ADDENDUM TO THE INTERIM FINAL FEASIBILITY STUDY

Battelle
The Business of Innovation

Centredale Manor Restoration Project Superfund Site

North Providence, Rhode Island

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EXECUTIVE SUMMARY

The United States Environmental Protection Agency (EPA) Region I is conducting a Remedial Investigation and Feasibility Study (RI/FS) for the Centredale Manor Restoration Project Superfund site (hereafter referred to as the CMRP site) located in North Providence, Rhode Island. The main part of the CMRP site, which is referred to as the Source Area, is located at 2072 and 2074 Smith Street (Route 44). The CMRP site also includes free-flowing reaches and impoundments of the Woonasquatucket River adjacent to and downstream of the Source Area and any other areas where contamination has come to be located. Historically, the Source Area was used for chemical manufacturing and drum recycling operations, and is currently occupied by the Brook Village and Centredale Manor apartment complexes. Results from the RI/FS are reported in the *Interim Final Remedial Investigation, Centredale Manor Restoration Project Superfund Site* (Battelle, 2005) and *Interim Final Feasibility Study, Centredale Manor Restoration Project Superfund Site* (Battelle, 2010). The RI/FS was completed following *Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA* (EPA, 1988), the final *RI/FS Work Plan* for the CMRP site (Battelle, 2003), and *Principles for Managing Contaminated Sediment Risks at Hazardous Waste Sites* (EPA, 2002).

The RI evaluated the nature and extent of contamination at the CMRP site and focused on gaining a better understanding of contaminant fate and transport processes and collecting data to support the baseline risk assessments. The RI was used to prepare the FS, which evaluated different combinations of cleanup approaches to restrict access to, contain, remove, and/or treat contamination to protect human health and the environment from exposure to contaminated soil, groundwater, surface water, and sediment at the CMRP site. Areas evaluated in the FS include the Source Area and reaches of the River immediately downstream of the Source Area, i.e., Allendale and Lyman Mill.

The 2010 FS identified the contaminants in sediment, soil, and groundwater that present a risk to human health and the environment; developed remedial action objectives (RAOs); identified potential applicable or relevant and appropriate requirements (ARARs) and to be considered (TBC) criteria; developed cleanup goals and areas for remedial action; selected appropriate remediation technologies that would be effective; and developed remedial alternatives to address contamination, including estimates of anticipated costs, that would achieve the RAOs. These aspects of the FS are refined in this Addendum based on information from the supplemental site activities conducted since the completion of the FS in 2010. To the extent that there are conflicts between this Addendum and the 2010 FS report, the changes documented in the Addendum shall control.

Supplemental Site Activities

Supplemental site activities conducted since the completion of the FS in 2010 include 1) a time-critical removal action (TCRA) at the Source Area in 2009–2010 focused on contaminated groundwater discharge to the Woonasquatucket River; 2) supplemental investigations in 2010–2011 to better understand the nature and extent of contamination at the Oxbow and potential risks to human health and the environment from exposure to contaminated media at this area; and 3) the National Remedy Review Board (NRRB) review in 2010 of the CMRP site and EPA Region 1's proposed cleanup action, and the Regional response to the NRRB recommendations. Key aspects of the 2010 FS impacted by the supplemental site activities include:

- The federal groundwater classification for groundwater within the Source Area changed from Class III (non-potable water) to Class IIB (potential drinking water source);

- RAOs and ARARs for soil and groundwater at the Source Area are revised based on the Class IIB groundwater classification and EPA's recommended residential level for polychlorinated biphenyl (PCB) is identified as a TBC criteria for CMRP site soil;
- Cleanup goals for Source Area soil and groundwater are revised with respect to the Class IIB groundwater classification to include contaminants in excess of the state GA leachability criteria for soil and federal maximum contaminant levels (MCLs) and non-zero maximum contaminant level goals (MCLGs) for groundwater. Cleanup goals for Lyman Mill Reach floodplain soil are revised based on the supplemental risk assessment evaluations for this area;
- Cleanup areas (areas for remedial action) for the groundwater and Lyman Mill Reach stream sediment and floodplain soil action areas are revised based on the updated RAOs and cleanup goals;
- Select remedial alternatives for Source Area soil are revised based on the updated RAOs and cleanup areas;
- Remedial alternatives for Lyman Mill Reach stream sediment and floodplain soil are revised based on the updated RAOs and cleanup areas, as well as based on an evaluation of data from the 2010 Oxbow area investigation; and
- Remedial cost estimates for select soil and groundwater remedial alternatives are updated based on the revised alternatives and/or areas for remedial action. Remedial cost estimates for off-site disposal options under the sediment alternatives are also updated based on applying the alternative treatment standards for soil to dewatered sediment, which results in a smaller percentage of excavated material requiring treatment to meet the land disposal restrictions (LDRs).

Contaminants in Source Area Soil, Groundwater, and Lyman Mill Reach Floodplain Soil that Present Risk at the CMRP Site

The conceptual site model for the site was refined based on information from the supplemental site activities. Under the Class IIB groundwater classification, contaminants in soil and groundwater at the Source Area that present a risk to human health include dioxin, pesticides (soil only), PCBs (soil only), semivolatile organic compounds (SVOCs) (soil only), volatile organic compounds, and inorganics. Soil and groundwater contamination at the Source Area is widespread. The majority of contamination above ARARs and EPA's recommended residential levels occur at the central and southern portions of the Source Area, and are in areas that are paved or capped.

Based on the supplemental investigations at the Oxbow, contaminants in floodplain soil that present a risk to human health and the environment at Lyman Mill (including the Oxbow) include dioxin and select pesticides (4,4'-DDE and 4,4'-DDT), SVOCs (benzo(a)pyrene), and inorganics (antimony, arsenic, and copper). Dioxin contamination at Lyman Mill Reach is widespread within the 100-year floodplain.

Leaching of contaminants from soil to groundwater at the Source Area is a pathway of concern based on the 2001 and 2002 groundwater data, which showed widespread groundwater contamination above federal MCLs including presence of tetrachloroethylene (PCE) contamination in the deep overburden and bedrock at the Source Area. However, these elevated PCE concentrations may no longer be present within the Source Area, given the subsequent removal actions performed at the Source Area to address contaminated soil, sediment, and groundwater. Advection of organic contaminants (above MCLs) from groundwater to the Woonasquatucket River surface water and sediment does not appear to be a current pathway of concern, especially following the 2009–2010 TCRA; additional monitoring is recommended to confirm this assumption. Contaminated soil within the 100-year floodplain of the Oxbow presents a

risk to human health and the environment, and contaminated sediment in the south Oxbow area could pose a risk to ecological receptors and could be a potential secondary source of contamination to downstream areas if remobilized during flooding events.

RAOs, ARARs, TBCs and Cleanup Goals

Under the Class IIB groundwater classification, RAOs for Source Area soil and groundwater are revised to protect human health and water quality of the Woonasquatucket River by 1) preventing leaching or migration of contaminants from vadose zone soil that would result in groundwater contamination in excess of ARARs (federal MCLs and non-zero MCLGs), 2) preventing migration of contaminants from groundwater within the Source Area that would result in surface water contamination in excess of federal water quality criteria and state standards, and 3) preventing exposure to contamination in groundwater in excess of federal MCLs and/or non-zero MCLGs for drinking water.

ARARs and TBC criteria that would be pertinent to the remediation at the Source Area are updated based on the Class IIB groundwater classification, and include the state GA leachability criteria for soil and federal MCLs/non-zero MCLGs for groundwater. TBC criteria for Source Area soil are also updated to include EPA's recommended residential level for PCB in soil.

Cleanup goals for Source Area soil are proposed for contaminants detected in Source Area soil at concentrations above the ARARs (residential direct exposure and GA leachability) and EPA's recommended residential levels. Cleanup goals for groundwater within the Source Area are proposed for contaminants detected in groundwater at concentrations above the ARARs (federal MCLs and non-zero MCLGs). Overall, cleanup goals protective of the Class IIB groundwater classification are developed for additional contaminants and are in many cases an order of magnitude lower compared to levels under the Class III groundwater classification. Cleanup goals for Lyman Mill Reach floodplain soil are based on an evaluation of preliminary remediation goals (PRGs, risk-based concentrations), ARARs, and background, such that the cleanup goal is the PRG (or ARAR/TBC) or background, whichever is higher. Risk-based PRGs used in the evaluation are updated based on revised risk assessments. Overall, cleanup goals for Lyman Mill Reach floodplain soil (including Oxbow) are based on background for most contaminants.

Areas at the Source Area and Lyman Mill Reach that Require Remedial Action

Based on the extent of contamination above the cleanup goals for the Source Area soil, groundwater, and Lyman Mill Reach stream sediment and floodplain soil action areas, the following areas and volumes are proposed for remediation:

Action Area/Media	Cleanup Area		In-situ Removal Volume	Change from 2010 FS
	(square feet)	(acres)	(cubic yards [cy])	
Source Area/Soil	339,500	7.8 (a)	62,900	No change
Source Area/Groundwater	348,500	8.0 (a)	N/A	Larger cleanup area (previously 0.13 acres)
Lyman Mill Reach/Stream Sediment and Floodplain Soil	1,251,370	28.7	58,400	Larger cleanup area/volume (previously 21.6 acres/34,800 cy)

(a) The difference between the cleanup areas for Source Area soil and groundwater is associated with the footprint of the Centredale Manor apartment building, which is included in the groundwater cleanup area but not the Source Area soil cleanup area.

N/A, Not applicable.

Remedial Alternatives for Detailed Evaluation

Alternatives were screened in the 2010 FS based upon the screening criteria required by the National Hazardous Substances and Pollution Contingency Plan. Remedial alternatives for select action areas, retained from the screening analysis performed in the 2010 FS, are evaluated in more detail in this Addendum, along with the No Action alternative (Alternative 1). Specifically, remedial alternatives for the Source Area Soil and Lyman Mill Reach stream sediment and floodplain soil action areas are re-evaluated in detail, and the alternatives analysis has been refined to consider information from the supplemental site activities, which impact the RAOs and action areas, and areas for excavation and/or enhanced natural recovery, as follows:

- **Source Area Soil Alternative 3e, Targeted Excavation, Upgrade and Maintain Existing Surfaces, and Off-site Disposal and/or Treatment** is refined to expand the excavation areas to encompass locations with contaminant concentrations above the GA leachability criteria in order to meet the revised RAOs to prevent leaching or migration of contaminants from vadose zone soil that would result in groundwater contamination in excess of ARARs (e.g., MCLs/non-zero MCLGs). This results in an increase in the excavation area (additional 0.6 acres) and volume (additional 4,500 cy) of contaminated soil for off-site disposal and/or treatment, which in turn increases the present worth costs by approximately $4,800,000, for a total cost of approximately $24,400,000.
- **Lyman Mill Reach Stream Sediment and Floodplain Soil Alternative 3, Limited Excavation, Enhanced Natural Recovery, and Disposal and/or Treatment** is refined to address contamination at the revised cleanup area and to re-evaluate areas for excavation and thin-layer cover based on results from the 2010–2011 supplemental investigations at the Oxbow area. The areas for excavation increased from 4.8 acres (2010 FS) to 6.5 acres, resulting in an incremental increase of 10,800 cy of contaminated material for disposal and/or treatment. The areas for thin-layer cover increased from 16.8 acres (2010 FS) to 22.2 acres. Overall, the present worth costs increased by approximately 40% or more compared to estimated costs presented in the 2010 FS, and range from $13,700,000 (Option 3b, on-site containment in nearshore confined disposal facility [CDF]) to $33,300,000 (option 3d, on-site incineration).
- **Lyman Mill Reach Stream Sediment and Floodplain Soil Alternative 5, Partial Excavation, Enhanced Natural Recovery, and Disposal and/or Treatment** is refined to address contamination at the revised cleanup area and to re-evaluate areas for excavation and thin-layer cover based on results from the 2010–2011 supplemental investigations at the Oxbow area. The areas for excavation increased from 13.5 acres (2010 FS) to 19.5 acres, resulting in an incremental increase of 23,600 cy of contaminated sediment and soil for disposal and/or treatment. The areas for thin-layer cover increased from 8.0 acres (2010 FS) to 9.2 acres. Overall, the present worth costs increased by approximately 50% or more compared to estimated costs presented in the 2010 FS, and range from $24,100,000 (Option 5b, on-site containment in nearshore CDF) to $73,300,000 (option 5d, on-site incineration).

The remedial alternatives for groundwater were not refined in this Addendum because EPA's proposed cleanup action for groundwater, generally described as Source Area Groundwater Alternative 2e (Excavation/Dewatering) in the 2010 FS, was constructed under the 2009–2010 TCRA. Additional parts of the proposed groundwater cleanup action that have not been implemented (i.e., institutional controls, long-term monitoring, and five-year reviews) are generally the same as described in the 2010 FS, except that the present worth costs would increase by approximately $600,000 (compared to costs estimated in the 2010 FS) because the larger cleanup area would result in additional construction and monitoring costs to evaluate the continued effectiveness of the action.

Present worth costs for Allendale and Lyman Mill sediment alternatives utilizing off-site disposal (Option e) decreased approximately 15% to 25% (depending on the alternative) as a result of applying the alternative treatment standards for soil to dewatered sediment and assuming that 10% (rather than 50%) of the excavated material shipped off site would require treatment to meet the LDRs.

Comparative Analysis of Alternatives

Overall, the remedial alternatives presented in this Addendum would address contamination that presents a risk to human health and the environment at the Source Area soil and Lyman Mill Reach stream sediment and floodplain soil action areas, and would achieve the cleanup objectives at varying levels of effectiveness as described below. The No Action alternative (Alternative 1) would not provide effective protection because contaminated material that presents a risk to human health and the environment would remain on site unaddressed.

- Lyman Mill Reach Stream Sediment and Floodplain Soil Alternatives 3 and 5 would achieve human health objectives quickly through targeted excavation. These alternatives would not provide immediate, complete protection of ecological receptors from exposures to contaminated material, but rather a minimum of several decades may be required to attain the ecological cleanup objectives. This delay in achieving the RAOs for ecological receptors is balanced by the need to preserve the habitat necessary to maintain the receptors to be protected. Alternative 3 would provide a somewhat lower level of immediate ecological protection than Alternative 5 because a smaller volume of contaminated material would be removed from the system. However, it would preserve 13 additional acres of a regionally important forested wetland complex that is providing habitat to a variety of plants, invertebrates, and wildlife populations including possibly vernal pool species. Although the time for risk reduction until human health and ecologically-based RAOs are achieved is extended by about 5 years under this alternative compared to Alternative 5, the impacts to wildlife populations from eliminating this valuable hardwood forest habitat outweigh the potential benefits of reducing the risk in a slightly quicker fashion.
- Source Area Soil Alternative 4e would provide the greatest overall protection because potential buried waste material that could be highly toxic or highly mobile would be removed and all existing surfaces would be upgraded to Resource Conservation and Recovery Act (RCRA) caps, which would effectively isolate the contamination that remains in place and comply with all ARARs, including RCRA Subtitle C and Toxic Substances Control Act closure requirements. Alternative 3e would also provide moderately effective protection of human health and the environment, although the upgraded caps under this alternative would not comply with RCRA Subtitle C requirements or eliminate rainwater/snowmelt infiltration into the underlying soil and groundwater.

All of the active soil remedial alternatives (above) constitute a discharge of dredged or fill material into the waters of the state/US, thereby triggering state and federal wetlands requirements that would have to be addressed. Moreover, because contamination is found above cleanup goals in wetland areas, there is no practical alternative to the destruction of wetland areas. As a result, actions would need to be taken to minimize impacts and EPA would need to evaluate alternatives to select the least damaging practicable alternative consistent with Clean Water Act requirements. Additionally, all of the soil alternatives would require coordination with the Department of Interior (if during remedial design or remedial action) it is determined that the remedial alternatives may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archaeological data.

Next Steps

The remedy considered most appropriate to achieve the cleanup objectives will ultimately be selected by EPA in close coordination with the State of Rhode Island. The proposed remedy has also been subject to review by EPA's NRRB. The proposed remedy for the site will be described in a Proposed Plan, which will be available for review and comment by the public. After consideration of public comments, the remedy selection decision will be documented in a Record of Decision.

Following collection of additional baseline data and implementation of the selected remedy itself, the long-term monitoring plan will be executed to assess overall performance. Using an adaptive management approach, information from the monitoring plan and review process will be evaluated to determine whether potential down river contamination concerns may also need to be addressed.

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** Table and Figure numbers and Appendices in this Addendum are maintained from the 2010 Feasibility Study report to facilitate comparisons between the two reports.*

ABBREVIATIONS AND ACRONYMS

ARAR	applicable or relevant and appropriate requirement
BERA	baseline ecological risk assessment
bgs	below ground surface
BHHRA	baseline human health risk assessment
cfs	cubic feet per second
CDF	confined disposal facility
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CMRP	Centredale Manor Restoration Project
COC	chemical of concern
CSM	conceptual site model
cy	cubic yards
cy/d	cubic yards per day
DDD	dichlorodiphenyldichloroethane
DDE	dichlorodiphenyltrichloroethylene
DDT	dichlorodiphenyltrichloroethane
DOI	Department of Interior
EC	engineering control
ENR	enhanced natural recovery
ELCR	excess lifetime cancer risk
EPA	United States Environmental Protection Agency
ft	feet
FS	feasibility study
gpm	gallon per minute
HDPE	high-density polyethylene
HI	hazard index
HQ	hazard quotient
IC	institutional control
LDR	land disposal restrictions
LEA	Loureiro Engineering Associates
LLDPE	low density polyethylene
MCL	maximum contaminant level
MCLG	maximum contaminant level goal
mg/kg	milligrams per kilogram
NCP	National Hazardous Substances and Pollution Contingency Plan
ng/kg	nanograms per kilogram
NHPA	National Historic Preservation Act
NOAEL	no observed adverse effects level
NRHP	National Register of Historic Places

NRRB	National Remedy Review Board
NTCRA	non-time critical removal action
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PCE	tetrachloroethylene (tetrachloroethene or perchloroethylene)
PRG	preliminary remediation goal
RAO	remedial action objective
RCRA	Resource Conservation and Recovery Act
RI	remedial investigation
RIDEM	Rhode Island Department of Environmental Management
ROD	Record of Decision
sq ft	square feet
sq ft/d	square feet per day
SVOC	semivolatile organic compound
TBC	to be considered
TCDD	tetrachlorodibenzo-*p*-dioxin
TCE	trichloroethylene (or trichloroethene)
TCLP	toxicity characteristic leaching procedure
TCRA	time critical removal action
TEQ	toxic equivalency
TSCA	Toxic Substances Control Act
TTNUS	TetraTech NUS, Inc.
USACE	United States Army Corps of Engineers
UTS	universal treatment standards
VOC	volatile organic compound
WQC	water quality criteria

1.0 INTRODUCTION

The United States Environmental Protection Agency (EPA) Region I is conducting a Remedial Investigation and Feasibility Study (RI/FS) for the Centredale Manor Restoration Project Superfund site (hereafter referred to as the CMRP site) located in North Providence, Rhode Island (Figure 1-1). The main part of the CMRP site, which is referred to as the Source Area, is located at 2072 and 2074 Smith Street (Route 44) (Figure 1-2). The CMRP site also includes free-flowing reaches and impoundments of the Woonasquatucket River adjacent to and downstream of the Source Area (Figure 1-1) and any other areas where contamination has come to be located. Historically, the Source Area was used for chemical manufacturing and drum recycling operations, and is currently occupied by the Brook Village and Centredale Manor apartment complexes. Results from the RI/FS are reported in the *Interim Final Remedial Investigation, Centredale Manor Restoration Project Superfund Site* (Battelle, 2005) and *Interim Final Feasibility Study, Centredale Manor Restoration Project Superfund Site* (Battelle, 2010). The RI/FS was completed following *Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA* (EPA, 1988), the final *RI/FS Work Plan* for the CMRP site (Battelle, 2003), and *Principles for Managing Contaminated Sediment Risks at Hazardous Waste Sites* (EPA, 2002).

The RI evaluated the nature and extent of contamination at the CMRP site and focused on gaining a better understanding of contaminant fate and transport processes and collecting data to support the baseline risk assessments. The RI was used to prepare the FS, which evaluated different combinations of cleanup approaches to restrict access to, contain, remove, and/or treat contamination to protect human health and the environment from exposure to contaminated soil, groundwater, surface water, and sediment at the CMRP site. Areas evaluated in the FS include the Source Area and reaches of the River immediately downstream of the Source Area, i.e., Allendale and Lyman Mill (Figure 1-1).

1.1 Study Objectives

This report is an Addendum to the FS completed for the CMRP site in 2010 (Battelle, 2010). The purpose of this Addendum is to update aspects of the FS impacted by supplemental site activities conducted following the completion of the FS in 2010. These supplemental site activities impact aspects of the remedial investigation summary, remedial action objectives (RAOs) and action areas, and remedial alternatives presented in the FS for the CMRP site. The supplemental site activities are described in detail in Sections 2.1 and 2.2, and Table 1-1 generally summarizes the nature of the changes to the FS resulting from the supplemental site activities. This Addendum focuses on presenting the changes to the FS; all references to table and figure numbers and appendices are maintained from the 2010 FS report to facilitate comparisons between the two reports. To the extent that there are conflicts between this Addendum and the 2010 FS report, the changes documented in the Addendum shall control.

1.2 Report Organization

This Addendum is organized in eight sections and five appendices, as follows:

Section 1.0: Introduction. This section is an introduction and describes the objectives of the FS Addendum.

Section 2.0: Remedial Investigation Summary. This section provides a summary of the supplemental site activities performed at the site since the completion of the FS in 2010, and presents how these activities impact the description of the CMRP site and its physical setting, the conceptual site model (CSM), and a summary of the conclusions from the human health and ecological risk assessment.

Section 3.0: Development of Remedial Action Objectives and Action Areas. This section summarizes changes from the 2010 FS with respect to the RAOs developed based on risk and exposure pathways, applicable or relevant and appropriate requirements (ARARs) and to be considered (TBC) criteria, cleanup goals and cleanup areas. Cleanup goals for those areas of the site that pose an unacceptable risk are defined, and the conceptual cleanup areas for site contamination to which removal, containment, or treatment may be applied are developed.

Section 4.0: Identification and Screening of Remedial Technologies and Process Options. This section summarizes changes from the 2010 FS with respect to the general response actions and associated remedial technologies that could be applied at the CMRP site. Changes are limited to the discussion of potential historic properties at the site.

Section 5.0: Identification and Screening of Remedial Alternatives. This section summarizes changes from the 2010 FS with respect to the potential remedial alternatives that could be applied at the CMRP site. All changes to remedial alternatives are captured in the detailed evaluation of remedial alternatives presented in Section 6.0 of this Addendum.

Section 6.0: Detailed Evaluation of Remedial Alternatives. This section summarizes changes from the 2010 FS with respect to the remedial alternatives developed to address contamination at the CMRP site. The remedial alternatives are evaluated in detail using the seven National Hazardous Substances and Pollution Contingency Plan (NCP) criteria; alternatives are also compared and contrasted to identify strengths and weaknesses.

Section 7.0: Summary and Conclusions. This section presents the summary and conclusions of the FS Addendum evaluations, including a discussion of data uncertainties and next steps for the CMRP site.

Section 8.0: References. This section includes the references that have been cited and used to develop this report.

Appendix F: Proposed Cleanup Goals for the CMRP Site. Data evaluations conducted to determine proposed cleanup goals for Source Area soil, groundwater, and Allendale and Lyman Mill reach floodplain soil are summarized in this appendix.

Appendix G: Proposed Cleanup Areas for the CMRP Site. Data evaluations conducted to determine the proposed remediation footprints (cleanup areas) for the groundwater and Lyman Mill Reach stream sediment and floodplain soil action areas are summarized in this appendix.

Appendix J: Remedial Cost Estimates for the CMRP Site. This appendix includes FS-level cost estimates for the alternatives evaluated in Section 6.0 of this Addendum.

Appendix M: Comparative Net Risk Analysis for Floodplain Soil Alternatives. This appendix provides the comparative net risk analysis which evaluates the risk of remedy implementation versus long-term risk reduction for the floodplain soil alternatives evaluated in Section 6.0 of this Addendum.

Appendix O: Detailed Analysis and ARAR and TBC Criteria Tables. This appendix provides tables that summarize the detailed analysis and/or ARARs/TBCs for the remedial alternatives retained for detailed analysis for the Allendale and Lyman Mill sediment, Allendale Reach floodplain soil, and groundwater action areas.

2.0 REMEDIAL INVESTIGATION SUMMARY

Complete details of the RI summary for the CMRP site are provided in Section 2.0 of the 2010 FS (Battelle, 2010). This Addendum focuses on changes to the RI summary as a result of supplemental activities conducted at the site following the completion of the FS in 2010 (Table 1-1 generally summarizes changes to the FS; Sections 2.1 and 2.2 summarize supplemental site activities). Changes are limited to the following aspects of the RI summary:

- Site Characterization: Summary of Supplemental Site Actions and Site Investigations;
- Physical Setting: Demography and Land Use;
- Conceptual Site Model: Nature and Extent of Contamination, Secondary Release and Transport Mechanisms, and Principal Threat and Low-level Threat Wastes; and
- Summary of Human Health and Ecological Risks.

2.1 Supplemental Site Activities

Supplemental site activities conducted since the completion of the FS in 2010 include 1) a time critical removal action (TCRA) at the Source Area in 2009–2010 focused on contaminated groundwater discharge to the Woonasquatucket River; 2) supplemental investigations in 2010–2011 to better understand the nature and extent of contamination at the Oxbow area and potential risks to human health and the environment from exposure to contaminated media at this area (the Oxbow is a forested wetland located immediately downstream of Allendale Dam, Figure 1-1); and 3) a review conducted by EPA's National Remedy Review Board (NRRB) in 2010. The NRRB review is summarized in Section 2.1.1. The 2009–2010 TCRA and supplemental investigations at the Oxbow area are described in more detail in Section 2.2.

2.1.1 National Remedy Review Board

EPA's NRRB is a national peer review group that reviews proposed cleanup decisions to ensure that they are consistent with laws, regulations and guidance. The NRRB conducted a review of the CMRP site and EPA Region 1's proposed cleanup action in August 2010 and provided recommendations (EPA, 2010). EPA Region I reviewed the NRRB recommendations and provided responses to each of the recommendations (EPA, 2011). Based on the NRRB review and the Regional response:

- EPA revised the federal groundwater classification from Class III (non-potable water) to Class IIB (potential drinking water source) for the groundwater within the Source Area;
- EPA's recommended residential polychlorinated biphenyl (PCB) preliminary remediation goal (PRG) of 1 milligram per kilogram (mg/kg, or parts per million) for soil is identified as a TBC criteria for the CMRP site;
- All Source Area soil, floodplain soil and pond sediment at the reaches of Allendale and Lyman Mill are classified as principal threat waste; and
- Areas for excavation and thin-layer cover at the Oxbow area are revised to reflect results from the 2010 investigation and updated risk assessments for the Oxbow area.

The Regional response to the NRRB recommendations (above) impact aspects of the RI summary, RAOs and action areas, and remedial alternatives presented in the FS for the CMRP site, especially with respect to the Source Area soil, groundwater, and Lyman Mill Reach stream sediment and floodplain soil action

areas. Results from evaluations conducted are presented in this Addendum. Changes to the FS based upon these results are also included in this Addendum.

2.2 Site Characterization – Summary of Supplemental Site Actions and Investigations

Results of the major investigations conducted since 1996 to establish and confirm the presence of contamination at the CMRP site, to support removal actions, and to support the RI/FS are presented in the 2010 FS (Battelle, 2010). Site actions and investigations conducted and/or completed since the completion of the FS in 2010 are summarized below.

2.2.1 Supplemental Site Actions

Actions taken to address contamination at the CMRP site between 1999 and 2004 are summarized in Section 2.2.2 and Table 2-1 of the 2010 FS. A TCRA was also performed in 2009–2010 while the FS was nearing completion. The 2009–2010 TCRA was performed to prevent contamination from soil and groundwater at the Brook Village parking lot from moving into the Woonasquatucket River. The major activities conducted under the TCRA included:

- A sheet pile wall was installed between the excavation area within the Brook Village parking lot and the Woonasquatucket River to prevent river water from flooding the excavation area during construction, as well as to reduce the movement of groundwater into the River in the long term;
- Contaminated soil was excavated and transported off site for treatment/disposal;
- Contaminated groundwater extracted from the excavation area was treated and returned to the River;
- The excavation area was backfilled with clean fill and a cap designed to cover hazardous waste was installed over the remediation area; and
- Groundwater wells were installed and one round of monitoring was performed.

Table 2-1, which summarizes actions taken at the CMRP site, has been updated in this Addendum to include the 2009–2010 TCRA.

2.2.2 Supplemental Site Investigations

Supplemental site investigations were performed at the Oxbow area in 2010–2011 following the completion of the FS. A site investigation was performed in the fall/winter of 2010 to collect samples of floodplain soil and sediment to better understand the nature and extent of contamination at the Oxbow area (Figure 1-1) and to update potential risks to human health and the environment from exposure to contamination at this area. Samples were analyzed for dioxins, furans, PCBs, pesticides, semi-volatile organic compounds (SVOCs), inorganics, and physical properties. Results from the 2010 Oxbow area investigation (Gwinn, 2011) were used to update the risk assessments for the Oxbow area (MACTEC and Battelle, 2011a) and develop risk-based PRGs for exposure scenarios and contaminants that pose a risk to human and/or ecological receptors at the Oxbow area (MACTEC and Battelle, 2011b).

These supplemental site investigations impact aspects of the RI summary, remedial action areas, and remedial alternatives presented in the FS for the Lyman Mill Reach stream sediment and floodplain soil (including the Oxbow area) action area. Results from evaluations conducted are presented in this Addendum. Changes to the FS based upon these results are also included in this Addendum.

2.3 Physical Setting

The physical characteristics of the CMRP site and surrounding region are summarized in Section 2.3 of the 2010 FS. Based on the Regional response to the NRRB recommendations, EPA revised the federal groundwater classification from Class III (non-potable water) to Class IIB (potential drinking water source) for the groundwater within the Source Area. As a result, the description of demography and land use at the CMRP site (Section 2.3.1 and Table 2-2 of the 2010 FS) is revised to clarify that groundwater at the Source Area is federally classified as Class IIB: potential source of drinking water. Table 2-2, which summarizes land use at the CMRP site and surrounding region, and Table 2-3, which summarizes aquifer characteristics at the Source Area, has been updated accordingly.

2.4 Conceptual Site Model

The CSM for the CMRP site is summarized in Section 2.4 of the 2010 FS, and illustrates the sources of contamination, release mechanisms, transport pathways, migration routes, contaminated media, exposure pathways, and potential receptors (Figures 2-11a and 2-11b in the 2010 FS). The CSM for the CMRP site is refined in this Addendum to incorporate information from the supplemental site activities, actions and investigations (Sections 2.1 and 2.2), which impact aspects of the nature and extent of contamination, secondary release and transport mechanisms, principal threat wastes, and potential human health and ecological risks at the CMRP site.

2.4.1 Nature and Extent of Contamination

Major findings regarding the nature and extent of contamination in site soil, groundwater, sediment, surface water, and biota are presented in Section 2.4.3 of the 2010 FS. The nature and extent of contamination at the Source Area soil, groundwater, and Lyman Mill Reach stream sediment and floodplain soil (including the Oxbow) action areas are updated in this Addendum to present the data in terms of established PRGs and ARARs that have been revised or supplemented based on the Regional response to the NRRB recommendations (Section 2.1.1), and to incorporate data from the supplemental Oxbow area investigations (Section 2.2.2). Specifically, the nature and extent of contamination in site soil are updated to present the data in terms of EPA's recommended residential level for PCB in soil (EPA, 1990). Additionally, the nature and extent of contamination in Source Area soil are updated to present the data in terms of Rhode Island Department of Environmental Management's (RIDEM's) GA leachability criteria. The nature and extent of contamination in groundwater are updated to present the data in terms of federal maximum contaminant levels (MCLs) for drinking water (EPA, 2009a), which are ARARs under the Class IIB groundwater classification at the Source Area. Finally, the nature and extent of contamination at the Oxbow area of Lyman Mill Reach are updated to include data from the 2010 investigation. Statistical summaries of the site data are presented in Table 2-6b.

Source Area Soil. Dioxin and PCB contamination above EPA's recommended residential levels (EPA, 1990 and 1998) is spatially widespread in surface soil at the Source Area (Figure 2-12). Contaminant concentrations in vadose zone soil (average thickness of the vadose zone in the Source Area is 5 feet [ft]) are also above RIDEM's residential direct exposure criteria at numerous locations throughout the Source Area. The contaminants most frequently detected at concentrations exceeding the direct exposure criteria are dioxin, PCBs (Figure 2-13), medium to high molecular weight polycyclic aromatic hydrocarbons (PAHs), and several inorganics (Battelle, 2005). Volatile organic compounds (VOCs) exceed the direct exposure criteria in some samples, but at a lower frequency than the analytes noted above. Six VOCs exceed the direct exposure criteria for soil in more than one vadose zone sample: benzene, chlorobenzene, tetrachloroethylene (PCE), trichloroethylene (TCE), vinyl chloride, and xylenes (Appendix F, Table F-4b). SVOC and inorganic concentrations are also above the direct exposure criteria for residential soil at several locations.

Contaminant concentrations in vadose zone soil are also above RIDEM's GA leachability criteria at numerous locations throughout the Source Area. The most common contaminants with concentrations above the leachability criteria are PCB, PCE, and TCE (Figures 2-13 and 2-14). Concentrations of total PCBs also exceed the Toxic Substances Control Act (TSCA) criteria of 50 mg/kg at 15 locations at the Source Area: many of the exceedances occur at Cap Area #1 and the Centredale Manor parking lots (Figure 2-13). The majority of Source Area soil with contaminant concentrations above the direct exposure, leachability, or TSCA criteria is located in the central and southern portions of the Source Area under the paved surfaces and interim caps. However, soil in several small areas that are not paved or capped have contaminant concentrations exceeding either RIDEM's direct exposure criteria or EPA's recommended residential levels for dioxin and PCBs (Figures 2-12 and 2-13).

Dioxin concentrations are highest under Cap Area #1 (and in the area of Brook Village parking lot prior to the 2009–2010 TCRA) and generally decrease with increasing depth, with only localized contamination found at depths greater than 5 ft below ground surface (bgs). The highest PCB concentrations also occur under Cap Area #1 and the Centredale Manor parking lots, and are generally higher in sub-surface soil (e.g., 1 to 3 ft bgs) with only localized contamination found at depths greater than 5 ft bgs.

Groundwater. Groundwater contamination at the Source Area is spatially widespread relative to federal MCLs. For example, groundwater sampled at 25 out of 37 wells contained one or more contaminants with detected concentrations above the MCLs (Figure 2-15). The most common contaminant detected at concentrations above the federal MCLs is PCE, followed by TCE, and 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (2,3,7,8-TCDD). Dioxin-contaminated groundwater is generally localized at the Brook Village parking lot; this area was the subject of the 2009–2010 TCRA (Section 2.2.1).

Organic contamination in groundwater plotted along two north-south cross sections along the western and eastern boundaries of the Source Area reveal:

- The presence of a dioxin plume (2,3,7,8-TCDD) was not observed;
- Elevated concentrations of PCE above federal MCLs were detected in deeper well intervals (deep overburden and bedrock) in two areas:
    - Along the western portion of the Source Area in MW14M, MW07D, and MW12D, which are located south of the area excavated during the 2009–2010 TCRA (Figure 2-15a)
    - In the eastern portion of Cap Area #1 near MW02M, MW02D, MW13S, MW13D, MW13B, MW04D, and MW04B (Figure 2-15b). These wells coincide with the location of the former tailrace. (TetraTech NUS, Inc. [TTNUS, 2002]).

Groundwater data indicate the potential presence of one or more areas with PCE contamination within the Source Area. However, these elevated PCE concentrations may no longer be present within the Source Area, given the subsequent removal actions performed at the Source Area to address contaminated soil, sediment, and groundwater (i.e., 2003–2004 TCRA to cap contaminated soil and sediment in the former tailrace that runs along the eastern boundary of the Source Area and the 2009–2010 TCRA which focused on contaminated soil and groundwater in the Brook Village parking lot). Additional groundwater monitoring will be conducted to confirm that these elevated PCE concentrations have been adequately addressed.

Lyman Mill Reach Stream Sediment and Floodplain Soil. Concentrations of dioxin (as toxic equivalency [TEQ]) are above EPA's recommended residential level for soil (EPA, 1998) at numerous locations throughout the Oxbow and old mill raceway areas (Figure 2-21). Dioxin contamination in floodplain areas abutting Allendale and Lyman Mill Ponds are below EPA's recommended residential level at all but two locations sampled (i.e., CMS-019 at Allendale and RES-11-433-01 at Lyman Mill),

following previous removal actions. The highest dioxin concentrations occur in the Oxbow wetland (borings SS_G-01 and SS_G-29) within approximately 75 ft of the Woonasquatucket River in areas where floodwaters appear to routinely overflow the banks of the River. Elevated dioxin concentrations also occur in Oxbow sediment located in the southern region of the Oxbow (Figure 2-21). Median dioxin concentrations in the Oxbow area sediment (within the abandoned channel and scrub-shrub and emergent marsh habitat to the south) are comparable to concentrations in Allendale and Lyman Mill Pond sediment, suggesting that low-lying areas in this forested wetland have been impacted by contamination from the CMRP site and that the Oxbow area is a net depositional environment. This is consistent with the geomorphology investigation which showed that this area is impacted during flooding and times of high water. Further, Oxbow floodplain soil located at higher elevations (above 100-year flood elevation) and in areas of fill has dioxin concentrations and composition more similar to background conditions (MACTEC and Battelle, 2011a).

Median Concentrations (nanograms per kilogram [ng/kg]) of Dioxin (2,3,7,8-TCDD) at the CMRP Site[(a)]				
Parameter	Allendale Sediment	Oxbow Area		Lyman Mill Pond Sediment
		Sediment	Floodplain Soil[(b)]	
2,3,7,8-TCDD	1,591	776	131	778

(a) Median concentrations based on available surface and subsurface data.
(b) Floodplain areas abutting Lyman Mill Pond not included in median concentration.

For areas outside prior removal actions, concentrations of PCBs in Allendale and Lyman Mill floodplain soil are below EPA's recommended residential level (EPA, 1990). Soil concentrations are also frequently below RIDEM's residential direct exposure criteria for many SVOC, VOC, and inorganic contaminants (Appendix F, Table F-2b). The most common contaminants detected at concentrations above the direct exposure criteria (i.e., above criteria in >20% of samples) include select inorganics (e.g., beryllium, lead, manganese, and arsenic) and SVOCs (e.g., chrysene, benzo(a)pyrene, and benzo(b)fluoranthene). Contaminant concentrations are below RIDEM's GB leachability criteria in floodplain soil associated with Allendale and Lyman Mill Reaches (including Oxbow wetland).

2.4.2 Secondary Release and Transport Mechanisms

The most important potential transport mechanisms currently affecting the Source Area are summarized in Section 2.4.4 and Figures 2-11a and 2-11b of the 2010 FS. Leaching of contaminants from soil to groundwater and advection of contaminants from groundwater to surface water and sediment are re-evaluated in this Addendum based on the revised groundwater classification for groundwater within the Source Area (revised from Class III [non-potable water] to Class IIB [potential drinking water source]) and the 2009–2010 TCRA (Section 2.2.1).

Leaching of contaminants from soil to groundwater is a pathway of concern based on the 2001-2002 groundwater data which showed widespread contamination above federal MCLs and one or more areas with PCE contamination in the deep overburden and bedrock at the Source Area (Section 2.4.1). However, these elevated PCE concentrations may no longer be present within the Source Area given the subsequent removal actions performed at the Source Area to address contaminated soil, sediment, and groundwater (i.e., 2003–2004 TCRA to cap contaminated soil and sediment in the former tailrace that runs along the eastern boundary of the Source Area and the 2009–2010 TCRA which focused on contaminated soil and groundwater in the Brook Village parking lot).

Advection of organic contaminants (above MCLs) from groundwater to the Woonasquatucket River surface water and sediment no longer appears to be a major pathway of concern because:

- Contaminated groundwater discharge to the Woonasquatucket River in the vicinity of the Brook Village parking lot was the subject of work conducted as part of the 2009–2010 TCRA (Table 2-1);
- There is no evidence of groundwater discharge to surface water within the southern portion of the Source Area, and
- There is no evidence of chlorinated compounds present above MCLs in shallow groundwater near the southern boundary of the Source Area.

Relative to upgradient conditions, for the most part groundwater discharge from the Source Area does not appear to be adversely impacting the surface water of the Woonasquatucket River with respect to federal water quality criteria (WQC) or risk to human health or the environment. For example, contaminants were infrequently detected at concentrations above the federal WQC, and only dioxin (2,3,7,8-TCDD) was considered to be significantly higher than upstream background conditions (Battelle, 2010). While some contaminants were measured in surface water at the site at levels above the WQC, the baseline risk assessments found that exposure to surface water does not pose a risk (MACTEC, 2004 and 2005a).

2.4.3 Principal Threat and Low-level Threat Wastes

The identification of principal threat and low-level threat wastes is presented in Section 2.4.5 and Tables 2-8a and 2-8b of the 2010 FS. Based on the Regional response to the NRRB recommendations (Section 2.1.1), principal threat wastes for the CMRP site have been expanded to include all Source Area soil, and contaminated floodplain soil and pond sediment at the reaches of Allendale and Lyman Mill (EPA, 2011). Tables 2-8a and 2-8b have been revised accordingly.

2.5 Summary of Human Health and Ecological Risks

Human health and ecological risks from exposure to contamination at the CMRP site are summarized in Section 2.5 and Tables 2-7 and 2-9 through 2-16 in the 2010 FS. Potential risks from exposure to contamination at the Oxbow area are presented in this Addendum, and have been updated based on the Supplemental Baseline Human Health and Ecological Risk Assessment (Supplemental BHHRA and Supplemental BERA) for the Oxbow area, which was prepared in 2011 based on recent data collection activities. Major findings from the Supplemental BHHRA and BERA for the Oxbow area are summarized below, and Tables 2-7e, 2-11e, 2-13d, and 2-16 have been updated accordingly.

2.5.1 Human Health Risks

The Supplemental BHHRA for the Oxbow area (MACTEC and Battelle, 2011a) evaluated potential risks to human health associated with the human contact with and incidental ingestion of surface soil at two exposure areas in the Oxbow area: the human health concern area and the general area. The potentially exposed human population evaluated included the Passive Recreational Visitor who may visit the Oxbow area for passive recreational activities (e.g., hiking, bird-watching, picnicking, etc.). The Oxbow area was evaluated as two different areas because the use and access to the areas differ. The human health concern area is mostly upland and can be accessed by an earthen trail. In contrast, the general area is within the 100-year floodplain, is more susceptible to flooding throughout the year, and overall is a less usable area with respect to passive recreational activities. Key findings from the Supplemental BHHRA are summarized below:

Human Health Concern Area – The total (summed across age groups) soil cancer risk for the Passive Recreational Visitor in the human health concern area is 4×10^{-6}. The highest non-cancer hazard index (HI) among the age groups in the human health concern area is 0.1 for the child Passive Recreational

Receptor. The largest chemical contributor to the HI is ingestion of arsenic. Ingestion of soil by the child receptor contributes the largest cancer risk among exposure pathways. The largest chemical contributor to cancer risk is the dioxin TEQ.

General Area – The total (summed across age groups) soil cancer risk for the Passive Recreational Visitor in the general area is 6×10^{-5}. The highest non-cancer HI among the age groups in the general area is 0.2 for the child Passive Recreational Receptor. The largest chemical contributor to the HI is ingestion of thallium. Ingestion of soil by the child receptor contributes the largest cancer risk among exposure pathways. The largest chemical contributor to cancer risk is the dioxin TEQ. Supporting information from the risk assessment is summarized in Tables 2-7e and 2-11e.

2.5.2 Ecological Risks

The Supplemental BERA evaluated potential adverse ecological effects in the Oxbow area associated with direct exposure to floodplain surface soil and surface sediment, as well as the consumption of contaminated prey and the incidental ingestion of surface soil during foraging or preening activities. Ecological receptor species considered in the Supplemental BERA include floodplain soil and sediment macroinvertebrates, worm-eating (vermivorous) birds, and vermivorous and omnivorous mammals that depend on ecological resources within the Oxbow area. Key findings from the Supplemental BERA summarized in this section are discussed in terms of which receptors appear to be at substantial risk of harm and what contaminants present risk above EPA's guidelines (i.e., Hazard Quotient [HQ] value of 1 or higher[1]). Summary statistics and screening toxicity data for the contaminants contributing to ecological risk are summarized in Table 2-13d.

Ecological Receptors at Risk of Harm. The Supplemental BERA (MACTEC and Battelle, 2011a) determined that wildlife and soil and sediment macroinvertebrates appear to be at substantial risk of harm from exposure to contamination at the CMRP site that has migrated from the Source Area to the Oxbow area. For wildlife receptors, potential exposure to floodplain soil contaminants that have bioaccumulated in prey tissue was identified as the most significant exposure pathway, with the incidental ingestion of floodplain soil being of secondary importance. Macroinvertebrates could potentially be exposed to contaminants in floodplain soil and sediment via the direct contact and ingestion exposure pathways.

Biota – Vermivorous mammal and bird populations that forage in the Oxbow area are at substantial (i.e., HQs in excess of 10) risk of harm from the consumption of invertebrates (earthworms) that have bioaccumulated dioxins/furans, pesticides (4,4'- dichlorodiphenyltrichloroethylene [4,4'-DDE] and 4,4'-dichlorodiphenyltrichloroethane [4,4'-DDT]), and inorganics (antimony and copper). Omnivorous mammals are not at risk of harm from foraging in the Oxbow area. Estimated exposures of woodcock populations to pesticides and dioxins/furans and short-tailed shrew populations to dioxins/furans and inorganics present incremental risks[2]. The incremental risks (based on no observable adverse effects level [NOAEL]) are 76 and 220 for the woodcock and shrew receptors, respectively. For the woodcock, zinc also contributes to the incremental risk with a NOAEL-based incremental HQ of 2.0. Incremental risks are somewhat higher than those associated with Allendale Pond. For instance, the incremental risks for dioxin TEQs (NOAEL-based) for the shrew are 190 in the Oxbow area and 130 for Allendale Pond floodplain soil.

[1] Here and throughout this section, HQs are reported as unitless values derived as the ratio of an exposure estimate (in units of either a medium concentration or dose) divided by a toxicological benchmark estimate (in same equivalent units dose of the exposure term).
[2] Incremental risks are defined as those in excess of background conditions.

Floodplain Soil – The Supplemental BERA (MACTEC and Battelle, 2011a) concluded that the macroinvertebrate communities residing in the floodplain habitat associated with the Oxbow area may be at substantial risk of harm associated with average exposures to pesticides (4,4'-dichlorodiphenyldichloroethane [4,4'-DDD], 4,4'-DDE, 4,4'-DDT, dieldrin, lindane [gamma-chlordane] and endrin), PAHs, and inorganics (chromium, copper, manganese, mercury, vanadium, zinc and potentially aluminum [depending on soil pH]) in floodplain soil as a result of direct contact and ingestion exposure pathways. Risks from body burdens are associated with inorganic contaminants, specifically cadmium, lead, nickel, vanadium, zinc, and potentially aluminum.

Sediment – Based on a screening-level evaluation, the Supplemental BERA (MACTEC and Battelle, 2011a) concluded that macroinvertebrate communities found in the Oxbow area may be at risk of harm from direct exposure to dioxins/furans, 13 pesticides, PCBs (Aroclors 1254 and 1268 and Total Aroclors), PAHs (17 individual PAHs as well as total, high molecular weight and low molecular weight PAHs), and 16 inorganics in sediment located in depositional areas in the scrub-shrub habitat and river remnant. Because fish and wildlife exposure to sediment in the scrub-shrub habitat are expected to be most substantial for amphibians and smaller forage fish and suitability of the scrub-shrub habitat for wildlife foraging is low compared with other nearby habitat, aquatic wildlife exposures were not evaluated.

In summary, the ecological risks for the Oxbow area are summarized below.

- Biota Tissue: Hazards to vermivorous bird and mammal populations through consumption of contaminated prey (earthworms) containing dioxins/furans (birds and mammals), pesticides (birds only), and inorganics (mammals only).
- Floodplain Surface Soil: Hazards to soil macroinvertebrate populations from exposure to pesticides, PAHs and inorganics.
- Surface Sediment: Hazards to sediment macroinvertebrate populations from exposure to dioxins/furans, pesticides, PCBs, PAHs and inorganics.

The primary risk drivers for wildlife receptors include dioxins/furans, 4,4'-DDT, 4,4'-DDE, antimony, and copper. Threshold contaminant concentrations in floodplain soil below which ecological receptors are believed to be adequately protected are summarized in Table 2-16.

3.0 DEVELOPMENT OF REMEDIAL ACTION OBJECTIVES AND ACTION AREAS

RAOs and action areas were developed in Section 3.0 of the 2010 FS to address contamination at the CMRP site that presents potentially unacceptable human health and ecological risks. Supplemental activities conducted at the site following the completion of the FS in 2010 impact aspects of the RAOs, potential ARARs, guidance and advisories (TBC criteria), risk-based PRGs, cleanup goals, and cleanup areas presented in the 2010 FS. (Table 1-1 generally summarizes changes to the FS; Sections 2.1 and 2.2 summarize the supplemental site activities.) Results from evaluations conducted to assess these impacts are presented in this Addendum, and changes to the 2010 FS based upon these results are summarized below.

3.1 Remedial Action Objectives

The human health RAOs for Source Area soil and groundwater presented in Section 3.1.1 of the 2010 FS are updated in this Addendum to reflect the change in the federal groundwater classification at the Source Area (revised from Class III [non-potable water] to Class IIB [potential drinking water source]) and to identify EPA's recommended residential level for PCBs in soil (EPA, 1990) as a TBC criteria. Updated human health RAOs for Source Area soil and groundwater are summarized below. Minor revisions have also been made in this Addendum to the human health and ecological RAOs developed for Allendale and Lyman Mill sediment and floodplain soil; see the footnote below.[3]

Source Area Soil. Prevent direct human exposure by incidental ingestion of and dermal contact with Source Area soil that contain contamination in excess of ARARs (e.g., RIDEM residential direct exposure criteria and TSCA requirements for PCBs) and EPA's recommended residential level for dioxin and PCBs (EPA, 1998 and 1990).

In addition, prevent leaching or migration of contaminants from vadose zone soil that would result in groundwater contamination in excess of ARARs (e.g., MCLs and non-zero maximum contaminant level goals [MCLGs]).[4]

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[3] Minor revisions to the human health and ecological RAOs are summarized by action area:

Allendale and Lyman Mill Sediment – Human health RAOs are based on preventing direct human exposure by incidental ingestion of and dermal contact with sediment, or human ingestion of fish and other aquatic organisms, containing contaminants at concentrations that would result in a total excess lifetime cancer risk (ELCR) greater than the target risk range of 10^{-6} to 10^{-4}, or a HI greater than 1. Ecological RAOs are based on preventing dermal contact and ingestion by ecological receptors to sediment containing contaminants at levels that would result in unacceptable impacts. Finally, RAOs are also based on preventing migration of contaminants from sediment that would result in river surface water concentrations in excess of state and federal environmental laws and regulations or migration of contaminants downstream.

Allendale Floodplain Soil – Human health RAOs are based on preventing direct human exposure by incidental ingestion of and dermal contact with floodplain soil containing contaminants: in excess of ARARs, in excess of EPA's recommended residential level for dioxin (EPA, 1998), at concentrations that would result in a total ELCR greater than the target risk range of 10^{-6} to 10^{-5}, and/or at concentrations that would result in a HI greater than 1. Ecological RAOs are based on preventing dermal contact and ingestion by ecological receptors to floodplain soil containing contaminants at levels that would result in unacceptable impacts. Finally, RAOs are also based on preventing migration of contaminants from floodplain soil that would result in river surface water concentrations in excess of state and federal environmental laws and regulations or migration of contaminants downstream that could result in concentrations in the river above sediment cleanup goals.

Lyman Mill Reach Stream Sediment and Floodplain Soil – Human health and ecological RAOs are provided in Section 6.1 of this Addendum.

[4] Under state groundwater regulations, this part of the aquifer at the CMRP site is classified as GB. However, because the state has not obtained EPA approval of a Comprehensive State Ground Water Protection Program, it is necessary to default to the federal classification. Groundwater within the Source Area is federally classified as Class IIB (Potential Source of Drinking Water). As a result, RIDEM's GA leachability criteria and federal MCLs/non-zero MCLGs are potential ARARs for soil and groundwater within the Source Area, respectively.

Groundwater. Prevent migration of contaminants from groundwater within the Source Area that would result in surface water contamination in excess of ARARs (e.g., State of Rhode Island standards and federal WQC: chronic ambient freshwater and human health criteria for consumption of water and aquatic organisms), that could indirectly lead to unacceptable human health risks, and/or that could result in concentrations in the river above sediment cleanup goals. In addition, prevent direct human exposure by dermal contact with or ingestion of groundwater by occupants and/or workers within the Source Area that contain contamination in excess of ARARs. Finally, comply with the federal drinking water standards.

3.2 Applicable or Relevant and Appropriate Requirements

Complete details regarding potential ARARs and guidance and advisories (TBC criteria) identified for the CMRP site are presented in Section 3.2 and Table 3-1 of the 2010 FS. Potential ARARs are updated in this Addendum to identify RIDEM's GA leachability criteria (RIDEM, 2004) and federal MCLs and non-zero MCLGs for drinking water (EPA, 2009a) as potential ARARs for Source Area soil and groundwater, respectively, based on the federal groundwater classification at the Source Area (Class IIB, Potential Source of Drinking Water). Guidance and advisories are also updated in this Addendum to identify EPA's recommended residential level for PCBs in soil (EPA, 1990) as a TBC criteria for CMRP site soil. The updated list of potential ARARs and TBCs for the CMRP site are summarized in Table 3-1.

Waste characterization and potential disposal options for the CMRP site presented in Section 3.2.1.2 of the 2010 FS are also updated in this Addendum to clarify that a small amount of soil excavated at the Oxbow may require treatment prior to disposal based on results from the 2010 Oxbow investigation which showed dioxin contamination above the 10 times the Universal Treatment Standard (UTS) criteria in two out of 40 samples analyzed. The 2010 FS also assumed that a treatability variance would be needed to apply the alternative treatment standards for contaminated soil to sediment. Based on further consideration, EPA believes that the alternative treatment standards can be used for dewatered sediment (Table 3-2) without first obtaining a treatability variance. Cost estimates developed in the 2010 FS for the sediment alternatives (off-site disposal option) are updated in this Addendum based on the assumption that 10% of the contaminated material (rather than 50%) would require treatment to meet land disposal restrictions (LDRs, approximately 10% of the sediment data for the CMRP site contain dioxin at concentrations above the alternative treatment standards).

3.3 Preliminary Remediation Goals

Complete details regarding risk-based PRGs developed for exposure scenarios and contaminants that pose a risk to human and/or ecological receptors at the CMRP site are presented in Section 3.3 and Appendices D and F of the 2010 FS (Battelle, 2010). Risk-based PRGs for Lyman Mill Reach floodplain soil are updated in this Addendum (see Appendix F, Table F-2a) based on findings from the supplemental risk assessments and PRG evaluations for the Oxbow area (MACTEC and Battelle, 2011a and 2011b), and supercede PRGs presented in the 2010 FS (Appendices D and F) for this exposure area and medium.

PRGs for Lyman Mill Reach floodplain soil were developed at various risk levels (excess lifetime cancer risk of 10^{-6}, 10^{-5}, and 10^{-4} and non-cancer HQs of 0.1, 1.0, and 10) for exposure scenarios and contaminants that pose a risk to human and/or ecological receptors at the Oxbow area within Lyman Mill Reach. PRGs were developed consistent with EPA guidelines (EPA, 1991, 2001a, and 2002), and are based on the supplemental risk assessments conducted for the Oxbow area (MACTEC and Battelle, 2011a) and the physical and chemical conditions of the site. As a result, the PRGs are site-specific and appropriate for use in the remedial decision-making process. Site-specific human health and ecological PRGs for Lyman Mill Reach floodplain soil are summarized below.

Human Health PRGs. PRGs were developed for the passive recreational visitor exposed through direct contact with and incidental ingestion of contaminants in floodplain soil at the Oxbow area of Lyman Mill Reach. The contaminants identified based on cancer risk are dioxins and furans (reported as dioxin TEQ), arsenic, and benzo(a)pyrene. No contaminants were identified based on non-cancer risk (HQ greater than 1.0).

Ecological PRGs. PRGs were developed for soil invertebrates (earthworm) and vermivorous wildlife (American woodcock, short-tailed shrew) for the following contaminants: dioxin (2,3,7,8-TCDD), 4,4'-DDT, 4,4'-DDE, antimony, and copper.

3.4 Cleanup Goals

The general approach and rationale used to develop remediation or cleanup goals for contaminated media at the CMRP site is presented in Section 3.4 and Appendix F of the 2010 FS (Battelle, 2010). Overall, the cleanup goals are used to delineate the proposed cleanup areas and are based on an evaluation of potential ARARs, TBCs, risk-based PRGs and site background data. Cleanup goals for Source Area soil, groundwater, and Lyman Mill Reach floodplain soil are updated in this Addendum to consider changes to the ARARs, TBCs and/or risk-based PRGs resulting from the revised groundwater classification at the Source Area (Section 3.2), inclusion of EPA's recommended residential level for PCBs in soil (Section 3.2), and revised PRGs for Lyman Mill Reach floodplain soil (Section 3.3) developed based on the supplemental risk assessments for the Oxbow Area.

Lyman Mill Reach Floodplain Soil. Cleanup goals for floodplain soil are summarized in Table 3-4. Cleanup goals are based on an evaluation of potential ARARs, TBCs, PRGs and site data. Potential ARARs include RIDEM's residential direct exposure and GB leachability criteria (RIDEM, 2004). TBCs include EPA's recommended residential level for dioxin and PCB in soil (EPA, 1998 and 1990). PRGs include risk-based concentrations and are based on the most sensitive receptor or exposure pathway. For carcinogenic effects, the lowest risk level value (PRG associated with 10^{-6} risk) was used. For non-carcinogenic effects and all ecologically-protective PRGs, the middle risk level value (PRG associated with target HQ of 1) was used.

Cleanup goals for floodplain soil were determined in an iterative approach. First, the site data were evaluated to identify contaminants detected at concentrations in excess of the ARARs or TBCs (see Appendix F, Table F-2b for comparison of site data to ARARs and TBCs; Appendix F in this Addendum has been updated to include the 2010 Oxbow area data). Next, the site data were statistically evaluated using methods established for the RI (Battelle, 2005) to determine if the contaminants detected at concentrations in excess of ARARs were consistent with background conditions.[5] Contaminants that were detected in excess of ARARs or TBCs and were determined to be significantly higher than background conditions (i.e., dioxin TEQ and antimony) were retained for cleanup goal determination. Contaminants detected in excess of ARARs or TBCs but found to be consistent with, or less than background conditions were not included in the determination of cleanup goals unless a risk-based PRG was available for the contaminant.

Next, for contaminants with an ARAR, TBC and PRG, the lower of the values was compared to the site background concentration to determine the cleanup goal (Appendix F, Table F-2a). (Where multiple PRGs were available, the more protective PRG value based on the most sensitive receptor and exposure pathway was used in the comparison.) For example, the ARAR and PRG values for antimony are 10 mg/kg (based on RIDEM residential direct exposure criteria) and 0.44 mg/kg (based on an ecological health endpoint - Short tail shrew diet), respectively. The lower of the two values (ecological health PRG

[5] Statistical evaluations conducted for the 2010 FS (Battelle, 2010) were not repeated in this Addendum.

of 0.44 mg/kg) was then compared to the background concentration (0.62 mg/kg), and the higher of the values was identified as the proposed cleanup goal (0.62 mg/kg, background). Overall, cleanup goals were developed for a number of contaminants in floodplain soil, including dioxin (2,3,7,8-TCDD and TEQ), 4,4'-DDE, 4,4'-DDT, antimony, arsenic, copper, and benzo(a)pyrene, and are frequently based on background (Table 3-4).

Source Area Soil. Cleanup goals for soil at the Source Area are summarized in Table 3-6. Cleanup goals are based on an evaluation of potential ARARs, TBCs, and site data. Potential ARARs include Rule 8.02B of the Rhode Island Remediation Regulations (RIDEM, 2004), which states that soil contaminated as a result of a release of hazardous materials must be remediated in a manner that meets the direct exposure *and* leachability criteria for each hazardous substance present. Because the CMRP site is used for residential purposes, the residential direct exposure and leachability criteria are potential ARARs for the site, and these criteria must be applied to soil throughout the vadose zone. The leachability criteria are intended to ensure protection of the designated groundwater classification. Because the groundwater is federally classified as IIB, despite Rhode Island's GB classification, the GA leachability criteria are relevant and appropriate for Source Area soil as long as there is a corresponding federal MCL or non-zero MCLG and application of these criteria does not contribute to actual or potential adverse impacts to surface water and/or sediment. Rule 8.02B has been promulgated for VOCs, SVOCs, pesticides, PCBs, and inorganics (residential direct exposure and leachability criteria for all contaminant classes). Potential TBCs include EPA's recommended residential level for dioxin and PCBs in soil (EPA, 1998 and 1990). EPA's recommended residential level for dioxin was used as the cleanup level for residential properties, and was used as the basis for the first TCRA and the non-time critical removal action (NTCRA).

Contaminants detected in Source Area soil at concentrations in excess of the ARARs (for vadose zone soil) or TBCs (for surface soil) were used in the determination of cleanup goals (see Appendix F, Table F-4b for comparison of Source Area soil data to ARARs and TBCs). For contaminants with multiple ARAR values, the lower (more protective) value was identified as the proposed cleanup goal (Appendix F, Table F-4a). For example, potential ARARs for benzene are 2.5 mg/kg (RIDEM residential direct exposure criteria) and 0.2 mg/kg (RIDEM GA soil leachability criteria). The lower of these values (0.2 mg/kg) was identified as the proposed cleanup goal. Overall, cleanup goals are proposed for a number of contaminants, including dioxin (as TEQ) and selected VOCs, SVOCs, pesticides/PCBs, and inorganics (Table 3-6).

Groundwater. Cleanup goals for groundwater within the Source Area are summarized in Table 3-7. Cleanup goals are based on an evaluation of potential ARARs and site data. Potential ARARs include the federal MCLs and non-zero MCLGs for drinking water (EPA, 2009a), which are promulgated for dioxin (2,3,7,8-TCDD), VOCs, SVOCs, pesticides, PCBs, and/or inorganics. Contaminants detected in groundwater within the Source Area at concentrations in excess of the ARARs (see Appendix F, Table F-5b for comparison of groundwater data to ARARs) were used in the determination of cleanup goals. Overall, cleanup goals are proposed for several contaminants, including dioxin (2,3,7,8-TCDD) and selected VOCs and inorganics (Table 3-7).

3.5 Areas and Volumes Above Cleanup Goals

The approach used to delineate proposed areas and volumes of sediment, soil, and groundwater for cleanup at the CMRP site is presented in Section 3.5 and Appendix G of the 2010 FS (Battelle, 2010). Overall, the proposed cleanup areas encompass all sampling locations with contaminant concentrations above the cleanup goals. The theoretical volumes are based on the removal depth needed to reach the cleanup goals, but do not include any allowance for over-excavation or over-dredging which is needed to perform the remediation. Cleanup areas as conveyed in the 2010 FS and this Addendum are conceptual. More precise cleanup areas will be developed during the remedial design as described in the 2010 FS.

Proposed cleanup areas for the groundwater and Lyman Mill Reach stream sediment and floodplain soil action areas are updated in this Addendum based on a comparison of site data (including data from the 2010 Oxbow area investigation) to the revised cleanup goals (Section 3.4). While the cleanup goals for Source Area soil were also revised (Section 3.4), there are no impacts to the cleanup area for this action area because all locations with contaminant concentrations above the revised cleanup goals are encompassed within the cleanup area proposed in the FS (Figure 3-5 in the FS). Areas and theoretical volumes for cleanup are summarized in Table 3-8, by action area and media.

3.5.1 Lyman Mill Reach Stream Sediment and Floodplain Soil

The proposed cleanup area for Lyman Mill Reach stream sediment and floodplain soil is shown in Figure 3-4. The proposed area is approximately 28.7 acres, with a volume of approximately 58,400 cubic yards (cy). The spatial extent of the proposed cleanup area encompasses contaminated sediment and floodplain soil within the stream channel and old mill raceway connecting Allendale and Lyman Mill Ponds, the Oxbow area, and floodplain areas abutting Lyman Mill Pond. Sediment within the Oxbow area is located within the abandoned channel (i.e., remnant of the former river channel that previously received flow at its eastern end and flowed westward and then in a southerly direction to Lyman Mill Pond) and within the scrub-shrub and emergent marsh habitat at the southern end of the Oxbow (Figure 3-4). Median concentrations of dioxin (2,3,7,8-TCDD) in Oxbow area sediment are comparable to concentrations measured in Allendale and Lyman Mill Pond sediment (see Section 2.4.1), suggesting that the Oxbow area is a net depositional environment and has a potential to serve as a sink for sediment-bound contaminants. The sediment cleanup goal developed for dioxin in Allendale and Lyman Mill Pond sediment (14.7 ng/kg, based on background [Battelle, 2010]) was used to delineate proposed sediment cleanup areas at the Oxbow because contaminated sediment at the Oxbow area could pose a risk to ecological receptors[6] and are a potential secondary source of contamination to downstream areas if remobilized during flooding events (MACTEC and Battelle, 2011a).

Stream Sediment – The proposed cleanup area for Lyman Mill reach stream sediment is shown in Figure 3-4. The spatial extent of the proposed cleanup area encompasses the main stream channel connecting Allendale and Lyman Mill Ponds, the abandoned channel bisecting the Oxbow area, and the scrub-shrub and emergent marsh habitat at the southern end of the Oxbow. Contaminant concentrations are above the cleanup goals throughout these areas (see Appendix G, Table G-8 and Figure G-4). The cleanup area at the southern end of the Oxbow generally follows the 80-ft topographic contour because the available data (including data from the 2010 Oxbow area investigation) indicate that the highest contaminant concentrations are primarily within 1 to 2 ft of the normal water elevation. Concentrations of dioxin (2,3,7,8-TCDD) are above the cleanup goal of 14.7 ng/kg in all surface (top 1 foot) sediment sampled within the Oxbow area. The vertical extent of footprint varies from 1 ft bgs to 3 ft bgs, and represents the depth needed to reach clean sediment based on a comparison of sub-surface (>1 ft bgs) data to the cleanup goals. Where sub-surface data were not available, the vertical extent of the footprint was assumed to be 1 ft bgs, which encompasses the area where the most significant ecological exposures occur. The actual depth of removal would be determined during design based on sampling and analysis of deeper sediment samples.

[6] The Supplemental BERA (MACTEC and Battelle, 2011a) conducted a qualitative evaluation of the sediment data available for the Oxbow area including the scrub-shrub habitat located in the southern portion as well as the remnant river channel that bisects the area. As discussed in the Supplemental BERA, wildlife exposures within the scrub-shrub habitat may be somewhat limited due to the nature of the habitat and prey types and life stages available. Although application of sediment cleanup goals that are protective of bioaccumulation hazards posed by contaminants developed for Lyman Mill Pond might be considered unduly conservative, it is warranted because of the recontamination threat posed by the periodic flooding of this area. The Lyman Mill sediment cleanup goals are directly applicable to the remnant river channel that bisects the Oxbow Area.

Floodplain Soil – The proposed cleanup area for Lyman Mill floodplain soil is shown in Figure 3-4. The spatial extent of the proposed cleanup area encompasses contaminated soil within the 100-year floodplain of the Oxbow and Lyman Mill Pond areas as described below.

Oxbow Area. The proposed areas for cleanup at the Oxbow encompass soil within the 100-year floodplain with contaminant concentrations above the cleanup goals (see Appendix G, Table G-9 and Figure G-4). Floodplain areas at higher elevations west of the stream channel are not included in the proposed cleanup area (Figure 3-4) because contaminant concentrations were below the cleanup goals (Appendix G, Figure G-4).

Lyman Mill Pond. Following the NTCRA performed in 2002 and 2003, floodplain soil along the shore of Lyman Mill Pond poses an exposure hazard to ecological receptors only. Therefore, the spatial extent of the proposed cleanup area was delineated to include only areas with contaminant concentrations above the cleanup goals (see Appendix G, Table G-9 and Figure G-4) that represent high value ecological floodplain habitat or have potential for erosion as follows:

- The small area along the eastern shore south of Falco Street (contaminant concentrations are above the cleanup goals, including dioxin TEQ above EPA's recommended residential level);
- The small patch of forested area occurring along the eastern shore north of Water Street (contaminant concentrations are above the cleanup goals); and,
- The small peninsula north of the confluence of Assapumpset Brook and Lyman Mill Pond (available contaminant data for this area are above the cleanup goals and this area has potential for erosion).

Floodplain areas that do not represent high value ecological habitat (i.e., areas that are developed, in close proximity to residential structures and lacking native vegetation or where the grade is steep and the riparian zone only narrowly defined) and have low potential for erosion were excluded from the proposed cleanup area (Appendix G, Table G-9 and Figure G-4), as follows:

- The small isolated patches of floodplain vegetation occurring along the eastern shore, between Warren Avenue and Lyman Mill Dam; and
- The western shore of Lyman Mill Pond, except the small peninsula north of the confluence of Assapumpset Brook and Lyman Mill Pond which is included in the cleanup area because it is a large depositional area that has likely been impacted by riverborne contaminants and could represent a substantial recontamination hazard.

3.5.2 Groundwater

The proposed cleanup area for groundwater within the Source Area is shown in Figure 3-6. The proposed cleanup area is approximately 8 acres and encompasses nearly the entire Source Area. The cleanup area is a much larger area than the area proposed for cleanup in the 2010 FS (0.13 acres) because contaminant concentrations in groundwater are above the revised cleanup goals (federal MCLs/non-zero MCLGs for drinking water) at numerous locations throughout the Source Area (see Section 2.4.1 and Figures 2-15, 2-15a, and 2-15b). The cleanup volume was not determined because it is variable and dependent upon the specific cleanup alternative.

4.0 IDENTIFICATION AND SCREENING OF REMEDIAL TECHNOLOGIES AND PROCESS OPTIONS

Remedial technologies (i.e., general categories of remediation mechanisms or tools, such as isolation caps or dredging) and process options (i.e., specific processes within each technology family, such as using sand for an isolation cap or mechanical equipment for dredging) were evaluated in Section 4.0 of the 2010 FS based on a subset of the NCP screening criteria (effectiveness, implementability, and cost) to eliminate technologies and process options that are inappropriate or infeasible for the CMRP site. Complete details of the screening analysis and a description of the screening criteria are presented in Section 4.0 of the 2010 FS. Supplemental site activities conducted since the completion of the FS in 2010 do not impact the screening analysis. However, Section 4.5 of the 2010 FS, which evaluates technology impacts on wetlands and floodplains, is updated in this Addendum to clarify that according to a Stage 1A cultural resource survey performed by U.S. Army Corps of Engineers (USACE, 2011a), the Allendale Mill is individually listed on the National Register of Historic Places (NRHP), and the Allendale Historic District and Lymansville Company Mill are considered eligible and/or potentially eligible for listing on the NRHP:

> *"The Allendale Mill, located south of the source area, is individually listed on the National Register of Historic Places (NRHP). The Allendale Historic District, an early 19th century mill village that grew up around the mill and consists of workers cottages, a store, a chapel, and associated mill pond, is considered eligible for listing on the NRHP. The Lymansville Company Mill, a late 19th century factory south of the Allendale Mill and Historic District, is also considered potentially eligible for listing on the NRHP. The current mill owners are undertaking the preparation of a National Register nomination for the Lymansville Mill…."* (USACE, 2011a)

The Stage 1A cultural resource survey was performed to identify known or potential archaeological and historical resources and assess the potential for historic and archaeological resources to be present within the area of potential effect from remedial action (USACE, 2011a). Remediation measures utilizing capping, excavation, dam removal, and other significant alterations of the mill ponds and riverbanks in the Allendale Historic District and the Lyman Mill area have the potential to adversely impact significant historic features and archaeological deposits (USACE, 2011b). If, during remedial design or remedial action, it is determined that the remedial action may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archaeological data, then EPA will notify the Department of Interior (DOI) and comply with all statutory requirements as set forth in the Archaeological and Historical Preservation Act of 1974 (Table 3-1).

5.0 IDENTIFICATION AND SCREENING OF REMEDIAL ALTERNATIVES

Complete details regarding the range of remedial alternatives developed to address contaminated sediment, soil, and groundwater at the CMRP site, and results from the screening analysis performed to reduce the number of alternatives for detailed analysis are presented in Section 5.0 of the 2010 FS (Battelle, 2010). The screening analysis is not repeated in this Addendum because the results of the analysis have not changed. Any changes to the alternative descriptions (e.g., changes to excavation areas and volumes, cover areas, costs) and evaluations against the screening criteria, as a result of revised RAOs, ARARs, TBCs, cleanup goals, and cleanup areas (Section 3.0 of this Addendum), are captured in the detailed analysis of remedial alternatives presented in Section 6.0 of this Addendum.

6.0 DETAILED EVALUATION OF REMEDIAL ALTERNATIVES

Remedial alternatives were developed and evaluated in the 2010 FS to address contaminated sediment, soil, and groundwater that present an unacceptable risk to human health and the environment at the CMRP site. The alternatives with the most favorable evaluation from the screening analysis performed in Section 5.0 of the 2010 FS were retained for a more detailed evaluation in Section 6.0 of the 2010 FS. The detailed evaluation of select remedial alternatives developed for the Source Area soil and Lyman Mill Reach stream sediment and floodplain soil action areas are refined in this Addendum to consider the RAOs, ARARs, TBCs, and cleanup areas that have been revised (see Sections 3.1, 3.2 and 3.5) as a result of the supplemental site activities performed following the completion of the FS in 2010. Specifically,

- **Source Area Soil Alternative 3e, Targeted Excavation, Upgrade and Maintain Existing Surfaces, and Off-site Disposal and/or Treatment** is updated in this Addendum to expand the excavation areas to encompass locations with contaminant concentrations above the GA leachability criteria in order to meet the revised RAOs (i.e., prevent leaching or migration of contaminants from vadose zone soil that would result in groundwater contamination in excess of ARARs [e.g., MCLs/non-zero MCLGs).
- **Lyman Mill Reach Stream Sediment and Floodplain Soil Alternative 3, Limited Excavation, Enhanced Natural Recovery, and Disposal and/or Treatment** and **Alternative 5, Partial Excavation, Enhanced Natural Recovery, and Disposal and/or Treatment** are updated in this Addendum to address contamination at the revised cleanup area and to re-evaluate areas for excavation and thin-layer cover based on results from the 2010–2011 supplemental investigations at the Oxbow area.

The RAOs, ARARs, cleanup goals, and cleanup areas for groundwater within the Source Area are also updated in this Addendum based on the revised federal groundwater classification (Class IIB). However, groundwater remedial alternatives are not updated in this Addendum because the proposed cleanup action for groundwater, generally described as Source Area Groundwater Alternative 2e (Excavation/ Dewatering) in the 2010 FS, was constructed under the 2009–2010 TCRA (Section 2.2.1), and additional parts of the proposed groundwater cleanup action that have not been implemented (e.g., institutional controls [ICs], long-term monitoring, and five-year reviews) are generally the same as described in the 2010 FS (Section 6.10.2). One notable exception, however, is that the present worth costs for the proposed groundwater cleanup action would be substantially higher than estimated in the 2010 FS (Sections 6.10.2.2 and 6.11.7, Table 6-40, and Appendix J) because the larger cleanup area (approximately 8 acres proposed in this Addendum versus 0.13 acres proposed in the 2010 FS) would result in additional groundwater monitoring well construction and monitoring costs to evaluate the effectiveness of the removal action and confirm compliance with the drinking water standards. As a result, the present worth cost estimates for Source Area Groundwater Alternative 2e, Excavation/Dewatering are updated in this Addendum to account for the additional monitoring requirements.

Remedial alternatives developed in the 2010 FS for Allendale and Lyman Mill pond/river sediment and Allendale Reach floodplain soil are not impacted by the supplemental site activities performed since the completion of the FS in 2010, except that the Archaeological and Historical Preservation Act, National Historic Preservation Act (NHPA), and Rhode Island Historic Preservation Act are location-specific ARARs for the sediment and soil alternatives based on findings from the Stage 1A cultural resource survey which identified historic properties at the site (see Section 4.0). Additionally, the amount of treatment assumed under the off-site disposal option (Option e) for the sediment alternatives is expected to be reduced (from 50% to 10%), resulting in lower disposal costs, by using the alternative treatment standards for soil for dewatered sediment (Section 3.2). Alternative-specific detailed analysis and ARAR tables for the sediment and soil alternatives have been updated accordingly, and are provided in Appendix

O to this Addendum. Alternative-specific ARAR tables for the groundwater alternatives have also been updated based on the revised groundwater classification, and are also provided in Appendix O.

6.1 Lyman Mill Reach Stream Sediment and Floodplain Soil Alternatives

The detailed evaluation of Lyman Mill Reach stream sediment and floodplain soil alternatives presented in Section 6.6 of the 2010 FS is refined in this Addendum to consider information from the 2010–2011 supplemental investigations at the Oxbow area which resulted in revised cleanup goals, areas, and volumes for this action area, and which impacts the areas for excavation and enhanced natural recovery (ENR, i.e., thin-layer cover) proposed under Alternatives 3 and 5 in the 2010 FS. While the No Action alternative is not impacted (except for the time to achieve RAOs as described below), it is included in this Addendum to facilitate the comparative analysis of alternatives and better understand the key tradeoffs among the alternatives.

Lyman Mill Reach Stream Sediment and Floodplain Soil Alternatives Retained for Detailed Analysis

1	No Action
3	Targeted Excavation, Enhanced Natural Recovery, and Disposal and/or Treatment
5	Partial Excavation, Enhanced Natural Recovery, and Disposal and/or Treatment

This section includes a detailed analysis of the alternatives developed to achieve the RAOs for sediment and soil at Lyman Mill Reach described below. Alternatives are described in detail and evaluated against the NCP criteria (excluding State and Community Acceptance, which are considered after comments to the FS and Proposed Plan are received; see Section 6.1 of the 2010 FS for a detailed description of the NCP criteria). All of the alternatives, with the exception of No Action, assume that the Allendale and Lyman Mill Dams will remain in place. It is also assumed that implementation of a floodplain soil remedy would be carried out concurrently with the pond sediment remedy at Lyman Mill, and that any excavation activities would be conducted after the pond water levels had been temporarily lowered. Additionally, it is assumed that all work would be performed in an upstream to downstream direction to prevent re-contamination of areas previously remediated. Some wetlands are located at this action area, including the Oxbow, a forested wetland located southwest of Allendale Dam (Section 2.3.10 of the 2010 FS). Because some sediment/soil contamination is located in wetland areas, there is no practical alternative to destruction of these wetlands.

RAOs for Sediment and Soil at Lyman Mill Reach	
Sediment	**Floodplain Soil**
Prevent direct human exposure by incidental ingestion of and dermal contact with sediment or human ingestion of fish and other aquatic organisms containing contaminants at concentrations that would result in: • a total ELCR greater than the target risk range of 10^{-6} to 10^{-4}; or • an HI greater than 1. Prevent dermal contact and ingestion by ecological receptors to sediment containing contaminants at levels that would result in unacceptable impacts.	Prevent direct human exposure by incidental ingestion of and dermal contact with floodplain soil containing contaminants at concentrations in excess of: • ARARs (e.g., RIDEM residential direct exposure and GB leachability criteria); • a total ELCR greater than the target risk[7] range of 10^{-6} to 10^{-5}; • an HI greater than 1; and/or • EPA's recommended residential level for dioxin. Prevent dermal contact and ingestion by ecological receptors to floodplain soil containing contaminants at levels that would result in unacceptable impacts. For ecological receptors, maximize hazard reduction and minimize remediation-related habitat loss.
• Prevent migration of contaminants from floodplain soil and sediment that would result in river surface water concentrations in excess of ARARs or migration of contaminants downstream that could result in concentrations in the river above sediment cleanup goals.	

[7] The Rhode Island Site Remediation Regulations define acceptable carcinogenic risk as within the range of 10^{-6} to 10^{-5}.

6.1.1 Alternative 1: No Action

6.1.1.1 Description of No Action

In accordance with the NCP requirements, the No Action alternative must be carried through the entire FS process, and is used as a basis of comparison to the other alternatives. This alternative would entail no active remediation of the contaminated sediment or floodplain soil. Five-year reviews and periodic monitoring, triggered by severe weather events, are incorporated into this alternative. For cost estimating, it is assumed that there would be one physical survey and report to EPA on the conditions of the site every five years. Monitored natural recovery processes, ICs, and rigorous long-term monitoring are not components of this alternative.

6.1.1.2 Evaluation of No Action

Results from the evaluation of Alternative 1, No Action against the NCP criteria are discussed below and summarized in Table 6-22.

Overall Protection of Human Health and the Environment

The No Action alternative would not provide overall protection because contaminated material presenting a risk to human health and the environment would remain on site unaddressed. Assuming additional actions are taken upstream to address soil and sediment, future migration of contaminated sediment from Allendale Pond to the Lyman Mill Reach would be reduced. Natural deposition of cleaner material at Lyman Mill Reach may eventually reduce the overall risk with time; however, because rigorous long-term monitoring would not be conducted, there would be no way to demonstrate or evaluate this reduction.

Compliance with ARARs

This alternative will not comply with ARARs for state residential direct exposure or EPA's recommended residential level for dioxin in soil (EPA, 1998) (Table 6-23).

Long-Term Effectiveness and Permanence

The No Action alternative would not be effective in the long term because no action would be taken to contain, reduce erosion and downstream transport, or remove the contaminated sediment/soil that presents a risk. The residual risk remains high as no actions are taken to address sediment/soil and no controls are in place to adequately and/or reliably prevent exposure in the long term.

Reduction of Toxicity, Mobility or Volume through Treatment

There would be no reduction of toxicity, mobility or volume of contamination through treatment.

Short-Term Effectiveness

This alternative would have no short-term impacts because there would not be any intrusive work into the contaminated sediment/soil that could disrupt the local community or environment or present a risk to on-site workers. However, it would not achieve the RAOs.

Implementability

This alternative would be easily implemented because it would not require engineering or physical construction. This alternative would not require any institutional or access controls or maintenance of existing features (e.g., dams). The implementation of periodic monitoring would not present any unusual issues.

Cost

There would be no capital costs for this alternative. The cost for periodic monitoring of site conditions and five-year reviews would be approximately $20,000 for a present worth cost of approximately $250,000.

6.1.2 Alternative 3: Targeted Excavation, Enhanced Natural Recovery (Thin-Layer Cover) and Disposal and/or Treatment

6.1.2.1 Description of Targeted Excavation, Enhanced Natural Recovery (Thin-Layer Cover) and Disposal and/or Treatment

Alternative 3 includes excavation and removal of contaminated sediment and floodplain soil from targeted areas within the cleanup area and placement of a thin-layer cover over the remaining areas to accelerate the natural recovery processes by placing clean material over the underlying contaminated material. Areas targeted for excavation include 1) erosional areas with contaminant concentrations above the cleanup goals where a thin-layer cover is not suitable and contaminated sediment/soil could be transported downstream if remobilized during flooding events and 2) areas with contaminant concentrations in excess of RIDEM's residential direct exposure criteria (except where background is an issue; there are no exceedances of the GB leachability criteria) and EPA's recommended residential level for dioxin in soil (EPA, 1998; there are no exceedances of EPA's recommended residential level for PCBs).

Under this alternative, access areas would need to be created so that all areas of the cleanup area could be reached. Additionally, staging areas to stockpile the cover material would be required. Space surrounding the site is limited and any work would need to be closely coordinated with local authorities to ensure that access to residential properties is not compromised and to ensure that measures would be taken to protect public health during remedy implementation. It is assumed that the remedy selected for this area would be implemented concurrently with the remedy for Lyman Mill Pond sediment and would use the staging areas and access roadways installed for the sediment remediation and that any excavation activities would be conducted after the pond water levels were temporarily lowered.

Figure 5-26 shows areas for excavation and thin-layer cover within the Lyman Mill Reach stream sediment and floodplain soil cleanup area. Moving north to south, targeted excavation would be used to:

- Remove the top 1 foot of sediment from the stream channel connecting Allendale and Lyman Mill Ponds. Contaminant concentrations are above the cleanup goals in stream sediment (see Appendix G, Table G-8 and Figure G-4) and this area would not be suitable for a thin-layer cover;
- Remove the top 1 foot of floodplain soil from areas where contaminant concentrations are in excess of state ARARs for residential direct exposure (except where background is an issue) or EPA's recommended residential level for dioxin in soil (EPA, 1998) (see Appendix G, Table G-9 and Figure G-4); and

- Remove the top 1 to 3 ft of sediment in and abutting channel areas in the southern Oxbow area. Contaminated sediment from these areas could be transported downstream if remobilized during flooding events.

A 1-foot excavation depth was assumed for the stream channel and floodplain soil areas because this is generally considered the depth to which the majority of relevant ecological exposures occur as a result of foraging or burrowing activities, as well as human exposure. For floodplain soil, the actual depth of excavation would extend deeper within the vadose zone as necessary to meet ARARs or EPA's dioxin requirements. The excavation depth of 1 ft bgs for sediment in the stream channel and 1 to 3 ft bgs for sediment in the southern Oxbow area is based on the depth needed to reach clean substrate (see Section 3.5.1 of this Addendum). The excavation depth for sediment and soil areas would be determined during design based on sampling and analysis of deeper sediment/soil samples. Excavation and backfill volumes would also be evaluated during design to ensure no net loss of flood storage capacity from placement of the thin-layer cover in wetland/floodplain areas. (This alternative assumes no net loss of flood storage capacity as described below under Excavation/Backfill Volumes and Rates). Data needs would include, but may not be limited to, the collection of floodplain soil and sediment samples within the cleanup area, as well as a survey to more precisely delineate the boundaries between the various vegetation types represented.

Following removal, confirmation sampling would be conducted to verify that the cleanup goals were achieved (see Appendix J for assumptions regarding types and quantities of confirmation samples), and the excavated sediment/soil would be disposed or treated. The sequence of excavation activities, excavation/backfill volumes and rates, cover placement, sediment/soil processing, flow control structures, mitigation activities, long-term monitoring and ICs, and disposal or treatment options are described below.

Construction Sequence

A typical construction sequence is presented below:

1. Construct temporary access roads and staging areas.
2. Clear debris and vegetation as necessary.
3. Excavate contaminated sediment/soil in an upstream to downstream direction, stockpile and dispose.
4. If material was to be disposed off site, testing would be conducted to determine the appropriate disposal designation.
5. Evaluate confirmation samples and backfill excavated areas with clean material.
6. Place enhanced natural cover in areas that were not remediated with excavation, which could be performed concurrently with backfill placement.
7. Plant appropriate types of vegetation within the excavation footprint to enhance ecosystem recovery.

Excavation/Backfill Volumes and Rates

Sediment and floodplain soil would be removed after the pond water levels were temporarily lowered (for the sediment remedy at Lyman Mill). In this alternative, 6.5 acres would be excavated (Figure 5-26) and backfilled with clean material to provide subgrade for re-vegetation of the area.[8]

- Approximately 20,500 cy of floodplain soil and stream sediment would be removed from the excavation footprint under this alternative, including a 0.25 foot over-excavation allowance.
- Approximately 15,600 tons (10,400 cy) of soil would be placed as backfill in the excavation area.
- Approximately 13,500 tons (or 9,000 cy) of soil would be placed for the thin-layer cover.

The backfill volume assumes that all excavation areas would be backfilled with 1 foot of clean material, which would provide a high quality substrate for restoring the terrestrial (floodplain soil) and aquatic (sediment) invertebrate communities and vegetation in the floodplain. A uniform 1-ft backfill volume would also result in a post-remediation elevation lower than existing conditions in areas where the excavation footprint extends deeper than 1 foot (i.e., sediment areas in southern Oxbow area), and this would provide additional (to that previously discussed in the 2010 FS) mitigation for lost flood storage capacity from the thin-layer cover as well as greater flow capacity in the river. The criteria used to select backfill material and determine excavation depth for the stream channel connecting Allendale and Lyman Mill Ponds would include adequacy of erosion protection during flood flows and benthic habitat suitability.

The excavation rate for sediment and floodplain soil is assumed to be 200 cubic yards per day (cy/d); the placement rate of clean backfill is assumed to be 500 tons/day; placement of thin-layer cover is assumed to be 70 tons/day; and the rate of replanting vegetation is assumed to be 7,400 square feet per day (sq ft/d). Including the required wetland mitigation and streambank restoration activities (see discussion on mitigation below), it is estimated that this alternative would take approximately one year to implement.

Cover Design and Placement

The final composition and thickness of the cover would be determined during the design phase; however, for the purposes of evaluating this alternative, a cover thickness of 3 inches with a composition similar to the existing soil is assumed for floodplain habitat within the Oxbow area. In aquatic sections of the cleanup area, the cover material would have a particle size distribution and organic carbon content designed to optimize rapid recolonization of the substrate by benthos.

The cover material would be placed over 22.2 acres of contaminated sediment and floodplain soil within the entire cleanup area (28.7 acres) that were not remediated by excavation (Figure 5-26). The conventional method of placing cover material would be to deliver material to the site by dump truck, dump the cover material onto the ground, and spread with crawler tractors with bulldozing blades. This

[8] Appendix N of the 2010 FS describes how the excavation area and volume for Alternative 3 would change if EPA's draft recommended interim PRG for dioxin in soil (i.e., 72 ng/kg based on residential exposure scenario; EPA, 2009b) is adopted. Appendix N of the 2010 FS indicates that the excavation area could be expanded to encompass the entire eastern shore of Lyman Mill Pond, resulting in an incremental increase in the excavation volume of approximately 6,480 cy (includes 0.25-ft over-excavation allowance) if EPA's draft interim PRG is adopted. Supplemental site activities conducted since the completion of the FS in 2010 are not expected to substantively impact the incremental increase in the excavation volume presented in Appendix N of the 2010 FS (6,480 cy) because the revised cleanup and excavation areas presented in this Addendum are largely limited to the Oxbow area. Overall, the excavation volume identified in this Addendum for Alternative 3 (20,500 cy) could increase by approximately 6,480 cy assuming that EPA's 2009 draft interim PRG is adopted.

method would require that all trees and shrubs be removed and would trample and uproot a significant portion of the existing grass type vegetation in the wetland area. In order to reduce the need for tree and shrub removal and to minimize the impact on the existing roots, an alternative method of cover placement would be used. Under this alternative, cover material would be placed using a hydraulic slurry method that involves adding water to the cover material to form a slurry and then spraying the slurry over the area until the appropriate thickness is achieved. Although the concept of pumping soil slurries has been used for placing aquatic caps and is used in the mining industry, use of this technology for placing wetland covers is an innovative application.

In order to create a soil slurry that could be pumped, water would be added to the soil in a hopper and the slurry fed into pumps connected to a network of pipes and hoses for distribution. A temporary network of slurry pipes would be installed to allow access to the cleanup area. These pipes would be placed on the existing ground surface and held in place with temporary earth anchors or weights (such as sand bags). The pipe and hoses could be placed using small low-ground pressure equipment commonly used in landscape maintenance work. This would have much less impact on the existing vegetation than conventional heavy earthmoving equipment, which can harm or kill trees through soil compaction. Most of the water added to form the slurry (referred to as carriage water) would quickly separate from the cover soil and drain into the wetland. The flow rate of carriage water would be about 300 gallons per minute (gpm). It is expected that this water would result in a temporary increase in the water surface elevation in the wetland; however, no adverse impacts are expected because the wetland is periodically inundated with water during periods of natural flooding.

Placement of 3 inches of clean material would require approximately 13,500 tons of cover material. For cost estimating and scheduling purposes, it is assumed that the slurry would be placed using a 4-inch diameter hose with a total slurry (sand plus carriage water) discharge rate of approximately 350 gpm.

Sediment/Floodplain Soil Processing

It is anticipated that the wetland sediment/soil would contain more vegetation and have a higher in-situ solids content than the river/pond sediment. Therefore, the wetland soil and sediment removed using excavation would not be processed with mechanical dewatering. It is assumed that the final volume and weight in a disposal facility would be the same as the in-situ volume and weight. The excavated sediment/soil would be stockpiled in the same processing area established for pond sediment. Stockpiled sediment/soil would be tested as needed for off-site disposal, and then loaded onto trucks for transport to an appropriately licensed disposal facility. (Under Option 3a, excavated sediment/soil would be characterized during the remedial design phase.)

Flow Control Structures

This alternative would be further developed during the design phase to include diverting some of the flow from the Woonasquatucket River into and through the Oxbow area to increase natural sediment deposition rates. Some site regrading would also be conducted within the Oxbow, including filling and the creation of baffles in portions of the abandoned river channel; this is intended to minimize the short-circuiting of floodwaters through the wetland system and increase sediment deposition rates. This aspect of the alternative may be important if the selected remedy for the sediment includes the removal of Allendale and Lyman Mill Dams. If Lyman Mill Dam was removed, the normal water level would be lower compared to current conditions and the habitat within the Lyman Mill Reach could transition from aquatic to riparian wetland and/or floodplain habitat or even upland in some areas. Deposition rates are

expected to be lower in an upland setting rather than a wetland setting, and removing dams could retard natural recovery processes in these areas.[9]

Mitigation

This remedy would involve the destruction of some existing forested and/or scrub/shrub habitat structure and jurisdictional (federal and state) wetlands. Sediment/soil excavation and application of a cover would either eliminate (sediment/soil excavation) or potentially degrade (thin-layer cover) the invertebrate communities associated with floodplain soil and aquatic sediment. In addition, the remediation of the lotic portion of the river would destroy benthic habitat and disrupt a portion of the adjacent riverbank including some riparian vegetation and tree root systems.

The application of the cover material could be performed during the dormant season to minimize damage to the existing vegetation. This application process significantly reduces the amount of vegetation that would need to be removed or mowed prior to cover placement; however, the placement of 3 inches of cover material may have deleterious effects to the trees within the Oxbow. For example, the cover may make it more difficult for trees to access sufficient oxygen, and could also damage the shallow root systems typical of trees growing in hydric soil. Limited data are available regarding the relative sensitivities of different resident tree species to having their root systems covered with additional soil material. The Iowa State University Forestry Extension Web site provides a classification system based on tolerance to root damage associated with compaction and anoxia. For the species that have been documented occurring in the Oxbow wetland (USACE, 2008), red oak and swamp white oak are classified as being "very sensitive", red maple is considered to be "moderately sensitive", and black willow and cottonwood are considered "somewhat tolerant" to root damage effects. Sensitive species, such as oaks, can be killed by the addition of even a couple inches of fill on existing grade. These effects can be minimized by using cover material that allows air passage (e.g., sandy loam much preferable to clay), avoiding compaction of existing soil, and limiting grade changes to outside the tree canopy dripline. It is anticipated that the majority of the dominant canopy species (e.g., red maple) can be preserved if remedy implementation practices are mindful of the above provisions.

Figure 6-6 from the 2010 FS presents an overview of the different habitat features associated with this alternative and possible mitigation components for each; this overview may need to be updated during design based on the revised excavation and thin-layer cover areas developed in this Addendum. After excavation and evaluation of the confirmation samples, imported backfill (with appropriate humic content to facilitate infaunal recolonization) could be placed to established design grades to provide subgrade for re-vegetation of the area. The area could be planted with common floodplain trees (e.g., black willow, red maple) and fruit-bearing wetland shrubs such as elderberry and highbush blueberry. An appropriate herbaceous seed mix could be applied to rapidly stabilize the soil. The specific species, planting specifications, and monitoring requirements would be identified during the remedial design phase. The vegetation could consist of canopy species saplings (e.g., red maple, cottonwood, and swamp white oak), balled shrubs (e.g., highbush blueberry, alder, and northern arrowwood), and a wetland grass mix (to stabilize exposed soil in the short term).

[9] Some uncertainty remains regarding the potential impacts of replacing the Lyman Mill Dam with a weir structure on hydrological conditions within the Oxbow area. Although a hydrological analysis concluded that there would be no substantive effects on water balance in the wetlands because the area receives much of its water from precipitation and runoff from adjoining upland areas (USACE, 2007), a more detailed assessment during final design would be warranted in the event that this alternative were selected.

Mitigation for impacts associated with the sediment remediation could include backfilling with sediment of similar composition to emulate current benthic habitat structure (and provide similar sediment stability). Restoration of the entire section of river bank could include use of techniques to ensure bank stability (e.g., installation of "Biolog" or an equivalent at toe of the slope and biodegradable erosion control blanket) along with shrub plantings to compensate for loss of riparian vegetation.

Finally, contaminated sediment/soil that was excavated under Alternative 3b would be contained on site in a nearshore CDF and mitigation for the incremental loss of aquatic habitat involved could be provided by the same measures described previously for the pond sediment alternatives (i.e., preservation uplands and/or wetland restoration/replication as described in Section 6.2.2 of the 2010 FS).

Long-Term Monitoring, Dam Maintenance and Institutional Controls

Long-term monitoring, maintenance of Allendale Dam, and ICs would be required to maintain the integrity of the thin-layer cover and stream restoration and prevent activities (e.g., excavation) that could expose the underlying contaminated sediment/soil. Long-term monitoring would be designed to evaluate the integrity of the thin-layer cover and stream restoration, whether any downstream transport of contaminated sediment/soil is occurring, and the rate at which recovery is occurring after the placement of the natural cover material.

For example, sediment/soil monitoring would be performed to evaluate the thickness of the sediment/soil deposited over time and to confirm that the contaminated sediment/soil had not migrated away from this area of the site. Long-term biota monitoring would be conducted to determine biota recovery and when animal tissue was safe to eat. Water quality monitoring would be performed to assess the quality of the surface water and potential for downriver transport. Monitoring downstream of the Lyman Mill Dam would also be performed to assess potential impact of the remedial action on the downstream areas. Periodic reporting would be required to document remedy progress and efficacy, and the long-term monitoring results would be used by the Agencies to determine if additional evaluations or cleanups were warranted. Details of the monitoring plan would be developed during final design. The general approach for monitoring and the assumptions used to estimate annual costs are described in a conceptual long-term monitoring approach presented in Appendix H of the 2010 FS.

Maintenance of the Allendale Dam would be required to prevent sudden release of water that could erode the cover or contaminated sediment/soil, which would not be the case with the downstream Lyman Mill Dam. However, both dams could be removed in a controlled fashion without impact to this alternative. ICs restricting site access and use would be required to prevent the disturbance of the confined disposal facilities (CDFs, Options 3a and 3b) and thin-layer cover (all options). In addition, engineering controls (ECs, such as boardwalks and fencing) could be used to enhance remedy effectiveness by further reducing human exposure.

Disposal and/or Treatment Options

It is assumed that the implementation of a remedial alternative to address Lyman Mill Reach stream sediment and floodplain soil would be carried out concurrently with the pond sediment remediation, and the disposal and/or treatment options would be common to both action areas to improve the overall efficiency of the selected remedies. It is assumed that the on-site disposal and/or treatment option(s) for floodplain soil would only be used if the on-site disposal and/or treatment option(s) was also implemented for the pond sediment remediation. The off-site disposal and/or treatment option could be implemented independent of the selected alternative for the pond sediment. For on-site disposal, the maximum capacity available at potential CDF locations (Section 6.2.2.1 of the 2010 FS) would be sufficient to contain all sediment/soil removed under Alternative 3 (20,500 cy), in addition to all of the pond/river

sediment from Allendale and Lyman Mill (97,700 cy) and floodplain soil from Allendale Reach (2,400 cy) if full-removal alternatives were selected for those action areas.

It may also be possible to use some of the excavated material to assist in grading and building the bottom layer of the cap to be constructed under Alternative 4e of the Source Area soil alternatives (see Section 6.3.3) assuming this alternative was selected. This material would not need to comply with the LDRs because it would be consolidated within an area of contamination. Use of some of the excavated material in this way would reduce the amount of material requiring disposal.

Disposal and/or treatment options are the same as described for pond sediment (Section 6.2.2 of the 2010 FS) and include:

Option 3a: On-site Containment in an Upland CDF
Option 3b: On-site Containment in a Nearshore CDF
Option 3d: On-site Thermal Treatment
Option 3e: Off-site Disposal and/or Treatment

Option 3a: On-site Containment in an Upland CDF

Under this option, the costs assume that the LDR alternative treatment standards in 40 CFR §268.49 can be used for excavated material and that treatment would be required for approximately 10% of the excavated material based on an evaluation of data from the 2010 Oxbow area investigation (approximately 10% of the samples contain dioxin contamination above the LDR alternative treatment standards in 40 CFR §268.49). These assumptions would be confirmed during design.

Option 3b: On-site Containment in a Nearshore CDF

Under this option, the costs assume that treatment is not required because the excavated material would be consolidated in situ in a nearshore CDF within an "area of contamination."

Option 3d: On-site Thermal Treatment

Under this option, the excavated material would be treated on site using thermal treatment (incineration) as described in Section 6.2.2 of the 2010 FS.

Option 3e: Off-site Disposal and/or Treatment

Under this option, the excavated material would be disposed off site as described in Section 6.2.2 of the 2010 FS, either by containment in a designated facility or thermal treatment. Representative, composite samples would be taken and analyzed for dioxin and furans to determine if disposal by incineration is required according to the LDRs (e.g., F-listed or characteristic soil waste with an underlying hazardous constituent that exceeds 10 times the UTS in 40 CFR §268.48 will need to be treated prior to disposal). Representative, composite samples would also be taken and analyzed for toxicity characteristic leaching procedure (TCLP) concentrations to determine the designation of the materials as solid or hazardous waste and to determine which type of landfill is required. Once the appropriate disposal facility is identified, the excavated material would be loaded onto trucks and transported to the appropriate location. The costs assume that approximately 10% of the excavated material would require treatment to meet the LDR alternative treatment standards in 40 CFR §268.49. These assumptions would be confirmed during design.

6.1.2.2 Evaluation of Targeted Excavation, Enhanced Natural Recovery (Thin-Layer Cover) and Disposal and/or Treatment

Results from the evaluation of Alternative 3, Targeted Excavation, Enhanced Natural Recovery (Thin-Layer Cover) and Disposal and/or Treatment against the NCP criteria are discussed below and summarized in Table 6-24.

Overall Protection of Human Health and the Environment

This alternative would provide some protection of human health and the environment because some contaminated sediment/soil would be removed and surface concentrations would be reduced by the thin-layer cover. Contaminated sediment from the main stream channel and channel areas in the south Oxbow area (potentially erosional areas during flooding events) and floodplain soil from areas with contaminant concentrations in excess of ARARs or EPA's dioxin requirements would be removed and either contained in a disposal facility or treated. However, because some contaminated sediment/soil would remain in place under the thin-layer cover, ICs restricting site access and use would be required to prevent the disturbance of the CDFs (Options 3a and 3b) and thin-layer cover (all options). In addition, ECs (such as boardwalks and fencing) could be used to enhance remedy effectiveness by further reducing human exposure. This alternative would provide some reduction in ecological exposures in the short term; however, ecological receptors may continue to be at risk of harm over an extended period of time from exposure to contaminated sediment/soil. Ecological receptors are thought to have the ability to burrow or dig to depths of 1 foot or greater; therefore, there is a potential that some may burrow through the thin-layer cover and into contaminated sediment/soil.

Compliance with ARARs

ARARs specific to Alternative 3 are summarized in Table 6-25. Assuming that excavation involves more than a *deminimis*/incidental discharge to surface water, Clean Water Act Section 404 requirements are triggered by excavation. In addition, placement of backfill in wetland areas, the nearshore CDF (Option 3b), and possibly the upland CDF (Option 3a) also trigger wetlands/Section 404 requirements. As a result, these actions must be evaluated to determine the least damaging practicable alternative. State wetlands requirements will also need to be addressed. The thin-layer cover (all options) and nearshore CDF (Option 3b) would also result in the permanent occupancy and modification of the floodplain. According to Executive Order 11988, a determination would need to be made that there was no other practicable alternative before selecting this option as the preferred remedy. In addition, some of the excavated sediment/soil is expected to require treatment to meet the alternative treatment standards set forth in the LDRs. The Subtitle C requirements under the Resource Conservation and Recovery Act (RCRA) would have to be waived for this alternative. The waiver would be based on the determination that the placement of a RCRA-compliant cap or one that would prevent washout would result in greater risk to the environment. Specifically, the cover proposed under this alternative would allow for preservation of a majority of the existing forested wetland that provides a regionally-important habitat to a variety of birds and animals (including potentially threatened/endangered vernal pool species). However, requiring a thicker, impermeable cap or one that would prevent washout would permanently eliminate one of the largest areas of forested riparian habitat remaining along the Woonasquatucket River downstream of the Smithfield town line.

Long-Term Effectiveness and Permanence

Alternative 3 would provide some risk reduction because sediment in the areas most susceptible to erosion (main stream channel and channel areas in southern Oxbow area) and floodplain soil with contamination in excess of ARARs or EPA's dioxin requirements would be removed and either contained

in an engineered facility or treated by incineration. Additionally, placement of a thin-layer cover would reduce surface concentrations, where exposure is most likely. However, inherent hazard of waste remains where contamination remains under the cover and there is potential for future exposure to and migration of contaminated sediment/soil particles downriver as a result of flood flows. Because of the potential for erosion and redeposition during severe storm events, maintenance and monitoring are critical to the long-term adequacy and reliability of this alternative. Implementation of ICs would provide further protection to human health by lowering the potential for human exposure; ICs are only effective if adequately monitored, enforced, and maintained. ICs would not be reliable or effective in addressing ecological risk.

Inherent hazards would be reduced for Options 3d and 3e because sediment/soil would be incinerated on site (Option 3d) or taken off site for disposal or treatment (Option 3e). The inherent hazard is somewhat higher for the upland (Option 3a) and nearshore (Option 3b) CDFs as sediment/soil above cleanup levels remains untreated on site. However, under both of the options, contaminated sediment/soil is either removed from the river/wetlands and placed in secure upland locations (Option 3a) or consolidated along the shore in nearshore CDFs (Option 3b). The upland CDF would have a liner and would be outside of the floodplain while the nearshore CDF would not be lined and would be located within the floodplain, thereby increasing the inherent hazard and reliance on other controls. Long-term monitoring, maintenance, including maintenance of Allendale Dam, and ICs would be critical to control physical disturbances and protect the integrity of the cover (all options) or any type of on-site disposal facility (Options 3a and 3b) for the long-term effectiveness of this alternative.

Reduction of Toxicity, Mobility or Volume through Treatment

The toxicity, mobility, or volume of contamination would be reduced through treatment under Option 3a (on-site containment in upland CDF), Option 3d (on-site thermal treatment), and Option 3e (off-site disposal and/or treatment). The on-site containment options (Option 3a and 3b), and to a lesser extent the thin-layer cover (all options), would reduce the mobility of the contaminants, although not through treatment (Option 3b).

Short-Term Effectiveness

Alternative 3 is expected to have some short-term impacts. However, potential short-term impacts to human health, on-site workers and the community would be limited. Temporary work areas and an access roadway would be set up and the work areas cleared of vegetation. There would be truck traffic into and out of the area to deliver the cover material and fuel; traffic would also increase slightly due to site workers traveling back and forth to the job site. The application of cover material would also require petroleum-powered engines and generators; therefore, there would be some short-term low level air emissions associated with this alternative.

Potential short-term impacts to the environment would be minimized to the extent practical by conducting construction activities during the dormant season, limiting excavation to targeted areas, and placing the cover using an innovative hydraulic slurry system. In the targeted excavation areas, removal of sediment/soil and placement of backfill would result in the destruction of approximately 6.5 acres of habitat. It is anticipated that existing scrub-shrub and emergent marsh habitat would require at least a decade to become fully reestablished with the same level of ecological functions as is currently provided. Short-term impacts could be minimized by selection of the hydraulic slurry method to apply the thin-layer cover. This approach would not destroy the existing shrub and tree vegetation and would minimize the magnitude of the impacts to the red maple swamp habitat. As discussed in the wetland delineation and functions and values assessment of the Oxbow (USACE, 2008), the mature red maple floodplain forest found in the Oxbow provides a number of environmental functions (including a unique recreational area)

to both people and the local ecosystem, and these would be lost if the area was cleared using the traditional earthwork approach.

The application of a 3-inch layer of cover material is not expected to have deleterious effects on the majority of the indigenous vegetation, particularly if a porous material is used and sensitive species such as swamp white oak are avoided (or the cover thickness is reduced). Damage would be further minimized by applying the cover material during the dormant season (e.g., late fall or early winter). It is expected that some small areas of habitat would be disrupted due to the installation of temporary access roadways along the main river channel; however, the locations of these areas would be designed to minimize ecological impact as much as possible.

Placement of the thin-layer cover would not impact mobile animals in the wetland because they would have time to move away from the construction activities. Non-mobile animals, such as soil invertebrates that live in the wetland soil or benthos occurring in sediment, would be buried by the cover; however, it is expected that these organisms would quickly colonize the newly applied cover material both from below and from areas outside the soil cover. The thinness of the proposed cover is anticipated to minimize mortality to macroinvertebrate communities during the construction phase.

The ecological exposures would diminish over time, as the layer of clean material deposited within the area increased in thickness and chemical degradation (organic contamination only) occurred. However, the rate of deposition of clean material is expected to be low and the time to achieve RAOs for this alternative may be on the order of several decades to well over a century. Based on the model analysis for the most sensitive ecological receptor, the time to reach the cleanup goals for this alternative varies from 25 to over 250 years, with an expected duration of approximately 30 years.[10] The cleanup goals for the passive recreational visitor receptor are expected to be reached in about 4 years (Appendix M).

Implementability

Overall, this alternative raises some limited implementation issues. Construction in areas having soft sediment/soil can pose unique challenges; however, specialized, low ground-pressure equipment would be used in conjunction with the establishment of temporary work platforms and access roads. As mentioned above, use of a hydraulic slurry method for the placement of a wetland cover is not routine. However, such a broadcast placement method has been successfully demonstrated at other sites including an EPA demonstration project in Casper, Wyoming in early 2000 (Fitzpatrick, 2002). There are no unusual implementability issues related to the availability of services and materials. Sandy loam cover material is expected to be readily available from local construction supply companies.

Because this alternative leaves contaminated sediment and floodplain soil in place over an extended period of time, technical problems could occur in the future. Monitoring and enforcement of ICs would be necessary to ensure the successful implementation of this alternative. The implementation of a monitoring program and ICs would not present any unusual issues. Requirements for dam maintenance

[10] Appendix M describes the results of a sensitivity analysis conducted to evaluate the predictive floodplain soil contaminant exposure model for ecological receptors; results are summarized in Table M-15. The sensitivity analysis assessed the impact of a range of potential values for the two most important determinants of future exposure and risk (i.e., the average annual deposition rate and the chemical half-life of organic contaminants in floodplain soil). In addition to a no deposition scenario, the deposition rate was assumed to vary by an order of magnitude between 0.024 and 0.24 inches per year. The annual half-life (i.e., time for half of the contaminant mass to degrade) for 2,3,7,8-TCDD, the primary human health and ecological risk driver for floodplain soil, was assumed to vary between 6.5 to 51.7 years; a no degradation scenario was also conducted. Time estimates to achieve the RAOs are based on the model analysis for the most sensitive ecological receptor (i.e., short-tailed shrew) and for the contaminant 2,3,7,8-TCDD.

and impacts to wetland/floodplain areas could present some implementability issues that would have to be assessed. For dam maintenance, agreement for access from owners of the dams would be needed. Impacts to wetlands and floodplains would need to be minimized to the extent possible and mitigation for unavoidable wetland impacts and replacement for lost flood storage capacity, if any, would be required. In addition, this alternative will face additional implementation issues if the presence of vernal pool habitat was confirmed within the current cleanup area. The animals that occur in vernal pools are typically very sensitive to environmental disturbances and special care would have to be taken during the design and construction aspects of these alternatives to mitigate these concerns. Even the application of a 3-inch layer of natural soil cover could have some deleterious effects on these areas. Finally, as discussed above, a waiver from the RCRA Subtitle C regulations would have to be obtained for this alternative.

Coordination with DOI would be required if (during remedial design or remedial action) it is determined that this alternative may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archaeological data.

Because the disposal and/or treatment options required under Alternative 3 are combined with the disposal and/or treatment options for the sediment excavation alternatives (Section 6.2 of the 2010 FS), the implementability issues that result from disposal and/or treatment will be the same as for Alternative 7 for Allendale and Lyman Reach sediment (Section 6.2.2 of the 2010 FS).

Cost

The detailed cost evaluation for Alternative 3, Targeted Excavation, Enhanced Natural Recovery (Thin-Layer Cover) and Disposal and/or Treatment, is presented in Appendix J; costs for water quality monitoring are captured under the sediment alternatives. The capital, operation and monitoring, and present worth costs are listed below.

Option 3a: On-site Containment in an Upland CDF	Capital cost and baseline monitoring	$13,600,000
	Annual cost for years 1 to 30	$230,000
	Present worth costs	$16,400,000
Option 3b: On-site Containment in a Nearshore CDF	Capital cost and baseline monitoring	$10,900,000
	Annual cost for years 1 to 30	$230,000
	Present worth costs	$13,700,000
Option 3d: On-site Thermal Treatment	Capital cost and baseline monitoring	$30,800,000
	Annual cost for years 1 to 30	$200,000
	Present worth costs	$33,300,000
Option 3e: Off-site Disposal and/or Treatment	Capital cost and baseline monitoring	$23,500,000
	Annual cost for years 1 to 30	$200,000
	Present worth costs	$26,000,000

The present worth costs (above) for Alternative 3 could increase by approximately $290,000 to $350,000 (or more) if a Stage IB cultural resource survey (archaeological survey testing and excavation) and additional mitigation measures are required to comply with the NHPA (USACE, 2011b) (Appendix J).

6.1.3 Alternative 5: Partial Excavation, Enhanced Natural Recovery and Disposal and/or Treatment

6.1.3.1 Description of Partial Excavation, Enhanced Natural Recovery and Disposal and/or Treatment

Under this alternative, contaminated sediment and floodplain soil would be removed using excavation from areas where contaminant concentrations are in excess of ARARs for residential direct exposure or EPA's recommended residential level for dioxin in soil (EPA, 1998), as well as from areas with the highest potential for future erosion, from low-lying channels where contaminated sediment has accumulated, and from areas with the most frequent human exposure. After excavation, these areas would be backfilled with clean material and the site restored. Areas within the cleanup area that are not excavated would rely on ENR in conjunction with ICs to further reduce potential human exposure to site contamination. Temporary gravel access roadways would be constructed on the east and west side of the pond and along the river channel between Lyman Mill Pond and Allendale Dam. These roadways would also provide access to this action area.

Figure 5-27 shows areas for excavation and thin-layer cover within the Lyman Mill Reach stream sediment and floodplain soil cleanup area. Moving north to south, excavation would be used to:

- Remove the top 1 foot of floodplain soil from the old mill raceway connecting Allendale and Lyman Mill Ponds. Contaminant concentrations are above the cleanup goals in raceway soil north of the Allendale condominiums (see Appendix G, Table G-9 and Figure G-4). Contaminant data are not available for raceway soil south of the condominiums, but contaminated sediment/soil may have accumulated in this area over time, and could pose a human health risk to nearby residents;
- Remove the top 1 foot of sediment from the stream channel connecting Allendale and Lyman Mill Ponds. Contaminant concentrations are above the cleanup goals in stream sediment (see Appendix G, Table G-8 and Figure G-4) and this area would not be suitable for a thin-layer cover;
- Remove the top 1 foot of floodplain soil from areas where contaminant concentrations are in excess of state ARARs for residential direct exposure (except where background is an issue) or EPA's recommended residential level for dioxin in soil (EPA, 1998) (see Appendix G, Table G-9 and Figure G-4);
- Remove the top 1 foot of sediment in the abandoned channel bisecting the Oxbow. This area serves as aquatic habitat and could pose a risk to ecological receptors (see Sections 2.5.2 and 3.5.1). Further, this area is periodically in communication with the river during times of high water, and appears to have been impacted by site activities evidenced by contamination above the cleanup goals (see Appendix G, Table G-8 and Figure G-4); and
- Remove the top 1 foot of floodplain soil and top 1 to 3 ft of sediment in the area of emergent marsh and scrub/shrub south of the abandoned channel and the top 1 foot of floodplain soil at the small peninsula north of the confluence of Assapumpset Brook and Lyman Mill Pond. These areas appear to have been impacted by site activities as evidenced by contamination above the cleanup goals (see Appendix G, Figure G-4). Contaminated material at these areas could migrate to and recontaminate pond areas during normal flow (river channel and brook flow through these areas) and/or high flow or flood events. Excavation within these areas is expected to reduce area-wide contamination, thereby reducing risk, and should also remove contaminated material that could be transported downstream. Finally, the vegetation present in these areas is expected to

become reestablished relatively quickly after remedy implementation (i.e., on the order of a decade).

A 1-foot excavation depth was assumed for the stream channel and floodplain soil areas because this is generally considered the depth to which the majority of relevant ecological exposures occur as a result of foraging or burrowing activities, as well as human exposure. For floodplain soil, the actual depth of excavation would extend deeper within the vadose zone as necessary to meet ARARs or EPA's dioxin requirements. The excavation depth of 1 ft bgs for sediment in the stream channel and 1 to 3 ft bgs for sediment in the southern Oxbow area is based on the depth needed to reach clean (see Section 3.5.1 of this Addendum). The excavation depth for sediment and soil areas would be determined during design based on sampling and analysis of deeper sediment/soil samples. Excavation and backfill volumes would also be evaluated during design to ensure no net loss of flood storage capacity from placement of the thin-layer cover in wetland/floodplain areas. (This alternative assumes no net loss of flood storage capacity as described below under Excavation/Backfill Volumes and Rates). Data needs would include, but may not be limited to, the collection of floodplain soil and sediment samples within this area, as well as a survey to more precisely delineate the boundaries between the various vegetation types represented.

Following removal, confirmation sampling would be conducted to verify that the cleanup goals were achieved (see Appendix J for assumptions regarding types and quantities of confirmation samples), and the excavated sediment/soil would be disposed or treated. The sequence of excavation activities, excavation/backfill volumes and rates, cover placement, floodplain sediment/soil processing, long-term monitoring and ICs, and disposal or treatment options are described below.

Construction Sequence

A typical construction sequence is presented below:

1. Construct temporary access roads and staging areas.
2. Clear debris and vegetation as necessary.
3. Excavate contaminated sediment/soil in an upstream to downstream direction, stockpile and dispose.
4. If material was to be disposed off site, testing would be conducted to determine the appropriate disposal designation.
5. Evaluate confirmation samples, and backfill excavated areas with clean material.
6. Place enhanced natural cover in areas that were not remediated with excavation, which could be performed concurrently with backfill placement.
7. Plant appropriate types of vegetation within the excavation footprint to enhance ecosystem recovery.

Excavation/Backfill Volumes and Rates

Sediment and floodplain soil would be removed after the pond water levels were temporarily lowered (for the pond sediment remedy at Lyman Mill). In this alternative, 19.5 acres would be excavated (Figure 5-27) and backfilled with clean material to provide subgrade for re-vegetation of the area.[11]

[11] Appendix N of the 2010 FS describes how the excavation area and volume for Alternative 5 would change if EPA's draft recommended interim PRG for dioxin in soil (i.e., 72 ng/kg based on residential exposure scenario; EPA, 2009b) is adopted. Appendix N of the 2010 FS indicates that the excavation area could be expanded to

- Approximately 50,900 cy of floodplain soil and sediment would be removed from the excavation footprint under this alternative, including a 0.25 foot over-excavation allowance.
- Approximately 47,000 tons (or 31,500 cy) of soil would be placed as backfill in the excavation area,
- Approximately 5,600 tons (or 3,700 cy) of soil would be placed for the thin-layer cover.

The backfill volume assumes that all excavation areas would be backfilled with 1 foot of clean material, which would provide a high quality substrate for restoring the terrestrial (floodplain soil) and aquatic (sediment) invertebrate communities and vegetation in the floodplain. A uniform 1-ft backfill volume would also result in a post-remediation elevation lower than existing conditions in areas where the excavation footprint extends deeper than 1 foot (i.e., sediment areas in southern Oxbow area), and this would provide additional (to that previously discussed in the 2010 FS) mitigation for lost flood storage capacity from the thin-layer cover as well as greater flow capacity in the river. The criteria used to select backfill material and determine excavation depth for the stream channel connecting Allendale and Lyman Mill Ponds would include adequacy of erosion protection during flood flows and benthic habitat suitability.

The excavation rate for sediment and floodplain soil is assumed to be 200 cy/d; the placement rate of clean backfill is assumed to be 500 tons/day; placement of thin-layer cover is assumed to be 70 tons/day; and the rate of replanting vegetation is assumed to be 7,400 sq ft/d. Including the required wetland mitigation and streambank restoration activities (see discussion on mitigation below), it is estimated that this alternative would take approximately one year to implement.

Cover Placement

Under this alternative, a thin-layer cover would be placed using the same methods as described in Alternative 3 (Section 6.1.2). The cover would be placed over the 9.2 acre area within the cleanup area that is not excavated (Figure 5-27). The final composition and thickness of the cover would be determined during the design phase; however, for the purposes of evaluating this alternative, a cover thickness of 3 inches with a composition physically similar to the soil indigenous to the Oxbow area is assumed. Placement of a thin-layer cover in the 9.2 acre area would preserve the existing shrub and tree vegetation to the maximum extent possible.

The 9.2 acre area would require approximately 5,600 tons of cover material to place a 3-inch thin-layer cover. For cost estimating and scheduling purposes, it is assumed that the cover would be placed at a discharge rate of approximately 350 gpm. This would place approximately 70 tons per working day.

Sediment/Floodplain Soil Processing

The excavated sediment/soil would be processed for disposal as described for Alternative 3 (Section 6.1.2).

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encompass the entire eastern shore of Lyman Mill Pond, resulting in an incremental increase in the excavation volume of approximately 6,480 cy (includes 0.25-ft over-excavation allowance) if EPA's draft interim PRG is adopted. Supplemental site activities conducted since the completion of the FS in 2010 are not expected to substantively impact the incremental increase in the excavation volume presented in Appendix N of the 2010 FS (6,480 cy) because the revised cleanup and excavation areas presented in this Addendum are largely limited to the Oxbow area. Overall, the excavation volume identified in this Addendum for Alternative 5 (50,900 cy) could increase by approximately 6,480 cy assuming that EPA's 2009 draft interim PRG is adopted.

Flow Control Structures

Similar to Alternative 3 (Section 6.1.2), this alternative would be further developed during the design phase to include diverting some of the flow from the Woonasquatucket River into and through the Oxbow area to increase the rates of natural sediment deposition.

Mitigation

Similar to Alternative 3 (Section 6.1.2), this remedy would involve the destruction of some existing forested and/or scrub/shrub habitat structure and jurisdictional wetland. Sediment/soil excavation and application of a soil cover would either eliminate (sediment/soil excavation) or potentially degrade (thin-layer cover) the floodplain soil and aquatic benthic invertebrate communities that form a primary basis of the food chains in these habitats. In addition, remediation of the lotic portion of the river would destroy benthic habitat and the benthos itself, and sediment excavation would destroy a portion of the adjacent riverbank including some riparian vegetation and tree root systems.

Figure 6-7 from the 2010 FS presents an overview of the different habitat features associated with this alternative and possible mitigation components for each; this overview may need to be updated during design based on the revised excavation and thin-layer cover areas developed in this Addendum. Mitigation measures, including plantings, would be similar to those described in Section 6.1.2. Finally, contaminated sediment/soil that was excavated under Alternative 5b would be contained on site in a nearshore CDF and mitigation for the incremental loss of aquatic habitat involved could be provided by the same measures described previously for the pond sediment alternatives (i.e., preservation uplands and/or wetland restoration/replication).

Long-Term Monitoring, Dam Maintenance and Institutional Controls

Long-term monitoring, dam maintenance, and ICs would be required as described for Alternative 3 (Section 6.1.2) to ensure that the thin-layer cover remained in place, to prevent activities (e.g., excavation) that could expose the underlying contaminated material, and to quantify the recovery occurring within the area. Details of the monitoring plan would be developed during final design. The general approach for monitoring and the assumptions used to estimate annual costs are described in a conceptual long-term monitoring approach presented in Appendix H of the 2010 FS.

Maintenance of the Allendale Dam would be required to prevent a sudden release of water that could erode the cover or contaminated sediment/soil, which is not the case with the downstream Lyman Mill Dam. However, both dams could be removed in a controlled fashion without impact to this alternative. ICs restricting site use and limiting access would be used to further limit human exposure to contaminated material that remained on site. These controls could include, but not be limited to, access restrictions (i.e., fencing and requirements for boardwalks) and future use restrictions to prevent excavation in the area. Long-term monitoring and ICs would also be required to maintain any type of on-site containment facility (Options 5a and 5b).

Disposal and/or Treatment Options

It is assumed that the implementation of a remedial alternative to address Lyman Mill Reach stream sediment and floodplain soil would be carried out concurrently with the pond sediment remediation, and the disposal and/or treatment options would be common to both action areas to improve the overall efficiency of the selected remedies. It is assumed that the on-site disposal and/or treatment option(s) for sediment/soil would only be used if the on-site disposal and/or treatment option(s) was also implemented for the pond sediment remediation. The off-site disposal and/or treatment option could be implemented

independent of the selected alternative for the sediment. If this alternative was selected and if a full-removal alternative was selected for the pond sediment, the total volume for disposal would be 151,000 cy (50,900 cy sediment/soil from Lyman Mill Reach, 97,700 cy sediment from the ponds, and 2,400 cy floodplain soil from Allendale Reach). There is sufficient capacity at potential upland CDF locations for this volume, but multiple CDFs may be required, depending on the locations selected.

It may also be possible to use some of the excavated material to assist in grading and building the bottom layer of the cap to be constructed under Alternative 4e of the Source Area Soil Alternatives (see Section 6.3.3) should this alternative be selected. This material would not need to comply with the LDRs because it would be consolidated within an area of contamination. Use of some of the excavated material in this way would reduce the amount of material requiring disposal.

Disposal and/or treatment options are the same as described for Alternative 3 (Section 6.1.2) and include:

Option 5a: On-site Containment in an Upland CDF
Option 5b: On-site Containment in a Nearshore CDF
Option 5d: On-site Thermal Treatment
Option 5e: Off-site Disposal and/or Treatment

Under Options 5a and 5e, the costs assume that approximately 10% of the excavated material would require treatment to meet the LDR alternative treatment standards in 40 CFR §268.49 (see Option 3a, Section 6.1.2). These assumptions would be confirmed during design.

6.1.3.2 Evaluation of Partial Excavation, Enhanced Natural Recovery and Disposal and/or Treatment

Results from the evaluation of Alternative 5, Partial Excavation, Enhanced Natural Recovery and Disposal and/or Treatment, against the NCP criteria are discussed below and summarized in Table 6-26.

Overall Protection of Human Health and the Environment

Alternative 5, Partial Excavation, Enhanced Natural Recovery and Disposal and/or Treatment, would provide some overall protection of human health and the environment. The primary risk to human health is from direct contact with floodplain soil; this risk would be eliminated in areas that were excavated and backfilled, and minimized elsewhere by the combination of placement of a thin-layer cover and use of appropriate ICs to restrict access and prevent digging or excavation within the cleanup area. As discussed in the Supplemental BHHRA (MACTEC and Battelle, 2011a), human exposure to sediment associated with the Oxbow action area is unlikely due to limited accessibility. This alternative would help balance the long-term benefits of sediment/soil removal with the short-term benefit of protecting valuable existing wetland tree and shrub habitat.

The risks to ecological receptors, which are based on direct contact or ingestion of contaminated prey, would also be reduced under this alternative. Such risks would be eliminated in areas that were excavated and backfilled. The shrub and forested wetland in the 9.2 acres not excavated would continue to provide habitat to ecological receptors. Additionally, the placement of a 3-inch layer of natural cover material in the remaining area of the cleanup area will provide further reduction in exposure to contaminants. However, because the cover material is only estimated to be 3 inches thick, the potential for exposure of burrowing organisms would not be eliminated until RAOs are met. Similarly, the bioaccumulation hazard to wildlife would be reduced but not eliminated over an extended period of time.

Compliance with ARARs

ARARs specific to Alternative 5 are summarized in Table 6-27. Excavation, placement of backfill/cover material in wetland areas, the nearshore CDF (Option 5b), and possibly the upland CDF (Option 5a) will trigger wetlands/Section 404 requirements. As a result, these actions must be evaluated to determine the least damaging practicable alternative. State wetlands requirements will also need to be addressed. The thin-layer cover (all options) and nearshore CDF (Option 5b) would also result in the permanent occupancy and modification of the floodplain. According to Executive Order 11988, a determination would need to be made that there was no other practicable alternative before selecting this option as the preferred remedy. In addition, some of the sediment/soil is expected to require treatment to meet the alternative treatment standards set forth in the LDRs. The Subtitle C requirements under RCRA would have to be waived for this alternative. The waiver would be based on the determination that the placement of a RCRA-compliant cap or one that would prevent washout would result in greater risk to the environment. Specifically, the cap proposed under this alternative would allow for preservation of a majority of the existing forested wetland that provides a regionally-important habitat to a variety of birds and animals (including potential threatened/endangered vernal pool species). However, requiring a thicker, impermeable cap or one that would prevent washout would permanently eliminate one of the largest areas of forested riparian habitat remaining along the Woonasquatucket River downstream of the Smithfield town line.

Long-Term Effectiveness and Permanence

Partial excavation would be somewhat effective in the long term because the contaminated sediment/soil would be removed and either contained in a disposal facility or treated. In addition, placement of a thin-layer cover would facilitate risk reduction through natural recovery. All sediment and floodplain soil will be excavated from areas with contamination in excess of ARARs or EPA's dioxin requirements, as well as from areas of highest potential for future erosion, from low-lying channels where contaminated sediment has accumulated, and from areas with potential for frequent human exposure. As a result, the residual risk would be reduced particularly for human receptors. The elevated post-construction ecological residual risk from contamination remaining in place under the thin-layer cover would be further reduced over time as clean material was deposited within the area. However, inherent hazard of waste remains wherever contamination remains on site (under the thin-layer cover and contained in the upland and nearshore CDFs).

Inherent hazard of the disposal and/or treatment options is the same as Alternative 3 (Section 6.1.2). Long-term monitoring, maintenance, including maintenance of the Allendale Dam, and ICs would be critical to control physical disturbances and protect the integrity of the thin-layer cover (all options) or any type of on-site disposal facility (Options 5a and 5b) for the long-term effectiveness of this alternative. Implementation of ICs would provide further protection to human health by lowering the potential for human exposure; ICs are only effective if adequately monitored, enforced, and maintained. ICs are not reliable or effective in addressing ecological risk.

Reduction of Toxicity, Mobility or Volume through Treatment

The toxicity, mobility, or volume of contamination would be reduced through treatment under Option 5a (on-site containment in upland CDF), Option 5d (on-site thermal treatment) and Option 5e (off-site disposal and/or treatment). The on-site containment options (Options 5a and 5b) and to a lesser extent the thin-layer cover (all options) would reduce the mobility of the contaminated sediment/soil particles, although not through treatment (Option 5b).

Short-Term Effectiveness

This alternative would have the same short-term impacts as Alternative 3 (Section 6.1.2), although adverse impacts to the environment would be more extensive because a larger area would be excavated under this alternative. Excavation and removal of sediment and floodplain soil and placement of backfill would result in the destruction of approximately 19.5 acres of existing habitat, including emergent marsh, scrub/shrub and forested areas (Figure 5-27). It may take at least a decade for habitat to become reestablished in areas of emergent marsh, and a considerably longer time (on the order of several decades) in areas with a well-developed tree canopy.

As discussed in Section 6.1.2, anticipated human and ecological exposures will diminish over time, as the layer of clean material deposited within the area increased in thickness and chemical degradation (organic contamination only) occurred. However, the rate of deposition of clean material is expected to be low and the time to achieve RAOs for this alternative may be on the order of several decades to well over a century. Based on the sensitivity results presented in Appendix M (Table M-15) the time for 2,3,7,8-TCDD to reach the cleanup goal for the most sensitive ecological receptor under this alternative[12] varies from 20 to over 250 years, with an expected duration of approximately 25 years (Appendix M). The cleanup goal for the passive recreational visitor receptor is expected to be reached in approximately 0.5 years (Appendix M).

Implementability

Overall, this alternative raises the same limited implementability issues as Alternative 3 (Section 6.1.2).

Cost

The detailed cost evaluation for Alternative 5, Partial Excavation, Enhanced Natural Recovery and Disposal and/or Treatment, is presented in Appendix J; costs for water quality monitoring are captured under the sediment alternatives. The capital, operation and monitoring, and present worth costs are:

Option 5a: On-site Containment in an Upland CDF	Capital cost and baseline monitoring	$28,700,000
	Annual cost for years 1 to 30	$230,000
	Present worth costs	$31,500,000
Option 5b: On-site Containment in a Nearshore CDF	Capital cost and baseline monitoring	$21,300,000
	Annual cost for years 1 to 30	$230,000
	Present worth costs	$24,100,000
Option 5d: On-site Thermal Treatment	Capital cost and baseline monitoring	$70,800,000
	Annual cost for years 1 to 30	$200,000
	Present worth costs	$73,300,000
Option 5e: Off-site Disposal and/or Treatment	Capital cost and baseline monitoring	$52,800,000
	Annual cost for years 1 to 30	$200,000
	Present worth costs	$55,300,000

The present worth costs (above) for Alternative 5 could increase by approximately $290,000 to $350,000 (or more) if a Stage IB cultural resource survey (archaeological survey testing and excavation) and additional mitigation measures are required to comply with the NHPA (USACE, 2011b) (Appendix J).

[12] This is based on the most sensitive ecological receptor for this contaminant, which is the short-tailed shrew.

6.2 Comparative Analysis of the Lyman Mill Reach Stream Sediment and Floodplain Soil Alternatives

The three alternatives for Lyman Mill Reach stream sediment and floodplain soil (Alternative 1, No Action; Alternative 3, Targeted Excavation, Enhanced Natural Recovery and Disposal and/or Treatment; and Alternative 5, Partial Excavation, Enhanced Natural Recovery and Disposal and/or Treatment) are compared below to better understand the key tradeoffs among the alternatives; key features of the alternatives are summarized in Table 6-28. Overall, among the alternatives evaluated, partial excavation (Alternative 5) will provide the highest level of protection to human health and the environment and a higher level of long-term effectiveness and permanence because a larger volume of contaminated material would be removed from the system. None of the alternatives, however, would provide immediate, complete protection of ecological receptors from exposures to contaminated material. Rather, a minimum of a couple decades would likely be required to attain the ecological RAOs. This delay in achieving the RAOs for ecological receptors is balanced by the need to preserve the habitat necessary to maintain the receptors warranting protection.

6.2.1 Overall Protection of Human Health and the Environment

The human health and ecological risks for this action area are associated with direct contact exposure with soil and contaminated sediment (ecological primarily) and consumption of prey items that have bioaccumulated contaminants from these media. Due to the high value of much of the ecological habitat in this area, the RAOs have been developed in an effort to obtain an optimal balance between the ecological benefits of the removal of contaminated sediment and soil versus the loss and destruction of sensitive habitat. Because of the mature nature of this floodplain forest along with its relative scarcity in this urbanized watershed, the impacts associated with large-scale excavation in the Oxbow would extend out for many decades. As a result, overall protection balances the benefits of reducing human risk with the benefits of protecting valuable existing wetland tree and shrub habitat in the long term.

The No Action alternative would provide little protection to either human health or the environment because nothing would be done to address the risks associated with the current exposure pathways.

Alternatives 3 and 5 would provide more protection to human health and the environment, with Alternative 5 (Partial Excavation and ENR) providing greater protection of human health and the environment. Both Alternatives 3 and 5 would protect human health through the targeted excavation of sediment and floodplain soil in areas where there is a greater likelihood of human exposure with Alternative 5 requiring more of the material that presents a risk to be removed.

Alternative 5 would provide some protection of ecological receptors even though a larger portion of the area would be excavated and backfilled. The application of the thin-layer cover in the remaining area would also accelerate the natural recovery. This alternative would reduce the potential for downstream transport of contaminants into Lyman Mill Pond compared to Alternative 3. Alternative 3 would be somewhat less protective of human health because of the reduced excavation footprint. Alternative 3 also includes placement of the thin-layer cover and, thus, would be similar to Alternative 5 in terms of short-term impacts to ecological receptors.

6.2.2 Compliance with ARARs

Alternative 1 (No Action) would not comply with state ARARs for residential direct exposure or EPA's recommended residential level for dioxin in soil (EPA, 1998). The action-based alternatives (Alternatives 3 and 5) would both involve the placement of fill in waters of the state/US, the destruction of wetlands, and the permanent occupancy and modification of the floodplain. Therefore, a determination would need

to be made that there was no other practicable alternative before selecting any of these alternatives as the preferred remedy. None of the alternatives would satisfy the Subtitle C regulations under RCRA. For Alternatives 3 and 5, a waiver could be obtained on the basis that placement of a RCRA-compliant cap or constructing one that would prevent washout would create a greater risk to the environment than the proposed cap.

With respect to the disposal component of these alternatives, Alternatives 3b and 5b would involve additional permanent occupancy and modification of the floodplain, and the filling of wetlands. Alternatives 3a and 5a could also result in the filling of wetlands if the selected upland CDF location contains wetlands. In addition, under Alternatives 3a, 3e, 5a, and 5e, some of the sediment/soil is expected to require treatment to meet the treatment standards set forth in the LDRs.

6.2.3 Long-Term Effectiveness and Permanence

The three alternatives evaluated in the detailed analysis exhibit a range with respect to the long-term effectiveness and permanence of the remedy. Alternative 1 (No Action) would not be effective in the long term because the risk remains high and there are no controls to prevent exposure.

Alternatives 3 (Targeted Excavation, Enhanced Natural Recovery and Disposal and/or Treatment) and 5 (Partial Excavation, Enhanced Natural Recovery and Disposal and/or Treatment) would be more effective in the long term than the No Action alternative. Excavation of contaminated sediment/soil and placement of clean backfill in areas of potential human exposure and potential downstream migration would provide an increased level of long-term protection of human health and the environment. Alternative 5 would provide a greater level of risk reduction than Alternative 3 throughout the post-construction period because more of the contamination would be removed and either contained in a disposal facility or treated. Ultimately (estimated duration of between 25 and 30 years), both action-based alternatives would achieve a low residual risk. Although not necessary to achieve RAOs, ICs are included as a component of both Alternatives 3 and 5 in order to provide enhanced protectiveness by reducing human exposure to contamination. ICs would be necessary to prevent the disturbance of the CDFs (Alternatives 3a, 3b, 5a and 5b) and thin-layer cover under Alternatives 3 and 5. These controls are only effective if adequately monitored and enforced. ECs such as walkways could be used under Alternatives 3 and 5 to provide further protection to human health. There are additional reliability issues for Alternatives 3b and 5b because the CDF is located in the river/floodplain.

Residual Risk – Table 6-29 summarizes the calculated residual risks (i.e., the risks based on anticipated contaminant exposures following attainment of the RAOs) to human health and ecological receptors for Lyman Mill Reach stream sediment and floodplain soil. The residual risks are equivalent for all active remedies and in most cases are considerably less than the No Action alternative. The residual risks are summarized in the following sections, with detailed analysis provided in Appendix M.

For each active remedial alternative, the residual carcinogenic risk to humans is 1.E-05 (Table 6-29b), which is within the EPA cancer risk range and less than residual risks under the No Action alternative (Table 6-29a). (Organ-specific noncarcinogenic hazards to exposed human receptors are less than 1 under existing conditions.)

Residual risks to ecological receptors are also lower under the active remedial alternatives (Table 6-29d) compared to the No Action alternative (Table 6-29c). Under the No Action alternative, residual risks to birds and mammals are 70 and 100, respectively; these risks are considerably lower for the action alternatives (i.e., 4 and 10, respectively). Elevated risks remain due to background concentrations of select contaminants (i.e., copper, antimony, and 4,4'-DDE, Table 6-29d).

Inherent Hazard – The inherent hazard remains under all action alternatives because contamination above the cleanup goals remains in place in the floodplain under the thin-layer cover for an extended period of time. Among the disposal options, the inherent hazard is higher for the on-site containment options (Alternatives 3a, 3b, 5a and 5b) because floodplain sediment/soil above cleanup levels remains untreated on site, and these options would rely on other controls to be effective in the long term. There are additional reliability issues for Options 3b and 5b because the CDF is located in the river/floodplain. Long-term monitoring, maintenance, and ICs are necessary to protect the integrity of both CDF options. These controls are only effective if adequately monitored and enforced.

6.2.4 Reduction of Toxicity, Mobility or Volume through Treatment

Alternatives 5d and 3d would require the greatest reduction of toxicity, mobility, and volume through treatment, followed by Alternatives 5a and 5e, and Alternatives 3a and 3e. The thin-layer cover (Alternatives 3 and 5) and on-site containment options (Alternatives 3a, 3b, 5a, and 5b) would reduce the mobility of the contaminated sediment/soil, although not through treatment (Alternatives 3b and 5b). The No Action alternative (Alternative 1) would not provide any treatment or reduction in mobility, toxicity or volume.

6.2.5 Short-Term Effectiveness

The No Action alternative has no short-term impacts to the community, the environment, or workers. The short-term impacts to the community and on-site workers are fairly similar for the remaining alternatives. Both Alternatives 3 and 5 would result in increased traffic around the site. Generators, heavy equipment, and large trucks would be used during remedy implementation. This would result in a temporary increase in noise and air emissions. These emissions would be within acceptable safe levels.

Disposal of sediment/soil would involve transport of excavated materials to an on-site or off-site facility. ECs would be implemented to eliminate releases of contaminants during such transport. Additionally, if on-site treatment is utilized (Alternatives 3d and 5d), there would be air emissions associated with the incinerator operations. These emissions would be within acceptable safe levels.

Alternative 5, which includes excavating and backfilling, as well as construction activities related to the various disposal options, would present the most short-term impacts to the environment. The excavation footprint for this alternative is approximately 19.5 acres and includes areas of emergent marsh, scrub/shrub vegetation, as well as some areas with mature trees. The remaining 9.2 acres would be covered with 3 inches of enhanced natural cover, which is less invasive, but not without some adverse effects. It is unlikely that 3 inches of material placed within this area would have a substantial deleterious effect on resident biota; however, there would be some disruption to the soil and benthic invertebrate communities as well as to non-woody vegetation. Any soil/sediment removal and backfilling activities will result in destruction of the habitat in the removal and staging areas. Although the remedy would include placing topsoil and planting vegetation at the conclusion of implementation, the emergent marsh and scrub/shrub area habitats are expected to take approximately a decade to fully develop. Mature trees would take even longer (on the order of decades) to become fully restored with respect to vegetative biomass and canopy cover criteria.

Alternative 3 would have somewhat fewer short-term impacts to the environment than Alternative 5 due to the reduced excavation footprint (6.5 acres excavated under Alternative 3 compared to 19.5 acres excavated under Alternative 5). The targeted excavation area in this alternative is limited to those areas that exceed state ARARs for residential direct exposure and EPA's recommended residential level for dioxin (EPA, 1998), as well as potentially erosional areas with contamination above the cleanup goals (stream channel and channel areas in southern part of the Oxbow) which would not be suitable for the thin

cover. Areas not remediated by excavation would be covered with 3 inches of enhanced natural cover, which is less invasive, but not without some adverse effects (e.g., some disruption to the soil community and the herbaceous stratum, same as Alternative 5). However, the time to achieve the target hazard for 2,3,7,8-TCDD is anticipated to take approximately 30 years under Alternative 3 compared to 25 years under Alternative 5. This time differential is the tradeoff associated with the reduced footprint (i.e., approximately 13 fewer acres of impact to wetland vegetation). The delay in achieving the remedial goals (for ecological receptors) is balanced by the need to preserve the habitat necessary to maintain the receptors to be protected. As has been noted previously, this area provides a unique environmental function in the lower Woonasquatucket River watershed as one of the largest remaining tracts of undisturbed forested wetland.

Comparing across the three remedial alternatives for a given model scenario, the difference between the remedies can range up to over 200 years (Table M-15). Based on the current understanding of the hydrodynamics of this reach of the Woonasquatucket River and professional judgment concerning likely soil degradation rates, the best estimates of the amount of time to reach the desired target hazard for the action-based alternatives is 25 years for Alternative 5 and 30 years for Alternative 3.[13] The RAOs for human health will be achieved in approximately 0.5 and 4 years for Alternatives 5 and 3, respectively (Figure 6-8). The time to achieve the human health and ecological RAOs for the No Action alternative is unknown, but could be upwards of 200 years or more depending on the rate of natural recovery processes that are not monitored under this alternative (Appendix M).[14]

6.2.6 Implementability

All of the alternatives except the No Action alternative present technical and administrative feasibility issues. Alternative 3, however, may have fewer implementability issues compared to Alternative 5 because the magnitude of wetlands destruction is reduced (i.e., 6.5 acres of wetlands destroyed under Alternative 3 compared to 19.5 acres destroyed under Alternative 5).

Alternatives 3 and 5 would require space for construction activities such as material stockpiling and equipment staging. Space is very limited on site and the surrounding land is privately owned and, in most cases, already developed. In addition, both alternatives will require construction in areas having soft sediment/soil. Alternatives 3 and 5 will both face additional implementation issues if the presence of vernal pool habitat is confirmed within the current cleanup area. The animals that occur in vernal pools are typically very sensitive to environmental disturbances and special care would have to be taken during the design and construction aspects of these alternatives to mitigate these concerns. Even the application of a 3-inch layer of natural soil cover could have some deleterious effects on these areas. Both alternatives will also require a determination that there is no other practicable alternative before they can be selected as the remedy because of the resulting permanent occupancy and modification of the floodplain.

Alternatives 3 and 5, the nearshore CDF (Alternatives 3b and 5b), and possibly the upland CDF (Alternatives 3a and 5a) would have wetlands and Section 404 requirements. Alternatives 3 and 5 would

[13] This is based on an assumed annual deposition rate of 0.24 inches/year and a half-life of 2,3,7,8-TCDD in soil of 12.9 years for the action-based alternatives (Appendix M, Table M-15). The faster deposition rate assumed for the action-based alternatives, Alternatives 3 and 5, is based on the inclusion of engineering structures to divert floodwaters into the Oxbow and to maximize retention time within the area (Appendix M).

[14] For No Action, the model analysis in Appendix M evaluated a range of scenarios with varying deposition and soil degradation rates. The time to achieve RAOs presented here is based on an assumed annual deposition rate of 0.048 inches/year and no chemical degradation of the organic contaminants (i.e., dioxin TEQ and benzo[a]pyrene) that pose an unacceptable risk to human health.

also result in the permanent occupancy and modification of the floodplain. The application of slurry for cap placement has been widely used in aquatic settings; however, using this method for cover placement in wetland or more terrestrial regimes is an innovative application and may pose some unforeseen challenges.

Coordination with DOI would be required under Alternatives 3 and 5 if (during remedial design or remedial action) it is determined that the remedial action may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archaeological data.

The implementability of Alternatives 3 and 5 is largely determined by the various disposal options associated with this alternative. Those options that include on-site treatment and/or disposal facilities (Alternatives 3a, 3b, 3d, 5a, 5b, and 5d) will require adequate space for such facilities. The option that requires on-site incineration (Alternatives 3d and 5d) would have additional implementability issues because of the need for vendors specializing in on-site, high-temperature incineration of hazardous waste. Gaining public acceptance is an important component as well.

6.2.7 Cost

The costs for the three alternatives are presented in Table 6-28. The present worth cost for No Action is $250,000. Present worth costs for the action-based alternatives range from $13,700,000 for targeted excavation, ENR and on-site containment in a nearshore CDF (Alternative 3b) to $73,300,000 for partial excavation, ENR and on-site thermal treatment (Alternative 5d). Additional costs for compliance with the NHPA are the same for both action-based alternatives (potentially $290,000 to $350,000 or more in additional costs for Stage 1B cultural resource survey and mitigation) (Appendix J).

6.3 Source Area Soil Alternatives

The detailed evaluation of Source Area soil alternatives presented in Section 6.8 of the 2010 FS is refined in this Addendum to consider information from the supplemental investigations that resulted in revised RAOs, ARARs, TBCs, and cleanup goals for this action area, which impacts the areas for excavation proposed in the 2010 FS for Source Area Soil Alternative 3e. While the Targeted Excavation, Convert to RCRA Caps, and Maintain and Disposal and/or Treatment alternative (4e) is not impacted, it is included in this Addendum, along with No Action, to facilitate the comparative analysis of alternatives and better understand the key tradeoffs among the alternatives.

Source Area Soil Alternatives Retained for Detailed Analysis

1	No Action
3e	Targeted Excavation, Upgrade and Maintain Existing Surfaces and Disposal and/or Treatment
4e	Targeted Excavation, Convert to RCRA Caps and Maintain and Disposal and/or Treatment

This section includes a detailed analysis of the alternatives developed to achieve the RAOs for Source Area soil described below. Alternatives are described in detail and evaluated against the NCP criteria (excluding State and Community Acceptance, which are considered after comments to the FS and Proposed Plan are received). All of the alternatives include five-year reviews and assume that all work would be performed in an upstream to downstream direction to prevent re-contamination of areas

RAOs for Source Area Soil

Prevent direct human exposure by incidental ingestion of and dermal contact with Source Area soil that contain contamination:

- in excess of ARARs (e.g., RIDEM residential direct exposure criteria and TSCA requirements for PCBs);
- in excess of EPA's recommended residential level for dioxin and PCB (EPA, 1998 and 1990).

Prevent leaching or migration of contaminants from vadose zone soil that would result in groundwater contamination in excess of ARARs (e.g., MCLs/non-zero MCLGs).

previously remediated. The Source Area soil action area is located within the floodplain (Figure 1-2). This area also includes riverbank wetland resource areas as well as wetland vegetation that may become re-established within the former tailrace (Cap Area #3) (Section 2.3.10 of the 2010 FS). Because some soil contamination is located in wetland areas, there is no practical alternative to destruction of these wetlands. Principal threat wastes are also located in this area, and include buried waste material that may be present particularly near the southern area of Cap Area #1 and all contaminated soil at the Source Area.

Four short-term removal actions have been completed since 1999 to reduce the immediate human health threat to residents on and near the site from exposure to contaminated soil and sediment in the Source Area (Table 2-1). The removal actions include the construction of four caps, as described below:

- Construction of an interim protective cap (Cap Area #1) in a formerly wooded area immediately south of the Centredale Manor parking lot. This area was prone to flooding and had some of the highest concentrations of dioxin and PCBs in surface soil at the site. Contaminated Source Area soil was capped with intermediate cover material (6 inches minimum thickness), a geotextile liner, and approximately 12 inches of final cover material. The uppermost layer consists of 4 inches of loam and a vegetative cover.
- Construction of a second interim cap (Cap Area #2) between the Woonasquatucket River and the Centredale Manor building. This area also was prone to flooding and contained elevated concentrations of dioxin in surface soil. Contaminated Source Area soil was capped with a geotextile fabric liner, 6 inches of sand fill, and 12 inches of common fill. The uppermost layer consists of loam and a vegetative cover. A flood control berm was constructed along the western edge of the cap to reduce erosion.
- Construction of a permeable protective cap (Cap Area #3) over contaminated soil and sediment in the former tailrace, installation of a precast modular stormwater control structure at the terminus of a storm drain at the north end of the tailrace, and construction of a drainage swale along the length of the capped area (Loureiro Engineering Associates [LEA], 2004). The majority of the tailrace is capped with a cellular confinement system consisting from the bottom up of approximately 6 inches of sand, a geotextile fabric, and a 6-inch-thick cellular confinement system filled with and covered by 1.5-inch aggregate material. A soil cap consisting of geotextile fabric covered by 20 inches of bank run gravel and 4 inches of loam was constructed at the north end of the tailrace.
- Construction of an impermeable cap at the west side of the Brook Village parking lot to prevent contamination from soil and groundwater at this area from moving into the Woonasquatucket River (2009–2010 groundwater removal action, Section 2.2.1). Following excavation of contaminated soil, the area was backfilled to design elevations and an impermeable cap was constructed over the action area. The cap consisted of a geosynthetic high-density polyethylene (HDPE) liner, manufactured drainage layer system, HDPE cellular confinement system for slope stabilization; and 2-foot thick cover material layer consisting of bank-run gravel or stone and either a layer of filter fabric and topsoil (loam), rip rap, or processed stone and pavement, as necessary to match the surrounding areas.

The ground surface elevations in a significant percentage of Cap Areas #1, #2, and #3 are below the 100-year flood elevation (Figure 1-2), as are some of the parking lots, paved surfaces and landscaped areas. Approximately 85% (7.6 acres) of the Source Area is below the 100-year flood elevation, indicating that these areas may be subject to erosion during flooding.

As described in Section 2.4.1, contamination at the Source Area is spatially widespread. The majority of contamination above state ARARs (RIDEM's residential direct exposure and GA leachability), EPA's

recommended residential levels (for dioxin and PCBs), and TSCA criteria (40 CFR 761; 50 mg/kg total PCBs) occur at the central and southern portions of the Source Area, and are in areas that are paved or capped.

6.3.1 Alternative 1: No Action

6.3.1.1 Description of No Action

In accordance with the NCP requirements, the No Action alternative must be carried through the entire FS process, and is used as a basis of comparison to the other alternatives. This alternative would entail no active remediation of the contaminated Source Area soil or maintenance of the prior removal actions. Five-year reviews and periodic monitoring, triggered by severe weather events, are incorporated into this alternative. For cost estimating, it is assumed that there would be one physical survey and report to EPA on the conditions of the site every five years. Monitored natural recovery processes, ICs, and rigorous long-term monitoring are not components of this alternative.

6.3.1.2 Evaluation of No Action

Results from the evaluation of Alternative 1, No Action against the NCP criteria are discussed below and summarized in Table 6-31.

Overall Protection of Human Health and the Environment

The No Action alternative would not provide additional overall protection of human health and the environment. Four "removal actions" have been completed, including the installation of three interim soil covers and an impermeable cap, which reduces direct human exposure to vadose zone soil. The existing interim caps currently provide some overall protection, but without long-term monitoring, maintenance and ICs to maintain the integrity of the soil caps, conditions would likely deteriorate over time. For example, a site inspection in 2002 showed a limited amount of erosion had occurred at Cap Area #1 and Cap Area #2, likely because the caps are located within flood zones (Figure 1-2) and have no apparent maintenance program (Atlantic Environmental Technologies, 2002).

Compliance with ARARs

ARARs specific to the No Action alternative are summarized in Table 6-32. This alternative will not comply with ARARs for residential direct exposure, GA leachability, TSCA closure or EPA's recommended residential level for dioxin and PCB in soil (EPA, 1998 and 1990).

Long-Term Effectiveness and Permanence

The residual risk and inherent hazard remain high without a RCRA and TSCA closure. In addition, contamination above acceptable levels would remain in areas that are not capped. There would be no adequate or reliable controls to prevent exposure in the long term or maintain the controls currently in place. Without long-term monitoring and ICs to maintain the integrity of the existing surfaces, there would be risk of future uncontrolled exposure and migration of contaminated soil by erosion and transport to the Woonasquatucket River and Allendale Pond.

Reduction of Toxicity, Mobility or Volume through Treatment

There would not be a reduction of toxicity, mobility or volume of contamination through treatment with this alternative.

Short-Term Effectiveness

This alternative has no short-term impacts on the community, the environment or workers because there would not be any construction or intrusive work required under this alternative.

Implementability

There are no implementability issues as no activities are required under this alternative.

Cost

There would be no costs associated with the No Action alternative if no monitoring was conducted. If periodic monitoring is implemented, the annual cost for monitoring would be $14,000 and the present worth costs would be $170,000.

6.3.2 Alternative 3e: Targeted Excavation, Upgrade and Maintain Existing Surfaces and Disposal and/or Treatment

6.3.2.1 Description of Targeted Excavation, Upgrade and Maintain Existing Surfaces and Disposal and/or Treatment

Alternative 3e includes targeted excavation to remove potential buried waste material and contaminated soil that exceed the TSCA or GA leachability criteria, as well as extending the existing caps to cover existing landscape areas and upgrading and maintaining the existing surfaces to prevent exposure to or migration of contaminated soil at the Source Area (Figure 5-28). Excavated material would be shipped off site for disposal and/or treatment (Option 3e).

The health and safety of residents would be protected during construction. This is especially important for the Source Area because the residents in the Brook Village and Centredale Manor apartment buildings, located at the Source Area, are mostly elderly. Elderly populations are typically more sensitive to contaminants in the air and soil and to uncontaminated dust and chemicals used in standard construction. Additional steps would be taken so that the work was performed in a manner that would protect the health and safety of the residents, would protect the existing facilities from contamination, and would provide continuous access to the facilities. All work would be coordinated with management of Brook Village and Centredale Manor to provide continuous access to the residents and building service providers. The remedial action work plans, which would be submitted to EPA and the state before construction, would include a traffic control plan, a contamination migration control plan, and a resident health and safety plan.[15] These plans would describe measures that would be implemented to provide continuous access, protect existing property, and protect residents' health and safety during construction.

[15] State and federal wetlands may be associated with the Source Area soil action area and mitigation for any losses to these resource areas would need to be provided for if unavoidable impacts occurred as a result of remedy implementation. However, the developed nature of the Source Area (i.e., buildings, pavement and cover systems) introduces some questions regarding the need for mitigation in this area that would need to be resolved with the appropriate regulatory authorities during the design phase. Any potential impacts would be evaluated and provided for at that time as one component of the overall mitigation planning for the project.

The management of Brook Village and Centredale Manor would be contacted during the preparation of these plans to facilitate coordination and obtain their input into the procedures. After approval by EPA, these plans would be provided to the residential facilities management.

Following removal, confirmation sampling would be conducted to verify that the cleanup goals were achieved (see Appendix J for assumptions regarding types and quantities of confirmation samples). The sequence of excavation activities, excavation/backfill volumes and rates, soil processing, construction to upgrade existing surfaces, construction monitoring, long-term monitoring and ICs, and disposal and/or treatment options are described below. Construction activities would occur at the Source Area, where there is limited area for stockpile of material and equipment storage. Rules developed in accordance with TSCA will be followed for the decontamination of all construction equipment used when handling TSCA-contaminated material to avoid mixing with non-TSCA material.

Construction Sequence

The work would be done in phases to minimize disruption to the residents. An example construction sequence is described below. (The cap constructed at Brook Village parking lot under the 2009–2010 removal action does not require an upgrade because it is a RCRA cap.)

1. Construct stockpiling, truck loading and decontamination facilities prior to excavation.
2. Excavate potential buried waste material and transport off site for treatment/disposal.
3. Clear vegetation and install upgraded cap in Cap Area #1.
4. Excavate Source Area soil (TSCA/GA leachability areas) in Cap Area #3 east of Centredale Manor and transport off site for treatment/disposal.
5. Upgrade cap in Cap Area #3.
6. Excavate Source Area soil (TSCA/GA leachability area) in area north of Centredale Manor and transport off site for treatment/disposal.
7. Upgrade cap in landscape areas north of Centredale Manor.
8. Excavate Source Area soil (TSCA/GA leachability area) on north end of Cap Area #2 and transport off site for treatment/disposal.
9. Upgrade cap in Cap Area #2.
10. Upgrade cap in landscape areas around Centredale Manor
11. Apply sealer to asphalt parking lot areas
12. Remove the temporary roadways and restore the vegetation in the temporary work areas.

Excavation/Backfill Volumes and Rates

Conventional earth moving equipment would be used to excavate the potential buried waste material and contaminated soil. Figure 5-28 shows the areas that would be excavated under this alternative. The spatial extent of the potential buried waste excavation area encompasses the area interpreted as having the highest potential for containing buried bulk metallic materials (Roy F. Weston, 1999). The vertical extent of this excavation area is 4 ft bgs, which is based on the average fill thickness at the Source Area and confirmed by soil borings collected at this area (TTNUS, 2002). The TSCA/GA leachability excavation areas encompass all locations where there are chemical concentrations above the TSCA/GA leachability

criteria.[16] Each location represents a polygon-shaped area of contamination, where the spatial extent of the area extends approximately half-way between contaminated locations and clean locations. The vertical extent of these excavation areas ranges from 1 to 5 ft bgs, and encompasses the depth to clean (i.e., the depth at which contamination does not exceed TSCA and/or GA leachability criteria). The total volume of Source Area soil that would be excavated under this alternative is 14,300 cy (5,500 cy in potential buried waste area and 8,800 cy in the TSCA/GA leachability area; it does not include over-excavation allowance).[17] Approximately 23,200 tons of backfill would be placed in the excavated area.

The excavation and backfill rates are assumed to be approximately 400 cy/d and 500 tons/day, respectively. Based on these rates, it will take approximately 8 weeks to excavate the potential buried waste and contaminated soil and 9 weeks to place backfill. After excavation and evaluation of the confirmation samples, imported backfill would be placed to restore the site grade to existing elevation and to provide subgrade for the soil cap or asphalt.

Source Area Soil Processing

The excavated soil will generally be above the elevation of the groundwater table, so continual groundwater pumping and treatment will not be required. However, some of the deeper excavations may be below shallow groundwater during some seasons in the year. Therefore, this alternative includes provisions for pumping groundwater and stormwater from the excavations and treatment in a temporary treatment system. The excavated soil will be managed according to TSCA regulations as described below (see Disposal and/or Treatment Options).

Upgrade Existing Surfaces

This alternative includes an initial assessment to identify design improvements needed to restore the existing interim caps to meet the requirements of the original designs; a more detailed analysis would be performed during design. Construction to upgrade the existing surfaces would be performed following completion of excavation activities (above).

In the three existing interim cap areas the upgrade would include the following (no additional construction would be done to the RCRA cap at the Brook Village parking lot):

- Remove existing vegetation and take off site for disposal as hazardous debris. There are no trees in the cap areas and the vegetation that has grown since the caps were placed would be removed.
- Import loam type soil to fill depressions in the cap area where water could form shallow ponds and to provide soil with nutrients for healthy vegetation. For cost estimating purposes, it is assumed that an average fill thickness of 0.5 ft would be needed to fill low areas to provide soil for vegetation.

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[16] The existing paved surfaces are considered an impermeable barrier under state regulations. Contaminated soil beneath the paved surfaces with GA leachability exceedances would not be excavated.

[17] Appendix N of the 2010 FS describes how the excavation area and volume proposed in the 2010 FS for Alternative 3e would change if EPA's draft recommended interim PRG for dioxin in soil (i.e., 72 ng/kg based on residential exposure scenario; EPA, 2009b) is adopted. Appendix N of the 2010 FS indicates that the excavation area could be expanded to include landscape areas north of Brook Village and areas east of Cap Area #3, resulting in an incremental increase in the excavation volume of approximately 1,040 cy if EPA's draft interim PRG is adopted. Supplemental site activities conducted since the completion of the FS in 2010 are not expected to impact the incremental increase in the excavation volume presented in Appendix N of the 2010 FS (1,040 cy). Overall, the excavation volume identified in this Addendum for Alternative 3e (14,300 cy) could increase by approximately 1,040 cy assuming that EPA's 2009 draft interim PRG is adopted.

- Place hydro-seed to establish grass that would control soil erosion.
- The new soil and grass would cover any areas where erosion has exposed the geotextile fabric that was placed for the existing soil caps.

Excavation activities would be limited to landscape areas, and all work would be performed where the existing ground surface is above the normal water levels in the Woonasquatucket River and Allendale Pond, so dewatering would not be required.

In the parking lot and paved areas, asphalt sealant would be placed over the entire paved surfaces. The asphalt sealing would have to be performed in one area at a time to provide residents with continuous access and vehicle parking.

In the landscaped areas, which encompass approximately 60,500 sq ft at the Source Area (Table 6-30), the top 0.5 ft of soil would be removed and replaced with a cap that matches the existing interim cap thereby raising the grade by 1.5 ft from existing conditions. This would include from bottom to surface (a) 6 inches of fill, (b) a geotextile fabric layer, (c) 12 inches of imported fill and (d) 6 inches of topsoil. Once the cap was in place, the areas could be covered with grass or decorative landscape plantings with shallow (< 6 inches) root systems.

Overall, a total of approximately 11,000 tons of imported fill would be required to upgrade the existing interim caps and extend the caps to cover the landscaped areas. This would require approximately 275 truck loads of material, which could be delivered at a rate of 25 trucks per day for 2 weeks. The estimated construction duration to upgrade the existing interim caps and extend the caps to cover the landscaped areas is approximately 4 weeks. It would take approximately 2 weeks to install asphalt sealant on the site.

In this alternative, the ground surface elevation after upgrading the caps would be an average of 0.5 ft higher, and this has the potential to impact flood storage especially because a significant percentage of the cap areas are below the 100-year flood elevation (Figure 1-2). The volume of fill for all three cap areas would be 93,000 cubic feet. The estimated flows during flood events are 893 and 2,300 cubic feet per second (cfs) for flood return periods of 5 and 100 years, respectively. The potential impact to flood storage can be assessed by calculating the time it would take flood flows to fill a volume equal to the fill volume. For this assessment, it was assumed that all the cap areas are below the 100-year flood elevation. In this simplified case, for the floods with 5-year and 100-year return periods, the flood flows would be equal to the fill volume in 100 and 40 seconds, respectively. Mitigative measures to replace lost flood storage capacity would be evaluated during design if this option is selected as the remedy.

Construction Monitoring

During all construction, work would be limited to normal work hours. During earthwork construction, dust and noise would be controlled to protect the health of the residents of the two on-site buildings and surrounding neighborhoods. Air monitoring and dust suppression measures for PCBs would be maintained until excavation and transport of PCB contaminated soil and capping of contaminated soil is complete. Air and noise monitoring and abatement would be performed to ensure that the residents were not exposed to unsafe levels of particulates or volatiles in the air or unsafe noise levels. Dust and erosion controls may include actions such as applying water to keep the soil moist, covering exposed soil with straw or natural fiber mats, covering soil stockpiles with fabric, or installing silt fences around the perimeter of the site. Noise controls may include features such as mufflers on all equipment, or enclosing generators and air compressors in sound-reduction enclosures.

Long-Term Monitoring and Institutional Controls

A conceptual long-term monitoring approach is presented in Appendix H of the 2010 FS. Because the contamination would remain on site, ICs would be required to prevent contact with contaminated Source Area soil. The ICs would prohibit future excavation, restrict access for buried utilities, prevent the construction of buildings with pilings or basements, and require maintenance of the caps, parking lots, paved surfaces, and rip rap areas. The existing groundwater monitoring wells would be protected and used for long-term groundwater monitoring. Periodic reporting would be required to document remedy progress and efficacy.

Disposal or Treatment Options

This alternative includes one disposal option: *Option 3e, Off-site Disposal and/or Treatment.* Potential buried waste material, hazardous debris and excavated soil would be treated/disposed off site at a permitted facility.

Excavated material will be placed into a temporary stockpile for a short time while awaiting transport off site. All material will be stored within a temporary contained area which will have a bottom liner, perimeter berms, and stormwater collection sumps. Any precipitation that contacts the excavated material will be collected in the sumps and treated prior to discharge to the stormwater system. In addition, the temporary stockpile will be covered with impermeable materials to prevent erosion from precipitation or dust. The stockpile areas will be designed, constructed and operated in accordance with TSCA regulations (40 CFR §761.65) and will be located above the 100-year flood elevation.

The excavated soil would be sampled on a daily basis. Representative, composite samples would be taken and analyzed for total dioxin and furans to determine if disposal by incineration is required according to the LDRs. Representative, composite samples would also be taken and analyzed for TCLP concentrations to determine the designation of the materials as solid or hazardous waste and to determine which type of landfill is required. Once the appropriate disposal facility is identified, the excavated soil would be loaded onto trucks and transported to the appropriate location.

F-listed or characteristic soil waste with underlying hazardous constituents that meet alternative treatment standards in 40 CFR §268.49 would be taken to a licensed hazardous waste landfill for disposal. F-listed or characteristic soil waste that exceeds treatment standards in 40 CFR §268.49 would be taken to an off-site incinerator. Approximately 10% of the Source Area soil samples (from the planned excavation areas) contain dioxin or PCBs at concentrations in excess of the treatment standards in 40 CFR §268.49 (Section 3.2.1.2 of the 2010 FS). Therefore, the costs are based on the assumption that 90% of the soil would be taken to an off-site landfill and that 10% would be taken to an off-site incinerator for treatment. Costs assume that 100% of the excavated potential buried waste material and hazardous debris would be taken to the off-site facility for incineration.

6.3.2.2 Evaluation of Targeted Excavation, Upgrade and Maintain Existing Surfaces and Disposal and/or Treatment

Results from the evaluation of Alternative 3e, Targeted Excavation, Upgrade and Maintain Existing Surfaces and Disposal and/or Treatment, against the NCP criteria are discussed below and summarized in Table 6-33.

Overall Protection of Human Health and the Environment

Removal of potential buried waste and contaminated soil that exceed TSCA/GA leachability criteria in conjunction with extending and upgrading the soil caps would provide moderate overall protection of human health and the environment. Targeted removal of potential buried waste would remove highly toxic or highly mobile waste that generally cannot be reliably contained and could present a significant risk to human health or the environment should exposure occur. Targeted removal of contaminated soil that exceeds TSCA would prevent exposure to toxic soil. Targeted removal of contaminated soil that exceeds GA leachability criteria, extending the caps over landscape areas, and upgrading the existing surfaces would be effective in preventing erosion of surface soil and migration of the contaminants in eroded soil at the Source Area, and would effectively isolate contaminants from human exposure. The risk of exposure to contamination that remains in place would be reduced with ICs restricting site activities.

The impermeable cap at the Brook Village parking lot would prevent precipitation infiltration into the groundwater, but the other three protective caps would not. The pavement in the existing parking lots reduces infiltration in the parking lot areas, but re-directs the run-off to the edges of the parking lot where it can infiltrate into the ground.

Compliance with ARARs

ARARs specific to Alternative 3e are summarized in Table 6-34. This alternative would not comply with RCRA Subtitle C requirements. In addition, excavation and placement of fill in wetland areas would result in the destruction of existing wetlands and will trigger wetlands/Section 404 requirements. As a result, these actions must be evaluated to determine the least damaging practicable alternative. State wetlands requirements will also need to be addressed. Under this alternative, there would be permanent occupancy and modification of the floodplain. According to Executive Order 11988, a determination would need to be made that there was no other practicable alternative before selecting this option as the preferred remedy.

Long-Term Effectiveness and Permanence

Excavation and removal of the potential buried waste material and contaminated soil that exceeds TSCA/GA leachability will be effective in the long term. Upgrading the existing surfaces and extending the caps over landscaped areas would increase the effectiveness of this alternative. There are additional reliability issues for this alternative because some contaminated soil would remain in the floodplain. Inherent hazard of contamination will remain on site under an upgraded cap but without a RCRA Subtitle C closure. Risk reduction will be high as long as the cap is designed, constructed and maintained to provide long-term isolation of contaminants.

Long-term monitoring and maintenance of the upgraded surfaces would be required to prevent erosion and exposure of the underlying contaminated soil. In addition, ICs would be required to prevent human exposure, and could include restrictions on excavation, access for buried utilities, and construction with pilings or basements. However, these controls are only effective if adequately monitored and enforced.

Periodic monitoring would also be performed to verify that contamination left in place remains relatively immobile, and that no future releases occur.

Reduction of Toxicity, Mobility or Volume through Treatment

There would be a reduction of toxicity, mobility or volume of contamination through treatment with this alternative. The mobility of the contaminated soil would be reduced by the isolation cap, although not through treatment.

Short-Term Effectiveness

There would be some short-term impacts to the community, environment and workers during construction of this alternative. There would be some potential risk to on-site residents from dust generated during construction activities and VOCs generated during installation of asphalt sealants. However, access to the work zone during construction activities would be prohibited and all appropriate measures including ECs, dust suppression techniques, and site perimeter air (dust) monitoring would be taken to mitigate risks to the residents and community. Additionally, all work would be performed in phases to minimize these impacts, and measures would be taken to provide residents continued access to the buildings and parking areas.

Site workers would be protected by dust and erosion control measures implemented during construction. Potentially contaminated soil would be transported in covered trucks, and trucks would be cleaned to prevent contaminated soil from being deposited within the site. ECs and personal protection equipment would be used to meet worker safety regulations.

Excavation and placement of fill in wetland areas would result in the destruction of existing wetlands.

The RAO to prevent direct human contact with the contaminated vadose zone soil would be achieved at the completion of remedy implementation, which is expected to be approximately five months. Achieving this RAO, however, is contingent on long-term monitoring and maintenance of the existing surfaces that would continue after construction activities are complete.

The time to achieve the RAO to prevent migration or leaching of contaminants to soil and groundwater is unknown because some precipitation infiltration to the underlying soil and groundwater would still occur under this alternative. However, contaminated soil that exceeds the GA leachability criteria would be removed and should reduce the potential leaching of contaminants from soil to groundwater.

Implementability

Alternative 3e would be moderately difficult to implement. The cap materials and pavement sealing materials would be available from common commercial sources, and all work could be performed with conventional earthwork or paving equipment. Although the construction would be routine, implementation at this site would be more difficult because remediation work would be conducted in close proximity to apartment buildings with a sensitive population. In addition, there is limited space available for equipment, material stockpiles, and efficient work operations. The sequence of work would be constrained by the need to maintain access to Brook Village and Centredale Manor and the lack of space. As stated above, work would be limited to normal business hours Monday through Friday. The contractors would develop a traffic control plan and coordinate with the management of Brook Village and Centredale Manor to provide continuous access to residents and building service providers.

This alternative results in a permanent occupancy and modification of the floodplain, and a determination would need to be made that there was no other practicable alternative before selecting this option as the preferred remedy. Impacts to wetlands and floodplains would need to be minimized to the extent

possible, and mitigation for unavoidable wetland impacts would be required, as well as replacement of flood storage capacity.

Coordination with DOI would be required if (during remedial design or remedial action) it is determined that this alternative may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archaeological data.

Cost

The detailed cost evaluation for Alternative 3e, Targeted Excavation, Upgrade and Maintain the Existing Surfaces and Off-site Disposal and/or Treatment, is presented in Appendix J. The capital, operation and monitoring, and present worth costs are listed below.

Option 3e:Off-site Disposal and/or Treatment	Capital cost and baseline monitoring	$23,900,000
	Annual cost for years 1 to 30	$37,000
	Present worth costs	$24,400,000

The present worth costs (above) for Alternative 3e could increase by approximately $120,000 to $135,000 (or more) if a Stage IB cultural resource survey (archaeological survey testing and excavation) and additional mitigation measures are required to comply with the NHPA (USACE, 2011b) (Appendix J).

6.3.3 Alternative 4e: Targeted Excavation, Convert to RCRA Caps and Maintain and Disposal and/or Treatment

6.3.3.1 Description of Targeted Excavation, Convert to RCRA Caps and Maintain and Disposal and/or Treatment

In this alternative, potential buried waste material would be removed by excavation and existing interim caps and paved surfaces (Figure 5-29 of the 2010 FS) would be upgraded to meet the guidance for caps over unlined hazardous waste landfills. The cap would also be extended to cover landscaped areas within the proposed cleanup area (Figure 5-29 of the 2010 FS). Measures would be taken to provide continuous access, protect existing property, and protect site worker and resident's health and safety during construction as described for Alternative 3e (Section 6.3.2).

The sequence of excavation activities, excavation/backfill volumes and rates, soil processing, construction to convert the existing surfaces to RCRA caps, relocation of utilities, construction monitoring, long-term monitoring and ICs, and disposal and/or treatment options are described below. Construction activities would occur at the Source Area, where there is limited area for stockpile of material and equipment storage. Rules developed in accordance with TSCA will be followed for the decontamination of all construction equipment used when handling TSCA-contaminated material to avoid mixing with non-TSCA material.

Construction Sequence

The work would be done in phases to minimize disruption to the residents. An example construction sequence is described below. (The cap constructed at Brook Village parking lot under the 2009–2010 removal action does not require an upgrade because it is a RCRA cap.)

1. Construct stockpiling, truck loading and decontamination facilities prior to excavation.
2. Excavate potential buried waste material and transport off site for disposal/treatment.

3. Relocate underground utilities.
4. Clear vegetation and install RCRA cap in Cap Area #1.
5. Install RCRA cap in Cap Area #3.
6. Install RCRA cap in Cap Area #2.
7. Install RCRA cap in landscape areas around Centredale Manor
8. Install RCRA cap in asphalt parking lot and access roadway southwest of Centredale Manor.
9. Install RCRA cap in asphalt parking lot and access roadways north of Centredale Manor.
10. Install RCRA cap in parking lot and access roadways south of Brook Village.
11. Remove the temporary roadways and restore the vegetation in the temporary work areas.

Excavation/Backfill Volumes and Rates

Conventional earth moving equipment would be used to excavate the potential buried waste material from the southern portion of the Source Area at Cap Area #1 (Figure 5-29 in the 2010 FS). The spatial extent of the potential buried waste excavation area encompasses the area interpreted as having the highest potential for containing buried bulk metallic materials (Roy F. Weston, 1999). The vertical extent of this excavation area is 4 ft bgs, which is based on the average fill thickness at the Source Area and confirmed by soil borings collected at this area (TTNUS, 2002). The total volume of Source Area soil that would be excavated under this alternative is 5,500 cy (does not include over-excavation allowance).[18] Approximately 8,900 tons of backfill would be placed in the excavated area.

The excavation and backfill rates are assumed to be approximately 400 cy/d and 500 tons/day, respectively. Based on these rates, it will take approximately 3 weeks to excavate the potential buried waste material and contaminated soil and 4 weeks to place backfill. After excavation, imported backfill would be placed to restore the site grade to existing elevation and to provide subgrade for the soil cap or asphalt.

Source Area Soil Processing

The excavated soil will generally be above the elevation of the groundwater table, so continual groundwater pumping and treatment will not be required. However, some of the deeper excavations may be below shallow groundwater during some seasons in the year. Therefore, this alternative includes provisions for pumping groundwater and stormwater from the excavations and treatment in a temporary treatment system. The excavated soil will be managed according to TSCA regulations as described below (see Disposal and/or Treatment Options).

[18] Appendix N of the 2010 FS describes how the excavation area and volume proposed in the 2010 FS for Alternative 4e would change if EPA's draft recommended interim PRG for dioxin in soil (i.e., 72 ng/kg based on residential exposure scenario; EPA, 2009b) is adopted. Appendix N of the 2010 FS indicates that the excavation area could be expanded to include landscape areas north of Brook Village and areas east of Cap Area #3, resulting in an incremental increase in the excavation volume of approximately 1,040 cy if EPA's draft interim PRG is adopted. Supplemental site activities conducted since the completion of the FS in 2010 are not expected to impact the incremental increase in the excavation volume presented in Appendix N of the 2010 FS (1,040 cy). Overall, the excavation volume identified in this Addendum for Alternative 4e (5,500 cy) could increase by approximately 1,040 cy assuming that EPA's 2009 draft interim PRG is adopted.

Cap Design and Construction

The RCRA cap would be designed to meet the requirements of the EPA Region 1 guidance for RCRA covers over unlined hazardous waste landfills (EPA, 2001b); the RCRA cap will meet TSCA requirements. A cross-section showing the placement of a RCRA cap at the Source Area, bounded to the west by the Woonasquatucket River and to the east by the steps to the Centredale Manor apartment building, is shown in Figure 5-30b of the 2010 FS. A cross-section of a representative RCRA cap showing the cover system is presented in Figure 5-30a of the 2010 FS. The total area of the existing interim soil caps is 186,000 sq ft (4.3 acres) and the total area of existing pavement is 93,000 sq ft (2.1 acres) (Table 6-30).

In the three soil cap areas, the interim soil material previously placed would serve as the Base Layer, Gas Vent Layer and Bottom Low-Permeability Layer. The following work elements would be required to upgrade the existing soil covers:

1. Regrade the site to provide a minimum slope of 3%. This could be performed with contaminated floodplain soil excavated from the ponds as part of the Allendale and Lyman Mill floodplain soil alternatives (see Sections 6.4 of the 2010 FS and 6.1 of this Addendum) assuming one of the active alternatives is selected. Approximately 14,900 tons of imported soil would be required.
2. Install a Geomembrane Layer using 60 mil thick low density polyethylene (LLDPE) or HDPE. This would cover the cap area of 186,000 sq ft.
3. Install a Drain Layer. For estimating costs in the FS, it is assumed that imported sand and gravel would be used, with a layer thickness of 12 inches. Install a geotextile on top of the Drain Layer to prevent fine-grained soil from the top layers from migrating into the pore spaces and reducing the permeability. Approximately 12,000 tons would be required.
4. Install a Protective Soil Layer. For this FS, this layer is assumed to be 12 inches thick. Approximately 12,000 tons would be required.
5. Install a Topsoil Layer. For this FS, this layer is assumed to be 6 inches thick. Approximately 6,000 tons would be required.

Where necessary for drainage at Cap Area #3, 3.5 ft of soil would be removed and a 12-inch thick layer of silt installed. The silt layer would be covered with a geomembrane, drain layer, protective soil layer and topsoil as described above for the three cap areas. The total thickness of the new cap would be 3.5 ft, so that the future ground surface would be the same elevation as the existing ground.

For the Source Area, a total thickness of 18 inches for the Topsoil and Protective Layers would be sufficient to protect the Drain Layer and Low-Permeability Layers. The use of a sand and gravel drain layer instead of a thinner geocomposite drain provides a total of 30 inches of soil over the geomembrane layer, which is more than the total of 24 inches shown in the Region 1 guidance (EPA, 2001b). The climate at this site is more moderate than northern New England so a total thickness of 30 inches would be enough to protect the geomembrane from damage by frost or future use. The sand and gravel in the Drain Layer would not be susceptible to damage from frost or future use.

In the paved areas, the existing asphalt would be removed and transported to an off-site disposal or recycling facility. The existing soil under the pavement would serve as the Base Layer and Gas Vent Layer. The following work elements would be required to upgrade the existing pavement areas:

1. Remove existing asphalt and take to an off-site disposal or recycling facility.

2. Install a Bottom Low-Permeability Layer and regrade the site to provide a minimum slope of 3%. This layer could be made using contaminated floodplain soil excavated as part of the Allendale and Lyman Mill floodplain soil alternatives (see Sections 6.4 and 6.6 of the 2010 FS) assuming one of the active alternatives is selected. Approximately 6,000 tons of imported soil would be required.
3. Install a Geomembrane Layer using 60 mil thick LLDPE or HDPE over an area of about 93,000 sq ft.
4. Install a sand and gravel Drain Layer. For estimating costs in the FS, it is assumed that imported sand and gravel would be used, with a layer thickness of 12 inches. Install a geotextile on top of the Drain Layer to prevent fine-grained soil from the top layers from migrating into the pore spaces and reducing the permeability. Approximately 6,000 tons would be required.
5. Install a total of 12 inches of gravel base and asphalt pavement to replace the pavement and serve as the Protective Layer. Approximately 6,000 tons would be required.

This would provide a total of 24 inches of gravel, sand or asphalt over the Geomembrane Layer, which would protect it from frost damage or from damage due to traffic loads.

The total weight of imported fill materials required would be about 72,000 tons (45,000 tons for the interim cap areas, 18,000 tons for pavement areas, and 8,900 tons for the excavation areas). This would require 25 trucks per day for about 125 working days, or 25 weeks. The estimated construction time for the three interim cap areas is approximately 25 weeks and the estimated time for the pavement areas is approximately 10 weeks, for a total construction time of 35 weeks, or 8 months.

In the landscaped areas (1.4 acres) that are not currently capped, 0.5 ft of soil would be removed and a 12-inch thick layer of silt installed. The silt layer would be covered with a geomembrane, drain layer, protective soil layer and topsoil as described above for the three cap areas. The total thickness of the new cap would be 3.5 ft, so that the future ground surface would be higher by 3.0 ft.

In this alternative, the ground surface elevation after upgrading the caps would be an average of 2.5 ft higher and this has the potential to impact flood storage, especially because a significant percentage of the cap areas are below the 100-year flood elevation (Figure 1-2). The volume of fill for all three cap areas would be 248,000 cubic feet and the volume for imported cap materials would be 372,000 cubic feet, for a total volume of 620,000 cubic feet in the three cap areas. The estimated flows during flood events are 893 and 2,300 cfs for flood return periods of 5 and 100 years, respectively. The potential impact to flood storage can be assessed by calculating the time it would take flood flows to fill a volume equal to the fill volume. For this assessment, assume that all the cap areas are below the 100-year flood elevation. In this simplified case, for the floods with 5-year and 100-year return periods, the flood flows would be equal to the fill volume in 690 and 270 seconds, respectively. Mitigative measures to replace lost flood storage capacity would be evaluated during design if this option is selected as the remedy.

Relocation of Utilities

This alternative also includes placement of underground utilities into trenches with only clean soil. Because the two buildings on the property are occupied, continuous service must be provided to the buildings. Because the residents will remain on site during the construction, the most practical method to accomplish this construction would be to install new underground utilities parallel to the existing utilities, then remove the existing lines. The new utilities would include the following:

- Sanitary sewer lines – The costs are based on the assumption that the trenches would be an average of 4 ft wide and 10 ft deep.
- Water, natural gas and storm drains – The costs are based on the assumption that the trenches would be an average of 2 ft wide and 4 ft deep.
- Electric power, telephone, communication cable and parking lot lighting – The costs are based on the assumption that all lines would be inside rigid conduits and that the trenches would be an average of 2 ft wide and 4 ft deep.

After the new utilities were installed, connected, and buried in trenches with clean soil, the existing utilities would be excavated and removed. It is assumed that the soil removed from both new trenches and existing trenches would be contaminated and would be placed in the existing soil cap areas, then covered with the new RCRA caps.

Construction Monitoring

During all construction, work would be limited to normal work hours. During earthwork construction, dust and noise would be controlled to protect the health of the residents of the two on-site buildings and surrounding neighborhoods. Air monitoring and dust suppression measures for PCBs would be maintained until excavation and transport of PCB contaminated soil and capping of contaminated soil is complete. Air and noise monitoring and abatement would be performed to ensure that the residents were not exposed to unsafe levels of particulates or volatiles in the air or unsafe noise levels. Dust and erosion controls may include actions such as applying water to keep the soil moist, covering exposed soil with straw or natural fiber mats, covering soil stockpiles with fabric, or installing silt fences around the perimeter of the site. Noise controls may include features such as mufflers of all equipment, or enclosing generators and air compressors in sound-reduction enclosures.

Long-Term Monitoring and Institutional Controls

A conceptual long-term monitoring approach is presented in Appendix H of the 2010 FS. Because the contamination would remain on site, ICs would be required to prevent contact with contaminated Source Area soil. The ICs would include prohibiting future excavation, restricting access for buried utilities, preventing the construction of buildings with pilings or basements, and maintenance of the caps and parking lots. The existing groundwater monitoring wells would be protected and raised to the new ground surface elevations and used for long-term groundwater monitoring.

Disposal or Treatment Options

This alternative includes one disposal option: *Option 4e, Off-site Disposal and/or Treatment.* Potential buried waste material, hazardous debris and excavated soil would be treated/disposed off site at a permitted facility.

Excavated material will be placed into a temporary stockpile for a short time while awaiting transport off site. All material will be stored within a temporary contained area which will have a bottom liner, perimeter berms, and stormwater collection sumps. Any precipitation that contacts the excavated material will be collected in the sumps and treated prior to discharge to the stormwater system. In addition, the temporary stockpile will be covered with impermeable materials to prevent erosion from precipitation or dust. The stockpile areas will be designed, constructed and operated in accordance with TSCA regulations (40 CFR §761.65) and will be located above the 100-year flood elevation. The excavated soil would be sampled on a daily basis. Representative, composite samples would be taken and analyzed for total dioxin and furans to determine treatment for LDRs (see Section 3.2.1.2 of the 2010 FS).

Representative, composite samples would also be taken and analyzed for TCLP concentrations to determine the designation of the materials as solid or hazardous waste and to determine which type of landfill is required. Once the appropriate disposal facility is identified, the soil would be loaded onto trucks and transported to the appropriate location.

Excavated soil that is designated as hazardous waste would be subject to LDRs. F-listed or characteristic soil waste with underlying hazardous constituents that meet the alternative treatment standards in 40 CFR §268.49 would be taken to a licensed hazardous waste landfill for disposal. F-listed or characteristic soil waste that exceeds treatment standards in 40 CFR §268.49 would be taken to an off-site incinerator. The costs are based on the assumption that all of the excavated potential buried waste material, hazardous debris and excavated soil would be taken to an off-site incinerator for treatment.

6.3.3.2 Evaluation of Targeted Excavation, Convert to RCRA Caps and Maintain and Disposal and/or Treatment

Results from the evaluation of Alternative 4e, Targeted Excavation, Convert to RCRA Caps and Maintain and Disposal and/or Treatment against the NCP criteria are discussed below and summarized in Table 6-35.

Overall Protection of Human Health and the Environment

Removal of potential buried waste material and converting the existing surfaces to RCRA caps would provide high overall protection of human health and the environment. Targeted removal of potential buried waste material would remove highly toxic or highly mobile waste that generally cannot be reliably contained and could present a significant risk to human health or the environment should exposure occur. The RCRA caps would prevent direct human contact with contaminated soil and prevent migration or leaching of contaminants from soil that would result in soil or groundwater contamination in excess of ARARs. The RCRA cap would be effective in the long term because caps constructed of natural earth materials and geosynthetics would be stable in the long term and would provide effective and reliable containment of contaminated soil. The RCRA cap would also essentially eliminate precipitation infiltration into the vadose zone soil, which would provide additional protection against contaminant migration and leaching from soil into groundwater and surface water. With respect to lateral seepage of floodwaters, the shoreline erosion protection stone and underlying sand bedding layer would prevent the movement of soil particles and direct contact with contaminated soil.

Compliance with ARARs

ARARs specific to Alternative 4e are summarized in Table 6-36. This alterative will comply with all ARARs, including requirements for TSCA and RCRA closure. Excavation and placement of fill in wetland areas will result in the destruction of existing wetlands and will trigger wetlands/Section 404 requirements. As a result, these actions must be evaluated to determine the least damaging practicable alternative. State wetlands requirements will also need to be addressed. Under this alternative, there would be permanent occupancy and modification of the floodplain. According to Executive Order 11988, a determination would need to be made that there was no other practicable alternative before selecting this option as the preferred remedy.

Long-Term Effectiveness and Permanence

Excavation and off-site disposal/treatment of the potential buried waste material will be effective in the long term. Capping contaminated soil with a RCRA and TSCA cap would increase the long-term effectiveness of this alternative by providing highly reliable chemical isolation. Risk reduction will be

high as the cap will be designed, constructed, and maintained in compliance with RCRA and TSCA closure requirements. Because contaminated soil is contained and remains under the cap, inherent hazard of waste also remains. Long-term monitoring, maintenance, and ICs would be required to protect the integrity of the caps. ICs would also be required to prevent human exposure, and could include restrictions on excavation, access for buried utilities, and construction with pilings or basements. However, these controls are only effective if adequately monitored and enforced. Finally, there are additional reliability issues for this alternative because the cap is located in the floodplain.

Reduction of Toxicity, Mobility or Volume through Treatment

There would be a reduction of toxicity, mobility or volume of contamination through treatment with this alternative. The mobility of the contaminated soil would be reduced by the RCRA cap, although not through treatment.

Short-Term Effectiveness

Short-term impacts to the community and the environment would be similar to Alternative 3e (Section 6.3.2.2). The RAOs would be achieved at the completion of remedy implementation, which is expected to be approximately eight months.

Implementability

The cap, membrane cover, pavement, and utility materials would be available from common commercial sources, and all work could be performed with conventional earthwork or paving equipment. Although the construction would be routine, implementation at the Source Area would be more difficult because the remedial work would be conducted in close proximity to apartment buildings with a sensitive population. In addition, there is limited space available for equipment, material stockpiles and efficient work operations. Construction of the clean utility corridor would also present some logistical issues. The sequence of work would be constrained by the need to maintain access to Brook Village and Centredale Manor, maintain utilities, and the lack of space. As stated above, work would be limited to normal business hours Monday through Friday. The contractors would develop a traffic control plan and coordinate with the management of Brook Village and Centredale Manor to provide continuous access to residents and building service providers.

With the installation of the new caps, the existing ground surface would be higher than the existing grades, except in the drainage area of Cap Area #3 where some excavation would be performed to maintain the site grade. This would not impact the Centredale Manor apartment building because the ground floor is higher than the surrounding parking lots and there would simply be fewer steps up to the main entrance. The new cap would be installed under the parking lot south of the Brook Village building, but not in the access roadways or lawn areas to the east, north or west. Therefore, this would not impact the access or stormwater drainage around Brook Village. Placement of permanent fill in the floodplain, however, would result in a permanent occupancy and modification of floodplain areas, and a determination would need to be made that there was no other practicable alternative before selecting this option as the preferred remedy. This alternative also requires the filling of wetland areas. Impacts to wetlands and floodplains would need to be minimized to the extent possible and mitigation for unavoidable wetland impacts would be required, as well as replacement of flood storage capacity.

Coordination with DOI would be required if (during remedial design or remedial action) it is determined that this alternative may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archaeological data.

Cost

The detailed cost evaluation for Alternative 4e, Targeted Excavation, Convert to RCRA Caps and Maintain and Off-site Disposal and/or Treatment, is presented in Appendix J. The capital, operation and monitoring, and present worth costs are listed below.

Option 4e:Off-site Disposal and/or Treatment	Capital cost and baseline monitoring	$20,800,000
	Annual cost for years 1 to 30	$38,000
	Present worth costs	$21,300,000

The present worth costs (above) for Alternative 4e could increase by approximately $120,000 to $135,000 (or more) if a Stage IB cultural resource survey (archaeological survey testing and excavation) and additional mitigation measures are required to comply with the NHPA (USACE, 2011b) (Appendix J).

6.4 Comparative Analysis of the Source Area Soil Alternatives

The three alternatives for Source Area soil (Alternative 1, No Action; Alternative 3e, Targeted Excavation, Upgrade and Maintain Existing Surfaces and Disposal and/or Treatment; and Alternative 4e, Targeted Excavation, Convert to RCRA Caps and Maintain and Disposal and/or Treatment) are compared below to better understand the key tradeoffs among the alternatives; key features of the alternatives are summarized in Table 6-37. Overall, among the alternatives evaluated, the targeted excavation and upgrade to RCRA cap alternative (Alternative 4e) would provide the highest level of protection to human health and the environment and higher long-term effectiveness and permanence. This is the only alternative that will comply with all ARARs, including RCRA and TSCA closure requirements.

6.4.1 Overall Protection of Human Health and the Environment

The RAOs for Source Area soil are to 1) prevent direct human contact with Source Area soil that contain contamination above ARARs and EPA's recommended residential level for dioxin and PCBs and 2) prevent leaching or migration of contaminants from vadose zone soil that would result in groundwater contamination in excess of ARARs. The previously described removal actions (interim caps) at the Source Area are temporary measures that prevent direct human contact to the soil. The No Action alternative would provide no additional overall protection of human health and the environment. Because this alternative does not include any long-term monitoring, it would not be possible to determine or evaluate the risks of future exposure.

Alternative 3e (Targeted Excavation, Upgrade and Maintain Existing Surfaces and Disposal and/or Treatment) would provide a higher level of protection compared to the No Action alternative, and Alternative 4e (Targeted Excavation, Convert to RCRA Caps and Maintain and Disposal and/or Treatment) would provide a higher level of protection when compared to Alternative 3e. Both types of caps would be very effective at preventing human contact with the contaminated Source Area soil.

Alternative 4e would provide the highest level of overall protection to human health and the environment. This is the only alternative that would comply with RCRA closure requirements and eliminate precipitation infiltration to the caps and in areas where soil or groundwater contains contamination above the ARARs for GA leachability and federal drinking water standards.

6.4.2 Compliance with ARARs

The No Action alternative will not comply with ARARs. Among the alternatives evaluated, only Alternative 4e will comply with all ARARs, including RCRA Subtitle C requirements for closure. The

RCRA cap would also comply with TSCA regulations and would prevent exposure to PCB-contaminated waste as long as the caps are maintained. Alternative 3e would comply with all ARARs except for RCRA Subtitle C requirements.

Alternatives 3 and 4 would require the filling of wetlands. As a result, these actions must be evaluated to determine the least damaging practicable alternative. State wetlands requirements will also need to be addressed. Both alternatives would result in a permanent occupancy and modification of the floodplain. According to Executive Order 11988, a determination would need to be made that there was no other practicable alternative before selecting any of these options as the preferred remedy.

6.4.3 Long-Term Effectiveness and Permanence

For Alternative 1, No Action, the residual risk remains high, and there are no ICs to prevent exposure or actions required to maintain the controls currently in place. Although the inherent hazard remains under Alternatives 3e and 4e, there are ICs to prevent exposure, and actions required to maintain the controls would be included as part of these alternatives. These controls are only effective if adequately monitored and enforced. Among the alternatives, Alternative 4e would provide the highest long-term effectiveness and permanence because the RCRA/TSCA caps would provide reliable chemical isolation and would be designed, constructed, and maintained in compliance with RCRA and TSCA closure requirements.

6.4.4 Reduction of Toxicity, Mobility or Volume through Treatment

Alternative 3e would require the greatest reduction of toxicity, mobility and volume through treatment, followed by Alternative 4e. The caps under Alternatives 3 and 4 would reduce the mobility of the contaminated soil, although not through treatment. The No Action (Alternative 1) would not provide any treatment or reduction in mobility, toxicity or volume.

6.4.5 Short-Term Effectiveness

Alternative 1 would have fewer short-term impacts on the community, the environment and workers compared to Alternatives 3 and 4 because no construction activities would be performed for Alternative 1 and there would be little disruption to the residents of Centredale Manor, Brook Village, or the nearby community.

Alternatives 3 and 4 could be accomplished using routine construction methods, and asphalt paving could be performed using the materials and equipment typically used for routine road construction. However, both alternatives would involve some disruption to the local residents, as well as the potential for exposure of workers to contamination during excavation activities. Appropriate health and safety measures would be used to protect workers from exposure. The total time for on-site construction of Alternative 3e would be about 5 months, and the construction time for Alternative 4e would be about 8 months. Although construction activities would be conducted during regular business hours, there would be an increase in the volume of traffic and noise in the immediate vicinity of the site.

6.4.6 Implementability

The No Action alternative would not require any action to be taken at the site, and therefore does not present any implementability issues.

Although the construction work for Alternatives 3 and 4 would be routine, implementation at this site would be more difficult because the remediation area is in close proximity to apartment buildings with a sensitive population and there is limited space available for material stockpiles, equipment storage, and

efficient work operations. In addition, both of these alternatives would result in the filling of wetlands and the permanent occupancy and modification of the floodplain. Impacts to wetlands and floodplains would need to be minimized to the extent possible and mitigation for unavoidable floodplain/wetland impacts would be required, as well as replacement of flood storage capacity.

Alternative 4e is somewhat more difficult to implement compared to Alternative 3e because construction activities would be more extensive, especially in the parking areas with respect to placing the RCRA cap and installing a clean utility corridor.

Coordination with DOI would be required under Alternatives 3e and 4e if (during remedial design or remedial action) it is determined that the remedial action may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archaeological data.

6.4.7 Cost

The costs for the Source Area soil alternatives are presented in Table 6-37. Present worth costs for No Action (Alternative 1) is $170,000. Present worth costs for the action-based alternatives range from $21,300,000 for targeted excavation with the RCRA cap upgrade (Alternative 4e) to $24,400,000 for targeted excavation with the cap upgrade (Alternative 3e). Additional costs for compliance with the NHPA are the same for both action-based alternatives (potentially $120,000 to $135,000 or more in additional costs for Stage 1B cultural resource survey and mitigation).

6.5 Groundwater Alternatives

The detailed evaluation of groundwater alternatives is presented in Section 6.10 of the 2010 FS. The proposed cleanup action for groundwater, generally described as Source Area Groundwater Alternative 2e (Excavation/Dewatering) in the 2010 FS, was constructed under the 2009–2010 TCRA (Section 2.2.1). Additional parts of the proposed groundwater cleanup action that have not been implemented (i.e., ICs, long-term monitoring, and five-year reviews) are generally the same as described in the 2010 FS (Sections 6.10.2 and Table 6-40 of the 2010 FS), except that capital costs and long-term monitoring costs are higher than estimated in the 2010 FS because the larger cleanup area (Figure 3-6) will result in additional construction and monitoring costs to evaluate the continued effectiveness of this action. The remedial cost estimates for Source Area Groundwater Alternative 2e, Excavation/Dewatering are refined in this Addendum to account for the additional construction and monitoring requirements, including:

- Installation of three additional deep monitoring wells, each drilled to 80 ft bgs and installed with multiple screened intervals for monitoring distinct depth intervals at approximately 40 and 80 ft bgs.
- More comprehensive groundwater monitoring (14 existing well intervals and six new well intervals will be monitored annually), resulting in additional costs for sampling and analysis activities.

The detailed cost evaluation for Alternative 2e, Excavation/Dewatering, is presented in Appendix J. The capital, operation and monitoring, and present worth costs are listed below.

Option 2e: Off-site Disposal and/or Treatment	Capital cost and baseline monitoring	$2,700,000
	Annual cost for years 1 to 30	$70,000
	Present worth costs	$3,600,000

7.0 SUMMARY AND CONCLUSIONS

This section summarizes the most significant findings of the FS Addendum. The key changes to the 2010 FS are presented in Section 7.1. Principal uncertainties associated with the FS Addendum conclusions and next steps for the CMRP site are presented in Sections 7.2 and 7.3, respectively.

7.1 Summary of Changes to the 2010 FS

The 2010 FS for the CMRP site presented remedial alternatives, including estimates of anticipated costs, that would achieve the RAOs and address contamination at the site that presents a risk to human health and the environment. Supplemental site activities performed since the completion of the FS in 2010 impact aspects of the FS, including the RAOs, action areas, and remedial alternatives for select action areas.

7.1.1 Impacts to RAOs and Action Areas

Supplemental site activities impact the RAOs and areas for remedial action at select action areas as described below.

Source Area Soil and Groundwater. The federal groundwater classification for groundwater within the Source Area changed from Class III (non-potable water) to Class IIB (potential source of drinking water), which impacts the RAOs, cleanup goals, and/or cleanup areas for Source Area soil and groundwater. For Source Area soil, the RAO is revised to prevent leaching or migration of contaminants from vadose zone soil that would result in groundwater contamination in excess of federal MCLs and non-zero MCLGs. For groundwater, the RAOs are revised to prevent migration of contaminants from groundwater within the Source Area that would result in surface water contamination in excess of federal WQC and state standards and prevent exposure to contamination in groundwater in excess of federal MCLs/non-zero MCLGs for groundwater. The RAOs also require attainment of federal drinking water standards. These changes result in substantially lower cleanup goals for Source Area soil and groundwater, and a larger cleanup area for groundwater (increased from 0.13 acres in the 2010 FS to 8.0 acres in this Addendum).

Lyman Mill Reach Stream Sediment and Floodplain Soil. Additional sampling and analysis activities were performed for the Oxbow area in 2010 (LEA, 2011). Results from this investigation were used to 1) better understand the nature and extent of contamination at the Oxbow area with respect to the site CSM and 2) update the risk assessments and determine potential risks to human health and the environment from exposure to contamination at this area. Results from these supplemental investigations impact the cleanup goals and cleanup areas for the Lyman Mill Reach stream sediment and floodplain soil action area, and were also used to re-evaluate areas for excavation and thin-layer cover proposed under the remedial alternatives for this action area. Overall, the cleanup area and in-situ volumes increased from 21.6 acres and 34,800 cy in the 2010 FS to 28.7 acres and 58,400 cy in this Addendum.

7.1.2 Impacts to Remedial Alternatives

Remedial alternatives for the Source Area and Lyman Mill Reach stream sediment and floodplain soil action areas were refined in this Addendum based on changes to the RAOs and action areas. Additionally, cost estimates developed in the 2010 FS for the sediment alternatives (off-site disposal option) are updated in this Addendum based on applying the alternative treatment standards to dewatered sediment and assuming that the amount of treatment needed would to be reduced (from 50% to 10%).

Source Area Soil. Alternative 3e is impacted by the revised RAOs, whereas Alternative 1 (No Action) and Alternative 4e (RCRA cap) are not. Briefly, Alternative 3e, Targeted Excavation, Upgrade and Maintain

Existing Surfaces, and Off-site Disposal and/or Treatment, is refined to expand the excavation areas to encompass locations with contaminant concentrations above the GA leachability criteria in order to meet the revised RAOs. This results in an increase in the excavation area (additional 0.6 acres) and volume (additional 4,500 cy) of contaminated soil for off-site disposal and/or treatment, which in turn increase the present worth costs by approximately $4,800,000, for a total cost of approximately $24,400,000.

Groundwater. The remedial alternatives for groundwater were not refined because EPA's proposed cleanup action for groundwater, generally described as Source Area Groundwater Alternative 2e (Excavation/Dewatering) in the 2010 FS, was constructed under the 2009–2010 TCRA. Additional parts of the proposed groundwater cleanup action that have not been implemented (i.e., ICs, long-term monitoring, and five-year reviews) are generally the same as described in the 2010 FS, except that the present worth costs would increase by approximately $600,000 (compared to costs estimated in the 2010 FS) because the larger cleanup area would result in additional construction and monitoring costs to evaluate the effectiveness of this action.

Lyman Mill Reach Stream Sediment and Floodplain Soil. Alternatives 3 and 5 are impacted by the revised RAOs and action areas (No Action is not impacted except with respect to the time to achieve RAOs). Alternative 3, Limited Excavation, Enhanced Natural Recovery, and Disposal and/or Treatment is refined to address contamination at the revised cleanup area and to re-evaluate areas for excavation and thin-layer cover based on results from the 2010–2011 supplemental investigations at the Oxbow area. The areas for excavation increased from 4.8 acres (2010 FS) to 6.5 acres, resulting in an incremental increase of 10,800 cy of contaminated sediment and soil for disposal and/or treatment. The areas for thin-layer cover increased from 16.8 acres (2010 FS) to 22.2 acres. Overall, the present worth costs increased by 40% or more depending on the disposal option, and range from $13,700,000 (Option 3b, on-site containment in nearshore CDF) to $33,300,000 (Option 3d, on-site incineration).

Alternative 5, Partial Excavation, Enhanced Natural Recovery, and Disposal and/or Treatment is refined to address contamination at the revised cleanup area and to re-evaluate areas for excavation and thin-layer cover based on results from the 2010–2011 supplemental investigations at the Oxbow area. The areas for excavation increased from 13.5 acres (2010 FS) to 19.5 acres, resulting in an incremental increase of 23,600 cy of contaminated sediment and soil for disposal and/or treatment. The areas for thin-layer cover increased from 8.0 acres (2010 FS) to 9.2 acres. Overall, the present worth costs increased 50% or more depending on the disposal option, and range from $24,100,000 (Option 5b, on-site containment in nearshore CDF) to $73,300,000 (Option 5d, on-site incineration).

Allendale and Lyman Mill Sediment – Cost estimates for off-site disposal (Option e) decreased by approximately 15% to 25% compared to the costs presented in the 2010 FS as a result of applying the alternative treatment standards for soil to dewatered sediment and assuming that 10% of the excavated, dewatered material (rather than 50%) would require treatment to meet LDRs.

7.1.3 Detailed and Comparative Analysis of Alternatives

The remedial alternatives for the Source Area soil and Lyman Mill Reach stream sediment and floodplain soil action areas were evaluated individually against the NCP criteria and were also compared to better understand the key tradeoffs among the alternatives. Overall, the remedial alternatives would address contamination that presents a risk to human health and the environment at the Source Area soil and Lyman Mill Reach stream sediment and floodplain soil action areas, and would achieve the RAOs at varying levels of effectiveness as described below. The No Action alternative (Alternative 1) would not provide effective protection because contaminated material that presents a risk to human health and the environment would remain on site unaddressed.

- Lyman Mill Reach Stream Sediment and Floodplain Soil Alternatives 3 and 5 would achieve human health objectives quickly through targeted excavation. These alternatives would not provide immediate, complete protection of ecological receptors from exposures to contaminated material, rather, a minimum of several decades may be required to attain the ecological cleanup objectives. This delay in achieving the RAOs for ecological receptors is balanced by the need to preserve the habitat necessary to maintain the receptors to be protected. Alternative 3 would provide a somewhat lower level of immediate ecological protection than Alternative 5 because a smaller volume of contaminated material would be removed from the system. However, it would preserve 13 additional acres of a regionally important forested wetland complex that is providing habitat to a variety of plants, invertebrates, and wildlife populations including possibly vernal pool species. Although the time for risk reduction until human health and ecologically-based RAOs are achieved is extended by about 5 years under this alternative compared to Alternative 5, the impacts to wildlife populations from eliminating this valuable hardwood forest habitat outweigh the potential benefits of reducing the risk in a slightly quicker fashion.
- Source Area Soil Alternative 4 would provide the greatest overall protection because potential buried waste material that could be highly toxic or highly mobile would be removed and all existing surfaces would be upgraded to RCRA caps, which would effectively isolate the contamination that remains in place and comply with all ARARs, including RCRA Subtitle C and TSCA closure requirements. Alternative 3 would also provide moderately effective protection of human health and the environment, although the upgraded caps under this alternative would not comply with RCRA Subtitle C requirements or eliminate rainwater/snowmelt infiltration into the underlying soil and groundwater.

All of the active soil remedial alternatives (above) constitute a discharge of dredged or fill material into the waters of the state/US, thereby triggering state and federal wetlands requirements that would have to be addressed. Moreover, because contamination is found above cleanup goals in wetland areas, there is no practical alternative to the destruction of wetland areas. As a result, actions would need to be taken to minimize impacts and EPA would need to evaluate alternatives to select the least damaging practicable alternative consistent with Clean Water Act requirements. Additionally, all of the soil alternatives would require coordination with DOI (if during remedial design or remedial action) it is determined that the remedial alternatives may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archaeological data.

7.2 Uncertainties

Important uncertainties associated with the FS Addendum are summarized below, and the potential effects of the uncertainties on the FS Addendum conclusions are described. Once selected, following the public comment period, the remedy for the CMRP site will be documented in a Record of Decision (ROD), and will be further developed through a detailed design to address these uncertainties.

- Cleanup Goals – Additional sampling and analysis will be needed during the remedial design to verify the proposed cleanup goals. Specifically, additional background sampling is required to verify background conditions at the time of site remediation and the statistical comparisons, and assess impacts, if any, to the proposed cleanup goals for floodplain soil and sediment. Additional sampling and analysis are also required to verify that “undetected” contaminants are not present in site soil at concentrations in excess of ARARs or TBC criteria (see Appendix F); the analytical methods must be capable of measuring contaminants at concentrations below the ARARs and TBC criteria.
- Cleanup Areas – The proposed cleanup areas or remedial footprints are conceptual and more precise cleanup footprints will be developed during the remedial design. For example, additional sampling and analysis will be needed to confirm the spatial and vertical extent of the cleanup area for Lyman Mill Reach stream sediment and floodplain soil. Additional

investigations should also be considered to confirm the presence of vernal pool habitat within the current remediation footprint for this action area.

- Disposal Options – The off-site disposal and/or treatment options evaluated are based on the assumption that contaminated media at the CMRP site is an F-listed waste or similar to an F-listed waste or characteristic waste, and that approximately 10% of the excavated material could require incineration to meet the LDR alternative treatment standards for soil in 40 CFR §268.49. (Excavated material would be characterized for waste-disposal requirements, including hazardous waste criteria, and handled and disposed appropriately.)

  The on-site upland CDF disposal option evaluated assumes that 10% of the excavated material would be shipped off site for treatment to meet the LDR alternative treatment standards for soil in 40 CFR §268.49. The on-site nearshore CDF disposal option assumes that all waste can be addressed without treatment, regardless of its characterization or contaminant concentrations, if such waste is consolidated or treated in-situ within an "area of contamination." Disposal costs could increase under the upland CDF option if more excavated material has to be shipped off site to meet the LDRs.

  Potential changes to waste disposal regulations or location of a potential on-site disposal facility that could impact the cost estimates will be assessed during the remedial design phase. In the event that the selected remedy includes on-site containment in an upland CDF, potential upland CDF locations should be evaluated with respect to acquisition potential and environmental services (wetlands or other valued habitat attributes) that could be impacted.

  Mitigation – The action-based alternatives for sediment and soil will result in unavoidable wetland loss and/or impacts requiring mitigative measures. In some areas federal/state resource determinations and/or functional assessments would be necessary to quantify the amount of required mitigation. In addition, in-place mitigation may not be feasible or sufficient to fully compensate for the projected impacts in many cases (e.g., nearshore CDFs) and it is assumed that appropriate land could be available to address this project need. Finally, the successful restoration of wetlands and particularly forested habitats depends on a number of factors that interact in ways that cannot be fully understood beforehand. As a result, there are considerable uncertainties regarding the outcome of the mitigation efforts, whether the lost functional attributes can be fully replaced and if so, the length of time required to reach this goal.

  Mitigation measures to replace floodplain storage capacity that could be lost under selected alternatives would also be evaluated during design.

7.3 Next Steps

The remedy considered most appropriate to achieve the cleanup objectives will ultimately be selected by EPA in close coordination with the State of Rhode Island. The proposed remedy for the site will be described in a Proposed Plan, which will be available for review and comment by the public. After consideration of public comments, the remedy selection decision will be documented in a ROD.

Following collection of additional baseline data and implementation of the selected remedy itself, the long-term monitoring plan will be executed to assess overall performance. Using an adaptive management approach, information from the monitoring plan and review process will be evaluated to determine whether potential down river contamination concerns may also need to be addressed.

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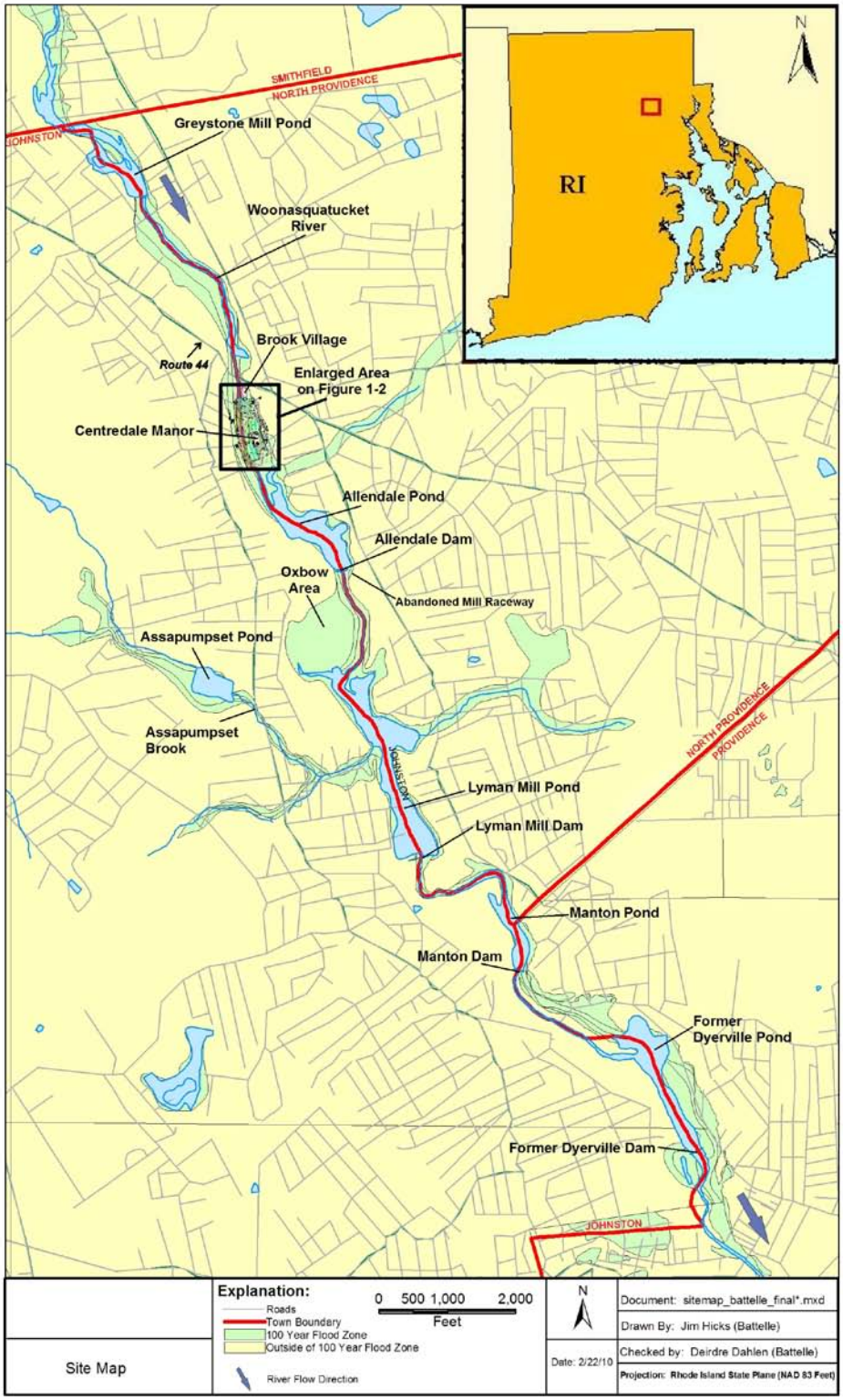
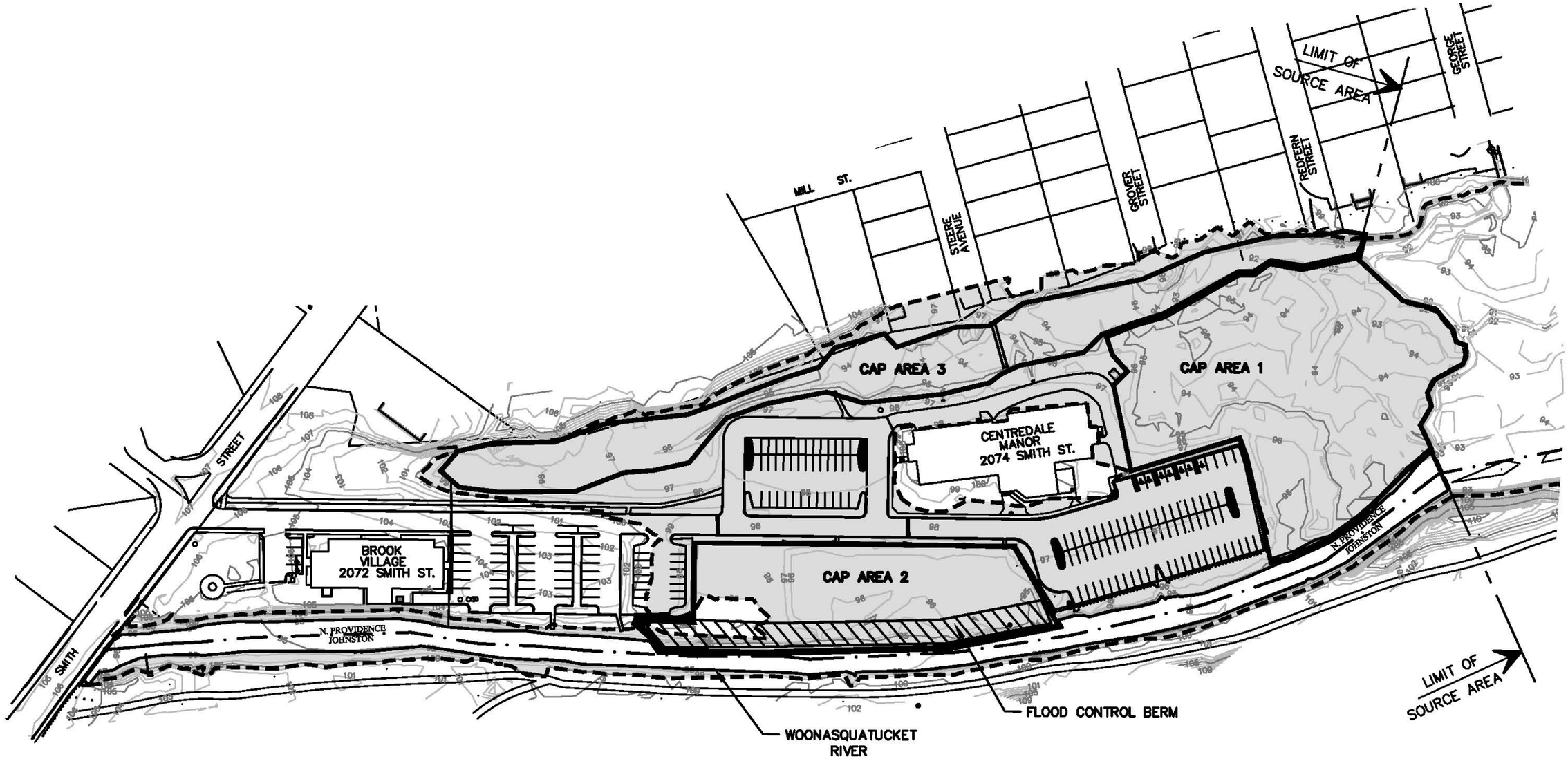


Figure 1-1. Site Map



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Scale: 0 120 240 FEET

Figure 1–2

Explanation: SOURCE AREA BASE MAP

90 EXISTING GROUND ELEVATION (FT)

FLOODPLAIN AREA BETWEEN NORMAL AND 100–YR– FLOOD ELEVATION

100 YR FLOOD ELEVATION (GRADIENT OF 101.2' AT SMITH ST. TO 97.0' AT LIMIT OF SOURCE AREA)

Date: 02/26/10

Document: Fig 1–2_REV0.dwg

Drawn By: L. Bouchard (Watermark)

Checked By: D. Dahlen (Battelle)

Projection: Rhode Island State Plane (NAD 83 Feet)

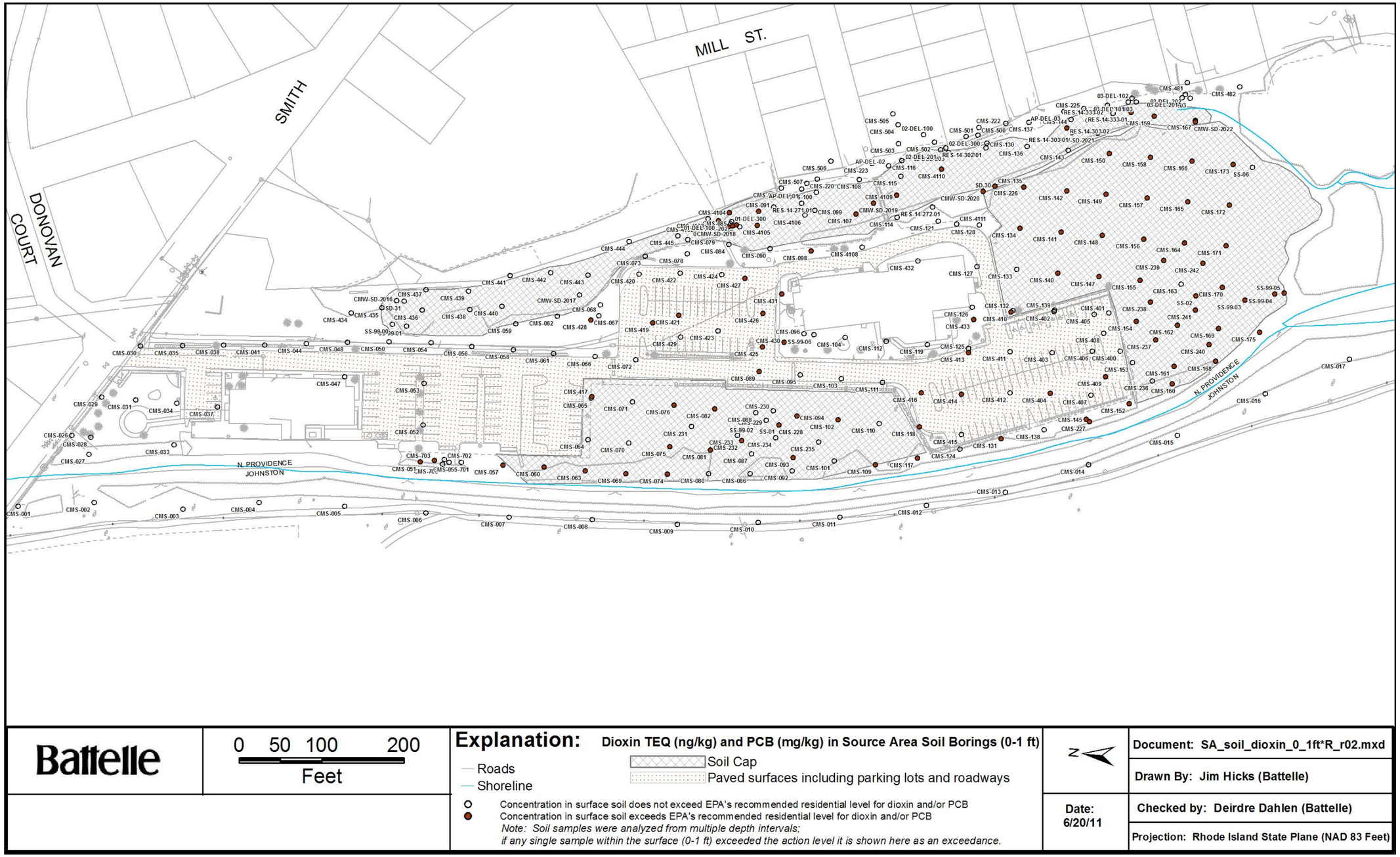


Figure 2-12. Dioxin and PCB Contamination in Source Area Soil, Surface (0-1 ft)

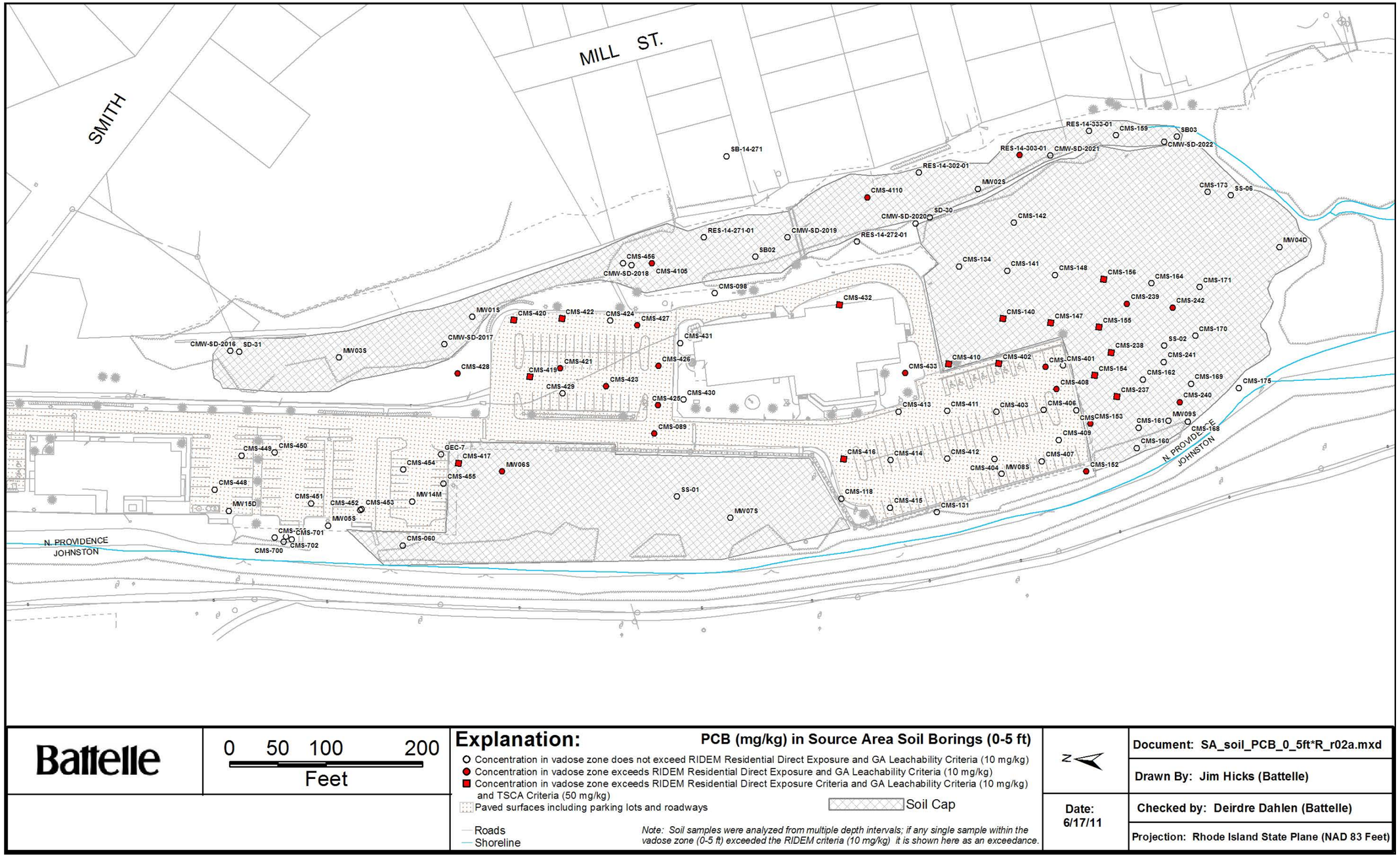
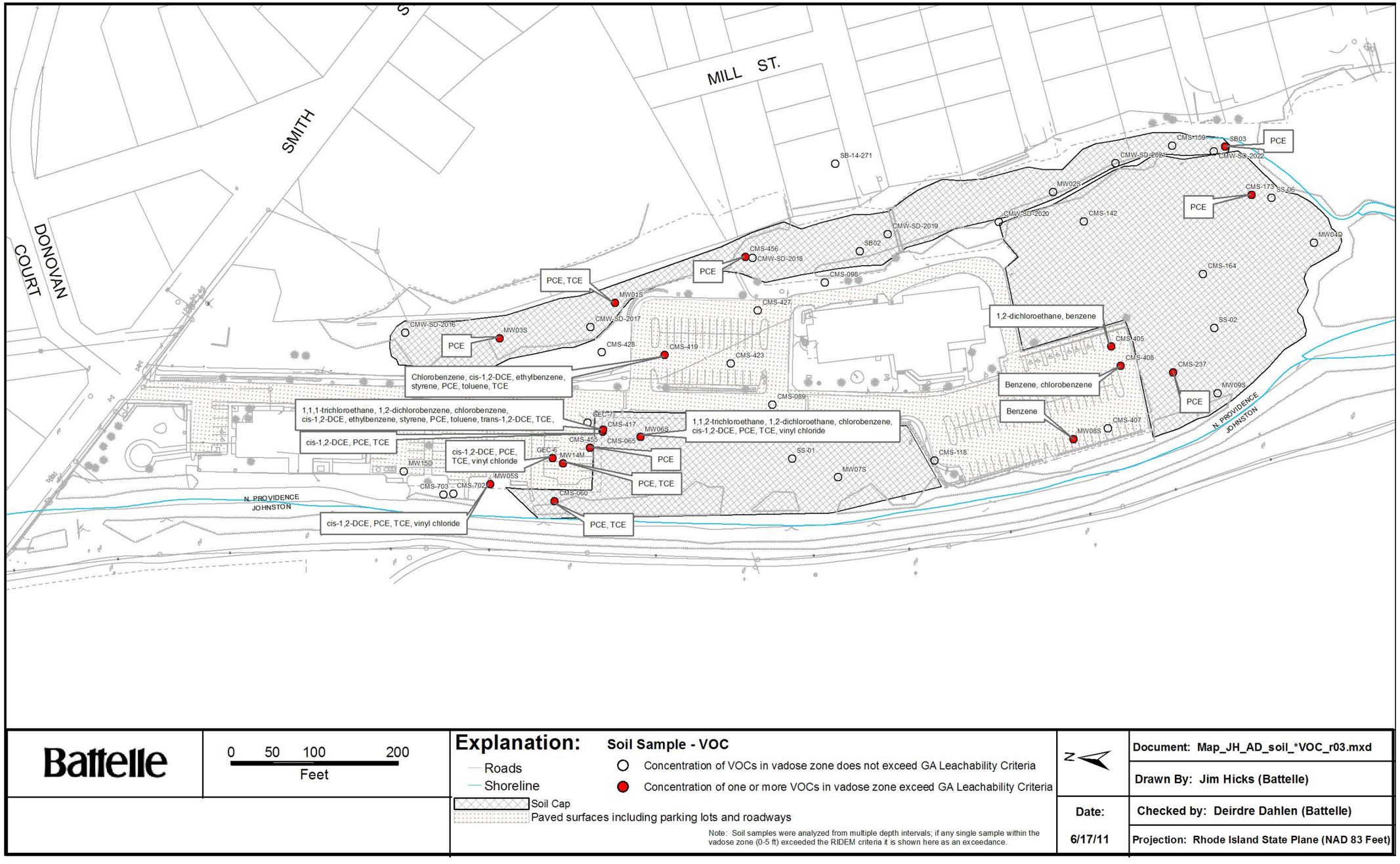


Figure 2-13. Total PCB Contamination in Source Area Soil, Vadose Zone (0-5 ft)



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0 50 100 200
Feet

Explanation:

Roads
Shoreline
Soil Cap
Paved surfaces including parking lots and roadways

Soil Sample - VOC

Concentration of VOCs in vadose zone does not exceed GA Leachability Criteria
Concentration of one or more VOCs in vadose zone exceed GA Leachability Criteria

Note: Soil samples were analyzed from multiple depth intervals; if any single sample within the vadose zone (0-5 ft) exceeded the RIDEM criteria it is shown here as an exceedance.

N

Date: 6/17/11

Document: Map_JH_AD_soil_*VOC_r03.mxd
Drawn By: Jim Hicks (Battelle)
Checked by: Deirdre Dahlen (Battelle)
Projection: Rhode Island State Plane (NAD 83 Feet)

Figure 2-14. Source Area Soil Locations where VOCs in Vadose Zone (0-5 ft) Exceed GA Leachability Criteria

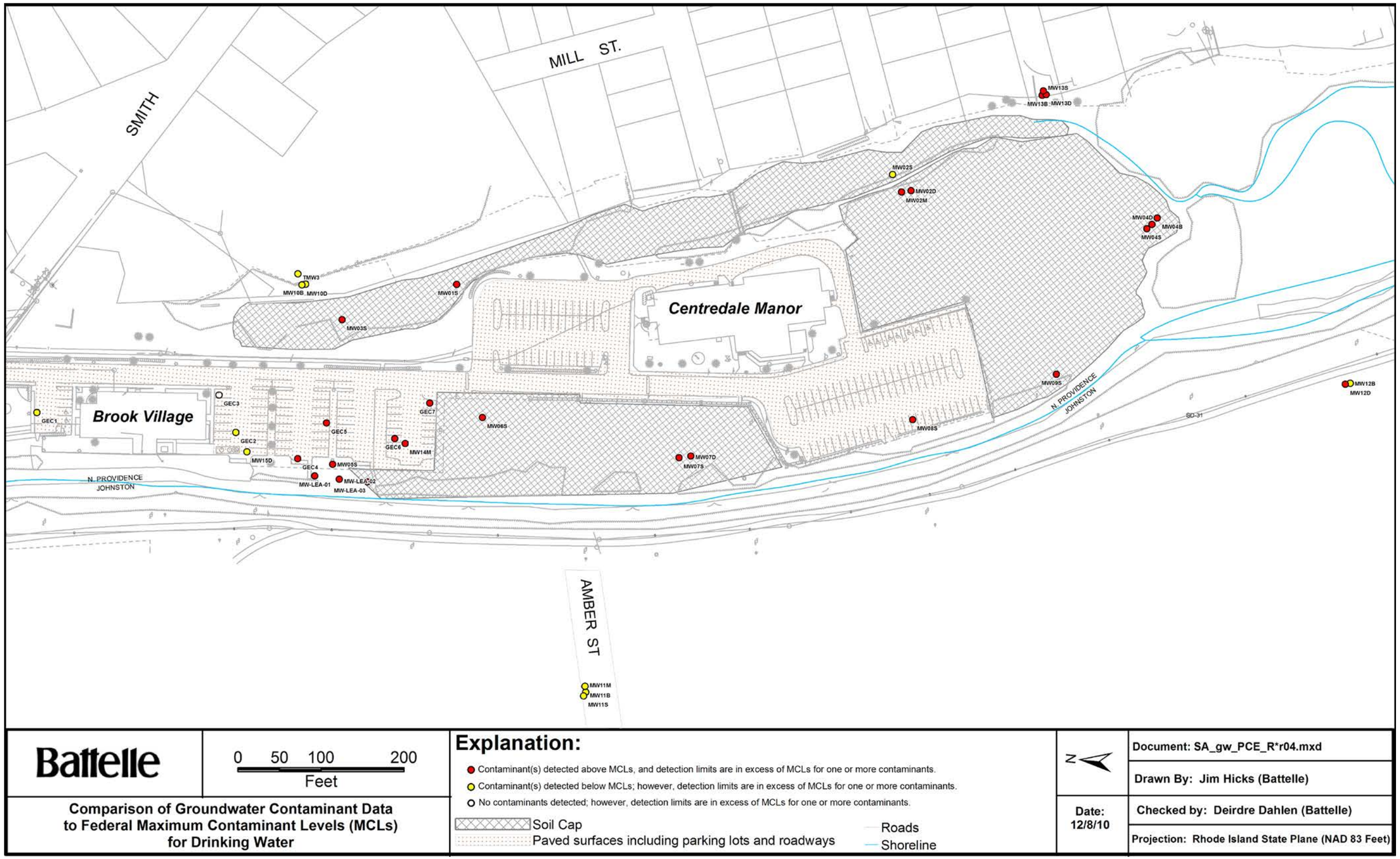


Figure 2-15. Groundwater Locations at the Source Area where Contaminant Concentrations Exceed Federal Maximum Contaminant Levels for Drinking Water in 2001 and 2002

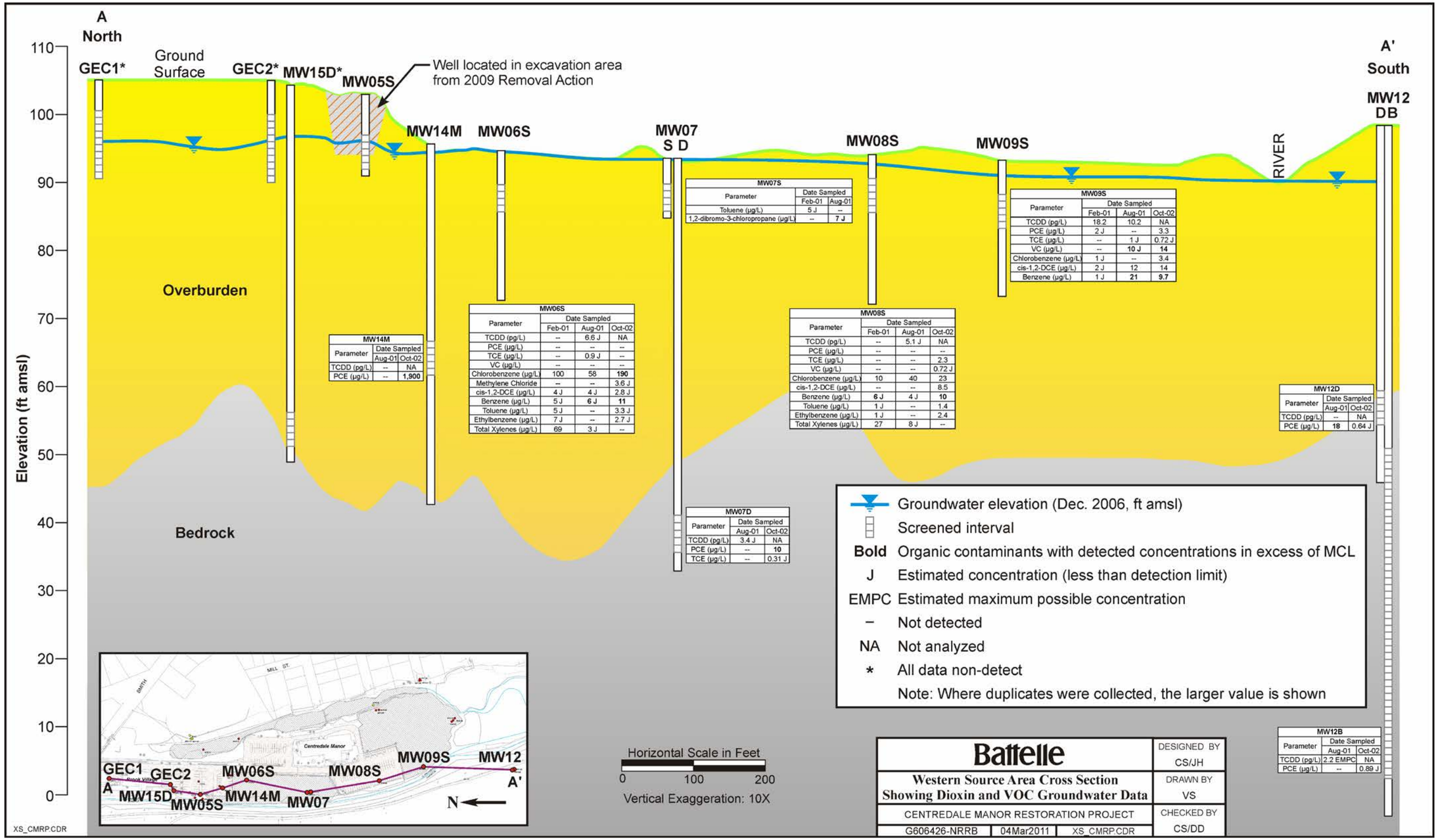


Figure 2-15a. North-South Cross Section Showing Organic Contamination in Groundwater along the Western Boundary of the Source Area

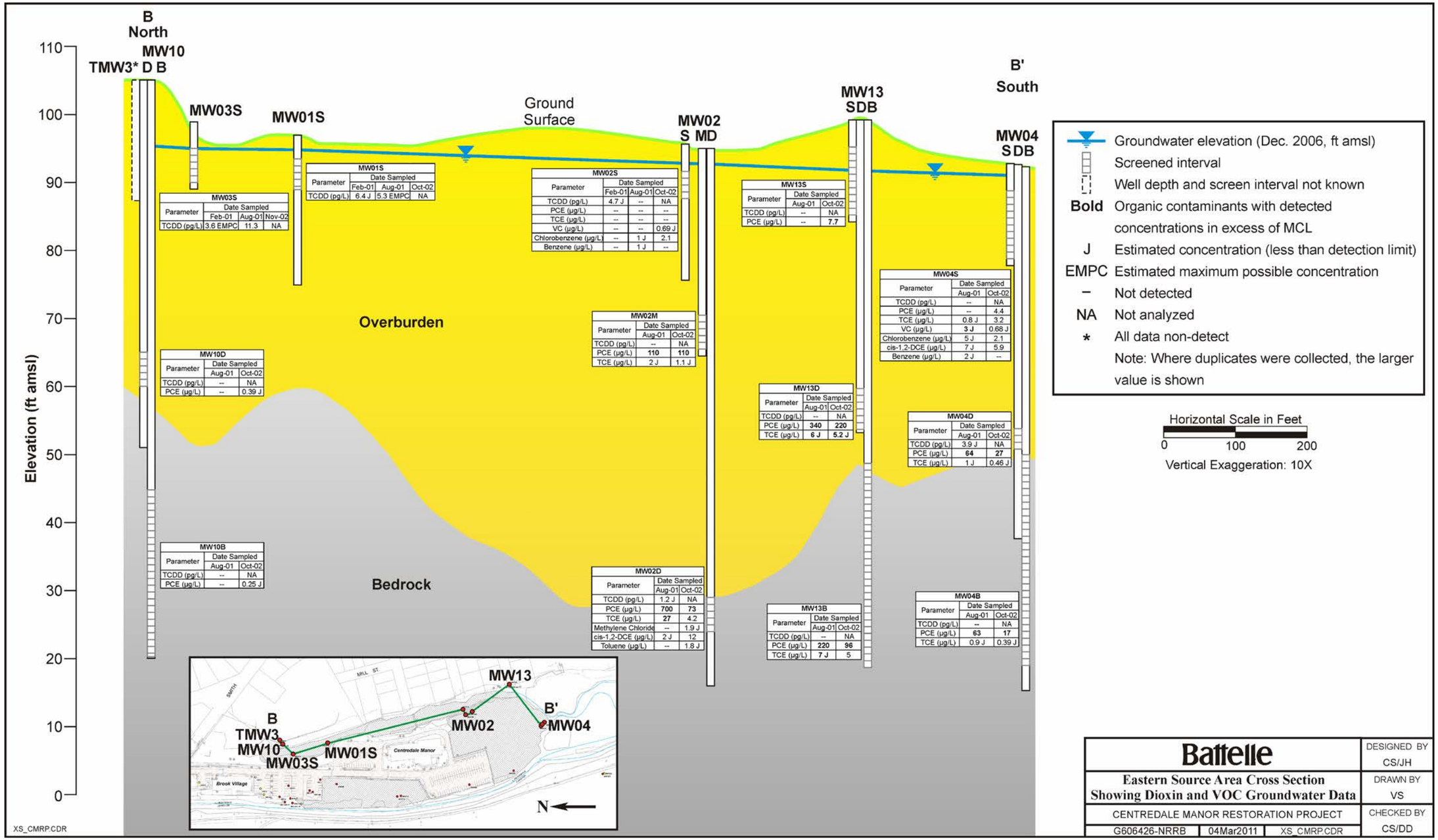


Figure 2-15b. North-South Cross Section Showing Organic Contamination in Groundwater along the Eastern Boundary of the Source Area

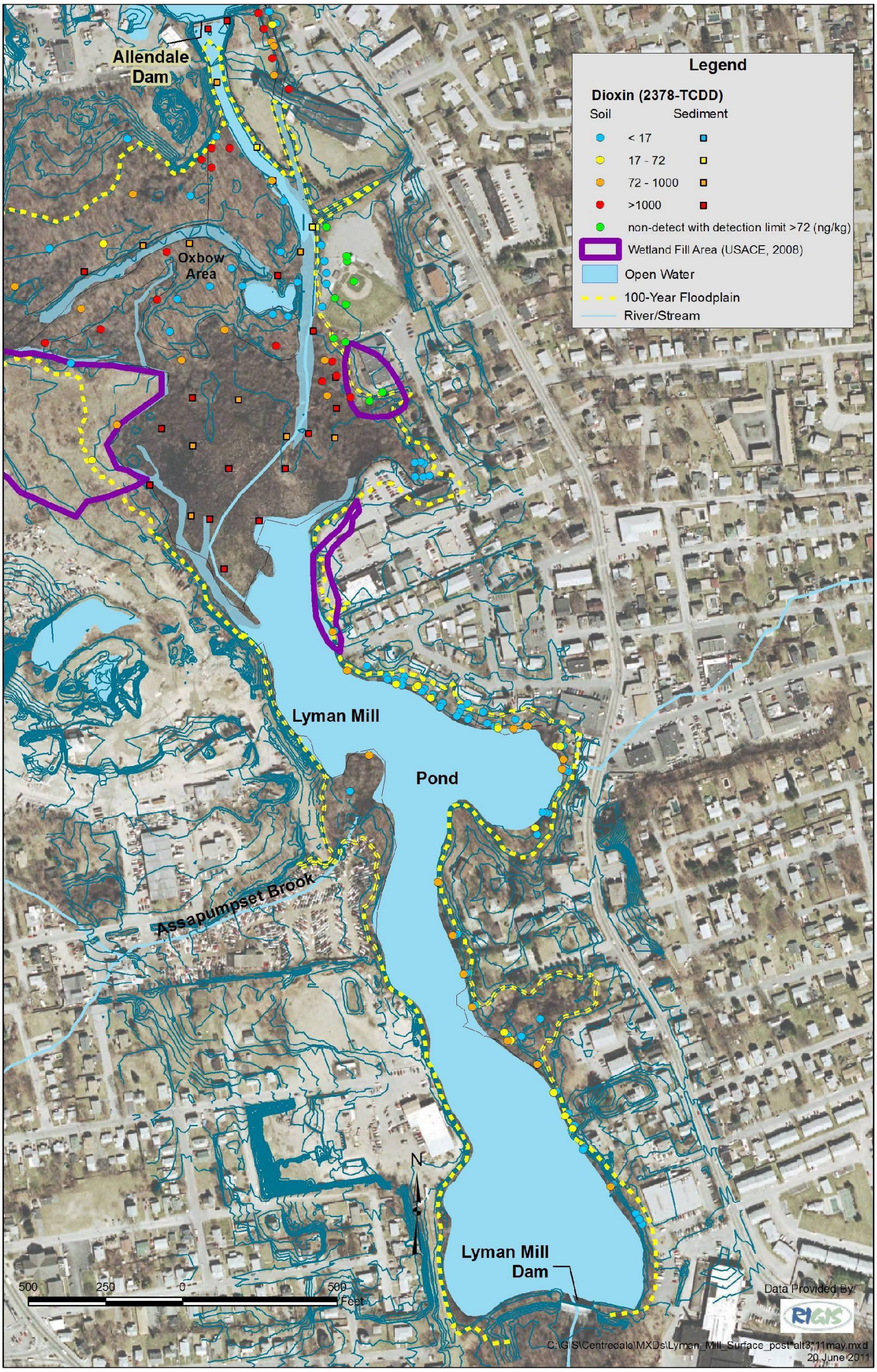


Figure 2-21. Dioxin Contamination in Surface (0-1 ft) Soil and Sediment at the Oxbow Area and Floodplain Areas along Lyman Mill Pond

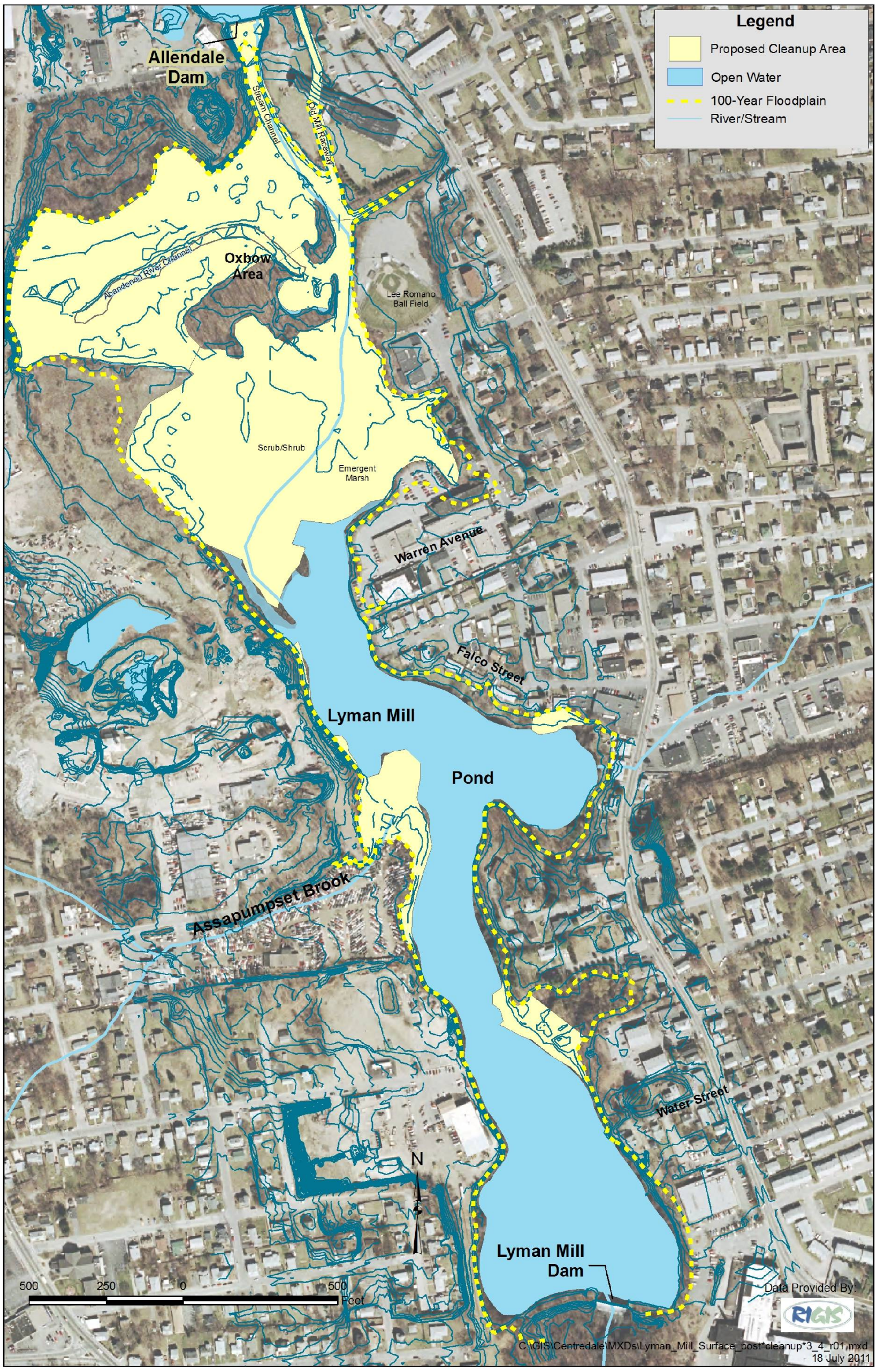
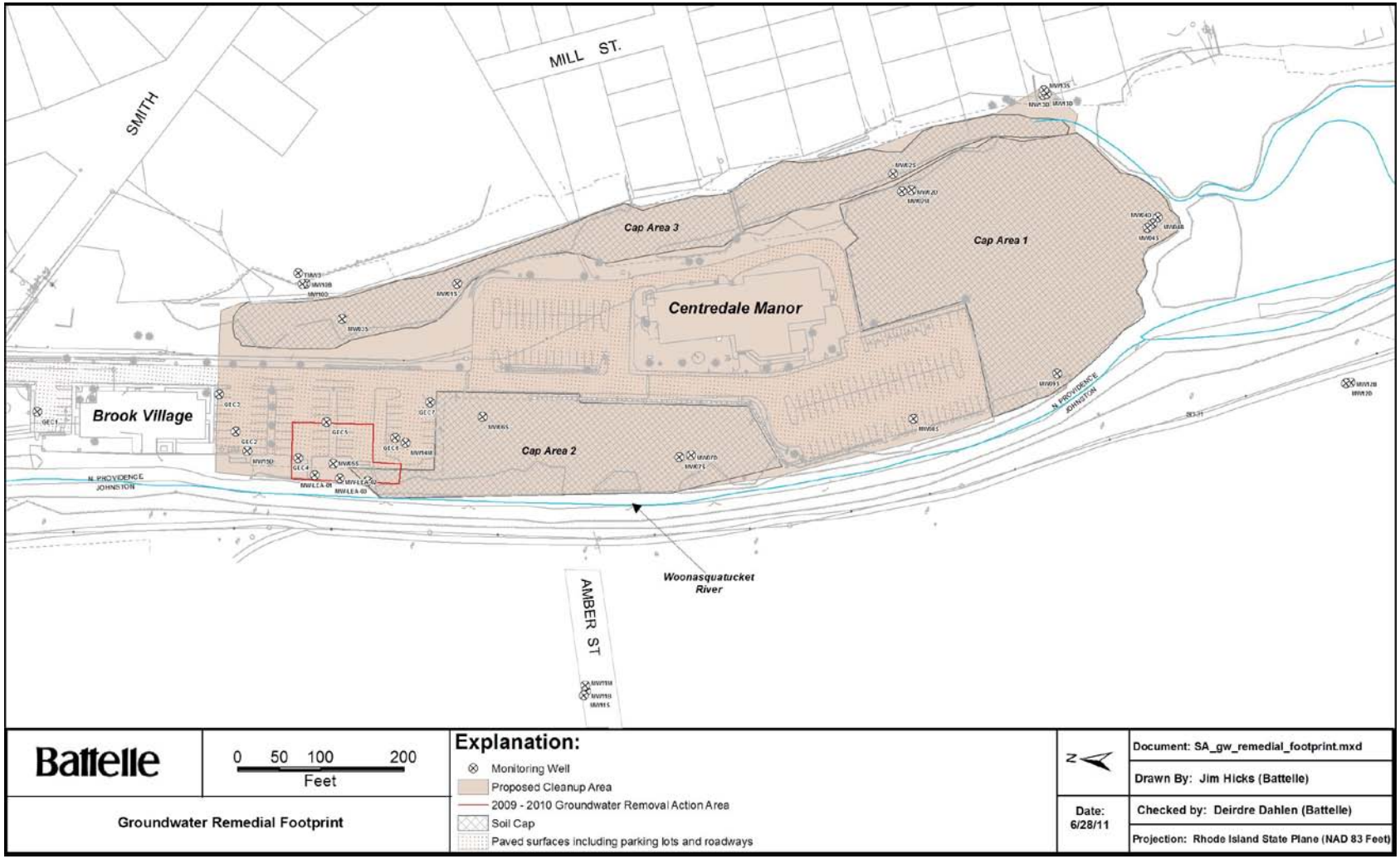


Figure 3-4. Lyman Mill Reach Stream Sediment and Floodplain Soil Cleanup Area

Figure 3-6. Groundwater Cleanup Area



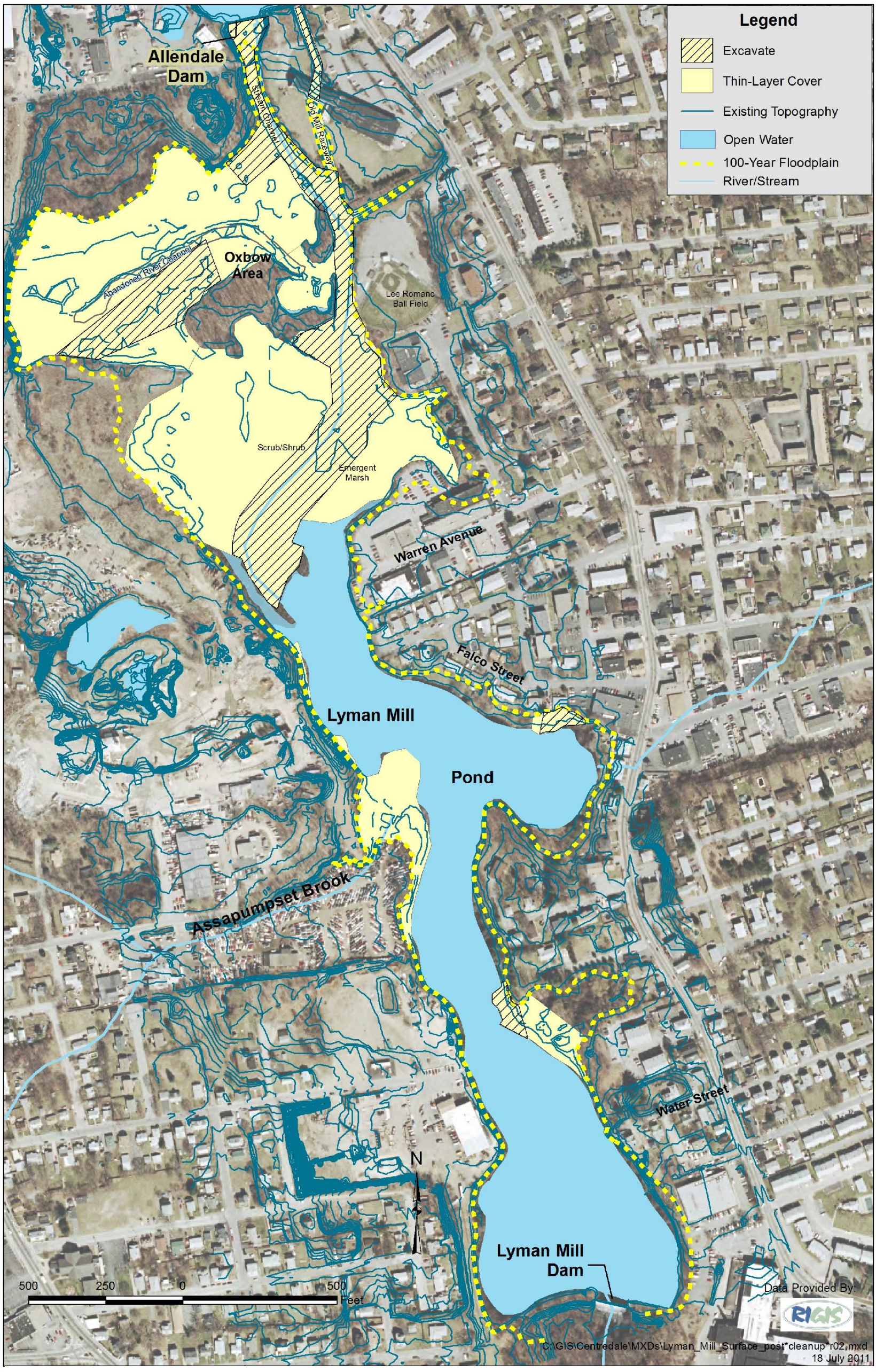


Figure 5-26. Lyman Mill Reach Stream Sediment and Floodplain Soil Alternative 3, Targeted Excavation, Enhanced Natural Recovery (Thin-Layer Cover), and Disposal and/or Treatment

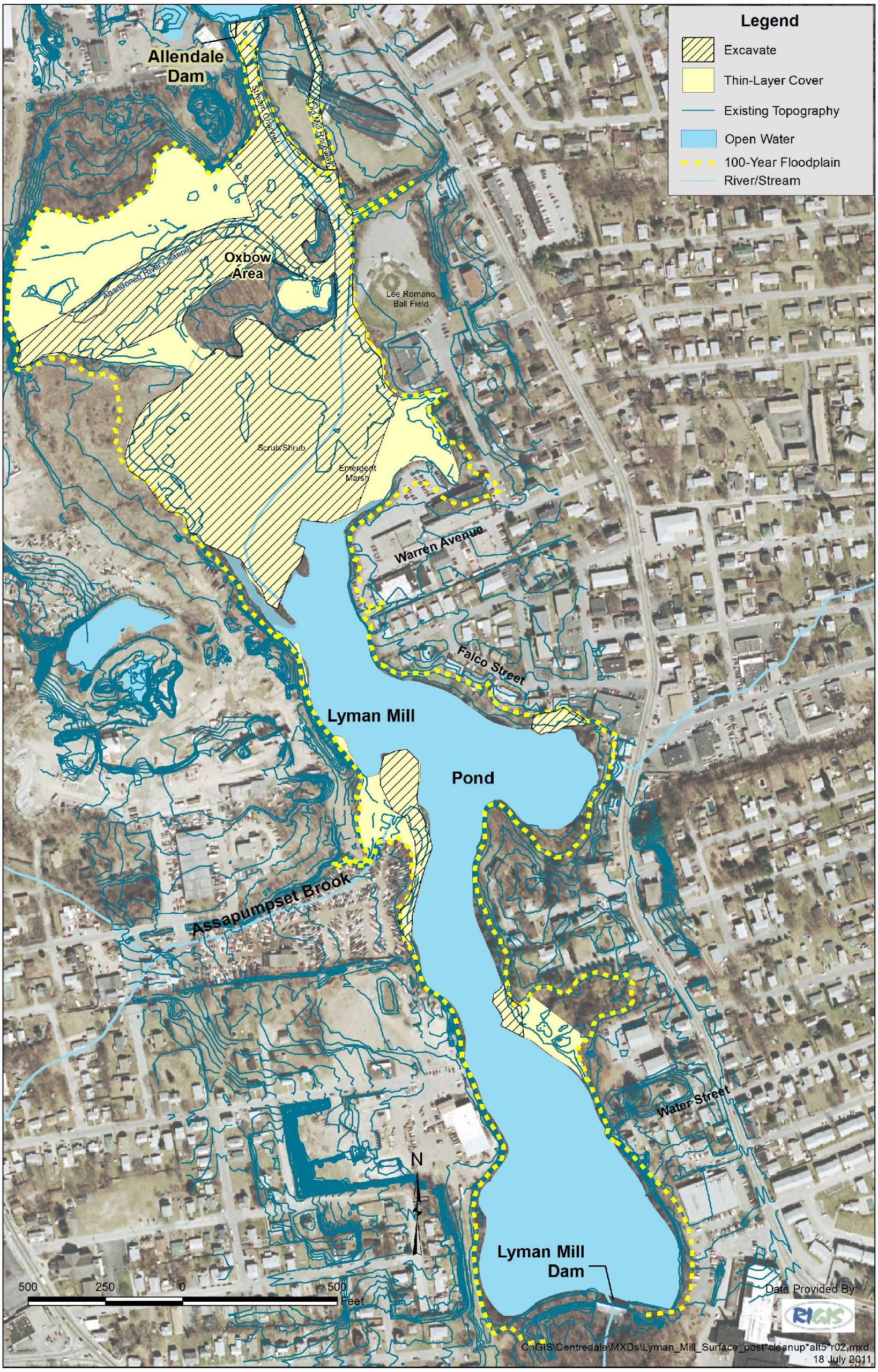
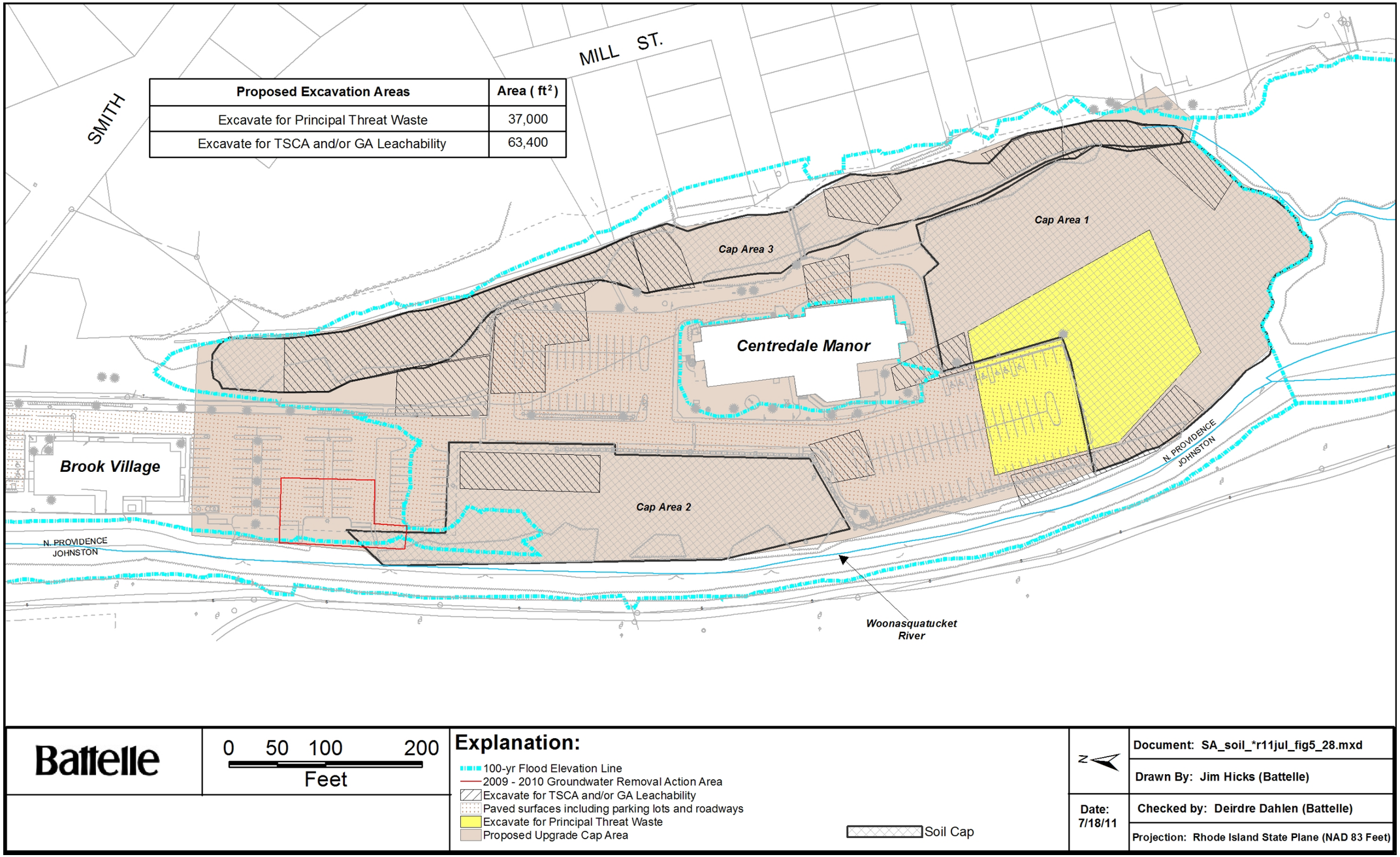


Figure 5-27. Lyman Mill Reach Stream Sediment and Floodplain Soil Alternative 5, Partial Excavation, Enhanced Natural Recovery (Thin-Layer Cover), and Disposal and/or Treatment



Proposed Excavation Areas	Area (ft^2)
Excavate for Principal Threat Waste	37,000
Excavate for TSCA and/or GA Leachability	63,400

Figure 5-28. Source Area Soil Alternative 3e, Targeted Excavation, Upgrade and Maintain Existing Surfaces, and Off-site Disposal and/or Treatment

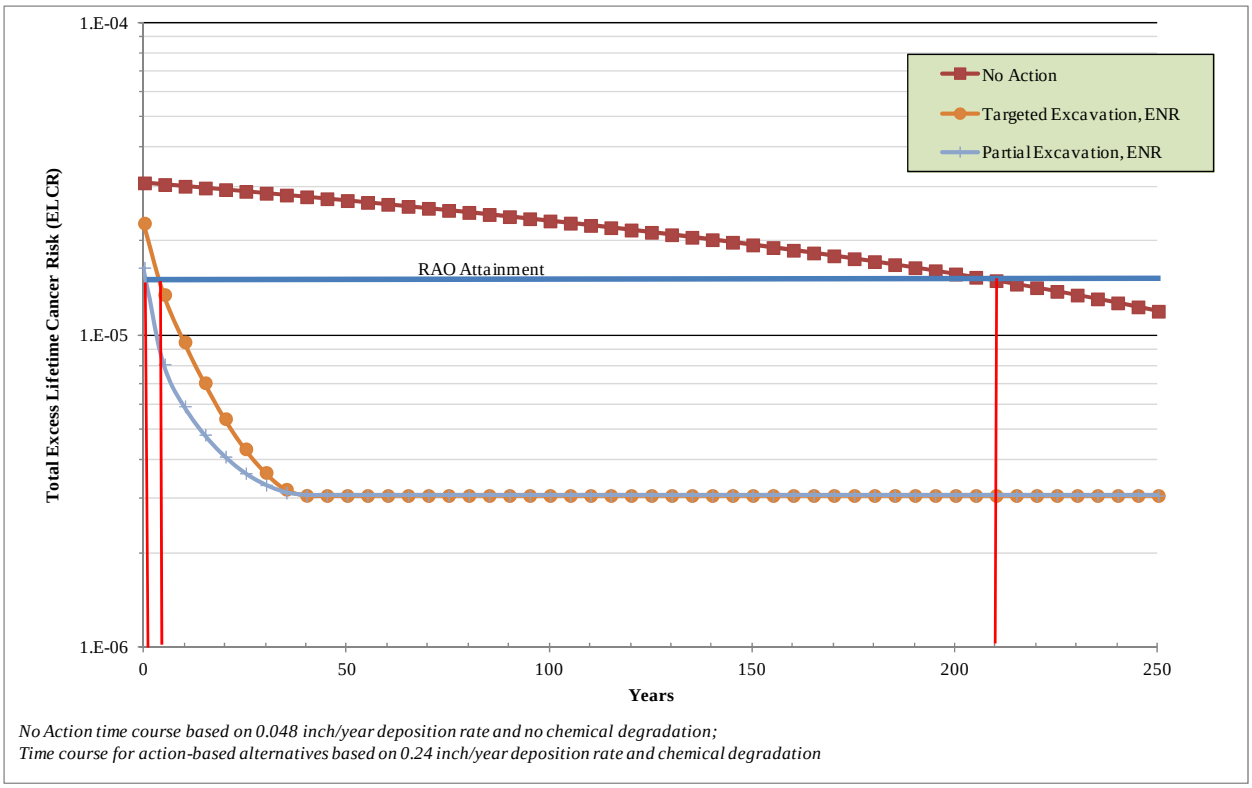


Figure 6-8. Anticipated Time Course to Achieve Human Health RAOs (ELCR 10^{-5}) for Lyman Mill Reach Stream Sediment and Floodplain Soil (Including Oxbow) Alternatives

Table 1-1. Summary of Changes to the Feasibility Study

2010 FS Report Outline Highlighted Sections are Impacted by Supplemental Site Activities[a]	Nature of Impact/Change	Tables, Figures, Appendices Revised from FS
1.0 INTRODUCTION 1.1 Study Objectives and Approach 1.2 Report Organization	• Study Objectives – Addendum focuses on evaluating impacts and changes to the FS resulting from supplemental site activities conducted following completion of FS in 2010	Table 1-1[b]
2.0 REMEDIAL INVESTIGATION SUMMARY 2.1 Site Location and History 2.2 Site Characterization 2.2.1 Summary of Historical Site Investigations 2.2.2 Summary of Site Actions 2.2.3 Summary of Remedial Investigation Activities 2.2.4 Summary of Supplemental Site Investigations 2.3 Physical Setting 2.3.1 Demography and Land Use 2.3.2 Dam Ownership and Dam Conditions 2.3.3 Geomorphology 2.3.4 Soils 2.3.5 Meteorology 2.3.6 Geology 2.3.7 Hydrogeology 2.3.8 Sediment and Surface Water 2.3.9 Surface Water Hydrology 2.3.10 Ecology 2.4 Conceptual Site Model 2.4.1 Primary Sources of Contamination 2.4.2 Primary Release and Transport Mechanisms 2.4.3 Nature and Extent of Contamination 2.4.3.1 Source Area Soils	• Provide overview of National Remedy Review Board recommendations and Regional response memo, which impact groundwater classification at the Source Area, select ARARs/TBCs, site media classified as principal threat waste, and Source Area Soil and Lyman Mill Stream Sediment and Floodplain Soil (including the Oxbow) remedial alternatives. • Site Actions – Describe 2009–2010 groundwater removal action performed while FS was nearing completion. • Site Investigations – Describe supplemental site investigations conducted in 2010–2011 (Oxbow field sampling, risk assessment, and PRGs); • Demography and Land Use – Clarify that groundwater at the Source Area is a potential drinking water source (based on revised groundwater classification); • Nature and Extent, Source Area Soil and Groundwater – Present data in context of potential ARARs (GA leachability, Federal MCLs) under the revised groundwater classification, and EPA's recommended residential level for PCB in soil; • Nature and Extent, Allendale and Lyman Mill Floodplain Soil – Present data in context of EPA's recommended residential level for PCB in soil and 2010 Oxbow Area data; • Principal Threat and Low-level Threat Waste – Clarify that all soil (Source Area soil and Allendale and Lyman Mill floodplain soil) and sediment (Allendale and Lyman Mill sediment) at the CMRP site are classified as principal threat waste; and • Summary of Human Health and Ecological Risks – Update risk summary based on revised risk assessments conducted for the Oxbow Area using data from recent collection activities (e.g., 2010 Oxbow Area investigation.	Table 2-1 Table 2-2 Table 2-3 Tables 2-6b Table 2-7e Tables 2-8a,b Table 2-11e Table 2-13d Table 2-16 Figure 2-12 Figure 2-13 Figure 2-14 Figure 2-15 Figures 2-15a,b[b] Figure 2-21[b]

Table 1-1. (continued)

2010 FS Report Outline Highlighted Sections are Impacted by Supplemental Site Activities[a]	Nature of Impact/Change	Tables, Figures, Appendices Revised from FS
2.4.3.2 Source Area Groundwater 2.4.3.3 Allendale and Lyman Mill Reach Sediments 2.4.3.4 Allendale and Lyman Mill Reach Floodplain Soils 2.4.3.5 Allendale and Lyman Mill Reach Surface Water 2.4.3.6 Allendale and Lyman Mill Reach Biota 2.4.3.7 Downstream Areas (Manton Pond and Former Dyerville Pond) 2.4.4 Secondary Release and Transport Mechanisms 2.4.5 Principal Threat and Low-level Threat Wastes 2.5 Summary of Human Health and Ecological Risks 2.5.1 Human Health Risks 2.5.1.1 Human Receptors at Risk 2.5.2 Ecological Risks 2.5.2.1 Ecological Receptors at Risk of Harm		
3.0 DEVELOPMENT OF REMEDIAL ACTION OBJECTIVES AND ACTION AREAS 3.1 Remedial Action Objectives 3.1.1 Human Health RAOs 3.1.2 Ecological RAOs 3.2 Applicable or Relevant and Appropriate Requirements	• RAOs – Update Source Area soil and groundwater RAOs based on the revised groundwater classification, and identify EPA's recommended residential level for PCB in soil as TBC for soil; • PRGs – Update based on revised PRGs for the Oxbow Area • Cleanup Goals, Source Area Soil and Groundwater – Cleanup goals updated based on revised groundwater classification and revised ARARs/TBCs;	Table 3-1 Table 3-2 Table 3-4 Table 3-6 Table 3-7 Table 3-8

Table 1-1. (continued)

2010 FS Report Outline Highlighted Sections are Impacted by Supplemental Site Activities[a]	Nature of Impact/Change	Tables, Figures, Appendices Revised from FS
3.2.1 Introduction to Potential ARARs and To Be Considered Criteria 3.3 Preliminary Remediation Goals 3.3.1 Site-Specific Human Health PRGs 3.3.2 Site-Specific Ecological PRGs 3.4 Cleanup Goals 3.5 Areas and Volumes above Cleanup Goals 3.5.1 Allendale Reach Sediment 3.5.2 Lyman Mill Reach Sediment 3.5.3 Allendale Reach Floodplain Soil 3.5.4 Lyman Mill Reach Stream Sediment and Floodplain Soil 3.5.4.1 Lyman Mill Reach Stream Sediment 3.5.4.2 Lyman Mill Reach Floodplain Soil 3.5.5 Source Area Soil 3.5.6 Source Area Groundwater 3.6 Contingency Monitoring and Evaluations for Downstream Areas	• Cleanup Goals, Lyman Mill Floodplain Soil – Cleanup goals updated based on revised risk assessment and PRGs for the Oxbow Area; • Cleanup Areas, Source Area Groundwater – Cleanup area revised to encompass nearly the entire Source Area due to widespread contamination above revised cleanup goals; • Cleanup Areas, Lyman Mill Floodplain Soil –Cleanup area revised based on revised risk assessment and cleanup goals for the Oxbow Area, and based on updated comparison of all data (including 2010 Oxbow data) to revised cleanup goals.	Figure 3-4a,b Figure 3-6 Appendix F Appendix G *Appendix D in the 2010 FS is replaced by MACTEC and Battelle (2011b)*
4.0 IDENTIFICATION AND SCREENING OF REMEDIAL TECHNOLOGIES AND PROCESS OPTIONS 4.1 No Action 4.2 General Response Actions and Technologies for Sediment 4.3 General Response Actions and Technologies for Source Area Soils and Floodplain Soils 4.4 General Response Actions and Technologies for Groundwater 4.5 Technology Impacts on Wetlands and Floodplains	No changes except to clarify presence of historic properties at the site.	

Table 1-1. (continued)

2010 FS Report Outline Highlighted Sections are Impacted by Supplemental Site Activities[(a)]	Nature of Impact/Change	Tables, Figures, Appendices Revised from FS
5.0 IDENTIFICATION AND SCREENING OF REMEDIAL ALTERNATIVES 5.1 Allendale and Lyman Mill Reach Sediment Alternatives 5.2 Allendale Reach Floodplain Soil Alternatives 5.3 Lyman Mill Reach Stream Sediment and Floodplain Soil (Including Oxbow) Alternatives 5.4 Source Area Soil Alternatives 5.5 Source Area Groundwater Alternatives 5.6 Alternatives Retained for Detailed Analysis	Changes captured under Section 6.0	Figure 5-26a,b Figure 5-27a,b Figure 5-28
6.0 DETAILED EVALUATION OF REMEDIAL ALTERNATIVES 6.1 NCP Evaluation Criteria 6.2 Detailed Evaluation of Allendale and Lyman Mill Sediment Alternatives 6.3 Comparative Analysis of the Allendale and Lyman Mill Sediment Alternatives 6.4 Detailed Evaluation of Allendale Floodplain Soil Alternatives 6.4.1 Alternative 1: No Action 6.4.2 Alternative 5: Excavation and Disposal and/or Treatment 6.5 Comparative Analysis of the Allendale Floodplain Soil Alternatives 6.5.1 Overall Protection of Human Health and the Environment 6.5.2 Compliance with ARARs 6.5.3 Long-Term Effectiveness and Permanence 6.5.4 Reduction of Toxicity, Mobility or Volume through Treatment 6.5.5 Short-Term Effectiveness	• Summarize additional ARARs for historic resources that could be applicable to sediment and soil alternatives • Summarize changes to cost estimates for off-site disposal options (Option e) under the Allendale and Lyman Mill sediment alternatives • Summarize changes to cost estimates for Groundwater Alternative 2e • Lyman Mill Reach Stream Sediment and Floodplain Soil Alternatives 3 and 5 – Alternative descriptions, detailed analysis, and comparative analysis updated based on the revised cleanup areas and areas for excavation and thin-layer cover ; • Source Area Soil Alternative 3 – Alternative description, detailed analysis, and comparative analysis updated based on the revised areas for excavation ; and • No changes to Source Area Groundwater alternatives other than summary statement to clarify whether alternatives meet the revised RAOs, and estimate long-term monitoring costs for Alternative 2E to account for the larger cleanup area. *FS assumes 2009-2010 TCRA is basis of cleanup action with continued long-term monitoring required. Any changes to GW alternatives would be assessed during pre-design.*	Table 6-22 Table 6-23 Table 6-24 Table 6-25 Table 6-26 Table 6-27 Table 6-28 Table 6-29 Table 6-30 Table 6-31 Table 6-32 Table 6-33 Table 6-34 Table 6-35 Table 6-36 Table 6-37 Figure 6-8 Appendix J Appendix M

Table 1-1. (continued)

2010 FS Report Outline Highlighted Sections are Impacted by Supplemental Site Activities[a]	Nature of Impact/Change	Tables, Figures, Appendices Revised from FS
6.5.6 Implementability 6.5.7 Cost 6.6 Detailed Evaluation of Lyman Mill Reach Stream Sediment and Floodplain Soil (including Oxbow) Alternatives 6.6.1 Alternative 1: No Action 6.6.2 Alternative 3: Targeted Excavation, Enhanced Natural Recovery (Thin-Layer Cover) and Disposal and/or Treatment 6.6.3 Alternative 5: Partial Excavation, Enhanced Natural Recovery and Disposal and/or Treatment 6.7 Comparative Analysis of the Lyman Mill Reach Stream Sediment and Floodplain Soil Alternatives 6.7.1 Overall Protection of Human Health and the Environment 6.7.2 Compliance with ARARs 6.7.3 Long-Term Effectiveness and Permanence 6.7.4 Reduction of Toxicity, Mobility or Volume through Treatment 6.7.5 Short-Term Effectiveness 6.7.6 Implementability 6.7.7 Cost 6.8 Detailed Evaluation of Source Area Soil Alternatives 6.8.1 Alternative 1: No Action 6.8.2 Alternative 3: Targeted Excavation, Upgrade and Maintain Existing Surfaces and Disposal and/or Treatment 6.8.3 Alternative 4: Targeted		*Appendix O includes alternative-specific detailed analysis and ARAR/TBC tables for Allendale and Lyman Mill sediment, Allendale Floodplain Soil, and Groundwater (ARAR/TBC tables only) alternatives*

Table 1-1. (continued)

2010 FS Report Outline Highlighted Sections are Impacted by Supplemental Site Activities[a]	Nature of Impact/Change	Tables, Figures, Appendices Revised from FS
Excavation, Convert to RCRA Caps and Maintain and Disposal and/or Treatment 6.9 Comparative Analysis of the Source Area Soil Alternatives 6.9.1 Overall Protection of Human Health and the Environment 6.9.2 Compliance with ARARs 6.9.3 Long-Term Effectiveness and Permanence 6.9.4 Reduction of Toxicity, Mobility or Volume through Treatment 6.9.5 Short-Term Effectiveness 6.9.6 Implementability 6.9.7 Cost 6.10 Detailed Evaluation of Source Area Groundwater Alternatives 6.10.1 Alternative 1: No Action 6.10.2 Alternative 2: Excavation/Dewatering 6.10.3 Alternative 5: In-Situ Chemical Oxidation 6.11 Comparative Analysis of the Source Area Groundwater Alternatives		
7.0 SUMMARY AND CONCLUSIONS	Updated to summarize key changes to the FS summary and conclusions	
8.0 REFERENCES	Update to include new references	

Notes:
[a] Supplemental site activities described in Section 2.1.
[b] New from 2010 FS report.

Key:
ARAR – applicable or relevant and appropriate requirement; EPA – United States Environmental Protection Agency; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act of 1980; CMRP – Centredale Manor Restoration Project; FS – feasibility study; MCL – maximum contaminant level; NCP - National Hazardous Substances and Pollution Contingency Plan; NRRB – National Remedy Review Board; PCB – polychlorinated biphenyl; PRG – preliminary remediation goal; RAO – remedial action objective; TBC – to be considered; TCRA – time critical removal action

Table 2-1. Actions Taken at the CMRP Site

Date	Action	Legal Authority	Who Undertook	Results	Related Documents
1999–2000	Fencing constructed in Source Area and in residential areas adjoining Allendale Pond (repairs to the fence were performed in 2005); Construction of two interim protective caps and a flood control berm in the Source Area; Placement of riprap along eastern bank of the Woonasquatucket River in the Source Area	EPA, Region I	Combination of fund-lead and PRP-lead	Restrict access to potentially contaminated media; Isolate contaminated soils to minimize human exposure; Reduce/prevent erosion and runoff of contaminated soils to the river	EPA Region I Action Memorandum, dated May 4, 1999, as amended September 13, 1999 and June 1, 2000
2000–2003	EE/CA; Reconstruction of the Allendale Dam and restoration of Allendale Pond in 2002; Excavation and remediation of contaminated floodplain soils in eleven action areas on residential properties and recreational access points along Allendale and Lyman Mill Ponds	EPA, Region I	PRP-lead	Mitigate unacceptable human health risk from exposure to contaminated soils on residential and recreational use properties on the Woonasquatucket River floodplain between Route 44 and the Lyman Mill Dam; Prevent further downstream migration of sediment-bound contaminants; Minimize exposure to site-related contaminants	TTNUS, 2000; EPA OSWER Directive 9200.4-26 (*Approaches for Addressing Dioxins in Soil at CERCLA and RCRA Sites*, April 13, 1998); Action Memorandum dated January 18, 2001 (EPA, 2001c); and Completion of Work Report (LEA, 2005)
2003–2004	Construction of permeable protective cap in former tailrace, installation of a precast modular stormwater control structure at the north end of the tailrace, and construction of a drainage swale along the capped area	EPA, Region I	PRP-lead	Minimize potential erosion and downstream transport of contaminated soils and sediments in the former tailrace on the east side of the Source Area	Completion of Work Report (LEA, 2004)
2009–2010	Excavation of contaminated soils and treatment of contaminated groundwater at the Brook Village parking lot, installation of permanent sheet pile wall between the excavation area and the Woonasquatucket River, and construction of a cap to cover hazardous waste	EPA, Region I	PRP-lead	Minimize potential discharge of contaminated groundwater to the Woonasquatucket River	Completion of Work Report (LEA, 2010)

Key:
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act of 1980; EE/CA - Engineering Evaluation/Cost Analysis; LEA - Loureiro Engineering Associates; OSWER - Office of Solid Waste and Emergency Response; PRP - Potentially Responsible Party; RCRA - Resource Conservation and Recovery Act; TTNUS - Tetra Tech NUS, Inc.; EPA – United States Environmental Protection Agency

Table 2-2. Land Uses[1]

	Current On-site Use	Current Adjacent Use	Reasonable Potential Beneficial Use	Basis for Potential Beneficial Use
Land	Mixed residential, with some commercial and light industrial	Mixed residential, with some commercial and light industrial	Recreational/ Residential	Rhode Island Statewide Planning Program, Rivers Policy and Classification Plan
	Undeveloped woods and wetland	Mixed residential, with some commercial and light industrial	Recreational	Rhode Island Statewide Planning Program, Rivers Policy and Classification Plan; Oxbow Wetland Analysis (USACE, 2008); Watershed Initiatives[2]
Shallow Groundwater	None[3]	None[3]	Potential drinking water source	Guidelines for Ground-Water Classification under the EPA Ground-Water Protection Strategy, (EPA, 1986)
Deep Groundwater	None[3]	Yacht Club Flavored Seltzer & Soda bottling plant		
Surface Water	Recreational[4]	Recreational	Recreational	Rhode Island Statewide Planning Program, Rivers Policy and Classification Plan; Watershed Initiatives[2]

Notes:
[1] Land use assumes that the Allendale and Lyman Mill Dams will remain in place. Land use would need to be re-evaluated if the remedy selected includes dam removal and/or replacement.
[2] Remediation at the CMRP site will contribute to achieving the long-term goal to improve conditions in the watershed. The Narragansett Bay and Watershed Planning Commission identified that "By 2015, make the Blackstone, Woonasquatucket and Wood-Pawcatuck Rivers, and Greenwich Bay fishable and swimmable". Local urban revitalization and watershed restoration efforts also promote the development of areas for recreational activities.
[3] Groundwater at the Source Area is federally classified as Class IIB: Potential Source of Drinking Water.
[4] Surface water at the site is classified as Class B1 (see Section 2.3.1).

Key:
EPA – United States Environmental Protection Agency; USACE - United States Army Corps of Engineers

Table 2-3. Summary of Aquifer Characteristics[1]

Aquifer/Aquitard Formation/Confined	Flow Direction, Quantity	Source Contaminants	NAPLs	Dissolved VOCs[2]
Shallow Overburden, silty sands and gravel (0-14 feet bgs)	South/0.21 feet/day average groundwater velocity	Chemicals released directly to the ground and/or buried; soil is a secondary source	No[3]	Yes, PCE, TCE, vinyl chloride, benzene, and chlorobenzene (see Figures 2-15a and 2-15b)
Deep Overburden, sand and gravel, possible till (23-70 feet bgs)	South-southeast/ 0.55 feet/day average groundwater velocity	Shallow Overburden	No	Yes, PCE and TCE (see Figures 2-15a and 2-15b)
Bedrock	South-southeast/27 feet/day average groundwater velocity	Overburden	No	Yes, PCE and TCE (see Figures 2-15a and 2-15b)

Notes:
[1] Data source: Battelle, 2005.
[2] VOCs detected in groundwater at concentrations above the maximum contaminant levels (MCLs) identified.
[3] The 2009–2010 time-critical removal action removed potential NAPL from soil and groundwater at the Brook Village parking lot.

Key:
bgs - below ground surface; NAPL - non-aqueous phase liquid; PCE - tetrachloroethylene; TCE - trichloroethylene; VOCs - volatile organic compounds

Table 2-6b. Sources, Nature and Extent of Contamination at the CMRP Site, Summary Statistics

Affected Medium[1]	Contaminant[1]	Concentration Range[2]	Concentration Average[3]	Mobility	Toxicity[4]
Source Area, Soil	Dioxin TEQ	0.000079–140000 ng/kg	118 ng/kg	Low	B2[5]
	PCBs (total Aroclors)	0.0074–1300 mg/kg	0.29 mg/kg	Low	B2[6]
	Dieldrin	0.0002–9.9 mg/kg	0.0009 mg/kg	Low	B2
	Technical chlordane	0.0009-10.6 mg/kg	-	Low	B2
	Benzo(a)anthracene	0.006–8.5 mg/kg	0.22 mg/kg	Low	B2
	Benzo(a)pyrene	0.006–8.9 mg/kg	0.25 mg/kg	Low	B2
	Benzo(b)fluoranthene	0.0235–10 mg/kg	0.30 mg/kg	Low	B2
	Benzo(g,h,i)perylene	0.0041–5.3 mg/kg	-	Low	D
	Benzo(k)fluoranthene	0.0099–8.8 mg/kg	-	Low	B2
	Biphenyl	0.041-1.61 mg/kg	-	Low	B2
	Bis(2-ethyhexyl)phthalate	0.042-460 mg/kg	0.18 mg/kg	Low	B2
	Chrysene	0.0045–11 mg/kg	0.27 mg/kg	Low	B2
	Dibenzo(a,h)anthracene	0.0048–2.2 mg/kg	-	Low	B2
	Fluoranthene	0.0235–24 mg/kg	0.46 mg/kg	Low	D
	Indeno(1,2,3-c,d)pyrene	0.0055–5.3 mg/kg	-	Low	B2
	Naphthalene	0.0021–84 mg/kg	-	Low	D
	Pentachlorophenol	0.011–18 mg/kg	-	Low	B2
	Pyrene	0.0235–23 mg/kg	0.47 mg/kg	Low	D
	Antimony	0.08–27.8 mg/kg	-	Low	ND
	Arsenic	0.27–49.3 mg/kg	3.40 mg/kg	Low	A
	Beryllium	0.03–3.90 mg/kg	0.41 mg/kg	Low	B2
	Cadmium	0.03–180 mg/kg	0.32 mg/kg	Low	B1
	Lead	2.2–3160 mg/kg	53.8 mg/kg	Low	B2
	Manganese	35.7–6420 mg/kg	194 mg/kg	Low	D
	Thallium	0.16–13.4 mg/kg	-	Low	D
	Benzene	0.0003–480 mg/kg	-	High	A
	Chlorobenzene	0.0004–1000 mg/kg	-	Moderate to Very High	D
	Dichloroethane (1,2-)	0.0002–1.7 mg/kg	-	High to Very High	B2
	Dichloroethene (cis-1,2)	0.0005-500 mg/kg	-	High to Very High	D
	Ethyl benzene	0.0003–81 mg/kg	-	Moderate	D
	Tetrachloroethene (PCE)	0.0002–1700 mg/kg	-	High	B2
	Toluene	0.0003–430 mg/kg	-	Very High to Moderate	D
	Trichloroethene (TCE)	0.0002–2400 mg/kg	-	Moderate to High	B2
	Vinyl chloride	0.0006–2.3 mg/kg	-	High	A
	Xylenes (Total)	0.0009–380 mg/kg	-	Moderate	D

Table 2-6b. (continued)

Affected Medium[1]	Contaminant[1]	Concentration Range[2]	Concentration Average[3]	Mobility	Toxicity[4]
Source Area, Soil	Trichloroethane (1,1,1-)	0.0003–110 mg/kg	-	Moderate	D
	Trichloroethane (1,1,2-)	0.00052–0.12 mg/kg	-	Moderate to High	C
	Dichlorobenzene (1,2-)	0.00047–2800 mg/kg	-	Low to Moderate	D
	Dichlorobenzene (1,4-)	0.0006–40 mg/kg	-	Low	C
	Trichlorobenzene (1,2,4-)	0.00034–340 mg/kg	-	Moderate to High	D
	Styrene	0.00012–10 mg/kg	-	Low	ND
	Dichloroethene (trans-1,2)	0.00034–8.4 mg/kg	-	High to Very High	D
Source Area, Ground-water	2,3,7,8-TCDD	0.95–6154 pg/L	-	Low	B2
	Benzene	0.041-21 µg/L	-	High	A
	Chlorobenzene	0.075-190 µg/L	-	Moderate to Very High	D
	Dibromochloropropane (DBCP)	0.4-7 µg/L	-	High	B2
	Dichloroethene (cis,1-2)	0.19-1600 µg/L	-	High to Very High	D
	Tetrachloroethene (PCE)	0.1–61000 µg/L	-	High	B2
	Trichloroethene (TCE)	0.0435–2500 µg/L	-	Moderate	B2
	Vinyl chloride	0.07-27 µg/L	-	High	A
	Ethylene dibromide	0.042-1 µg/L	-	Low to Moderate	B2
	Arsenic	1-20 µg/L	-	Low	A
	Chromium	0.35-114 µg/L	-	Low	A, D
	Lead	0.65-70 µg/L	-	Low	B2
	Thallium	2.8-8.6 µg/L	-	Low	D
Allendale, Sediment	2,3,7,8-TCDD	0.2–110000 ng/kg[7]	879 ng/kg[7]	Low	B2
	Dioxin TEQ	0.52–110000 ng/kg	972 ng/kg	Low	B2[5]
	PCB TEQ	147–147 ng/kg	*147* ng/kg	Low	B2[6]
	Total Aroclors	0.0006–28 mg/kg	0.27 mg/kg	Low	B2[6]
	Aroclor 1254	0.0006–28 mg/kg	0.27 mg/kg	Low	B2
	Aroclor 1268	0.034–0.16 mg/kg	0.067 mg/kg	Low	B2
	Dieldrin	0.0001–0.17 mg/kg	-	Low	B2
	Technical Chlordane	0.0005–0.97 mg/kg	*0.028* mg/kg	Low	B2
	Benzo(a)pyrene	0.012–9.62 mg/kg	0.72 mg/kg	Low	B2
	Dibenzo(a,h)anthracene	0.016–2.6 mg/kg	-	Low	B2
	Arsenic	0.31–18 mg/kg	3.03 mg/kg	Low	A
	Selenium	0.30–4.7 mg/kg	-	Low	D
	Zinc	0.26–2088 mg/kg	**299** mg/kg	Low	D

Table 2-6b. (continued)

Affected Medium[1]	Contaminant[1]	Concentration Range[2]	Concentration Average[3]	Mobility	Toxicity[4]
Lyman Mill, Sediment	2,3,7,8-TCDD	0.035–49421 ng/kg	433 ng/kg	Low	B2
	Dioxin TEQ	0.2–49737 ng/kg	533 ng/kg	Low	B2[5]
	PCB TEQ	17–64.9 ng/kg	*18.6* ng/kg	Low	B2[6]
	Total Aroclors	0.0006–3.26 mg/kg	0.135 mg/kg	Low	B2[5]
	Aroclor 1254	0.0006–2.6 mg/kg	0.13 mg/kg	Low	B2
	Aroclor 1268	0.012–0.31 mg/kg	-	Low	B2
	4,4'-DDD	0.00015–0.05 mg/kg	-	Low	B2
	4,4'-DDE	0.000067–0.046 mg/kg	-	Low	B2
	Dieldrin	0.0001–0.027 mg/kg	-	Low	B2
	Technical Chlordane	0.017–2.21 mg/kg	0.4 mg/kg	Low	B2
	Benzo(a)pyrene	0.012–7.04 mg/kg	0.67 mg/kg	Low	B2
	Dibenzo(a,h)anthracene	0.016–1.24 mg/kg	-	Low	B2
	N-nitroso-di-n-propylamine	0.008–2.1 mg/kg[8]	-	Low	B2
	Aluminum	1690–27773 mg/kg	8075 mg/kg	Low	D
	Arsenic	0.031–14.8 mg/kg	**3.95** mg/kg	Low	A
	Barium	10–380 mg/kg	92.2 mg/kg	Low	Not classified
	Selenium	0.027–4.5 mg/kg	-	Low	D
	Vanadium	4.0–91.7 mg/kg	27.2 mg/kg	Low	Not classified
	Zinc	15.4–2060 mg/kg	256 mg/kg	Low	D
Allendale, Floodplain Soil	Dioxin TEQ	Not detected–1939 ng/kg	44.1 ng/kg	Low	B2[5]
	2,3,7,8-TCDD	0.2405–1510 ng/kg	22.4 ng/kg	Low	B2
Lyman Mill/ Oxbow, Floodplain Soil	Dioxin TEQ	0.998–14633 ng/kg	165.89 ng/kg	Low	B2[5]
	2,3,7,8-TCDD	0.5–14600 ng/kg	99.2 ng/kg	Low	B2
	4,4-DDT	0.0012–1.3 mg/kg	*0.0078* mg/kg	Low	B2
	4,4-DDE	0.001–1 mg/kg	*0.0053* mg/kg	Low	B2
	Benzo(a)pyrene	0.015–2.8 mg/kg	**0.65 mg/kg**	Low	B2
	Antimony	0.131–38.2 mg/kg	*0.57* mg/kg	Low	ND
	Arsenic	1.7–13.3 mg/kg	**5.8 mg/kg**	Low	A
	Copper	6.26–2350 mg/kg	*35.3* mg/kg	Low	D
Allendale, Surface Water	2,3,7,8-TCDD	0.145 – 4000 pg/L	-	Low	B2

Table 2-6b. (continued)

Affected Medium[1]	Contaminant[1]	Concentration Range[2]	Concentration Average[3]	Mobility	Toxicity[4]
Lyman Mill, Surface Water	2,3,7,8-TCDD	1.75 – 853 pg/L	*3.65* pg/L	Low	B2

Notes:

[1] Summary statistics are provided for affected medium and contaminants for which cleanup goals are developed, as follows:

- Source Area Soils - contaminants detected in soil samples at concentrations in excess of RIDEM's residential direct exposure or GA leachability criteria (RIDEM, 2004; applicable to vadose zone), or EPA's recommended residential level for dioxin and PCB (EPA, 1998 and 1990) (applicable to surface soil);
- Source Area Groundwater – contaminants detected in groundwater at concentrations in excess of the federal maximum contaminant levels (MCLs) and/or non-zero maximum contaminant level goals (MCLGs) for drinking water (EPA, 2009a);
- Allendale and Lyman Mill Reach Sediment - contaminants for which there are risk-based (human health and ecological) PRGs (MACTEC, 2005b);
- Allendale and Lyman Mill Reach Floodplain Soil - contaminants for which there are risk-based (human health and ecological) PRGs (MACTEC, 2005b and MACTEC and Battelle, 2011b), as well as contaminants detected in floodplain soils at concentrations in excess of RIDEM's residential direct exposure criteria (RIDEM, 2004; applicable to vadose zone; there were no exceedances of the GB leachability criteria) or EPA's recommended residential level for dioxin (EPA, 1998) (there were no exceedances of EPA's recommended residential level for PCB [EPA, 1990]); and
- Allendale and Lyman Mill Reach Surface Water – cleanup goals developed for dioxin will be monitored during remedy implementation.

[2] The minimum concentration is based on the minimum detected concentration or ½ the method detection limit for non-detects, whichever is smaller. The maximum concentration is based on the maximum detected value, unless otherwise indicated. Data source is the RI (Battelle, 2005) for Source Area soil and Allendale sediment and floodplain soil; data source is RI (Battelle, 2005), Appendix A of the FS (Battelle, 2010), and LEA (2008) for groundwater (VOC data from LEA [2008] only used qualitatively); data source is Appendix B of the FS (Battelle, 2010) for Lyman Mill sediment; and data source is MACTEC and Battelle (2011a) for Lyman Mill/Oxbow Area floodplain soil.

[3] Average concentrations are only reported where the detection frequency is 50% or higher; reported as '-' where the detection frequency is less than 50%. The geometric mean is reported for data that are lognormally distributed; the median data (*italics*) is reported for data that are not lognormally or normally distributed; the arithmetic mean (**bold**) is reported for data that are normally distributed. Data sources are identified in footnote 2, above. For Lyman Mill/Oxbow floodplain soil, the data source for benzo(a)pyrene and arsenic (MACTEC and Battelle, 2011a, Part I) provides the arithmetic mean only (but the data are lognormally distributed).

[4] Toxicity based on Weight of Evidence/Cancer Guideline Descriptions (http://rais.ornl.gov/tox/rap_toxp.shtml), including:

A – human carcinogen
B1 – probable human carcinogen, indicates that limited human data are available
B2 – probable human carcinogen, indicates that sufficient evidence in animals and inadequate or no evidence in humans
C – possible human carcinogen
D – not classifiable as a human carcinogen
E – evidence of noncarcinogeniety
ND – no data available

[5] Based on toxicity profile for 2,3,7,8-TCDD.

[6] Based on toxicity profile for Aroclor 1254.

[7] Concentration range and average do not include sediment data from 2005 SPMD investigation (Appendix A of the FS [Battelle,, 2010]); however, concentrations of 2,3,7,8-TCDD in surface sediments from the 2005 SPMD investigation are within the concentration range reported here.

[8] Maximum concentration based on detection limit.

Key:
mg/kg - milligrams per kilogram; ng/kg - nanograms per kilogram; PCB - polychlorinated biphenyl; TEQ - toxic equivalency

Table 2-7e. Summary of Chemicals of Concern and Medium-Specific Exposure Point Concentrations

Scenario Timeframe: Current
Receptor: Passive Recreational Visitor
Medium: Soil
Exposure Medium: Surface Soil

Exposure Point	Chemical of Concern	Concentration Detected		Units	Frequency of Detection			Exposure Point Concentration	Exposure Point Concentration Units	Statistical Measure
		Minimum	Maximum							
Oxbow Area *(General Area)*	Benzo(a)pyrene	0.023	2.8	mg/kg	18	/	18	1.1	mg/kg	UCL-G (a)
	Arsenic	2.6	13.3	mg/kg	19	/	19	7.0	mg/kg	UCL-G (a)
	Toxicity Equivalency (Dioxins/Furans) - Mammals	0.0000054	0.0064	mg/kg	22	/	22	0.0028	mg/kg	UCL-G (b)

Notes

G – Gamma distribution
(a) 95% Approximate Gamma UCL
(b) 95% Adjusted Gamma UCL

Key
mg/kg - milligrams per kilogram; UCL – upper confidence limit (on the arithmetic mean)

Table 2-8a. Principal and Low-level Threats at the CMRP Site

(source media, affected media, contaminant data, and affected receptors summarized in Table 2-8b)

Principal Threats	Medium	Contaminant(s)[1]	Action To Be Taken
Buried waste material	Soil/Liquid	Chemicals that were potentially used on site were identified based on drum labels and included caustics, halogenated solvents, PCBs, and inks	Preferred remedy not selected yet. Potential remedial alternatives include no action, or targeted excavation in combination with either upgrading the existing caps and parking lots or converting the existing surfaces to RCRA caps.
Leaching, Erosion, and Run-off	Source Area Soil	Dioxin, PCB, Pesticides, SVOCs, VOCs, and Inorganics	Preferred remedy not selected yet. Potential remedial alternatives include no action, or targeted excavation in combination with either upgrading the existing caps and parking lots or converting the existing surfaces to RCRA caps. (*Contaminated soils and groundwater at the west side of the Brook Village parking lot subject of 2009–2010 TCRA, see Table 2-1*)
Resuspension and Transport	Sediment and floodplain soil	Dioxin, PCBs, Pesticides, SVOCs, and Inorganics	Preferred remedy not selected yet. Potential remedial alternatives for sediment include no action, excavation, or partial excavation with isolation capping. Potential remedial alternatives for floodplain soil include no action, excavation, targeted excavation with enhanced natural recovery (thin-layer cover), or partial excavation with enhanced natural recovery.

Table 2-8a. (continued)

(source media, affected media, contaminant data, and affected receptors summarized in Table 2-8b)

Low-level Threats	Medium	Contaminant(s)	Action To Be Taken
Fish Consumption and Dermal Contact	Biota, sediment, floodplain soil, and surface water	Dioxin, PCBs, Pesticides, SVOCs, and Inorganics	Preferred remedy not selected yet. Potential remedial alternatives for sediment include no action, excavation, or partial excavation with isolation capping. Potential remedial alternatives for floodplain soil include no action, excavation, targeted excavation with enhanced natural recovery (thin-layer cover), or partial excavation with enhanced natural recovery.
Groundwater discharge to Woonasquatucket River	Groundwater[2]	Dioxin, VOCs, and Inorganics	Preferred remedy not selected yet.[3] Potential remedial alternatives include no action, excavation of contaminated soils for groundwater protection, or in-situ chemical treatment.

Notes:
[1] See Table 2-8b for detailed contaminant data.
[2] Groundwater within the Source Area is a potential source of drinking water.
[3] Contaminated groundwater discharge to the river in the vicinity of the Brook Village parking lot subject of 2009–2010 TCRA (see Table 2-1).

Key:
PCB - polychlorinated biphenyl; RCRA - Resource Conservation and Recovery Act; SVOCs - semi-volatile organic compounds; TCRA – time-critical removal action; VOCs - volatile organic compounds

Table 2-8b. Principal and Low-level Threats: Source Media, Affected Media, Contaminants, Reasons, Concentrations, and Impacted Receptors

Principal Threats					
Source Media	**Affected Media**	**Contaminant(s)**	**Reason(s)**	**Concentration(s)[1]**	**Receptors**
Buried waste material	Source Area soil and groundwater	Chemicals that were potentially used on site were identified based on drum labels and included caustics, halogenated solvents, PCBs, and inks	Buried waste may leach into soil and groundwater and migrate to surface water	Unknown	Residents living along the river and ecological receptors
Source Area soil	Soil (surface and subsurface), groundwater, surface water, and sediment	Dioxin, PCBs, Pesticides, SVOCs, VOCs, and Inorganics	Exceeds RIDEM criteria, EPA's recommended residential level for dioxin and PCB, and TSCA criteria Contaminants may leach into groundwater and migrate to surface water[2]	140,000 ng/kg (dioxin TEQ); 1,300 mg/kg (total Aroclors); 9.9 mg/kg (dieldrin); 10.6 mg/kg (technical chlordane); 8.5 mg/kg (benzo(a)anthracene); 8.9 mg/kg (benzo(a)pyrene); 10 mg/kg (benzo(b)fluoranthene); 5.3 mg/kg (benzo(g,h,i)perylene); 8.8 mg/kg (benzo(k)fluoranthene); 1.61 mg/kg (biphenyl); 460 mg/kg (bis(2-ethylhexyl)phthalate); 11 mg/kg (chrysene); 2.2 mg/kg (dibenzo(a,h)anthracene); 24 mg/kg (fluoranthene); 5.3 mg/kg (indeno(1,2,3-c,d)pyrene); 84 mg/kg (naphthalene); 18 mg/kg (pentachlorophenol); 23 mg/kg (pyrene); 27.8 mg/kg (antimony); 49.3 mg/kg (arsenic); 3.9 mg/kg (beryllium); 180 mg/kg (cadmium); 3,160 mg/kg (lead); 6,420 mg/kg (manganese); 13.4 mg/kg (thallium); 480 mg/kg (benzene); 1,000 mg/kg (chlorobenzene);	Residents living along the river and ecological receptors

Table 2-8b. (continued)

Principal Threats					
Source Media	**Affected Media**	**Contaminant(s)**	**Reason(s)**	**Concentration(s)[1]**	**Receptors**
Source Area soil (cont.)	Soil (surface and subsurface), groundwater, surface water, and sediment	Dioxin, PCBs, Pesticides, SVOCs, VOCs, and Inorganics	Exceeds RIDEM criteria, EPA's recommended residential level for dioxin and PCB, and TSCA criteria Contaminants may leach into groundwater and migrate to surface water[2]	1.7 mg/kg (1,2-dichloroethane); 500 mg/kg (dichloroethene (cis-1,2); 81 mg/kg (ethyl benzene); 1,700 mg/kg (PCE); 430 mg/kg (toluene); 2,400 mg/kg (TCE); 2.3 mg/kg (vinyl chloride); 380 mg/kg (total xylenes); 110 mg/kg (trichloroethane (1,1,1)); 0.12 mg/kg (trichloroethane (1,1,2)); 2,800 mg/kg (dichlorobenzene (1,2)); 40 mg/kg (dichlorobenzene (1,4)); 340 mg/kg (trichlorobenzene (1,2,4)); 10 mg/kg (styrene); 8.4 mg/kg (dichloroethene (trans-1,2))	Residents living along the river and ecological receptors
Sediment	Biota, sediment, floodplain soil, and surface water	Dioxin, PCBs, Pesticides, SVOCs, and Inorganics *(PCB concentrations are below TSCA criteria)*	Resuspension and transport, bioaccumulation hazard and toxicity	110,000 ng/kg (2,3,7,8-TCDD and dioxin TEQ); 147 ng/kg (coplanar PCB TEQ); 28 mg/kg (total Aroclors); 28 mg/kg (Aroclor 1254); 0.31 mg/kg (Aroclor 1268); 0.046 mg/kg (4,4'-DDE); 0.050 mg/kg (4,4'-DDD); 0.17 mg/kg (dieldrin); 2.2 mg/kg (technical chlordane); 9.6 mg/kg (benzo(a)pyrene); 2.6 mg/kg (dibenzo(a,h)anthracene); 2.1 mg/kg (N-nitroso-di-n-propylamine)[3]; 27,773 mg/kg (aluminum); 18 mg/kg (arsenic); 380 mg/kg (barium); 4.7 mg/kg (selenium); 91.7 mg/kg (vanadium); 2,088 mg/kg (zinc)	Residents living along the river, visiting recreational anglers, and ecological receptors

Table 2-8b. (continued)

Principal Threats					
Source Media	**Affected Media**	**Contaminant(s)**	**Reason(s)**	**Concentration(s)[1]**	**Receptors**
Floodplain Soil	Biota, sediment, and surface water	Dioxin, Pesticides, SVOCs, and Inorganics	Resuspension and transport, bioaccumulation hazard and toxicity Exceeds RIDEM criteria and EPA's recommended residential level for dioxin	14,633 ng/kg (dioxin TEQ) 14,600 ng/kg (2,3,7,8-TCDD) 1.3 mg/kg (4,4'-DDT) 1 mg/kg (4,4'-DDE); 2.8 mg/kg (benzo(a)pyrene); 38.2 mg/kg (antimony); 13.3 mg/kg (arsenic) 2,350 mg/kg (copper)	Passive recreational visitor and ecological receptors
Low-level Threats					
Source Media	**Affected Media**	**Contaminant(s)**	**Reason(s)**	**Concentration(s)[1]**	**Receptors**
Groundwater (non source material)	Surface water and sediment, and Source Area groundwater[4]	Dioxin, VOCs, and Inorganics	Exceeds federal MCLs and/or non-zero MCLGs	6,154 pg/L (2,3,7,8-TCDD); 21 µg/L (benzene); 190 µg/L (chlorobenzene); 850 µg/L (DBCP); 1,600 µg/L (cis-1,2-dichlorothene); 61,000 µg/L (PCE); 2,500 µg/L (TCE); 27 µg/L (vinyl chloride); 1 µg/L (ethlyene dibromide); 20 µg/L (arsenic); 114 µg/L (chromium); 70 µg/L (lead); 8.6 µg/L (thallium)	Residents living along the river, visiting recreational anglers, and ecological receptors

Notes:
[1] Maximum detected concentration reported, by media and across all exposure areas (see Table 2-6 for additional statistical data).
[2] Contaminated groundwater discharge to the river in the vicinity of the Brook Village parking lot subject of 2009–2010 time-critical removal action (see Table 2-1).
[3] Contaminant not detected in site samples; value reported is based on laboratory detection limit.
[4] Groundwater within the Source Area is a potential source of drinking water.

Key:
EPA – United States Environmental Protection Agency; mg/kg - milligrams per kilogram; ng/kg - nanograms per kilogram; MCL - maximum contaminant level; MCLG – maximum contaminant level goal; PCB - polychlorinated biphenyl; PCE - tetrachloroethylene; RIDEM - Rhode Island Department of Environmental Management; SVOCs - semi-volatile organic compounds; TCE - trichloroethylene; TEQ - toxic equivalency; TSCA – Toxic Substances Control Act; VOCs – volatile organic compounds

Table 2-11e. Risk Characterization Summary - Carcinogens

Scenario Timeframe: Current/Future
Receptor Population: Passive Recreational Visitor
Receptor Age: Young Child/Adult (Ages 0-30)

				Carcinogenic Risk				
Medium	Exposure Medium	Exposure Point	Chemical of Concern	Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total
Soil	Surface Soil	Oxbow Area *(General Area)*	Benzo(a)pyrene	3.4E-06	--	1.8E-06	--	5.1E-06
			Arsenic	1.3E-06	--	1.8E-07	--	1.5E-06
			Toxicity Equivalency (Dioxins/Furans) - Mammals	5.3E-05	--	--	--	5.3E-05
							Soil Risk Total:	6E-05
							Total Risk:	**6E-05**

Table 2-13d. Occurrence, Distribution, and Selection of Chemicals of Concern (COCs)

Exposure Medium: Lyman Mill Floodplain Soil (Including Oxbow)

Chemical of Concern[1]	Min Conc.[2] (ppm)	Max Conc.[2] (ppm)	Mean Conc.[2] (ppm)	RME Conc.[2] (ppm)	Statistical Measure[2,3]	Background Conc.[4] (ppm)	Screening Toxicity Value[2] (ppm)	Screening Toxicity Value Source[2]	HQ[5]
2,3,7,8-TCDD	5.0 E-7	0.015	0.0013	0.0018	95% UCL	0.000017	8.9 E-7	Wildlife PCL	1.6E+04
Dioxins and furans (TEQ-mammal)[6]	1.0 E-6	0.015	0.0014	0.0017	95% UCL	0.000050	8.9 E-7	Wildlife PCL	1.6E+04
4,4'-DDT	0.0012	1.3	0.051	0.33	95% UCL	0.0085	0.0025	EPA Region IV	5.2E+02
4,4'-DDE	0.001	1.0	0.036	0.25	95% UCL	0.013	0.0025	EPA Region IV	4.0E+02
Antimony	0.13	38	1.9	10	95% UCL	0.62	0.27	ECO SSL	1.4E+02
Copper	6.2	2400	110	460	95% UCL	205	28	ECO SSL	8.4E+01

Notes:
[1] The Chemical of Concern listed in this table is a subset of those that were identified as resulting in actionable risks to one or more ecological receptor in the Supplemental Baseline Ecological Risk Assessment (BERA) for the Oxbow Area (MACTEC and Battelle, 2011a). Specifically, remediation goals were not developed for macroinvertebrates due to the lack of appropriate site-specific effects information and those chemicals posing an actionable risk to this receptor group only are not listed. Consideration of the spatial distribution and magnitude of the risk estimates for vertebrate receptors supports the use of wildlife-based values as protective surrogates for invertebrate receptors.
[2] Minimum, maximum, arithmetic mean concentrations, statistical measures, and toxicity data from the Supplemental BERA for the Oxbow Area (MACTEC and Battelle, 2011a, Part II); the Oxbow is where the most significant ecological exposures will occur. (95%UCL for 2,3,7,8-TCDD was developed in support of Appendix M evaluations.)
[3] Statistical measures for the Reasonable Maximum Exposure Exposure Point Concentration (RME EPC) are:

Max: Maximum detection concentration, applied if fewer than 10 samples or if the 95% UCL is greater than the maximum concentration.

[4] Background concentrations from MACTEC and Battelle (2011b).
[5] HQ is defined as the Maximum Concentration/Screening Toxicity Value. These values were developed for the sole purpose of identifying contaminants that required risk analysis and are generally much larger than the actual site risks as characterized in the Supplemental BERA (MACTEC and Battelle, 2011a).
[6] The Supplemental BERA for the Oxbow Area (MACTEC and Battelle, 2011a, Part II) determined that exposure to dioxin and furans would result in actionable risks to avian wildlife as well as mammals; however, birds were determined to be less sensitive and they thus would be protected by actions taken to eliminate risks to mammals that forage in floodplain soils at the site.

Key
COC – chemical of concern; HQ – hazard quotient; PCL – Protective Concentration Level; protective of semi-aquatic wildlife exposure to sediment via incidental sediment ingestion and consumption of contaminated prey; value is minimum of selected receptor species; ppm – parts per million (or mg/kg, milligrams per kilogram); RME – reasonable maximum exposure; TEQ – toxic equivalency; 95% UCL – 95 percent upper confidence limit on the arithmetic mean.

Table 2-16. COC Concentrations Expected to Provide Adequate Protection to Ecological Receptors

Habitat Type/ Name	Exposure Medium	COC	Protective Level (ppm)	Basis	Assessment Endpoint
Allendale	Sediment	Dioxins and furans (TEQ)	0.00029	Middle risk range value (i.e., based on a Target Hazard Quotient [THQ] of 1) for the most sensitive ecological exposure pathway - bird	Protection and maintenance of insectivorous mammal and bird populations
		Coplanar PCBs (TEQ)	0.000025	Background	
		Aroclor 1254	0.15	Background	
		Total Aroclors	0.21	Background	
		Technical chlordane	0.4	Background	
		Selenium	1.1	Background	
		Zinc	220	Background	
	Soil	Arsenic	7.7	Background	
		Cadmium	1.6	Background	
		Selenium	0.7	Background	
		Dioxin/furan TEQ	0.000055	Background	
Lyman Mill	Sediment	Dioxins and furans (TEQ)	0.00029	Middle risk range value (i.e., based on a Target Hazard Quotient [THQ] of 1) for the most sensitive ecological exposure pathway - bird	Protection and maintenance of insectivorous mammal and bird populations
		Coplanar PCBs (TEQ)	0.000025	Background	
		Aroclor 1254	0.15	Background	
		Total Aroclors	0.21	Background	
		4,4’-DDD	0.0084	Middle risk range value (i.e., based on a Target Hazard Quotient [THQ] of 1) for the most sensitive ecological exposure pathway - bird	Protection and maintenance of piscivorous mammal and bird populations
		4,4’-DDE	0.006	Background	

Table 2-16. (continued)

Habitat Type/ Name	Exposure Medium	COC	Protective Level (ppm)	Basis	Assessment Endpoint
Lyman Mill	Sediment	Technical chlordane	0.4	Background	
		Aluminum	8200	Background	
		Barium	130	Background	
		Selenium	1.1	Background	
		Vanadium	38	Background	
		Zinc	220	Background	
Lyman Mill/Oxbow	Soil	2,3,7,8-TCDD	0.000035	Middle risk range value (i.e., based on a Target Hazard Quotient [THQ] of 1) for the most sensitive ecological exposure pathway - mammal	Protection and maintenance of vermivorous mammal and bird populations
		Antimony	0.62	Background	
		Copper	205	Background	
		4,4'-DDE	0.013	Background	
		4,4'-DDT	0.1	Middle risk range value (i.e., based on a Target Hazard Quotient [THQ] of 1) for the most sensitive ecological exposure pathway - bird	Protection and maintenance of vermivorous mammal and bird populations

Key:

PCB – polychlorinated biphenyl; ppm – parts per million (or mg/kg, milligrams per kilogram); TEQ – toxic equivalency

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Table 3-1. Potential Applicable or Relevant and Appropriate Requirements (ARARs) and To Be Considered (TBC) Criteria for the CMRP Site

Requirement	Status	Synopsis	Potential Application
Chemical-Specific ARARs			
Federal Requirements			
Clean Water Act Federal Water Quality Criteria, Section 304(a) 40 CFR 131.11	R & A	Ambient Water Quality Criteria (AWQC) are provided by EPA for chemicals for both the protection of human health and the protection of aquatic life.	Exceedances of AWQC are present in Woonasquatucket River.
OSWER Directive 92-4-26, Approaches for Addressing Dioxins in Soil at CERCLA and RCRA Sites	TBC	One part per billion (ppb, or 1000 ng/kg) dioxin (as TEQ) is to be generally used as a starting point for setting cleanup levels for CERCLA removal sites and as a Preliminary Remediation Goal (PRG) for remedial sites for dioxin in surface soil involving residential exposure scenarios. A cleanup range of 5 to 20 ppb of dioxin (as TEQ) has been established for commercial and industrial exposure scenarios.	Soil at the site contains dioxin at levels above the PRG.
Draft Recommended Interim Preliminary Remediation Goals for Dioxin in Soil at CERCLA and RCRA Sites	TBC	Draft recommended interim PRGs of 72 parts per trillion (ppt or ng/kg) dioxin (as TEQ) for residential exposure scenarios and 950 ppt dioxin (as TEQ) for commercial and industrial exposure scenarios are recommended as a starting point for setting cleanup levels for CERCLA removal sites.	Soil at the site contains dioxin at levels above the draft recommended interim PRGs.
Guidelines for Carcinogenic Risk Assessment, EPA/630/P-03/001F	TBC	These guidelines provide guidance on conducting risk assessments involving carcinogens.	Guidelines used to evaluate all risk assessments on carcinogenicity.
Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens, EPA/630/R-03/003F	TBC	This provides guidance on assessing risk to children from carcinogens.	Guidance used to evaluate all risk to children from carcinogens.
EPA Risk Reference Doses (RfDs)	TBC	RfDs are estimates of a daily exposure concentration that is likely to be without appreciable risk of deleterious effects during a lifetime exposure.	RfDs used to characterize human health risks due to non-carcinogens in site media.
Human Health Assessment Cancer Slope Factors (CSFs)	TBC	CSFs are estimates of the upper-bound probability of an individual developing cancer as a result of a lifetime exposure to a particular concentration of a potential carcinogen.	CSFs used to compute the individual incremental cancer risk resulting from exposure to carcinogens in site media.
EPA Carcinogenic Assessment Group Potency Factors	TBC	These factors are used to evaluate an acceptable risk from a carcinogen.	Used to evaluate carcinogenicity of dioxin.
EPA Health Advisories	TBC	EPA publishes contaminant-specific health advisories that indicate the non-carcinogenic risks associated with consuming contaminated drinking water.	EPA may use Health Advisories to establish criteria in the absence of other criteria.

Table 3-1. (continued)

Requirement	Status	Synopsis	Potential Application
Chemical-Specific ARARs (cont)			
Federal Requirements (cont)			
Safe Drinking Water Act Maximum Contaminant Levels (MCLs), 40 CFR 141.11-141.13	R & A	The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to Maximum Contaminant Levels Goals (MCLGs) as feasible using the best available treatment technology and taking cost into consideration. MCLs are enforceable standards.	MCLs are relevant and appropriate as the groundwater at the Source Area is a potential federal drinking water source.
EPA Guidance on Remedial Actions for Superfund Sites with PCB Contamination	TBC	Describes the recommended approach to evaluating and remediating Superfund Sites with PCB contamination.	This guidance will be considered when establishing remediation goals for PCB contaminated media.
Safe Drinking Water Act Maximum Contaminant Levels Goals (non-zero MCLGs), 40 CFR 141.50-141.51	R & A	The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety and are non-enforceable public health goals.	Non-zero MCLGs are relevant and appropriate as the groundwater at the Source Area is a potential federal drinking water source.
State Requirements			
RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (i.e., Remediation Regulations)	Applicable	Unless otherwise specified, soil contaminated as a result of a release of hazardous materials shall be remediated in a manner which meets the direct exposure and leachability criteria for each hazardous substance established in Rule 8.02.B (Method 1 Soil Objectives). Similarly, groundwater objectives established in Rule 8.03 shall be applied to contaminated sites.	Soil at the site contains contaminants subject to the Rule 8.02B soil objectives. Groundwater at the site contains contaminants subject to the Rule 8.03 GB groundwater objectives.
RIDEM Rules and Regulations for Groundwater Quality	Not Applicable	Establishes state MCLs, limits, and requirements for current and future public water supply systems.	State MCLs are not applicable as the groundwater at the site is not a potential state drinking water source under state classification system .
Location-Specific ARARs			
Federal Requirements			
Fish and Wildlife Coordination Act 16 U.S.C. 661, Fish and Wildlife Protection (40 CFR Section 6.302(g))	Applicable	Requires that a federal agency involved in actions that will result in the control or structural modification of any stream or water body to take action to prevent, mitigate, or compensate for project-related losses of fish and wildlife resources. Encourages that any federal agency proposing to modify a body of water to consult with the U.S. Fish and Wildlife Service, National Marine Fisheries Service, and other related state agencies.	On-site remediation activities may include modifications to the Woonasquatucket River.

Table 3-1. (continued)

Requirement	Status	Synopsis	Potential Application
***Location-Specific ARARs* (cont)**			
Federal Requirements (cont)			
Clean Water Act, Section 404(b)(1) Guidelines for specification of disposal sites for dredged or fill material, 40 CFR Part 230, 231 and 33 CFR Parts 320-323 and Guidelines for Compensatory Mitigation for Losses of Aquatic Resources, 33 CFR Part 332	Applicable	Outlines requirements for the discharge of dredged or fill materials into surface waters, including wetlands. Such discharges are not allowed if there are practicable alternatives with less adverse impact. Sets standards for restoration and mitigation required as a result of unavoidable impacts to aquatic resources.	On-site remediation activities may include discharge of dredged or fill material into the Woonasquatucket River.
National Historic Preservation Act 16 USC 470 36 CFR Part 800	Applicable	A federal agency must take into account the project's effect on properties included or eligible for inclusion in the National Register of Historic Places.	A federal agency must take into account the project's effect on properties included or eligible for inclusion in the National Register of Historic Places.
Rivers and Harbors Act Section 10 (33 U.S.C. Section 403)	Applicable	Prohibits unauthorized obstruction or alteration of navigable waters of the U.S.	Remediation activities may involve obstruction or alteration of the Woonasquatucket River.
Protection of Wetlands (Executive Order 11990)	TBC	Federal agencies are required to avoid adversely impacting wetlands unless there is no practicable alternative and the proposed action includes all practicable measures to minimize harm to wetlands that may result from such use.	Some wetlands are located within the site boundaries. Any activities in wetland areas will need to comply with this order.
Floodplain Management (Executive Order 11988)	TBC	Federal agencies are required to avoid occupancy and modification of a floodplain unless there is no practicable alternative and avoid support of floodplain development wherever there is a practicable alternative.	The site is located in a 100-yr floodplain. If no practicable alternative, any activity will be designed to minimize such impacts.
Endangered Species Act of 1973, 16 USC 1531 et seq. 50 CFR 402	Potentially Applicable	Establishes requirements to protect species threatened by extinction and habitats critical to their survival.	Site includes part of the Woonasquatucket River and some wetlands. There are no known habitats for threatened or endangered species at Allendale and Lyman Mill Ponds, but transient bald eagles may occasionally occur within the Woonasquatucket River watershed.

Table 3-1. (continued)

Requirement	Status	Synopsis	Potential Application
Location-Specific ARARs (cont)			
Federal Requirements (cont)			
Archaeological and Historical Preservation Act of 1974 Public Law 93-291	Potentially applicable	When a Federal agency finds, or is notified, that its activities in connection with a Federal construction project may cause irreparable loss or destruction of significant scientific, prehistorical, historical, or archeological data, such agency shall notify DOI. Such agency may request DOI to undertake the preservation of such data or it may undertake such activities.	If during remedial design or remedial action, it is determined that this alternative may cause irreparable loss or destruction of significant scientific, prehistorical, historical, or archaeological data, EPA will notify DOI and comply with the processes in this statute.
State Requirements			
RIDEM Rules and Regulations for Hazardous Waste Management – Section 8 Location Standards for Hazardous Waste Facilities	Potentially Applicable	Rhode Island is delegated to administer the federal RCRA statute through its state regulations. The standards of 40 CFR 264.18(b), with some exceptions, are incorporated by reference. Certain facilities located in 100-yr floodplain must be designed, constructed, operated and maintained to prevent washout of any hazardous waste by 100-yr flood, unless demonstrate no adverse effects on human health or environment will result from washout.	Treatment, disposal, and storage of hazardous materials may take place at the site, which is located within the 100-yr floodplain.
RIDEM Rules and Regulations Governing the Enforcement of the Freshwater Wetlands Act	Applicable	Sets requirements to prevent the undesirable drainage, excavation, filling, alteration, encroachment, or any other form of disturbance or destruction to a wetland.	Some wetlands are located within the site boundaries.
RIDEM Rules and Regulations for Groundwater Quality	Not Applicable	Sets forth policy to protect future and present sources of drinking water by protection of the groundwater, aquifers, recharge areas, and watersheds.	Groundwater and surface water at and near the site are not currently a source of drinking water.
Rhode Island Historic Preservation Action – Rhode Island General Laws 42-45 et seq.	Applicable	Regulations that address the project's effect on properties included or eligible for inclusion in the National Register of Historic Places.	State must take into account the project's effect on properties included or eligible for inclusion in the National Register of Historic Places.
Action-Specific ARARs			
Federal Requirements			
TSCA PCB regulations (40 CFR 761, Subparts B and C)	Applicable	Establishes requirements for addressing PCB-contaminated remediation waste.	PCBs are present in source area soil.

Table 3-1. (continued)

Requirement	Status	Synopsis	Potential Application
***Action-Specific ARARs* (cont)**			
Federal Requirements (cont)			
Safe Drinking Water Act Maximum Contaminant Levels (MCLs), 40 CFR 141.11-141.13	R & A	The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology and taking cost into consideration. MCLs are enforceable standards.	MCLs are relevant and appropriate as the groundwater at the Source Area is a potential federal drinking water source. These standards would be used to evaluate the effectiveness of Source Are soil alternatives in reducing/preventing migration of contaminants from soil to groundwater.
Safe Drinking Water Act Maximum Contaminant Levels Goals (non-zero MCLGs), 40 CFR 141.50-141.51	R & A	The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety and are non-enforceable public health goals.	Non-zero MCLGs are relevant and appropriate as the groundwater at the Source Area is a potential federal drinking water source. These standards would be used to evaluate the effectiveness of Source Area soil alternatives in reducing/preventing migration of contaminants from soil to groundwater.
Invasive Species (Executive Order 13112)	TBC	Federal agencies are directed to prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause when requiring actions that impact the environment.	Actions that may be taken in the river, wetlands and/or floodplains could result in the introduction of invasive species.
RCRA (40 CFR 264, Subpart AA)	Potentially Applicable	Air emission standards for process vents apply to process vents that manage hazardous wastes with organic concentrations of at least 10 parts per million by weight (ppmw).	Should incinerator operations manage hazardous wastes with organic concentrations of at least 10 ppm by weight, vents operated as part of the system will comply with these requirements.

Table 3-1. (continued)

Requirement	Status	Synopsis	Potential Application
***Action-Specific ARARs* (cont)**			
Federal Requirements (cont)			
RCRA (40 CFR 264, Subpart BB)	Potentially Applicable	Air emission standards for equipment leaks apply to equipment that contains or contacts hazardous wastes with organic concentrations of at least 10 percent by weight.	Should equipment used in incineration come into contact with hazardous wastes containing organic concentrations of at least 10 percent by weight, these regulations will be followed.
RCRA (40 CFR 264, Subpart CC)	Potentially Applicable	Air emission standards for tanks, surface impoundments, and containers used to manage hazardous waste. Emission controls required if tanks, surface impoundments, and containers used to manage hazardous waste have more than 500 ppmw of volatile organics.	If tanks, surface impoundments, and containers used to manage hazardous waste have more than 500 ppmw of volatile organics, then these requirements will be met.
CAA National Emissions Standards for Hazardous Air Pollutants: Site remediation (40 CFR 63, Subpart GGGGG)	Potentially Applicable	Applicable to major sources of hazardous air pollutants.	If site remediation activities result in emissions or potential to emit hazardous air pollutants that qualify as a major source, then these requirements will be met.
RCRA Land Disposal Restrictions (40 CFR 268)	Potentially Applicable	These regulations identify treatment standards for hazardous wastes and specify requirements that generators, transporters, and owners or operators of treatment, storage, and disposal facilities that manage restricted wastes destined for land disposal must meet.	Material subject to these regulations placed in upland CDFs must be treated to meet these requirements.
State Requirements			
RIDEM Rules and Regulations for Hazardous Waste Management Identification and Listing of Hazardous Wastes	Applicable or R & A	Rhode Island is delegated to administer the federal RCRA statute through its regulations. The standards of 40 Part 261 of RCRA are incorporated by reference. Sets forth requirements for hazardous waste determination according to federal (40 CFR 262.11) and State of Rhode Island (Rule 5.8) definitions.	Solid waste generated by excavation of soils or sediments at the site will undergo hazardous waste determination.
RIDEM Rules and Regulations for Hazardous Waste Management, Section 8 – Operation Requirements for Treatment, Storage, and Disposal Facilities	Potentially Applicable	Outlines operational requirements for all hazardous waste treatment, storage, and disposal facilities, including general waste analyses, security procedures, inspections, safety, groundwater monitoring, etc. Sets design, construction, and operational requirements for hazardous waste containers and tanks, and closure requirements for hazardous waste facilities.	If remediation at the site includes some of these activities, substantive requirements must be met.

Table 3-1. (continued)

Requirement	Status	Synopsis	Potential Application
***Action-Specific ARARs* (cont)**			
State Requirements			
RIDEM Rules and Regulations for Hazardous Waste Management, Section 8 – Land Disposal Facilities	Potentially Applicable	Outlines design, operational, and closure requirements for land disposal facilities.	Requirements must be met for CDFs constructed on site as well as other activities.
RIDEM Rules and Regulations for Hazardous Waste Management, Section 8 - Incinerators	Potentially Applicable	Outlines design, operational, and closure requirements for incinerator facilities.	If remediation at the site includes on-site thermal treatment, substantive requirements must be met.
RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (i.e., Remediation Regulations), Section 8.0 (Risk Management)	Applicable	This section regulates impacted media (soil and groundwater only) at contaminated sites and sets risk standards under state law. (1×10^{-5}).	This section was used to develop cleanup goals for the site.
RIDEM Rules and Regulations for Dredging and the Management of Dredged Material	Not Applicable	Sets standards for any remedial action or removal action including dredging of sediments in marine waters.	Applies only to marine waters of the state and freshwater upland disposal sites.
RIDEM Water Quality Regulations	Applicable	Provides water classification for surface waters in Rhode Island and sets ambient water quality criteria for toxic substances and governs water quality impacts associated with site activities.	Remediation activities may affect water quality.
RIDEM Regulations for the Rhode Island Pollutant Discharge Elimination System (RIPDES)	Potentially Applicable	Sets requirements for discharges to surface waters and to protect waters from discharges of pollutants.	Remediation activities may require discharge of water to the Woonasquatucket River; these regulations are applicable to discharges as a result of extracting groundwater or dewatering an excavation area.
RIDEM Rules and Regulations for Groundwater Quality	Applicable	Establishes construction standards for permanent monitoring wells and abandonment procedures (Appendix 1).	The site contains approximately 33 monitoring wells.
RIDEM Oil Pollution Control Regulations	Not Applicable	Establishes guidelines for the prevention of discharge, escape or release of oil into the waters of the state.	No oil will be discharged during the remedial action.
RIDEM Underground Injection Control Program	Potentially Applicable	Establishes rules for remedial actions that include subsurface discharge or underground injection of treated or untreated groundwater.	May be applicable to subsurface injection of chemical oxidants.

Table 3-1. (continued)

Requirement	Status	Synopsis	Potential Application
***Action-Specific ARARs* (cont)**			
State Requirements (cont)			
RIDEM Solid Waste Regulation No. 1, Rules and Regulations for Solid Waste Management	Potentially Applicable	Applicable for the minimization of environmental hazards associated with the operation of solid waste facilities.	CDFs containing non-hazardous waste would need to be constructed in accordance with substantive provisions.
RIDEM Solid Waste Regulation No. 2	Potentially Applicable	Establishes standards for construction of final covers, leachate collection systems and monitoring plans that result from on-site remedial actions.	CDFs containing non-hazardous waste would need to be constructed in accordance with substantive provisions.
RIDEM Pretreatment Regulations	Not Applicable	Applicable for any remedial action where treated or untreated liquids are discharged to a Publically Owned Treatment Works (POTW) facility.	No liquids will be discharged to a POTW.
RI Air Pollution Control Regulation #1: Visible Emissions	Applicable	Establishes opacity limitations for contaminant emissions.	Remediation activities could potentially result in visible emissions. If these standards are exceeded, emissions would need to be managed through engineering controls.
RI Air Pollution Control Regulation #5: Fugitive Dust,	Applicable	Requires that reasonable measures be taken to prevent particulate matter from becoming airborne.	Remediation activities could potentially result in fugitive dust. Appropriate measures would need to be taken to prevent particulate matter from becoming airborne.
RI Air Pollution Control Regulation #7: Emissions Detrimental to Persons or Property	Applicable	Prohibits emissions of contaminants which may be injurious to human, plant, or animal life or cause damage to property or which unreasonably interfere with the enjoyment of life and property.	Remediation activities may result in emissions.
RI Air Pollution Control Regulation #15: Control of Organic Solvent Emissions,	Potentially Applicable	Limits the amount of organic solvents emitted to the atmosphere.	Remediation activities could result in emission of organic solvents to the atmosphere.
RI Air Pollution Control Regulation #22: Air Toxics Air Toxics Guideline, and Air Modeling Guidelines	Potentially Applicable	Prohibits the emissions of specified contaminants that result in ground level concentrations greater than ambient level concentrations.	Remediation activities could result in emission of toxics to the atmosphere.

Key
R & A - relevant and appropriate; TBC - to be considered

Table 3-2. Off-Site Waste Disposal Options at the CMRP Site

Waste Classification	Waste Concentration	Disposal Requirement	Comment
F020	Do not meet treatment standards of 40 CFR 268.40 (e.g., Dioxins > 1 µg/kg or > 0.001 mg/kg)	Incineration	Within U.S., based on F-listing (40 CFR 261.31), accompanying Land Disposal Restrictions (LDRs) for dioxins (40 CFR 268.31), and treatment standards for hazardous waste (40 CFR 268.40)
		Hazardous landfill	Constituents must meet 10 times the Universal Treatment Standards (UTS) (40 CFR 268.48) Landfill disposal may be possible in Canada (Quebec) for dioxins < 5 µg/kg
	Meet treatment standards of 40 CFR 268.40 (e.g., Dioxins < 1 µg/kg or < 0.001 mg/kg)	Hazardous landfill	Within U.S. 40 CFR 261.31(d)(1) allows exception to LDR if concentrations meet Subpart D (40 CFR 268.40 Treatment Standards for Hazardous Waste)
Non-listed	> TCLP concentration	Incineration	Constituents that exceed 10 times the UTS (40 CFR 268.48)
		Hazardous landfill	Constituents must meet 10 times the UTS (40 CFR 268.48)
	< TCLP concentrations	Local non-hazardous landfill	Waste that is neither listed nor characteristic (40 CFR 261.24)

Key:
CFR – Code of Federal Regulations; LDR – land disposal restrictions; TCLP - toxicity characteristic leaching procedure; UTS – universal treatment standard; µg/kg - micrograms per kilogram; mg/kg – milligrams per kilogram

Table 3-4. Proposed Cleanup Goals for Allendale and Lyman Mill Reach Floodplain Soil[1]

Contaminant	Cleanup Goal	Basis	Explanation (Receptor/Exposure Pathway)
Dioxin (ng/kg)			
2,3,7,8-TCDD	35	Ecological risk-based PRG	Short-tailed Shrew Diet, hazard index of 1 (Human health risk-based PRG [Passive Recreational Visitor, direct contact 10^{-6}] value of 53 ng/kg dioxin TEQ)
Pesticides (mg/kg)			
4,4'-DDE[2]	0.013	Background	Ecological risk-based PRG (American Woodcock CBR, hazard index of 1) value of 0.0046 mg/kg is below upstream background value of 0.013 mg/kg
4,4'-DDT[2]	0.10	Ecological risk-based PRG	American Woodcock Diet, hazard index of 1
Semi-volatile Organic Compounds (mg/kg)			
Benzo(a)pyrene[3]	3.1	Background	Human health risk PRG (Passive Recreational Visitor, direct contact 10^{-6}) value of 0.21 mg/kg is below upstream background value of 3.1 mg/kg
Inorganics (mg/kg)			
Antimony[2]	0.62	Background	Ecological risk based PRG (Short-tailed Shrew Diet, hazard index of 1) value of 0.44 mg/kg is below upstream background value of 0.62 mg/kg
Arsenic[3]	7.7	Background	Human health risk PRG (Passive Recreational Visitor, direct contact 10^{-6}) value of 4.7 mg/kg is below upstream background value of 7.7 mg/kg
Copper[2]	205	Background	Ecological risk based PRG (Short-tailed Shrew Diet, hazard index of 1) value of 19 mg/kg is below upstream background value of 205 mg/kg

Notes:

[1] Proposed cleanup goals are based on an evaluation of risk-based PRGs (developed for the most sensitive receptor and/or exposure pathway), potential ARARs, TBCs, and site background data, as described in Appendix F. Contaminants detected in excess of ARARs but found to be consistent with, or less than background conditions were not retained for cleanup goal determination unless a risk-based PRG was available for the contaminant (Appendix F). Cleanup goals were not developed for undetected contaminants where the laboratory detection limits were in excess of ARARs. Additional sampling will be performed during the design phase to verify background conditions and the statistical comparisons, and verify undetected contaminants using analytical methods capable of measuring concentrations at levels below the ARARs. These data will be evaluated to assess impacts, if any, to the proposed cleanup goals. However, all numeric criteria included in ARARs identified for the CMRP site must also be met by the cleanup regardless of whether or not they are identified above except where background is an issue.

[2] Applicable to Lyman Mill reach floodplain soil only (including Oxbow).

[3] Applicable to Oxbow surface soil only.

Key:

ARAR - Applicable or Relevant and Appropriate Requirement; CBR - critical body residue; PRG - preliminary remediation goal; TBC - to be considered; TEQ - toxic equivalency; mg/kg - milligram per kilogram; and ng/kg - nanograms per kilogram

Table 3-6. Proposed Cleanup Goals for Source Area Soil[1]

Contaminant	Cleanup Goal	Basis	Explanation
Dioxin (ng/kg)			
Dioxin TEQ	1000	TBC	EPA's recommended residential level for dioxin
Pesticides/PCBs (mg/kg)			
Total Aroclors (total PCB)	1	TBC	EPA's recommended residential level for PCB
Dieldrin	0.04	ARAR	RIDEM residential direct exposure criteria
Technical Chlordane	0.5	ARAR	RIDEM residential direct exposure criteria
Semi-volatile Organic Compounds (mg/kg)			
Benzo(a)anthracene	0.9	ARAR	RIDEM residential direct exposure criteria
Benzo(a)pyrene	0.4	ARAR	RIDEM residential direct exposure criteria
Benzo(b)fluoranthene	0.9	ARAR	RIDEM residential direct exposure criteria
Benzo(g,h,i)perylene	0.8	ARAR	RIDEM residential direct exposure criteria
Benzo(k)fluoranthene	0.9	ARAR	RIDEM residential direct exposure criteria
Biphenyl	0.8	ARAR	RIDEM residential direct exposure criteria
Bis(2-ethylhexyl)phthalate	46	ARAR	RIDEM residential direct exposure criteria
Chrysene	0.4	ARAR	RIDEM residential direct exposure criteria
Dibenzo(a,h)anthracene	0.4	ARAR	RIDEM residential direct exposure criteria
Fluoranthene	20	ARAR	RIDEM residential direct exposure criteria
Indeno(1,2,3-cd)pyrene	0.9	ARAR	RIDEM residential direct exposure criteria
Naphthalene	0.8	ARAR	RIDEM GA leachability criteria
Pentachlorophenol	5.3	ARAR	RIDEM residential direct exposure criteria
Pyrene	13	ARAR	RIDEM residential direct exposure criteria
Inorganics (mg/kg)			
Antimony	10	ARAR	RIDEM residential direct exposure criteria
Arsenic	7	ARAR	RIDEM residential direct exposure criteria
Beryllium	0.4	ARAR	RIDEM residential direct exposure criteria
Cadmium	39	ARAR	RIDEM residential direct exposure criteria
Lead	150	ARAR	RIDEM residential direct exposure criteria
Manganese	390	ARAR	RIDEM residential direct exposure criteria
Thallium	5.5	ARAR	RIDEM residential direct exposure criteria

Table 3-6. (continued)

Contaminant	Cleanup Goal	Basis	Explanation
Volatile organic compounds (mg/kg)			
Benzene	0.2	ARAR	RIDEM GA leachability criteria
Chlorobenzene	3.2	ARAR	RIDEM GA leachability criteria
Dichloroethane (1,2-)	0.1	ARAR	RIDEM GA leachability criteria
Dichloroethene (cis-1,2-)	1.7	ARAR	RIDEM GA leachability criteria
Ethyl benzene	27	ARAR	RIDEM GA leachability criteria
Tetrachloroethene (PCE)	0.1	ARAR	RIDEM GA leachability criteria
Toluene	32	ARAR	RIDEM GA leachability criteria
Trichloroethene (TCE)	0.2	ARAR	RIDEM GA leachability criteria
Vinyl chloride	0.02	ARAR	RIDEM residential direct exposure criteria
Xylenes (Total)	110	ARAR	RIDEM residential direct exposure criteria
Trichloroethane (1,1,1-)	11	ARAR	RIDEM GA leachability criteria
Trichloroethane (1,1,2-)	0.1	ARAR	RIDEM GA leachability criteria
Dichlorobenzene (1,2-)	41	ARAR	RIDEM GA leachability criteria
Dichlorobenzene (1,4-)	27	ARAR	RIDEM residential direct exposure criteria
Trichlorobenzene (1,2,4-)	96	ARAR	RIDEM residential direct exposure criteria
Styrene	2.9	ARAR	RIDEM GA leachability criteria
Dichloroethene (trans-1,2)	3.3	ARAR	RIDEM GA leachability criteria

Notes:
[1] Proposed cleanup goals are based on those chemicals detected in vadose zone samples at concentrations in excess of the potential ARARs (RIDEM residential direct exposure and GA leachability criteria, RIDEM, 2004) or detected in surface samples at concentrations in excess of EPA's recommended residential level for dioxin and PCB (EPA, 1998 and 1990) as described in Appendix F. Cleanup goals were not developed for undetected contaminants where the laboratory detection limits were in excess of ARARs. Additional sampling will be performed during the design phase using analytical methods capable of measuring concentrations at levels below the ARARs. These data will be evaluated to assess impacts, if any, to the proposed cleanup goals. However, all numeric criteria included in ARARs identified for the CMRP site must also be met by the cleanup regardless of whether or not they are identified above except where background is an issue.

Key:
ARAR - Applicable or Relevant and Appropriate Requirement; EPA – United States Environmental Protection Agency; PCB - polychlorinated biphenyl; RIDEM – Rhode Island Department of Environmental Management; TBC - to be considered; TEQ, toxic equivalency; mg/kg - milligram per kilogram; and ng/kg - nanograms per kilogram

Table 3-7. Proposed Cleanup Goals for Groundwater within the Source Area[1]

Contaminant	Cleanup Goal	Basis	Explanation
Dioxin (pg/L)			
2,3,7,8-TCDD	30	ARAR	Federal MCL
Inorganics (mg/L)			
Arsenic	0.01	ARAR	Federal MCL
Chromium	0.1	ARAR	Federal MCL
Lead	0.015	ARAR	Federal MCL
Thallium	0.0005	ARAR	Federal non-zero MCLG
Volatile organic compounds (mg/L)			
Benzene	0.005	ARAR	Federal MCL
Chlorobenzene	0.1	ARAR	Federal MCL
Dibromochloropropane (DBCP)	0.0002	ARAR	Federal MCL
Dichloroethene (cis-1,2-)	0.07	ARAR	Federal MCL
Tetrachloroethene (PCE)	0.005	ARAR	Federal MCL
Trichloroethene (TCE)	0.005	ARAR	Federal MCL
Vinyl chloride	0.002	ARAR	Federal MCL
Ethylene dibromide	0.00005	ARAR	Federal MCL

Notes:
[1] Proposed cleanup goals are based on those chemicals detected in groundwater within the Source Area at concentrations in excess of the potential ARARs (federal maximum contaminant levels [MCLs] and non-zero maximum contaminant level goals [MCLGs] for drinking water, EPA, 2009) as described in Appendix F. Cleanup goals were not developed for undetected contaminants where the laboratory detection limits were in excess of ARARs. Additional sampling will be performed during the design phase using analytical methods capable of measuring concentrations at levels below the ARARs. These data will be evaluated to assess impacts, if any, to the proposed cleanup goals. However, all numeric criteria included in ARARs identified for the CMRP site must also be met by the cleanup regardless of whether or not they are identified above except where background is an issue.

Key:
ARAR - Applicable or Relevant and Appropriate Requirement; DBCP – dibromochloropropane; MCL – maximum contaminant level; MCLG – maximum contaminant level goal; mg/L – milligrams per liter; PCE – tetrachloroethylene; pg/L – picograms per liter; and TCE - trichloroethylene

Table 3-8. Area and Volume Estimates for Proposed Cleanup Areas

Action Area/Media	Cleanup Area		In-Situ Removal Volume[1] (cy)
	(sq ft)	(ac)	
Allendale Reach/Sediment	673,600	15.5	48,200
Lyman Mill Reach/Sediment	1,022,000	23.5	91,000
Allendale Reach/Floodplain Soil	64,600	1.5	2,400
Lyman Mill Reach/Stream Sediment and Floodplain Soil[2]	1,251,370	28.7	58,400
Source Area/Soil[3]	339,500	7.8[3]	62,900
Source Area/Groundwater	348,500	8.0	Not determined[4]

Notes:

[1] In-situ removal volumes do not include any allowance for over-excavation or over-dredging which is needed to perform the remediation. The volumes described in the alternative descriptions and cost estimates in subsequent sections of the 2010 FS and this Addendum are higher because they include an over-dredge or over-excavation allowance.
[2] Action area includes the Oxbow area located southwest of Allendale Dam.
[3] Majority of cleanup area is comprised of existing interim caps and paved surfaces (6.4 acres), and the remaining area is comprised of landscape areas, walkways, and rip rap.
[4] The volume of material removed is variable and dependent upon the specific alternative. The specific volume of groundwater to be removed (i.e. in the case of a pump and treat alternative) is not able to be calculated; the treatment would be considered complete when confirmation testing indicated that the levels of dissolved parameters had dropped below the clean up goals.

Key:
sq ft – square feet; ac – acres; cy – cubic yards

Table 6-22. Detailed Analysis of Lyman Mill Reach Stream Sediment and Floodplain Soil Alternative 1, No Action

EVALUATION CRITERIA	ALTERNATIVE LYMAN MILL REACH STREAM SEDIMENT AND FLOODPLAIN SOIL -1: NO ACTION
OVERALL PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT	
Human Health Protection and the Environment	Contaminated sediment and floodplain soil would remain on site unaddressed and continue to present a risk to human health and the environment.
COMPLIANCE WITH ARARS	
Chemical-, Location-, and Action-Specific	See Table 6-23. This alternative will not comply with ARARs for residential direct exposure or EPA's recommended residential level for dioxin (EPA, 1998).
LONG-TERM EFFECTIVENESS AND PERMANENCE	
Magnitude of Residual Risk	The residual risk is high because no actions are taken to address contaminated sediment and floodplain soil or reduce the risk of erosion and migration downstream.
Adequacy and Reliability of Controls	There would be no controls in place to adequately and/or reliably prevent exposure in the long term. In addition, there would be no controls to ensure maintenance of the privately owned dams which could lead to downstream transport of contaminated sediment in the event of a dam breach.
REDUCTION OF TOXICITY, MOBILITY, OR VOLUME	
Treatment Process Used and Materials Treated	None proposed for this alternative.
Amount Destroyed or Treated	None anticipated.
Degree of Expected Reductions of Toxicity, Mobility, or Volume Through Treatment	No reductions in toxicity, mobility, or volume of contamination anticipated for this alternative.
Degree to Which Treatment is Irreversible	Not applicable.
Type and Quantity of Residuals Remaining After Treatment	There would be no residuals because no treatment is planned for this alternative.
SHORT-TERM EFFECTIVENESS	
Protection of Community During Remedial Action	Not applicable, as no remedial actions are proposed for this alternative.
Protection of Workers During Remedial Action	Not applicable, as no remedial actions are proposed for this alternative.
Environmental Impacts	Not applicable, as no remedial actions are proposed for this alternative

Table 6-22. (continued)

EVALUATION CRITERIA	ALTERNATIVE LYMAN MILL REACH STREAM SEDIMENT AND FLOODPLAIN SOIL -1: NO ACTION
SHORT-TERM EFFECTIVENESS	
Time Until Remedial Action Objectives are Achieved	The time to achieve RAOs is unknown, but could be upwards of 200 years or more depending on the rate of natural recovery processes (deposition and chemical decay rates) that are not monitored under this alternative (Appendix M).
IMPLEMENTABILITY	
Ability to Construct and Operate the Technology	Not applicable, as no remedial technology is implemented under this alternative.
Reliability of the Technology	Not applicable, as no remedial technology is implemented under this alternative.
Ease of Undertaking Additional Remedial Actions, If Necessary	This alternative does not preclude future remedial activities.
Ability to Monitor the Effectiveness of Remedy	Five-year reviews and periodic monitoring, triggered by severe weather events, are incorporated into this alternative. Periodic monitoring would include routine testing and could be easily implemented.
Ability to Obtain Approvals and Coordinate with Other Agencies	Not applicable, as no activities requiring approval are planned for this alternative.
Availability of Off-Site Treatment, Storage, and Disposal Services and Capacity	Not applicable for this alternative.
Availability of Necessary Equipment and Specialists	Not applicable for this alternative.
Availability of Technology	Not applicable for this alternative.
COST[1]	
Capital Cost	$0
Present Worth of Long-term Monitoring and Maintenance	$250,000 (includes costs for periodic monitoring and five-year reviews)
Total Present Worth Cost	$250,000

Notes:
[1]Detailed cost estimates provided in Appendix J.

Table 6-23. Potential Applicable or Relevant and Appropriate Requirements (ARARs) and To Be Considered (TBC) Criteria for Lyman Mill Reach Stream Sediment and Floodplain Soil Alternative 1, No Action[1]

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Chemical-Specific ARARs			
Federal Requirements			
OSWER Directive 92-4-26, Approaches for Addressing Dioxins in Soil at CERCLA and RCRA Sites	TBC	Guidance cleanup levels for CERCLA removal sites and PRGs for remedial sites for dioxin (as TEQ) in surface soil involving residential exposure scenarios. Also establishes a cleanup range for dioxin (as TEQ) for commercial and industrial exposure scenarios.	Some residential use soils at the site contains dioxin at levels above the PRG and will not be addressed by this alternative.
Draft Recommended Interim Preliminary Remediation Goals for Dioxin in Soil at CERCLA and RCRA Sites	TBC	Draft recommended interim PRGs of 72 parts per trillion (ppt or ng/kg) dioxin (as TEQ) for residential exposure scenarios and 950 ppt dioxin (as TEQ) for commercial and industrial exposure scenarios are recommended as a starting point for setting cleanup levels for CERCLA removal sites.	Soil at the site contains dioxin at levels above the draft recommended interim PRGs.
Clean Water Act Federal Water Quality Criteria, Section 304(a) 40 CFR 131.11	R & A	Ambient Water Quality Criteria (AWQC) are provided by EPA for chemicals for both the protection of human health and the protection of aquatic life.	Contributions of contaminants from sediment/floodplain soil that could result in exceedances of AWQC in the Woonasquatucket River will not be minimized to the maximum extent practical.
Guidelines for Carcinogenic Risk Assessment, EPA/630/P-03/001F	TBC	These guidelines provide guidance on conducting risk assessments involving carcinogens.	Alternative would not prevent exposure to contaminants considered under this guidance.
Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens, EPA/630/R-03/003F	TBC	These guidelines provide guidance on conducting risk assessments involving carcinogens.	Alternative would not prevent exposure to contaminants considered under this guidance.
EPA Risk Reference Doses (RfDs)	TBC	RfDs are estimates of a daily exposure concentration that is likely to be without appreciable risk of deleterious effects during a lifetime exposure.	Alternative would not prevent exposure to contaminants considered under this guidance.
Human Health Assessment Cancer Slope Factors (CSFs)	TBC	CSFs are estimates of the upper-bound probability of an individual developing cancer as a result of a lifetime exposure to a particular concentration of a potential carcinogen.	Alternative would not prevent exposure to contaminants considered under this guidance.
EPA Carcinogenic Assessment Group Potency Factors	TBC	These factors are used to evaluate an acceptable risk from a carcinogen.	Alternative would not prevent exposure to contaminants considered under this guidance.

Table 6-23. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Chemical-Specific ARARs (cont)			
Federal Requirements (cont)			
EPA Health Advisories	TBC	EPA publishes contaminant-specific health advisories that indicate the non-carcinogenic risks associated with consuming contaminated drinking water.	Alternative would not prevent exposure to contaminants potentially considered under these advisories.
State Requirements			
RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (i.e., Remediation Regulations)	Applicable	Unless otherwise specified, soil contaminated as a result of a release of hazardous materials shall be remediated in a manner which meets the direct exposure and leachability criteria for each hazardous substance established in Rule 8.02.B (Method 1 Soil Objectives).	Some residential use soils at the site contain contaminants subject to the Rule 8.02B soil objectives and would not be addressed by this alternative.
RIDEM Water Quality Regulations	R & A	Provides water classification for surface waters in Rhode Island and sets ambient water quality criteria for toxic substances and governs water quality impacts associated with site activities.	Contributions of contaminants from sediment that could result in exceedances of water quality standards in the Woonasquatucket River will not be minimized to the maximum extent practical.

Notes:
[1] With no action, there are no location- or action-specific ARARs.

Key:
R & A – Relevant and Appropriate; TBC – To Be Considered

Table 6-24. Detailed Analysis of Lyman Mill Reach Stream Sediment and Floodplain Soil Alternative 3, Targeted Excavation, Enhanced Natural Recovery and Disposal and/or Treatment

EVALUATION CRITERIA	ALTERNATIVE LYMAN MILL REACH STREAM SEDIMENT AND FLOODPLAIN SOIL -3: TARGETED EXCAVATION, ENHANCED NATURAL RECOVERY AND DISPOSAL AND/OR TREATMENT
OVERALL PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT	
Human Health Protection and the Environment	The combination of targeted excavation and removal of contaminated material and placement of a thin-layer cover would provide some protection to human health and the environment. Removal of the sediment from the stream channel and south Oxbow areas would reduce contaminant migration downstream due to erosion. In addition, removal of contaminated soil that exceeds ARARs or EPA's dioxin requirements in combination with a thin cover would reduce exposure to contamination and accelerate the natural recovery processes. Flow control structures to divert stream flow into the Oxbow would also accelerate the natural recovery processes. However, because some contamination would remain in place, ICs restricting site access and use would be required to prevent the disturbance of the CDFs (Options 3a and 3b) and thin-layer cover (all options). In addition, ECs (such as boardwalks and fencing) could be used to enhance remedy effectiveness by further reducing human exposure. Potential risks to ecological receptors would be reduced, but not eliminated because contaminated material under the thin-layer cover could continue to present an exposure hazard to burrowing aquatic and floodplain organisms over an extended period of time until the cleanup objectives are met. In addition, the bioaccumulation hazard to wildlife would be reduced but not eliminated over an extended period of time until cleanup objectives are met.
COMPLIANCE WITH ARARS	
Chemical-, Location-, and Action-Specific	ARARs specific to Alternative 3 are summarized in Table 6-25. Assuming that excavation involves more than a *deminimis*/incidental discharge to surface water, Clean Water Act Section 404 requirements are triggered by excavation. In addition, placement of backfill in wetland areas, the nearshore CDF (Option 3b), and possibly the upland CDF (Option 3a) also trigger wetlands/Section 404 requirements. As a result, these actions must be evaluated to determine the least damaging practicable alternative. State wetlands requirements will also need to be addressed. The thin-layer cover (all options) and nearshore CDF (Option 3b) would also require the permanent occupancy and modification of the floodplain. According to Executive Order 11988, a determination would need to be made that there was no other practicable alternative before selecting this option as the preferred remedy.

Table 6-24. (continued)

EVALUATION CRITERIA	ALTERNATIVE LYMAN MILL REACH STREAM SEDIMENT AND FLOODPLAIN SOIL -3: TARGETED EXCAVATION, ENHANCED NATURAL RECOVERY AND DISPOSAL AND/OR TREATMENT
COMPLIANCE WITH ARARS	
Chemical-, Location-, and Action-Specific (continued)	Under Options 3a and 3e, some of the excavated material is expected to require treatment to meet the alternative treatment standards set forth in the LDRs. Subtitle C requirements under RCRA would have to be waived for this alternative. The waiver would be based on the determination that the placement of a RCRA-compliant cap would result in greater risk to the environment. Specifically, the cover proposed under this alternative would allow for preservation of a majority of the existing forested wetland that provides a regionally-important habitat to a variety of birds and animals (including potential threatened/endangered vernal pool species). However, requiring a thicker, impermeable cap would permanently eliminate one of the largest areas of forested riparian habitat remaining along the Woonasquatucket River downstream of the Smithfield town line.
LONG-TERM EFFECTIVENESS AND PERMANENCE	
Magnitude of Residual Risk	Targeted excavation would be somewhat effective in the long term because some contaminated sediment/soil would be removed and either contained on site, destroyed, or shipped off site for disposal and treatment. Targeted excavation will remove floodplain soil from areas where contaminant concentrations are in excess of ARARs for residential direct exposure or EPA's recommended residential level for dioxin in soil (EPA, 1998), and provide a higher level of risk reduction for human receptors. Although post-construction ecological residual risk would remain elevated as a result of leaving contamination in place under the thin-layer cover, targeted excavation would remove some of the contamination from areas with the highest likelihood of downstream migration. ICs and ECs would be used to further minimize human exposure. The risks to ecological receptors would be further reduced over time, as clean material was deposited within the area. However, the overall implementation period for this alternative is expected to be long (e.g., several decades to well over a century) even with the inclusion of river flow-diversion structures to increase sedimentation rates in the Oxbow. As a result, ecological receptors would continue to be at risk of harm from exposure to contaminants where contamination remains in place in the area where enhanced natural recovery occurs. This alternative does not involve significant destruction of ecological habitat which would be balanced against the benefits of a more intrusive excavation.

Table 6-24. (continued)

EVALUATION CRITERIA	ALTERNATIVE LYMAN MILL REACH STREAM SEDIMENT AND FLOODPLAIN SOIL -3: TARGETED EXCAVATION, ENHANCED NATURAL RECOVERY AND DISPOSAL AND/OR TREATMENT
LONG-TERM EFFECTIVENESS AND PERMANENCE	
Adequacy and Reliability of Controls	Long-term monitoring, maintenance, including maintenance of the dam, and ICs would be necessary to assure the long-term protectiveness of this alternative, including the soil cover and any on-site disposal facility under Options 3a and 3b. Implementation of ICs would provide further protection by lowering the potential for exposure; ICs are only effective if adequately monitored, enforced, and maintained.
REDUCTION OF TOXICITY, MOBILITY, OR VOLUME	
Treatment Process Used and Materials Treated	Options 3a and 3e assume some material will require treatment to meet LDRs. Option 3d includes on-site incineration.
Amount Destroyed or Treated	Under Options 3a and 3e, approximately 2,100 cy of the excavated material would be treated (10% of the total volume). Under Option 3d, approximately 20,500 cy of the excavated material would be excavated and treated.
Degree of Expected Reductions of Toxicity, Mobility, or Volume Through Treatment	There would be a reduction of toxicity, mobility, or volume of contamination by incineration under Options 3a, 3d, and 3e. There would be no reduction of toxicity, mobility, or volume of contamination through treatment for Option 3b; however, the mobility of the contaminated sediment particles would be reduced by the disposal facility, if used.
Degree to Which Treatment is Irreversible	For materials that undergo thermal treatment (Options 3a, 3d, and 3e), the process is irreversible.
Type and Quantity of Residuals Remaining After Treatment	Excavation would produce no residuals. Air emissions of contaminants or additional by-products produced during on-site or off-site thermal treatment (Options 3d and 3e) would be at levels below regulatory standards. After incineration, the volume of inorganic soil particles would be nearly the same as the pre-treatment volume, but concentrations of organic chemical contaminants would be below detection limits.
SHORT-TERM EFFECTIVENESS	
Protection of Community During Remedial Action	All of the options would result in limited impacts to the community from construction. Access to the work zone during construction activities would be prohibited, and engineering controls, dust suppression techniques, and site perimeter air (dust) monitoring will mitigate risks to the community. An on-site incinerator under Option 3d would result in air emissions which would be monitored to ensure that they are below regulatory standards.

Table 6-24. (continued)

EVALUATION CRITERIA	ALTERNATIVE LYMAN MILL REACH STREAM SEDIMENT AND FLOODPLAIN SOIL -3: TARGETED EXCAVATION, ENHANCED NATURAL RECOVERY AND DISPOSAL AND/OR TREATMENT
SHORT-TERM EFFECTIVENESS	
Protection of Workers During Remedial Action	Health and safety plans, emergency response plans, engineering controls (dust suppression), and personal protective equipment will be used during site activities, mitigating risks to workers.
Environmental Impacts	Excavation would temporarily destroy existing habitat, which may take at least a decade to become reestablished in areas of emergent marsh. Application of cover material may have deleterious effects to the trees within the Oxbow. However, using a hydraulic slurry method and performing the work during the dormant season (e.g., late fall or early winter) would minimize damage to vegetation. Non-mobile animals, such as soil invertebrates, would be buried by the cover; however, it is expected that they would quickly colonize the newly applied cap material. Some short-term air emissions from truck traffic and petroleum powered engines and generators are associated with this alternative.
Time Until Remedial Action Objectives are Achieved	The time to achieve RAOs may be on the order of several decades to well over a century depending on the deposition and chemical decay rates. Overall, the time to reach the cleanup goals for the most sensitive ecological receptor (short-tailed shrew) varies from 25 to over 250 years, best estimate is approximately 30 years. The time to reach the cleanup goals for the passive recreational visitor is expected to be in about 4 years (based on meeting the Rhode Island carcinogenic risk range of 10^{-6} to 10^{-5}; post-construction residual risk estimates would be within EPA's risk range, see Appendix M). Flow control structures will be incorporated into the design to direct flood flows over the entire area, which will increase the rate of clean sediment deposition.

Table 6-24. (continued)

EVALUATION CRITERIA	ALTERNATIVE LYMAN MILL REACH STREAM SEDIMENT AND FLOODPLAIN SOIL -3: TARGETED EXCAVATION, ENHANCED NATURAL RECOVERY AND DISPOSAL AND/OR TREATMENT
IMPLEMENTABILITY	
Ability to Construct and Operate the Technology	For all options, the soft soils would require the use of low-ground pressure equipment and hydraulic excavators. Temporary work areas would need to be set up and the areas cleared of vegetation. Temporary haul roads would need to be constructed to provide access. There may be some issues related to obtaining property access. Use of a hydraulic slurry method for placement of a wetland cover is not routine, but such a broadcast method has been successfully demonstrated at other sites. The soft surface sediment/soil would require the use of low-ground pressure equipment and hydraulic excavators but should not present any significant issues. Upland land is required for the temporary work areas and sediment/soil processing areas (all options except Option 3b). Additional land is needed for a disposal facility (Option 3a) and Option 3d requires land for an incinerator. These properties may need to be acquired from private parties. Increased monitoring would be needed for Options 3a, 3b, and 3d relative to Option 3e.
Reliability of the Technology	Excavation, CDF construction and thermal treatment technologies have been successfully implemented at other contaminated soil sites, although the nearshore CDF (Option 3b) could present additional reliability concerns because it is located in the floodplain/river. Although the concept of pumping soil slurries has been used for placing aquatic caps and is used in the mining industry, use of this technology for placing wetland covers is an innovative application. Habitat restoration activities have historically had variable success rates. Because contamination remains in place, technical problems could arise in the future.
Ease of Undertaking Additional Remedial Actions, If Necessary	This alternative would not preclude additional future remedial actions.

Table 6-24. (continued)

EVALUATION CRITERIA	ALTERNATIVE LYMAN MILL REACH STREAM SEDIMENT AND FLOODPLAIN SOIL -3: TARGETED EXCAVATION, ENHANCED NATURAL RECOVERY AND DISPOSAL AND/OR TREATMENT
IMPLEMENTABILITY	
Ability to Monitor the Effectiveness of Remedy	The effectiveness of excavation and water quality protection measures could be monitored with routine testing. Confirmational sampling would be performed at the completion of construction activities to verify that the cleanup goals were achieved. A physical survey would also be conducted at the completion of construction activities to confirm that the cover was placed over the entire remedial footprint and meets the design thickness. Long-term monitoring would be required to assess cover performance and the rate at which recovery is occurring, assess the impact of the remedial action on downstream areas, and determine if additional evaluations or clean-ups are warranted. Increased monitoring would be needed for the on-site containment (Options 3a and 3b) and treatment (Option 3d) options. However, these monitoring programs would not present any unusual issues. The implementation of long-term monitoring and maintenance programs and enforcement of institutional controls are critical to the success of this alternative.
Ability to Obtain Approvals and Coordinate with Other Agencies	Because this alternative constitutes the placement of fill in waters of the US, a determination must first be made that this is the least damaging practicable alternative to the aquatic environment. In addition, this alternative would require the permanent occupancy and modification the floodplain, and a determination would need to be made that there is no other practicable alternative before selecting this option as the preferred remedy. For Option 3a, some low-value wetlands could be destroyed depending on the location of the CDF. Coordination with U.S. Department of Interior (DOI) would be required if during remedial design or remedial action, it is determined that this alternative may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archaeological data. Coordination with adjacent property owners, and appropriate federal, state, and local agencies would be required to implement ICs. Access from property owners would be required to obtain access to the site and to maintain Allendale Dam.

Table 6-24. (continued)

EVALUATION CRITERIA	ALTERNATIVE LYMAN MILL REACH STREAM SEDIMENT AND FLOODPLAIN SOIL -3: TARGETED EXCAVATION, ENHANCED NATURAL RECOVERY AND DISPOSAL AND/OR TREATMENT	
IMPLEMENTABILITY		
Availability of Off-Site Treatment, Storage, and Disposal Services and Capacity	Off-site landfill and treatment options are readily available. Samples of excavated sediment/floodplain soil could be tested to determine if the material could be taken to a hazardous waste landfill without treatment.	
Availability of Necessary Equipment and Specialists	Construction equipment and personnel are readily available.	
Availability of Technology	Technology is common enough that required equipment and materials would be readily available.	
COST[1]		
Capital Cost	Option 3a, On-site Upland CDF	$13,600,000
	Option 3b, On-site Nearshore CDF	$10,900,000
	Option 3d, On-site Thermal Treatment	$30,800,000
	Option 3e, Off-site Disposal and/or Treatment	$23,500,000
Present Worth of Long-term Monitoring and Maintenance	Option 3a, On-site Upland CDF	$2,800,000
	Option 3b, On-site Nearshore CDF	$2,800,000
	Option 3d, On-site Thermal Treatment	$2,500,000
	Option 3e, Off-site Disposal and/or Treatment	$2,500,000
Total Present Worth Cost	Option 3a, On-site Upland CDF	$16,400,000
	Option 3b, On-site Nearshore CDF	$13,700,000
	Option 3d, On-site Thermal Treatment	$33,300,000
	Option 3e, Off-site Disposal and/or Treatment	$26,000,000

Notes:
[1]Detailed cost estimates provided in Appendix J. Costs could increase by approximately $290,000 to $350,000 for compliance with the National Historic Preservation Act (NHPA) (USACE, 2011b).

Table 6-25. Potential Applicable or Relevant and Appropriate Requirements (ARARs) and To Be Considered (TBC) Criteria for Lyman Mill Reach Stream Sediment and Floodplain Soil Alternative 3, Targeted Excavation, Enhanced Natural Recovery and Disposal and/or Treatment

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Chemical-Specific ARARs			
Federal Requirements			
OSWER Directive 92-4-26, Approaches for Addressing Dioxins in Soil at CERCLA and RCRA Sites	TBC	Guidance cleanup levels for CERCLA removal sites and PRGs for remedial sites for dioxin (as TEQ) in surface soil involving residential exposure scenarios. Also establishes a cleanup range for dioxin (as TEQ) for commercial and industrial exposure scenarios.	Soil at the site that contains dioxin at levels above that recommended in this guidance would be addressed under this alternative.
Draft Recommended Interim Preliminary Remediation Goals for Dioxin in Soil at CERCLA and RCRA Sites	TBC	Draft recommended interim PRGs of 72 parts per trillion (ppt or ng/kg) dioxin (as TEQ) for residential exposure scenarios and 950 ppt dioxin (as TEQ) for commercial and industrial exposure scenarios are recommended as a starting point for setting cleanup levels for CERCLA removal sites.	Soil at the site contains dioxin at levels above the draft recommended interim PRGs.
Clean Water Act Federal Water Quality Criteria, Section 304(a) 40 CFR 131.11	R & A	Ambient Water Quality Criteria (AWOC) are provided by EPA for chemicals for both the protection of human health and the protection of aquatic life.	Contaminants from sediment/floodplain soil that could result in exceedances of AWQC in Woonasquatucket River will be minimized to the maximum extent practical.
Guidelines for Carcinogenic Risk Assessment, EPA/630/P-03/001F	TBC	These guidelines provide guidance on conducting risk assessments involving carcinogens.	Guidelines used to evaluate all risk assessments on carcinogenicity.
Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens, EPA/630/R-03/003F	TBC	These guidelines provide guidance on conducting risk assessments involving carcinogens.	Guidelines used to evaluate all risk assessments on carcinogenicity in children.
EPA Risk Reference Doses (RfDs)	TBC	RfDs are estimates of a daily exposure concentration that is likely to be without appreciable risk of deleterious effects during a lifetime exposure.	RfDs used to characterize human health risks due to non-carcinogens in site media.
Human Health Assessment Cancer Slope Factors (CSFs)	TBC	CSFs are estimates of the upper-bound probability of an individual developing cancer as a result of a lifetime exposure to a particular concentration of a potential carcinogen.	CSFs used to compute the individual incremental cancer risk resulting from exposure to carcinogens in site media.
EPA Carcinogenic Assessment Group Potency Factors	TBC	These factors are used to evaluate an acceptable risk from a carcinogen.	Used to evaluate carcinogenicity of dioxin.
EPA Health Advisories	TBC	EPA publishes contaminant-specific health advisories that indicate the non-carcinogenic risks associated with consuming contaminated drinking water.	Used to establish criteria in the absence of other standards.

Table 6-25. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Chemical-Specific ARARs (cont)			
State Requirements			
RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (i.e., Remediation Regulations)	Applicable	Unless otherwise specified, soil contaminated as a result of a release of hazardous materials shall be remediated in a manner which meets the direct exposure and leachability criteria for each hazardous substance established in Rule 8.02.B (Method 1 Soil Objectives).	Some residential use soils at the site contain contaminants subject to the Rule 8.02B soil objectives and would be addressed under this alternative consistent with state requirements.
RIDEM Water Quality Regulations	R & A	Provides water classification for surface waters in Rhode Island and sets ambient water quality criteria for toxic substances and governs water quality impacts associated with site activities.	Contributions of contaminants from sediment that could result in exceedances of water quality standards in the Woonasquatucket River will be minimized to the maximum extent practical.
Location-Specific ARARs			
Federal Requirements			
Fish and Wildlife Coordination Act 16 U.S.C. 661, Fish and Wildlife Protection (40 CFR Section 6.302(g))	Applicable	Requires that a federal agency take action to prevent, mitigate, or compensate for project-related losses of fish and wildlife resources. Encourages that any federal agency proposing to modify a body of water to consult with the U.S. Fish and Wildlife Service, National Marine Fisheries Service, and other related state agencies.	Construction activities under this alternative in the Woonasquatucket River are subject to these requirements. Actions will be taken in accordance with these requirements.
Clean Water Act, Section 404 Guidelines for discharge of dredged or fill material into waters of US (40 CFR Parts 230 and 231, 33 CFR Parts 320-323, and 33 CFR Part 332)	Applicable	Outlines requirements for the discharge of dredged or fill materials into surface waters, including wetlands. Such discharges are not allowed if there are practicable alternatives with less adverse impact. Sets standards for restoration and mitigation required as a result of unavoidable impacts to aquatic resources.	Excavation/backfill, placement of thin cover, and nearshore CDF (and potentially upland CDF) subject to these requirements. Activities must be conducted in accordance with these requirements, including but not limited to mitigation and/or restoration. Alternative must be evaluated to determine least damaging practicable alternative before it can be selected.

Table 6-25. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Location-Specific ARARs (cont)			
Federal Requirements (cont)			
Rivers and Harbors Act Section 10 (33 U.S.C. Section 403)	Applicable	Sets forth criteria for placing dams/structures in navigable waters of the U.S.	Backfill/thin cover, nearshore CDF, and flow control structures subject to these requirements. Activities must be conducted in accordance with these requirements.
Protection of Wetlands (Executive Order 11990)	TBC	Federal agencies are required to avoid adversely impacting wetlands unless there is no practicable alternative and the proposed action includes all practicable measures to minimize harm to wetlands that may result from such use.	Excavation/backfill, placement of thin cover, and nearshore CDF (and potentially upland CDF) are subject to these requirements. Activities must be conducted in accordance with these requirements.
Archaeological and Historical Preservation Act of 1974 Public Law 93-291	Potentially applicable	When a Federal agency finds, or is notified, that its activities in connection with a Federal construction project may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archeological data, such agency shall notify DOI. Such agency may request DOI to undertake the preservation of such data or it may undertake such activities	If during remedial design or remedial action, it is determined that this alternative may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archaeological data, EPA will notify DOI and comply with these requirements.
National Historic Preservation Act 16 USC 470 36 CFR Part 800	Applicable	A federal agency must take into account the project's effect on properties included or eligible for inclusion in the National Register of Historic Places.	Work conducted will take into account the project's effect on properties included or eligible for inclusion in the National Register of Historic Places as required under this law.
Floodplain Management (Executive Order 11988)	TBC	Federal agencies are required to avoid impacts associated with the occupancy and modification of a floodplain and avoid support of floodplain development wherever there is a practicable alternative.	This alternative and nearshore CDF alternative can only be selected if there is no practicable alternative to occupancy and modification of floodplain.

Table 6-25. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Location-Specific ARARs (cont)			
State Requirements			
RIDEM Rules and Regulations for Hazardous Waste Management – Section 8 Location Standards for Hazardous Waste Facilities	R & A	Rhode Island is delegated to administer the federal RCRA statute through its state regulations. The standards of 40 CFR 264.18(b), with some exceptions, are incorporated by reference. Certain facilities located in 100-yr floodplain must be designed, constructed, operated and maintained to prevent washout of any hazardous waste by 100-yr flood, unless demonstrate no adverse effects on human health or environment will result from washout.	Nearshore CDF must meet these requirements. Waste material that remains in the Oxbow will not meet these requirements and would have to be waived.
Rhode Island Historic Preservation Act – Rhode Island General Laws 42-45 et seq.	Applicable	Regulations that address the project's effect on properties included or eligible for inclusion in the State/National Registers of Historic Places.	Will take into account the project's effect on properties included or eligible for inclusion in the National/State Registers of Historic Places in accordance with these requirements.
RIDEM Rules and Regulations Governing the Enforcement of the Freshwater Wetlands Act	Applicable	Sets requirements to prevent the undesirable drainage, excavation, filling, alteration, encroachment, or any other form of disturbance or destruction to a wetland.	Activities required by RIDEM for remediation will be conducted in accordance with these requirements.
Action-Specific ARARs			
Federal Requirements			
Clean Water Act Federal Water Quality Criteria, Section 304(a) 40 CFR 131.11	Applicable	Ambient Water Quality Criteria (AWQC) are provided by EPA for chemicals for both the protection of human health and the protection of aquatic life.	Excavation/backfill, placement of thin cover, and nearshore CDF must be conducted so that there are no exceedances of AWQC.
RCRA (40 CFR 264, Subpart AA)	Applicable: On-site Incineration	Air emission standards for process vents apply to process vents that manage hazardous wastes with organic concentrations of at least 10 parts per million by weight (ppmw).	Should incinerator operations manage hazardous wastes with organic concentrations of at least 10 ppm by weight, vents operated as part of the system will comply with these requirements.

Table 6-25. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Action-Specific ARARs (cont)			
Federal Requirements (cont)			
RCRA (40 CFR 264, Subpart BB)	Applicable: On-site Incineration	Air emission standards for equipment leaks apply to equipment that contains or contacts hazardous wastes with organic concentrations of at least 10 percent by weight.	Should equipment used in incineration come into contact with hazardous wastes containing organic concentrations of at least 10 percent by weight, these regulations will be followed.
RCRA (40 CFR 264, Subpart CC)	Applicable: Upland CDF On-site Incineration	Air emission standards for tanks, surface impoundments, and containers used to manage hazardous waste. Emission controls required if tanks, surface impoundments, and containers used to manage hazardous waste have greater than 500 ppmw of volatile organics.	If tanks, surface impoundments, and containers used to manage hazardous waste have greater than 500 ppmw of volatile organics then these requirements will be met.
CAA National Emissions Standards for Hazardous Air Pollutants: Site remediation (40 CFR 63, Subpart GGGGG)	Applicable: On-site Incineration	Applicable to major sources of hazardous air pollutants conducting site remediation.	On-site incineration must be conducted to meet these substantive requirements.
RCRA Land Disposal Restrictions (40 CFR 268)	Applicable: Upland CDF	These regulations identify treatment standards for hazardous wastes and specify requirements that generators, transporters, and owners or operators of treatment, storage, and disposal facilities that manage restricted wastes destined for land disposal must meet.	Material subject to these regulations placed in upland CDF must be treated to meet these requirements.
Invasive Species (Executive Order 13112)	TBC	Federal agencies are directed to prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause when requiring actions that impact the environment.	Actions will be taken to address invasive species consistent with the Executive Order.
State Requirements			
RIDEM Rules and Regulations for Hazardous Waste Management Identification and Listing of Hazardous Wastes	Applicable: Upland CDF Incineration Off-site Disposal	Rhode Island is delegated to administer the federal RCRA statute through its regulations. The standards of 40 Part 261 of RCRA are incorporated by reference. Sets forth requirements for hazardous waste determination according to federal (40 CFR 262.11) and RI State (Rule 5.8) definitions.	Will be used to determine appropriate treatment and disposal.
RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (i.e., Remediation Regulations), Section 8.0 (Risk Management)	Applicable	This section regulates impacted media at contaminated sites.	This section was used to develop cleanup goals for the site. This alternative meets this requirement.

Table 6-25. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
***Action-Specific ARARs* (cont)**			
State Requirements (cont)			
RIDEM Rules and Regulations for Hazardous Waste Management, Section 8 – Operation Requirements for Treatment, Storage, and Disposal Facilities	Applicable and R & A	Outlines operational requirements for all hazardous waste treatment, storage, and disposal facilities, including general waste analyses, security procedures, inspections, safety, groundwater monitoring etc. Sets design, construction, and operational requirements for hazardous waste containers and tanks, and closure requirements for hazardous waste facilities.	Substantive requirements related to land disposal, on-site incineration, closure, etc. must be met. Waste material that remains in the Oxbow will not meet these requirements and would have to be waived.
RIDEM Rules and Regulations for Hazardous Waste Management, Section 8 – Land Disposal Facilities	Applicable and R & A	Outlines design, operational, and closure requirements for land disposal facilities.	Substantive requirements for land disposal/closure, etc. must be met. Waste material that remains in the Oxbow will not meet these requirements and would have to be waived.
RIDEM Rules and Regulations for Hazardous Waste Management, Section 8 – Incinerators	Applicable: On-site incineration	Outlines design, operational, and closure requirements for incinerator facilities.	On-site incineration must be conducted to meet these substantive requirements.
RIDEM Water Quality Regulations	Applicable	Provides water classification for surface waters in Rhode Island and sets ambient water quality criteria for toxic substances and governs water quality impacts associated with site activities.	Excavation/backfill, placement of thin cover, and nearshore CDF must be conducted so that there are no exceedances of water quality standards.
RI Air Pollution Control Regulation #1: Visible Emissions	Applicable	Establishes opacity limitations for contaminant emissions.	Remediation will be conducted to meet the standards for visible emissions.
RI Air Pollution Control Regulation #5: Fugitive Dust	Applicable	Requires that reasonable precaution be taken to prevent particulate matter from becoming airborne.	Actions will be taken to prevent particulate matter from becoming airborne in accordance with these regulations.
RI Air Pollution Control Regulation #7: Emissions Detrimental to Persons or Property	Applicable	Prohibits emissions of contaminants which may be injurious to human, plant, or animal life or cause damage to property or which unreasonably interfere with the enjoyment of life and property.	Any potential emissions subject to these requirements will meet these standards.

Table 6-25. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
***Action-Specific ARARs* (cont)**			
State Requirements (cont)			
RI Air Pollution Control Regulation #15: Control of Organic Solvent Emissions	Applicable: On-site incineration	Limits the amount of organic solvents emitted to the atmosphere.	Any emissions of organic solvents will be controlled to ensure that the standards are met.
RI Air Pollution Control Regulation #22: Air Toxics, Air Toxics Guideline, and Air Modeling Guidelines	Applicable: On-site incineration	Prohibits the emissions of specified contaminants that result in ground level concentrations greater than ambient level concentrations.	Remediation will be conducted so that these requirements are met.

Key:
R & A – Relevant and Appropriate; TBC – To Be Considered

Table 6-26. Detailed Analysis of Lyman Mill Reach Stream Sediment and Floodplain Soil Alternative 5, Partial Excavation, Enhanced Natural Recovery and Disposal and/or Treatment

EVALUATION CRITERIA	ALTERNATIVE LYMAN MILL REACH STREAM SEDIMENT AND FLOODPLAIN SOIL -5: PARTIAL EXCAVATION, ENHANCED NATURAL RECOVERY, AND DISPOSAL AND/OR TREATMENT
OVERALL PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT	
Human Health Protection and the Environment	This alternative would provide some overall protection of human health and the environment, and would help balance the long-term benefits of sediment/soil removal with the short-term benefit of protecting valuable existing wetland habitat. Targeted excavation and removal of contaminated soil from areas where contaminant concentrations are in excess of ARARs or EPA's dioxin requirements, as well as removal of contaminated sediment/soil from areas with the highest potential human exposure, from low-lying channels where contaminated sediment has accumulated, and areas with higher potential for downstream transport of contaminated sediment/soil would minimize human and ecological exposure to contamination. Placement of a thin cover would further reduce exposure to contamination, and, used in combination with flow control structures to divert stream flow into the Oxbow, would also accelerate the natural recovery processes. Potential risks to ecological receptors would be reduced, but not eliminated because contaminated material under the thin-layer cover could continue to present an exposure hazard to burrowing aquatic and floodplain organisms over an extended period of time until the cleanup objectives are met. In addition, the bioaccumulation hazard to wildlife would be reduced but not eliminated over an extended period of time until cleanup objectives are met.
COMPLIANCE WITH ARARS	
Chemical-, Location-, and Action-Specific	ARARs specific to Alternative 5 are summarized in Table 6-27. Excavation, placement of backfill/cover material in wetland areas, the nearshore CDF (Option 5b), and possibly the upland CDF (Option 5a) will trigger wetlands/Section 404 requirements. As a result, these actions must be evaluated to determine the least damaging practicable alternative. State wetlands requirements will also need to be addressed. The thin-layer cover (all options) and nearshore CDF (Option 5b) would also require the permanent occupancy and modification of the floodplain. According to Executive Order 11988, a determination would need to be made that there was no other practicable alternative before selecting this option as the preferred remedy. Under Options 5a and 5e, some of the excavated material is expected to require treatment to meet the alternative treatment standards set forth in the LDRs.

Table 6-26. (continued)

EVALUATION CRITERIA	ALTERNATIVE LYMAN MILL REACH STREAM SEDIMENT AND FLOODPLAIN SOIL -5: PARTIAL EXCAVATION, ENHANCED NATURAL RECOVERY, AND DISPOSAL AND/OR TREATMENT
COMPLIANCE WITH ARARS	
Chemical-, Location-, and Action-Specific (continued)	Subtitle C requirements under RCRA would have to be waived for this alternative. The waiver would be based on the determination that the placement of a RCRA-compliant cap would result in greater risk to the environment. Specifically, the cap proposed under this alternative would allow for preservation of a majority of the existing forested wetland that provides a regionally-important habitat to a variety of birds and animals (including potential threatened/endangered vernal pool species). However, requiring a thicker, impermeable cap would permanently eliminate one of the largest areas of remaining forested riparian habitat remaining along the Woonasquatucket River downstream of the Smithfield town line.
LONG-TERM EFFECTIVENESS AND PERMANENCE	
Magnitude of Residual Risk	Partial excavation would be somewhat effective in the long term because some contaminated sediment/soil would be removed and either contained on site, destroyed, or shipped off site for disposal and treatment. In addition, placement of a thin-layer cover would facilitate risk reduction through natural recovery. All sediment and floodplain soil will be excavated from areas where contaminant concentrations are in excess of ARARs for residential direct exposure or EPA's recommended residential level for dioxin in soil (EPA, 1998), as well as from areas of highest potential for future erosion, from low-lying channels where contaminated sediment has accumulated, and from areas with potential for frequent human exposure; therefore the residual risk would be significantly reduced particularly for human receptors. The elevated post-construction ecological residual risk from contamination remaining in place under the thin-layer cover would be further reduced over time as clean material was deposited within the area, although this process will be fairly slow even with the inclusion of river flow-diversion structures to increase sedimentation rates in the Oxbow.
Adequacy and Reliability of Controls	Long-term monitoring, maintenance, including maintenance of the dam, and ICs would be critical to ensure the long-term protectiveness of the thin-layer cover and any type of on-site disposal facility (Options 5a and 5b). Implementation of ICs would provide further protection by lowering the potential for exposure; ICs are only effective if adequately monitored, enforced, and maintained.

Table 6-26. (continued)

EVALUATION CRITERIA	ALTERNATIVE LYMAN MILL REACH STREAM SEDIMENT AND FLOODPLAIN SOIL -5: PARTIAL EXCAVATION, ENHANCED NATURAL RECOVERY, AND DISPOSAL AND/OR TREATMENT
REDUCTION OF TOXICITY, MOBILITY, OR VOLUME	
Treatment Process Used and Materials Treated	Options 5a and 5e assume some material would require treatment to meet LDRs. Option 5d includes on-site incineration.
Amount Destroyed or Treated	Under Options 5a and 5e, approximately 5,100 cy of the excavated material would be treated (10% of total volume). Under Option 5d, approximately 50,900 cy of the excavated material would be treated.
Degree of Expected Reductions of Toxicity, Mobility, or Volume Through Treatment	There would be a reduction of toxicity, mobility, or volume of contamination by incineration under Options 5a, 5d, and 5e. There would not be a reduction of toxicity, mobility, or volume of contamination through treatment for Option 5b, although the mobility of the contaminated sediment/soil particles would be reduced by the disposal facility and thin-layer cover.
Degree to Which Treatment is Irreversible	For material that undergoes thermal treatment (Options 5a, 5d, and 5e), the process is irreversible.
Type and Quantity of Residuals Remaining After Treatment	Excavation would produce no residuals. Air emissions of contaminants or additional by-products produced during on- or off-site thermal treatment (Options 5d and 5e) would be at levels below regulatory standards. After incineration, the volume of inorganic sediment/soil particles would be nearly the same as the pre-treatment volume, but the concentrations of organic chemical contaminants would be below detection limits.
SHORT-TERM EFFECTIVENESS	
Protection of Community During Remedial Action	All of the options would present limited impacts to the community from construction. Access to the work zone during construction activities would be prohibited, and engineering controls, dust suppression techniques, and site perimeter air (dust) monitoring will mitigate risks to the community. An on-site incinerator under Option 5d would result in air emissions which would be monitored to ensure that they are below regulatory standards.
Protection of Workers During Remedial Action	Health and safety plans, emergency response plans, engineering controls (dust suppression), and personal protective equipment will be used during site activities, mitigating risks to workers.
Environmental Impacts	Excavation would temporarily destroy existing habitat, which may take at least a decade to become reestablished in areas of emergent marsh, and a considerably longer time (on the order of several decades) in areas with a well-developed tree canopy.

Table 6-26. (continued)

EVALUATION CRITERIA	ALTERNATIVE LYMAN MILL REACH STREAM SEDIMENT AND FLOODPLAIN SOIL -5: PARTIAL EXCAVATION, ENHANCED NATURAL RECOVERY, AND DISPOSAL AND/OR TREATMENT
SHORT-TERM EFFECTIVENESS	
Time Until Remedial Action Objectives are Achieved	The time to achieve RAOs may be on the order of several decades to well over a century depending on the deposition and chemical decay rates. Overall, the time to reach the cleanup goals for the most sensitive ecological receptor (short-tailed shrew) varies from 20 to over 250 years, best estimate is approximately 25 years. The time to reach the cleanup goals for the passive recreational visitor is expected to be reached in approximately 0.5 years (based on meeting the Rhode Island carcinogenic risk range of 10^{-6} to 10^{-5}; post-construction residual risk estimates would be within EPA's risk range, see Appendix M). Flow control structures will be incorporated into the design to direct flood flows over the entire area, which will increase the rate of clean sediment deposition.
IMPLEMENTABILITY	
Ability to Construct and Operate the Technology	Use of a hydraulic slurry method for placement of a wetland cover is not routine; however, the relevant technologies have been successfully utilized in other situations to meet similar objectives. The soft surface sediment/floodplain soil would require the use of low-ground pressure equipment and hydraulic excavators but should not present any significant issues. Temporary haul roads would need to be constructed to provide access. There may be some issues related to obtaining property access. Upland land is required for the temporary work areas and sediment/soil processing areas (all options except Option 5b). Additional land is needed for a disposal facility (Option 5a) and Option 5d requires land for an incinerator. These properties may need to be acquired from private parties. Increased monitoring would be needed for Options 5a, 5b, and 5d relative to Option 5e.
Reliability of the Technology	Excavation and CDF construction are proven technologies and have been successfully implemented at other contaminated sediment/soil sites. Although the concept of pumping soil slurries has been used for placing aquatic caps and is used in the mining industry, use of this technology for placing wetland covers is an innovative application. In addition, habitat restoration activities have historically had variable success rates.
Ease of Undertaking Additional Remedial Actions, If Necessary	This alternative would not preclude additional future remedial actions.

Table 6-26. (continued)

EVALUATION CRITERIA	ALTERNATIVE LYMAN MILL REACH STREAM SEDIMENT AND FLOODPLAIN SOIL -5: PARTIAL EXCAVATION, ENHANCED NATURAL RECOVERY, AND DISPOSAL AND/OR TREATMENT
IMPLEMENTABILITY	
Ability to Monitor the Effectiveness of Remedy	The effectiveness of excavation and water quality protection measures could be monitored with routine testing. Confirmational sampling would be performed at the completion of construction activities to verify that the cleanup goals were achieved. A physical survey would also be conducted at the completion of construction activities to confirm that the cover was placed over the entire remedial footprint and meets the design thickness. Long-term monitoring would be required to assess cover performance and the rate at which recovery is occurring, assess the impact of the remedial action on downstream areas, and determine if additional evaluations or clean-ups are warranted. Increased monitoring would be needed for the on-site containment (Options 5a and 5b) and treatment (Option 5d) options. However, these monitoring programs would not present any unusual issues. The implementation of long-term monitoring and maintenance programs and enforcement of institutional controls are critical to the success of this alternative.
Ability to Obtain Approvals and Coordinate with Other Agencies	Because this alternative constitutes the placement of fill in waters of the US, a determination must first be made that this is the least damaging practicable alternative to the aquatic environment. In addition, this alternative would result in the permanent occupancy and modification of the floodplain, and a determination would need to be made that there is no other practicable alternative before selecting this option as the preferred remedy. For Option 5a, some low-value wetlands could be destroyed depending on the location of the CDF. Coordination with DOI would be required if during remedial design or remedial action, it is determined that this alternative may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archaeological data. Coordination with adjacent property owners, and appropriate federal, state, and local agencies would be required to implement ICs. Access from property owners would be required to obtain access to the site and to maintain Allendale Dam.
Availability of Off-Site Treatment, Storage, and Disposal Services and Capacity	Off-site landfill and treatment options are readily available Samples of excavated sediment/soil could be tested to determine if the material could be taken to a hazardous waste landfill without treatment.

Table 6-26. (continued)

EVALUATION CRITERIA	ALTERNATIVE LYMAN MILL REACH STREAM SEDIMENT AND FLOODPLAIN SOIL -5: PARTIAL EXCAVATION, ENHANCED NATURAL RECOVERY, AND DISPOSAL AND/OR TREATMENT	
IMPLEMENTABILITY		
Availability of Necessary Equipment and Specialists	Excavation, cover placement, and CDF construction contractors and equipment are readily available.	
Availability of Technology	Technology is common enough that required equipment and materials would be readily available.	
COST[1]		
Capital Cost	Option 5a, On-site Upland CDF	$28,700,000
	Option 5b, On-site Nearshore CDF	$21,300,000
	Option 5d, On-site Thermal Treatment	$70,800,000
	Option 5e, Off-site Disposal and/or Treatment	$52,800,000
Present Worth of Long-term Monitoring and Maintenance	Option 5a, On-site Upland CDF	$2,800,000
	Option 5b, On-site Nearshore CDF	$2,800,000
	Option 5d, On-site Thermal Treatment	$2,500,000
	Option 5e, Off-site Disposal and/or Treatment	$2,500,000
Total Present Worth Cost	Option 5a, On-site Upland CDF	$31,500,000
	Option 5b, On-site Nearshore CDF	$24,100,000
	Option 5d, On-site Thermal Treatment	$73,300,000
	Option 5e, Off-site Disposal and/or Treatment	$55,300,000

Notes:
[1]Detailed cost estimates provided in Appendix J. Costs could increase by approximately $290,000 to $350,000 for compliance with the National Historic Preservation Act (NHPA) (USACE, 2011b).

Table 6-27. Potential Applicable or Relevant and Appropriate Requirements (ARARs) for Lyman Mill Reach Stream Sediment and Floodplain Soil Alternative 5, Partial Excavation, Enhanced Natural Recovery and Disposal and/or Treatment

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Chemical-Specific ARARs			
Federal Requirements			
OSWER Directive 92-4-26, Approaches for Addressing Dioxins in Soil at CERCLA and RCRA Sites	TBC	Guidance cleanup levels for CERCLA removal sites and PRGs for remedial sites for dioxin (as TEQ) in surface soil involving residential exposure scenarios. Also establishes a cleanup range for dioxin (as TEQ) for commercial and industrial exposure scenarios.	Soil at the site that contains dioxin at levels above that recommended in this guidance would be addressed under this alternative.
Draft Recommended Interim Preliminary Remediation Goals for Dioxin in Soil at CERCLA and RCRA Sites	TBC	Draft recommended interim PRGs of 72 parts per trillion (ppt or ng/kg) dioxin (as TEQ) for residential exposure scenarios and 950 ppt dioxin (as TEQ) for commercial and industrial exposure scenarios are recommended as a starting point for setting cleanup levels for CERCLA removal sites.	Soil at the site contains dioxin at levels above the draft recommended interim PRGs.
Clean Water Act Federal Water Quality Criteria, Section 304(a) 40 CFR 131.11	R & A	Ambient Water Quality Criteria (AWOC) are provided by EPA for chemicals for both the protection of human health and the protection of aquatic life.	Contaminants from sediment/floodplain soil that could result in exceedances of AWQC in Woonasquatucket River will be minimized to the maximum extent practical.
Guidelines for Carcinogenic Risk Assessment, EPA/630/P-03/001F	TBC	These guidelines provide guidance on conducting risk assessments involving carcinogens.	Guidelines used to evaluate all risk assessments on carcinogenicity.
Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens, EPA/630/R-03/003F	TBC	These guidelines provide guidance on conducting risk assessments involving carcinogens.	Guidelines used to evaluate all risk assessments on carcinogenicity in children.
EPA Risk Reference Doses (RfDs)	TBC	RfDs are estimates of a daily exposure concentration that is likely to be without appreciable risk of deleterious effects during a lifetime exposure.	RfDs used to characterize human health risks due to non-carcinogens in site media.
Human Health Assessment Cancer Slope Factors (CSFs)	TBC	CSFs are estimates of the upper-bound probability of an individual developing cancer as a result of a lifetime exposure to a particular concentration of a potential carcinogen.	CSFs used to compute the individual incremental cancer risk resulting from exposure to carcinogens in site media.
EPA Carcinogenic Assessment Group Potency Factors	TBC	These factors are used to evaluate an acceptable risk from a carcinogen.	Used to evaluate carcinogenicity of dioxin.
EPA Health Advisories	TBC	EPA publishes contaminant-specific health advisories that indicate the non-carcinogenic risks associated with consuming contaminated drinking water.	Used to establish criteria in the absence of other standards.

Table 6-27. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Chemical-Specific ARARs (cont)			
State Requirements			
RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (i.e., Remediation Regulations)	Applicable	Unless otherwise specified, soil contaminated as a result of a release of hazardous materials shall be remediated in a manner which meets the direct exposure and leachability criteria for each hazardous substance established in Rule 8.02.B (Method 1 Soil Objectives).	Some residential use soils at the site contain contaminants subject to the Rule 8.02B soil objectives and would be addressed under this alternative consistent with state requirements.
RIDEM Water Quality Regulations	R & A	Provides water classification for surface waters in Rhode Island and sets ambient water quality criteria for toxic substances and governs water quality impacts associated with site activities.	Contributions of contaminants from sediment that could result in exceedances of water quality standards in the Woonasquatucket River will be minimized to the maximum extent practical.
Location-Specific ARARs			
Federal Requirements			
Fish and Wildlife Coordination Act 16 U.S.C. 661, Fish and Wildlife Protection (40 CFR Section 6.302(g))	Applicable	Requires that a federal agency take action to prevent, mitigate, or compensate for project-related losses of fish and wildlife resources. Encourages that any federal agency proposing to modify a body of water to consult with the U.S. Fish and Wildlife Service, National Marine Fisheries Service, and other related state agencies.	Construction activities under this alternative in the Woonasquatucket River are subject to these requirements. Actions will be taken in accordance with these requirements.
Clean Water Act, Section 404 Guidelines for discharge of dredged or fill material into waters of US (40 CFR Parts 230 and 231, 33 CFR Parts 320-323, and 33 CFR Part 332)	Applicable	Outlines requirements for the discharge of dredged or fill materials into surface waters, including wetlands. Such discharges are not allowed if there are practicable alternatives with less adverse impact. Sets standards for restoration and mitigation required as a result of unavoidable impacts to aquatic resources.	Excavation/backfill, placement of thin cover, and nearshore CDF (and potentially upland CDF) are subject to these requirements. Activities must be conducted in accordance with these requirements, including but not limited to mitigation and/or restoration. Alternative must be evaluated to determine least damaging practicable alternative before it can be selected.

Table 6-27. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Location-Specific ARARs (cont)			
Federal Requirements (cont)			
Rivers and Harbors Act Section 10 (33 U.S.C. Section 403)	Applicable	Sets forth criteria for placing dams/structures in navigable waters of the U.S.	Backfill/thin cover, nearshore CDF, and flow control structures subject to these requirements. Activities must be conducted in accordance with these requirements.
Protection of Wetlands (Executive Order 11990)	TBC	Federal agencies are required to avoid adversely impacting wetlands unless there is no practicable alternative and the proposed action includes all practicable measures to minimize harm to wetlands that may result from such use.	Excavation/backfill, placement of thin cover, and nearshore CDF (and potentially upland CDF) are subject to these requirements. Activities must be conducted in accordance with these requirements.
Archaeological and Historical Preservation Act of 1974 Public Law 93-291	Potentially applicable	When a Federal agency finds, or is notified, that its activities in connection with a Federal construction project may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archeological data, such agency shall notify DOI. Such agency may request DOI to undertake the preservation of such data or it may undertake such activities	If during remedial design or remedial action, it is determined that this alternative may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archaeological data, EPA will notify DOI and comply with these requirements.
National Historic Preservation Act 16 USC 470 36 CFR Part 800	Applicable	A federal agency must take into account the project's effect on properties included or eligible for inclusion in the National Register of Historic Places.	Work conducted will take into account the project's effect on properties included or eligible for inclusion in the National Register of Historic Places as required under this law.
Floodplain Management (Executive Order 11988)	TBC	Federal agencies are required to avoid impacts associated with the occupancy and modification of a floodplain and avoid support of floodplain development wherever there is a practicable alternative.	This alternative and nearshore CDF can only be selected if there is no practicable alternative to occupancy and modification of floodplain.

Table 6-27. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Location-Specific ARARs (cont)			
State Requirements			
RIDEM Rules and Regulations for Hazardous Waste Management – Section 8 Location Standards for Hazardous Waste Facilities	R & A: Nearshore CDF	Rhode Island is delegated to administer the federal RCRA statute through its state regulations. The standards of 40 CFR 264.18(b), with some exceptions, are incorporated by reference. Certain facilities located in 100-yr floodplain must be designed, constructed, operated and maintained to prevent washout of any hazardous waste by 100-yr flood, unless demonstrate no adverse effects on human health or environment will result from washout.	Nearshore CDF must meet these requirements. Most contamination from areas prone to erosion is excavated. Waste material that remains in the Oxbow will not meet these requirements and would have to be waived.
Rhode Island Historic Preservation Act – Rhode Island General Laws 42-45 et seq.	Applicable	Regulations that address the project's effect on properties included or eligible for inclusion in the State/National Registers of Historic Places.	Will take into account the project's effect on properties included or eligible for inclusion in the National/State Registers of Historic Places in accordance with these requirements.
RIDEM Rules and Regulations Governing the Enforcement of the Freshwater Wetlands Act	Applicable	Sets requirements to prevent the undesirable drainage, excavation, filling, alteration, encroachment, or any other form of disturbance or destruction to a wetland.	Activities required by RIDEM for remediation will be conducted in accordance with these requirements.
Action-Specific ARAR			
Federal Requirements			
Clean Water Act Federal Water Quality Criteria, Section 304(a) 40 CFR 131.11	Applicable	Ambient Water Quality Criteria (AWQC) are provided by EPA for chemicals for both the protection of human health and the protection of aquatic life.	Excavation/backfill, placement of thin cover, and nearshore CDF must be conducted so that there are no exceedances of AWQC.
RCRA (40 CFR 264, Subpart AA)	Applicable: On-site Incineration	Air emission standards for process vents apply to process vents that manage hazardous wastes with organic concentrations of at least 10 parts per million by weight (ppmw).	Should incinerator operations manage hazardous wastes with organic concentrations of at least 10 ppm by weight, vents operated as part of the system will comply with these requirements.

Table 6-27. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Action-Specific ARARs (cont)			
Federal Requirements (cont)			
RCRA (40 CFR 264, Subpart BB)	Applicable: On-site Incineration	Air emission standards for equipment leaks apply to equipment that contains or contacts hazardous wastes with organic concentrations of at least 10 percent by weight.	Should equipment used in incineration come into contact with hazardous wastes containing organic concentrations of at least 10 percent by weight, these regulations will be followed.
RCRA (40 CFR 264, Subpart CC)	Applicable: Upland CDF On-site Incineration	Air emission standards for tanks, surface impoundments, and containers used to manage hazardous waste. Emission controls required if tanks, surface impoundments, and containers used to manage hazardous waste have greater than 500 ppmw of volatile organics.	If tanks, surface impoundments, and containers used to manage hazardous waste have greater than 500 ppmw of volatile organics then these requirements will be met.
CAA National Emissions Standards for Hazardous Air Pollutants: Site remediation (40 CFR 63, Subpart GGGGG)	Applicable: On-site Incineration	Applicable to major sources of hazardous air pollutants conducting site remediation.	On-site incineration must be conducted to meet these substantive requirements.
RCRA Land Disposal Restrictions (40 CFR 268)	Applicable: Upland CDF	These regulations identify treatment standards for hazardous wastes and specify requirements that generators, transporters, and owners or operators of treatment, storage, and disposal facilities that manage restricted wastes destined for land disposal must meet.	Material subject to these regulations placed in upland CDF must be treated to meet these requirements.
Invasive Species (Executive Order 13112)	TBC	Federal agencies are directed to prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause when requiring actions that impact the environment.	Actions will be taken to address invasive species consistent with the Executive Order.
State Requirements			
RIDEM Rules and Regulations for Hazardous Waste Management Identification and Listing of Hazardous Wastes	Applicable: Upland CDF On-site Incineration Off-site Disposal	Rhode Island is delegated to administer the federal RCRA statute through its regulations. The standards of 40 Part 261 of RCRA are incorporated by reference. Sets forth requirements for hazardous waste determination according to federal (40 CFR 262.11) and RI State (Rule 5.8) definitions.	Will be used to determine appropriate treatment and disposal.

Table 6-27. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Action-Specific ARARs (cont)			
State Requirements (cont)			
RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (i.e., Remediation Regulations), Section 8.0 (Risk Management)	Applicable	This section regulates impacted media at contaminated sites.	This section was used to develop cleanup goals for the site. This alternative meets this requirement.
RIDEM Rules and Regulations for Hazardous Waste Management, Section 8 – Incinerators	Applicable: On-site incineration	Outlines design, operational, and closure requirements for incinerator facilities.	On-site incineration must be conducted to meet these substantive requirements.
RIDEM Rules and Regulations for Hazardous Waste Management, Section 8 – Operation Requirements for Treatment, Storage, and Disposal Facilities	Applicable and R & A	Outlines operational requirements for all hazardous waste treatment, storage, and disposal facilities, including general waste analyses, security procedures, inspections, safety, etc. Sets design, construction, and operational requirements for hazardous waste containers and tanks, and closure requirements for hazardous waste facilities.	Substantive requirements related to land disposal, on-site incineration, closure, etc. must be met. Waste material that remains in the Oxbow will not meet these requirements and would have to be waived.
RIDEM Rules and Regulations for Hazardous Waste Management, Section 8 – Land Disposal Facilities	Applicable and R & A	Outlines design, operational, and closure requirements for land disposal facilities.	Substantive requirements for land disposal/closure, etc. must be met. Waste material that remains in the Oxbow will not meet these requirements and would have to be waived.
RIDEM Water Quality Regulations	Applicable	Provides water classification for surface waters in Rhode Island and sets ambient water quality criteria for toxic substances and governs water quality impacts associated with site activities.	Excavation/backfill, placement of thin cover, and nearshore CDF must be conducted so that there are no exceedances of water quality standards.
RI Air Pollution Control Regulation #1: Visible Emissions	Applicable	Establishes opacity limitations for contaminant emissions.	Remediation will be conducted to meet the standards for visible emissions.
RI Air Pollution Control Regulation #5: Fugitive Dust	Applicable	Requires that reasonable precaution be taken to prevent particulate matter from becoming airborne.	Actions will be taken to prevent particulate matter from becoming airborne in accordance with these regulations.

Table 6-27. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Action-Specific ARARs (cont)			
State Requirements (cont)			
RI Air Pollution Control Regulation #7: Emissions Detrimental to Persons or Property	Applicable	Prohibits emissions of contaminants which may be injurious to human, plant, or animal life or cause damage to property or which unreasonably interfere with the enjoyment of life and property.	Any potential emissions subject to these requirements will meet these standards.
RI Air Pollution Control Regulation #15: Control of Organic Solvent Emissions	Applicable: On-site incineration	Limits the amount of organic solvents emitted to the atmosphere.	Any emissions of organic solvents will be controlled to ensure that the standards are met.
RI Air Pollution Control Regulation #22: Air Toxics, Air Toxics Guideline, and Air Modeling Guidelines	Applicable: On-site incineration	Prohibits the emissions of specified contaminants that result in ground level concentrations greater than ambient level concentrations.	Remediation will be conducted so that these requirements are met.

Key:
R & A – Relevant and Appropriate; TBC – To Be Considered

Table 6-28. Key Features of the Lyman Mill Reach Stream Sediment and Floodplain Soil Alternatives[1]

Alternative		Present Worth Cost[2]	Remediation Area (acres)	Excavation Volume (cy)	Residual Risk[3]				Estimated Time to RAOs[6]
					RME Cancer[4]	HI Kidney[4]	HI Skin[4]	HI Ecological[5]	
1 – No Action		$250K	—	—	6.E-05	0.00005	0.02	70 (woodcock) – 100 (shrew)	Unknown (could be upwards of 200 years or more depending on rate of natural recovery processes [Appendix M])
3 – Targeted Excavation, Enhanced Natural Recovery, and Disposal and/or Treatment	Option 3a	$16.4M	Excavate: 6.5 ENR: 22.2 Total: 28.7	20,500	1.E-05	0.00008	0.03	4 (woodcock) – 10 (shrew)	Ecological: 25 to over 250 years, best estimate 30 years Human: about 4 years
	Option 3b	$13.7M							
	Option 3d	$33.3M							
	Option 3e	$26.0M							
5 – Partial Excavation, Enhanced Natural Recovery and Disposal and/or Treatment	Option 5a	$31.5M	Excavate: 19.5 ENR: 9.2 Total: 28.7	50,900					Ecological: 20 to over 250 years, best estimate 25 years Human: about 0.5 years
	Option 5b	$24.1M							
	Option 5d	$73.3M							
	Option 5e	$55.3M							

Notes:

[1]Post-construction risks (i.e., those existing immediately following completion of remedy implementation phase) for each alternative are presented in Appendix M. The exposure estimates are based on projected area-weighted soil concentrations and assumed annual sediment deposition and degradation rates for 2,3,7,8-TCDD. Appendix M provides further details on the model and information regarding the time course of risk reduction for ecological receptors following remedy implementation.

[2] Costs for action-based alternatives could increase by approximately $290,000 to $350,000 for compliance with the National Historic Preservation Act (NHPA) (USACE, 2011b) (Appendix J).

[3]Residual risks are those risks that remain following attainment of the cleanup objectives. Residual risks for No Action are based on the same exposure point concentrations (i.e., 95th Upper Confidence Level [UCL] on the arithmetic mean) used to estimate baseline risks as presented in the Supplemental BHHRA for the Oxbow [MACTEC and Battelle, 2011a]).

[4]Based on receptor at highest risk, i.e., Passive Recreational Visitor; summary of information in Tables 6-29a and 6-29b. Post-construction carcinogenic risks for Alternatives 1, 3 and 5 are 3.E-05, 2.E-05, and 2.E-05, respectively (Appendix M). Post-construction risk estimates for the No Action alternative were calculated based on average soil contaminant concentrations to allow for comparison with the active remedial alternatives.

[5]Based on receptor at highest risk, i.e., short-tailed shrew; a summary of information presented in Tables 6-29c and 6-29d. Residual risk estimates derived using the geometric mean of No Observed Adverse Effect Level (NOAEL) and Lowest Observed Adverse Effect Level (LOAEL) based Toxicity Reference Values (TRVs), which are presented in the Supplemental BHHRA for the Oxbow [MACTEC and Battelle, 2011a]).

[6]Times estimates are based on a sensitivity analysis conducted to evaluate the predictive floodplain soil contaminant exposure model presented in Appendix M (Table M-15). The sensitivity analysis assessed the impact of a range of potential values for the two most important determinants of future exposure and risk (i.e., the average annual deposition rate and the chemical half-life of organic contaminants in floodplain soil). Time estimates for the ecological receptor are based on the most sensitive ecological receptor (i.e., short-tailed shrew).

Table 6-29a. Summary of Residual Risks for Human Health, Lyman Mill Reach Stream Sediment and Floodplain Soil Alternative 1-No Action[1]

Surface Soil Contact for a Passive Recreational Visitor

Carcinogenic Contaminant	Cancer Classification	Basis	No Action RME Residual Cancer Risk[3]	
Dioxin TEQ	B2	Risk	5.E-05	A
Benzo(a)pyrene	B2	Risk	5.E-06	A
Arsenic	A	Risk	1.E-06	A
		Sum of Carcinogenic Risk	**6.E-05**	
Non-Carcinogenic Contaminant	**Target Endpoint**	**Basis**	**No Action RME Hazard Index**	
Dioxin TEQ	--	Risk	--	B
Benzo(a)pyrene	Kidney	Risk	0.00005	A
Arsenic	Skin	Risk	0.02	A
		HI Kidney	**0.00005**	A
		HI Liver	--	
		HI Immune System	--	
		HI Skin	**0.02**	A

Notes:
[1]Residual risks for No Action are based on current risks calculated using the 95% UCL on the arithmetic mean.
[3]A - Residual cancer risk and/or hazard index for direct contact.
B - RME Residual Hazard Index not calculated for this compound due to lack of noncarcinogenic toxicity data.

HI - Hazard Index
RME - Reasonable Maximum Exposure
mg/Kg - milligrams/kilogram
TEQ - toxic equivalent

Table 6-29b. Summary of Residual Risks[1] for Human Health, Lyman Mill Reach Stream Sediment and Floodplain Soil Action-Based Alternatives (Alternatives 3 and 5)

Surface Soil Contact for a Passive Recreational Visitor

Carcinogenic Contaminant	Cancer Classification	Floodplain Soil Cleanup Goal[2] (mg/Kg)	Basis	RME Residual Cancer Risk[3]	
Dioxin TEQ	B2	0.000053	HH PRG	1.E-06	A
Benzo(a)pyrene	B2	2.0[4]	Background[4]	9.E-06	A
Arsenic	A	7.7	Background	2.E-06	A
			Sum of Carcinogenic Risk	**1.E-05**	
Non-Carcinogenic Contaminant	**Target Endpoint**	**Floodplain Soil Cleanup Goal (mg/Kg)**	**Basis**	**RME Residual Hazard Index**	
Dioxin TEQ	--	0.000053	HH PRG	--	B
Benzo(a)pyrene	Kidney	2.0[4]	Background[4]	0.00008	A
Arsenic	Skin	7.7	Background	0.03	A
			HI Kidney	**0.00008**	
			HI Liver	**--**	
			HI Immune System	**--**	
			HI Skin	**0.03**	

Notes:
[1]Residual risks are those risks that remain following attainment of the cleanup objectives. Estimates are based on anticipated average concentrations throughout relevant human exposure areas within the Oxbow.
[2]Floodplain soil cleanup goals are summarized in Table 3-4 of this Addendum.

[3]A - Residual cancer risk and/or hazard index for direct contact.
B - RME Residual Hazard Index not calculated for this compound due to lack of noncarcinogenic toxicity data.

[4]Estimated regional background values based on upstream background samples from Esmond Dam south to Route 44 (Data source: Battelle, 2005).

HH PRG - Human Health Risk-based PRG
HI - Hazard Index
RME - Reasonable Maximum Exposure
mg/Kg - milligrams/kilogram
TEQ - toxic equivalent

Table 6-29c. Summary of Residual Risks for Ecological Health, Lyman Mill Reach Stream Sediment and Floodplain Soil Alternative 1-No Action[1]

Floodplain Soil Contact and Prey Consumption by Ecological Receptors

Contaminant	Current Conditions[a] (mg/Kg)	Basis	Residual Hazard Quotients[b]			
			Wildlife - Birds[c]		Wildlife - Mammals[d]	
2,3,7,8-TCDD	0.0018	Risk	11	A	52	B
4,4'-DDT	0.33	Risk	3.0	B	-	
4,4'-DDE	0.25	Risk	54	A	-	
Antimony	10	Risk	-		23	B
Copper	460	Risk	-		24	B
		HI[e]	**70**		**100**	

Notes:
[1]Residual risks for No Action are based on current risks calculated using the 95% UCL on the arithmetic mean.
a. Under the No Action alternative, anticipated exposure would remain unchanged from current conditions; anticipated exposures represented by the 95% UCL on the arithmetic mean concentration for each contaminant. UCL estimates presented in the appendix of the Supplemental BERA (MACTEC and Battelle, 2011a).
b. Calculated by dividing the current condition exposure concentration by the PRG for the most sensitive measurement endpoint for each receptor category. A dash indicates no unacceptable risk for that particular receptor. Risk estimates are based on the PRGs presented in Table 13 of the Addendum to the Interim Final Preliminary Remediation Goals Report: Oxbow Area (Part II) (Battelle, 2011), which were derived as the geometric mean value of the NOAEL- and LOAEL-based risk estimates presented in the Supplemental BERA (MACTEC and Battelle, 2011a).
c. Floodplain soil concentrations protective of vermivorous wildlife (birds) were derived using: (A) literature-derived CBRs and (B) dietary exposure modeling. The American woodcock is the representative receptor species for this assessment endpoint.
d. Floodplain soil concentrations protective of vermivorous wildlife (mammals) were derived using: (E) literature-derived CBRs and (B) dietary exposure modeling. The short-tailed shrew is the representative receptor species for this assessment endpoint.
e Consistent with CERCLA Risk Assessment Guidance (RAGs) for human health risk assessments, HIs are reported using one significant figure; as a result the values may not appear to be equivalent to the sum of the individual contaminant-specific risk estimates (i.e., Hazard Quotients).

HI - Hazard Index
mg/Kg - milligrams/kilogram

Table 6-29d. Summary of Residual Risks[1] for Ecological Health, Lyman Mill Reach Stream Sediment and Floodplain Soil Action-Based Alternatives (Alternatives 3 and 5)

Floodplain Soil Contact and Prey Consumption by Ecological Receptors

Contaminant	Floodplain Soil Cleanup Goal[a] (mg/Kg)	Basis	Residual Hazard Quotients[b]			
			Wildlife - Birds[c]		Wildlife - Mammals[d]	
2,3,7,8-TCDD	0.000035	Mammal Dose	0.21	A	1.0	B
4,4'-DDT	0.10	Bird Dose	1.0	B	-	
4,4'-DDE	0.013	Background	2.8	A	-	
Antimony	0.62	Background	-		1.4	B
Copper	205	Background	-		11	B
Notes		**HI[e]**	**4**		**10**	

Notes:
[1]Residual risks are those risks that remain following attainment of the cleanup objectives. Estimates are based on anticipated average concentrations throughout the exposure area.
a. Floodplain soil cleanup goals are summarized in Table 3-4 of this Addendum.
b. Calculated by dividing the cleanup goal concentration by the PRG for the most sensitive measurement endpoint for each receptor category. A dash indicates no unacceptable risk for that particular receptor.
c. Floodplain soil concentrations protective of vermivorous wildlife (birds) were derived using: (A) literature-derived CBRs and (B) dietary exposure modeling. The American woodcock is the representative receptor species for this assessment endpoint.
d. Floodplain soil concentrations protective of vermivorous wildlife (mammals) were derived using: (B) dietary exposure modeling. The short-tailed shrew is the representative receptor species for this assessment endpoint.
e. Consistent with CERCLA Risk Assessment Guidance (RAGs) for human health risk assessments, HIs are reported using one significant figure; as a result the values may not appear to be equivalent to the sum of the individual contaminant-specific risk estimates (i.e., Hazard Quotients).

ARAR – Applicable or Relevant and Appropriate Requirement
HI - Hazard Index
mg/Kg - milligrams/kilogram

Table 6-30. Existing Surfaces and Excavation Areas at the Source Area

Proposed Cleanup Area	Surface Area	
	(sq ft)	(acres)
Existing Cap Areas		
Cap Area #1	85,000	2.0
Cap Area #2	48,000	1.1
Cap Area #3	53,000	1.2
TOTALS	**186,000**	**4.3**
Parking Lot Areas		
Southwest of Centredale Manor	34,000	0.8
North of Centredale Manor	27,000	0.6
South of Brook Village	32,000	0.7
TOTALS	**93,000**	**2.1**
Landscape, Walkway, Service Road and Rip Rap Areas	**60,500**	**1.4**
Excavation Areas		
Principal Threat Waste	37,000	0.8
TSCA/GA Leachability	63,400	1.5
TOTALS	**100,400**	**2.3**

Key:
sq ft – square feet.

Table 6-31. Detailed Analysis of Source Area Soil Alternative 1, No Action

EVALUATION CRITERIA	ALTERNATIVE SOURCE AREA SOIL -1: NO ACTION
OVERALL PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT	
Human Health Protection and the Environment	The existing interim caps, parking lots and pavement currently reduce the risk of direct human exposure to contaminated vadose zone soils. However, without additional actions this alternative would not be protective in the long term. This alternative would not prevent precipitation infiltration into the underlying soil and groundwater.
COMPLIANCE WITH ARARS	
Chemical-, Location-, and Action-Specific	ARARs specific to the No Action alternative are summarized in Table 6-32. This alternative would not comply with ARARs for residential direct exposure, GA leachability, TSCA closure, or EPA's recommended residential level for dioxin and PCBs in soil (EPA, 1998).
LONG-TERM EFFECTIVENESS AND PERMANENCE	
Magnitude of Residual Risk	Inherent hazard and risk of existing contaminated soil will remain in the floodplain without RCRA and TSCA closure. In addition, contamination above acceptable levels would remain in areas that are not capped.
Adequacy and Reliability of Controls	There would be no adequate or reliable controls to prevent exposure in the long term or maintain the controls currently in place. Without long-term monitoring and ICs to maintain the integrity of the existing surfaces, there would be risk of future uncontrolled exposure and migration of contaminated soils by erosion and transport to the Woonasquatucket River and Allendale Pond.
REDUCTION OF TOXICITY, MOBILITY, OR VOLUME	
Treatment Process Used and Materials Treated	None proposed for this alternative.
Amount Destroyed or Treated	None anticipated.
Degree of Expected Reductions of Toxicity, Mobility, or Volume Through Treatment	No reductions of toxicity, mobility, or volume of contamination through treatment is anticipated with this alternative. The mobility of the contaminated soil particles would be reduced by the existing interim caps and paved surfaces.
Degree to Which Treatment is Irreversible	Not applicable.
Type and Quantity of Residuals Remaining After Treatment	There would be no residuals because treatment is not planned for this alternative.

Table 6-31. (continued)

EVALUATION CRITERIA	ALTERNATIVE SOURCE AREA SOIL -1: NO ACTION
SHORT-TERM EFFECTIVENESS	
Protection of Community During Remedial Action	Not applicable, as no remedial actions are proposed for this alternative.
Protection of Workers During Remedial Action	Not applicable, as no remedial actions are proposed for this alternative.
Environmental Impacts	Not applicable, as no remedial actions are proposed for this alternative
Time Until Remedial Action Objectives are Achieved	This alternative would not achieve the RAOs.
IMPLEMENTABILITY	
Ability to Construct and Operate the Technology	Not applicable, as no remedial technology is implemented under this alternative.
Reliability of the Technology	Not applicable, as no remedial technology is implemented under this alternative.
Ease of Undertaking Additional Remedial Actions, If Necessary	This alternative does not preclude future remedial activities.
Ability to Monitor the Effectiveness of Remedy	Five-year reviews and periodic monitoring, triggered by severe weather events, are incorporated into this alternative. Periodic monitoring would include routine testing and could be easily implemented.
Ability to Obtain Approvals and Coordinate with Other Agencies	Not applicable, as no activities requiring approval are planned for this alternative.
Availability of Off-Site Treatment, Storage, and Disposal Services and Capacity	Not applicable for this alternative.
Availability of Necessary Equipment and Specialists	Not applicable for this alternative.
Availability of Technology	Not applicable for this alternative.
COST[1]	
Capital Cost	$0
Present Worth of Long-term Monitoring and Maintenance	$170,000 (includes costs for periodic monitoring and five-year reviews)
Total Present Worth Cost	$170,000

Notes
[1]Detailed cost estimates provided in Appendix J.

Table 6-32. Potential Applicable or Relevant and Appropriate Requirements (ARARs) and To Be Considered (TBC) Criteria for Source Area Soil Alternative 1, No Action[1]

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Chemical-Specific ARARs			
Federal Requirements			
OSWER Directive 92-4-26, Approaches for Addressing Dioxins in Soil at CERCLA and RCRA Sites	TBC	Guidance cleanup levels for CERCLA removal sites and PRGs for remedial sites for dioxin (as TEQ) in surface soil involving residential exposure scenarios. Also establishes a cleanup range for dioxin (as TEQ) for commercial and industrial exposure scenarios.	Soil at the source area contains dioxin at levels above the PRG established pursuant to this guidance. This alternative will not address soils that exceed the level recommended in this guidance.
Draft Recommended Interim Preliminary Remediation Goals for Dioxin in Soil at CERCLA and RCRA Sites	TBC	Draft recommended interim PRGs of 72 parts per trillion (ppt or ng/kg) dioxin (as TEQ) for residential exposure scenarios and 950 ppt dioxin (as TEQ) for commercial and industrial exposure scenarios are recommended as a starting point for setting cleanup levels for CERCLA removal sites.	Soil at the site contains dioxin at levels above the draft recommended interim PRGs.
TSCA PCB Regulations (40 CFR 761)	Applicable	Establishes requirements for PCB-remediation waste.	PCBs present in source area soil would not be addressed under this alternative.
EPA Guidance on Remedial Actions for Superfund Sites with PCB Contamination	TBC	Describes the recommended approach to evaluating and remediating Superfund Sites with PCB contamination.	This guidance used when establishing remediation goals for PCB contaminated media and goals established would not be met by this alternative.
Clean Water Act Federal Water Quality Criteria, Section 304(a) 40 CFR 131.11	R & A	Ambient Water Quality Criteria (AWQC) are provided by EPA for chemicals for both the protection of human health and the protection of aquatic life.	Contaminants from source area soil that could result in exceedances of AWQC in the Woonasquatucket River will not be minimized to the maximum extent practical.

Table 6-32. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Chemical-Specific ARARs			
State Requirements			
RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (i.e., Remediation Regulations)	Applicable R & A	Unless otherwise specified, soil contaminated as a result of a release of hazardous materials shall be remediated in a manner which meets the direct exposure and leachability criteria for each hazardous substance established in Rule 8.02.B (Method 1 Soil Objectives).	Soils at the source area contain contaminants subject to the Rule 8.02B soil objectives and would not be addressed by this alternative (residential direct exposure criteria applicable) (GA leachability criteria R & A when corresponding federal MCL).
RIDEM Water Quality Regulations	R & A	Provides water classification for surface waters in Rhode Island and sets ambient water quality criteria for toxic substances and governs water quality impacts associated with site activities.	Contributions of contaminants from sediment that could result in exceedances of water quality standards in the Woonasquatucket River will not be minimized to the maximum extent practical.

Notes:
[1] With no action, there are no location- or action-specific ARARs.

Key:
R & A – Relevant and Appropriate; TBC – To Be Considered

Table 6-33. Detailed Analysis of Source Area Soil Alternative 3, Targeted Excavation, Upgrade and Maintain Existing Surfaces and Disposal and/or Treatment

EVALUATION CRITERIA	ALTERNATIVE SOURCE AREA SOIL-3: TARGETED EXCAVATION, UPGRADE AND MAINTAIN EXISTING SURFACES AND DISPOSAL AND/OR TREATMENT
OVERALL PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT	
Human Health Protection and the Environment	Removal of some principal threat waste and contaminated soil that exceeds TSCA/GA leachability criteria, in conjunction with upgrading the existing surfaces (existing interim caps, parking lots, landscape areas, and rip rap), would provide moderate protection to human health and the environment. Targeted removal of some principal threat waste would remove highly toxic or highly mobile waste that generally cannot be reliably contained and could present a significant risk to human health or the environment should exposure occur. Targeted removal of contaminated soil that exceeds TSCA would prevent exposure to toxic soils. Targeted removal of contaminated soil that exceeds GA leachability criteria, upgrading the existing surfaces, and extending the caps over landscape areas would reduce migration of contaminated soil at the source area to the Woonasquatucket River and Allendale Pond. The risk of exposure to contamination that remains in place would be reduced with ICs restricting site activities.
COMPLIANCE WITH ARARS	
Chemical-, Location-, and Action-Specific	ARARs specific to Alternative 3 are summarized in Table 6-34. This alternative would not comply with RCRA Subtitle C requirements. In addition, excavation and placement of fill in wetland areas would result in the destruction of existing wetlands and will trigger wetlands/Section 404 requirements. As a result, these actions must be evaluated to determine the least damaging practicable alternative. State wetlands requirements will also need to be addressed. Under this alternative, there would be permanent occupancy and modification of the floodplain. According to Executive Order 11988, a determination would need to be made that there was no other practicable alternative before selecting this option as the preferred remedy.
LONG-TERM EFFECTIVENESS AND PERMANENCE	
Magnitude of Residual Risk	Excavation and removal of some of the principal threat waste and contaminated soil that exceeds TSCA/GA leachability will be effective in the long term. Upgrading the existing surfaces and extending the caps over landscaped areas would increase the effectiveness of this alternative. Some contaminated soil would remain in the floodplain. Inherent hazard of contamination will remain on site under an upgraded cap but without a RCRA Subtitle C closure. Risk reduction will be high as long as the cap is designed, constructed, and maintained to provide long-term isolation of contaminants.

Table 6-33. (continued)

EVALUATION CRITERIA	ALTERNATIVE SOURCE AREA SOIL-3: TARGETED EXCAVATION, UPGRADE AND MAINTAIN EXISTING SURFACES AND DISPOSAL AND/OR TREATMENT
LONG-TERM EFFECTIVENESS AND PERMANENCE	
Adequacy and Reliability of Controls	Long-term monitoring and maintenance of the upgraded surfaces would be required to prevent erosion and exposure of the underlying contaminated soils. In addition, ICs would be required to prevent human exposure, and could include restrictions on excavation, access for buried utilities, and construction with pilings or basements. However, these controls are only effective if adequately monitored and enforced. Periodic monitoring would also be performed to verify that contamination left in place remains relatively immobile, and that no future releases occur.
REDUCTION OF TOXICITY, MOBILITY, OR VOLUME	
Treatment Process Used and Materials Treated	This alternative assumes principal threat waste and some contaminated soil will be treated off site to meet LDRs.
Amount Destroyed or Treated	Approximately 14,300 cy of contaminated material would be excavated and approximately 6,400 cy would be treated.
Degree of Expected Reductions of Toxicity, Mobility, or Volume Through Treatment	There would be a reduction of toxicity, mobility, or volume of contamination through treatment under this alternative. The mobility of the contaminated soil particles that remain in place would be reduced by the upgraded caps and paved surfaces but not through treatment.
Degree to Which Treatment is Irreversible	For contaminated soils that undergo thermal treatment, the process is irreversible.
Type and Quantity of Residuals Remaining After Treatment	Excavation would produce no residuals. For soil that remains on site under the cap, there would be no residuals. Air emissions of contaminants or additional by-products produced during off-site thermal treatment (Option 3e) would be at levels below regulatory standards. After incineration, the volume of inorganic sediment/soil particles would be nearly the same as the pre-treatment volume, but the concentrations of organic chemical contaminants would be below detection limits.

Table 6-33. (continued)

EVALUATION CRITERIA	ALTERNATIVE SOURCE AREA SOIL-3: TARGETED EXCAVATION, UPGRADE AND MAINTAIN EXISTING SURFACES AND DISPOSAL AND/OR TREATMENT
SHORT-TERM EFFECTIVENESS	
Protection of Community During Remedial Action	There would be some short-term impacts to the community from construction. Access to the work zone during construction activities would be prohibited, but measures would be taken to provide residents access to the buildings and parking areas. There would be potential risk to residents from dust and VOCs generated during excavation activities and installation of asphalt sealants. However, all appropriate measures including engineering controls, dust suppression techniques, and site perimeter air (dust) monitoring would be taken to mitigate risks to the community.
Protection of Workers During Remedial Action	Health and safety plans, emergency response plans, engineering controls, and personal protective equipment will be used during construction activities, mitigating risks to workers.
Environmental Impacts	Excavation and placement of fill in wetland areas would result in the destruction of existing wetlands.
Time Until Remedial Action Objectives are Achieved	The RAO to prevent direct human contact with the contaminated vadose zone soil would be achieved at the completion of remedy implementation, which is estimated to take approximately five months. Meeting this RAO in the long term, however, is contingent on long-term monitoring and maintenance of the existing surfaces that would continue after construction activities are complete. The time to achieve the RAO to prevent migration or leaching of contaminants to soil and groundwater that would result in contamination above the ARARs is unknown, because some precipitation infiltration to the underlying soil and groundwater could still occur under this alternative. However, contaminated soil that exceeds the GA leachability criteria would be removed and should reduce the potential leaching of contaminants from soil to groundwater.
IMPLEMENTABILITY	
Ability to Construct and Operate the Technology	The limited space on site for staging areas and the close proximity of the construction zone to residents would present some implementability challenges. However, all construction would be performed in phases, and all work could be performed with conventional earthwork or paving equipment.

Table 6-33. (continued)

EVALUATION CRITERIA	ALTERNATIVE SOURCE AREA SOIL-3: TARGETED EXCAVATION, UPGRADE AND MAINTAIN EXISTING SURFACES AND DISPOSAL AND/OR TREATMENT
IMPLEMENTABILITY	
Reliability of the Technology	Excavation and capping are proven technologies and have been successfully implemented at non-hazardous waste sites. The existing interim caps are made from natural earth materials that are stable, and erosion would be controlled by existing rock rip rap and grass over the soil areas. These features should prevent of direct contact with vadose zone soils. There may be some reliability issues because the cap would be located in the floodplain.
Ease of Undertaking Additional Remedial Actions, If Necessary	This alternative would not preclude additional future remedial actions.
Ability to Monitor the Effectiveness of Remedy	The effectiveness of excavation and air/water quality protection measures could be monitored with routine testing. A physical survey would also be conducted at the completion of construction activities to confirm that the isolation cap meets the design thickness. Long-term monitoring would be required to assess cap performance and determine if additional actions are warranted. The implementation of a long-term monitoring program and enforcement of ICs are critical to the success of this alternative.
Ability to Obtain Approvals and Coordinate with Other Agencies	Coordination with the management of the Centredale Manor and Brook Village apartment buildings, adjacent property owners, and appropriate federal, state, and local agencies would be required to implement ICs, develop a traffic control plan, and provide continuous access to residents and building service providers. Because this alternative constitutes the placement of fill in waters of the US, a determination must first be made that this is the least damaging practicable alternative to the aquatic environment. In addition, this alternative would require the permanent occupancy and modification of the floodplain, and a determination would first need to be made concluding that there is no other practicable alternative before selecting this option as the preferred remedy. Coordination with DOI would be required if during remedial design or remedial action, it is determined that this alternative may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archaeological data.
Availability of Off-Site Treatment, Storage, and Disposal Services and Capacity	Off-site landfill and treatment options are readily available. Samples of excavated soil could be tested to determine if the material could be taken to a hazardous waste landfill without treatment.

Table 6-33. (continued)

EVALUATION CRITERIA	ALTERNATIVE SOURCE AREA SOIL-3: TARGETED EXCAVATION, UPGRADE AND MAINTAIN EXISTING SURFACES AND DISPOSAL AND/OR TREATMENT	
IMPLEMENTABILITY		
Availability of Necessary Equipment and Specialists	Excavation and construction equipment and personnel, and monitoring equipment and personnel, are readily available.	
Availability of Technology	Technology is common enough that required equipment and materials would be readily available.	
COST[1]		
Capital Cost	Option 3e, Off-site Disposal and/or Treatment	$23,900,000
Present Worth of Long-term Monitoring and Maintenance	Option 3e, Off-site Disposal and/or Treatment	$500,000
Total Present Worth Cost	Option 3e, Off-site Disposal and/or Treatment	$24,400,000

Notes:
[1]Detailed cost estimates provided in Appendix J. Costs could increase by approximately $120,000 to $135,000 for compliance with the National Historic Preservation Act (NHPA) (USACE, 2011b).

Table 6-34. Potential Applicable or Relevant and Appropriate Requirements (ARARs) and To Be Considered (TBC) Criteria for Source Area Soil Alternative 3, Targeted Excavation, Upgrade and Maintain Existing Surfaces and Disposal and/or Treatment

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Chemical-Specific ARARs			
Federal Requirements			
OSWER Directive 92-4-26, Approaches for Addressing Dioxins in Soil at CERCLA and RCRA Sites	TBC	Guidance cleanup levels for CERCLA removal sites and PRGs for remedial sites for dioxin (as TEQ) in surface soil involving residential exposure scenarios. Also establishes a cleanup range for dioxin (as TEQ) for commercial and industrial exposure scenarios.	Soils at the source area contains dioxin at levels above the PRG. This soil will be addressed consistent with this guidance.
Draft Recommended Interim Preliminary Remediation Goals for Dioxin in Soil at CERCLA and RCRA Sites	TBC	Draft recommended interim PRGs of 72 parts per trillion (ppt or ng/kg) dioxin (as TEQ) for residential exposure scenarios and 950 ppt dioxin (as TEQ) for commercial and industrial exposure scenarios are recommended as a starting point for setting cleanup levels for CERCLA removal sites.	Soil at the site contains dioxin at levels above the draft recommended interim PRGs.
TSCA PCB Regulations (40 CFR 761)	Applicable	Establishes requirements for PCB-remediation waste.	PCBs present in source area soil would be addressed under this alternative.
EPA Guidance on Remedial Actions for Superfund Sites with PCB Contamination (1990)	TBC	Describes the recommended approach to evaluating and remediating Superfund Sites with PCB contamination.	This guidance used when establishing remediation goals for PCB contaminated media and goals established would be met by this alternative.
Clean Water Act Federal Water Quality Criteria, Section 304(a) 40 CFR 131.11	R & A	Ambient Water Quality Criteria (AWOC) are provided by EPA for chemicals for both the protection of human health and the protection of aquatic life.	Contaminants from soil that could result in exceedances of AWQC in Woonasquatucket River will be minimized to the maximum extent practical.
State Requirements			
RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (i.e., Remediation Regulations)	Applicable R & A	Unless otherwise specified, soil contaminated as a result of a release of hazardous materials shall be remediated in a manner which meets the direct exposure and leachability criteria for each hazardous substance established in Rule 8.02.B (Method 1 Soil Objectives).	Soils at the source area contain contaminants subject to the Rule 8.02B soil objectives and would be addressed under this alternative consistent with state requirements (residential direct exposure criteria applicable) (GA leachability criteria R & A when corresponding federal MCL).

Table 6-34. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Chemical-Specific ARARs (cont)			
State Requirements (cont)			
RIDEM Water Quality Regulations	R & A	Provides water classification for surface waters in Rhode Island and sets ambient water quality criteria for toxic substances and governs water quality impacts associated with site activities.	Contributions of contaminants from sediment that could result in exceedances of water quality standards in the Woonasquatucket River will be minimized to the maximum extent practical.
Location-Specific ARARs			
Federal Requirements			
Clean Water Act, Section 404 Guidelines for discharge of dredged or fill material into waters of US (40 CFR Parts 230 and 231, 33 CFR Parts 320-323, and 33 CFR Part 332)	Applicable	Outlines requirements for the discharge of dredged or fill materials into surface waters, including wetlands. Such discharges are not allowed if there are practicable alternatives with less adverse impact.	Excavation/backfill and capping subject to these requirements. Activities must be conducted in accordance with these requirements, including but not limited to mitigation and/or restoration. Alternative must be evaluated to determine least damaging practicable alternative before it can be selected.
Protection of Wetlands (Executive Order 11990)	TBC	Federal agencies are required to avoid adversely impacting wetlands unless there is no practicable alternative and the proposed action includes all practicable measures to minimize harm to wetlands that may result from such use.	Excavation/backfill and capping are subject to these requirements. Activities must be conducted in accordance with these requirements.
National Historic Preservation Act 16 USC 470 36 CFR Part 800	Applicable	A federal agency must take into account the project's effect on properties included or eligible for inclusion in the National Register of Historic Places.	Work conducted will take into account the project's effect on properties included or eligible for inclusion in the National Register of Historic Places as required under this law.

Table 6-34. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Location-Specific ARARs (cont)			
Federal Requirements (cont)			
Archaeological and Historical Preservation Act of 1974 Public Law 93-291	Potentially applicable	When a Federal agency finds, or is notified, that its activities in connection with a Federal construction project may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archeological data, such agency shall notify DOI. Such agency may request DOI to undertake the preservation of such data or it may undertake such activities	If during remedial design or remedial action, it is determined that this alternative may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archaeological data, EPA will notify DOI and comply with these requirements.
Floodplain Management (Executive Order 11988)	TBC	Federal agencies are required to avoid impacts associated with the occupancy and modification of a floodplain and avoid support of floodplain development wherever there is a practicable alternative.	This alternative can only be selected if there is no practicable alternative to occupancy and modification of floodplain. Source area soil is located within the 100 year floodplain.
State Requirements			
RIDEM Rules and Regulations for Hazardous Waste Management – Section 8 Location Standards for Hazardous Waste Facilities	Applicable	Rhode Island is delegated to administer the federal RCRA statute through its state regulations. The standards of 40 CFR 264.18(b), with some exceptions, are incorporated by reference. Certain facilities located in 100-yr floodplain must be designed, constructed, operated and maintained to prevent washout of any hazardous waste by 100-yr flood, unless demonstrate no adverse effects on human health or environment will result from washout.	Hazardous waste remains in place within the 100-yr floodplain under this alternative. As a result, these requirements must be met. Some principal threat waste and some contaminated soil that exceed regulatory requirements are excavated and therefore would not be prone to washout. However, this alternative would not comply with these requirements.
Rhode Island Historic Preservation Act – Rhode Island General Laws 42-45 et seq.	Applicable	Regulations that address the project's effect on properties included or eligible for inclusion in the State/National Registers of Historic Places.	Will take into account the project's effect on properties included or eligible for inclusion in the National/State Registers of Historic Places in accordance with these requirements.

Table 6-34. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Location-Specific ARARs (cont)			
State Requirements (cont)			
RIDEM Rules and Regulations Governing the Enforcement of the Freshwater Wetlands Act (December 2009)	Applicable	Sets requirements to prevent the undesirable drainage, excavation, filling, alteration, encroachment, or any other form of disturbance or destruction to a wetland.	Activities required by RIDEM for remediation will be conducted in accordance with these requirements.
Action-Specific ARARs			
Federal Requirements			
TSCA PCB Regulations (40 CFR 761)	Applicable	Establishes requirements for PCB-remediation waste.	PCBs present in source area soil will be addressed in accordance with these requirements.
Safe Drinking Water Act Maximum Contaminant Levels (MCLs), 40 CFR 141.11-141.13	R & A	The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to Maximum Contaminant Levels Goals (MCLGs) as feasible using the best available treatment technology and taking cost into consideration. MCLs are enforceable standards.	MCLs are relevant and appropriate as the groundwater at the Source Area is a potential federal drinking water source. These standards would be used to evaluate the effectiveness of Source Are soil alternatives in reducing/preventing migration of contaminants from soil to groundwater.
Safe Drinking Water Act Maximum Contaminant Levels Goals (non-zero MCLGs), 40 CFR 141.50-141.51	R & A	The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety and are non-enforceable public health goals.	Non-zero MCLGs are relevant and appropriate as the groundwater at the Source Area is a potential federal drinking water source. These standards would be used to evaluate the effectiveness of Source Area soil alternatives in reducing/preventing migration of contaminants from soil to groundwater.
Clean Water Act Federal Water Quality Criteria, Section 304(a) 40 CFR 131.11	Applicable	Ambient Water Quality Criteria (AWQC) are provided by EPA for chemicals for both the protection of human health and the protection of aquatic life.	Excavation/backfill and capping must be conducted so that there are no exceedances of AWQC.

Table 6-34. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Action-Specific ARARs (cont)			
Federal Requirements (cont)			
Invasive Species (Executive Order 13112)	TBC	Federal agencies are directed to prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause when requiring actions that impact the environment.	Actions will be taken to address invasive species consistent with the Executive Order.
State Requirements			
RIDEM Rules and Regulations for Hazardous Waste Management Identification and Listing of Hazardous Wastes	Applicable	Rhode Island is delegated to administer the federal RCRA statute through its regulations. The standards of 40 Part 261 of RCRA are incorporated by reference. Sets forth requirements for hazardous waste determination according to federal (40 CFR 262.11) and RI State (Rule 5.8) definitions.	Will be used to determine appropriate treatment and disposal.
RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (i.e., Remediation Regulations), Section 8.0 (Risk Management)	Applicable	This section regulates impacted media at contaminated sites.	This section was used to develop cleanup goals for the site. This alternative meets this requirement.
RIDEM Rules and Regulations for Hazardous Waste Management, Section 8 – Operation Requirements for Treatment, Storage, and Disposal Facilities	R & A	Outlines operational requirements for all hazardous waste treatment, storage, and disposal facilities, including general waste analyses, security procedures, inspections, safety, groundwater monitoring etc. Sets design, construction, and operational requirements for hazardous waste containers and tanks, and closure requirements for hazardous waste facilities.	Substantive requirements related land disposal/closure, etc. may not be met.
RIDEM Rules and Regulations for Hazardous Waste Management, Section 8 – Land Disposal Facilities	R & A	Outlines design, operational, and closure requirements for land disposal facilities.	This alternative will not meet the substantive requirements related to land disposal/closure, etc.
RIDEM Water Quality Regulations	Applicable	Provides water classification for surface waters in Rhode Island and sets ambient water quality criteria for toxic substances and governs water quality impacts associated with site activities.	Excavation/backfill and capping must be conducted so that there are no exceedances of water quality standards.
RI Air Pollution Control Regulation #1: Visible Emissions	Applicable	Establishes opacity limitations for contaminant emissions.	Remediation will be conducted to meet the standards for visible emissions.
RI Air Pollution Control Regulation #5: Fugitive Dust	Applicable	Requires that reasonable precaution be taken to prevent particulate matter from becoming airborne.	Actions will be taken to prevent particulate matter from becoming airborne in accordance with these regulations.

Table 6-34. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Action-Specific ARARs (cont)			
State Requirements (cont)			
RI Air Pollution Control Regulation #7: Emissions Detrimental to Persons or Property	Applicable	Prohibits emissions of contaminants which may be injurious to human, plant, or animal life or cause damage to property or which unreasonably interfere with the enjoyment of life and property.	Any potential emissions subject to these requirements will meet these standards.

Key:
R & A – Relevant and Appropriate; TBC – To Be Considered

Table 6-35. Detailed Analysis of Source Area Soil Alternative 4, Targeted Excavation, Convert to RCRA Caps and Maintain and Disposal and/or Treatment

EVALUATION CRITERIA	ALTERNATIVE SOURCE AREA SOIL-4: TARGETED EXCAVATION, CONVERT TO RCRA CAPS AND MAINTAIN AND DISPOSAL AND/OR TREATMENT
OVERALL PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT	
Human Health Protection and the Environment	Removal of some principal threat waste and converting the existing surfaces (interim caps, parking lots, pavement, and landscape areas) to RCRA caps would be highly protective of human health and the environment. Targeted removal of some principal threat waste would remove highly toxic or highly mobile waste that generally cannot be reliably contained and could present a significant risk to human health or the environment should exposure occur. The RCRA caps would also meet TSCA requirements for capping PCB remediation waste. This alternative would prevent direct contact with soil, prevent erosion and runoff of contaminated soils, and prevent precipitation infiltration into the groundwater. The RCRA cap is designed to maintain its integrity over time while functioning with minimum maintenance.
COMPLIANCE WITH ARARS	
Chemical-, Location-, and Action-Specific	ARARs specific to Alternative 4 are summarized in Table 6-36. This alterative will comply with all ARARs, including requirements for TSCA and RCRA closure. Excavation and placement of fill in wetland areas will result in the destruction of existing wetlands and will trigger wetlands/Section 404 requirements. As a result, these actions must be evaluated to determine the least damaging practicable alternative. State wetlands requirements will also need to be addressed. Under this alternative, there would be permanent occupancy and modification of the floodplain. According to Executive Order 11988, a determination would need to be made that there was no other practicable alternative before selecting this option as the preferred remedy.
LONG-TERM EFFECTIVENESS AND PERMANENCE	
Magnitude of Residual Risk	Excavation and off-site disposal or treatment of some principal threat waste will be effective in the long term. Capping contaminated soils with a RCRA and TSCA cap would increase the long-term effectiveness of this alternative by providing highly reliable chemical isolation. Risk reduction will be high as the cap will be designed, constructed, and maintained in compliance with RCRA and TSCA closure requirements. Because contaminated soil is contained and remains under the cap, inherent hazard of waste also remains.

Table 6-35. (continued)

EVALUATION CRITERIA	ALTERNATIVE SOURCE AREA SOIL-4: TARGETED EXCAVATION, CONVERT TO RCRA CAPS AND MAINTAIN AND DISPOSAL AND/OR TREATMENT
LONG-TERM EFFECTIVENESS AND PERMANENCE	
Adequacy and Reliability of Controls	Long-term monitoring, maintenance, and ICs would be required to protect integrity of the caps. ICs would also be required to prevent human exposure, and could include restrictions on excavation, access for buried utilities, and construction with pilings or basements. However, these controls are only effective if adequately monitored and enforced.
REDUCTION OF TOXICITY, MOBILITY, OR VOLUME	
Treatment Process Used and Materials Treated	This alternative assumes principal threat waste will be shipped off site for treatment.
Amount Destroyed or Treated	Approximately 5,500 cy of principal threat waste would be excavated and treated.
Degree of Expected Reductions of Toxicity, Mobility, or Volume Through Treatment	There would be a reduction of toxicity, mobility, or volume of contamination through treatment under this alternative. The mobility of the contaminated soil particles that remain in place would be reduced by the RCRA caps but not through treatment.
Degree to Which Treatment is Irreversible	For contaminated soils that undergo thermal treatment, the process is irreversible.
Type and Quantity of Residuals Remaining After Treatment	Excavation would produce no residuals. For soil that remains on site under the cap, there would be no residuals. Air emissions of contaminants or additional by-products produced during off-site thermal treatment (Option 4e) would be at levels below regulatory standards. After incineration, the volume of inorganic sediment/soil particles would be nearly the same as the pre-treatment volume, but the concentrations of organic chemical contaminants would be below detection limits.
SHORT-TERM EFFECTIVENESS	
Protection of Community During Remedial Action	There would be some short-term impacts to the community from construction. Access to the work zone during construction activities would be prohibited, but measures would be taken to provide residents access to the buildings and parking areas and maintain utilities. There would also be potential risk to residents from dust and VOCs generated during excavation activities and installation of asphalt sealants. However, all appropriate measures including engineering controls, dust suppression techniques, and site perimeter air (dust) monitoring would be taken to mitigate risks to the community.
Protection of Workers During Remedial Action	Health and safety plans, emergency response plans, engineering controls (dust suppression), and personal protective equipment will be used during construction activities, mitigating risks to workers.

Table 6-35. (continued)

EVALUATION CRITERIA	ALTERNATIVE SOURCE AREA SOIL-4: TARGETED EXCAVATION, CONVERT TO RCRA CAPS AND MAINTAIN AND DISPOSAL AND/OR TREATMENT
SHORT-TERM EFFECTIVENESS	
Environmental Impacts	Excavation and placement of fill in wetland areas would result in the destruction of existing wetlands.
Time Until Remedial Action Objectives are Achieved	The RAOs would be achieved at the completion of remedy implementation, which is estimated to take approximately 8 months. Meeting the RAOs in the long term, however, is contingent on long-term monitoring and maintenance of the RCRA caps that would continue after construction activities are complete.
IMPLEMENTABILITY	
Ability to Construct and Operate the Technology	Generally, this alternative could be easily implemented, and all work could be performed in phases with conventional earthwork or paving equipment. Additional steps may need to be taken to address the concern of working near an apartment building for the elderly. Although there is limited space for staging areas, this should not raise significant implementability concerns.
Reliability of the Technology	Excavation and capping are proven technologies that have been successfully implement at contaminated soil sites. The RCRA cap would be made from natural earth materials and geosynthetic materials that are proven to be very stable and effective in the long term. There may be some minor reliability issues because the cap would be located in the floodplain.
Ease of Undertaking Additional Remedial Actions, If Necessary	This alternative would not preclude additional future remedial actions.
Ability to Monitor the Effectiveness of Remedy	The effectiveness of excavation and air/water quality protection measures could be monitored with routine testing. A physical survey would be conducted at the completion of construction activities to confirm that the RCRA cap meets the design specifications. Long-term monitoring would be required to assess cap performance and determine if additional actions are warranted. The implementation of long-term monitoring and enforcement of ICs are critical to the success of this alternative.

Table 6-35. (continued)

EVALUATION CRITERIA	ALTERNATIVE SOURCE AREA SOIL-4: TARGETED EXCAVATION, CONVERT TO RCRA CAPS AND MAINTAIN AND DISPOSAL AND/OR TREATMENT	
IMPLEMENTABILITY		
Ability to Obtain Approvals and Coordinate with Other Agencies	Coordination with the management of the Centredale Manor and Brook Village apartment buildings, adjacent property owners, and appropriate federal, state, and local agencies would be required to implement ICs, develop a traffic control plan, and provide continuous access to residents and building service providers. Residents' concerns about disruptions from construction activities would need to be addressed. Because this alternative constitutes the placement of fill in waters of the US, a determination must first be made that this is the least damaging practicable alternative to the aquatic environment. In addition, this alternative would require the permanent occupancy and modification of the floodplain, and a determination would first need to be made concluding that there is no other practicable alternative before selecting this option as the preferred remedy. Coordination with DOI would be required if during remedial design or remedial action, it is determined that this alternative may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archaeological data.	
Availability of Off-Site Treatment, Storage, and Disposal Services and Capacity	Off-site landfill and treatment options are readily available. This alternative assumes principal threat waste will be shipped off site for treatment.	
Availability of Necessary Equipment and Specialists	Construction equipment and personnel, and monitoring equipment and personnel, are readily available.	
Availability of Technology	Technology is common enough that required equipment and materials would be readily available.	
COST[1]		
Capital Cost	Option 4e, Off-site Disposal and/or Treatment	$20,800,000
Present Worth of Long-term Monitoring and Maintenance	Option 4e, Off-site Disposal and/or Treatment	$500,000
Total Present Worth Cost	Option 4e, Off-site Disposal and/or Treatment	$21,300,000

Notes:
[1]Detailed cost estimates provided in Appendix J. Costs could increase by approximately $120,000 to $135,000 for compliance with the National Historic Preservation Act (NHPA) (USACE, 2011b).

Table 6-36. Potential Applicable or Relevant and Appropriate Requirements (ARARs) and To Be Considered (TBC) Criteria for Source Area Soil Alternative 4, Targeted Excavation, Convert to RCRA Caps and Maintain and Disposal and/or Treatment

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Chemical-Specific ARARs			
Federal Requirements			
OSWER Directive 92-4-26, Approaches for Addressing Dioxins in Soil at CERCLA and RCRA Sites	TBC	Guidance cleanup levels for CERCLA removal sites and PRGs for remedial sites for dioxin (as TEQ) in surface soil involving residential exposure scenarios. Also establishes a cleanup range for dioxin (as TEQ) for commercial and industrial exposure scenarios.	Soil at the source area contains dioxin at levels above the PRG. This soil will be addressed consistent with this guidance.
Draft Recommended Interim Preliminary Remediation Goals for Dioxin in Soil at CERCLA and RCRA Sites	TBC	Draft recommended interim PRGs of 72 parts per trillion (ppt or ng/kg) dioxin (as TEQ) for residential exposure scenarios and 950 ppt dioxin (as TEQ) for commercial and industrial exposure scenarios are recommended as a starting point for setting cleanup levels for CERCLA removal sites.	Soil at the site contains dioxin at levels above the draft recommended interim PRGs.
TSCA PCB Regulations (40 CFR 761)	Applicable	Establishes requirements for PCB-remediation waste.	PCBs present in source area soil would be addressed under this alternative.
EPA Guidance on Remedial Actions for Superfund Sites with PCB Contamination	TBC	Describes the recommended approach to evaluating and remediating Superfund Sites with PCB contamination.	This guidance used when establishing remediation goals for PCB contaminated media and goals established would be met by this alternative.
Clean Water Act Federal Water Quality Criteria, Section 304(a) 40 CFR 131.11	R & A	Ambient Water Quality Criteria (AWOC) are provided by EPA for chemicals for both the protection of human health and the protection of aquatic life.	Contaminants from soil that could result in exceedances of AWQC in Woonasquatucket River will be minimized to the maximum extent practical.
State Requirements			
RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (i.e., Remediation Regulations)	Applicable R & A	Unless otherwise specified, soil contaminated as a result of a release of hazardous materials shall be remediated in a manner which meets the direct exposure and leachability criteria for each hazardous substance established in Rule 8.02.B (Method 1 Soil Objectives).	Soils at the source area contain contaminants subject to the Rule 8.02B soil objectives and would be addressed under this alternative consistent with state requirements (residential direct exposure criteria applicable) (GA leachability criteria R & A when corresponding federal MCL).

Table 6-36. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Chemical-Specific ARARs (cont)			
State Requirements (cont)			
RIDEM Water Quality Regulations	R & A	Provides water classification for surface waters in Rhode Island and sets ambient water quality criteria for toxic substances and governs water quality impacts associated with site activities.	Contributions of contaminants from sediment that could result in exceedances of water quality standards in the Woonasquatucket River will be minimized to the maximum extent practical.
Location-Specific ARARs			
Federal Requirements			
Clean Water Act, Section 404 Guidelines for discharge of dredged or fill material into waters of US (40 CFR Parts 230 and 231, 33 CFR Parts 320-323, and 33 CFR Part 332)	Applicable	Outlines requirements for the discharge of dredged or fill materials into surface waters, including wetlands. Such discharges are not allowed if there are practicable alternatives with less adverse impact.	Excavation/backfill and capping subject to these requirements. Activities must be conducted in accordance with these requirements, including but not limited to mitigation and/or restoration. Alternative must be evaluated to determine least damaging practicable alternative before it can be selected.
National Historic Preservation Act 16 USC 470 36 CFR Part 800	Applicable	A federal agency must take into account the project's effect on properties included or eligible for inclusion in the National Register of Historic Places.	Work conducted will take into account the project's effect on properties included or eligible for inclusion in the National Register of Historic Places as required under this law.
Archaeological and Historical Preservation Act of 1974 Public Law 93-291	Potentially applicable	When a Federal agency finds, or is notified, that its activities in connection with a Federal construction project may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archeological data, such agency shall notify DOI. Such agency may request DOI to undertake the preservation of such data or it may undertake such activities	If during remedial design or remedial action, it is determined that this alternative may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archaeological data, EPA will notify DOI and comply with these requirements.
Protection of Wetlands (Executive Order 11990)	TBC	Federal agencies are required to avoid adversely impacting wetlands unless there is no practicable alternative and the proposed action includes all practicable measures to minimize harm to wetlands that may result from such use.	Excavation/backfill and capping are subject to these requirements. Activities must be conducted in accordance with these requirements.

Table 6-36. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Location-Specific ARARs (cont)			
Federal Requirements (cont)			
Floodplain Management (Executive Order 11988)	TBC	Federal agencies are required to avoid impacts associated with the occupancy and modification of a floodplain and avoid support of floodplain development wherever there is a practicable alternative.	This alternative can only be selected if there is no practicable alternative to occupancy and modification of floodplain. Source area soil is located within the 100 year floodplain.
State Requirements			
RIDEM Rules and Regulations for Hazardous Waste Management – Section 8 Location Standards for Hazardous Waste Facilities	R & A	Rhode Island is delegated to administer the federal RCRA statute through its state regulations. The standards of 40 CFR 264.18(b) are incorporated by reference. Facility located in 100-yr floodplain must be designed, constructed, operated and maintained to prevent washout of any hazardous waste by 100-yr flood, unless demonstrate no adverse effects on human health or environment will result from washout.	Hazardous waste remains in place within the 100-yr floodplain under this alternative. As a result, these requirements must be met for waste that remains. Some principal threat waste is excavated and disposed off site and therefore would not be subject to washout.
Rhode Island Historic Preservation Act – Rhode Island General Laws 42-45 et seq.	Applicable	Regulations that address the project's effect on properties included or eligible for inclusion in the State/National Registers of Historic Places.	Will take into account the project's effect on properties included or eligible for inclusion in the National/State Registers of Historic Places in accordance with these requirements.
RIDEM Rules and Regulations Governing the Enforcement of the Freshwater Wetlands Act	Applicable	Sets requirements to prevent the undesirable drainage, excavation, filling, alteration, encroachment, or any other form of disturbance or destruction to a wetland.	Activities required by RIDEM for remediation will be conducted in accordance with these requirements.
Action-Specific ARAR			
Federal Requirements			
TSCA PCB Regulations (40 CFR 761)	Applicable	Establishes requirements for PCB-remediation waste.	PCBs present in source area soil will be addressed in accordance with these requirements.

Table 6-36. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Action-Specific ARAR (cont)			
Federal Requirements (cont)			
Safe Drinking Water Act Maximum Contaminant Levels (MCLs), 40 CFR 141.11-141.13	R & A	The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to Maximum Contaminant Levels Goals (MCLGs) as feasible using the best available treatment technology and taking cost into consideration. MCLs are enforceable standards.	MCLs are relevant and appropriate as the groundwater at the Source Area is a potential federal drinking water source. These standards would be used to evaluate the effectiveness of Source Are soil alternatives in reducing/preventing migration of contaminants from soil to groundwater.
Safe Drinking Water Act Maximum Contaminant Levels Goals (non-zero MCLGs), 40 CFR 141.50-141.51	R & A	The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety and are non-enforceable public health goals.	Non-zero MCLGs are relevant and appropriate as the groundwater at the Source Area is a potential federal drinking water source. These standards would be used to evaluate the effectiveness of Source Area soil alternatives in reducing/preventing migration of contaminants from soil to groundwater.
Clean Water Act Federal Water Quality Criteria, Section 304(a) 40 CFR 131.11	Applicable	Ambient Water Quality Criteria (AWQC) are provided by EPA for chemicals for both the protection of human health and the protection of aquatic life.	Excavation/backfill and capping must be conducted so that there are no exceedances of AWQC.
Invasive Species (Executive Order 13112)	TBC	Federal agencies are directed to prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause when requiring actions that impact the environment.	Actions will be taken to address invasive species consistent with the Executive Order.
State Requirements			
RIDEM Rules and Regulations for Hazardous Waste Management Identification and Listing of Hazardous Wastes	Applicable	Rhode Island is delegated to administer the federal RCRA statute through its regulations. The standards of 40 Part 261 of RCRA are incorporated by reference. Sets forth requirements for hazardous waste determination according to federal (40 CFR 262.11) and RI State (Rule 5.8) definitions.	Will be used to determine appropriate treatment and disposal.

Table 6-36. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Action-Specific ARARs (cont)			
State Requirements (cont)			
RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (i.e., Remediation Regulations), Section 8.0 (Risk Management)	Applicable	This section regulates impacted media at contaminated sites.	This section was used to develop cleanup goals for the site. This alternative meets this requirement.
RIDEM Rules and Regulations for Hazardous Waste Management, Section 8 – Operation Requirements for Treatment, Storage, and Disposal Facilities	R & A	Outlines operational requirements for all hazardous waste treatment, storage, and disposal facilities, including general waste analyses, security procedures, inspections, safety, groundwater monitoring etc. Sets design, construction, and operational requirements for hazardous waste containers and tanks, and closure requirements for hazardous waste facilities.	Substantive requirements related to land disposal/closure, etc. must be met.
RIDEM Rules and Regulations for Hazardous Waste Management, Section 8 – Land Disposal Facilities	R & A	Outlines design, operational, and closure requirements for land disposal facilities.	This alternative will meet the substantive requirements related to land disposal/closure, etc.
RIDEM Water Quality Regulations	Applicable	Provides water classification for surface waters in Rhode Island and sets ambient water quality criteria for toxic substances and governs water quality impacts associated with site activities.	Excavation and capping must be conducted so that there are no exceedances of water quality standards.
RI Air Pollution Control Regulation #1: Visible Emissions	Applicable	Establishes opacity limitations for contaminant emissions.	Remediation will be conducted to meet the standards for visible emissions.
RI Air Pollution Control Regulation #5: Fugitive Dust	Applicable	Requires that reasonable precaution be taken to prevent particulate matter from becoming airborne.	Actions will be taken to prevent particulate matter from becoming airborne in accordance with these regulations.
RI Air Pollution Control Regulation #7: Emissions Detrimental to Persons or Property	Applicable	Prohibits emissions of contaminants which may be injurious to human, plant, or animal life or cause damage to property or which unreasonably interfere with the enjoyment of life and property.	Any potential emissions subject to these requirements will meet these standards.

Key:
R & A – Relevant and Appropriate; TBC – To Be Considered

Table 6-37. Key Features of the Source Area Soil Alternatives

	Alternative		
	1 – No Action	**3e – Targeted Excavation, Upgrade and Maintain Existing Surfaces, and Off-site Disposal and/or Treatment**	**4e – Targeted Excavation, Convert to RCRA Caps and Maintain, and Off-site Disposal and/or Treatment**
Present Worth Cost[1]	$170K[2]	$24.4M	$21.3M
Remediation Area (acres)	—	Excavate: 2.3 Isolation Cap: 7.8 Total: 7.8	Excavate: 0.85 Isolation Cap: 7.8 Total: 7.8
Excavation Volume (cy)	—	14,300	5,500
Estimated Time to Achieve RAOs	Unknown	5 months (after construction complete), to achieve RAO to prevent direct contact Unknown for RAO to prevent migration and leaching of contaminants from soil to groundwater	8 months (after construction complete)

Notes:
[1] Costs for action-based alternatives could increase by approximately $120,000 to $135,000 for compliance with the National Historic Preservation Act (NHPA) (USACE, 2011b) (Appendix J).
[2] If periodic monitoring is implemented, the annual cost for monitoring would be $14,000 and the present worth costs would be $170,000.

APPENDIX F
(Revised from the 2010 Feasibility Study)

Proposed Cleanup Goals for the CMRP Site

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F.1 Introduction

The approach and supporting evaluations used to develop cleanup goals at the Centredale Manor Restoration Project (CMRP) Superfund Site were presented in Appendix F of the 2010 feasibility study (FS) (Battelle, 2010) for the following action areas:

- Section F.2 – Allendale and Lyman Mill Sediment
- Section F.3 – Allendale and Lyman Mill Floodplain Soil
- Section F.4 – Allendale and Lyman Mill Surface Water
- Section F.5 – Source Area Soil
- Section F.6 – Source Area Groundwater

The approach and supporting evaluations used to develop cleanup goals for Allendale and Lyman Mill floodplain soil (Section F.3), Source Area soil (Section F.5), and groundwater within the Source Area (Section F.6) are updated below based on supplemental site activities which resulted in additional data for Lyman Mill Reach floodplain soil, revised preliminary remediation goals (PRGs) for Lyman Mill Reach floodplain soil, and revised and/or supplemented applicable or relevant and appropriate requirements (ARARs) and guidance and advisories (to be considered [TBC] criteria) for site soil and groundwater within the Source Area.

Cleanup goals for Allendale and Lyman Mill sediment (Section F.2) and surface water (Section F.4) are not impacted by the information from the supplemental site activities, and are not repeated here.

F.3 Allendale and Lyman Mill Reach Floodplain Soil

Cleanup goals for floodplain soil are presented in Table F-2a, and are based on an evaluation of potential ARARs, TBC criteria, risk-based PRGs, and site background data, where:

- The background is the arithmetic mean[1] of the site background concentrations.
- Potential ARARs include the Rhode Island Department of Environmental Management (RIDEM) residential direct exposure and GB leachability criteria (RIDEM, 2004).
- TBC criteria include the United States Environmental Protection Agency's (EPA's) recommended residential level for dioxin and polychlorinated biphenyls (PCBs) in soil (EPA, 1998 and 1990).
- For carcinogenic effects, the lowest risk value (PRG associated with 10^{-6} or one in one million risk) was compared to background.
- For non-carcinogenic effects and all ecologically-protective PRGs, the middle risk value (PRG associated with hazard quotient [HQ] of 1) was compared to background.

Proposed cleanup goals were developed in a step-wise process, as follows:

Step 1 – The first step included a comparison of Allendale and Lyman Mill floodplain soil data to the available ARARs and TBC criteria (Table F-2b). Contaminants in soil with detected concentrations in excess of the ARARs/TBC criteria were retained for cleanup goal determination; this included dioxin (toxic equivalency [TEQ]), pesticides (i.e., technical chlordane), inorganics (i.e., antimony, arsenic,

[1] The use of the arithmetic mean to represent background conditions is a reasonable approach that will be re-evaluated during design once additional background data are available. That is, the distribution of the data will be examined to identify the most appropriate use of the central tendency (arithmetic mean for normally distributed data or geometric mean for log normally distributed data).

beryllium, chromium, copper, lead, and manganese), and semivolatile organic compounds (SVOCs) (i.e., anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, indeno(1,2,3-c,d)pyrene, phenanthrene, and pyrene). Many of these contaminants were detected at concentrations in excess of the ARARs in only 10% or fewer of the soil samples (see Table F-2b for comparison of soil data to ARARs). Contaminants that were undetected (i.e., 'U' or 'UJ' qualified), rejected by third party validation (i.e., 'R' qualified), or detected at concentrations below the available ARARs/TBC criteria were excluded from the cleanup goal determination, unless a risk-based PRG was available for the contaminant. Cleanup goals developed for undetected contaminants where the laboratory detection limits were in excess of the ARARs (see Table F-2b); additional sampling will be performed during the design phase to verify that these contaminants are not present in site floodplain soil at concentrations in excess of ARARs.

Step 2 – Next, the Allendale and Lyman Mill floodplain soil data were statistically evaluated to determine if the contaminants measured at concentrations in excess of the ARARs/TBC criteria (Step 1) were consistent with background conditions. The statistical tests used to evaluate the floodplain soil data included a comparison of two populations using a proportional hazard analysis and the Wilcoxon test (this statistical analysis is consistent with the approach used in the Remedial Investigation [RI] [Battelle, 2005] to evaluate significant differences among the sediment data). A detailed description of the statistical analysis methods are provided in Appendix A to the RI (Battelle 2005). Briefly, the proportional hazard analysis was used (at the 0.05 significance level) for comparing soil concentrations for the various locations to those for the upstream background location (i.e., Greystone Mill). The proportional hazard analysis was performed using a program written in SAS programming software. No existing procedure performs the proportional hazards test, so code was written to perform the test. The code was tested using a dataset with known results to verify that it was performing correctly. The Wilcoxon test was also performed on the data (using SAS PROC NPAR1WAY) and used to validate the results of the proportional hazards analysis. Contaminants that were detected in excess of the ARARs/TBC criteria and were determined to be significantly higher than background conditions (i.e., the median concentration for the test exposure area [i.e., Allendale, Lyman Mill, and Oxbow] was significantly higher than the background median concentration) were retained for cleanup goal determination; these included dioxin and antimony (selenium was also significantly different from background conditions, but this contaminant was not detected in Allendale and Lyman Mill soil at concentrations above the ARAR). Contaminants detected in excess of ARARs/TBC criteria but found to be consistent with or less than background conditions were not retained for cleanup goal determination unless a risk-based PRG was available for the contaminant. (Results from the statistical comparison performed in support of the 2010 FS were used in this Addendum; the statistical comparisons were not repeated in this Addendum.)

The robustness of the statistical test is limited by the small test population (n = 4) for the upstream background location in that there are an insufficient number of records (i.e., statistical power) to disprove the null hypothesis (i.e., that the two datasets are statistically different). However, additional background sampling will be performed during the design phase to verify background conditions and the statistical comparisons, and assess impacts, if any, to the proposed cleanup goals.

Step 3 – Next, for contaminants with a risk-based PRG and an available ARARs/TBC criteria (retained from Step 2 above), the lower (more protective) value was used in the cleanup goal determination (Table F-2a). PRG values used in the evaluation were based on the most sensitive receptor or exposure pathway, and were based on values developed for the Oxbow area (MACTEC and Battelle, 2011). Ecological PRGs developed for Oxbow floodplain soils supercede PRGs developed for Allendale and Lyman Mill floodplain soils (MACTEC, 2005) because the Oxbow is where the most significant ecological exposures will occur.

Step 4 – The cleanup goal selected is based on the ARAR/TBC/PRG value (Step 3, above) or background, whichever is higher. Overall, cleanup goals were identified for a number of contaminants, including dioxin (2,3,7,8-TCDD and TEQ[2]) and selected pesticides, SVOCs, and inorganics (Table F-2a).

F.5 Source Area Soil

Cleanup goals for Source Area soils are presented in Table F-4a, and are based on an evaluation of potential ARARs and TBC criteria, including:

- Potential ARARs including RIDEM residential direct exposure and GA leachability criteria[3] (RIDEM, 2004); and
- TBC criteria including EPA's recommended residential level for dioxin and PCB in soil (EPA, 1998 and 1990).

There are no applicable risk-based PRGs or background data for Source Area soils.

Proposed cleanup goals were developed in a step-wise process, as follows:

Step 1 – For contaminants with multiple ARAR values, the lower (more protective) value was used in the cleanup goal determination. For example, the RIDEM residential direct exposure and GA leachability criteria for benzene are 2.5 milligrams per kilogram (mg/kg) and 0.2 mg/kg, respectively. The lower of these values (0.2 mg/kg) was selected as the ARAR.

Step 2 – Next, the Source Area soil data were compared to the available ARARs (from step 1 above) and TBC criteria (see Table F-4b). Contaminants in vadose zone soils (0 to 5 ft below ground surface [bgs]) detected at concentrations in excess of the available ARAR or detected in surface soil (0 to 1 ft bgs) at concentrations in excess of the TBC criteria were retained for cleanup goal determination.

Contaminants that were undetected (i.e., 'U' or 'UJ' qualified) or detected at concentrations below the available ARARs/TBC criteria were excluded from the cleanup goal determination. Nor were cleanup goals developed for undetected contaminants where the laboratory detection limits were in excess of the ARARs/TBC criteria (see Table F-4b); additional sampling will be performed during the design phase to verify that these contaminants are not present in Source Area soil at concentrations in excess of ARARs/TBC criteria.

Step 3 – Cleanup goals were selected based on those chemicals detected in Source Area soils at concentrations in excess of the available ARARs or TBC criteria (Step 2, above). Overall, cleanup goals were identified for a number of chemicals, including dioxin TEQ, total PCBs, and selected pesticides, SVOCs, VOCs, and inorganics.

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[2] Based on the approach described in this appendix, the proposed cleanup goal for dioxin is not impacted should EPA's *Draft Recommended Interim Preliminary Remediation Goals for Dioxin in Soil at CERCLA and RCRA Sites* (EPA, 2009a) be adopted. The risk-based PRG for human health (53 ng/kg) is lower than EPA's draft interim PRG (72 ng/kg), and would continue to be the basis of the proposed cleanup goal for dioxin in soil.

[3] Under state groundwater regulations, this part of the aquifer at the CMRP site is classified as GB. However, because the state has not obtained EPA approval of a Comprehensive State Ground Water Protection Program, it is necessary to default to the federal classification. Groundwater within the Source Area is federally classified as Class IIB (Potential Source of Drinking Water). As a result, RIDEM's GA leachability criteria are potential ARARs for soil within the Source Area.

F.6 Groundwater

Cleanup goals for groundwater within the Source Area are presented in Table F-5a, and are based on contaminants detected in groundwater at concentrations in excess of potential ARARs, i.e., Federal Maximum Contaminant Levels (MCLs) and non-zero Maximum Contaminant Level Goals (MCLGs) for drinking water (EPA, 2009b).

Contaminants in groundwater within the Source Area detected at concentrations in excess of the available ARARs were retained for cleanup goal determination (see Table F-5b for comparison of groundwater data within the Source Area to ARARs). Contaminants that were undetected (i.e., 'U', 'UB', 'UJ, 'UJw', and 'Uw' qualified), detected at concentrations below the available ARAR, or rejected by third party validation were excluded from the cleanup goal determination; additional sampling will be performed during the design phase to verify that these contaminants are not present in groundwater at concentrations in excess of ARARs.

Overall, cleanup goals for groundwater within the Source Area were identified for a number of chemicals, including dioxin, and selected VOCs and inorganics (Table F-5a).

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Appendix F Tables (Revised)

Table F-2 Floodplain Soil
Table F-4 Source Area Soil
Table F-5 Groundwater

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Table F-2a. Proposed Cleanup Goals for Allendale and Lyman Mill Reach Floodplain Soils, Comparison of ARARs, TBCs, and Risk-based PRGs to Background. (All units are in mg/kg; parts per million)

Contaminant[a]	Receptor Category [b]	Receptor/Scenario [c]	ARAR/TBC [d]	Risk Range[e]			Background[f]	Proposed Cleanup Goal[g]	Basis[h]
				Lower	Middle	Upper			
Antimony	ECO_{mam}	Short-tailed Shrew/Diet	1.0E+01	**4.4E-02**	**4.4E-01**	4.4E+00	6.2E-01	6.2E-01	Bkgd
Arsenic[i]	HH	Passive Recreational Visitor/Direct Contact [i]	**7.0E+00**	**4.7E+00**	4.7E+01	4.7E+02	7.7E+00	7.7E+00	Bkgd
Beryllium[i]	Resident	Direct Exposure	**4.0E-01**	N/A	N/A	N/A	3.1E+00	N/A	N/A
Chromium[i]	Resident	Direct Exposure	3.9E+02	N/A	N/A	N/A	2.3E+02	N/A	N/A
Copper	ECO_{mam}	Short-tailed Shrew/Diet	3.1E+03	**1.9E+00**	**1.9E+01**	**1.9E+02**	2.1E+02	2.1E+02	Bkgd
Lead[i]	Resident	Direct Exposure	**1.5E+02**	N/A	N/A	N/A	4.5E+02	N/A	N/A
Manganese[i]	Resident	Direct Exposure	**3.9E+02**	N/A	N/A	N/A	1.8E+03	N/A	N/A
4,4'-DDE	ECO_{bird}	American Woodcock/CBR	N/A	**4.6E-04**	**4.6E-03**	4.6E-02	1.3E-02	1.3E-02	Bkgd
	ECO_{bird}	American Woodcock/Diet		**6.6E-03**	6.6E-02	6.6E-01			
4,4'-DDT	ECO_{bird}	American Woodcock/Diet	N/A	1.0E-02	1.0E-01	1.0E+00	8.5E-03	1.0E-01	NC
Technical Chlordane[i]	Resident	Direct Exposure	5.0E-01	N/A	N/A	N/A	4.3E-01	N/A	N/A
Anthracene[i]	Resident	Direct Exposure	3.5E+01	N/A	N/A	N/A	7.1E-01	N/A	N/A
Benzo(a)anthracene[i]	Resident	Direct Exposure	**9.0E-01**	N/A	N/A	N/A	3.1E+00	N/A	N/A
Benzo(a)pyrene	HH	Passive Recreational Visitor/Direct Contact [i]	**4.0E-01**	**2.1E-01**	**2.1E+00**	2.1E+01	3.1E+00	3.1E+00	Bkgd
Benzo(b)fluoranthene[i]	Resident	Direct Exposure	**9.0E-01**	N/A	N/A	N/A	3.5E+00	N/A	N/A
Benzo(g,h,i)perylene[i]	Resident	Direct Exposure	**8.0E-01**	N/A	N/A	N/A	2.3E+00	N/A	N/A
Benzo(k)fluoranthene[i]	Resident	Direct Exposure	**9.0E-01**	N/A	N/A	N/A	3.2E+00	N/A	N/A
Chrysene[i]	Resident	Direct Exposure	**4.0E-01**	N/A	N/A	N/A	3.8E+00	N/A	N/A
Dibenzo(a,h)anthracene[i]	Resident	Direct Exposure	**4.0E-01**	N/A	N/A	N/A	6.1E-01	N/A	N/A
Fluoranthene[i]	Resident	Direct Exposure	2.0E+01	N/A	N/A	N/A	7.0E+00	N/A	N/A
Indeno(1,2,3-c,d)pyrene[i]	Resident	Direct Exposure	**9.0E-01**	N/A	N/A	N/A	2.5E+00	N/A	N/A
Phenanthrene[i]	Resident	Direct Exposure	4.0E+01	N/A	N/A	N/A	4.0E+00	N/A	N/A
Pyrene[i]	Resident	Direct Exposure	1.3E+01	N/A	N/A	N/A	5.8E+00	N/A	N/A
2,3,7,8-Tetrachlorodibenzo-*p*-dioxin	ECO_{mam}	Short-tailed Shrew/Diet	N/A	**3.5E-06**	3.5E-05	3.5E-04	1.7E-05	3.5E-05	NC
	ECO_{mam}	Short-tailed Shrew/CBR		**1.2E-05**	1.2E-04	1.2E-03			
	ECO_{bird}	American Woodcock/CBR		**1.7E-05**	1.7E-04	1.7E-03			
	ECO_{bird}	American Woodcock/Diet		4.7E-05	4.7E-04	4.7E-03			
Dioxin/Furans (TEQ)	HH	Passive Recreational Visitor/Direct Contact [i]	1.0E-03	5.3E-05	5.3E-04	5.3E-03	5.0E-05	5.3E-05	C

Table F-2a. Proposed Cleanup Goals for Allendale and Lyman Mill Reach Floodplain Soils, Comparison of ARARs, TBCs, and Risk-based PRGs to Background. (All units are in mg/kg; parts per million)

Contaminant[a]	Receptor Category [b]	Receptor/Scenario [c]	ARAR/TBC [d]	Risk Range[e]			Background[f]	Proposed Cleanup Goal[g]	Basis[h]
				Lower	Middle	Upper			

All units are in milligrams per kilogram (mg/kg); parts per million.

(a) Cleanup goals were developed for risk-based contaminants for which Preliminary Remediation Goals (PRGs) were calculated (MACTEC and Battelle, 2011) and contaminants detected at concentrations in excess of ARARs or To Be Considered (TBC) criteria (see Table F-2b for data comparisons to ARARs and TBC).

Cleanup goals were not developed for contaminants that were undetected (i.e., results are 'U' or 'UJ' qualified) or detected at concentrations below ARARs (see Table F-2b for data comparisons to ARARs). Nor were cleanup goals developed for undetected contaminants where the laboratory detection limits are in excess of ARARs (see Table F-2b); **additional sampling will be performed during design to verify undetected contaminants, and assess impacts, if any, to the proposed cleanup goals.**

In addition, all numeric criteria included in ARARs identified for the CMRP site are cleanup goals regardless of whether or not they are identified above in this Appendix F (except where background is an issue).

(b) PRG basis (HH - human health and ECO - ecological); for ecological receptors the generic category is indicated: bird, mammal.

(c) Specific receptor and exposure scenario or pathway for which PRGs were developed include the following (tables where the PRGs are presented are also indicated). Ranked from most to least stringent.

	Receptor/Scenario	Table # in MACTEC and Battelle (2011)
Human Health - Part I	Passive Recreational User Direct Contact	1
Ecological - Part II	Short-tailed Shrew CBR	10
	American Woodcock CBR	7
	Short-tailed Shrew Diet	12
	American Woodcock Diet	11

(d) ARARs include RIDEM residential direct exposure and GB leachability criteria (RIDEM, 2004) and TBC criteria include EPA's recommended residential level for dioxin (EPA, 1998) in soil.

(e) Except as noted, the lower, middle and upper range values are based on target hazards of 0.1, 1.0, and 10 (non-carcinogenic effects - humans and ecological receptors) and 10^{-6}, 10^{-5}, and 10^{-4} risk levels for (carcinogenic effects - humans only). **Bolding** indicates values that are less than background.

(f) Background values as presented in MACTEC and Battelle (2011); background values are based on the arithmetic mean of the four background floodplain soil samples (RWR-FP-5001-0000-01, RWR-FP-5002-0000-01, RWR-FP-5003-0000-01, and RWR-FP-5004-0000-01). **Additional sampling will be performed during design to verify background conditions.**

(g) Proposed Cleanup Goal is the lower risk range value (i.e. based on a total excess cancer risk of 10^{-6}) for carcinogenic effects and the middle risk range value (i.e., Superfund benchmark Hazard Index of 1.0) for non-carcinogenic effects (and all ecologically-protective PRGs), but defaults to background if either of these is less than site background.

(h) The basis of the Cleanup Goal is:

- ARAR Applicable or Relevant and Appropriate Requirement
- Bkgd Background
- C Carcinogenic effects, lower risk range value for most sensitive human exposure
- NA Not applicable because contaminant statistically determined to be consistent with, or less than background conditions (see note 'i').
- NC Non-carcinogenic effects, middle risk range value of the most sensitive human or ecological exposure pathway

(i) Contaminants detected in floodplain soil at concentration in excess of potential ARARs/TBC, but found to be consistent with, or less than background conditions (based on a statistical evaluation of the data) were not included in the cleanup goal determination. **Additional sampling will be performed during design to verify background conditions, and assess impacts, if any, to the proposed cleanup goals.**

(j) The excess lifetime cancer risk (ELCR) for the passive recreational visitor to the Oxbow area is $6x10^{-5}$ for the general area and $4x10^{-6}$ for the human health concern area (see Section 2.5.1), which is within EPA's Superfund risk range indicating that remedial action is not warranted. However, the RAO for Allendale and Lyman Mill floodplain soil is to prevent human exposure to contamination that would result in an ELCR greater than 10^{-5} to 10^{-6} (see Section 3.1.1 of the FS [Battelle, 2010]). The lower risk level (10^{-5}) is based on the state regulations that the cumulative excess lifetime cancer risk posed by the contaminated-site does not exceed $1x10^{-5}$ (RIDEM, 2004). ELCR for the passive recreational visitor (child and adolescent) at the general area are above 10^{-5}. As a result, risk-based PRGs were developed for this receptor for exposure scenarios and contaminants that pose a greater than 10^{-6} risk (MACTEC and Battelle, 2011b, Part I).

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Volatile Organics											
Allendale soil	CMS-418	0	1	Benzene	0.0045	MG/KG	U	2.5	4.3	NA	NA
Allendale soil	CMS-418	1	2	Benzene	0.0054	MG/KG	U	2.5	4.3	NA	NA
Allendale soil	CMS-418	0	1	Bromodichloromethane	0.0045	MG/KG	U	10	nc	NA	NA
Allendale soil	CMS-418	1	2	Bromodichloromethane	0.0054	MG/KG	U	10	nc	NA	NA
Allendale soil	CMS-418	0	1	Bromoform	0.0045	MG/KG	U	81	nc	NA	NA
Allendale soil	CMS-418	1	2	Bromoform	0.0054	MG/KG	U	81	nc	NA	NA
Allendale soil	CMS-418	0	1	Bromomethane	0.0045	MG/KG	U	0.8	nc	NA	NA
Allendale soil	CMS-418	1	2	Bromomethane	0.0054	MG/KG	U	0.8	nc	NA	NA
Allendale soil	CMS-418	0	1	Carbon Tetrachloride	0.0045	MG/KG	U	1.5	5.0	NA	NA
Allendale soil	CMS-418	1	2	Carbon Tetrachloride	0.0054	MG/KG	U	1.5	5.0	NA	NA
Allendale soil	CMS-418	0	1	Chlorobenzene	0.0045	MG/KG	U	210	100	NA	NA
Allendale soil	CMS-418	1	2	Chlorobenzene	0.0054	MG/KG	U	210	100	NA	NA
Allendale soil	CMS-418	0	1	Chloroform	0.0045	MG/KG	U	1.2	nc	NA	NA
Allendale soil	CMS-418	1	2	Chloroform	0.0054	MG/KG	U	1.2	nc	NA	NA
Allendale soil	CMS-418	0	1	Dibromochloromethane	0.0045	MG/KG	U	7.6	nc	NA	NA
Allendale soil	CMS-418	1	2	Dibromochloromethane	0.0054	MG/KG	U	7.6	nc	NA	NA
Allendale soil	CMS-418	0	1	1,2-dibromo-3-chloropropane	0.009	MG/KG	U	0.5	nc	NA	NA
Allendale soil	CMS-418	1	2	1,2-dibromo-3-chloropropane	0.011	MG/KG	U	0.5	nc	NA	NA
Allendale soil	CMS-418	0	1	1,1-dichloroethane	0.0045	MG/KG	U	920	nc	NA	NA
Allendale soil	CMS-418	1	2	1,1-dichloroethane	0.0054	MG/KG	U	920	nc	NA	NA
Allendale soil	CMS-418	0	1	1,2-dichloroethane	0.0045	MG/KG	U	0.9	2.3	NA	NA
Allendale soil	CMS-418	1	2	1,2-dichloroethane	0.0054	MG/KG	U	0.9	2.3	NA	NA
Allendale soil	CMS-418	0	1	1,1-dichloroethene	0.0045	MG/KG	U	0.2	0.7	NA	NA
Allendale soil	CMS-418	1	2	1,1-dichloroethene	0.0054	MG/KG	U	0.2	0.7	NA	NA
Allendale soil	CMS-418	0	1	Cis-1,2-dichloroethene	0.0045	MG/KG	U	630	60	NA	NA
Allendale soil	CMS-418	1	2	Cis-1,2-dichloroethene	0.002	MG/KG	J	630	60	NA	N
Allendale soil	CMS-418	0	1	Trans-1,2-dichloroethene	0.0045	MG/KG	U	1100	92	NA	NA
Allendale soil	CMS-418	1	2	Trans-1,2-dichloroethene	0.0054	MG/KG	U	1100	92	NA	NA
Allendale soil	CMS-418	0	1	1,2-dichloropropane	0.0045	MG/KG	U	1.9	70	NA	NA
Allendale soil	CMS-418	1	2	1,2-dichloropropane	0.0054	MG/KG	U	1.9	70	NA	NA
Allendale soil	CMS-418	0	1	Ethylbenzene	0.0045	MG/KG	U	71	62	NA	NA
Allendale soil	CMS-418	1	2	Ethylbenzene	0.0054	MG/KG	U	71	62	NA	NA
Allendale soil	CMS-418	0	1	Isopropylbenzene	0.0045	MG/KG	U	27	nc	NA	NA
Allendale soil	CMS-418	1	2	Isopropylbenzene	0.0054	MG/KG	U	27	nc	NA	NA
Allendale soil	CMS-418	0	1	Methylene Chloride	0.009	MG/KG	U	45	nc	NA	NA
Allendale soil	CMS-418	1	2	Methylene Chloride	0.011	MG/KG	U	45	nc	NA	NA
Allendale soil	CMS-418	0	1	Styrene	0.0045	MG/KG	U	13	64	NA	NA
Allendale soil	CMS-418	1	2	Styrene	0.0054	MG/KG	U	13	64	NA	NA
Allendale soil	CMS-418	0	1	1,1,1,2-tetrachloroethane	0.0045	MG/KG	U	2.2	nc	NA	NA
Allendale soil	CMS-418	1	2	1,1,1,2-tetrachloroethane	0.0054	MG/KG	U	2.2	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Allendale soil	CMS-418	0	1	1,1,2,2-tetrachloroethane	0.0045	MG/KG	U	1.3	nc	NA	NA
Allendale soil	CMS-418	1	2	1,1,2,2-tetrachloroethane	0.0054	MG/KG	U	1.3	nc	NA	NA
Allendale soil	CMS-418	0	1	Tetrachloroethene	0.0045	MG/KG	U	12	4.2	NA	NA
Allendale soil	CMS-418	1	2	Tetrachloroethene	0.0054	MG/KG	U	12	4.2	NA	NA
Allendale soil	CMS-418	0	1	Toluene	0.0045	MG/KG	U	190	54	NA	NA
Allendale soil	CMS-418	1	2	Toluene	0.0054	MG/KG	U	190	54	NA	NA
Allendale soil	CMS-418	0	1	1,1,1-trichloroethane	0.0045	MG/KG	U	540	160	NA	NA
Allendale soil	CMS-418	1	2	1,1,1-trichloroethane	0.0054	MG/KG	U	540	160	NA	NA
Allendale soil	CMS-418	0	1	1,1,2-trichloroethane	0.0045	MG/KG	U	3.6	nc	NA	NA
Allendale soil	CMS-418	1	2	1,1,2-trichloroethane	0.0054	MG/KG	U	3.6	nc	NA	NA
Allendale soil	CMS-418	0	1	Trichloroethene	0.0045	MG/KG	U	13	20	NA	NA
Allendale soil	CMS-418	1	2	Trichloroethene	0.0054	MG/KG	U	13	20	NA	NA
Allendale soil	CMS-418	0	1	Vinyl Chloride	0.0045	MG/KG	U	0.02	nc	NA	NA
Allendale soil	CMS-418	1	2	Vinyl Chloride	0.0054	MG/KG	U	0.02	nc	NA	NA
Allendale soil	CMS-418	0	1	Total Xylenes	0.0045	MG/KG	U	110	nc	NA	NA
Allendale soil	CMS-418	1	2	Total Xylenes	0.0054	MG/KG	U	110	nc	NA	NA
Semivolatiles											
Lyman Mill soil	LPX-FP-4004	0	0.5	Acenaphthene	0.01054	MG/KG	J	43	nc	NA	N
Lyman Mill soil	LPX-FP-4006	0	0.5	Acenaphthene	0.02138	MG/KG		43	nc	NA	N
Lyman Mill soil	LPX-FP-4007	0	0.5	Acenaphthene	0.07158	MG/KG		43	nc	NA	N
Allendale soil	CMS-418	0	1	Acenaphthene	0.13	MG/KG	J	43	nc	NA	N
Allendale soil	CMS-418	1	2	Acenaphthene	0.087	MG/KG	J	43	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Acenaphthene	0.0140	MG/KG	J	43	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Acenaphthene	0.0047	MG/KG	J	43	nc	NA	N
Lyman Mill soil	LPX-4113	0	0.5	Acenaphthene	2.5895	MG/KG		43	nc	NA	N
Lyman Mill soil	LPX-4114	0	0.5	Acenaphthene	0.0103	MG/KG		43	nc	NA	N
Allendale soil	SS-04	0	1.5	Acenaphthene	0.21	MG/KG	J	43	nc	NA	N
Allendale soil	SS-05	0	1.5	Acenaphthene	0.48	MG/KG	U	43	nc	NA	NA
Allendale soil	RES-14-421-01	0	1	Acenaphthene	0.37	MG/KG	U	43	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	Acenaphthene	0.46	MG/KG	U	43	nc	NA	NA
Lyman Mill soil	RES-10-005-01	0	1	Acenaphthene	3.3	MG/KG	U	43	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	Acenaphthene	0.82	MG/KG	U	43	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Acenaphthene	4.3	MG/KG	U	43	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	Acenaphthene	0.5	MG/KG	U	43	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	Acenaphthene	2	MG/KG	U	43	nc	NA	NA
Lyman Mill soil	RES-10-074-01	0	1	Acenaphthene	5	MG/KG	U	43	nc	NA	NA
Lyman Mill soil	RES-10-075-01	0	1	Acenaphthene	9.2	MG/KG	U	43	nc	NA	NA
Lyman Mill soil	RES-10-076-01	0	1	Acenaphthene	9.7	MG/KG	U	43	nc	NA	NA
Lyman Mill soil	RES-10-604-01	0	1	Acenaphthene	3.1	MG/KG	U	43	nc	NA	NA
Lyman Mill soil	RES-11-011-01	0	1	Acenaphthene	0.53	MG/KG	U	43	nc	NA	NA
Lyman Mill soil	RES-11-012-01	0	1	Acenaphthene	0.12	MG/KG	J	43	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-11-328-01	0	1	Acenaphthene	2.7	MG/KG	U	43	nc	NA	NA
Lyman Mill soil	RES-11-419-01	0	1	Acenaphthene	4	MG/KG	U	43	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	Acenaphthene	0.46	MG/KG	U	43	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	Acenaphthene	0.47	MG/KG	U	43	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	Acenaphthene	0.41	MG/KG	U	43	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	Acenaphthene	14	MG/KG	J	43	nc	NA	N
Lyman Mill soil	RES-11-426-01	0	1	Acenaphthene	0.37	MG/KG	U	43	nc	NA	NA
Lyman Mill soil	RES-11-427-01	0	1	Acenaphthene	0.36	MG/KG	U	43	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	Acenaphthene	0.08	MG/KG	J	43	nc	NA	N
Lyman Mill soil	RES-11-429-01	0	1	Acenaphthene	0.4	MG/KG	UJ	43	nc	NA	NA
Lyman Mill soil	RES-11-430-01	0	1	Acenaphthene	0.37	MG/KG	U	43	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	Acenaphthene	2	MG/KG	U	43	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	Acenaphthene	3.5	MG/KG	U	43	nc	NA	NA
Lyman Mill soil	RES-11-486-01	0	1	Acenaphthene	4.8	MG/KG	U	43	nc	NA	NA
Lyman Mill soil	RES-11-497-01	0	1	Acenaphthene	0.44	MG/KG	U	43	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	Acenaphthene	3.9	MG/KG	U	43	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	Acenaphthene	4	MG/KG	U	43	nc	NA	NA
Lyman Mill soil	RES-12-560-01	0	1	Acenaphthene	2	MG/KG	U	43	nc	NA	NA
Lyman Mill soil	RES-12-560-02	0	1	Acenaphthene	0.24	MG/KG	J	43	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	Acenaphthene	4.4	MG/KG	U	43	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	Acenaphthene	0.48	MG/KG	U	43	nc	NA	NA
Lyman Mill soil	LPX-FP-4004	0	0.5	Acenaphthylene	0.02823	MG/KG	J	23	nc	NA	N
Lyman Mill soil	LPX-FP-4006	0	0.5	Acenaphthylene	0.01934	MG/KG		23	nc	NA	N
Lyman Mill soil	LPX-FP-4007	0	0.5	Acenaphthylene	0.21323	MG/KG		23	nc	NA	N
Allendale soil	CMS-418	0	1	Acenaphthylene	0.83	MG/KG	J	23	nc	NA	N
Allendale soil	CMS-418	1	2	Acenaphthylene	0.13	MG/KG	J	23	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Acenaphthylene	0.0138	MG/KG	J	23	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Acenaphthylene	0.0071	MG/KG	J	23	nc	NA	N
Lyman Mill soil	LPX-4113	0	0.5	Acenaphthylene	0.1520	MG/KG		23	nc	NA	N
Lyman Mill soil	LPX-4114	0	0.5	Acenaphthylene	0.0134	MG/KG		23	nc	NA	N
Allendale soil	SS-04	0	1.5	Acenaphthylene	0.38	MG/KG	J	23	nc	NA	N
Allendale soil	SS-05	0	1.5	Acenaphthylene	0.058	MG/KG	J	23	nc	NA	N
Allendale soil	RES-14-421-01	0	1	Acenaphthylene	0.37	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	Acenaphthylene	0.46	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-10-005-01	0	1	Acenaphthylene	3.3	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	Acenaphthylene	0.82	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Acenaphthylene	4.3	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	Acenaphthylene	0.5	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	Acenaphthylene	2	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-10-074-01	0	1	Acenaphthylene	5	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-10-075-01	0	1	Acenaphthylene	3.1	MG/KG	J	23	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-10-076-01	0	1	Acenaphthylene	9.7	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-10-604-01	0	1	Acenaphthylene	3.1	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-11-011-01	0	1	Acenaphthylene	0.3	MG/KG	J	23	nc	NA	N
Lyman Mill soil	RES-11-012-01	0	1	Acenaphthylene	0.16	MG/KG	J	23	nc	NA	N
Lyman Mill soil	RES-11-328-01	0	1	Acenaphthylene	2.7	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-11-419-01	0	1	Acenaphthylene	4	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	Acenaphthylene	0.46	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	Acenaphthylene	0.47	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	Acenaphthylene	0.41	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	Acenaphthylene	110	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-11-426-01	0	1	Acenaphthylene	0.37	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-11-427-01	0	1	Acenaphthylene	0.36	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	Acenaphthylene	0.44	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-11-429-01	0	1	Acenaphthylene	0.4	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-11-430-01	0	1	Acenaphthylene	0.37	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	Acenaphthylene	2	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	Acenaphthylene	3.5	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-11-486-01	0	1	Acenaphthylene	4.8	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-11-497-01	0	1	Acenaphthylene	0.44	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	Acenaphthylene	3.9	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	Acenaphthylene	4	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-12-560-01	0	1	Acenaphthylene	2	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-12-560-02	0	1	Acenaphthylene	2.1	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Acenaphthylene	4.4	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	Acenaphthylene	0.48	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	LPX-FP-4004	0	0.5	Anthracene	0.04475	MG/KG	J	35	nc	NA	N
Lyman Mill soil	LPX-FP-4006	0	0.5	Anthracene	0.05724	MG/KG		35	nc	NA	N
Lyman Mill soil	LPX-FP-4007	0	0.5	Anthracene	0.27532	MG/KG		35	nc	NA	N
Allendale soil	CMS-418	0	1	Anthracene	0.9	MG/KG	J	35	nc	NA	N
Allendale soil	CMS-418	1	2	Anthracene	0.3	MG/KG	J	35	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Anthracene	0.0350	MG/KG	J	35	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Anthracene	0.0159	MG/KG	J	35	nc	NA	N
Lyman Mill soil	LPX-4113	0	0.5	Anthracene	3.3811	MG/KG		35	nc	NA	N
Lyman Mill soil	LPX-4114	0	0.5	Anthracene	0.0284	MG/KG		35	nc	NA	N
Allendale soil	SS-04	0	1.5	Anthracene	0.52	MG/KG		35	nc	NA	N
Allendale soil	SS-05	0	1.5	Anthracene	0.12	MG/KG	J	35	nc	NA	N
Allendale soil	RES-14-421-01	0	1	Anthracene	0.37	MG/KG	U	35	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	Anthracene	0.018	MG/KG	J	35	nc	NA	N
Lyman Mill soil	RES-10-005-01	0	1	Anthracene	3.3	MG/KG	U	35	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	Anthracene	0.017	MG/KG	J	35	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	Anthracene	0.14	MG/KG	J	35	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-10-053-01	0	1	Anthracene	0.5	MG/KG	U	35	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	Anthracene	0.036	MG/KG	J	35	nc	NA	N
Lyman Mill soil	RES-10-074-01	0	1	Anthracene	0.65	MG/KG	J	35	nc	NA	N
Lyman Mill soil	RES-10-075-01	0	1	Anthracene	2.6	MG/KG	J	35	nc	NA	N
Lyman Mill soil	RES-10-076-01	0	1	Anthracene	1.6	MG/KG	J	35	nc	NA	N
Lyman Mill soil	RES-10-604-01	0	1	Anthracene	0.05	MG/KG	J	35	nc	NA	N
Lyman Mill soil	RES-11-011-01	0	1	Anthracene	0.22	MG/KG	J	35	nc	NA	N
Lyman Mill soil	RES-11-012-01	0	1	Anthracene	0.35	MG/KG	J	35	nc	NA	N
Lyman Mill soil	RES-11-328-01	0	1	Anthracene	2.7	MG/KG	U	35	nc	NA	NA
Lyman Mill soil	RES-11-419-01	0	1	Anthracene	4	MG/KG	U	35	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	Anthracene	0.46	MG/KG	U	35	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	Anthracene	0.47	MG/KG	U	35	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	Anthracene	0.41	MG/KG	U	35	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	Anthracene	40	MG/KG	J	35	nc	NA	Y
Lyman Mill soil	RES-11-426-01	0	1	Anthracene	0.026	MG/KG	J	35	nc	NA	N
Lyman Mill soil	RES-11-427-01	0	1	Anthracene	0.36	MG/KG	U	35	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	Anthracene	0.12	MG/KG	J	35	nc	NA	N
Lyman Mill soil	RES-11-429-01	0	1	Anthracene	0.027	MG/KG	J	35	nc	NA	N
Lyman Mill soil	RES-11-430-01	0	1	Anthracene	0.37	MG/KG	U	35	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	Anthracene	2	MG/KG	U	35	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	Anthracene	3.5	MG/KG	U	35	nc	NA	NA
Lyman Mill soil	RES-11-486-01	0	1	Anthracene	4.8	MG/KG	U	35	nc	NA	NA
Lyman Mill soil	RES-11-497-01	0	1	Anthracene	0.44	MG/KG	U	35	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	Anthracene	3.9	MG/KG	U	35	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	Anthracene	0.43	MG/KG	J	35	nc	NA	N
Lyman Mill soil	RES-12-560-01	0	1	Anthracene	0.068	MG/KG	J	35	nc	NA	N
Lyman Mill soil	RES-12-560-02	0	1	Anthracene	0.63	MG/KG	J	35	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	Anthracene	0.11	MG/KG	J	35	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Anthracene	0.48	MG/KG	U	35	nc	NA	NA
Lyman Mill soil	LPX-FP-4004	0	0.5	Benzo(a)anthracene	0.29695	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	LPX-FP-4006	0	0.5	Benzo(a)anthracene	0.24599	MG/KG		0.9	nc	NA	N
Lyman Mill soil	LPX-FP-4007	0	0.5	Benzo(a)anthracene	1.74881	MG/KG		0.9	nc	NA	Y
Allendale soil	CMS-418	0	1	Benzo(a)anthracene	1.9	MG/KG	J	0.9	nc	NA	Y
Allendale soil	CMS-418	1	2	Benzo(a)anthracene	0.92	MG/KG		0.9	nc	NA	Y
Lyman Mill soil	LPX-4112	0	0.5	Benzo(a)anthracene	0.1418	MG/KG		0.9	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Benzo(a)anthracene	0.1047	MG/KG		0.9	nc	NA	N
Lyman Mill soil	LPX-4113	0	0.5	Benzo(a)anthracene	7.3008	MG/KG		0.9	nc	NA	Y
Lyman Mill soil	LPX-4114	0	0.5	Benzo(a)anthracene	0.1725	MG/KG		0.9	nc	NA	N
Allendale soil	SS-04	0	1.5	Benzo(a)anthracene	2.4	MG/KG		0.9	nc	NA	Y
Allendale soil	SS-05	0	1.5	Benzo(a)anthracene	0.46	MG/KG	J	0.9	nc	NA	N
Allendale soil	RES-14-421-01	0	1	Benzo(a)anthracene	0.37	MG/KG	U	0.9	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-10-004-01	0	1	Benzo(a)anthracene	0.12	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-10-005-01	0	1	Benzo(a)anthracene	3.3	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	Benzo(a)anthracene	0.12	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	Benzo(a)anthracene	0.49	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Benzo(a)anthracene	0.084	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-10-068-01	0	1	Benzo(a)anthracene	0.23	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-10-074-01	0	1	Benzo(a)anthracene	2.1	MG/KG	J	0.9	nc	NA	Y
Lyman Mill soil	RES-10-075-01	0	1	Benzo(a)anthracene	17	MG/KG		0.9	nc	NA	Y
Lyman Mill soil	RES-10-076-01	0	1	Benzo(a)anthracene	7.2	MG/KG	J	0.9	nc	NA	Y
Lyman Mill soil	RES-10-604-01	0	1	Benzo(a)anthracene	0.4	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-011-01	0	1	Benzo(a)anthracene	0.76	MG/KG		0.9	nc	NA	N
Lyman Mill soil	RES-11-012-01	0	1	Benzo(a)anthracene	1.3	MG/KG	J	0.9	nc	NA	Y
Lyman Mill soil	RES-11-328-01	0	1	Benzo(a)anthracene	0.46	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-419-01	0	1	Benzo(a)anthracene	0.3	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-420-01	0	1	Benzo(a)anthracene	0.12	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-422-01	0	1	Benzo(a)anthracene	0.092	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-423-01	0	1	Benzo(a)anthracene	0.41	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	Benzo(a)anthracene	140	MG/KG		0.9	nc	NA	Y
Lyman Mill soil	RES-11-426-01	0	1	Benzo(a)anthracene	0.098	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-427-01	0	1	Benzo(a)anthracene	0.03	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-428-01	0	1	Benzo(a)anthracene	0.43	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-429-01	0	1	Benzo(a)anthracene	0.1	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-430-01	0	1	Benzo(a)anthracene	0.035	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-431-01	0	1	Benzo(a)anthracene	0.13	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-432-01	0	1	Benzo(a)anthracene	3.5	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-433-01	0	1	Benzo(a)anthracene	0.61	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-486-01	0	1	Benzo(a)anthracene	0.64	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-497-01	0	1	Benzo(a)anthracene	0.44	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	Benzo(a)anthracene	3.9	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	Benzo(a)anthracene	2.6	MG/KG	J	0.9	nc	NA	Y
Lyman Mill soil	RES-12-560-01	0	1	Benzo(a)anthracene	0.28	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-12-560-02	0	1	Benzo(a)anthracene	2.3	MG/KG		0.9	nc	NA	Y
Lyman Mill soil	RES-10-044-01	0	1	Benzo(a)anthracene	0.58	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Benzo(a)anthracene	0.48	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	LPX-FP-4004	0	0.5	Benzo(a)pyrene	0.34967	MG/KG	J	0.4	nc	NA	N
Lyman Mill soil	LPX-FP-4006	0	0.5	Benzo(a)pyrene	0.28137	MG/KG		0.4	nc	NA	N
Lyman Mill soil	LPX-FP-4007	0	0.5	Benzo(a)pyrene	2.06637	MG/KG		0.4	nc	NA	Y
Allendale soil	CMS-418	0	1	Benzo(a)pyrene	1.5	MG/KG	J	0.4	nc	NA	Y
Allendale soil	CMS-418	1	2	Benzo(a)pyrene	0.76	MG/KG		0.4	nc	NA	Y
Lyman Mill soil	LPX-4112	0	0.5	Benzo(a)pyrene	0.1117	MG/KG		0.4	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Benzo(a)pyrene	0.0863	MG/KG		0.4	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	LPX-4113	0	0.5	Benzo(a)pyrene	5.1158	MG/KG		0.4	nc	NA	Y
Lyman Mill soil	LPX-4114	0	0.5	Benzo(a)pyrene	0.1278	MG/KG		0.4	nc	NA	N
Allendale soil	SS-04	0	1.5	Benzo(a)pyrene	2.6	MG/KG		0.4	nc	NA	Y
Allendale soil	SS-05	0	1.5	Benzo(a)pyrene	0.5	MG/KG		0.4	nc	NA	Y
Allendale soil	RES-14-421-01	0	1	Benzo(a)pyrene	0.37	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	Benzo(a)pyrene	0.11	MG/KG	J	0.4	nc	NA	N
Lyman Mill soil	RES-10-005-01	0	1	Benzo(a)pyrene	3.3	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	Benzo(a)pyrene	0.12	MG/KG	J	0.4	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	Benzo(a)pyrene	0.42	MG/KG	J	0.4	nc	NA	Y
Lyman Mill soil	RES-10-053-01	0	1	Benzo(a)pyrene	0.1	MG/KG	J	0.4	nc	NA	N
Lyman Mill soil	RES-10-068-01	0	1	Benzo(a)pyrene	0.24	MG/KG	J	0.4	nc	NA	N
Lyman Mill soil	RES-10-074-01	0	1	Benzo(a)pyrene	1.8	MG/KG	J	0.4	nc	NA	Y
Lyman Mill soil	RES-10-075-01	0	1	Benzo(a)pyrene	20	MG/KG		0.4	nc	NA	Y
Lyman Mill soil	RES-10-076-01	0	1	Benzo(a)pyrene	8.6	MG/KG	J	0.4	nc	NA	Y
Lyman Mill soil	RES-10-604-01	0	1	Benzo(a)pyrene	0.44	MG/KG	J	0.4	nc	NA	Y
Lyman Mill soil	RES-11-011-01	0	1	Benzo(a)pyrene	0.96	MG/KG		0.4	nc	NA	Y
Lyman Mill soil	RES-11-012-01	0	1	Benzo(a)pyrene	1.7	MG/KG	J	0.4	nc	NA	Y
Lyman Mill soil	RES-11-328-01	0	1	Benzo(a)pyrene	0.61	MG/KG	J	0.4	nc	NA	Y
Lyman Mill soil	RES-11-419-01	0	1	Benzo(a)pyrene	0.5	MG/KG	J	0.4	nc	NA	Y
Lyman Mill soil	RES-11-420-01	0	1	Benzo(a)pyrene	0.14	MG/KG	J	0.4	nc	NA	N
Lyman Mill soil	RES-11-422-01	0	1	Benzo(a)pyrene	0.12	MG/KG	J	0.4	nc	NA	N
Lyman Mill soil	RES-11-423-01	0	1	Benzo(a)pyrene	0.41	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	Benzo(a)pyrene	110	MG/KG	J	0.4	nc	NA	Y
Lyman Mill soil	RES-11-426-01	0	1	Benzo(a)pyrene	0.12	MG/KG	J	0.4	nc	NA	N
Lyman Mill soil	RES-11-427-01	0	1	Benzo(a)pyrene	0.36	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	Benzo(a)pyrene	0.42	MG/KG	J	0.4	nc	NA	Y
Lyman Mill soil	RES-11-429-01	0	1	Benzo(a)pyrene	0.062	MG/KG	J	0.4	nc	NA	N
Lyman Mill soil	RES-11-430-01	0	1	Benzo(a)pyrene	0.37	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	Benzo(a)pyrene	2	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	Benzo(a)pyrene	3.5	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-433-01	0	1	Benzo(a)pyrene	0.6	MG/KG	J	0.4	nc	NA	Y
Lyman Mill soil	RES-11-486-01	0	1	Benzo(a)pyrene	0.84	MG/KG	J	0.4	nc	NA	Y
Lyman Mill soil	RES-11-497-01	0	1	Benzo(a)pyrene	0.44	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	Benzo(a)pyrene	3.9	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	Benzo(a)pyrene	3.2	MG/KG	J	0.4	nc	NA	Y
Lyman Mill soil	RES-12-560-01	0	1	Benzo(a)pyrene	0.34	MG/KG	J	0.4	nc	NA	N
Lyman Mill soil	RES-12-560-02	0	1	Benzo(a)pyrene	2	MG/KG	J	0.4	nc	NA	Y
Lyman Mill soil	RES-10-044-01	0	1	Benzo(a)pyrene	0.53	MG/KG	J	0.4	nc	NA	Y
Lyman Mill soil	RES-10-053-01	0	1	Benzo(a)pyrene	0.48	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	LPX-FP-4004	0	0.5	Benzo(b)fluoranthene	0.419	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	LPX-FP-4006	0	0.5	Benzo(b)fluoranthene	0.29653	MG/KG		0.9	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	LPX-FP-4007	0	0.5	Benzo(b)fluoranthene	2.81441	MG/KG		0.9	nc	NA	Y
Allendale soil	CMS-418	0	1	Benzo(b)fluoranthene	0.33	MG/KG	UJ	0.9	nc	NA	NA
Allendale soil	CMS-418	1	2	Benzo(b)fluoranthene	0.37	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	LPX-4112	0	0.5	Benzo(b)fluoranthene	0.1406	MG/KG		0.9	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Benzo(b)fluoranthene	0.1225	MG/KG		0.9	nc	NA	N
Lyman Mill soil	LPX-4113	0	0.5	Benzo(b)fluoranthene	5.1383	MG/KG		0.9	nc	NA	Y
Lyman Mill soil	LPX-4114	0	0.5	Benzo(b)fluoranthene	0.2066	MG/KG		0.9	nc	NA	N
Allendale soil	SS-04	0	1.5	Benzo(b)fluoranthene	3.2	MG/KG	*	0.9	nc	NA	Y
Allendale soil	SS-05	0	1.5	Benzo(b)fluoranthene	0.67	MG/KG		0.9	nc	NA	N
Allendale soil	RES-14-421-01	0	1	Benzo(b)fluoranthene	0.37	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	Benzo(b)fluoranthene	0.12	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-10-005-01	0	1	Benzo(b)fluoranthene	3.3	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	Benzo(b)fluoranthene	0.11	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	Benzo(b)fluoranthene	0.41	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Benzo(b)fluoranthene	0.5	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	Benzo(b)fluoranthene	0.29	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-10-074-01	0	1	Benzo(b)fluoranthene	1.4	MG/KG	J	0.9	nc	NA	Y
Lyman Mill soil	RES-10-075-01	0	1	Benzo(b)fluoranthene	20	MG/KG		0.9	nc	NA	Y
Lyman Mill soil	RES-10-076-01	0	1	Benzo(b)fluoranthene	9	MG/KG	J	0.9	nc	NA	Y
Lyman Mill soil	RES-10-604-01	0	1	Benzo(b)fluoranthene	0.55	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-011-01	0	1	Benzo(b)fluoranthene	1.5	MG/KG		0.9	nc	NA	Y
Lyman Mill soil	RES-11-012-01	0	1	Benzo(b)fluoranthene	3.1	MG/KG	J	0.9	nc	NA	Y
Lyman Mill soil	RES-11-328-01	0	1	Benzo(b)fluoranthene	1	MG/KG	J	0.9	nc	NA	Y
Lyman Mill soil	RES-11-419-01	0	1	Benzo(b)fluoranthene	0.42	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-420-01	0	1	Benzo(b)fluoranthene	0.17	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-422-01	0	1	Benzo(b)fluoranthene	0.2	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-423-01	0	1	Benzo(b)fluoranthene	0.41	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	Benzo(b)fluoranthene	120	MG/KG		0.9	nc	NA	Y
Lyman Mill soil	RES-11-426-01	0	1	Benzo(b)fluoranthene	0.14	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-427-01	0	1	Benzo(b)fluoranthene	0.038	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-428-01	0	1	Benzo(b)fluoranthene	0.54	MG/KG		0.9	nc	NA	N
Lyman Mill soil	RES-11-429-01	0	1	Benzo(b)fluoranthene	0.13	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-430-01	0	1	Benzo(b)fluoranthene	0.039	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-431-01	0	1	Benzo(b)fluoranthene	2	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	Benzo(b)fluoranthene	0.44	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-433-01	0	1	Benzo(b)fluoranthene	0.7	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-486-01	0	1	Benzo(b)fluoranthene	1.2	MG/KG	J	0.9	nc	NA	Y
Lyman Mill soil	RES-11-497-01	0	1	Benzo(b)fluoranthene	0.44	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	Benzo(b)fluoranthene	0.21	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-12-556-01	0	1	Benzo(b)fluoranthene	3.1	MG/KG	J	0.9	nc	NA	Y
Lyman Mill soil	RES-12-560-01	0	1	Benzo(b)fluoranthene	0.38	MG/KG	J	0.9	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-12-560-02	0	1	Benzo(b)fluoranthene	1.8	MG/KG	J	0.9	nc	NA	Y
Lyman Mill soil	RES-10-044-01	0	1	Benzo(b)fluoranthene	0.5	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Benzo(b)fluoranthene	0.48	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	LPX-FP-4004	0	0.5	Benzo(g,h,i)perylene	0.29644	MG/KG	J	0.8	nc	NA	N
Lyman Mill soil	LPX-FP-4006	0	0.5	Benzo(g,h,i)perylene	0.22254	MG/KG		0.8	nc	NA	N
Lyman Mill soil	LPX-FP-4007	0	0.5	Benzo(g,h,i)perylene	1.97047	MG/KG		0.8	nc	NA	Y
Allendale soil	CMS-418	0	1	Benzo(g,h,i)perylene	0.58	MG/KG	J	0.8	nc	NA	N
Allendale soil	CMS-418	1	2	Benzo(g,h,i)perylene	0.34	MG/KG	J	0.8	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Benzo(g,h,i)perylene	0.0906	MG/KG		0.8	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Benzo(g,h,i)perylene	0.0913	MG/KG		0.8	nc	NA	N
Lyman Mill soil	LPX-4113	0	0.5	Benzo(g,h,i)perylene	3.1727	MG/KG		0.8	nc	NA	Y
Lyman Mill soil	LPX-4114	0	0.5	Benzo(g,h,i)perylene	0.1352	MG/KG		0.8	nc	NA	N
Allendale soil	SS-04	0	1.5	Benzo(g,h,i)perylene	1.3	MG/KG		0.8	nc	NA	Y
Allendale soil	SS-05	0	1.5	Benzo(g,h,i)perylene	0.31	MG/KG	J	0.8	nc	NA	N
Allendale soil	RES-14-421-01	0	1	Benzo(g,h,i)perylene	0.37	MG/KG	UJ	0.8	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	Benzo(g,h,i)perylene	0.071	MG/KG	J	0.8	nc	NA	N
Lyman Mill soil	RES-10-005-01	0	1	Benzo(g,h,i)perylene	3.3	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	Benzo(g,h,i)perylene	0.82	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Benzo(g,h,i)perylene	4.3	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	Benzo(g,h,i)perylene	0.5	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	Benzo(g,h,i)perylene	2	MG/KG	UJ	0.8	nc	NA	NA
Lyman Mill soil	RES-10-074-01	0	1	Benzo(g,h,i)perylene	1.3	MG/KG	J	0.8	nc	NA	Y
Lyman Mill soil	RES-10-075-01	0	1	Benzo(g,h,i)perylene	15	MG/KG	J	0.8	nc	NA	Y
Lyman Mill soil	RES-10-076-01	0	1	Benzo(g,h,i)perylene	7.2	MG/KG	J	0.8	nc	NA	Y
Lyman Mill soil	RES-10-604-01	0	1	Benzo(g,h,i)perylene	0.34	MG/KG	J	0.8	nc	NA	N
Lyman Mill soil	RES-11-011-01	0	1	Benzo(g,h,i)perylene	0.31	MG/KG	J	0.8	nc	NA	N
Lyman Mill soil	RES-11-012-01	0	1	Benzo(g,h,i)perylene	0.47	MG/KG	J	0.8	nc	NA	N
Lyman Mill soil	RES-11-328-01	0	1	Benzo(g,h,i)perylene	2.7	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-11-419-01	0	1	Benzo(g,h,i)perylene	4	MG/KG	UJ	0.8	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	Benzo(g,h,i)perylene	0.46	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	Benzo(g,h,i)perylene	0.47	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	Benzo(g,h,i)perylene	0.41	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	Benzo(g,h,i)perylene	58	MG/KG	J	0.8	nc	NA	Y
Lyman Mill soil	RES-11-426-01	0	1	Benzo(g,h,i)perylene	0.094	MG/KG	J	0.8	nc	NA	N
Lyman Mill soil	RES-11-427-01	0	1	Benzo(g,h,i)perylene	0.36	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	Benzo(g,h,i)perylene	0.083	MG/KG	J	0.8	nc	NA	N
Lyman Mill soil	RES-11-429-01	0	1	Benzo(g,h,i)perylene	0.072	MG/KG	J	0.8	nc	NA	N
Lyman Mill soil	RES-11-430-01	0	1	Benzo(g,h,i)perylene	0.37	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	Benzo(g,h,i)perylene	2	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	Benzo(g,h,i)perylene	3.5	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-11-433-01	0	1	Benzo(g,h,i)perylene	0.44	MG/KG	J	0.8	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-11-486-01	0	1	Benzo(g,h,i)perylene	4.8	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-11-497-01	0	1	Benzo(g,h,i)perylene	0.44	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	Benzo(g,h,i)perylene	3.9	MG/KG	UJ	0.8	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	Benzo(g,h,i)perylene	2.6	MG/KG	J	0.8	nc	NA	Y
Lyman Mill soil	RES-12-560-01	0	1	Benzo(g,h,i)perylene	0.2	MG/KG	J	0.8	nc	NA	N
Lyman Mill soil	RES-12-560-02	0	1	Benzo(g,h,i)perylene	1.3	MG/KG	J	0.8	nc	NA	Y
Lyman Mill soil	RES-10-044-01	0	1	Benzo(g,h,i)perylene	0.45	MG/KG	J	0.8	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Benzo(g,h,i)perylene	0.48	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	LPX-FP-4004	0	0.5	Benzo(k)fluoranthene	0.37161	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	LPX-FP-4006	0	0.5	Benzo(k)fluoranthene	0.27486	MG/KG		0.9	nc	NA	N
Lyman Mill soil	LPX-FP-4007	0	0.5	Benzo(k)fluoranthene	2.38312	MG/KG		0.9	nc	NA	Y
Allendale soil	CMS-418	0	1	Benzo(k)fluoranthene	3.1	MG/KG	J	0.9	nc	NA	Y
Allendale soil	CMS-418	1	2	Benzo(k)fluoranthene	1.4	MG/KG		0.9	nc	NA	Y
Lyman Mill soil	LPX-4112	0	0.5	Benzo(k)fluoranthene	0.1266	MG/KG		0.9	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Benzo(k)fluoranthene	0.1100	MG/KG		0.9	nc	NA	N
Lyman Mill soil	LPX-4113	0	0.5	Benzo(k)fluoranthene	5.7184	MG/KG		0.9	nc	NA	Y
Lyman Mill soil	LPX-4114	0	0.5	Benzo(k)fluoranthene	0.1815	MG/KG		0.9	nc	NA	N
Allendale soil	SS-04	0	1.5	Benzo(k)fluoranthene	0.96	MG/KG		0.9	nc	NA	Y
Allendale soil	SS-05	0	1.5	Benzo(k)fluoranthene	0.26	MG/KG	J	0.9	nc	NA	N
Allendale soil	RES-14-421-01	0	1	Benzo(k)fluoranthene	0.37	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	Benzo(k)fluoranthene	0.12	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-10-005-01	0	1	Benzo(k)fluoranthene	3.3	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	Benzo(k)fluoranthene	0.11	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	Benzo(k)fluoranthene	0.37	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Benzo(k)fluoranthene	0.5	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	Benzo(k)fluoranthene	0.21	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-10-074-01	0	1	Benzo(k)fluoranthene	1.8	MG/KG	J	0.9	nc	NA	Y
Lyman Mill soil	RES-10-075-01	0	1	Benzo(k)fluoranthene	23	MG/KG		0.9	nc	NA	Y
Lyman Mill soil	RES-10-076-01	0	1	Benzo(k)fluoranthene	9.6	MG/KG	J	0.9	nc	NA	Y
Lyman Mill soil	RES-10-604-01	0	1	Benzo(k)fluoranthene	0.43	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-011-01	0	1	Benzo(k)fluoranthene	1.6	MG/KG		0.9	nc	NA	Y
Lyman Mill soil	RES-11-012-01	0	1	Benzo(k)fluoranthene	2.7	MG/KG	J	0.9	nc	NA	Y
Lyman Mill soil	RES-11-328-01	0	1	Benzo(k)fluoranthene	0.85	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-419-01	0	1	Benzo(k)fluoranthene	0.54	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-420-01	0	1	Benzo(k)fluoranthene	0.19	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-422-01	0	1	Benzo(k)fluoranthene	0.13	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-423-01	0	1	Benzo(k)fluoranthene	0.41	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	Benzo(k)fluoranthene	100	MG/KG	J	0.9	nc	NA	Y
Lyman Mill soil	RES-11-426-01	0	1	Benzo(k)fluoranthene	0.14	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-427-01	0	1	Benzo(k)fluoranthene	0.042	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-428-01	0	1	Benzo(k)fluoranthene	0.39	MG/KG	J	0.9	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-11-429-01	0	1	Benzo(k)fluoranthene	0.12	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-430-01	0	1	Benzo(k)fluoranthene	0.036	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-431-01	0	1	Benzo(k)fluoranthene	2	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	Benzo(k)fluoranthene	0.49	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-433-01	0	1	Benzo(k)fluoranthene	0.88	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-486-01	0	1	Benzo(k)fluoranthene	0.8	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-497-01	0	1	Benzo(k)fluoranthene	0.44	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	Benzo(k)fluoranthene	0.25	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-12-556-01	0	1	Benzo(k)fluoranthene	4	MG/KG	J	0.9	nc	NA	Y
Lyman Mill soil	RES-12-560-01	0	1	Benzo(k)fluoranthene	0.38	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-12-560-02	0	1	Benzo(k)fluoranthene	2.3	MG/KG		0.9	nc	NA	Y
Lyman Mill soil	RES-10-044-01	0	1	Benzo(k)fluoranthene	0.53	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Benzo(k)fluoranthene	0.48	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	LPX-FP-4004	0	0.5	1,1'-biphenyl	0.00328	MG/KG	J	0.8	nc	NA	N
Lyman Mill soil	LPX-FP-4006	0	0.5	1,1'-biphenyl	0.01552	MG/KG		0.8	nc	NA	N
Lyman Mill soil	LPX-FP-4007	0	0.5	1,1'-biphenyl	0.01551	MG/KG		0.8	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	1,1'-biphenyl	0.0028	MG/KG		0.8	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	1,1'-biphenyl	0.0011	MG/KG		0.8	nc	NA	N
Lyman Mill soil	LPX-4113	0	0.5	1,1'-biphenyl	0.5028	MG/KG		0.8	nc	NA	N
Lyman Mill soil	LPX-4114	0	0.5	1,1'-biphenyl	0.0022	MG/KG		0.8	nc	NA	N
Allendale soil	RES-14-421-01	0	1	1,1'-biphenyl	0.37	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	1,1'-biphenyl	0.46	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-10-005-01	0	1	1,1'-biphenyl	3.3	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	1,1'-biphenyl	0.12	MG/KG	J	0.8	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	1,1'-biphenyl	4.3	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	1,1'-biphenyl	0.5	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	1,1'-biphenyl	2	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-10-074-01	0	1	1,1'-biphenyl	5	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-10-075-01	0	1	1,1'-biphenyl	9.2	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-10-076-01	0	1	1,1'-biphenyl	9.7	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-10-604-01	0	1	1,1'-biphenyl	3.1	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-11-011-01	0	1	1,1'-biphenyl	0.53	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-11-012-01	0	1	1,1'-biphenyl	0.65	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-11-328-01	0	1	1,1'-biphenyl	2.7	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-11-419-01	0	1	1,1'-biphenyl	4	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	1,1'-biphenyl	0.46	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	1,1'-biphenyl	0.47	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	1,1'-biphenyl	0.41	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	1,1'-biphenyl	110	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-11-426-01	0	1	1,1'-biphenyl	0.37	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-11-427-01	0	1	1,1'-biphenyl	0.36	MG/KG	U	0.8	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-11-428-01	0	1	1,1'-biphenyl	0.44	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-11-429-01	0	1	1,1'-biphenyl	0.4	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-11-430-01	0	1	1,1'-biphenyl	0.37	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	1,1'-biphenyl	2	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	1,1'-biphenyl	3.5	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-11-486-01	0	1	1,1'-biphenyl	4.8	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-11-497-01	0	1	1,1'-biphenyl	0.44	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	1,1'-biphenyl	3.9	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	1,1'-biphenyl	4	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-12-560-01	0	1	1,1'-biphenyl	2	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-12-560-02	0	1	1,1'-biphenyl	2.1	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	1,1'-biphenyl	4.4	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	1,1'-biphenyl	0.48	MG/KG	U	0.8	nc	NA	NA
Lyman Mill soil	LPX-FP-4004	0	0.5	Bis(2-ethylhexyl)phthalate	0.31	MG/KG	J	46	nc	NA	N
Lyman Mill soil	LPX-FP-4006	0	0.5	Bis(2-ethylhexyl)phthalate	0.45	MG/KG	J	46	nc	NA	N
Lyman Mill soil	LPX-FP-4007	0	0.5	Bis(2-ethylhexyl)phthalate	1.6	MG/KG		46	nc	NA	N
Allendale soil	CMS-418	0	1	Bis(2-ethylhexyl)phthalate	0.18	MG/KG	J	46	nc	NA	N
Allendale soil	CMS-418	1	2	Bis(2-ethylhexyl)phthalate	0.42	MG/KG		46	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Bis(2-ethylhexyl)phthalate	0.22	MG/KG	J	46	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Bis(2-ethylhexyl)phthalate	0.28	MG/KG	J	46	nc	NA	N
Lyman Mill soil	LPX-4113	0	0.5	Bis(2-ethylhexyl)phthalate	0.065	MG/KG	J	46	nc	NA	N
Lyman Mill soil	LPX-4114	0	0.5	Bis(2-ethylhexyl)phthalate	0.28	MG/KG	J	46	nc	NA	N
Allendale soil	SS-04	0	1.5	Bis(2-ethylhexyl)phthalate	0.29	MG/KG	J	46	nc	NA	N
Allendale soil	SS-05	0	1.5	Bis(2-ethylhexyl)phthalate	0.16	MG/KG	J	46	nc	NA	N
Allendale soil	RES-14-421-01	0	1	Bis(2-ethylhexyl)phthalate	0.37	MG/KG	UJ	46	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	Bis(2-ethylhexyl)phthalate	0.061	MG/KG	J	46	nc	NA	N
Lyman Mill soil	RES-10-005-01	0	1	Bis(2-ethylhexyl)phthalate	3.3	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	Bis(2-ethylhexyl)phthalate	0.21	MG/KG	J	46	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	Bis(2-ethylhexyl)phthalate	0.55	MG/KG	J	46	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Bis(2-ethylhexyl)phthalate	0.17	MG/KG	J	46	nc	NA	N
Lyman Mill soil	RES-10-068-01	0	1	Bis(2-ethylhexyl)phthalate	0.58	MG/KG	J	46	nc	NA	N
Lyman Mill soil	RES-10-074-01	0	1	Bis(2-ethylhexyl)phthalate	5	MG/KG	UJ	46	nc	NA	NA
Lyman Mill soil	RES-10-075-01	0	1	Bis(2-ethylhexyl)phthalate	9.2	MG/KG	UJ	46	nc	NA	NA
Lyman Mill soil	RES-10-076-01	0	1	Bis(2-ethylhexyl)phthalate	9.7	MG/KG	UJ	46	nc	NA	NA
Lyman Mill soil	RES-10-604-01	0	1	Bis(2-ethylhexyl)phthalate	0.37	MG/KG	J	46	nc	NA	N
Lyman Mill soil	RES-11-011-01	0	1	Bis(2-ethylhexyl)phthalate	0.13	MG/KG	J	46	nc	NA	N
Lyman Mill soil	RES-11-012-01	0	1	Bis(2-ethylhexyl)phthalate	2.9	MG/KG		46	nc	NA	N
Lyman Mill soil	RES-11-328-01	0	1	Bis(2-ethylhexyl)phthalate	2.7	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-11-419-01	0	1	Bis(2-ethylhexyl)phthalate	4	MG/KG	UJ	46	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	Bis(2-ethylhexyl)phthalate	0.46	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	Bis(2-ethylhexyl)phthalate	0.6	MG/KG	U	46	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-11-423-01	0	1	Bis(2-ethylhexyl)phthalate	1.4	MG/KG	EB	46	nc	NA	N
Lyman Mill soil	RES-11-424-01	0	1	Bis(2-ethylhexyl)phthalate	110	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-11-426-01	0	1	Bis(2-ethylhexyl)phthalate	0.2	MG/KG	JEB	46	nc	NA	N
Lyman Mill soil	RES-11-427-01	0	1	Bis(2-ethylhexyl)phthalate	0.049	MG/KG	JEB	46	nc	NA	N
Lyman Mill soil	RES-11-428-01	0	1	Bis(2-ethylhexyl)phthalate	0.44	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-11-429-01	0	1	Bis(2-ethylhexyl)phthalate	0.056	MG/KG	JEB	46	nc	NA	N
Lyman Mill soil	RES-11-430-01	0	1	Bis(2-ethylhexyl)phthalate	0.39	MG/KG	EB	46	nc	NA	N
Lyman Mill soil	RES-11-431-01	0	1	Bis(2-ethylhexyl)phthalate	2	MG/KG	JEB	46	nc	NA	N
Lyman Mill soil	RES-11-432-01	0	1	Bis(2-ethylhexyl)phthalate	3.5	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-11-433-01	0	1	Bis(2-ethylhexyl)phthalate	1.9	MG/KG	J	46	nc	NA	N
Lyman Mill soil	RES-11-486-01	0	1	Bis(2-ethylhexyl)phthalate	4.8	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-11-497-01	0	1	Bis(2-ethylhexyl)phthalate	0.13	MG/KG	J	46	nc	NA	N
Lyman Mill soil	RES-11-577-01	0	1	Bis(2-ethylhexyl)phthalate	1.2	MG/KG	J	46	nc	NA	N
Lyman Mill soil	RES-12-556-01	0	1	Bis(2-ethylhexyl)phthalate	0.66	MG/KG	JEB	46	nc	NA	N
Lyman Mill soil	RES-12-560-01	0	1	Bis(2-ethylhexyl)phthalate	0.53	MG/KG	JEB	46	nc	NA	N
Lyman Mill soil	RES-12-560-02	0	1	Bis(2-ethylhexyl)phthalate	2.1	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Bis(2-ethylhexyl)phthalate	4.2	MG/KG	J	46	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Bis(2-ethylhexyl)phthalate	0.075	MG/KG	J	46	nc	NA	N
Allendale soil	CMS-418	0	1	Bis(2-chloroethyl)ether	0.33	MG/KG	UJ	0.6	nc	NA	NA
Allendale soil	CMS-418	1	2	Bis(2-chloroethyl)ether	0.37	MG/KG	U	0.6	nc	NA	NA
Allendale soil	SS-04	0	1.5	Bis(2-chloroethyl)ether	0.43	MG/KG	U	0.6	nc	NA	NA
Allendale soil	SS-05	0	1.5	Bis(2-chloroethyl)ether	0.48	MG/KG	U	0.6	nc	NA	NA
Allendale soil	RES-14-421-01	0	1	Bis(2-chloroethyl)ether	0.37	MG/KG	U	0.6	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	Bis(2-chloroethyl)ether	0.46	MG/KG	U	0.6	nc	NA	NA
Lyman Mill soil	RES-10-005-01	0	1	Bis(2-chloroethyl)ether	3.3	MG/KG	U	0.6	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	Bis(2-chloroethyl)ether	0.82	MG/KG	U	0.6	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Bis(2-chloroethyl)ether	4.3	MG/KG	U	0.6	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	Bis(2-chloroethyl)ether	0.5	MG/KG	U	0.6	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	Bis(2-chloroethyl)ether	2	MG/KG	U	0.6	nc	NA	NA
Lyman Mill soil	RES-10-074-01	0	1	Bis(2-chloroethyl)ether	5	MG/KG	U	0.6	nc	NA	NA
Lyman Mill soil	RES-10-075-01	0	1	Bis(2-chloroethyl)ether	9.2	MG/KG	U	0.6	nc	NA	NA
Lyman Mill soil	RES-10-076-01	0	1	Bis(2-chloroethyl)ether	9.7	MG/KG	U	0.6	nc	NA	NA
Lyman Mill soil	RES-10-604-01	0	1	Bis(2-chloroethyl)ether	3.1	MG/KG	U	0.6	nc	NA	NA
Lyman Mill soil	RES-11-011-01	0	1	Bis(2-chloroethyl)ether	0.53	MG/KG	U	0.6	nc	NA	NA
Lyman Mill soil	RES-11-012-01	0	1	Bis(2-chloroethyl)ether	0.65	MG/KG	U	0.6	nc	NA	NA
Lyman Mill soil	RES-11-328-01	0	1	Bis(2-chloroethyl)ether	2.7	MG/KG	U	0.6	nc	NA	NA
Lyman Mill soil	RES-11-419-01	0	1	Bis(2-chloroethyl)ether	4	MG/KG	U	0.6	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	Bis(2-chloroethyl)ether	0.46	MG/KG	U	0.6	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	Bis(2-chloroethyl)ether	0.47	MG/KG	U	0.6	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	Bis(2-chloroethyl)ether	0.41	MG/KG	U	0.6	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	Bis(2-chloroethyl)ether	110	MG/KG	UJ	0.6	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-11-426-01	0	1	Bis(2-chloroethyl)ether	0.37	MG/KG	U	0.6	nc	NA	NA
Lyman Mill soil	RES-11-427-01	0	1	Bis(2-chloroethyl)ether	0.36	MG/KG	U	0.6	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	Bis(2-chloroethyl)ether	0.44	MG/KG	U	0.6	nc	NA	NA
Lyman Mill soil	RES-11-429-01	0	1	Bis(2-chloroethyl)ether	0.4	MG/KG	UJ	0.6	nc	NA	NA
Lyman Mill soil	RES-11-430-01	0	1	Bis(2-chloroethyl)ether	0.37	MG/KG	U	0.6	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	Bis(2-chloroethyl)ether	2	MG/KG	U	0.6	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	Bis(2-chloroethyl)ether	3.5	MG/KG	U	0.6	nc	NA	NA
Lyman Mill soil	RES-11-486-01	0	1	Bis(2-chloroethyl)ether	4.8	MG/KG	U	0.6	nc	NA	NA
Lyman Mill soil	RES-11-497-01	0	1	Bis(2-chloroethyl)ether	0.44	MG/KG	U	0.6	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	Bis(2-chloroethyl)ether	3.9	MG/KG	U	0.6	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	Bis(2-chloroethyl)ether	4	MG/KG	U	0.6	nc	NA	NA
Lyman Mill soil	RES-12-560-01	0	1	Bis(2-chloroethyl)ether	2	MG/KG	U	0.6	nc	NA	NA
Lyman Mill soil	RES-12-560-02	0	1	Bis(2-chloroethyl)ether	2.1	MG/KG	UJ	0.6	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Bis(2-chloroethyl)ether	4.4	MG/KG	U	0.6	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	Bis(2-chloroethyl)ether	0.48	MG/KG	U	0.6	nc	NA	NA
Allendale soil	CMS-418	0	1	Bis-(2-chloroisopropyl)ether	0.33	MG/KG	UJ	9.1	nc	NA	NA
Allendale soil	CMS-418	1	2	Bis-(2-chloroisopropyl)ether	0.37	MG/KG	U	9.1	nc	NA	NA
Allendale soil	CMS-418	0	1	4-chloroaniline	0.33	MG/KG	UJ	310	nc	NA	NA
Allendale soil	CMS-418	1	2	4-chloroaniline	0.37	MG/KG	U	310	nc	NA	NA
Allendale soil	SS-04	0	1.5	4-chloroaniline	0.43	MG/KG	U	310	nc	NA	NA
Allendale soil	SS-05	0	1.5	4-chloroaniline	0.48	MG/KG	U	310	nc	NA	NA
Allendale soil	RES-14-421-01	0	1	4-chloroaniline	0.37	MG/KG	U	310	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	4-chloroaniline	0.46	MG/KG	U	310	nc	NA	NA
Lyman Mill soil	RES-10-005-01	0	1	4-chloroaniline	3.3	MG/KG	U	310	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	4-chloroaniline	0.82	MG/KG	U	310	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	4-chloroaniline	4.3	MG/KG	U	310	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	4-chloroaniline	0.5	MG/KG	U	310	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	4-chloroaniline	2	MG/KG	U	310	nc	NA	NA
Lyman Mill soil	RES-10-074-01	0	1	4-chloroaniline	5	MG/KG	U	310	nc	NA	NA
Lyman Mill soil	RES-10-075-01	0	1	4-chloroaniline	9.2	MG/KG	U	310	nc	NA	NA
Lyman Mill soil	RES-10-076-01	0	1	4-chloroaniline	9.7	MG/KG	U	310	nc	NA	NA
Lyman Mill soil	RES-10-604-01	0	1	4-chloroaniline	3.1	MG/KG	U	310	nc	NA	NA
Lyman Mill soil	RES-11-011-01	0	1	4-chloroaniline	0.53	MG/KG	U	310	nc	NA	NA
Lyman Mill soil	RES-11-012-01	0	1	4-chloroaniline	0.65	MG/KG	U	310	nc	NA	NA
Lyman Mill soil	RES-11-328-01	0	1	4-chloroaniline	2.7	MG/KG	U	310	nc	NA	NA
Lyman Mill soil	RES-11-419-01	0	1	4-chloroaniline	4	MG/KG	U	310	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	4-chloroaniline	0.46	MG/KG	U	310	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	4-chloroaniline	0.47	MG/KG	U	310	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	4-chloroaniline	0.41	MG/KG	U	310	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	4-chloroaniline	110	MG/KG	U	310	nc	NA	NA
Lyman Mill soil	RES-11-426-01	0	1	4-chloroaniline	0.37	MG/KG	U	310	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-11-427-01	0	1	4-chloroaniline	0.36	MG/KG	U	310	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	4-chloroaniline	0.44	MG/KG	U	310	nc	NA	NA
Lyman Mill soil	RES-11-429-01	0	1	4-chloroaniline	0.4	MG/KG	U	310	nc	NA	NA
Lyman Mill soil	RES-11-430-01	0	1	4-chloroaniline	0.37	MG/KG	U	310	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	4-chloroaniline	2	MG/KG	U	310	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	4-chloroaniline	3.5	MG/KG	U	310	nc	NA	NA
Lyman Mill soil	RES-11-486-01	0	1	4-chloroaniline	4.8	MG/KG	U	310	nc	NA	NA
Lyman Mill soil	RES-11-497-01	0	1	4-chloroaniline	0.44	MG/KG	U	310	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	4-chloroaniline	3.9	MG/KG	U	310	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	4-chloroaniline	4	MG/KG	U	310	nc	NA	NA
Lyman Mill soil	RES-12-560-01	0	1	4-chloroaniline	2	MG/KG	U	310	nc	NA	NA
Lyman Mill soil	RES-12-560-02	0	1	4-chloroaniline	2.1	MG/KG	U	310	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	4-chloroaniline	4.4	MG/KG	U	310	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	4-chloroaniline	0.48	MG/KG	U	310	nc	NA	NA
Allendale soil	CMS-418	0	1	2-chlorophenol	0.33	MG/KG	UJ	50	nc	NA	NA
Allendale soil	CMS-418	1	2	2-chlorophenol	0.37	MG/KG	U	50	nc	NA	NA
Allendale soil	SS-04	0	1.5	2-chlorophenol	0.43	MG/KG	U	50	nc	NA	NA
Allendale soil	SS-05	0	1.5	2-chlorophenol	0.48	MG/KG	U	50	nc	NA	NA
Allendale soil	RES-14-421-01	0	1	2-chlorophenol	0.37	MG/KG	U	50	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	2-chlorophenol	0.46	MG/KG	U	50	nc	NA	NA
Lyman Mill soil	RES-10-005-01	0	1	2-chlorophenol	3.3	MG/KG	U	50	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	2-chlorophenol	0.82	MG/KG	U	50	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	2-chlorophenol	4.3	MG/KG	U	50	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	2-chlorophenol	0.5	MG/KG	U	50	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	2-chlorophenol	2	MG/KG	U	50	nc	NA	NA
Lyman Mill soil	RES-10-074-01	0	1	2-chlorophenol	5	MG/KG	U	50	nc	NA	NA
Lyman Mill soil	RES-10-075-01	0	1	2-chlorophenol	9.2	MG/KG	U	50	nc	NA	NA
Lyman Mill soil	RES-10-076-01	0	1	2-chlorophenol	9.7	MG/KG	U	50	nc	NA	NA
Lyman Mill soil	RES-10-604-01	0	1	2-chlorophenol	3.1	MG/KG	U	50	nc	NA	NA
Lyman Mill soil	RES-11-011-01	0	1	2-chlorophenol	0.53	MG/KG	U	50	nc	NA	NA
Lyman Mill soil	RES-11-012-01	0	1	2-chlorophenol	0.65	MG/KG	U	50	nc	NA	NA
Lyman Mill soil	RES-11-328-01	0	1	2-chlorophenol	2.7	MG/KG	U	50	nc	NA	NA
Lyman Mill soil	RES-11-419-01	0	1	2-chlorophenol	4	MG/KG	U	50	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	2-chlorophenol	0.46	MG/KG	U	50	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	2-chlorophenol	0.47	MG/KG	U	50	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	2-chlorophenol	0.41	MG/KG	U	50	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	2-chlorophenol	110	MG/KG	U	50	nc	NA	NA
Lyman Mill soil	RES-11-426-01	0	1	2-chlorophenol	0.37	MG/KG	U	50	nc	NA	NA
Lyman Mill soil	RES-11-427-01	0	1	2-chlorophenol	0.36	MG/KG	U	50	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	2-chlorophenol	0.44	MG/KG	U	50	nc	NA	NA
Lyman Mill soil	RES-11-429-01	0	1	2-chlorophenol	0.4	MG/KG	U	50	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-11-430-01	0	1	2-chlorophenol	0.37	MG/KG	U	50	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	2-chlorophenol	2	MG/KG	U	50	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	2-chlorophenol	3.5	MG/KG	U	50	nc	NA	NA
Lyman Mill soil	RES-11-486-01	0	1	2-chlorophenol	4.8	MG/KG	U	50	nc	NA	NA
Lyman Mill soil	RES-11-497-01	0	1	2-chlorophenol	0.44	MG/KG	U	50	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	2-chlorophenol	3.9	MG/KG	U	50	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	2-chlorophenol	4	MG/KG	U	50	nc	NA	NA
Lyman Mill soil	RES-12-560-01	0	1	2-chlorophenol	2	MG/KG	U	50	nc	NA	NA
Lyman Mill soil	RES-12-560-02	0	1	2-chlorophenol	2.1	MG/KG	U	50	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	2-chlorophenol	4.4	MG/KG	U	50	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	2-chlorophenol	0.48	MG/KG	U	50	nc	NA	NA
Lyman Mill soil	LPX-FP-4004	0	0.5	Chrysene	0.45735	MG/KG	J	0.4	nc	NA	Y
Lyman Mill soil	LPX-FP-4006	0	0.5	Chrysene	0.32025	MG/KG		0.4	nc	NA	N
Lyman Mill soil	LPX-FP-4007	0	0.5	Chrysene	2.83046	MG/KG		0.4	nc	NA	Y
Allendale soil	CMS-418	0	1	Chrysene	1.8	MG/KG	J	0.4	nc	NA	Y
Allendale soil	CMS-418	1	2	Chrysene	0.83	MG/KG		0.4	nc	NA	Y
Lyman Mill soil	LPX-4112	0	0.5	Chrysene	0.1591	MG/KG		0.4	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Chrysene	0.1219	MG/KG		0.4	nc	NA	N
Lyman Mill soil	LPX-4113	0	0.5	Chrysene	7.5050	MG/KG		0.4	nc	NA	Y
Lyman Mill soil	LPX-4114	0	0.5	Chrysene	0.2119	MG/KG		0.4	nc	NA	N
Allendale soil	SS-04	0	1.5	Chrysene	2.2	MG/KG		0.4	nc	NA	Y
Allendale soil	SS-05	0	1.5	Chrysene	0.47	MG/KG	J	0.4	nc	NA	Y
Allendale soil	RES-14-421-01	0	1	Chrysene	0.37	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	Chrysene	0.16	MG/KG	J	0.4	nc	NA	N
Lyman Mill soil	RES-10-005-01	0	1	Chrysene	3.3	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	Chrysene	0.18	MG/KG	J	0.4	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	Chrysene	0.82	MG/KG	J	0.4	nc	NA	Y
Lyman Mill soil	RES-10-053-01	0	1	Chrysene	0.098	MG/KG	J	0.4	nc	NA	N
Lyman Mill soil	RES-10-068-01	0	1	Chrysene	0.34	MG/KG	J	0.4	nc	NA	N
Lyman Mill soil	RES-10-074-01	0	1	Chrysene	2.4	MG/KG	J	0.4	nc	NA	Y
Lyman Mill soil	RES-10-075-01	0	1	Chrysene	29	MG/KG		0.4	nc	NA	Y
Lyman Mill soil	RES-10-076-01	0	1	Chrysene	10	MG/KG		0.4	nc	NA	Y
Lyman Mill soil	RES-10-604-01	0	1	Chrysene	0.7	MG/KG	J	0.4	nc	NA	Y
Lyman Mill soil	RES-11-011-01	0	1	Chrysene	1.2	MG/KG		0.4	nc	NA	Y
Lyman Mill soil	RES-11-012-01	0	1	Chrysene	2.1	MG/KG		0.4	nc	NA	Y
Lyman Mill soil	RES-11-328-01	0	1	Chrysene	0.7	MG/KG	J	0.4	nc	NA	Y
Lyman Mill soil	RES-11-419-01	0	1	Chrysene	0.52	MG/KG	J	0.4	nc	NA	Y
Lyman Mill soil	RES-11-420-01	0	1	Chrysene	0.15	MG/KG	J	0.4	nc	NA	N
Lyman Mill soil	RES-11-422-01	0	1	Chrysene	0.14	MG/KG	J	0.4	nc	NA	N
Lyman Mill soil	RES-11-423-01	0	1	Chrysene	0.41	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	Chrysene	150	MG/KG		0.4	nc	NA	Y

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-11-426-01	0	1	Chrysene	0.15	MG/KG	J	0.4	nc	NA	N
Lyman Mill soil	RES-11-427-01	0	1	Chrysene	0.042	MG/KG	J	0.4	nc	NA	N
Lyman Mill soil	RES-11-428-01	0	1	Chrysene	0.52	MG/KG		0.4	nc	NA	Y
Lyman Mill soil	RES-11-429-01	0	1	Chrysene	0.17	MG/KG	J	0.4	nc	NA	N
Lyman Mill soil	RES-11-430-01	0	1	Chrysene	0.042	MG/KG	J	0.4	nc	NA	N
Lyman Mill soil	RES-11-431-01	0	1	Chrysene	0.22	MG/KG	J	0.4	nc	NA	N
Lyman Mill soil	RES-11-432-01	0	1	Chrysene	0.42	MG/KG	J	0.4	nc	NA	Y
Lyman Mill soil	RES-11-433-01	0	1	Chrysene	1	MG/KG	J	0.4	nc	NA	Y
Lyman Mill soil	RES-11-486-01	0	1	Chrysene	1.1	MG/KG	J	0.4	nc	NA	Y
Lyman Mill soil	RES-11-497-01	0	1	Chrysene	0.44	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	Chrysene	3.9	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	Chrysene	3.9	MG/KG	J	0.4	nc	NA	Y
Lyman Mill soil	RES-12-560-01	0	1	Chrysene	0.38	MG/KG	J	0.4	nc	NA	N
Lyman Mill soil	RES-12-560-02	0	1	Chrysene	2.3	MG/KG		0.4	nc	NA	Y
Lyman Mill soil	RES-10-044-01	0	1	Chrysene	0.8	MG/KG	J	0.4	nc	NA	Y
Lyman Mill soil	RES-10-053-01	0	1	Chrysene	0.48	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	LPX-FP-4004	0	0.5	Dibenzo(a,h)anthracene	0.07375	MG/KG	J	0.4	nc	NA	N
Lyman Mill soil	LPX-FP-4006	0	0.5	Dibenzo(a,h)anthracene	0.05503	MG/KG		0.4	nc	NA	N
Lyman Mill soil	LPX-FP-4007	0	0.5	Dibenzo(a,h)anthracene	0.46627	MG/KG		0.4	nc	NA	Y
Allendale soil	CMS-418	0	1	Dibenzo(a,h)anthracene	0.33	MG/KG	UJ	0.4	nc	NA	NA
Allendale soil	CMS-418	1	2	Dibenzo(a,h)anthracene	0.13	MG/KG	J	0.4	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Dibenzo(a,h)anthracene	0.0274	MG/KG		0.4	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Dibenzo(a,h)anthracene	0.0258	MG/KG		0.4	nc	NA	N
Lyman Mill soil	LPX-4113	0	0.5	Dibenzo(a,h)anthracene	0.6681	MG/KG		0.4	nc	NA	Y
Lyman Mill soil	LPX-4114	0	0.5	Dibenzo(a,h)anthracene	0.0378	MG/KG		0.4	nc	NA	N
Allendale soil	SS-04	0	1.5	Dibenzo(a,h)anthracene	0.46	MG/KG		0.4	nc	NA	Y
Allendale soil	SS-05	0	1.5	Dibenzo(a,h)anthracene	0.12	MG/KG	J	0.4	nc	NA	N
Allendale soil	RES-14-421-01	0	1	Dibenzo(a,h)anthracene	0.37	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	Dibenzo(a,h)anthracene	0.46	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-10-005-01	0	1	Dibenzo(a,h)anthracene	3.3	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	Dibenzo(a,h)anthracene	0.82	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Dibenzo(a,h)anthracene	4.3	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	Dibenzo(a,h)anthracene	0.5	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	Dibenzo(a,h)anthracene	2	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-10-074-01	0	1	Dibenzo(a,h)anthracene	5	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-10-075-01	0	1	Dibenzo(a,h)anthracene	4.5	MG/KG	J	0.4	nc	NA	Y
Lyman Mill soil	RES-10-076-01	0	1	Dibenzo(a,h)anthracene	2.7	MG/KG	J	0.4	nc	NA	Y
Lyman Mill soil	RES-10-604-01	0	1	Dibenzo(a,h)anthracene	3.1	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-011-01	0	1	Dibenzo(a,h)anthracene	0.14	MG/KG	J	0.4	nc	NA	N
Lyman Mill soil	RES-11-012-01	0	1	Dibenzo(a,h)anthracene	0.17	MG/KG	J	0.4	nc	NA	N
Lyman Mill soil	RES-11-328-01	0	1	Dibenzo(a,h)anthracene	2.7	MG/KG	U	0.4	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-11-419-01	0	1	Dibenzo(a,h)anthracene	4	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	Dibenzo(a,h)anthracene	0.46	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	Dibenzo(a,h)anthracene	0.47	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	Dibenzo(a,h)anthracene	0.41	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	Dibenzo(a,h)anthracene	26	MG/KG	J	0.4	nc	NA	Y
Lyman Mill soil	RES-11-426-01	0	1	Dibenzo(a,h)anthracene	0.37	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-427-01	0	1	Dibenzo(a,h)anthracene	0.36	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	Dibenzo(a,h)anthracene	0.44	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-429-01	0	1	Dibenzo(a,h)anthracene	0.4	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-430-01	0	1	Dibenzo(a,h)anthracene	0.37	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	Dibenzo(a,h)anthracene	2	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	Dibenzo(a,h)anthracene	3.5	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-433-01	0	1	Dibenzo(a,h)anthracene	0.13	MG/KG	J	0.4	nc	NA	N
Lyman Mill soil	RES-11-486-01	0	1	Dibenzo(a,h)anthracene	4.8	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-497-01	0	1	Dibenzo(a,h)anthracene	0.44	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	Dibenzo(a,h)anthracene	3.9	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	Dibenzo(a,h)anthracene	0.93	MG/KG	J	0.4	nc	NA	Y
Lyman Mill soil	RES-12-560-01	0	1	Dibenzo(a,h)anthracene	2	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-12-560-02	0	1	Dibenzo(a,h)anthracene	2.1	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Dibenzo(a,h)anthracene	4.4	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	Dibenzo(a,h)anthracene	0.48	MG/KG	U	0.4	nc	NA	NA
Allendale soil	CMS-418	0	1	1,2-dichlorobenzene	0.33	MG/KG	UJ	510	nc	NA	NA
Allendale soil	CMS-418	1	2	1,2-dichlorobenzene	0.37	MG/KG	UJ	510	nc	NA	NA
Allendale soil	SS-04	0	1.5	1,2-dichlorobenzene	0.43	MG/KG	U	510	nc	NA	NA
Allendale soil	SS-05	0	1.5	1,2-dichlorobenzene	0.48	MG/KG	U	510	nc	NA	NA
Allendale soil	CMS-418	0	1	1,2-dichlorobenzene	0.0045	MG/KG	U	510	nc	NA	NA
Allendale soil	CMS-418	1	2	1,2-dichlorobenzene	0.0054	MG/KG	U	510	nc	NA	NA
Allendale soil	CMS-418	0	1	1,3-dichlorobenzene	0.33	MG/KG	UJ	430	nc	NA	NA
Allendale soil	CMS-418	1	2	1,3-dichlorobenzene	0.37	MG/KG	U	430	nc	NA	NA
Allendale soil	SS-04	0	1.5	1,3-dichlorobenzene	0.43	MG/KG	U	430	nc	NA	NA
Allendale soil	SS-05	0	1.5	1,3-dichlorobenzene	0.48	MG/KG	U	430	nc	NA	NA
Allendale soil	CMS-418	0	1	1,3-dichlorobenzene	0.0045	MG/KG	U	430	nc	NA	NA
Allendale soil	CMS-418	1	2	1,3-dichlorobenzene	0.0054	MG/KG	U	430	nc	NA	NA
Allendale soil	CMS-418	0	1	1,4-dichlorobenzene	0.33	MG/KG	UJ	27	nc	NA	NA
Allendale soil	CMS-418	1	2	1,4-dichlorobenzene	0.37	MG/KG	UJ	27	nc	NA	NA
Allendale soil	SS-04	0	1.5	1,4-dichlorobenzene	0.43	MG/KG	U	27	nc	NA	NA
Allendale soil	SS-05	0	1.5	1,4-dichlorobenzene	0.48	MG/KG	U	27	nc	NA	NA
Allendale soil	CMS-418	0	1	1,4-dichlorobenzene	0.0045	MG/KG	U	27	nc	NA	NA
Allendale soil	CMS-418	1	2	1,4-dichlorobenzene	0.0054	MG/KG	U	27	nc	NA	NA
Allendale soil	CMS-418	0	1	3,3'-dichlorobenzidine	1.6	MG/KG	UJ	1.4	nc	NA	NA
Allendale soil	CMS-418	1	2	3,3'-dichlorobenzidine	1.8	MG/KG	U	1.4	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Allendale soil	SS-04	0	1.5	3,3'-dichlorobenzidine	0.43	MG/KG	U	1.4	nc	NA	NA
Allendale soil	SS-05	0	1.5	3,3'-dichlorobenzidine	0.48	MG/KG	U	1.4	nc	NA	NA
Allendale soil	RES-14-421-01	0	1	3,3'-dichlorobenzidine	0.37	MG/KG	U	1.4	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	3,3'-dichlorobenzidine	0.46	MG/KG	UJ	1.4	nc	NA	NA
Lyman Mill soil	RES-10-005-01	0	1	3,3'-dichlorobenzidine	3.3	MG/KG	UJ	1.4	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	3,3'-dichlorobenzidine	0.82	MG/KG	UJ	1.4	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	3,3'-dichlorobenzidine	4.3	MG/KG	UJ	1.4	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	3,3'-dichlorobenzidine	0.5	MG/KG	U	1.4	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	3,3'-dichlorobenzidine	2	MG/KG	U	1.4	nc	NA	NA
Lyman Mill soil	RES-10-074-01	0	1	3,3'-dichlorobenzidine	5	MG/KG	U	1.4	nc	NA	NA
Lyman Mill soil	RES-10-075-01	0	1	3,3'-dichlorobenzidine	9.2	MG/KG	U	1.4	nc	NA	NA
Lyman Mill soil	RES-10-076-01	0	1	3,3'-dichlorobenzidine	9.7	MG/KG	U	1.4	nc	NA	NA
Lyman Mill soil	RES-10-604-01	0	1	3,3'-dichlorobenzidine	3.1	MG/KG	UJ	1.4	nc	NA	NA
Lyman Mill soil	RES-11-011-01	0	1	3,3'-dichlorobenzidine	0.53	MG/KG	U	1.4	nc	NA	NA
Lyman Mill soil	RES-11-012-01	0	1	3,3'-dichlorobenzidine	0.65	MG/KG	U	1.4	nc	NA	NA
Lyman Mill soil	RES-11-328-01	0	1	3,3'-dichlorobenzidine	2.7	MG/KG	U	1.4	nc	NA	NA
Lyman Mill soil	RES-11-419-01	0	1	3,3'-dichlorobenzidine	4	MG/KG	U	1.4	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	3,3'-dichlorobenzidine	0.46	MG/KG	U	1.4	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	3,3'-dichlorobenzidine	0.47	MG/KG	U	1.4	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	3,3'-dichlorobenzidine	0.41	MG/KG	U	1.4	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	3,3'-dichlorobenzidine	110	MG/KG	U	1.4	nc	NA	NA
Lyman Mill soil	RES-11-426-01	0	1	3,3'-dichlorobenzidine	0.37	MG/KG	U	1.4	nc	NA	NA
Lyman Mill soil	RES-11-427-01	0	1	3,3'-dichlorobenzidine	0.36	MG/KG	U	1.4	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	3,3'-dichlorobenzidine	0.44	MG/KG	U	1.4	nc	NA	NA
Lyman Mill soil	RES-11-429-01	0	1	3,3'-dichlorobenzidine	0.4	MG/KG	U	1.4	nc	NA	NA
Lyman Mill soil	RES-11-430-01	0	1	3,3'-dichlorobenzidine	0.37	MG/KG	U	1.4	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	3,3'-dichlorobenzidine	2	MG/KG	U	1.4	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	3,3'-dichlorobenzidine	3.5	MG/KG	U	1.4	nc	NA	NA
Lyman Mill soil	RES-11-486-01	0	1	3,3'-dichlorobenzidine	4.8	MG/KG	U	1.4	nc	NA	NA
Lyman Mill soil	RES-11-497-01	0	1	3,3'-dichlorobenzidine	0.44	MG/KG	U	1.4	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	3,3'-dichlorobenzidine	3.9	MG/KG	U	1.4	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	3,3'-dichlorobenzidine	4	MG/KG	U	1.4	nc	NA	NA
Lyman Mill soil	RES-12-560-01	0	1	3,3'-dichlorobenzidine	2	MG/KG	U	1.4	nc	NA	NA
Lyman Mill soil	RES-12-560-02	0	1	3,3'-dichlorobenzidine	2.1	MG/KG	U	1.4	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	3,3'-dichlorobenzidine	4.4	MG/KG	U	1.4	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	3,3'-dichlorobenzidine	0.48	MG/KG	U	1.4	nc	NA	NA
Allendale soil	CMS-418	0	1	2,4-dichlorophenol	0.33	MG/KG	UJ	30	nc	NA	NA
Allendale soil	CMS-418	1	2	2,4-dichlorophenol	0.37	MG/KG	U	30	nc	NA	NA
Allendale soil	SS-04	0	1.5	2,4-dichlorophenol	0.43	MG/KG	U	30	nc	NA	NA
Allendale soil	SS-05	0	1.5	2,4-dichlorophenol	0.48	MG/KG	U	30	nc	NA	NA
Allendale soil	RES-14-421-01	0	1	2,4-dichlorophenol	0.37	MG/KG	U	30	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-10-004-01	0	1	2,4-dichlorophenol	0.46	MG/KG	U	30	nc	NA	NA
Lyman Mill soil	RES-10-005-01	0	1	2,4-dichlorophenol	3.3	MG/KG	U	30	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	2,4-dichlorophenol	0.82	MG/KG	U	30	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	2,4-dichlorophenol	4.3	MG/KG	U	30	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	2,4-dichlorophenol	0.5	MG/KG	U	30	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	2,4-dichlorophenol	2	MG/KG	U	30	nc	NA	NA
Lyman Mill soil	RES-10-074-01	0	1	2,4-dichlorophenol	5	MG/KG	U	30	nc	NA	NA
Lyman Mill soil	RES-10-075-01	0	1	2,4-dichlorophenol	9.2	MG/KG	U	30	nc	NA	NA
Lyman Mill soil	RES-10-076-01	0	1	2,4-dichlorophenol	9.7	MG/KG	U	30	nc	NA	NA
Lyman Mill soil	RES-10-604-01	0	1	2,4-dichlorophenol	3.1	MG/KG	U	30	nc	NA	NA
Lyman Mill soil	RES-11-011-01	0	1	2,4-dichlorophenol	0.53	MG/KG	U	30	nc	NA	NA
Lyman Mill soil	RES-11-012-01	0	1	2,4-dichlorophenol	0.65	MG/KG	U	30	nc	NA	NA
Lyman Mill soil	RES-11-328-01	0	1	2,4-dichlorophenol	2.7	MG/KG	U	30	nc	NA	NA
Lyman Mill soil	RES-11-419-01	0	1	2,4-dichlorophenol	4	MG/KG	U	30	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	2,4-dichlorophenol	0.46	MG/KG	U	30	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	2,4-dichlorophenol	0.47	MG/KG	U	30	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	2,4-dichlorophenol	0.41	MG/KG	U	30	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	2,4-dichlorophenol	110	MG/KG	U	30	nc	NA	NA
Lyman Mill soil	RES-11-426-01	0	1	2,4-dichlorophenol	0.37	MG/KG	U	30	nc	NA	NA
Lyman Mill soil	RES-11-427-01	0	1	2,4-dichlorophenol	0.36	MG/KG	U	30	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	2,4-dichlorophenol	0.44	MG/KG	U	30	nc	NA	NA
Lyman Mill soil	RES-11-429-01	0	1	2,4-dichlorophenol	0.4	MG/KG	U	30	nc	NA	NA
Lyman Mill soil	RES-11-430-01	0	1	2,4-dichlorophenol	0.37	MG/KG	U	30	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	2,4-dichlorophenol	2	MG/KG	U	30	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	2,4-dichlorophenol	3.5	MG/KG	U	30	nc	NA	NA
Lyman Mill soil	RES-11-486-01	0	1	2,4-dichlorophenol	4.8	MG/KG	U	30	nc	NA	NA
Lyman Mill soil	RES-11-497-01	0	1	2,4-dichlorophenol	0.44	MG/KG	U	30	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	2,4-dichlorophenol	3.9	MG/KG	U	30	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	2,4-dichlorophenol	4	MG/KG	U	30	nc	NA	NA
Lyman Mill soil	RES-12-560-01	0	1	2,4-dichlorophenol	2	MG/KG	U	30	nc	NA	NA
Lyman Mill soil	RES-12-560-02	0	1	2,4-dichlorophenol	2.1	MG/KG	U	30	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	2,4-dichlorophenol	4.4	MG/KG	U	30	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	2,4-dichlorophenol	0.48	MG/KG	U	30	nc	NA	NA
Allendale soil	CMS-418	0	1	Diethylphthalate	0.33	MG/KG	UJ	340	nc	NA	NA
Allendale soil	CMS-418	1	2	Diethylphthalate	0.37	MG/KG	U	340	nc	NA	NA
Allendale soil	SS-04	0	1.5	Diethylphthalate	0.43	MG/KG	U	340	nc	NA	NA
Allendale soil	SS-05	0	1.5	Diethylphthalate	0.48	MG/KG	U	340	nc	NA	NA
Allendale soil	RES-14-421-01	0	1	Diethylphthalate	0.37	MG/KG	U	340	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	Diethylphthalate	0.46	MG/KG	U	340	nc	NA	NA
Lyman Mill soil	RES-10-005-01	0	1	Diethylphthalate	3.3	MG/KG	U	340	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	Diethylphthalate	0.82	MG/KG	U	340	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-10-044-01	0	1	Diethylphthalate	4.3	MG/KG	U	340	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	Diethylphthalate	0.5	MG/KG	U	340	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	Diethylphthalate	2	MG/KG	U	340	nc	NA	NA
Lyman Mill soil	RES-10-074-01	0	1	Diethylphthalate	5	MG/KG	U	340	nc	NA	NA
Lyman Mill soil	RES-10-075-01	0	1	Diethylphthalate	9.2	MG/KG	U	340	nc	NA	NA
Lyman Mill soil	RES-10-076-01	0	1	Diethylphthalate	9.7	MG/KG	U	340	nc	NA	NA
Lyman Mill soil	RES-10-604-01	0	1	Diethylphthalate	3.1	MG/KG	U	340	nc	NA	NA
Lyman Mill soil	RES-11-011-01	0	1	Diethylphthalate	0.53	MG/KG	U	340	nc	NA	NA
Lyman Mill soil	RES-11-012-01	0	1	Diethylphthalate	0.65	MG/KG	U	340	nc	NA	NA
Lyman Mill soil	RES-11-328-01	0	1	Diethylphthalate	2.7	MG/KG	U	340	nc	NA	NA
Lyman Mill soil	RES-11-419-01	0	1	Diethylphthalate	4	MG/KG	U	340	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	Diethylphthalate	0.46	MG/KG	U	340	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	Diethylphthalate	0.47	MG/KG	U	340	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	Diethylphthalate	0.41	MG/KG	U	340	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	Diethylphthalate	110	MG/KG	U	340	nc	NA	NA
Lyman Mill soil	RES-11-426-01	0	1	Diethylphthalate	0.37	MG/KG	U	340	nc	NA	NA
Lyman Mill soil	RES-11-427-01	0	1	Diethylphthalate	0.36	MG/KG	U	340	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	Diethylphthalate	0.44	MG/KG	U	340	nc	NA	NA
Lyman Mill soil	RES-11-429-01	0	1	Diethylphthalate	0.4	MG/KG	U	340	nc	NA	NA
Lyman Mill soil	RES-11-430-01	0	1	Diethylphthalate	0.37	MG/KG	U	340	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	Diethylphthalate	2	MG/KG	U	340	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	Diethylphthalate	3.5	MG/KG	U	340	nc	NA	NA
Lyman Mill soil	RES-11-486-01	0	1	Diethylphthalate	4.8	MG/KG	U	340	nc	NA	NA
Lyman Mill soil	RES-11-497-01	0	1	Diethylphthalate	0.44	MG/KG	U	340	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	Diethylphthalate	3.9	MG/KG	U	340	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	Diethylphthalate	4	MG/KG	U	340	nc	NA	NA
Lyman Mill soil	RES-12-560-01	0	1	Diethylphthalate	2	MG/KG	U	340	nc	NA	NA
Lyman Mill soil	RES-12-560-02	0	1	Diethylphthalate	2.1	MG/KG	U	340	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Diethylphthalate	4.4	MG/KG	U	340	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	Diethylphthalate	0.48	MG/KG	U	340	nc	NA	NA
Allendale soil	CMS-418	0	1	2,4-dimethylphenol	0.33	MG/KG	UJ	1400	nc	NA	NA
Allendale soil	CMS-418	1	2	2,4-dimethylphenol	0.37	MG/KG	U	1400	nc	NA	NA
Allendale soil	SS-04	0	1.5	2,4-dimethylphenol	0.43	MG/KG	U	1400	nc	NA	NA
Allendale soil	SS-05	0	1.5	2,4-dimethylphenol	0.48	MG/KG	U	1400	nc	NA	NA
Allendale soil	RES-14-421-01	0	1	2,4-dimethylphenol	0.37	MG/KG	U	1400	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	2,4-dimethylphenol	0.46	MG/KG	U	1400	nc	NA	NA
Lyman Mill soil	RES-10-005-01	0	1	2,4-dimethylphenol	3.3	MG/KG	U	1400	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	2,4-dimethylphenol	0.82	MG/KG	U	1400	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	2,4-dimethylphenol	4.3	MG/KG	U	1400	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	2,4-dimethylphenol	0.5	MG/KG	U	1400	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	2,4-dimethylphenol	2	MG/KG	U	1400	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-10-074-01	0	1	2,4-dimethylphenol	5	MG/KG	U	1400	nc	NA	NA
Lyman Mill soil	RES-10-075-01	0	1	2,4-dimethylphenol	9.2	MG/KG	U	1400	nc	NA	NA
Lyman Mill soil	RES-10-076-01	0	1	2,4-dimethylphenol	9.7	MG/KG	U	1400	nc	NA	NA
Lyman Mill soil	RES-10-604-01	0	1	2,4-dimethylphenol	3.1	MG/KG	U	1400	nc	NA	NA
Lyman Mill soil	RES-11-011-01	0	1	2,4-dimethylphenol	0.53	MG/KG	U	1400	nc	NA	NA
Lyman Mill soil	RES-11-012-01	0	1	2,4-dimethylphenol	0.65	MG/KG	U	1400	nc	NA	NA
Lyman Mill soil	RES-11-328-01	0	1	2,4-dimethylphenol	2.7	MG/KG	U	1400	nc	NA	NA
Lyman Mill soil	RES-11-419-01	0	1	2,4-dimethylphenol	4	MG/KG	U	1400	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	2,4-dimethylphenol	0.46	MG/KG	U	1400	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	2,4-dimethylphenol	0.47	MG/KG	U	1400	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	2,4-dimethylphenol	0.41	MG/KG	U	1400	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	2,4-dimethylphenol	110	MG/KG	U	1400	nc	NA	NA
Lyman Mill soil	RES-11-426-01	0	1	2,4-dimethylphenol	0.37	MG/KG	U	1400	nc	NA	NA
Lyman Mill soil	RES-11-427-01	0	1	2,4-dimethylphenol	0.36	MG/KG	U	1400	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	2,4-dimethylphenol	0.44	MG/KG	U	1400	nc	NA	NA
Lyman Mill soil	RES-11-429-01	0	1	2,4-dimethylphenol	0.4	MG/KG	U	1400	nc	NA	NA
Lyman Mill soil	RES-11-430-01	0	1	2,4-dimethylphenol	0.37	MG/KG	U	1400	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	2,4-dimethylphenol	2	MG/KG	U	1400	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	2,4-dimethylphenol	3.5	MG/KG	U	1400	nc	NA	NA
Lyman Mill soil	RES-11-486-01	0	1	2,4-dimethylphenol	4.8	MG/KG	U	1400	nc	NA	NA
Lyman Mill soil	RES-11-497-01	0	1	2,4-dimethylphenol	0.44	MG/KG	U	1400	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	2,4-dimethylphenol	3.9	MG/KG	U	1400	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	2,4-dimethylphenol	4	MG/KG	U	1400	nc	NA	NA
Lyman Mill soil	RES-12-560-01	0	1	2,4-dimethylphenol	2	MG/KG	U	1400	nc	NA	NA
Lyman Mill soil	RES-12-560-02	0	1	2,4-dimethylphenol	2.1	MG/KG	U	1400	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	2,4-dimethylphenol	4.4	MG/KG	U	1400	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	2,4-dimethylphenol	0.48	MG/KG	U	1400	nc	NA	NA
Allendale soil	CMS-418	0	1	Dimethylphthalate	0.33	MG/KG	UJ	1900	nc	NA	NA
Allendale soil	CMS-418	1	2	Dimethylphthalate	0.37	MG/KG	U	1900	nc	NA	NA
Allendale soil	SS-04	0	1.5	Dimethylphthalate	0.43	MG/KG	U	1900	nc	NA	NA
Allendale soil	SS-05	0	1.5	Dimethylphthalate	0.48	MG/KG	U	1900	nc	NA	NA
Allendale soil	RES-14-421-01	0	1	Dimethylphthalate	0.37	MG/KG	U	1900	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	Dimethylphthalate	0.46	MG/KG	U	1900	nc	NA	NA
Lyman Mill soil	RES-10-005-01	0	1	Dimethylphthalate	3.3	MG/KG	U	1900	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	Dimethylphthalate	0.82	MG/KG	U	1900	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Dimethylphthalate	4.3	MG/KG	U	1900	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	Dimethylphthalate	0.5	MG/KG	U	1900	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	Dimethylphthalate	2	MG/KG	U	1900	nc	NA	NA
Lyman Mill soil	RES-10-074-01	0	1	Dimethylphthalate	5	MG/KG	U	1900	nc	NA	NA
Lyman Mill soil	RES-10-075-01	0	1	Dimethylphthalate	9.2	MG/KG	U	1900	nc	NA	NA
Lyman Mill soil	RES-10-076-01	0	1	Dimethylphthalate	9.7	MG/KG	U	1900	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-10-604-01	0	1	Dimethylphthalate	3.1	MG/KG	U	1900	nc	NA	NA
Lyman Mill soil	RES-11-011-01	0	1	Dimethylphthalate	0.53	MG/KG	U	1900	nc	NA	NA
Lyman Mill soil	RES-11-012-01	0	1	Dimethylphthalate	0.65	MG/KG	U	1900	nc	NA	NA
Lyman Mill soil	RES-11-328-01	0	1	Dimethylphthalate	2.7	MG/KG	U	1900	nc	NA	NA
Lyman Mill soil	RES-11-419-01	0	1	Dimethylphthalate	4	MG/KG	U	1900	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	Dimethylphthalate	0.46	MG/KG	U	1900	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	Dimethylphthalate	0.47	MG/KG	U	1900	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	Dimethylphthalate	0.41	MG/KG	U	1900	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	Dimethylphthalate	110	MG/KG	U	1900	nc	NA	NA
Lyman Mill soil	RES-11-426-01	0	1	Dimethylphthalate	0.37	MG/KG	U	1900	nc	NA	NA
Lyman Mill soil	RES-11-427-01	0	1	Dimethylphthalate	0.36	MG/KG	U	1900	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	Dimethylphthalate	0.44	MG/KG	U	1900	nc	NA	NA
Lyman Mill soil	RES-11-429-01	0	1	Dimethylphthalate	0.4	MG/KG	U	1900	nc	NA	NA
Lyman Mill soil	RES-11-430-01	0	1	Dimethylphthalate	0.37	MG/KG	U	1900	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	Dimethylphthalate	2	MG/KG	U	1900	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	Dimethylphthalate	3.5	MG/KG	U	1900	nc	NA	NA
Lyman Mill soil	RES-11-486-01	0	1	Dimethylphthalate	4.8	MG/KG	U	1900	nc	NA	NA
Lyman Mill soil	RES-11-497-01	0	1	Dimethylphthalate	0.44	MG/KG	U	1900	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	Dimethylphthalate	3.9	MG/KG	U	1900	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	Dimethylphthalate	4	MG/KG	U	1900	nc	NA	NA
Lyman Mill soil	RES-12-560-01	0	1	Dimethylphthalate	2	MG/KG	U	1900	nc	NA	NA
Lyman Mill soil	RES-12-560-02	0	1	Dimethylphthalate	2.1	MG/KG	U	1900	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Dimethylphthalate	4.4	MG/KG	U	1900	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	Dimethylphthalate	0.48	MG/KG	U	1900	nc	NA	NA
Lyman Mill soil	LPX-FP-4004	0	0.5	2,4-dinitrophenol	2.6	MG/KG	UJ	160	nc	NA	NA
Lyman Mill soil	LPX-FP-4006	0	0.5	2,4-dinitrophenol	2.6	MG/KG	UJ	160	nc	NA	NA
Lyman Mill soil	LPX-FP-4007	0	0.5	2,4-dinitrophenol	3	MG/KG	UJ	160	nc	NA	NA
Allendale soil	CMS-418	0	1	2,4-dinitrophenol	1.6	MG/KG	UJ	160	nc	NA	NA
Allendale soil	CMS-418	1	2	2,4-dinitrophenol	1.8	MG/KG	UJ	160	nc	NA	NA
Lyman Mill soil	LPX-4112	0	0.5	2,4-dinitrophenol	1.9	MG/KG	U	160	nc	NA	NA
Lyman Mill soil	LPX-4112	0	0.5	2,4-dinitrophenol	1.9	MG/KG	U	160	nc	NA	NA
Lyman Mill soil	LPX-4113	0	0.5	2,4-dinitrophenol	1.9	MG/KG	U	160	nc	NA	NA
Lyman Mill soil	LPX-4114	0	0.5	2,4-dinitrophenol	2.1	MG/KG	U	160	nc	NA	NA
Allendale soil	SS-04	0	1.5	2,4-dinitrophenol	1.1	MG/KG	U	160	nc	NA	NA
Allendale soil	SS-05	0	1.5	2,4-dinitrophenol	1.2	MG/KG	UJ	160	nc	NA	NA
Allendale soil	RES-14-421-01	0	1	2,4-dinitrophenol	0.92	MG/KG	U	160	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	2,4-dinitrophenol	1.2	MG/KG	UJ	160	nc	NA	NA
Lyman Mill soil	RES-10-005-01	0	1	2,4-dinitrophenol	8.3	MG/KG	UJ	160	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	2,4-dinitrophenol	2	MG/KG	UJ	160	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	2,4-dinitrophenol	11	MG/KG	UJ	160	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	2,4-dinitrophenol	1.3	MG/KG	U	160	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-10-068-01	0	1	2,4-dinitrophenol	5	MG/KG	U	160	nc	NA	NA
Lyman Mill soil	RES-10-074-01	0	1	2,4-dinitrophenol	12	MG/KG	U	160	nc	NA	NA
Lyman Mill soil	RES-10-075-01	0	1	2,4-dinitrophenol	23	MG/KG	U	160	nc	NA	NA
Lyman Mill soil	RES-10-076-01	0	1	2,4-dinitrophenol	24	MG/KG	U	160	nc	NA	NA
Lyman Mill soil	RES-10-604-01	0	1	2,4-dinitrophenol	7.7	MG/KG	UJ	160	nc	NA	NA
Lyman Mill soil	RES-11-011-01	0	1	2,4-dinitrophenol	1.3	MG/KG	U	160	nc	NA	NA
Lyman Mill soil	RES-11-012-01	0	1	2,4-dinitrophenol	1.6	MG/KG	U	160	nc	NA	NA
Lyman Mill soil	RES-11-328-01	0	1	2,4-dinitrophenol	6.8	MG/KG	U	160	nc	NA	NA
Lyman Mill soil	RES-11-419-01	0	1	2,4-dinitrophenol	10	MG/KG	U	160	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	2,4-dinitrophenol	1.1	MG/KG	U	160	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	2,4-dinitrophenol	1.2	MG/KG	U	160	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	2,4-dinitrophenol	1	MG/KG	UJ	160	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	2,4-dinitrophenol	280	MG/KG	UJ	160	nc	NA	NA
Lyman Mill soil	RES-11-426-01	0	1	2,4-dinitrophenol	0.92	MG/KG	U	160	nc	NA	NA
Lyman Mill soil	RES-11-427-01	0	1	2,4-dinitrophenol	0.9	MG/KG	UJ	160	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	2,4-dinitrophenol	1.1	MG/KG	U	160	nc	NA	NA
Lyman Mill soil	RES-11-429-01	0	1	2,4-dinitrophenol	1	MG/KG	UJ	160	nc	NA	NA
Lyman Mill soil	RES-11-430-01	0	1	2,4-dinitrophenol	0.93	MG/KG	U	160	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	2,4-dinitrophenol	5.1	MG/KG	U	160	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	2,4-dinitrophenol	8.7	MG/KG	U	160	nc	NA	NA
Lyman Mill soil	RES-11-486-01	0	1	2,4-dinitrophenol	12	MG/KG	U	160	nc	NA	NA
Lyman Mill soil	RES-11-497-01	0	1	2,4-dinitrophenol	1.1	MG/KG	U	160	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	2,4-dinitrophenol	9.8	MG/KG	U	160	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	2,4-dinitrophenol	10	MG/KG	UJ	160	nc	NA	NA
Lyman Mill soil	RES-12-560-01	0	1	2,4-dinitrophenol	4.9	MG/KG	UJ	160	nc	NA	NA
Lyman Mill soil	RES-12-560-02	0	1	2,4-dinitrophenol	5.3	MG/KG	UJ	160	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	2,4-dinitrophenol	11	MG/KG	U	160	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	2,4-dinitrophenol	1.2	MG/KG	U	160	nc	NA	NA
Allendale soil	CMS-418	0	1	2,4-dinitrotoluene	0.33	MG/KG	UJ	0.9	nc	NA	NA
Allendale soil	CMS-418	1	2	2,4-dinitrotoluene	0.37	MG/KG	U	0.9	nc	NA	NA
Allendale soil	SS-04	0	1.5	2,4-dinitrotoluene	0.43	MG/KG	U	0.9	nc	NA	NA
Allendale soil	SS-05	0	1.5	2,4-dinitrotoluene	0.48	MG/KG	U	0.9	nc	NA	NA
Allendale soil	RES-14-421-01	0	1	2,4-dinitrotoluene	0.37	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	2,4-dinitrotoluene	0.46	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-10-005-01	0	1	2,4-dinitrotoluene	3.3	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	2,4-dinitrotoluene	0.82	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	2,4-dinitrotoluene	4.3	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	2,4-dinitrotoluene	0.5	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	2,4-dinitrotoluene	2	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-10-074-01	0	1	2,4-dinitrotoluene	5	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-10-075-01	0	1	2,4-dinitrotoluene	9.2	MG/KG	U	0.9	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-10-076-01	0	1	2,4-dinitrotoluene	9.7	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-10-604-01	0	1	2,4-dinitrotoluene	3.1	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-011-01	0	1	2,4-dinitrotoluene	0.53	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-012-01	0	1	2,4-dinitrotoluene	0.65	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-328-01	0	1	2,4-dinitrotoluene	2.7	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-419-01	0	1	2,4-dinitrotoluene	4	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	2,4-dinitrotoluene	0.46	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	2,4-dinitrotoluene	0.47	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	2,4-dinitrotoluene	0.41	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	2,4-dinitrotoluene	110	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-426-01	0	1	2,4-dinitrotoluene	0.37	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-427-01	0	1	2,4-dinitrotoluene	0.36	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	2,4-dinitrotoluene	0.44	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-429-01	0	1	2,4-dinitrotoluene	0.4	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-430-01	0	1	2,4-dinitrotoluene	0.37	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	2,4-dinitrotoluene	2	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	2,4-dinitrotoluene	3.5	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-486-01	0	1	2,4-dinitrotoluene	4.8	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-497-01	0	1	2,4-dinitrotoluene	0.44	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	2,4-dinitrotoluene	3.9	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	2,4-dinitrotoluene	4	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-12-560-01	0	1	2,4-dinitrotoluene	2	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-12-560-02	0	1	2,4-dinitrotoluene	2.1	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	2,4-dinitrotoluene	4.4	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	2,4-dinitrotoluene	0.48	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	LPX-FP-4004	0	0.5	Fluoranthene	0.79252	MG/KG	J	20	nc	NA	N
Lyman Mill soil	LPX-FP-4006	0	0.5	Fluoranthene	0.59605	MG/KG		20	nc	NA	N
Lyman Mill soil	LPX-FP-4007	0	0.5	Fluoranthene	4.87119	MG/KG		20	nc	NA	N
Allendale soil	CMS-418	0	1	Fluoranthene	3.8	MG/KG	J	20	nc	NA	N
Allendale soil	CMS-418	1	2	Fluoranthene	2.1	MG/KG		20	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Fluoranthene	0.3308	MG/KG		20	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Fluoranthene	0.2101	MG/KG		20	nc	NA	N
Lyman Mill soil	LPX-4113	0	0.5	Fluoranthene	21.7781	MG/KG		20	nc	NA	Y
Lyman Mill soil	LPX-4114	0	0.5	Fluoranthene	0.3811	MG/KG		20	nc	NA	N
Allendale soil	SS-04	0	1.5	Fluoranthene	4.7	MG/KG	*	20	nc	NA	N
Allendale soil	SS-05	0	1.5	Fluoranthene	1.1	MG/KG		20	nc	NA	N
Allendale soil	RES-14-421-01	0	1	Fluoranthene	0.051	MG/KG	J	20	nc	NA	N
Lyman Mill soil	RES-10-004-01	0	1	Fluoranthene	0.22	MG/KG	J	20	nc	NA	N
Lyman Mill soil	RES-10-005-01	0	1	Fluoranthene	3.3	MG/KG	U	20	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	Fluoranthene	0.2	MG/KG	J	20	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	Fluoranthene	1.2	MG/KG	J	20	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-10-053-01	0	1	Fluoranthene	0.18	MG/KG	J	20	nc	NA	N
Lyman Mill soil	RES-10-068-01	0	1	Fluoranthene	0.49	MG/KG	J	20	nc	NA	N
Lyman Mill soil	RES-10-074-01	0	1	Fluoranthene	4.6	MG/KG	J	20	nc	NA	N
Lyman Mill soil	RES-10-075-01	0	1	Fluoranthene	68	MG/KG		20	nc	NA	Y
Lyman Mill soil	RES-10-076-01	0	1	Fluoranthene	19	MG/KG		20	nc	NA	N
Lyman Mill soil	RES-10-604-01	0	1	Fluoranthene	0.79	MG/KG	J	20	nc	NA	N
Lyman Mill soil	RES-11-011-01	0	1	Fluoranthene	2	MG/KG		20	nc	NA	N
Lyman Mill soil	RES-11-012-01	0	1	Fluoranthene	3.4	MG/KG		20	nc	NA	N
Lyman Mill soil	RES-11-328-01	0	1	Fluoranthene	1.1	MG/KG	J	20	nc	NA	N
Lyman Mill soil	RES-11-419-01	0	1	Fluoranthene	0.59	MG/KG	J	20	nc	NA	N
Lyman Mill soil	RES-11-420-01	0	1	Fluoranthene	0.26	MG/KG	J	20	nc	NA	N
Lyman Mill soil	RES-11-422-01	0	1	Fluoranthene	0.24	MG/KG	J	20	nc	NA	N
Lyman Mill soil	RES-11-423-01	0	1	Fluoranthene	0.41	MG/KG	U	20	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	Fluoranthene	300	MG/KG	J	20	nc	NA	Y
Lyman Mill soil	RES-11-426-01	0	1	Fluoranthene	0.29	MG/KG	J	20	nc	NA	N
Lyman Mill soil	RES-11-427-01	0	1	Fluoranthene	0.072	MG/KG	J	20	nc	NA	N
Lyman Mill soil	RES-11-428-01	0	1	Fluoranthene	1	MG/KG		20	nc	NA	N
Lyman Mill soil	RES-11-429-01	0	1	Fluoranthene	0.17	MG/KG	J	20	nc	NA	N
Lyman Mill soil	RES-11-430-01	0	1	Fluoranthene	0.08	MG/KG	J	20	nc	NA	N
Lyman Mill soil	RES-11-431-01	0	1	Fluoranthene	0.22	MG/KG	J	20	nc	NA	N
Lyman Mill soil	RES-11-432-01	0	1	Fluoranthene	0.72	MG/KG	J	20	nc	NA	N
Lyman Mill soil	RES-11-433-01	0	1	Fluoranthene	1.3	MG/KG	J	20	nc	NA	N
Lyman Mill soil	RES-11-486-01	0	1	Fluoranthene	1.7	MG/KG	J	20	nc	NA	N
Lyman Mill soil	RES-11-497-01	0	1	Fluoranthene	0.44	MG/KG	U	20	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	Fluoranthene	3.9	MG/KG	U	20	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	Fluoranthene	7.7	MG/KG		20	nc	NA	N
Lyman Mill soil	RES-12-560-01	0	1	Fluoranthene	0.7	MG/KG	J	20	nc	NA	N
Lyman Mill soil	RES-12-560-02	0	1	Fluoranthene	5	MG/KG		20	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	Fluoranthene	1.2	MG/KG	J	20	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Fluoranthene	0.052	MG/KG	J	20	nc	NA	N
Lyman Mill soil	LPX-FP-4004	0	0.5	Fluorene	0.01638	MG/KG	J	28	nc	NA	N
Lyman Mill soil	LPX-FP-4006	0	0.5	Fluorene	0.02379	MG/KG		28	nc	NA	N
Lyman Mill soil	LPX-FP-4007	0	0.5	Fluorene	0.10614	MG/KG		28	nc	NA	N
Allendale soil	CMS-418	0	1	Fluorene	0.5	MG/KG	J	28	nc	NA	N
Allendale soil	CMS-418	1	2	Fluorene	0.11	MG/KG	J	28	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Fluorene	0.0166	MG/KG	J	28	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Fluorene	0.0049	MG/KG	J	28	nc	NA	N
Lyman Mill soil	LPX-4113	0	0.5	Fluorene	2.8132	MG/KG		28	nc	NA	N
Lyman Mill soil	LPX-4114	0	0.5	Fluorene	0.0099	MG/KG		28	nc	NA	N
Allendale soil	SS-04	0	1.5	Fluorene	0.28	MG/KG	J	28	nc	NA	N
Allendale soil	SS-05	0	1.5	Fluorene	0.051	MG/KG	J	28	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Allendale soil	RES-14-421-01	0	1	Fluorene	0.37	MG/KG	U	28	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	Fluorene	0.46	MG/KG	U	28	nc	NA	NA
Lyman Mill soil	RES-10-005-01	0	1	Fluorene	3.3	MG/KG	U	28	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	Fluorene	0.82	MG/KG	U	28	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Fluorene	4.3	MG/KG	U	28	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	Fluorene	0.5	MG/KG	U	28	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	Fluorene	2	MG/KG	U	28	nc	NA	NA
Lyman Mill soil	RES-10-074-01	0	1	Fluorene	0.52	MG/KG	J	28	nc	NA	N
Lyman Mill soil	RES-10-075-01	0	1	Fluorene	5.3	MG/KG	J	28	nc	NA	N
Lyman Mill soil	RES-10-076-01	0	1	Fluorene	1.7	MG/KG	J	28	nc	NA	N
Lyman Mill soil	RES-10-604-01	0	1	Fluorene	3.1	MG/KG	U	28	nc	NA	NA
Lyman Mill soil	RES-11-011-01	0	1	Fluorene	0.073	MG/KG	J	28	nc	NA	N
Lyman Mill soil	RES-11-012-01	0	1	Fluorene	0.14	MG/KG	J	28	nc	NA	N
Lyman Mill soil	RES-11-328-01	0	1	Fluorene	2.7	MG/KG	U	28	nc	NA	NA
Lyman Mill soil	RES-11-419-01	0	1	Fluorene	4	MG/KG	U	28	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	Fluorene	0.46	MG/KG	U	28	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	Fluorene	0.47	MG/KG	U	28	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	Fluorene	0.41	MG/KG	U	28	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	Fluorene	16	MG/KG	J	28	nc	NA	N
Lyman Mill soil	RES-11-426-01	0	1	Fluorene	0.37	MG/KG	U	28	nc	NA	NA
Lyman Mill soil	RES-11-427-01	0	1	Fluorene	0.36	MG/KG	U	28	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	Fluorene	0.059	MG/KG	J	28	nc	NA	N
Lyman Mill soil	RES-11-429-01	0	1	Fluorene	0.4	MG/KG	U	28	nc	NA	NA
Lyman Mill soil	RES-11-430-01	0	1	Fluorene	0.37	MG/KG	U	28	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	Fluorene	2	MG/KG	U	28	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	Fluorene	3.5	MG/KG	U	28	nc	NA	NA
Lyman Mill soil	RES-11-486-01	0	1	Fluorene	4.8	MG/KG	U	28	nc	NA	NA
Lyman Mill soil	RES-11-497-01	0	1	Fluorene	0.44	MG/KG	U	28	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	Fluorene	3.9	MG/KG	U	28	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	Fluorene	4	MG/KG	U	28	nc	NA	NA
Lyman Mill soil	RES-12-560-01	0	1	Fluorene	2	MG/KG	U	28	nc	NA	NA
Lyman Mill soil	RES-12-560-02	0	1	Fluorene	0.25	MG/KG	J	28	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	Fluorene	4.4	MG/KG	U	28	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	Fluorene	0.48	MG/KG	U	28	nc	NA	NA
Allendale soil	CMS-418	0	1	Hexachlorobenzene	0.33	MG/KG	UJ	0.4	nc	NA	NA
Allendale soil	CMS-418	1	2	Hexachlorobenzene	0.37	MG/KG	U	0.4	nc	NA	NA
Allendale soil	SS-04	0	1.5	Hexachlorobenzene	0.43	MG/KG	U	0.4	nc	NA	NA
Allendale soil	SS-05	0	1.5	Hexachlorobenzene	0.48	MG/KG	U	0.4	nc	NA	NA
Allendale soil	RES-14-421-01	0	1	Hexachlorobenzene	0.37	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	Hexachlorobenzene	0.46	MG/KG	UJ	0.4	nc	NA	NA
Lyman Mill soil	RES-10-005-01	0	1	Hexachlorobenzene	3.3	MG/KG	UJ	0.4	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-10-042-01	0	1	Hexachlorobenzene	0.82	MG/KG	UJ	0.4	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Hexachlorobenzene	4.3	MG/KG	UJ	0.4	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	Hexachlorobenzene	0.5	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	Hexachlorobenzene	2	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-10-074-01	0	1	Hexachlorobenzene	5	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-10-075-01	0	1	Hexachlorobenzene	9.2	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-10-076-01	0	1	Hexachlorobenzene	9.7	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-10-604-01	0	1	Hexachlorobenzene	3.1	MG/KG	UJ	0.4	nc	NA	NA
Lyman Mill soil	RES-11-011-01	0	1	Hexachlorobenzene	0.53	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-012-01	0	1	Hexachlorobenzene	0.65	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-328-01	0	1	Hexachlorobenzene	2.7	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-419-01	0	1	Hexachlorobenzene	4	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	Hexachlorobenzene	0.46	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	Hexachlorobenzene	0.47	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	Hexachlorobenzene	0.41	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	Hexachlorobenzene	110	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-426-01	0	1	Hexachlorobenzene	0.37	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-427-01	0	1	Hexachlorobenzene	0.36	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	Hexachlorobenzene	0.44	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-429-01	0	1	Hexachlorobenzene	0.4	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-430-01	0	1	Hexachlorobenzene	0.37	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	Hexachlorobenzene	2	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	Hexachlorobenzene	3.5	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-486-01	0	1	Hexachlorobenzene	4.8	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-497-01	0	1	Hexachlorobenzene	0.44	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	Hexachlorobenzene	3.9	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	Hexachlorobenzene	4	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-12-560-01	0	1	Hexachlorobenzene	2	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-12-560-02	0	1	Hexachlorobenzene	2.1	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Hexachlorobenzene	4.4	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	Hexachlorobenzene	0.48	MG/KG	U	0.4	nc	NA	NA
Allendale soil	CMS-418	0	1	Hexachlorobutadiene	0.33	MG/KG	UJ	8.2	nc	NA	NA
Allendale soil	CMS-418	1	2	Hexachlorobutadiene	0.37	MG/KG	U	8.2	nc	NA	NA
Allendale soil	SS-04	0	1.5	Hexachlorobutadiene	0.43	MG/KG	U	8.2	nc	NA	NA
Allendale soil	SS-05	0	1.5	Hexachlorobutadiene	0.48	MG/KG	U	8.2	nc	NA	NA
Allendale soil	RES-14-421-01	0	1	Hexachlorobutadiene	0.37	MG/KG	U	8.2	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	Hexachlorobutadiene	0.46	MG/KG	U	8.2	nc	NA	NA
Lyman Mill soil	RES-10-005-01	0	1	Hexachlorobutadiene	3.3	MG/KG	U	8.2	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	Hexachlorobutadiene	0.82	MG/KG	U	8.2	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Hexachlorobutadiene	4.3	MG/KG	U	8.2	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	Hexachlorobutadiene	0.5	MG/KG	U	8.2	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-10-068-01	0	1	Hexachlorobutadiene	2	MG/KG	U	8.2	nc	NA	NA
Lyman Mill soil	RES-10-074-01	0	1	Hexachlorobutadiene	5	MG/KG	U	8.2	nc	NA	NA
Lyman Mill soil	RES-10-075-01	0	1	Hexachlorobutadiene	9.2	MG/KG	U	8.2	nc	NA	NA
Lyman Mill soil	RES-10-076-01	0	1	Hexachlorobutadiene	9.7	MG/KG	U	8.2	nc	NA	NA
Lyman Mill soil	RES-10-604-01	0	1	Hexachlorobutadiene	3.1	MG/KG	U	8.2	nc	NA	NA
Lyman Mill soil	RES-11-011-01	0	1	Hexachlorobutadiene	0.53	MG/KG	U	8.2	nc	NA	NA
Lyman Mill soil	RES-11-012-01	0	1	Hexachlorobutadiene	0.65	MG/KG	U	8.2	nc	NA	NA
Lyman Mill soil	RES-11-328-01	0	1	Hexachlorobutadiene	2.7	MG/KG	U	8.2	nc	NA	NA
Lyman Mill soil	RES-11-419-01	0	1	Hexachlorobutadiene	4	MG/KG	U	8.2	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	Hexachlorobutadiene	0.46	MG/KG	U	8.2	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	Hexachlorobutadiene	0.47	MG/KG	U	8.2	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	Hexachlorobutadiene	0.41	MG/KG	U	8.2	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	Hexachlorobutadiene	110	MG/KG	U	8.2	nc	NA	NA
Lyman Mill soil	RES-11-426-01	0	1	Hexachlorobutadiene	0.37	MG/KG	U	8.2	nc	NA	NA
Lyman Mill soil	RES-11-427-01	0	1	Hexachlorobutadiene	0.36	MG/KG	U	8.2	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	Hexachlorobutadiene	0.44	MG/KG	U	8.2	nc	NA	NA
Lyman Mill soil	RES-11-429-01	0	1	Hexachlorobutadiene	0.4	MG/KG	U	8.2	nc	NA	NA
Lyman Mill soil	RES-11-430-01	0	1	Hexachlorobutadiene	0.37	MG/KG	U	8.2	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	Hexachlorobutadiene	2	MG/KG	U	8.2	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	Hexachlorobutadiene	3.5	MG/KG	U	8.2	nc	NA	NA
Lyman Mill soil	RES-11-486-01	0	1	Hexachlorobutadiene	4.8	MG/KG	U	8.2	nc	NA	NA
Lyman Mill soil	RES-11-497-01	0	1	Hexachlorobutadiene	0.44	MG/KG	U	8.2	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	Hexachlorobutadiene	3.9	MG/KG	U	8.2	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	Hexachlorobutadiene	4	MG/KG	U	8.2	nc	NA	NA
Lyman Mill soil	RES-12-560-01	0	1	Hexachlorobutadiene	2	MG/KG	U	8.2	nc	NA	NA
Lyman Mill soil	RES-12-560-02	0	1	Hexachlorobutadiene	2.1	MG/KG	U	8.2	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Hexachlorobutadiene	4.4	MG/KG	U	8.2	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	Hexachlorobutadiene	0.48	MG/KG	U	8.2	nc	NA	NA
Allendale soil	CMS-418	0	1	Hexachlorobutadiene	0.0045	MG/KG	U	8.2	nc	NA	NA
Allendale soil	CMS-418	1	2	Hexachlorobutadiene	0.0054	MG/KG	U	8.2	nc	NA	NA
Allendale soil	CMS-418	0	1	Hexachloroethane	0.33	MG/KG	UJ	46	nc	NA	NA
Allendale soil	CMS-418	1	2	Hexachloroethane	0.37	MG/KG	U	46	nc	NA	NA
Allendale soil	SS-04	0	1.5	Hexachloroethane	0.43	MG/KG	U	46	nc	NA	NA
Allendale soil	SS-05	0	1.5	Hexachloroethane	0.48	MG/KG	U	46	nc	NA	NA
Allendale soil	RES-14-421-01	0	1	Hexachloroethane	0.37	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	Hexachloroethane	0.46	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-10-005-01	0	1	Hexachloroethane	3.3	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	Hexachloroethane	0.82	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Hexachloroethane	4.3	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	Hexachloroethane	0.5	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	Hexachloroethane	2	MG/KG	U	46	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-10-074-01	0	1	Hexachloroethane	5	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-10-075-01	0	1	Hexachloroethane	9.2	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-10-076-01	0	1	Hexachloroethane	9.7	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-10-604-01	0	1	Hexachloroethane	3.1	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-11-011-01	0	1	Hexachloroethane	0.53	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-11-012-01	0	1	Hexachloroethane	0.65	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-11-328-01	0	1	Hexachloroethane	2.7	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-11-419-01	0	1	Hexachloroethane	4	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	Hexachloroethane	0.46	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	Hexachloroethane	0.47	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	Hexachloroethane	0.41	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	Hexachloroethane	110	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-11-426-01	0	1	Hexachloroethane	0.37	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-11-427-01	0	1	Hexachloroethane	0.36	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	Hexachloroethane	0.44	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-11-429-01	0	1	Hexachloroethane	0.4	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-11-430-01	0	1	Hexachloroethane	0.37	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	Hexachloroethane	2	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	Hexachloroethane	3.5	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-11-486-01	0	1	Hexachloroethane	4.8	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-11-497-01	0	1	Hexachloroethane	0.44	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	Hexachloroethane	3.9	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	Hexachloroethane	4	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-12-560-01	0	1	Hexachloroethane	2	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-12-560-02	0	1	Hexachloroethane	2.1	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Hexachloroethane	4.4	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	Hexachloroethane	0.48	MG/KG	U	46	nc	NA	NA
Lyman Mill soil	LPX-FP-4004	0	0.5	Indeno(1,2,3-cd)pyrene	0.32296	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	LPX-FP-4006	0	0.5	Indeno(1,2,3-cd)pyrene	0.23708	MG/KG		0.9	nc	NA	N
Lyman Mill soil	LPX-FP-4007	0	0.5	Indeno(1,2,3-cd)pyrene	2.1227	MG/KG		0.9	nc	NA	Y
Allendale soil	CMS-418	0	1	Indeno(1,2,3-cd)pyrene	0.63	MG/KG	J	0.9	nc	NA	N
Allendale soil	CMS-418	1	2	Indeno(1,2,3-cd)pyrene	0.33	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Indeno(1,2,3-cd)pyrene	0.1039	MG/KG		0.9	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Indeno(1,2,3-cd)pyrene	0.0975	MG/KG		0.9	nc	NA	N
Lyman Mill soil	LPX-4113	0	0.5	Indeno(1,2,3-cd)pyrene	3.5708	MG/KG	J	0.9	nc	NA	Y
Lyman Mill soil	LPX-4114	0	0.5	Indeno(1,2,3-cd)pyrene	0.1481	MG/KG		0.9	nc	NA	N
Allendale soil	SS-04	0	1.5	Indeno(1,2,3-cd)pyrene	1.5	MG/KG		0.9	nc	NA	Y
Allendale soil	SS-05	0	1.5	Indeno(1,2,3-cd)pyrene	0.35	MG/KG	J	0.9	nc	NA	N
Allendale soil	RES-14-421-01	0	1	Indeno(1,2,3-cd)pyrene	0.37	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	Indeno(1,2,3-cd)pyrene	0.078	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-10-005-01	0	1	Indeno(1,2,3-cd)pyrene	3.3	MG/KG	U	0.9	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-10-042-01	0	1	Indeno(1,2,3-cd)pyrene	0.094	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	Indeno(1,2,3-cd)pyrene	4.3	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	Indeno(1,2,3-cd)pyrene	0.5	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	Indeno(1,2,3-cd)pyrene	0.2	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-10-074-01	0	1	Indeno(1,2,3-cd)pyrene	1.2	MG/KG	J	0.9	nc	NA	Y
Lyman Mill soil	RES-10-075-01	0	1	Indeno(1,2,3-cd)pyrene	15	MG/KG		0.9	nc	NA	Y
Lyman Mill soil	RES-10-076-01	0	1	Indeno(1,2,3-cd)pyrene	7.7	MG/KG	J	0.9	nc	NA	Y
Lyman Mill soil	RES-10-604-01	0	1	Indeno(1,2,3-cd)pyrene	0.38	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-011-01	0	1	Indeno(1,2,3-cd)pyrene	0.38	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-012-01	0	1	Indeno(1,2,3-cd)pyrene	0.47	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-328-01	0	1	Indeno(1,2,3-cd)pyrene	2.7	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-419-01	0	1	Indeno(1,2,3-cd)pyrene	4	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	Indeno(1,2,3-cd)pyrene	0.46	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	Indeno(1,2,3-cd)pyrene	0.47	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	Indeno(1,2,3-cd)pyrene	0.41	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	Indeno(1,2,3-cd)pyrene	56	MG/KG	J	0.9	nc	NA	Y
Lyman Mill soil	RES-11-426-01	0	1	Indeno(1,2,3-cd)pyrene	0.085	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-427-01	0	1	Indeno(1,2,3-cd)pyrene	0.36	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	Indeno(1,2,3-cd)pyrene	0.098	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-429-01	0	1	Indeno(1,2,3-cd)pyrene	0.056	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-430-01	0	1	Indeno(1,2,3-cd)pyrene	0.37	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	Indeno(1,2,3-cd)pyrene	2	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	Indeno(1,2,3-cd)pyrene	3.5	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-433-01	0	1	Indeno(1,2,3-cd)pyrene	0.42	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-11-486-01	0	1	Indeno(1,2,3-cd)pyrene	4.8	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-497-01	0	1	Indeno(1,2,3-cd)pyrene	0.44	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	Indeno(1,2,3-cd)pyrene	3.9	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	Indeno(1,2,3-cd)pyrene	2.5	MG/KG	J	0.9	nc	NA	Y
Lyman Mill soil	RES-12-560-01	0	1	Indeno(1,2,3-cd)pyrene	0.2	MG/KG	J	0.9	nc	NA	N
Lyman Mill soil	RES-12-560-02	0	1	Indeno(1,2,3-cd)pyrene	1.1	MG/KG	J	0.9	nc	NA	Y
Lyman Mill soil	RES-10-044-01	0	1	Indeno(1,2,3-cd)pyrene	4.4	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	Indeno(1,2,3-cd)pyrene	0.48	MG/KG	U	0.9	nc	NA	NA
Lyman Mill soil	LPX-FP-4004	0	0.5	2-methylnaphthalene	0.00782	MG/KG	J	123	nc	NA	N
Lyman Mill soil	LPX-FP-4006	0	0.5	2-methylnaphthalene	0.01729	MG/KG		123	nc	NA	N
Lyman Mill soil	LPX-FP-4007	0	0.5	2-methylnaphthalene	0.03566	MG/KG		123	nc	NA	N
Allendale soil	CMS-418	0	1	2-methylnaphthalene	0.33	MG/KG	UJ	123	nc	NA	NA
Allendale soil	CMS-418	1	2	2-methylnaphthalene	0.37	MG/KG	U	123	nc	NA	NA
Lyman Mill soil	LPX-4112	0	0.5	2-methylnaphthalene	0.0056	MG/KG	J	123	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	2-methylnaphthalene	0.0024	MG/KG	J	123	nc	NA	N
Lyman Mill soil	LPX-4113	0	0.5	2-methylnaphthalene	1.5602	MG/KG		123	nc	NA	N
Lyman Mill soil	LPX-4114	0	0.5	2-methylnaphthalene	0.0045	MG/KG		123	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Allendale soil	SS-04	0	1.5	2-methylnaphthalene	0.078	MG/KG	J	123	nc	NA	N
Allendale soil	SS-05	0	1.5	2-methylnaphthalene	0.48	MG/KG	U	123	nc	NA	NA
Allendale soil	RES-14-421-01	0	1	2-methylnaphthalene	0.37	MG/KG	U	123	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	2-methylnaphthalene	0.46	MG/KG	U	123	nc	NA	NA
Lyman Mill soil	RES-10-005-01	0	1	2-methylnaphthalene	3.3	MG/KG	U	123	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	2-methylnaphthalene	0.82	MG/KG	U	123	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	2-methylnaphthalene	4.3	MG/KG	U	123	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	2-methylnaphthalene	0.5	MG/KG	U	123	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	2-methylnaphthalene	2	MG/KG	U	123	nc	NA	NA
Lyman Mill soil	RES-10-074-01	0	1	2-methylnaphthalene	5	MG/KG	U	123	nc	NA	NA
Lyman Mill soil	RES-10-075-01	0	1	2-methylnaphthalene	1.1	MG/KG	J	123	nc	NA	N
Lyman Mill soil	RES-10-076-01	0	1	2-methylnaphthalene	9.7	MG/KG	U	123	nc	NA	NA
Lyman Mill soil	RES-10-604-01	0	1	2-methylnaphthalene	3.1	MG/KG	U	123	nc	NA	NA
Lyman Mill soil	RES-11-011-01	0	1	2-methylnaphthalene	0.53	MG/KG	U	123	nc	NA	NA
Lyman Mill soil	RES-11-012-01	0	1	2-methylnaphthalene	0.65	MG/KG	U	123	nc	NA	NA
Lyman Mill soil	RES-11-328-01	0	1	2-methylnaphthalene	2.7	MG/KG	U	123	nc	NA	NA
Lyman Mill soil	RES-11-419-01	0	1	2-methylnaphthalene	4	MG/KG	U	123	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	2-methylnaphthalene	0.46	MG/KG	U	123	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	2-methylnaphthalene	0.47	MG/KG	U	123	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	2-methylnaphthalene	0.41	MG/KG	U	123	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	2-methylnaphthalene	110	MG/KG	U	123	nc	NA	NA
Lyman Mill soil	RES-11-426-01	0	1	2-methylnaphthalene	0.37	MG/KG	U	123	nc	NA	NA
Lyman Mill soil	RES-11-427-01	0	1	2-methylnaphthalene	0.36	MG/KG	U	123	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	2-methylnaphthalene	0.044	MG/KG	J	123	nc	NA	N
Lyman Mill soil	RES-11-429-01	0	1	2-methylnaphthalene	0.4	MG/KG	U	123	nc	NA	NA
Lyman Mill soil	RES-11-430-01	0	1	2-methylnaphthalene	0.37	MG/KG	U	123	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	2-methylnaphthalene	2	MG/KG	U	123	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	2-methylnaphthalene	3.5	MG/KG	U	123	nc	NA	NA
Lyman Mill soil	RES-11-486-01	0	1	2-methylnaphthalene	4.8	MG/KG	U	123	nc	NA	NA
Lyman Mill soil	RES-11-497-01	0	1	2-methylnaphthalene	0.44	MG/KG	U	123	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	2-methylnaphthalene	3.9	MG/KG	U	123	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	2-methylnaphthalene	4	MG/KG	U	123	nc	NA	NA
Lyman Mill soil	RES-12-560-01	0	1	2-methylnaphthalene	2	MG/KG	U	123	nc	NA	NA
Lyman Mill soil	RES-12-560-02	0	1	2-methylnaphthalene	2.1	MG/KG	U	123	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	2-methylnaphthalene	4.4	MG/KG	U	123	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	2-methylnaphthalene	0.48	MG/KG	U	123	nc	NA	NA
Lyman Mill soil	LPX-FP-4004	0	0.5	Naphthalene	0.01275	MG/KG	J	54	nc	NA	N
Lyman Mill soil	LPX-FP-4006	0	0.5	Naphthalene	0.02965	MG/KG		54	nc	NA	N
Lyman Mill soil	LPX-FP-4007	0	0.5	Naphthalene	0.0634	MG/KG		54	nc	NA	N
Allendale soil	CMS-418	0	1	Naphthalene	0.33	MG/KG	UJ	54	nc	NA	NA
Allendale soil	CMS-418	1	2	Naphthalene	0.37	MG/KG	U	54	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	LPX-4112	0	0.5	Naphthalene	0.0090	MG/KG	J	54	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Naphthalene	0.0040	MG/KG	J	54	nc	NA	N
Lyman Mill soil	LPX-4113	0	0.5	Naphthalene	4.3899	MG/KG		54	nc	NA	N
Lyman Mill soil	LPX-4114	0	0.5	Naphthalene	0.0079	MG/KG		54	nc	NA	N
Allendale soil	SS-04	0	1.5	Naphthalene	0.11	MG/KG	J	54	nc	NA	N
Allendale soil	SS-05	0	1.5	Naphthalene	0.48	MG/KG	U	54	nc	NA	NA
Allendale soil	RES-14-421-01	0	1	Naphthalene	0.37	MG/KG	U	54	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	Naphthalene	0.46	MG/KG	U	54	nc	NA	NA
Lyman Mill soil	RES-10-005-01	0	1	Naphthalene	3.3	MG/KG	U	54	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	Naphthalene	0.18	MG/KG	J	54	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	Naphthalene	4.3	MG/KG	U	54	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	Naphthalene	0.5	MG/KG	U	54	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	Naphthalene	2	MG/KG	U	54	nc	NA	NA
Lyman Mill soil	RES-10-074-01	0	1	Naphthalene	5	MG/KG	U	54	nc	NA	NA
Lyman Mill soil	RES-10-075-01	0	1	Naphthalene	2.3	MG/KG	J	54	nc	NA	N
Lyman Mill soil	RES-10-076-01	0	1	Naphthalene	9.7	MG/KG	U	54	nc	NA	NA
Lyman Mill soil	RES-10-604-01	0	1	Naphthalene	3.1	MG/KG	U	54	nc	NA	NA
Lyman Mill soil	RES-11-011-01	0	1	Naphthalene	0.53	MG/KG	U	54	nc	NA	NA
Lyman Mill soil	RES-11-012-01	0	1	Naphthalene	0.65	MG/KG	U	54	nc	NA	NA
Lyman Mill soil	RES-11-328-01	0	1	Naphthalene	2.7	MG/KG	U	54	nc	NA	NA
Lyman Mill soil	RES-11-419-01	0	1	Naphthalene	4	MG/KG	U	54	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	Naphthalene	0.46	MG/KG	U	54	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	Naphthalene	0.47	MG/KG	U	54	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	Naphthalene	0.41	MG/KG	U	54	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	Naphthalene	110	MG/KG	U	54	nc	NA	NA
Lyman Mill soil	RES-11-426-01	0	1	Naphthalene	0.37	MG/KG	U	54	nc	NA	NA
Lyman Mill soil	RES-11-427-01	0	1	Naphthalene	0.36	MG/KG	U	54	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	Naphthalene	0.065	MG/KG	J	54	nc	NA	N
Lyman Mill soil	RES-11-429-01	0	1	Naphthalene	0.4	MG/KG	U	54	nc	NA	NA
Lyman Mill soil	RES-11-430-01	0	1	Naphthalene	0.37	MG/KG	U	54	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	Naphthalene	2	MG/KG	U	54	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	Naphthalene	3.5	MG/KG	U	54	nc	NA	NA
Lyman Mill soil	RES-11-486-01	0	1	Naphthalene	4.8	MG/KG	U	54	nc	NA	NA
Lyman Mill soil	RES-11-497-01	0	1	Naphthalene	0.44	MG/KG	U	54	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	Naphthalene	3.9	MG/KG	U	54	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	Naphthalene	4	MG/KG	U	54	nc	NA	NA
Lyman Mill soil	RES-12-560-01	0	1	Naphthalene	2	MG/KG	U	54	nc	NA	NA
Lyman Mill soil	RES-12-560-02	0	1	Naphthalene	2.1	MG/KG	U	54	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Naphthalene	4.4	MG/KG	U	54	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	Naphthalene	0.48	MG/KG	U	54	nc	NA	NA
Allendale soil	CMS-418	0	1	Naphthalene	0.0045	MG/KG	U	54	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Allendale soil	CMS-418	1	2	Naphthalene	0.0054	MG/KG	U	54	nc	NA	NA
Lyman Mill soil	LPX-FP-4004	0	0.5	Pentachlorophenol	2.6	MG/KG	U	5.3	nc	NA	NA
Lyman Mill soil	LPX-FP-4006	0	0.5	Pentachlorophenol	2.6	MG/KG	U	5.3	nc	NA	NA
Lyman Mill soil	LPX-FP-4007	0	0.5	Pentachlorophenol	3	MG/KG	U	5.3	nc	NA	NA
Allendale soil	CMS-418	0	1	Pentachlorophenol	1.6	MG/KG	UJ	5.3	nc	NA	NA
Allendale soil	CMS-418	1	2	Pentachlorophenol	1.8	MG/KG	U	5.3	nc	NA	NA
Lyman Mill soil	LPX-4112	0	0.5	Pentachlorophenol	1.9	MG/KG	U	5.3	nc	NA	NA
Lyman Mill soil	LPX-4112	0	0.5	Pentachlorophenol	1.9	MG/KG	U	5.3	nc	NA	NA
Lyman Mill soil	LPX-4113	0	0.5	Pentachlorophenol	1.9	MG/KG	U	5.3	nc	NA	NA
Lyman Mill soil	LPX-4114	0	0.5	Pentachlorophenol	2.1	MG/KG	U	5.3	nc	NA	NA
Allendale soil	SS-04	0	1.5	Pentachlorophenol	1.1	MG/KG	UJ	5.3	nc	NA	NA
Allendale soil	SS-05	0	1.5	Pentachlorophenol	1.2	MG/KG	UJ	5.3	nc	NA	NA
Allendale soil	RES-14-421-01	0	1	Pentachlorophenol	0.92	MG/KG	UJ	5.3	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	Pentachlorophenol	1.2	MG/KG	UJ	5.3	nc	NA	NA
Lyman Mill soil	RES-10-005-01	0	1	Pentachlorophenol	8.3	MG/KG	UJ	5.3	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	Pentachlorophenol	2	MG/KG	UJ	5.3	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Pentachlorophenol	11	MG/KG	UJ	5.3	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	Pentachlorophenol	1.3	MG/KG	U	5.3	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	Pentachlorophenol	5	MG/KG	UJ	5.3	nc	NA	NA
Lyman Mill soil	RES-10-074-01	0	1	Pentachlorophenol	12	MG/KG	UJ	5.3	nc	NA	NA
Lyman Mill soil	RES-10-075-01	0	1	Pentachlorophenol	23	MG/KG	UJ	5.3	nc	NA	NA
Lyman Mill soil	RES-10-076-01	0	1	Pentachlorophenol	24	MG/KG	UJ	5.3	nc	NA	NA
Lyman Mill soil	RES-10-604-01	0	1	Pentachlorophenol	7.7	MG/KG	UJ	5.3	nc	NA	NA
Lyman Mill soil	RES-11-011-01	0	1	Pentachlorophenol	1.3	MG/KG	U	5.3	nc	NA	NA
Lyman Mill soil	RES-11-012-01	0	1	Pentachlorophenol	1.6	MG/KG	U	5.3	nc	NA	NA
Lyman Mill soil	RES-11-328-01	0	1	Pentachlorophenol	6.8	MG/KG	U	5.3	nc	NA	NA
Lyman Mill soil	RES-11-419-01	0	1	Pentachlorophenol	10	MG/KG	UJ	5.3	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	Pentachlorophenol	1.1	MG/KG	U	5.3	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	Pentachlorophenol	1.2	MG/KG	U	5.3	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	Pentachlorophenol	1	MG/KG	U	5.3	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	Pentachlorophenol	280	MG/KG	U	5.3	nc	NA	NA
Lyman Mill soil	RES-11-426-01	0	1	Pentachlorophenol	0.92	MG/KG	U	5.3	nc	NA	NA
Lyman Mill soil	RES-11-427-01	0	1	Pentachlorophenol	0.9	MG/KG	U	5.3	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	Pentachlorophenol	1.1	MG/KG	U	5.3	nc	NA	NA
Lyman Mill soil	RES-11-429-01	0	1	Pentachlorophenol	1	MG/KG	U	5.3	nc	NA	NA
Lyman Mill soil	RES-11-430-01	0	1	Pentachlorophenol	0.93	MG/KG	U	5.3	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	Pentachlorophenol	5.1	MG/KG	U	5.3	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	Pentachlorophenol	8.7	MG/KG	U	5.3	nc	NA	NA
Lyman Mill soil	RES-11-486-01	0	1	Pentachlorophenol	12	MG/KG	U	5.3	nc	NA	NA
Lyman Mill soil	RES-11-497-01	0	1	Pentachlorophenol	1.1	MG/KG	U	5.3	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	Pentachlorophenol	9.8	MG/KG	UJ	5.3	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-12-556-01	0	1	Pentachlorophenol	10	MG/KG	U	5.3	nc	NA	NA
Lyman Mill soil	RES-12-560-01	0	1	Pentachlorophenol	4.9	MG/KG	U	5.3	nc	NA	NA
Lyman Mill soil	RES-12-560-02	0	1	Pentachlorophenol	5.3	MG/KG	U	5.3	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Pentachlorophenol	11	MG/KG	UJ	5.3	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	Pentachlorophenol	1.2	MG/KG	U	5.3	nc	NA	NA
Lyman Mill soil	LPX-FP-4004	0	0.5	Phenanthrene	0.33152	MG/KG	J	40	nc	NA	N
Lyman Mill soil	LPX-FP-4006	0	0.5	Phenanthrene	0.3401	MG/KG		40	nc	NA	N
Lyman Mill soil	LPX-FP-4007	0	0.5	Phenanthrene	2.13094	MG/KG		40	nc	NA	N
Allendale soil	CMS-418	0	1	Phenanthrene	3.4	MG/KG	J	40	nc	NA	N
Allendale soil	CMS-418	1	2	Phenanthrene	1.3	MG/KG		40	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Phenanthrene	0.2032	MG/KG	J	40	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Phenanthrene	0.0942	MG/KG	J	40	nc	NA	N
Lyman Mill soil	LPX-4113	0	0.5	Phenanthrene	24.6292	MG/KG		40	nc	NA	N
Lyman Mill soil	LPX-4114	0	0.5	Phenanthrene	0.1736	MG/KG		40	nc	NA	N
Allendale soil	SS-04	0	1.5	Phenanthrene	3.9	MG/KG	*	40	nc	NA	N
Allendale soil	SS-05	0	1.5	Phenanthrene	0.58	MG/KG		40	nc	NA	N
Allendale soil	RES-14-421-01	0	1	Phenanthrene	0.37	MG/KG	U	40	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	Phenanthrene	0.12	MG/KG	J	40	nc	NA	N
Lyman Mill soil	RES-10-005-01	0	1	Phenanthrene	3.3	MG/KG	U	40	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	Phenanthrene	0.13	MG/KG	J	40	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	Phenanthrene	0.97	MG/KG	J	40	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Phenanthrene	0.17	MG/KG	J	40	nc	NA	N
Lyman Mill soil	RES-10-068-01	0	1	Phenanthrene	0.28	MG/KG	J	40	nc	NA	N
Lyman Mill soil	RES-10-074-01	0	1	Phenanthrene	4	MG/KG	J	40	nc	NA	N
Lyman Mill soil	RES-10-075-01	0	1	Phenanthrene	63	MG/KG		40	nc	NA	Y
Lyman Mill soil	RES-10-076-01	0	1	Phenanthrene	17	MG/KG		40	nc	NA	N
Lyman Mill soil	RES-10-604-01	0	1	Phenanthrene	0.32	MG/KG	J	40	nc	NA	N
Lyman Mill soil	RES-11-011-01	0	1	Phenanthrene	1.1	MG/KG		40	nc	NA	N
Lyman Mill soil	RES-11-012-01	0	1	Phenanthrene	2.2	MG/KG		40	nc	NA	N
Lyman Mill soil	RES-11-328-01	0	1	Phenanthrene	0.46	MG/KG	J	40	nc	NA	N
Lyman Mill soil	RES-11-419-01	0	1	Phenanthrene	4	MG/KG	U	40	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	Phenanthrene	0.091	MG/KG	J	40	nc	NA	N
Lyman Mill soil	RES-11-422-01	0	1	Phenanthrene	0.11	MG/KG	J	40	nc	NA	N
Lyman Mill soil	RES-11-423-01	0	1	Phenanthrene	0.41	MG/KG	U	40	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	Phenanthrene	180	MG/KG	J	40	nc	NA	Y
Lyman Mill soil	RES-11-426-01	0	1	Phenanthrene	0.12	MG/KG	J	40	nc	NA	N
Lyman Mill soil	RES-11-427-01	0	1	Phenanthrene	0.36	MG/KG	U	40	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	Phenanthrene	1	MG/KG		40	nc	NA	N
Lyman Mill soil	RES-11-429-01	0	1	Phenanthrene	0.072	MG/KG	J	40	nc	NA	N
Lyman Mill soil	RES-11-430-01	0	1	Phenanthrene	0.37	MG/KG	U	40	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	Phenanthrene	2	MG/KG	U	40	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-11-432-01	0	1	Phenanthrene	3.5	MG/KG	U	40	nc	NA	NA
Lyman Mill soil	RES-11-433-01	0	1	Phenanthrene	0.7	MG/KG	J	40	nc	NA	N
Lyman Mill soil	RES-11-486-01	0	1	Phenanthrene	0.66	MG/KG	J	40	nc	NA	N
Lyman Mill soil	RES-11-497-01	0	1	Phenanthrene	0.44	MG/KG	U	40	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	Phenanthrene	3.9	MG/KG	U	40	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	Phenanthrene	4.1	MG/KG		40	nc	NA	N
Lyman Mill soil	RES-12-560-01	0	1	Phenanthrene	0.28	MG/KG	J	40	nc	NA	N
Lyman Mill soil	RES-12-560-02	0	1	Phenanthrene	3.6	MG/KG		40	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	Phenanthrene	0.92	MG/KG	J	40	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Phenanthrene	0.48	MG/KG	U	40	nc	NA	NA
Lyman Mill soil	LPX-FP-4004	0	0.5	Phenol	0.51	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	LPX-FP-4006	0	0.5	Phenol	0.51	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	LPX-FP-4007	0	0.5	Phenol	0.58	MG/KG	U	6000	nc	NA	NA
Allendale soil	CMS-418	0	1	Phenol	0.33	MG/KG	UJ	6000	nc	NA	NA
Allendale soil	CMS-418	1	2	Phenol	0.37	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	LPX-4112	0	0.5	Phenol	0.4	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	LPX-4112	0	0.5	Phenol	0.4	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	LPX-4113	0	0.5	Phenol	0.4	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	LPX-4114	0	0.5	Phenol	0.44	MG/KG	U	6000	nc	NA	NA
Allendale soil	SS-04	0	1.5	Phenol	0.43	MG/KG	U	6000	nc	NA	NA
Allendale soil	SS-05	0	1.5	Phenol	0.48	MG/KG	U	6000	nc	NA	NA
Allendale soil	RES-14-421-01	0	1	Phenol	0.37	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	Phenol	0.46	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	RES-10-005-01	0	1	Phenol	3.3	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	Phenol	0.82	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Phenol	4.3	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	Phenol	0.5	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	Phenol	2	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	RES-10-074-01	0	1	Phenol	5	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	RES-10-075-01	0	1	Phenol	9.2	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	RES-10-076-01	0	1	Phenol	9.7	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	RES-10-604-01	0	1	Phenol	3.1	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	RES-11-011-01	0	1	Phenol	0.53	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	RES-11-012-01	0	1	Phenol	0.65	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	RES-11-328-01	0	1	Phenol	2.7	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	RES-11-419-01	0	1	Phenol	4	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	Phenol	0.46	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	Phenol	0.47	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	Phenol	0.41	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	Phenol	110	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	RES-11-426-01	0	1	Phenol	0.37	MG/KG	U	6000	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-11-427-01	0	1	Phenol	0.36	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	Phenol	0.44	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	RES-11-429-01	0	1	Phenol	0.4	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	RES-11-430-01	0	1	Phenol	0.37	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	Phenol	2	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	Phenol	3.5	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	RES-11-486-01	0	1	Phenol	4.8	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	RES-11-497-01	0	1	Phenol	0.44	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	Phenol	3.9	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	Phenol	4	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	RES-12-560-01	0	1	Phenol	2	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	RES-12-560-02	0	1	Phenol	2.1	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Phenol	4.4	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	Phenol	0.48	MG/KG	U	6000	nc	NA	NA
Lyman Mill soil	LPX-FP-4004	0	0.5	Pyrene	0.62517	MG/KG	J	13	nc	NA	N
Lyman Mill soil	LPX-FP-4006	0	0.5	Pyrene	0.49012	MG/KG		13	nc	NA	N
Lyman Mill soil	LPX-FP-4007	0	0.5	Pyrene	3.84604	MG/KG		13	nc	NA	N
Allendale soil	CMS-418	0	1	Pyrene	3.5	MG/KG	J	13	nc	NA	N
Allendale soil	CMS-418	1	2	Pyrene	2.2	MG/KG		13	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Pyrene	0.2829	MG/KG		13	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Pyrene	0.1851	MG/KG		13	nc	NA	N
Lyman Mill soil	LPX-4113	0	0.5	Pyrene	17.2717	MG/KG		13	nc	NA	Y
Lyman Mill soil	LPX-4114	0	0.5	Pyrene	0.3372	MG/KG		13	nc	NA	N
Allendale soil	SS-04	0	1.5	Pyrene	3.5	MG/KG	*	13	nc	NA	N
Allendale soil	SS-05	0	1.5	Pyrene	0.75	MG/KG		13	nc	NA	N
Allendale soil	RES-14-421-01	0	1	Pyrene	0.055	MG/KG	J	13	nc	NA	N
Lyman Mill soil	RES-10-004-01	0	1	Pyrene	0.23	MG/KG	J	13	nc	NA	N
Lyman Mill soil	RES-10-005-01	0	1	Pyrene	3.3	MG/KG	UJ	13	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	Pyrene	0.25	MG/KG	J	13	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	Pyrene	1.1	MG/KG	J	13	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Pyrene	0.26	MG/KG	J	13	nc	NA	N
Lyman Mill soil	RES-10-068-01	0	1	Pyrene	0.48	MG/KG	J	13	nc	NA	N
Lyman Mill soil	RES-10-074-01	0	1	Pyrene	4.1	MG/KG	J	13	nc	NA	N
Lyman Mill soil	RES-10-075-01	0	1	Pyrene	57	MG/KG	J	13	nc	NA	Y
Lyman Mill soil	RES-10-076-01	0	1	Pyrene	18	MG/KG	J	13	nc	NA	Y
Lyman Mill soil	RES-10-604-01	0	1	Pyrene	0.77	MG/KG	J	13	nc	NA	N
Lyman Mill soil	RES-11-011-01	0	1	Pyrene	2.4	MG/KG		13	nc	NA	N
Lyman Mill soil	RES-11-012-01	0	1	Pyrene	5	MG/KG		13	nc	NA	N
Lyman Mill soil	RES-11-328-01	0	1	Pyrene	0.77	MG/KG	J	13	nc	NA	N
Lyman Mill soil	RES-11-419-01	0	1	Pyrene	0.55	MG/KG	J	13	nc	NA	N
Lyman Mill soil	RES-11-420-01	0	1	Pyrene	0.2	MG/KG	J	13	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-11-422-01	0	1	Pyrene	0.17	MG/KG	J	13	nc	NA	N
Lyman Mill soil	RES-11-423-01	0	1	Pyrene	0.41	MG/KG	U	13	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	Pyrene	280	MG/KG	J	13	nc	NA	Y
Lyman Mill soil	RES-11-426-01	0	1	Pyrene	0.23	MG/KG	J	13	nc	NA	N
Lyman Mill soil	RES-11-427-01	0	1	Pyrene	0.057	MG/KG	J	13	nc	NA	N
Lyman Mill soil	RES-11-428-01	0	1	Pyrene	0.85	MG/KG		13	nc	NA	N
Lyman Mill soil	RES-11-429-01	0	1	Pyrene	0.18	MG/KG	J	13	nc	NA	N
Lyman Mill soil	RES-11-430-01	0	1	Pyrene	0.062	MG/KG	J	13	nc	NA	N
Lyman Mill soil	RES-11-431-01	0	1	Pyrene	0.21	MG/KG	J	13	nc	NA	N
Lyman Mill soil	RES-11-432-01	0	1	Pyrene	0.48	MG/KG	J	13	nc	NA	N
Lyman Mill soil	RES-11-433-01	0	1	Pyrene	1.5	MG/KG	J	13	nc	NA	N
Lyman Mill soil	RES-11-486-01	0	1	Pyrene	1.2	MG/KG	J	13	nc	NA	N
Lyman Mill soil	RES-11-497-01	0	1	Pyrene	0.44	MG/KG	U	13	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	Pyrene	3.9	MG/KG	UJ	13	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	Pyrene	5.8	MG/KG		13	nc	NA	N
Lyman Mill soil	RES-12-560-01	0	1	Pyrene	0.5	MG/KG	J	13	nc	NA	N
Lyman Mill soil	RES-12-560-02	0	1	Pyrene	4.9	MG/KG		13	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	Pyrene	1.1	MG/KG	J	13	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Pyrene	0.073	MG/KG	J	13	nc	NA	N
Allendale soil	CMS-418	0	1	1,2,4-trichlorobenzene	0.33	MG/KG	UJ	96	nc	NA	NA
Allendale soil	CMS-418	1	2	1,2,4-trichlorobenzene	0.37	MG/KG	U	96	nc	NA	NA
Allendale soil	SS-04	0	1.5	1,2,4-trichlorobenzene	0.43	MG/KG	U	96	nc	NA	NA
Allendale soil	SS-05	0	1.5	1,2,4-trichlorobenzene	0.48	MG/KG	U	96	nc	NA	NA
Lyman Mill soil	LPX-FP-4004	0	0.5	2,4,5-trichlorophenol	2.6	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	LPX-FP-4006	0	0.5	2,4,5-trichlorophenol	2.6	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	LPX-FP-4007	0	0.5	2,4,5-trichlorophenol	3	MG/KG	U	330	nc	NA	NA
Allendale soil	CMS-418	0	1	2,4,5-trichlorophenol	0.33	MG/KG	UJ	330	nc	NA	NA
Allendale soil	CMS-418	1	2	2,4,5-trichlorophenol	0.37	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	LPX-4112	0	0.5	2,4,5-trichlorophenol	0.4	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	LPX-4112	0	0.5	2,4,5-trichlorophenol	0.4	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	LPX-4113	0	0.5	2,4,5-trichlorophenol	0.4	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	LPX-4114	0	0.5	2,4,5-trichlorophenol	0.44	MG/KG	U	330	nc	NA	NA
Allendale soil	SS-04	0	1.5	2,4,5-trichlorophenol	0.18	MG/KG	J	330	nc	NA	N
Allendale soil	SS-05	0	1.5	2,4,5-trichlorophenol	1.2	MG/KG	U	330	nc	NA	NA
Allendale soil	RES-14-421-01	0	1	2,4,5-trichlorophenol	0.92	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	2,4,5-trichlorophenol	1.2	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	RES-10-005-01	0	1	2,4,5-trichlorophenol	8.3	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	2,4,5-trichlorophenol	2	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	2,4,5-trichlorophenol	11	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	2,4,5-trichlorophenol	1.3	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	2,4,5-trichlorophenol	5	MG/KG	U	330	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-10-074-01	0	1	2,4,5-trichlorophenol	12	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	RES-10-075-01	0	1	2,4,5-trichlorophenol	23	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	RES-10-076-01	0	1	2,4,5-trichlorophenol	24	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	RES-10-604-01	0	1	2,4,5-trichlorophenol	7.7	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	RES-11-011-01	0	1	2,4,5-trichlorophenol	1.3	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	RES-11-012-01	0	1	2,4,5-trichlorophenol	1.6	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	RES-11-328-01	0	1	2,4,5-trichlorophenol	6.8	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	RES-11-419-01	0	1	2,4,5-trichlorophenol	10	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	2,4,5-trichlorophenol	1.1	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	2,4,5-trichlorophenol	1.2	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	2,4,5-trichlorophenol	1	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	2,4,5-trichlorophenol	280	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	RES-11-426-01	0	1	2,4,5-trichlorophenol	0.92	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	RES-11-427-01	0	1	2,4,5-trichlorophenol	0.9	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	2,4,5-trichlorophenol	1.1	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	RES-11-429-01	0	1	2,4,5-trichlorophenol	1	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	RES-11-430-01	0	1	2,4,5-trichlorophenol	0.93	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	2,4,5-trichlorophenol	5.1	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	2,4,5-trichlorophenol	8.7	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	RES-11-486-01	0	1	2,4,5-trichlorophenol	12	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	RES-11-497-01	0	1	2,4,5-trichlorophenol	1.1	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	2,4,5-trichlorophenol	9.8	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	2,4,5-trichlorophenol	10	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	RES-12-560-01	0	1	2,4,5-trichlorophenol	4.9	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	RES-12-560-02	0	1	2,4,5-trichlorophenol	5.3	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	2,4,5-trichlorophenol	11	MG/KG	U	330	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	2,4,5-trichlorophenol	1.2	MG/KG	U	330	nc	NA	NA
Allendale soil	CMS-418	0	1	2,4,6-trichlorophenol	0.33	MG/KG	UJ	58	nc	NA	NA
Allendale soil	CMS-418	1	2	2,4,6-trichlorophenol	0.37	MG/KG	U	58	nc	NA	NA
Allendale soil	SS-04	0	1.5	2,4,6-trichlorophenol	0.43	MG/KG	U	58	nc	NA	NA
Allendale soil	SS-05	0	1.5	2,4,6-trichlorophenol	0.48	MG/KG	U	58	nc	NA	NA
Allendale soil	RES-14-421-01	0	1	2,4,6-trichlorophenol	0.37	MG/KG	U	58	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	2,4,6-trichlorophenol	0.46	MG/KG	U	58	nc	NA	NA
Lyman Mill soil	RES-10-005-01	0	1	2,4,6-trichlorophenol	3.3	MG/KG	U	58	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	2,4,6-trichlorophenol	0.82	MG/KG	U	58	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	2,4,6-trichlorophenol	4.3	MG/KG	U	58	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	2,4,6-trichlorophenol	0.5	MG/KG	U	58	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	2,4,6-trichlorophenol	2	MG/KG	U	58	nc	NA	NA
Lyman Mill soil	RES-10-074-01	0	1	2,4,6-trichlorophenol	5	MG/KG	U	58	nc	NA	NA
Lyman Mill soil	RES-10-075-01	0	1	2,4,6-trichlorophenol	9.2	MG/KG	U	58	nc	NA	NA
Lyman Mill soil	RES-10-076-01	0	1	2,4,6-trichlorophenol	9.7	MG/KG	U	58	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-10-604-01	0	1	2,4,6-trichlorophenol	3.1	MG/KG	U	58	nc	NA	NA
Lyman Mill soil	RES-11-011-01	0	1	2,4,6-trichlorophenol	0.53	MG/KG	U	58	nc	NA	NA
Lyman Mill soil	RES-11-012-01	0	1	2,4,6-trichlorophenol	0.65	MG/KG	U	58	nc	NA	NA
Lyman Mill soil	RES-11-328-01	0	1	2,4,6-trichlorophenol	2.7	MG/KG	U	58	nc	NA	NA
Lyman Mill soil	RES-11-419-01	0	1	2,4,6-trichlorophenol	4	MG/KG	U	58	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	2,4,6-trichlorophenol	0.46	MG/KG	U	58	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	2,4,6-trichlorophenol	0.47	MG/KG	U	58	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	2,4,6-trichlorophenol	0.41	MG/KG	U	58	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	2,4,6-trichlorophenol	110	MG/KG	U	58	nc	NA	NA
Lyman Mill soil	RES-11-426-01	0	1	2,4,6-trichlorophenol	0.37	MG/KG	U	58	nc	NA	NA
Lyman Mill soil	RES-11-427-01	0	1	2,4,6-trichlorophenol	0.36	MG/KG	U	58	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	2,4,6-trichlorophenol	0.44	MG/KG	U	58	nc	NA	NA
Lyman Mill soil	RES-11-429-01	0	1	2,4,6-trichlorophenol	0.4	MG/KG	U	58	nc	NA	NA
Lyman Mill soil	RES-11-430-01	0	1	2,4,6-trichlorophenol	0.37	MG/KG	U	58	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	2,4,6-trichlorophenol	2	MG/KG	U	58	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	2,4,6-trichlorophenol	3.5	MG/KG	U	58	nc	NA	NA
Lyman Mill soil	RES-11-486-01	0	1	2,4,6-trichlorophenol	4.8	MG/KG	U	58	nc	NA	NA
Lyman Mill soil	RES-11-497-01	0	1	2,4,6-trichlorophenol	0.44	MG/KG	U	58	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	2,4,6-trichlorophenol	3.9	MG/KG	U	58	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	2,4,6-trichlorophenol	4	MG/KG	U	58	nc	NA	NA
Lyman Mill soil	RES-12-560-01	0	1	2,4,6-trichlorophenol	2	MG/KG	U	58	nc	NA	NA
Lyman Mill soil	RES-12-560-02	0	1	2,4,6-trichlorophenol	2.1	MG/KG	U	58	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	2,4,6-trichlorophenol	4.4	MG/KG	U	58	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	2,4,6-trichlorophenol	0.48	MG/KG	U	58	nc	NA	NA
Pesticides/PCBs											
Oxbow Area soil	LPX-SD-4404	0	0.5	alpha-Chlordane	0.00119	MG/KG	J	0.5	nc	NA	N
Oxbow Area soil	LPX-SD-4407	0	0.5	alpha-Chlordane	0.00768	MG/KG	J	0.5	nc	NA	N
Lyman Mill soil	LPX-FP-4004	0	0.5	alpha-Chlordane	0.00284	MG/KG		0.5	nc	NA	N
Lyman Mill soil	LPX-FP-4004	0	0.5	alpha-Chlordane	0.01673	MG/KG	J	0.5	nc	NA	N
Lyman Mill soil	LPX-FP-4006	0	0.5	alpha-Chlordane	0.00123	MG/KG	J	0.5	nc	NA	N
Lyman Mill soil	LPX-FP-4007	0	0.5	alpha-Chlordane	0.02223	MG/KG		0.5	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	alpha-Chlordane	0.1141	MG/KG		0.5	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	alpha-Chlordane	0.0888	MG/KG		0.5	nc	NA	N
Lyman Mill soil	LPX-4113	0	0.5	alpha-Chlordane	0.0060	MG/KG		0.5	nc	NA	N
Lyman Mill soil	LPX-4114	0	0.5	alpha-Chlordane	0.0310	MG/KG		0.5	nc	NA	N
Allendale soil	SS-04	0	1.5	alpha-Chlordane	0.0022	MG/KG	J	0.5	nc	NA	N
Allendale soil	SS-05	0	1.5	alpha-Chlordane	0.001	MG/KG	J	0.5	nc	NA	N
Allendale soil	RES-14-421-01	0	1	alpha-Chlordane	0.0019	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	alpha-Chlordane	0.0024	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-10-005-01	0	1	alpha-Chlordane	0.0086	MG/KG		0.5	nc	NA	N
Lyman Mill soil	RES-10-042-01	0	1	alpha-Chlordane	0.0056	MG/KG		0.5	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-10-044-01	0	1	alpha-Chlordane	0.0044	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	alpha-Chlordane	0.0026	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	alpha-Chlordane	0.0016	MG/KG	J	0.5	nc	NA	N
Lyman Mill soil	RES-10-074-01	0	1	alpha-Chlordane	0.0073	MG/KG		0.5	nc	NA	N
Lyman Mill soil	RES-10-075-01	0	1	alpha-Chlordane	0.0024	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-10-076-01	0	1	alpha-Chlordane	0.006	MG/KG		0.5	nc	NA	N
Lyman Mill soil	RES-10-604-01	0	1	alpha-Chlordane	0.007	MG/KG		0.5	nc	NA	N
Lyman Mill soil	RES-11-011-01	0	1	alpha-Chlordane	0.0028	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-11-012-01	0	1	alpha-Chlordane	0.015	MG/KG		0.5	nc	NA	N
Lyman Mill soil	RES-11-328-01	0	1	alpha-Chlordane	0.0044	MG/KG		0.5	nc	NA	N
Lyman Mill soil	RES-11-419-01	0	1	alpha-Chlordane	0.0089	MG/KG		0.5	nc	NA	N
Lyman Mill soil	RES-11-420-01	0	1	alpha-Chlordane	0.0024	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	alpha-Chlordane	0.0024	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	alpha-Chlordane	0.0021	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	alpha-Chlordane	0.018	MG/KG		0.5	nc	NA	N
Lyman Mill soil	RES-11-426-01	0	1	alpha-Chlordane	0.0065	MG/KG		0.5	nc	NA	N
Lyman Mill soil	RES-11-427-01	0	1	alpha-Chlordane	0.0018	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	alpha-Chlordane	0.0022	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-11-429-01	0	1	alpha-Chlordane	0.0021	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-11-430-01	0	1	alpha-Chlordane	0.0019	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	alpha-Chlordane	0.0021	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	alpha-Chlordane	0.0057	MG/KG		0.5	nc	NA	N
Lyman Mill soil	RES-11-433-01	0	1	alpha-Chlordane	0.021	MG/KG	J	0.5	nc	NA	N
Lyman Mill soil	RES-11-486-01	0	1	alpha-Chlordane	0.026	MG/KG		0.5	nc	NA	N
Lyman Mill soil	RES-11-497-01	0	1	alpha-Chlordane	0.0035	MG/KG		0.5	nc	NA	N
Lyman Mill soil	RES-11-577-01	0	1	alpha-Chlordane	0.004	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	alpha-Chlordane	0.011	MG/KG		0.5	nc	NA	N
Lyman Mill soil	RES-12-560-01	0	1	alpha-Chlordane	0.002	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-12-560-02	0	1	alpha-Chlordane	0.0022	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	alpha-Chlordane	0.0046	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	alpha-Chlordane	0.0025	MG/KG	U	0.5	nc	NA	NA
Oxbow Area soil	LPX-SD-4404	0	0.5	gamma-Chlordane	0.00293	MG/KG		0.5	nc	NA	N
Oxbow Area soil	LPX-SD-4407	0	0.5	gamma-Chlordane	0.00694	MG/KG		0.5	nc	NA	N
Lyman Mill soil	LPX-FP-4004	0	0.5	gamma-Chlordane	0.00114	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	LPX-FP-4004	0	0.5	gamma-Chlordane	0.00526	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	LPX-FP-4006	0	0.5	gamma-Chlordane	0.00149	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	LPX-FP-4007	0	0.5	gamma-Chlordane	0.00136	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	LPX-4112	0	0.5	gamma-Chlordane	0.0945	MG/KG		0.5	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	gamma-Chlordane	0.0762	MG/KG		0.5	nc	NA	N
Lyman Mill soil	LPX-4113	0	0.5	gamma-Chlordane	0.0001	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	LPX-4114	0	0.5	gamma-Chlordane	0.0255	MG/KG		0.5	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Allendale soil	SS-04	0	1.5	gamma-Chlordane	0.0022	MG/KG	UJ	0.5	nc	NA	NA
Allendale soil	SS-05	0	1.5	gamma-Chlordane	0.0025	MG/KG	U	0.5	nc	NA	NA
Allendale soil	RES-14-421-01	0	1	gamma-Chlordane	0.0019	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	gamma-Chlordane	0.0024	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-10-005-01	0	1	gamma-Chlordane	0.005	MG/KG		0.5	nc	NA	N
Lyman Mill soil	RES-10-042-01	0	1	gamma-Chlordane	0.0038	MG/KG	J	0.5	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	gamma-Chlordane	0.0044	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	gamma-Chlordane	0.0026	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	gamma-Chlordane	0.002	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-10-074-01	0	1	gamma-Chlordane	0.0026	MG/KG		0.5	nc	NA	N
Lyman Mill soil	RES-10-075-01	0	1	gamma-Chlordane	0.0024	MG/KG		0.5	nc	NA	N
Lyman Mill soil	RES-10-076-01	0	1	gamma-Chlordane	0.0039	MG/KG		0.5	nc	NA	N
Lyman Mill soil	RES-10-604-01	0	1	gamma-Chlordane	0.0047	MG/KG		0.5	nc	NA	N
Lyman Mill soil	RES-11-011-01	0	1	gamma-Chlordane	0.0028	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-11-012-01	0	1	gamma-Chlordane	0.011	MG/KG		0.5	nc	NA	N
Lyman Mill soil	RES-11-328-01	0	1	gamma-Chlordane	0.0044	MG/KG		0.5	nc	NA	N
Lyman Mill soil	RES-11-419-01	0	1	gamma-Chlordane	0.0041	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	gamma-Chlordane	0.0024	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	gamma-Chlordane	0.0024	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	gamma-Chlordane	0.0021	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	gamma-Chlordane	0.0021	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-11-426-01	0	1	gamma-Chlordane	0.0039	MG/KG		0.5	nc	NA	N
Lyman Mill soil	RES-11-427-01	0	1	gamma-Chlordane	0.0018	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	gamma-Chlordane	0.0022	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-11-429-01	0	1	gamma-Chlordane	0.0021	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-11-430-01	0	1	gamma-Chlordane	0.0019	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	gamma-Chlordane	0.0021	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	gamma-Chlordane	0.0042	MG/KG		0.5	nc	NA	N
Lyman Mill soil	RES-11-433-01	0	1	gamma-Chlordane	0.018	MG/KG	J	0.5	nc	NA	N
Lyman Mill soil	RES-11-486-01	0	1	gamma-Chlordane	0.016	MG/KG		0.5	nc	NA	N
Lyman Mill soil	RES-11-497-01	0	1	gamma-Chlordane	0.0027	MG/KG		0.5	nc	NA	N
Lyman Mill soil	RES-11-577-01	0	1	gamma-Chlordane	0.004	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	gamma-Chlordane	0.01	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-12-560-01	0	1	gamma-Chlordane	0.002	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-12-560-02	0	1	gamma-Chlordane	0.0022	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	gamma-Chlordane	0.0046	MG/KG	U	0.5	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	gamma-Chlordane	0.0025	MG/KG	U	0.5	nc	NA	NA
Oxbow Area soil	LPX-SD-4407	0	0.5	Technical Chlordane	0.02034	MG/KG	U	0.5	nc	NA	NA
Oxbow Area soil	LPX-SD-4404	0	0.5	Technical Chlordane	0.03008	MG/KG		0.5	nc	NA	N
Lyman Mill soil	LPX-FP-4004	0	0.5	Technical Chlordane	0.07963	MG/KG	J	0.5	nc	NA	N
Lyman Mill soil	LPX-FP-4004	0	0.5	Technical Chlordane	0.47336	MG/KG	J	0.5	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	LPX-FP-4006	0	0.5	Technical Chlordane	0.08655	MG/KG	J	0.5	nc	NA	N
Lyman Mill soil	LPX-FP-4007	0	0.5	Technical Chlordane	0.45584	MG/KG		0.5	nc	NA	N
Allendale soil	CMS-418	0	1	Technical Chlordane	0.017	MG/KG	UJ	0.5	nc	NA	NA
Allendale soil	CMS-418	1	2	Technical Chlordane	0.019	MG/KG	UJ	0.5	nc	NA	NA
Lyman Mill soil	LPX-4112	0	0.5	Technical Chlordane	1.2167	MG/KG		0.5	nc	NA	Y
Lyman Mill soil	LPX-4112	0	0.5	Technical Chlordane	0.9433	MG/KG		0.5	nc	NA	Y
Lyman Mill soil	LPX-4113	0	0.5	Technical Chlordane	0.4904	MG/KG		0.5	nc	NA	N
Lyman Mill soil	LPX-4114	0	0.5	Technical Chlordane	0.5984	MG/KG		0.5	nc	NA	Y
Oxbow Area soil	LPX-SD-4407	0	0.5	dieldrin	0.00251	MG/KG		0.04	nc	NA	N
Oxbow Area soil	LPX-SD-4404	0	0.5	dieldrin	0.00343	MG/KG		0.04	nc	NA	N
Lyman Mill soil	LPX-FP-4004	0	0.5	Dieldrin	0.0022	MG/KG		0.04	nc	NA	N
Lyman Mill soil	LPX-FP-4004	0	0.5	Dieldrin	0.01313	MG/KG	J	0.04	nc	NA	N
Lyman Mill soil	LPX-FP-4006	0	0.5	Dieldrin	0.00149	MG/KG	U	0.04	nc	NA	NA
Lyman Mill soil	LPX-FP-4007	0	0.5	Dieldrin	0.0054	MG/KG		0.04	nc	NA	N
Allendale soil	CMS-418	0	1	Dieldrin	0.0017	MG/KG	U	0.04	nc	NA	NA
Allendale soil	CMS-418	1	2	Dieldrin	0.00098	MG/KG	J	0.04	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Dieldrin	0.0032	MG/KG		0.04	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Dieldrin	0.0029	MG/KG		0.04	nc	NA	N
Lyman Mill soil	LPX-4113	0	0.5	Dieldrin	0.0034	MG/KG		0.04	nc	NA	N
Lyman Mill soil	LPX-4114	0	0.5	Dieldrin	0.0026	MG/KG		0.04	nc	NA	N
Allendale soil	RES-14-421-01	0	1	Dieldrin	0.0037	MG/KG	U	0.04	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	Dieldrin	0.0047	MG/KG	U	0.04	nc	NA	NA
Lyman Mill soil	RES-10-005-01	0	1	Dieldrin	0.0067	MG/KG	U	0.04	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	Dieldrin	0.0081	MG/KG	U	0.04	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Dieldrin	0.0085	MG/KG	U	0.04	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	Dieldrin	0.0051	MG/KG	U	0.04	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	Dieldrin	0.004	MG/KG	U	0.04	nc	NA	NA
Lyman Mill soil	RES-10-074-01	0	1	Dieldrin	0.005	MG/KG	U	0.04	nc	NA	NA
Lyman Mill soil	RES-10-075-01	0	1	Dieldrin	0.0046	MG/KG	U	0.04	nc	NA	NA
Lyman Mill soil	RES-10-076-01	0	1	Dieldrin	0.0048	MG/KG	U	0.04	nc	NA	NA
Lyman Mill soil	RES-10-604-01	0	1	Dieldrin	0.0061	MG/KG	U	0.04	nc	NA	NA
Lyman Mill soil	RES-11-011-01	0	1	Dieldrin	0.0054	MG/KG	U	0.04	nc	NA	NA
Lyman Mill soil	RES-11-012-01	0	1	Dieldrin	0.0066	MG/KG	U	0.04	nc	NA	NA
Lyman Mill soil	RES-11-328-01	0	1	Dieldrin	0.015	MG/KG		0.04	nc	NA	N
Lyman Mill soil	RES-11-419-01	0	1	Dieldrin	0.008	MG/KG	U	0.04	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	Dieldrin	0.0046	MG/KG	UJ	0.04	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	Dieldrin	0.0047	MG/KG	U	0.04	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	Dieldrin	0.0041	MG/KG	U	0.04	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	Dieldrin	0.0041	MG/KG	U	0.04	nc	NA	NA
Lyman Mill soil	RES-11-426-01	0	1	Dieldrin	0.0037	MG/KG	U	0.04	nc	NA	NA
Lyman Mill soil	RES-11-427-01	0	1	Dieldrin	0.0035	MG/KG	U	0.04	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-11-428-01	0	1	Dieldrin	0.0044	MG/KG	U	0.04	nc	NA	NA
Lyman Mill soil	RES-11-429-01	0	1	Dieldrin	0.004	MG/KG	U	0.04	nc	NA	NA
Lyman Mill soil	RES-11-430-01	0	1	Dieldrin	0.0038	MG/KG	U	0.04	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	Dieldrin	0.0041	MG/KG	U	0.04	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	Dieldrin	0.0069	MG/KG	U	0.04	nc	NA	NA
Lyman Mill soil	RES-11-486-01	0	1	Dieldrin	0.0097	MG/KG	U	0.04	nc	NA	NA
Lyman Mill soil	RES-11-497-01	0	1	Dieldrin	0.0044	MG/KG	U	0.04	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	Dieldrin	0.0078	MG/KG	U	0.04	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	Dieldrin	0.02	MG/KG	U	0.04	nc	NA	NA
Lyman Mill soil	RES-12-560-01	0	1	Dieldrin	0.0039	MG/KG	U	0.04	nc	NA	NA
Lyman Mill soil	RES-12-560-02	0	1	Dieldrin	0.0043	MG/KG	U	0.04	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Dieldrin	0.0088	MG/KG	U	0.04	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	Dieldrin	0.0048	MG/KG	U	0.04	nc	NA	NA
Oxbow Area soil	LPX-SD-4404	0	0.5	Aroclor, Total	0.10311	MG/KG		10	10	1	N
Oxbow Area soil	LPX-SD-4407	0	0.5	Aroclor, Total	0.63783	MG/KG		10	10	1	N
Lyman Mill soil	LPX-FP-4004	0	0.5	Aroclor, Total	0.14252	MG/KG		10	10	1	N
Lyman Mill soil	LPX-FP-4004	0	0.5	Aroclor, Total	0.85924	MG/KG	J	10	10	1	N
Lyman Mill soil	LPX-FP-4006	0	0.5	Aroclor, Total	0.27811	MG/KG	J	10	10	1	N
Lyman Mill soil	LPX-FP-4007	0	0.5	Aroclor, Total	0.10873	MG/KG	J	10	10	1	N
Allendale soil	CMS-418	0	1	Aroclor, Total	0.21	MG/KG		10	10	1	N
Allendale soil	CMS-418	1	2	Aroclor, Total	0.2	MG/KG		10	10	1	N
Allendale soil	SS-04	0	1.5	Aroclor, Total	0.41	MG/KG		10	10	1	N
Allendale soil	SS-05	0	1.5	Aroclor, Total	0.78	MG/KG		10	10	1	N
Allendale soil	RES-14-421-01	0	1	Aroclor, Total	0.074	MG/KG	U	10	10	1	NA
Lyman Mill soil	RES-10-004-01	0	1	Aroclor, Total	0.095	MG/KG	U	10	10	1	NA
Lyman Mill soil	RES-10-005-01	0	1	Aroclor, Total	0.14	MG/KG	U	10	10	1	NA
Lyman Mill soil	RES-10-042-01	0	1	Aroclor, Total	0.16	MG/KG	U	10	10	1	NA
Lyman Mill soil	RES-10-044-01	0	1	Aroclor, Total	0.35	MG/KG		10	10	1	N
Lyman Mill soil	RES-10-053-01	0	1	Aroclor, Total	0.041	MG/KG		10	10	1	N
Lyman Mill soil	RES-10-068-01	0	1	Aroclor, Total	0.081	MG/KG	U	10	10	1	NA
Lyman Mill soil	RES-10-074-01	0	1	Aroclor, Total	0.1	MG/KG	U	10	10	1	NA
Lyman Mill soil	RES-10-075-01	0	1	Aroclor, Total	0.094	MG/KG	U	10	10	1	NA
Lyman Mill soil	RES-10-076-01	0	1	Aroclor, Total	0.098	MG/KG	U	10	10	1	NA
Lyman Mill soil	RES-10-604-01	0	1	Aroclor, Total	0.073	MG/KG		10	10	1	N
Lyman Mill soil	RES-11-011-01	0	1	Aroclor, Total	0.11	MG/KG	U	10	10	1	NA
Lyman Mill soil	RES-11-012-01	0	1	Aroclor, Total	0.15	MG/KG		10	10	1	N
Lyman Mill soil	RES-11-328-01	0	1	Aroclor, Total	0.34	MG/KG		10	10	1	N
Lyman Mill soil	RES-11-419-01	0	1	Aroclor, Total	0.16	MG/KG	U	10	10	1	NA
Lyman Mill soil	RES-11-420-01	0	1	Aroclor, Total	0.093	MG/KG	U	10	10	1	NA
Lyman Mill soil	RES-11-422-01	0	1	Aroclor, Total	0.095	MG/KG	U	10	10	1	NA
Lyman Mill soil	RES-11-423-01	0	1	Aroclor, Total	0.083	MG/KG	U	10	10	1	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-11-424-01	0	1	Aroclor, Total	0.082	MG/KG	U	10	10	1	NA
Lyman Mill soil	RES-11-426-01	0	1	Aroclor, Total	0.075	MG/KG	U	10	10	1	NA
Lyman Mill soil	RES-11-427-01	0	1	Aroclor, Total	0.072	MG/KG	U	10	10	1	NA
Lyman Mill soil	RES-11-428-01	0	1	Aroclor, Total	0.18	MG/KG		10	10	1	N
Lyman Mill soil	RES-11-429-01	0	1	Aroclor, Total	0.081	MG/KG	U	10	10	1	NA
Lyman Mill soil	RES-11-430-01	0	1	Aroclor, Total	0.076	MG/KG	U	10	10	1	NA
Lyman Mill soil	RES-11-431-01	0	1	Aroclor, Total	0.064	MG/KG		10	10	1	N
Lyman Mill soil	RES-11-432-01	0	1	Aroclor, Total	0.14	MG/KG	U	10	10	1	NA
Lyman Mill soil	RES-11-433-01	0	1	Aroclor, Total	0	MG/KG	U	10	10	1	NA
Lyman Mill soil	RES-11-486-01	0	1	Aroclor, Total	0.2	MG/KG	U	10	10	1	NA
Lyman Mill soil	RES-11-497-01	0	1	Aroclor, Total	0.03	MG/KG		10	10	1	N
Lyman Mill soil	RES-11-577-01	0	1	Aroclor, Total	0.086	MG/KG		10	10	1	N
Lyman Mill soil	RES-12-556-01	0	1	Aroclor, Total	0.41	MG/KG	U	10	10	1	NA
Lyman Mill soil	RES-12-560-01	0	1	Aroclor, Total	0.079	MG/KG	U	10	10	1	NA
Lyman Mill soil	RES-12-560-02	0	1	Aroclor, Total	0.087	MG/KG	U	10	10	1	NA
Lyman Mill soil	RES-10-044-01	0	1	Aroclor, Total	0.35	MG/KG		10	10	1	N
Lyman Mill soil	RES-10-053-01	0	1	Aroclor, Total	0.042	MG/KG		10	10	1	N
Lyman Mill soil	LPX-4112	0	0.5	Aroclor, Total	0.8257	MG/KG		10	10	1	N
Lyman Mill soil	LPX-4112	0	0.5	Aroclor, Total	0.9381	MG/KG		10	10	1	N
Lyman Mill soil	LPX-4113	0	0.5	Aroclor, Total	0.0101	MG/KG	U	10	10	1	NA
Lyman Mill soil	LPX-4114	0	0.5	Aroclor, Total	0.4667	MG/KG		10	10	1	N
Dioxin (ng/kg)											
Allendale Soil	AP-DEL-20	0	1	TEQ	3.8768	PG/G_DRYWT		nc	nc	1000	N
Allendale Soil	AP-DEL-20	1	2	TEQ	7.3	PG/G_DRYWT		nc	nc	1000	N
Allendale Soil	AP-DEL-19	0	1	TEQ	1.928	PG/G_DRYWT		nc	nc	1000	N
Allendale Soil	AP-DEL-19	1	2	TEQ	3.1	PG/G_DRYWT		nc	nc	1000	N
Allendale Soil	AP-DEL-18	0	1	TEQ	282.87	PG/G_DRYWT		nc	nc	1000	N
Allendale Soil	AP-DEL-18	1	2	TEQ	789.3	PG/G_DRYWT		nc	nc	1000	N
Allendale Soil	AP-DEL-17	0	1	TEQ	871.536	PG/G_DRYWT		nc	nc	1000	N
Allendale Soil	AP-DEL-16	0	1	TEQ	2.737	PG/G_DRYWT		nc	nc	1000	N
Allendale Soil	AP-DEL-16	1	2	TEQ	0.014	PG/G_DRYWT		nc	nc	1000	N
Allendale Soil	AP-DEL-15	0	1	TEQ	113.328	PG/G_DRYWT		nc	nc	1000	N
Allendale Soil	AP-DEL-15	1	2	TEQ	3.0	PG/G_DRYWT		nc	nc	1000	N
Allendale Soil	AP-DEL-14	0	1	TEQ	283.12	PG/G_DRYWT		nc	nc	1000	N
Allendale Soil	AP-DEL-14	1	2	TEQ	466.8	PG/G_DRYWT		nc	nc	1000	N
Allendale Soil	AP-DEL-13	0	1	TEQ	145.287	PG/G_DRYWT		nc	nc	1000	N
Allendale Soil	AP-DEL-13	1	2	TEQ	4.1	PG/G_DRYWT		nc	nc	1000	N
Allendale Soil	AP-DEL-12	0	1	TEQ	49.493	PG/G_DRYWT		nc	nc	1000	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Allendale Soil	AP-DEL-12	1	2	TEQ	47.6	PG/G_DRYWT		nc	nc	1000	N
Allendale Soil	AP-DEL-11	0	1	TEQ	25	PG/G_DRYWT		nc	nc	1000	N
Allendale Soil	AP-DEL-11	1	2	TEQ	4.7	PG/G_DRYWT		nc	nc	1000	N
Allendale Soil	AP-DEL-10	0	1	TEQ	2.593	PG/G_DRYWT		nc	nc	1000	N
Allendale Soil	AP-DEL-10	1	2	TEQ	1.6	PG/G_DRYWT		nc	nc	1000	N
Allendale Soil	AP-DEL-09	0	1	TEQ	0.011	PG/G_DRYWT		nc	nc	1000	N
Allendale Soil	AP-DEL-09	1	2	TEQ	18.5	PG/G_DRYWT		nc	nc	1000	N
Allendale Soil	AP-DEL-08	0	1	TEQ	104.883	PG/G_DRYWT		nc	nc	1000	N
Allendale Soil	AP-DEL-08	1	2	TEQ	6.9	PG/G_DRYWT		nc	nc	1000	N
Allendale Soil	AP-DEL-07	0	1	TEQ	142.51	PG/G_DRYWT		nc	nc	1000	N
Allendale Soil	AP-DEL-07	1	2	TEQ	145.9	PG/G_DRYWT		nc	nc	1000	N
Allendale Soil	AP-DEL-06	0	1	TEQ	1.93	PG/G_DRYWT		nc	nc	1000	N
Allendale Soil	AP-DEL-06	1	2	TEQ	6.8	PG/G_DRYWT		nc	nc	1000	N
Allendale Soil	AP-DEL-05	0	1	TEQ	484.26	PG/G_DRYWT		nc	nc	1000	N
Allendale Soil	AP-DEL-05	1	2	TEQ	17.0	PG/G_DRYWT		nc	nc	1000	N
Source Area soil [2]	CMS-001	0	0.25	TEQ	26.1	NG/KG		nc	nc	1000	N
Source Area soil [2]	CMS-001	0	0.25	TEQ	19	NG/KG		nc	nc	1000	N
Source Area soil [2]	CMS-002	0	0.25	TEQ	125	NG/KG		nc	nc	1000	N
Source Area soil [2]	CMS-003	0	0.25	TEQ	7.8	NG/KG		nc	nc	1000	N
Source Area soil [2]	CMS-004	0	0.25	TEQ	18.6	NG/KG		nc	nc	1000	N
Source Area soil [2]	CMS-004	0	0.25	TEQ	27.1	NG/KG		nc	nc	1000	N
Source Area soil [2]	CMS-005	0	0.25	TEQ	166	NG/KG		nc	nc	1000	N
Source Area soil [2]	CMS-005	0	0.25	TEQ	322	NG/KG		nc	nc	1000	N
Source Area soil [2]	CMS-006	0	0.25	TEQ	14.6	NG/KG		nc	nc	1000	N
Source Area soil [2]	CMS-007	0	0.25	TEQ	485	NG/KG		nc	nc	1000	N
Source Area soil [2]	CMS-008	0	0.25	TEQ	14.9	NG/KG		nc	nc	1000	N
Source Area soil [2]	CMS-009	0	0.25	TEQ	32.2	NG/KG		nc	nc	1000	N
Source Area soil [2]	CMS-010	0	0.25	TEQ	18.9	NG/KG		nc	nc	1000	N
Source Area soil [2]	CMS-011	0	0.25	TEQ	200	NG/KG		nc	nc	1000	N
Source Area soil [2]	CMS-012	0	0.25	TEQ	151	NG/KG		nc	nc	1000	N
Source Area soil [2]	CMS-013	0	0.25	TEQ	236	NG/KG		nc	nc	1000	N
Source Area soil [2]	CMS-014	0	0.25	TEQ	25.6	NG/KG		nc	nc	1000	N
Source Area soil [2]	CMS-015	0	0.25	TEQ	45.5	NG/KG		nc	nc	1000	N
Source Area soil [2]	CMS-016	0	0.25	TEQ	815	NG/KG		nc	nc	1000	N
Source Area soil [2]	CMS-017	0	0.25	TEQ	302	NG/KG		nc	nc	1000	N
Allendale soil	CMS-018	0	0.25	TEQ	38.1	NG/KG		nc	nc	1000	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Allendale soil	CMS-019	0	0.25	TEQ	1510	NG/KG		nc	nc	1000	Y
Allendale soil	CMS-184	0	0.25	TEQ	88.3	NG/KG		nc	nc	1000	N
Allendale soil	CMS-185	0	0.25	TEQ	61.6	NG/KG		nc	nc	1000	N
Allendale soil	CMS-189	0	0.25	TEQ	153	NG/KG		nc	nc	1000	N
Allendale soil	CMS-197	0	0.25	TEQ	616	NG/KG		nc	nc	1000	N
Allendale soil	CMS-019	0	1	TEQ	34	NG/KG		nc	nc	1000	N
Allendale soil	CMS-418	0	1	TEQ	240	NG/KG		nc	nc	1000	N
Allendale soil	CMS-446	0	1	TEQ	60	NG/KG		nc	nc	1000	N
Allendale soil	CMS-447	0	1	TEQ	58	NG/KG		nc	nc	1000	N
Allendale soil	CMS-460	0	1	TEQ	6.1	NG/KG		nc	nc	1000	N
Allendale soil	CMS-461	0	1	TEQ	31.3	NG/KG		nc	nc	1000	N
Allendale soil	CMS-462	0	1	TEQ	34.3	NG/KG		nc	nc	1000	N
Allendale soil	CMS-463	0	1	TEQ	25.2	NG/KG		nc	nc	1000	N
Allendale soil	CMS-463	0	1	TEQ	18.1	NG/KG		nc	nc	1000	N
Allendale soil	CMS-464	0	1	TEQ	13.2	NG/KG		nc	nc	1000	N
Allendale soil	CMS-466	0	1	TEQ	93.5	NG/KG		nc	nc	1000	N
Allendale soil	CMS-469	0	1	TEQ	9.9	NG/KG		nc	nc	1000	N
Allendale soil	CMS-473	0	1	TEQ	6.8	NG/KG		nc	nc	1000	N
Allendale soil	CMS-474	0	1	TEQ	77.5	NG/KG		nc	nc	1000	N
Allendale soil	CMS-475	0	1	TEQ	5.9	NG/KG		nc	nc	1000	N
Allendale soil	CMS-478	0	1	TEQ	115	NG/KG		nc	nc	1000	N
Allendale soil	CMS-479	0	1	TEQ	11.3	NG/KG		nc	nc	1000	N
Allendale soil	CMS-480	0	1	TEQ	13.5	NG/KG		nc	nc	1000	N
Allendale soil	CMS-485	0	1	TEQ	42.1	NG/KG		nc	nc	1000	N
Allendale soil	CMS-486	0	1	TEQ	6.1	NG/KG		nc	nc	1000	N
Allendale soil	CMS-488	0	1	TEQ	2.5	NG/KG		nc	nc	1000	N
Allendale soil	CMS-491	0	1	TEQ	13.9	NG/KG		nc	nc	1000	N
Allendale soil	CMS-492	0	1	TEQ	37.9	NG/KG		nc	nc	1000	N
Allendale soil	CMS-497	0	1	TEQ	81.8	NG/KG		nc	nc	1000	N
Allendale soil	CMS-498	0	1	TEQ	87.2	NG/KG		nc	nc	1000	N
Allendale soil	CMS-499	0	1	TEQ	93.6	NG/KG		nc	nc	1000	N
Allendale soil	RES-14-210-02	0	1	TEQ	14.6	NG/KG		nc	nc	1000	N
Allendale soil	RES-14-210-03	0	1	TEQ	15	NG/KG		nc	nc	1000	N
Allendale soil	RES-14-365-02	0	1	TEQ	88.2	NG/KG		nc	nc	1000	N
Allendale soil	RES-14-365-03	0	1	TEQ	106	NG/KG		nc	nc	1000	N
Allendale soil	RES-14-366-03	0	1	TEQ	13.4	NG/KG		nc	nc	1000	N
Allendale soil	RES-14-399-02	0	1	TEQ	58	NG/KG		nc	nc	1000	N
Allendale soil	RES-14-422-02	0	1	TEQ	24.9	NG/KG		nc	nc	1000	N
Allendale soil	RES-14-425-02	0	1	TEQ	9.7	NG/KG		nc	nc	1000	N
Allendale soil	RES-14-425-03	0	1	TEQ	8.1	NG/KG		nc	nc	1000	N
Allendale soil	06-DEL-200	0	2	TEQ	0	NG/KG		nc	nc	1000	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Allendale soil	06-DEL-100	0	2	TEQ	1	NG/KG		nc	nc	1000	N
Allendale soil	07-DEL-100	0	2	TEQ	11	NG/KG		nc	nc	1000	N
Allendale soil	07-DEL-202	0	2	TEQ	98	NG/KG		nc	nc	1000	N
Allendale soil	07-DEL-203	0	2	TEQ	406	NG/KG		nc	nc	1000	N
Allendale soil	07-DEL-201	0	2	TEQ	432	NG/KG		nc	nc	1000	N
Allendale soil	07-DEL-400	0	2	TEQ	16	NG/KG		nc	nc	1000	N
Allendale soil	07-DEL-300	0	2	TEQ	3	NG/KG		nc	nc	1000	N
Allendale soil	05-DEL-200	0	2	TEQ	9	NG/KG		nc	nc	1000	N
Allendale soil	05-DEL-100	0	2	TEQ	105	NG/KG		nc	nc	1000	N
Allendale soil	04-DEL-203	0	2	TEQ	311	NG/KG		nc	nc	1000	N
Allendale soil	04-DEL-202	0	2	TEQ	57	NG/KG		nc	nc	1000	N
Allendale soil	04-DEL-201	0	2	TEQ	141	NG/KG		nc	nc	1000	N
Allendale soil	04-DEL-100	0	2	TEQ	4	NG/KG		nc	nc	1000	N
Allendale soil	03/04-DEL-102	0	2	TEQ	290	NG/KG		nc	nc	1000	N
Allendale soil	03/04-DEL-102	0	2	TEQ	136	NG/KG		nc	nc	1000	N
Lyman Mill soil	CMS-217	0	0.25	Mammal_2005_TEQ	2420	NG/KG		nc	nc	1000	Y
Lyman Mill soil	CMS-217	0	0.25	Mammal_2005_TEQ	5030	NG/KG		nc	nc	1000	Y
Lyman Mill soil	CMS-218	0	0.25	Mammal_2005_TEQ	2290	NG/KG		nc	nc	1000	Y
Lyman Mill soil	CMS-219	0	0.25	Mammal_2005_TEQ	2220	NG/KG		nc	nc	1000	Y
Lyman Mill soil	CMS-457	0	1	Mammal_2005_TEQ	3800	NG/KG		nc	nc	1000	Y
Lyman Mill soil	CMS-458	0	1	Mammal_2005_TEQ	720	NG/KG		nc	nc	1000	N
Lyman Mill soil	CMS-459	0	1	Mammal_2005_TEQ	130	NG/KG		nc	nc	1000	N
Lyman Mill soil	CMS-468	0	1	Mammal_2005_TEQ	12.81	NG/KG		nc	nc	1000	N
Lyman Mill soil	LPX-4112	0	0.5	Mammal_2005_TEQ	5.02	PG/G_DRYWT		nc	nc	1000	N
Lyman Mill soil	LPX-4113	0	0.5	Mammal_2005_TEQ	4.93	PG/G_DRYWT		nc	nc	1000	N
Lyman Mill soil	LPX-4114	0	0.5	Mammal_2005_TEQ	6.52	PG/G_DRYWT		nc	nc	1000	N
Lyman Mill soil	LPX-FP-4004	0	0.5	Mammal_2005_TEQ	1133.44	NG/KG		nc	nc	1000	Y
Lyman Mill soil	LPX-FP-4006	0	0.5	Mammal_2005_TEQ	151.72	NG/KG		nc	nc	1000	N
Lyman Mill soil	LPX-FP-4007	0	0.5	Mammal_2005_TEQ	82.82	NG/KG		nc	nc	1000	N
Oxbow Area soil	LPX-SD-4404	0	0.5	Mammal_2005_TEQ	262.48	PG/G_DRYWT		nc	nc	1000	N
Oxbow Area soil	LPX-SD-4405	0	0.5	Mammal_2005_TEQ	4288.33	PG/G_DRYWT		nc	nc	1000	Y
Oxbow Area soil	LPX-SD-4406	0	0.5	Mammal_2005_TEQ	1823.41	PG/G_DRYWT		nc	nc	1000	Y
Oxbow Area soil	LPX-SD-4407	0	0.5	Mammal_2005_TEQ	2096.68	PG/G_DRYWT		nc	nc	1000	Y
Lyman Mill soil	RES-10-004-01	0	1	Mammal_2005_TEQ	118.17	NG/KG		nc	nc	1000	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-10-004-02	0	1	Mammal_2005_TEQ	6.59	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-10-004-03	0	1	Mammal_2005_TEQ	2.14	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-10-005-01	0	1	Mammal_2005_TEQ	154.46	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-10-005-02	0	1	Mammal_2005_TEQ	8.96	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-10-005-03	0	1	Mammal_2005_TEQ	3.17	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-10-042-01	0	1	Mammal_2005_TEQ	331.93	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-10-042-02	0	1	Mammal_2005_TEQ	4.28	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-10-042-03	0	1	Mammal_2005_TEQ	4.10	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-10-044-01	0	1	Mammal_2005_TEQ	531.80	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-10-044-02	0	1	Mammal_2005_TEQ	62.34	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-10-044-03	0	1	Mammal_2005_TEQ	11.81	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-10-053-01	0	1	Mammal_2005_TEQ	42.19	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-10-053-02	0	1	Mammal_2005_TEQ	8.53	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-10-053-03	0	1	Mammal_2005_TEQ	2.25	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-10-053-03	0	1	Mammal_2005_TEQ	3.38	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-10-068-01	0	1	Mammal_2005_TEQ	25.55	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-10-068-02	0	1	Mammal_2005_TEQ	8.69	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-10-068-03	0	1	Mammal_2005_TEQ	18.81	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-10-074-01	0	1	Mammal_2005_TEQ	16.57	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-10-074-01	0	1	Mammal_2005_TEQ	32.68	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-10-074-02	0	1	Mammal_2005_TEQ	85.94	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-10-074-03	0	1	Mammal_2005_TEQ	16.37	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-10-075-01	0	1	Mammal_2005_TEQ	14.26	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-10-075-01	0	1	Mammal_2005_TEQ	10.70	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-10-075-02	0	1	Mammal_2005_TEQ	3.30	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-10-075-03	0	1	Mammal_2005_TEQ	5.40	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-10-076-01	0	1	Mammal_2005_TEQ	115.21	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-10-076-02	0	1	Mammal_2005_TEQ	17.47	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-10-076-03	0	1	Mammal_2005_TEQ	3.53	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-10-604-01	0	1	Mammal_2005_TEQ	263.72	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-10-604-01	0	1	Mammal_2005_TEQ	232.46	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-10-604-02	0	1	Mammal_2005_TEQ	52.30	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-10-604-03	0	1	Mammal_2005_TEQ	3.18	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-011-01	0	1	Mammal_2005_TEQ	7.21	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-011-02	0	1	Mammal_2005_TEQ	4.43	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-011-03	0	1	Mammal_2005_TEQ	4.47	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-011-03	0	1	Mammal_2005_TEQ	6.58	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-012-01	0	1	Mammal_2005_TEQ	13.72	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-012-02	0	1	Mammal_2005_TEQ	3.47	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-012-03	0	1	Mammal_2005_TEQ	5.74	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-328-01	0	1	Mammal_2005_TEQ	386.71	NG/KG		nc	nc	1000	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-11-328-01	0	1	Mammal_2005_TEQ	347.86	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-328-02	0	1	Mammal_2005_TEQ	22.22	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-328-03	0	1	Mammal_2005_TEQ	3.45	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-396-02	0	1	Mammal_2005_TEQ	60.79	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-396-03	0	1	Mammal_2005_TEQ	8.54	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-419-01	0	1	Mammal_2005_TEQ	595.80	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-419-02	0	1	Mammal_2005_TEQ	147.69	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-419-03	0	1	Mammal_2005_TEQ	2.12	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-420-01	0	1	Mammal_2005_TEQ	11.17	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-420-02	0	1	Mammal_2005_TEQ	6.41	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-420-03	0	1	Mammal_2005_TEQ	2.03	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-420-03	0	1	Mammal_2005_TEQ	2.13	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-420-04	0	1	Mammal_2005_TEQ	115.61	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-422-01	0	1	Mammal_2005_TEQ	39.95	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-422-02	0	1	Mammal_2005_TEQ	6.71	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-422-03	0	1	Mammal_2005_TEQ	4.43	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-423-01	0	1	Mammal_2005_TEQ	13.66	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-423-02	0	1	Mammal_2005_TEQ	0.80	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-423-03	0	1	Mammal_2005_TEQ	0.89	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-424-01	0	1	Mammal_2005_TEQ	39.94	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-424-02	0	1	Mammal_2005_TEQ	29.70	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-424-03	0	1	Mammal_2005_TEQ	27.85	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-425-02	0	1	Mammal_2005_TEQ	10.42	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-425-03	0	1	Mammal_2005_TEQ	1.12	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-425-03	0	1	Mammal_2005_TEQ	2.36	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-426-01	0	1	Mammal_2005_TEQ	36.85	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-426-02	0	1	Mammal_2005_TEQ	1.87	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-426-03	0	1	Mammal_2005_TEQ	0.73	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-427-01	0	1	Mammal_2005_TEQ	0.91	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-427-02	0	1	Mammal_2005_TEQ	1.18	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-427-03	0	1	Mammal_2005_TEQ	1.11	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-428-01	0	1	Mammal_2005_TEQ	4.98	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-428-02	0	1	Mammal_2005_TEQ	3.37	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-428-03	0	1	Mammal_2005_TEQ	2.92	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-428-03	0	1	Mammal_2005_TEQ	3.36	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-428-G	0	1	Mammal_2005_TEQ	1.29	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-429-01	0	1	Mammal_2005_TEQ	17.38	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-429-02	0	1	Mammal_2005_TEQ	7.94	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-430-01	0	1	Mammal_2005_TEQ	1.51	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-430-02	0	1	Mammal_2005_TEQ	8.20	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-430-03	0	1	Mammal_2005_TEQ	2.42	NG/KG		nc	nc	1000	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-11-431-01	0	1	Mammal_2005_TEQ	35.34	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-431-02	0	1	Mammal_2005_TEQ	29.87	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-431-03	0	1	Mammal_2005_TEQ	4.29	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-432-01	0	1	Mammal_2005_TEQ	121.96	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-432-01	0	1	Mammal_2005_TEQ	163.50	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-432-02	0	1	Mammal_2005_TEQ	5.01	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-432-03	0	1	Mammal_2005_TEQ	8.20	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-433-01	0	1	Mammal_2005_TEQ	1018.81	NG/KG		nc	nc	1000	Y
Lyman Mill soil	RES-11-433-02	0	1	Mammal_2005_TEQ	138.94	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-433-03	0	1	Mammal_2005_TEQ	28.18	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-486-01	0	1	Mammal_2005_TEQ	46.17	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-486-01	0	1	Mammal_2005_TEQ	50.82	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-486-02	0	1	Mammal_2005_TEQ	72.96	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-486-03	0	1	Mammal_2005_TEQ	59.12	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-497-01	0	1	Mammal_2005_TEQ	7.55	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-497-02	0	1	Mammal_2005_TEQ	6.24	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-497-03	0	1	Mammal_2005_TEQ	5.10	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-577-01	0	1	Mammal_2005_TEQ	416.28	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-577-01	0	1	Mammal_2005_TEQ	322.45	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-577-02	0	1	Mammal_2005_TEQ	67.37	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-11-577-03	0	1	Mammal_2005_TEQ	18.94	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-12-556-01	0	1	Mammal_2005_TEQ	37.71	NG/KG		nc	nc	1000	N
Lyman Mill soil	RES-12-556-02	0	1	Mammal_2005_TEQ	18.51	NG/KG		nc	nc	1000	N
Lyman Mill soil	SS-99-07	0	0.25	Mammal_2005_TEQ	239.00	NG/KG		nc	nc	1000	N
Lyman Mill soil	SS-99-08	0	0.25	Mammal_2005_TEQ	207.00	NG/KG		nc	nc	1000	N
Lyman Mill soil	SS-99-09	0	0.25	Mammal_2005_TEQ	202.50	NG/KG		nc	nc	1000	N
Lyman Mill soil	SS-99-10	0	0.25	Mammal_2005_TEQ	166.00	NG/KG		nc	nc	1000	N
Lyman Mill soil	SS-99-11	0	0.25	Mammal_2005_TEQ	197.50	NG/KG		nc	nc	1000	N
Lyman Mill soil	SS-99-12	0	0.25	Mammal_2005_TEQ	187.50	NG/KG		nc	nc	1000	N
Lyman Mill soil	SS-99-13	0	0.25	Mammal_2005_TEQ	202.50	NG/KG		nc	nc	1000	N
Lyman Mill soil	SS-99-14	0	0.25	Mammal_2005_TEQ	198.50	NG/KG		nc	nc	1000	N
Lyman Mill soil	SS-99-15	0	0.25	Mammal_2005_TEQ	246.50	NG/KG		nc	nc	1000	N
Lyman Mill soil	SS-99-16	0	0.25	Mammal_2005_TEQ	218.50	NG/KG		nc	nc	1000	N
Lyman Mill soil	SS-99-21	0	0.25	Mammal_2005_TEQ	0.67	NG/KG		nc	nc	1000	N
Lyman Mill soil	SS-99-22	0	0.25	Mammal_2005_TEQ	1.47	NG/KG		nc	nc	1000	N
Lyman Mill soil	SS-99-23	0	0.25	Mammal_2005_TEQ	3.43	NG/KG		nc	nc	1000	N
Lyman Mill soil	SS-99-24	0	0.25	Mammal_2005_TEQ	3.42	NG/KG		nc	nc	1000	N
Lyman Mill soil	SS-99-25	0	0.25	Mammal_2005_TEQ	4.72	NG/KG		nc	nc	1000	N
Lyman Mill soil	WRL-SD-2038	0	0.5	Mammal_2005_TEQ	629.13	NG/KG		nc	nc	1000	N
Lyman Mill soil	10-DEL-100	0	2	TEQ	13	pg/g		nc	nc	1000	N
Lyman Mill soil	10-DEL-200	0	2	TEQ	45	pg/g		nc	nc	1000	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	10-DEL-301	0	2	TEQ	374	pg/g		nc	nc	1000	N
Lyman Mill soil	10-DEL-301	0	2	TEQ	333	pg/g		nc	nc	1000	N
Lyman Mill soil	10-DEL-302	0	2	TEQ	98	pg/g		nc	nc	1000	N
Lyman Mill soil	11-DEL-100	0	2	TEQ	51	pg/g		nc	nc	1000	N
Lyman Mill soil	12-DEL-101	0	1	TEQ	820	pg/g		nc	nc	1000	N
Lyman Mill soil	12-DEL-102	0	2	TEQ	9	pg/g		nc	nc	1000	N
Lyman Mill soil	12-DEL-103	0	1	TEQ	617	pg/g		nc	nc	1000	N
Lyman Mill soil	12-DEL-200	0	1.5	TEQ	4	pg/g		nc	nc	1000	N
Lyman Mill soil	9-DEL-100	0	2	TEQ	15	pg/g		nc	nc	1000	N
Lyman Mill soil	9-DEL-201	0	2	TEQ	20	pg/g		nc	nc	1000	N
Lyman Mill soil	9-DEL-202	0	2	TEQ	17	pg/g		nc	nc	1000	N
Lyman Mill soil	9-DEL-203	0	2	TEQ	60	pg/g		nc	nc	1000	N
Lyman Mill soil	9-DEL-300	0	2	TEQ	12	pg/g		nc	nc	1000	N
Inorganics											
Oxbow Area soil	LPX-SD-4407	0	0.5	Antimony	2.8	MG/KG		10	nc	NA	N
Oxbow Area soil	LPX-SD-4404	0	0.5	Antimony	7.01	MG/KG		10	nc	NA	N
Lyman Mill soil	LPX-FP-4004	0	0.5	Antimony	0.112	MG/KG	U	10	nc	NA	NA
Lyman Mill soil	LPX-FP-4006	0	0.5	Antimony	0.704	MG/KG	J	10	nc	NA	N
Lyman Mill soil	LPX-FP-4007	0	0.5	Antimony	0.213	MG/KG	J	10	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Antimony	0.0702	MG/KG	J	10	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Antimony	0.13	MG/KG	J	10	nc	NA	N
Lyman Mill soil	LPX-4113	0	0.5	Antimony	0.0675	MG/KG	J	10	nc	NA	N
Lyman Mill soil	LPX-4114	0	0.5	Antimony	0.163	MG/KG	J	10	nc	NA	N
Allendale soil	RES-14-421-01	0	1	Antimony	0.48	MG/KG	UJ	10	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	Antimony	0.86	MG/KG	UJ	10	nc	NA	NA
Lyman Mill soil	RES-10-005-01	0	1	Antimony	0.82	MG/KG	UJ	10	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	Antimony	38.2	MG/KG	J	10	nc	NA	Y
Lyman Mill soil	RES-10-044-01	0	1	Antimony	3.8	MG/KG	J	10	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Antimony	1.4	MG/KG	U	10	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	Antimony	0.52	MG/KG	UJ	10	nc	NA	NA
Lyman Mill soil	RES-10-074-01	0	1	Antimony	2.5	MG/KG	J	10	nc	NA	N
Lyman Mill soil	RES-10-075-01	0	1	Antimony	3.2	MG/KG	J	10	nc	NA	N
Lyman Mill soil	RES-10-076-01	0	1	Antimony	2.2	MG/KG	UJ	10	nc	NA	NA
Lyman Mill soil	RES-10-604-01	0	1	Antimony	0.76	MG/KG	UJ	10	nc	NA	NA
Lyman Mill soil	RES-11-011-01	0	1	Antimony	1.2	MG/KG	U	10	nc	NA	NA
Lyman Mill soil	RES-11-012-01	0	1	Antimony	2.5	MG/KG	J	10	nc	NA	N
Lyman Mill soil	RES-11-328-01	0	1	Antimony	1.9	MG/KG	U	10	nc	NA	NA
Lyman Mill soil	RES-11-419-01	0	1	Antimony	2.2	MG/KG	UJ	10	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	Antimony	1.5	MG/KG	U	10	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	Antimony	1.8	MG/KG	U	10	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	Antimony	1.3	MG/KG	U	10	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-11-424-01	0	1	Antimony	7.1	MG/KG		10	nc	NA	N
Lyman Mill soil	RES-11-426-01	0	1	Antimony	1.5	MG/KG	U	10	nc	NA	NA
Lyman Mill soil	RES-11-427-01	0	1	Antimony	1.1	MG/KG	U	10	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	Antimony	1.6	MG/KG	J	10	nc	NA	N
Lyman Mill soil	RES-11-429-01	0	1	Antimony	1.3	MG/KG	U	10	nc	NA	NA
Lyman Mill soil	RES-11-430-01	0	1	Antimony	1.3	MG/KG	U	10	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	Antimony	2.3	MG/KG	J	10	nc	NA	N
Lyman Mill soil	RES-11-432-01	0	1	Antimony	3.1	MG/KG	J	10	nc	NA	N
Lyman Mill soil	RES-11-433-01	0	1	Antimony	17	MG/KG		10	nc	NA	Y
Lyman Mill soil	RES-11-486-01	0	1	Antimony	5.8	MG/KG		10	nc	NA	N
Lyman Mill soil	RES-11-497-01	0	1	Antimony	1.3	MG/KG	U	10	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	Antimony	1	MG/KG	UJ	10	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	Antimony	3.1	MG/KG		10	nc	NA	N
Lyman Mill soil	RES-12-560-01	0	1	Antimony	1.2	MG/KG	U	10	nc	NA	NA
Lyman Mill soil	RES-12-560-02	0	1	Antimony	1.3	MG/KG	U	10	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Antimony	5.2	MG/KG	J	10	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Antimony	1.4	MG/KG	J	10	nc	NA	N
Oxbow Area soil	LPX-SD-4407	0	0.5	Arsenic	2.61	MG/KG		7	nc	NA	N
Oxbow Area soil	LPX-SD-4404	0	0.5	Arsenic	12.8	MG/KG		7	nc	NA	Y
Lyman Mill soil	LPX-FP-4004	0	0.5	Arsenic	4.25	MG/KG		7	nc	NA	N
Lyman Mill soil	LPX-FP-4006	0	0.5	Arsenic	7.42	MG/KG		7	nc	NA	Y
Lyman Mill soil	LPX-FP-4007	0	0.5	Arsenic	4.93	MG/KG		7	nc	NA	N
Allendale soil	CMS-418	0	1	Arsenic	1.5	MG/KG	J	7	nc	NA	N
Allendale soil	CMS-418	1	2	Arsenic	1.3	MG/KG	J	7	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Arsenic	9.64	MG/KG		7	nc	NA	Y
Lyman Mill soil	LPX-4112	0	0.5	Arsenic	11.5	MG/KG		7	nc	NA	Y
Lyman Mill soil	LPX-4113	0	0.5	Arsenic	9.98	MG/KG		7	nc	NA	Y
Lyman Mill soil	LPX-4114	0	0.5	Arsenic	9.77	MG/KG		7	nc	NA	Y
Allendale soil	RES-14-421-01	0	1	Arsenic	3	MG/KG		7	nc	NA	N
Lyman Mill soil	RES-10-004-01	0	1	Arsenic	9.1	MG/KG		7	nc	NA	Y
Lyman Mill soil	RES-10-005-01	0	1	Arsenic	8.1	MG/KG		7	nc	NA	Y
Lyman Mill soil	RES-10-042-01	0	1	Arsenic	55.6	MG/KG		7	nc	NA	Y
Lyman Mill soil	RES-10-044-01	0	1	Arsenic	14.8	MG/KG		7	nc	NA	Y
Lyman Mill soil	RES-10-053-01	0	1	Arsenic	2.8	MG/KG	J	7	nc	NA	N
Lyman Mill soil	RES-10-068-01	0	1	Arsenic	7.1	MG/KG		7	nc	NA	Y
Lyman Mill soil	RES-10-074-01	0	1	Arsenic	8.9	MG/KG		7	nc	NA	Y
Lyman Mill soil	RES-10-075-01	0	1	Arsenic	32.8	MG/KG		7	nc	NA	Y
Lyman Mill soil	RES-10-076-01	0	1	Arsenic	7.7	MG/KG		7	nc	NA	Y
Lyman Mill soil	RES-10-604-01	0	1	Arsenic	4	MG/KG		7	nc	NA	N
Lyman Mill soil	RES-11-011-01	0	1	Arsenic	3.9	MG/KG		7	nc	NA	N
Lyman Mill soil	RES-11-012-01	0	1	Arsenic	7.8	MG/KG		7	nc	NA	Y

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-11-328-01	0	1	Arsenic	4.9	MG/KG		7	nc	NA	N
Lyman Mill soil	RES-11-419-01	0	1	Arsenic	3.5	MG/KG		7	nc	NA	N
Lyman Mill soil	RES-11-420-01	0	1	Arsenic	6.7	MG/KG		7	nc	NA	N
Lyman Mill soil	RES-11-422-01	0	1	Arsenic	6.6	MG/KG		7	nc	NA	N
Lyman Mill soil	RES-11-423-01	0	1	Arsenic	1.7	MG/KG	J	7	nc	NA	N
Lyman Mill soil	RES-11-424-01	0	1	Arsenic	2.9	MG/KG		7	nc	NA	N
Lyman Mill soil	RES-11-426-01	0	1	Arsenic	2.7	MG/KG	J	7	nc	NA	N
Lyman Mill soil	RES-11-427-01	0	1	Arsenic	3.4	MG/KG		7	nc	NA	N
Lyman Mill soil	RES-11-428-01	0	1	Arsenic	3.6	MG/KG		7	nc	NA	N
Lyman Mill soil	RES-11-429-01	0	1	Arsenic	8.7	MG/KG		7	nc	NA	Y
Lyman Mill soil	RES-11-430-01	0	1	Arsenic	1.6	MG/KG	U	7	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	Arsenic	1.7	MG/KG	J	7	nc	NA	N
Lyman Mill soil	RES-11-432-01	0	1	Arsenic	2.6	MG/KG	J	7	nc	NA	N
Lyman Mill soil	RES-11-433-01	0	1	Arsenic	9.6	MG/KG		7	nc	NA	Y
Lyman Mill soil	RES-11-486-01	0	1	Arsenic	6.5	MG/KG		7	nc	NA	N
Lyman Mill soil	RES-11-497-01	0	1	Arsenic	3	MG/KG		7	nc	NA	N
Lyman Mill soil	RES-11-577-01	0	1	Arsenic	5.1	MG/KG		7	nc	NA	N
Lyman Mill soil	RES-12-556-01	0	1	Arsenic	9.3	MG/KG		7	nc	NA	Y
Lyman Mill soil	RES-12-560-01	0	1	Arsenic	5.8	MG/KG		7	nc	NA	N
Lyman Mill soil	RES-12-560-02	0	1	Arsenic	10.9	MG/KG		7	nc	NA	Y
Lyman Mill soil	RES-10-044-01	0	1	Arsenic	14.4	MG/KG		7	nc	NA	Y
Lyman Mill soil	RES-10-053-01	0	1	Arsenic	3.2	MG/KG		7	nc	NA	N
Oxbow Area soil	LPX-SD-4407	0	0.5	Barium	288	MG/KG		5500	nc	NA	N
Oxbow Area soil	LPX-SD-4404	0	0.5	Barium	514	MG/KG		5500	nc	NA	N
Lyman Mill soil	LPX-FP-4004	0	0.5	Barium	72.3	MG/KG		5500	nc	NA	N
Lyman Mill soil	LPX-FP-4006	0	0.5	Barium	842	MG/KG		5500	nc	NA	N
Lyman Mill soil	LPX-FP-4007	0	0.5	Barium	105	MG/KG		5500	nc	NA	N
Allendale soil	CMS-418	0	1	Barium	16.6	MG/KG	J	5500	nc	NA	N
Allendale soil	CMS-418	1	2	Barium	18.8	MG/KG	J	5500	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Barium	51.6	MG/KG		5500	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Barium	54.7	MG/KG		5500	nc	NA	N
Lyman Mill soil	LPX-4113	0	0.5	Barium	126	MG/KG		5500	nc	NA	N
Lyman Mill soil	LPX-4114	0	0.5	Barium	80.7	MG/KG		5500	nc	NA	N
Allendale soil	RES-14-421-01	0	1	Barium	25.8	MG/KG		5500	nc	NA	N
Lyman Mill soil	RES-10-004-01	0	1	Barium	63.7	MG/KG		5500	nc	NA	N
Lyman Mill soil	RES-10-005-01	0	1	Barium	59.5	MG/KG		5500	nc	NA	N
Lyman Mill soil	RES-10-042-01	0	1	Barium	286	MG/KG		5500	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	Barium	65.7	MG/KG		5500	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Barium	34.9	MG/KG		5500	nc	NA	N
Lyman Mill soil	RES-10-068-01	0	1	Barium	23.7	MG/KG		5500	nc	NA	N
Lyman Mill soil	RES-10-074-01	0	1	Barium	142	MG/KG		5500	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-10-075-01	0	1	Barium	874	MG/KG		5500	nc	NA	N
Lyman Mill soil	RES-10-076-01	0	1	Barium	608	MG/KG		5500	nc	NA	N
Lyman Mill soil	RES-10-604-01	0	1	Barium	73.8	MG/KG		5500	nc	NA	N
Lyman Mill soil	RES-11-011-01	0	1	Barium	82.6	MG/KG		5500	nc	NA	N
Lyman Mill soil	RES-11-012-01	0	1	Barium	202	MG/KG		5500	nc	NA	N
Lyman Mill soil	RES-11-328-01	0	1	Barium	186	MG/KG		5500	nc	NA	N
Lyman Mill soil	RES-11-419-01	0	1	Barium	99.8	MG/KG		5500	nc	NA	N
Lyman Mill soil	RES-11-420-01	0	1	Barium	37	MG/KG		5500	nc	NA	N
Lyman Mill soil	RES-11-422-01	0	1	Barium	47.4	MG/KG		5500	nc	NA	N
Lyman Mill soil	RES-11-423-01	0	1	Barium	19.6	MG/KG		5500	nc	NA	N
Lyman Mill soil	RES-11-424-01	0	1	Barium	56	MG/KG		5500	nc	NA	N
Lyman Mill soil	RES-11-426-01	0	1	Barium	17.7	MG/KG		5500	nc	NA	N
Lyman Mill soil	RES-11-427-01	0	1	Barium	21.5	MG/KG		5500	nc	NA	N
Lyman Mill soil	RES-11-428-01	0	1	Barium	48.7	MG/KG		5500	nc	NA	N
Lyman Mill soil	RES-11-429-01	0	1	Barium	37.6	MG/KG		5500	nc	NA	N
Lyman Mill soil	RES-11-430-01	0	1	Barium	16.9	MG/KG		5500	nc	NA	N
Lyman Mill soil	RES-11-431-01	0	1	Barium	45.2	MG/KG		5500	nc	NA	N
Lyman Mill soil	RES-11-432-01	0	1	Barium	45.3	MG/KG		5500	nc	NA	N
Lyman Mill soil	RES-11-433-01	0	1	Barium	208	MG/KG		5500	nc	NA	N
Lyman Mill soil	RES-11-486-01	0	1	Barium	136	MG/KG		5500	nc	NA	N
Lyman Mill soil	RES-11-497-01	0	1	Barium	53.3	MG/KG		5500	nc	NA	N
Lyman Mill soil	RES-11-577-01	0	1	Barium	40.5	MG/KG		5500	nc	NA	N
Lyman Mill soil	RES-12-556-01	0	1	Barium	222	MG/KG		5500	nc	NA	N
Lyman Mill soil	RES-12-560-01	0	1	Barium	44.2	MG/KG		5500	nc	NA	N
Lyman Mill soil	RES-12-560-02	0	1	Barium	85.9	MG/KG		5500	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	Barium	67.3	MG/KG		5500	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Barium	35.2	MG/KG		5500	nc	NA	N
Oxbow Area soil	LPX-SD-4407	0	0.5	Beryllium	3.46	MG/KG		0.4	nc	NA	Y
Oxbow Area soil	LPX-SD-4404	0	0.5	Beryllium	4.54	MG/KG		0.4	nc	NA	Y
Lyman Mill soil	LPX-FP-4004	0	0.5	Beryllium	1.06	MG/KG		0.4	nc	NA	Y
Lyman Mill soil	LPX-FP-4006	0	0.5	Beryllium	0.649	MG/KG		0.4	nc	NA	Y
Lyman Mill soil	LPX-FP-4007	0	0.5	Beryllium	0.698	MG/KG		0.4	nc	NA	Y
Allendale soil	CMS-418	0	1	Beryllium	0.21	MG/KG	J	0.4	nc	NA	N
Allendale soil	CMS-418	1	2	Beryllium	0.19	MG/KG	J	0.4	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Beryllium	0.473	MG/KG		0.4	nc	NA	Y
Lyman Mill soil	LPX-4112	0	0.5	Beryllium	0.556	MG/KG		0.4	nc	NA	Y
Lyman Mill soil	LPX-4113	0	0.5	Beryllium	0.934	MG/KG		0.4	nc	NA	Y
Lyman Mill soil	LPX-4114	0	0.5	Beryllium	0.623	MG/KG		0.4	nc	NA	Y
Allendale soil	RES-14-421-01	0	1	Beryllium	0.36	MG/KG		0.4	nc	NA	N
Lyman Mill soil	RES-10-004-01	0	1	Beryllium	0.92	MG/KG		0.4	nc	NA	Y
Lyman Mill soil	RES-10-005-01	0	1	Beryllium	0.86	MG/KG		0.4	nc	NA	Y

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-10-042-01	0	1	Beryllium	0.79	MG/KG		0.4	nc	NA	Y
Lyman Mill soil	RES-10-044-01	0	1	Beryllium	0.93	MG/KG		0.4	nc	NA	Y
Lyman Mill soil	RES-10-053-01	0	1	Beryllium	0.28	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	Beryllium	0.42	MG/KG		0.4	nc	NA	Y
Lyman Mill soil	RES-10-074-01	0	1	Beryllium	0.48	MG/KG		0.4	nc	NA	Y
Lyman Mill soil	RES-10-075-01	0	1	Beryllium	0.39	MG/KG		0.4	nc	NA	N
Lyman Mill soil	RES-10-076-01	0	1	Beryllium	0.42	MG/KG		0.4	nc	NA	Y
Lyman Mill soil	RES-10-604-01	0	1	Beryllium	0.72	MG/KG		0.4	nc	NA	Y
Lyman Mill soil	RES-11-011-01	0	1	Beryllium	0.24	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-012-01	0	1	Beryllium	0.35	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-328-01	0	1	Beryllium	0.38	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-419-01	0	1	Beryllium	0.75	MG/KG		0.4	nc	NA	Y
Lyman Mill soil	RES-11-420-01	0	1	Beryllium	0.29	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	Beryllium	0.36	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	Beryllium	0.26	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	Beryllium	0.25	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-426-01	0	1	Beryllium	0.29	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-427-01	0	1	Beryllium	0.21	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	Beryllium	0.28	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-429-01	0	1	Beryllium	0.25	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-430-01	0	1	Beryllium	0.26	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	Beryllium	0.24	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	Beryllium	0.41	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-497-01	0	1	Beryllium	0.26	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	Beryllium	0.65	MG/KG		0.4	nc	NA	Y
Lyman Mill soil	RES-12-556-01	0	1	Beryllium	0.25	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-12-560-01	0	1	Beryllium	0.25	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-12-560-02	0	1	Beryllium	0.27	MG/KG	U	0.4	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Beryllium	0.94	MG/KG		0.4	nc	NA	Y
Lyman Mill soil	RES-10-053-01	0	1	Beryllium	0.28	MG/KG	U	0.4	nc	NA	NA
Oxbow Area soil	LPX-SD-4407	0	0.5	Cadmium	3.77	MG/KG		39	nc	NA	N
Oxbow Area soil	LPX-SD-4404	0	0.5	Cadmium	8.25	MG/KG		39	nc	NA	N
Lyman Mill soil	LPX-FP-4004	0	0.5	Cadmium	0.463	MG/KG	J	39	nc	NA	N
Lyman Mill soil	LPX-FP-4006	0	0.5	Cadmium	3.18	MG/KG		39	nc	NA	N
Lyman Mill soil	LPX-FP-4007	0	0.5	Cadmium	1.76	MG/KG		39	nc	NA	N
Allendale soil	CMS-418	0	1	Cadmium	0.16	MG/KG	J	39	nc	NA	N
Allendale soil	CMS-418	1	2	Cadmium	0.16	MG/KG	J	39	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Cadmium	0.222	MG/KG	J	39	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Cadmium	0.184	MG/KG	J	39	nc	NA	N
Lyman Mill soil	LPX-4113	0	0.5	Cadmium	0.409	MG/KG	J	39	nc	NA	N
Lyman Mill soil	LPX-4114	0	0.5	Cadmium	0.428	MG/KG	J	39	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Allendale soil	RES-14-421-01	0	1	Cadmium	0.07	MG/KG	U	39	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	Cadmium	0.09	MG/KG	U	39	nc	NA	NA
Lyman Mill soil	RES-10-005-01	0	1	Cadmium	0.11	MG/KG	U	39	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	Cadmium	5	MG/KG		39	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	Cadmium	1.7	MG/KG		39	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Cadmium	0.28	MG/KG	U	39	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	Cadmium	0.07	MG/KG	U	39	nc	NA	NA
Lyman Mill soil	RES-10-074-01	0	1	Cadmium	2.2	MG/KG	J	39	nc	NA	N
Lyman Mill soil	RES-10-075-01	0	1	Cadmium	3	MG/KG	J	39	nc	NA	N
Lyman Mill soil	RES-10-076-01	0	1	Cadmium	1	MG/KG	J	39	nc	NA	N
Lyman Mill soil	RES-10-604-01	0	1	Cadmium	0.14	MG/KG	UJ	39	nc	NA	NA
Lyman Mill soil	RES-11-011-01	0	1	Cadmium	0.32	MG/KG	J	39	nc	NA	N
Lyman Mill soil	RES-11-012-01	0	1	Cadmium	1.6	MG/KG	J	39	nc	NA	N
Lyman Mill soil	RES-11-328-01	0	1	Cadmium	0.41	MG/KG	J	39	nc	NA	N
Lyman Mill soil	RES-11-419-01	0	1	Cadmium	0.14	MG/KG	U	39	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	Cadmium	0.29	MG/KG	U	39	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	Cadmium	0.36	MG/KG	U	39	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	Cadmium	0.26	MG/KG	U	39	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	Cadmium	0.71	MG/KG		39	nc	NA	N
Lyman Mill soil	RES-11-426-01	0	1	Cadmium	0.29	MG/KG	U	39	nc	NA	NA
Lyman Mill soil	RES-11-427-01	0	1	Cadmium	0.21	MG/KG	U	39	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	Cadmium	0.28	MG/KG	U	39	nc	NA	NA
Lyman Mill soil	RES-11-429-01	0	1	Cadmium	0.25	MG/KG	U	39	nc	NA	NA
Lyman Mill soil	RES-11-430-01	0	1	Cadmium	0.26	MG/KG	U	39	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	Cadmium	0.49	MG/KG		39	nc	NA	N
Lyman Mill soil	RES-11-432-01	0	1	Cadmium	0.53	MG/KG	J	39	nc	NA	N
Lyman Mill soil	RES-11-433-01	0	1	Cadmium	5.2	MG/KG		39	nc	NA	N
Lyman Mill soil	RES-11-497-01	0	1	Cadmium	0.26	MG/KG	U	39	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	Cadmium	0.15	MG/KG	U	39	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	Cadmium	1.1	MG/KG		39	nc	NA	N
Lyman Mill soil	RES-12-560-01	0	1	Cadmium	0.25	MG/KG	U	39	nc	NA	NA
Lyman Mill soil	RES-12-560-02	0	1	Cadmium	0.27	MG/KG	U	39	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Cadmium	1.4	MG/KG		39	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Cadmium	0.28	MG/KG	U	39	nc	NA	NA
Oxbow Area soil	LPX-SD-4407	0	0.5	Chromium	46.1	MG/KG	J	390	nc	NA	N
Oxbow Area soil	LPX-SD-4404	0	0.5	Chromium	101	MG/KG	J	390	nc	NA	N
Lyman Mill soil	LPX-FP-4004	0	0.5	Chromium	33.9	MG/KG		390	nc	NA	N
Lyman Mill soil	LPX-FP-4006	0	0.5	Chromium	107	MG/KG		390	nc	NA	N
Lyman Mill soil	LPX-FP-4007	0	0.5	Chromium	27.2	MG/KG	U	390	nc	NA	NA
Allendale soil	CMS-418	0	1	Chromium	9.9	MG/KG		390	nc	NA	N
Allendale soil	CMS-418	1	2	Chromium	6.8	MG/KG		390	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	LPX-4112	0	0.5	Chromium	20.6	MG/KG		390	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Chromium	21.7	MG/KG		390	nc	NA	N
Lyman Mill soil	LPX-4113	0	0.5	Chromium	27	MG/KG		390	nc	NA	N
Lyman Mill soil	LPX-4114	0	0.5	Chromium	22.3	MG/KG		390	nc	NA	N
Allendale soil	RES-14-421-01	0	1	Chromium	5.4	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-10-004-01	0	1	Chromium	16	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-10-005-01	0	1	Chromium	18.9	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-10-042-01	0	1	Chromium	52.6	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	Chromium	52.6	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Chromium	10.5	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-10-068-01	0	1	Chromium	10.6	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-10-074-01	0	1	Chromium	23.1	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-10-075-01	0	1	Chromium	41	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-10-076-01	0	1	Chromium	115	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-10-604-01	0	1	Chromium	23.5	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-11-011-01	0	1	Chromium	8.9	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-11-012-01	0	1	Chromium	25.7	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-11-328-01	0	1	Chromium	25.6	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-11-419-01	0	1	Chromium	29.1	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-11-420-01	0	1	Chromium	9.6	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-11-422-01	0	1	Chromium	20.6	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-11-423-01	0	1	Chromium	4.6	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-11-424-01	0	1	Chromium	7.5	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-11-426-01	0	1	Chromium	7.1	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-11-427-01	0	1	Chromium	8.3	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-11-428-01	0	1	Chromium	10.9	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-11-429-01	0	1	Chromium	8.9	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-11-430-01	0	1	Chromium	1.8	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-11-431-01	0	1	Chromium	10.5	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-11-432-01	0	1	Chromium	28.2	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-11-433-01	0	1	Chromium	275	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-11-486-01	0	1	Chromium	404	MG/KG		390	nc	NA	Y
Lyman Mill soil	RES-11-497-01	0	1	Chromium	8.3	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-11-577-01	0	1	Chromium	24.3	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-12-556-01	0	1	Chromium	18	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-12-560-01	0	1	Chromium	29.7	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-12-560-02	0	1	Chromium	12	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	Chromium	49.8	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Chromium	9.1	MG/KG		390	nc	NA	N
Oxbow Area soil	LPX-SD-4407	0	0.5	Copper	73.2	MG/KG		3100	nc	NA	N
Oxbow Area soil	LPX-SD-4404	0	0.5	Copper	357	MG/KG		3100	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	LPX-FP-4004	0	0.5	Copper	33.4	MG/KG		3100	nc	NA	N
Lyman Mill soil	LPX-FP-4006	0	0.5	Copper	400	MG/KG		3100	nc	NA	N
Lyman Mill soil	LPX-FP-4007	0	0.5	Copper	86	MG/KG		3100	nc	NA	N
Allendale soil	CMS-418	0	1	Copper	12.7	MG/KG		3100	nc	NA	N
Allendale soil	CMS-418	1	2	Copper	11.4	MG/KG		3100	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Copper	26.9	MG/KG		3100	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Copper	30	MG/KG		3100	nc	NA	N
Lyman Mill soil	LPX-4113	0	0.5	Copper	29.2	MG/KG		3100	nc	NA	N
Lyman Mill soil	LPX-4114	0	0.5	Copper	36.7	MG/KG		3100	nc	NA	N
Allendale soil	RES-14-421-01	0	1	Copper	8.2	MG/KG		3100	nc	NA	N
Lyman Mill soil	RES-10-004-01	0	1	Copper	25.3	MG/KG		3100	nc	NA	N
Lyman Mill soil	RES-10-005-01	0	1	Copper	32	MG/KG		3100	nc	NA	N
Lyman Mill soil	RES-10-042-01	0	1	Copper	2350	MG/KG		3100	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	Copper	82.4	MG/KG		3100	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Copper	23.5	MG/KG		3100	nc	NA	N
Lyman Mill soil	RES-10-068-01	0	1	Copper	18.1	MG/KG		3100	nc	NA	N
Lyman Mill soil	RES-10-074-01	0	1	Copper	142	MG/KG		3100	nc	NA	N
Lyman Mill soil	RES-10-075-01	0	1	Copper	175	MG/KG		3100	nc	NA	N
Lyman Mill soil	RES-10-076-01	0	1	Copper	409	MG/KG		3100	nc	NA	N
Lyman Mill soil	RES-10-604-01	0	1	Copper	45.9	MG/KG		3100	nc	NA	N
Lyman Mill soil	RES-11-011-01	0	1	Copper	28.8	MG/KG		3100	nc	NA	N
Lyman Mill soil	RES-11-012-01	0	1	Copper	251	MG/KG		3100	nc	NA	N
Lyman Mill soil	RES-11-328-01	0	1	Copper	64.3	MG/KG		3100	nc	NA	N
Lyman Mill soil	RES-11-419-01	0	1	Copper	44.1	MG/KG		3100	nc	NA	N
Lyman Mill soil	RES-11-420-01	0	1	Copper	20	MG/KG		3100	nc	NA	N
Lyman Mill soil	RES-11-422-01	0	1	Copper	18.8	MG/KG		3100	nc	NA	N
Lyman Mill soil	RES-11-423-01	0	1	Copper	7.3	MG/KG	U	3100	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	Copper	62.2	MG/KG		3100	nc	NA	N
Lyman Mill soil	RES-11-426-01	0	1	Copper	21.6	MG/KG		3100	nc	NA	N
Lyman Mill soil	RES-11-427-01	0	1	Copper	10	MG/KG		3100	nc	NA	N
Lyman Mill soil	RES-11-428-01	0	1	Copper	42.8	MG/KG		3100	nc	NA	N
Lyman Mill soil	RES-11-429-01	0	1	Copper	14.5	MG/KG		3100	nc	NA	N
Lyman Mill soil	RES-11-430-01	0	1	Copper	11	MG/KG		3100	nc	NA	N
Lyman Mill soil	RES-11-431-01	0	1	Copper	53.1	MG/KG		3100	nc	NA	N
Lyman Mill soil	RES-11-432-01	0	1	Copper	138	MG/KG		3100	nc	NA	N
Lyman Mill soil	RES-11-433-01	0	1	Copper	25500	MG/KG		3100	nc	NA	Y
Lyman Mill soil	RES-11-486-01	0	1	Copper	76	MG/KG		3100	nc	NA	N
Lyman Mill soil	RES-11-497-01	0	1	Copper	20.4	MG/KG		3100	nc	NA	N
Lyman Mill soil	RES-11-577-01	0	1	Copper	26.2	MG/KG		3100	nc	NA	N
Lyman Mill soil	RES-12-556-01	0	1	Copper	72.7	MG/KG		3100	nc	NA	N
Lyman Mill soil	RES-12-560-01	0	1	Copper	29.7	MG/KG		3100	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-12-560-02	0	1	Copper	41.4	MG/KG		3100	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	Copper	83.6	MG/KG		3100	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Copper	25.9	MG/KG		3100	nc	NA	N
Allendale soil	CMS-418	0	1	Cyanide	0.51	MG/KG	U	200	nc	NA	NA
Allendale soil	CMS-418	1	2	Cyanide	0.56	MG/KG	U	200	nc	NA	NA
Oxbow Area soil	LPX-SD-4407	0	0.5	Lead	246	MG/KG		150	nc	NA	Y
Oxbow Area soil	LPX-SD-4404	0	0.5	Lead	1835	MG/KG		150	nc	NA	Y
Lyman Mill soil	LPX-FP-4004	0	0.5	Lead	158	MG/KG		150	nc	NA	Y
Lyman Mill soil	LPX-FP-4006	0	0.5	Lead	901	MG/KG		150	nc	NA	Y
Lyman Mill soil	LPX-FP-4007	0	0.5	Lead	248	MG/KG		150	nc	NA	Y
Allendale soil	CMS-418	0	1	Lead	89.4	MG/KG		150	nc	NA	N
Allendale soil	CMS-418	1	2	Lead	220	MG/KG		150	nc	NA	Y
Lyman Mill soil	LPX-4112	0	0.5	Lead	109	MG/KG	J	150	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Lead	169	MG/KG	J	150	nc	NA	Y
Lyman Mill soil	LPX-4113	0	0.5	Lead	154	MG/KG	J	150	nc	NA	Y
Lyman Mill soil	LPX-4114	0	0.5	Lead	215	MG/KG	J	150	nc	NA	Y
Allendale soil	RES-14-421-01	0	1	Lead	35.2	MG/KG		150	nc	NA	N
Lyman Mill soil	RES-10-004-01	0	1	Lead	207	MG/KG		150	nc	NA	Y
Lyman Mill soil	RES-10-005-01	0	1	Lead	112	MG/KG		150	nc	NA	N
Lyman Mill soil	RES-10-042-01	0	1	Lead	368	MG/KG		150	nc	NA	Y
Lyman Mill soil	RES-10-044-01	0	1	Lead	509	MG/KG		150	nc	NA	Y
Lyman Mill soil	RES-10-053-01	0	1	Lead	59	MG/KG		150	nc	NA	N
Lyman Mill soil	RES-10-068-01	0	1	Lead	175	MG/KG		150	nc	NA	Y
Lyman Mill soil	RES-10-074-01	0	1	Lead	952	MG/KG		150	nc	NA	Y
Lyman Mill soil	RES-10-075-01	0	1	Lead	1220	MG/KG		150	nc	NA	Y
Lyman Mill soil	RES-10-076-01	0	1	Lead	2160	MG/KG		150	nc	NA	Y
Lyman Mill soil	RES-10-604-01	0	1	Lead	177	MG/KG		150	nc	NA	Y
Lyman Mill soil	RES-11-011-01	0	1	Lead	162	MG/KG		150	nc	NA	Y
Lyman Mill soil	RES-11-012-01	0	1	Lead	2460	MG/KG		150	nc	NA	Y
Lyman Mill soil	RES-11-328-01	0	1	Lead	325	MG/KG		150	nc	NA	Y
Lyman Mill soil	RES-11-419-01	0	1	Lead	157	MG/KG		150	nc	NA	Y
Lyman Mill soil	RES-11-420-01	0	1	Lead	99.3	MG/KG		150	nc	NA	N
Lyman Mill soil	RES-11-422-01	0	1	Lead	52.3	MG/KG		150	nc	NA	N
Lyman Mill soil	RES-11-423-01	0	1	Lead	11.7	MG/KG		150	nc	NA	N
Lyman Mill soil	RES-11-424-01	0	1	Lead	948	MG/KG		150	nc	NA	Y
Lyman Mill soil	RES-11-426-01	0	1	Lead	92.7	MG/KG		150	nc	NA	N
Lyman Mill soil	RES-11-427-01	0	1	Lead	24.4	MG/KG		150	nc	NA	N
Lyman Mill soil	RES-11-428-01	0	1	Lead	41.2	MG/KG		150	nc	NA	N
Lyman Mill soil	RES-11-429-01	0	1	Lead	28.2	MG/KG		150	nc	NA	N
Lyman Mill soil	RES-11-430-01	0	1	Lead	8.1	MG/KG		150	nc	NA	N
Lyman Mill soil	RES-11-431-01	0	1	Lead	78.4	MG/KG		150	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-11-432-01	0	1	Lead	79.7	MG/KG		150	nc	NA	N
Lyman Mill soil	RES-11-433-01	0	1	Lead	342	MG/KG		150	nc	NA	Y
Lyman Mill soil	RES-11-486-01	0	1	Lead	436	MG/KG		150	nc	NA	Y
Lyman Mill soil	RES-11-497-01	0	1	Lead	10.4	MG/KG		150	nc	NA	N
Lyman Mill soil	RES-11-577-01	0	1	Lead	176	MG/KG		150	nc	NA	Y
Lyman Mill soil	RES-12-556-01	0	1	Lead	500	MG/KG		150	nc	NA	Y
Lyman Mill soil	RES-12-560-01	0	1	Lead	121	MG/KG		150	nc	NA	N
Lyman Mill soil	RES-12-560-02	0	1	Lead	192	MG/KG		150	nc	NA	Y
Lyman Mill soil	RES-10-044-01	0	1	Lead	477	MG/KG		150	nc	NA	Y
Lyman Mill soil	RES-10-053-01	0	1	Lead	60.8	MG/KG		150	nc	NA	N
Oxbow Area soil	LPX-SD-4407	0	0.5	Manganese	809	MG/KG		390	nc	NA	Y
Oxbow Area soil	LPX-SD-4404	0	0.5	Manganese	859	MG/KG		390	nc	NA	Y
Lyman Mill soil	LPX-FP-4004	0	0.5	Manganese	740	MG/KG		390	nc	NA	Y
Lyman Mill soil	LPX-FP-4006	0	0.5	Manganese	470	MG/KG		390	nc	NA	Y
Lyman Mill soil	LPX-FP-4007	0	0.5	Manganese	307	MG/KG		390	nc	NA	N
Allendale soil	CMS-418	0	1	Manganese	134	MG/KG		390	nc	NA	N
Allendale soil	CMS-418	1	2	Manganese	98.7	MG/KG		390	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Manganese	372	MG/KG		390	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Manganese	402	MG/KG		390	nc	NA	Y
Lyman Mill soil	LPX-4113	0	0.5	Manganese	448	MG/KG		390	nc	NA	Y
Lyman Mill soil	LPX-4114	0	0.5	Manganese	478	MG/KG		390	nc	NA	Y
Allendale soil	RES-14-421-01	0	1	Manganese	152	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-10-004-01	0	1	Manganese	197	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-10-005-01	0	1	Manganese	217	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-10-042-01	0	1	Manganese	695	MG/KG		390	nc	NA	Y
Lyman Mill soil	RES-10-044-01	0	1	Manganese	178	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Manganese	134	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-10-068-01	0	1	Manganese	66.5	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-10-074-01	0	1	Manganese	311	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-10-075-01	0	1	Manganese	836	MG/KG		390	nc	NA	Y
Lyman Mill soil	RES-10-076-01	0	1	Manganese	2880	MG/KG		390	nc	NA	Y
Lyman Mill soil	RES-10-604-01	0	1	Manganese	168	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-11-011-01	0	1	Manganese	149	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-11-012-01	0	1	Manganese	425	MG/KG		390	nc	NA	Y
Lyman Mill soil	RES-11-328-01	0	1	Manganese	161	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-11-419-01	0	1	Manganese	388	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-11-420-01	0	1	Manganese	129	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-11-422-01	0	1	Manganese	369	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-11-423-01	0	1	Manganese	84.7	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-11-424-01	0	1	Manganese	141	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-11-426-01	0	1	Manganese	144	MG/KG		390	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-11-427-01	0	1	Manganese	148	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-11-428-01	0	1	Manganese	176	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-11-429-01	0	1	Manganese	175	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-11-430-01	0	1	Manganese	61	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-11-431-01	0	1	Manganese	115	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-11-432-01	0	1	Manganese	228	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-11-433-01	0	1	Manganese	486	MG/KG		390	nc	NA	Y
Lyman Mill soil	RES-11-486-01	0	1	Manganese	314	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-11-497-01	0	1	Manganese	200	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-11-577-01	0	1	Manganese	96.5	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-12-556-01	0	1	Manganese	373	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-12-560-01	0	1	Manganese	811	MG/KG		390	nc	NA	Y
Lyman Mill soil	RES-12-560-02	0	1	Manganese	277	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	Manganese	179	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Manganese	121	MG/KG		390	nc	NA	N
Lyman Mill soil	LPX-FP-4004	0	0.5	Mercury	0.209	MG/KG		23	nc	NA	N
Lyman Mill soil	LPX-FP-4006	0	0.5	Mercury	0.245	MG/KG		23	nc	NA	N
Lyman Mill soil	LPX-FP-4007	0	0.5	Mercury	0.159	MG/KG		23	nc	NA	N
Allendale soil	CMS-418	0	1	Mercury	0.041	MG/KG	U	23	nc	NA	NA
Allendale soil	CMS-418	1	2	Mercury	0.045	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	LPX-4112	0	0.5	Mercury	0.111	MG/KG		23	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Mercury	0.116	MG/KG		23	nc	NA	N
Lyman Mill soil	LPX-4113	0	0.5	Mercury	0.258	MG/KG		23	nc	NA	N
Lyman Mill soil	LPX-4114	0	0.5	Mercury	0.243	MG/KG		23	nc	NA	N
Allendale soil	RES-14-421-01	0	1	Mercury	0.05	MG/KG	J	23	nc	NA	N
Lyman Mill soil	RES-10-004-01	0	1	Mercury	0.12	MG/KG	J	23	nc	NA	N
Lyman Mill soil	RES-10-005-01	0	1	Mercury	0.13	MG/KG	J	23	nc	NA	N
Lyman Mill soil	RES-10-042-01	0	1	Mercury	0.13	MG/KG	J	23	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	Mercury	1.1	MG/KG	J	23	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Mercury	0.14	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	Mercury	0.16	MG/KG	J	23	nc	NA	N
Lyman Mill soil	RES-10-074-01	0	1	Mercury	0.33	MG/KG	J	23	nc	NA	N
Lyman Mill soil	RES-10-075-01	0	1	Mercury	0.77	MG/KG	J	23	nc	NA	N
Lyman Mill soil	RES-10-076-01	0	1	Mercury	0.32	MG/KG	J	23	nc	NA	N
Lyman Mill soil	RES-10-604-01	0	1	Mercury	0.09	MG/KG	J	23	nc	NA	N
Lyman Mill soil	RES-11-011-01	0	1	Mercury	0.12	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-11-012-01	0	1	Mercury	0.18	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-11-328-01	0	1	Mercury	0.19	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-11-419-01	0	1	Mercury	0.12	MG/KG	J	23	nc	NA	N
Lyman Mill soil	RES-11-420-01	0	1	Mercury	0.15	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	Mercury	0.18	MG/KG	U	23	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-11-423-01	0	1	Mercury	0.12	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	Mercury	0.12	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-11-426-01	0	1	Mercury	1.9	MG/KG		23	nc	NA	N
Lyman Mill soil	RES-11-427-01	0	1	Mercury	0.11	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	Mercury	0.14	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-11-429-01	0	1	Mercury	0.12	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-11-430-01	0	1	Mercury	0.12	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	Mercury	0.12	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	Mercury	0.21	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-11-497-01	0	1	Mercury	0.12	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	Mercury	0.18	MG/KG	J	23	nc	NA	N
Lyman Mill soil	RES-12-556-01	0	1	Mercury	1	MG/KG		23	nc	NA	N
Lyman Mill soil	RES-12-560-01	0	1	Mercury	0.12	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-12-560-02	0	1	Mercury	0.14	MG/KG	U	23	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Mercury	3	MG/KG	J	23	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Mercury	0.13	MG/KG	U	23	nc	NA	NA
Oxbow Area soil	LPX-SD-4407	0	0.5	Nickel	30.7	MG/KG		1000	nc	NA	N
Oxbow Area soil	LPX-SD-4404	0	0.5	Nickel	30.9	MG/KG		1000	nc	NA	N
Lyman Mill soil	LPX-FP-4004	0	0.5	Nickel	12.3	MG/KG		1000	nc	NA	N
Lyman Mill soil	LPX-FP-4006	0	0.5	Nickel	25.8	MG/KG		1000	nc	NA	N
Lyman Mill soil	LPX-FP-4007	0	0.5	Nickel	20.4	MG/KG		1000	nc	NA	N
Allendale soil	CMS-418	0	1	Nickel	11	MG/KG		1000	nc	NA	N
Allendale soil	CMS-418	1	2	Nickel	4.8	MG/KG		1000	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Nickel	9.87	MG/KG		1000	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Nickel	10.6	MG/KG		1000	nc	NA	N
Lyman Mill soil	LPX-4113	0	0.5	Nickel	15.2	MG/KG		1000	nc	NA	N
Lyman Mill soil	LPX-4114	0	0.5	Nickel	13.9	MG/KG		1000	nc	NA	N
Allendale soil	RES-14-421-01	0	1	Nickel	4.9	MG/KG		1000	nc	NA	N
Lyman Mill soil	RES-10-004-01	0	1	Nickel	9.1	MG/KG		1000	nc	NA	N
Lyman Mill soil	RES-10-005-01	0	1	Nickel	9.9	MG/KG		1000	nc	NA	N
Lyman Mill soil	RES-10-042-01	0	1	Nickel	38	MG/KG		1000	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	Nickel	14.1	MG/KG		1000	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Nickel	6.5	MG/KG		1000	nc	NA	N
Lyman Mill soil	RES-10-068-01	0	1	Nickel	6.6	MG/KG		1000	nc	NA	N
Lyman Mill soil	RES-10-074-01	0	1	Nickel	22	MG/KG	J	1000	nc	NA	N
Lyman Mill soil	RES-10-075-01	0	1	Nickel	34.6	MG/KG	J	1000	nc	NA	N
Lyman Mill soil	RES-10-076-01	0	1	Nickel	41.6	MG/KG	J	1000	nc	NA	N
Lyman Mill soil	RES-10-604-01	0	1	Nickel	15.1	MG/KG		1000	nc	NA	N
Lyman Mill soil	RES-11-011-01	0	1	Nickel	9.6	MG/KG		1000	nc	NA	N
Lyman Mill soil	RES-11-012-01	0	1	Nickel	48.1	MG/KG		1000	nc	NA	N
Lyman Mill soil	RES-11-328-01	0	1	Nickel	13.3	MG/KG		1000	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-11-419-01	0	1	Nickel	14.2	MG/KG		1000	nc	NA	N
Lyman Mill soil	RES-11-420-01	0	1	Nickel	5.5	MG/KG		1000	nc	NA	N
Lyman Mill soil	RES-11-422-01	0	1	Nickel	15.9	MG/KG		1000	nc	NA	N
Lyman Mill soil	RES-11-423-01	0	1	Nickel	3.2	MG/KG		1000	nc	NA	N
Lyman Mill soil	RES-11-424-01	0	1	Nickel	6.7	MG/KG		1000	nc	NA	N
Lyman Mill soil	RES-11-426-01	0	1	Nickel	4	MG/KG		1000	nc	NA	N
Lyman Mill soil	RES-11-427-01	0	1	Nickel	4.7	MG/KG		1000	nc	NA	N
Lyman Mill soil	RES-11-428-01	0	1	Nickel	10	MG/KG		1000	nc	NA	N
Lyman Mill soil	RES-11-429-01	0	1	Nickel	5.8	MG/KG		1000	nc	NA	N
Lyman Mill soil	RES-11-430-01	0	1	Nickel	7.1	MG/KG		1000	nc	NA	N
Lyman Mill soil	RES-11-431-01	0	1	Nickel	46	MG/KG		1000	nc	NA	N
Lyman Mill soil	RES-11-432-01	0	1	Nickel	9.8	MG/KG		1000	nc	NA	N
Lyman Mill soil	RES-11-433-01	0	1	Nickel	64.6	MG/KG		1000	nc	NA	N
Lyman Mill soil	RES-11-486-01	0	1	Nickel	25.9	MG/KG		1000	nc	NA	N
Lyman Mill soil	RES-11-497-01	0	1	Nickel	7.7	MG/KG		1000	nc	NA	N
Lyman Mill soil	RES-11-577-01	0	1	Nickel	9.8	MG/KG		1000	nc	NA	N
Lyman Mill soil	RES-12-556-01	0	1	Nickel	9.2	MG/KG		1000	nc	NA	N
Lyman Mill soil	RES-12-560-01	0	1	Nickel	9.6	MG/KG		1000	nc	NA	N
Lyman Mill soil	RES-12-560-02	0	1	Nickel	14	MG/KG		1000	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	Nickel	14.2	MG/KG		1000	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Nickel	5.9	MG/KG		1000	nc	NA	N
Oxbow Area soil	LPX-SD-4407	0	0.5	Selenium	1.78	MG/KG		390	nc	NA	N
Oxbow Area soil	LPX-SD-4404	0	0.5	Selenium	2.22	MG/KG		390	nc	NA	N
Lyman Mill soil	LPX-FP-4004	0	0.5	Selenium	0.779	MG/KG	J	390	nc	NA	N
Lyman Mill soil	LPX-FP-4006	0	0.5	Selenium	0.586	MG/KG	U	390	nc	NA	NA
Lyman Mill soil	LPX-FP-4007	0	0.5	Selenium	0.438	MG/KG	U	390	nc	NA	NA
Allendale soil	CMS-418	0	1	Selenium	25.3	MG/KG	U	390	nc	NA	NA
Allendale soil	CMS-418	1	2	Selenium	28.2	MG/KG	U	390	nc	NA	NA
Lyman Mill soil	LPX-4112	0	0.5	Selenium	0.518	MG/KG	U	390	nc	NA	NA
Lyman Mill soil	LPX-4112	0	0.5	Selenium	0.797	MG/KG	U	390	nc	NA	NA
Lyman Mill soil	LPX-4113	0	0.5	Selenium	1.37	MG/KG	U	390	nc	NA	NA
Lyman Mill soil	LPX-4114	0	0.5	Selenium	0.841	MG/KG	U	390	nc	NA	NA
Allendale soil	RES-14-421-01	0	1	Selenium	0.41	MG/KG	U	390	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	Selenium	0.91	MG/KG	J	390	nc	NA	N
Lyman Mill soil	RES-10-005-01	0	1	Selenium	0.64	MG/KG	U	390	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	Selenium	0.89	MG/KG	U	390	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Selenium	0.93	MG/KG	U	390	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	Selenium	1.4	MG/KG	UJ	390	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	Selenium	0.63	MG/KG	J	390	nc	NA	N
Lyman Mill soil	RES-10-074-01	0	1	Selenium	0.54	MG/KG	U	390	nc	NA	NA
Lyman Mill soil	RES-10-075-01	0	1	Selenium	0.5	MG/KG	U	390	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-10-076-01	0	1	Selenium	0.58	MG/KG	U	390	nc	NA	NA
Lyman Mill soil	RES-10-604-01	0	1	Selenium	0.65	MG/KG	U	390	nc	NA	NA
Lyman Mill soil	RES-11-011-01	0	1	Selenium	1.2	MG/KG	UJ	390	nc	NA	NA
Lyman Mill soil	RES-11-012-01	0	1	Selenium	1.8	MG/KG	UJ	390	nc	NA	NA
Lyman Mill soil	RES-11-328-01	0	1	Selenium	1.9	MG/KG	U	390	nc	NA	NA
Lyman Mill soil	RES-11-419-01	0	1	Selenium	0.84	MG/KG	U	390	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	Selenium	1.5	MG/KG	U	390	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	Selenium	1.8	MG/KG	U	390	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	Selenium	1.3	MG/KG	U	390	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	Selenium	1.2	MG/KG	U	390	nc	NA	NA
Lyman Mill soil	RES-11-426-01	0	1	Selenium	1.5	MG/KG	U	390	nc	NA	NA
Lyman Mill soil	RES-11-427-01	0	1	Selenium	1.1	MG/KG	U	390	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	Selenium	1.4	MG/KG	U	390	nc	NA	NA
Lyman Mill soil	RES-11-429-01	0	1	Selenium	1.3	MG/KG	U	390	nc	NA	NA
Lyman Mill soil	RES-11-430-01	0	1	Selenium	1.3	MG/KG	U	390	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	Selenium	1.2	MG/KG	U	390	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	Selenium	2.1	MG/KG	U	390	nc	NA	NA
Lyman Mill soil	RES-11-497-01	0	1	Selenium	1.3	MG/KG	UJ	390	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	Selenium	1.9	MG/KG		390	nc	NA	N
Lyman Mill soil	RES-12-556-01	0	1	Selenium	2.4	MG/KG	J	390	nc	NA	N
Lyman Mill soil	RES-12-560-01	0	1	Selenium	1.2	MG/KG	U	390	nc	NA	NA
Lyman Mill soil	RES-12-560-02	0	1	Selenium	1.3	MG/KG	U	390	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Selenium	1.3	MG/KG	J	390	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Selenium	1.4	MG/KG	UJ	390	nc	NA	NA
Oxbow Area soil	LPX-SD-4407	0	0.5	Silver	1.05	MG/KG		200	nc	NA	N
Oxbow Area soil	LPX-SD-4404	0	0.5	Silver	11.1	MG/KG		200	nc	NA	N
Lyman Mill soil	LPX-FP-4004	0	0.5	Silver	0.407	MG/KG		200	nc	NA	N
Lyman Mill soil	LPX-FP-4006	0	0.5	Silver	1.43	MG/KG		200	nc	NA	N
Lyman Mill soil	LPX-FP-4007	0	0.5	Silver	3.88	MG/KG		200	nc	NA	N
Allendale soil	CMS-418	0	1	Silver	1	MG/KG	U	200	nc	NA	NA
Allendale soil	CMS-418	1	2	Silver	1.1	MG/KG	U	200	nc	NA	NA
Lyman Mill soil	LPX-4112	0	0.5	Silver	0.173	MG/KG	J	200	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Silver	0.201	MG/KG	J	200	nc	NA	N
Lyman Mill soil	LPX-4113	0	0.5	Silver	0.257	MG/KG	J	200	nc	NA	N
Lyman Mill soil	LPX-4114	0	0.5	Silver	0.27	MG/KG	J	200	nc	NA	N
Allendale soil	RES-14-421-01	0	1	Silver	0.23	MG/KG	U	200	nc	NA	NA
Lyman Mill soil	RES-10-004-01	0	1	Silver	0.46	MG/KG	U	200	nc	NA	NA
Lyman Mill soil	RES-10-005-01	0	1	Silver	0.79	MG/KG	U	200	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	Silver	5.1	MG/KG		200	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	Silver	1.4	MG/KG		200	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Silver	0.28	MG/KG	U	200	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-10-068-01	0	1	Silver	0.5	MG/KG	U	200	nc	NA	NA
Lyman Mill soil	RES-10-074-01	0	1	Silver	1.6	MG/KG		200	nc	NA	N
Lyman Mill soil	RES-10-075-01	0	1	Silver	2	MG/KG	J	200	nc	NA	N
Lyman Mill soil	RES-10-076-01	0	1	Silver	3.6	MG/KG	J	200	nc	NA	N
Lyman Mill soil	RES-10-604-01	0	1	Silver	0.58	MG/KG	U	200	nc	NA	NA
Lyman Mill soil	RES-11-011-01	0	1	Silver	0.9	MG/KG	UJ	200	nc	NA	NA
Lyman Mill soil	RES-11-012-01	0	1	Silver	5.7	MG/KG	J	200	nc	NA	N
Lyman Mill soil	RES-11-328-01	0	1	Silver	0.6	MG/KG	UJ	200	nc	NA	NA
Lyman Mill soil	RES-11-419-01	0	1	Silver	0.94	MG/KG	U	200	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	Silver	0.47	MG/KG	UJ	200	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	Silver	0.58	MG/KG	U	200	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	Silver	0.26	MG/KG	U	200	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	Silver	1.4	MG/KG		200	nc	NA	N
Lyman Mill soil	RES-11-426-01	0	1	Silver	0.64	MG/KG	U	200	nc	NA	NA
Lyman Mill soil	RES-11-427-01	0	1	Silver	0.22	MG/KG	UJ	200	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	Silver	0.54	MG/KG	UJ	200	nc	NA	NA
Lyman Mill soil	RES-11-429-01	0	1	Silver	0.26	MG/KG	J	200	nc	NA	N
Lyman Mill soil	RES-11-430-01	0	1	Silver	0.26	MG/KG	U	200	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	Silver	0.47	MG/KG	U	200	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	Silver	0.41	MG/KG	U	200	nc	NA	NA
Lyman Mill soil	RES-11-433-01	0	1	Silver	1.4	MG/KG		200	nc	NA	N
Lyman Mill soil	RES-11-486-01	0	1	Silver	0.95	MG/KG	U	200	nc	NA	NA
Lyman Mill soil	RES-11-497-01	0	1	Silver	0.26	MG/KG	U	200	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	Silver	0.84	MG/KG	U	200	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	Silver	0.8	MG/KG	U	200	nc	NA	NA
Lyman Mill soil	RES-12-560-01	0	1	Silver	0.65	MG/KG	U	200	nc	NA	NA
Lyman Mill soil	RES-12-560-02	0	1	Silver	0.68	MG/KG	U	200	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Silver	2.3	MG/KG		200	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Silver	0.28	MG/KG	U	200	nc	NA	NA
Oxbow Area soil	LPX-SD-4407	0	0.5	Thallium	0.401	MG/KG		5.5	nc	NA	N
Oxbow Area soil	LPX-SD-4404	0	0.5	Thallium	1.036	MG/KG		5.5	nc	NA	N
Lyman Mill soil	LPX-FP-4004	0	0.5	Thallium	0.279	MG/KG		5.5	nc	NA	N
Lyman Mill soil	LPX-FP-4006	0	0.5	Thallium	0.575	MG/KG		5.5	nc	NA	N
Lyman Mill soil	LPX-FP-4007	0	0.5	Thallium	0.289	MG/KG		5.5	nc	NA	N
Allendale soil	CMS-418	0	1	Thallium	203	MG/KG	U	5.5	nc	NA	NA
Allendale soil	CMS-418	1	2	Thallium	226	MG/KG	U	5.5	nc	NA	NA
Lyman Mill soil	LPX-4112	0	0.5	Thallium	0.141	MG/KG	J	5.5	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Thallium	0.143	MG/KG	J	5.5	nc	NA	N
Lyman Mill soil	LPX-4113	0	0.5	Thallium	0.242	MG/KG	J	5.5	nc	NA	N
Lyman Mill soil	LPX-4114	0	0.5	Thallium	0.18	MG/KG	J	5.5	nc	NA	N
Allendale soil	RES-14-421-01	0	1	Thallium	0.48	MG/KG	U	5.5	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-10-004-01	0	1	Thallium	0.61	MG/KG	U	5.5	nc	NA	NA
Lyman Mill soil	RES-10-005-01	0	1	Thallium	0.75	MG/KG	U	5.5	nc	NA	NA
Lyman Mill soil	RES-10-042-01	0	1	Thallium	1	MG/KG	U	5.5	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Thallium	1.1	MG/KG	U	5.5	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	Thallium	2	MG/KG	U	5.5	nc	NA	NA
Lyman Mill soil	RES-10-068-01	0	1	Thallium	0.52	MG/KG	U	5.5	nc	NA	NA
Lyman Mill soil	RES-10-074-01	0	1	Thallium	0.63	MG/KG	U	5.5	nc	NA	NA
Lyman Mill soil	RES-10-075-01	0	1	Thallium	0.59	MG/KG	U	5.5	nc	NA	NA
Lyman Mill soil	RES-10-076-01	0	1	Thallium	0.67	MG/KG	U	5.5	nc	NA	NA
Lyman Mill soil	RES-10-604-01	0	1	Thallium	0.76	MG/KG	U	5.5	nc	NA	NA
Lyman Mill soil	RES-11-011-01	0	1	Thallium	1.7	MG/KG	U	5.5	nc	NA	NA
Lyman Mill soil	RES-11-012-01	0	1	Thallium	2.5	MG/KG	U	5.5	nc	NA	NA
Lyman Mill soil	RES-11-328-01	0	1	Thallium	2.7	MG/KG	UJ	5.5	nc	NA	NA
Lyman Mill soil	RES-11-419-01	0	1	Thallium	0.98	MG/KG	U	5.5	nc	NA	NA
Lyman Mill soil	RES-11-420-01	0	1	Thallium	2	MG/KG	UJ	5.5	nc	NA	NA
Lyman Mill soil	RES-11-422-01	0	1	Thallium	2.5	MG/KG	UJ	5.5	nc	NA	NA
Lyman Mill soil	RES-11-423-01	0	1	Thallium	1.8	MG/KG	UJ	5.5	nc	NA	NA
Lyman Mill soil	RES-11-424-01	0	1	Thallium	1.7	MG/KG	UJ	5.5	nc	NA	NA
Lyman Mill soil	RES-11-426-01	0	1	Thallium	2.1	MG/KG	UJ	5.5	nc	NA	NA
Lyman Mill soil	RES-11-427-01	0	1	Thallium	1.5	MG/KG	UJ	5.5	nc	NA	NA
Lyman Mill soil	RES-11-428-01	0	1	Thallium	1.9	MG/KG	UJ	5.5	nc	NA	NA
Lyman Mill soil	RES-11-429-01	0	1	Thallium	1.8	MG/KG	UJ	5.5	nc	NA	NA
Lyman Mill soil	RES-11-430-01	0	1	Thallium	1.8	MG/KG	UJ	5.5	nc	NA	NA
Lyman Mill soil	RES-11-431-01	0	1	Thallium	1.6	MG/KG	UJ	5.5	nc	NA	NA
Lyman Mill soil	RES-11-432-01	0	1	Thallium	2.9	MG/KG	UJ	5.5	nc	NA	NA
Lyman Mill soil	RES-11-497-01	0	1	Thallium	1.8	MG/KG	U	5.5	nc	NA	NA
Lyman Mill soil	RES-11-577-01	0	1	Thallium	1	MG/KG	U	5.5	nc	NA	NA
Lyman Mill soil	RES-12-556-01	0	1	Thallium	1.8	MG/KG	UJ	5.5	nc	NA	NA
Lyman Mill soil	RES-12-560-01	0	1	Thallium	1.7	MG/KG	UJ	5.5	nc	NA	NA
Lyman Mill soil	RES-12-560-02	0	1	Thallium	1.9	MG/KG	UJ	5.5	nc	NA	NA
Lyman Mill soil	RES-10-044-01	0	1	Thallium	1.2	MG/KG	U	5.5	nc	NA	NA
Lyman Mill soil	RES-10-053-01	0	1	Thallium	1.9	MG/KG	U	5.5	nc	NA	NA
Oxbow Area soil	LPX-SD-4407	0	0.5	Vanadium	62.7	MG/KG		550	nc	NA	N
Oxbow Area soil	LPX-SD-4404	0	0.5	Vanadium	71.1	MG/KG		550	nc	NA	N
Lyman Mill soil	LPX-FP-4004	0	0.5	Vanadium	38.6	MG/KG		550	nc	NA	N
Lyman Mill soil	LPX-FP-4006	0	0.5	Vanadium	42.6	MG/KG		550	nc	NA	N
Lyman Mill soil	LPX-FP-4007	0	0.5	Vanadium	31.6	MG/KG		550	nc	NA	N
Allendale soil	CMS-418	0	1	Vanadium	8.6	MG/KG		550	nc	NA	N
Allendale soil	CMS-418	1	2	Vanadium	6.1	MG/KG		550	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Vanadium	36.3	MG/KG		550	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Vanadium	39.5	MG/KG		550	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	LPX-4113	0	0.5	Vanadium	54.9	MG/KG		550	nc	NA	N
Lyman Mill soil	LPX-4114	0	0.5	Vanadium	38	MG/KG		550	nc	NA	N
Allendale soil	RES-14-421-01	0	1	Vanadium	8.7	MG/KG		550	nc	NA	N
Lyman Mill soil	RES-10-004-01	0	1	Vanadium	26	MG/KG		550	nc	NA	N
Lyman Mill soil	RES-10-005-01	0	1	Vanadium	20.5	MG/KG		550	nc	NA	N
Lyman Mill soil	RES-10-042-01	0	1	Vanadium	21.5	MG/KG		550	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	Vanadium	49.7	MG/KG		550	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Vanadium	14.6	MG/KG		550	nc	NA	N
Lyman Mill soil	RES-10-068-01	0	1	Vanadium	34.3	MG/KG		550	nc	NA	N
Lyman Mill soil	RES-10-074-01	0	1	Vanadium	16	MG/KG	J	550	nc	NA	N
Lyman Mill soil	RES-10-075-01	0	1	Vanadium	21	MG/KG	J	550	nc	NA	N
Lyman Mill soil	RES-10-076-01	0	1	Vanadium	24.8	MG/KG	J	550	nc	NA	N
Lyman Mill soil	RES-10-604-01	0	1	Vanadium	21.6	MG/KG		550	nc	NA	N
Lyman Mill soil	RES-11-011-01	0	1	Vanadium	12.2	MG/KG		550	nc	NA	N
Lyman Mill soil	RES-11-012-01	0	1	Vanadium	36.7	MG/KG		550	nc	NA	N
Lyman Mill soil	RES-11-328-01	0	1	Vanadium	12.2	MG/KG		550	nc	NA	N
Lyman Mill soil	RES-11-419-01	0	1	Vanadium	15.4	MG/KG		550	nc	NA	N
Lyman Mill soil	RES-11-420-01	0	1	Vanadium	12.3	MG/KG		550	nc	NA	N
Lyman Mill soil	RES-11-422-01	0	1	Vanadium	13.2	MG/KG		550	nc	NA	N
Lyman Mill soil	RES-11-423-01	0	1	Vanadium	5.9	MG/KG		550	nc	NA	N
Lyman Mill soil	RES-11-424-01	0	1	Vanadium	19.6	MG/KG		550	nc	NA	N
Lyman Mill soil	RES-11-426-01	0	1	Vanadium	11.2	MG/KG		550	nc	NA	N
Lyman Mill soil	RES-11-427-01	0	1	Vanadium	17.1	MG/KG		550	nc	NA	N
Lyman Mill soil	RES-11-428-01	0	1	Vanadium	18.3	MG/KG		550	nc	NA	N
Lyman Mill soil	RES-11-429-01	0	1	Vanadium	21.9	MG/KG		550	nc	NA	N
Lyman Mill soil	RES-11-430-01	0	1	Vanadium	4.1	MG/KG		550	nc	NA	N
Lyman Mill soil	RES-11-431-01	0	1	Vanadium	8.2	MG/KG		550	nc	NA	N
Lyman Mill soil	RES-11-432-01	0	1	Vanadium	9.9	MG/KG		550	nc	NA	N
Lyman Mill soil	RES-11-433-01	0	1	Vanadium	20.8	MG/KG		550	nc	NA	N
Lyman Mill soil	RES-11-486-01	0	1	Vanadium	21.4	MG/KG		550	nc	NA	N
Lyman Mill soil	RES-11-497-01	0	1	Vanadium	10.7	MG/KG		550	nc	NA	N
Lyman Mill soil	RES-11-577-01	0	1	Vanadium	42.3	MG/KG		550	nc	NA	N
Lyman Mill soil	RES-12-556-01	0	1	Vanadium	24	MG/KG		550	nc	NA	N
Lyman Mill soil	RES-12-560-01	0	1	Vanadium	27.7	MG/KG		550	nc	NA	N
Lyman Mill soil	RES-12-560-02	0	1	Vanadium	34.1	MG/KG		550	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	Vanadium	51.2	MG/KG		550	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Vanadium	13.8	MG/KG		550	nc	NA	N
Oxbow Area soil	LPX-SD-4407	0	0.5	Zinc	454	MG/KG		6000	nc	NA	N
Oxbow Area soil	LPX-SD-4404	0	0.5	Zinc	1867	MG/KG		6000	nc	NA	N
Lyman Mill soil	LPX-FP-4004	0	0.5	Zinc	97.5	MG/KG		6000	nc	NA	N
Lyman Mill soil	LPX-FP-4006	0	0.5	Zinc	1150	MG/KG		6000	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	LPX-FP-4007	0	0.5	Zinc	218	MG/KG		6000	nc	NA	N
Allendale soil	CMS-418	0	1	Zinc	44.8	MG/KG		6000	nc	NA	N
Allendale soil	CMS-418	1	2	Zinc	56	MG/KG		6000	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Zinc	366	MG/KG		6000	nc	NA	N
Lyman Mill soil	LPX-4112	0	0.5	Zinc	397	MG/KG		6000	nc	NA	N
Lyman Mill soil	LPX-4113	0	0.5	Zinc	2190	MG/KG		6000	nc	NA	N
Lyman Mill soil	LPX-4114	0	0.5	Zinc	583	MG/KG		6000	nc	NA	N
Allendale soil	RES-14-421-01	0	1	Zinc	38.5	MG/KG		6000	nc	NA	N
Lyman Mill soil	RES-10-004-01	0	1	Zinc	84.1	MG/KG		6000	nc	NA	N
Lyman Mill soil	RES-10-005-01	0	1	Zinc	77.8	MG/KG		6000	nc	NA	N
Lyman Mill soil	RES-10-042-01	0	1	Zinc	808	MG/KG		6000	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	Zinc	504	MG/KG		6000	nc	NA	N
Lyman Mill soil	RES-10-053-01	0	1	Zinc	60.1	MG/KG		6000	nc	NA	N
Lyman Mill soil	RES-10-068-01	0	1	Zinc	59.7	MG/KG		6000	nc	NA	N
Lyman Mill soil	RES-10-074-01	0	1	Zinc	1040	MG/KG		6000	nc	NA	N
Lyman Mill soil	RES-10-075-01	0	1	Zinc	1730	MG/KG		6000	nc	NA	N
Lyman Mill soil	RES-10-076-01	0	1	Zinc	1390	MG/KG		6000	nc	NA	N
Lyman Mill soil	RES-10-604-01	0	1	Zinc	157	MG/KG		6000	nc	NA	N
Lyman Mill soil	RES-11-011-01	0	1	Zinc	189	MG/KG		6000	nc	NA	N
Lyman Mill soil	RES-11-012-01	0	1	Zinc	574	MG/KG		6000	nc	NA	N
Lyman Mill soil	RES-11-328-01	0	1	Zinc	315	MG/KG		6000	nc	NA	N
Lyman Mill soil	RES-11-419-01	0	1	Zinc	190	MG/KG		6000	nc	NA	N
Lyman Mill soil	RES-11-420-01	0	1	Zinc	68.1	MG/KG		6000	nc	NA	N
Lyman Mill soil	RES-11-422-01	0	1	Zinc	74.5	MG/KG		6000	nc	NA	N
Lyman Mill soil	RES-11-423-01	0	1	Zinc	17.9	MG/KG		6000	nc	NA	N
Lyman Mill soil	RES-11-424-01	0	1	Zinc	116	MG/KG		6000	nc	NA	N
Lyman Mill soil	RES-11-426-01	0	1	Zinc	43.3	MG/KG		6000	nc	NA	N
Lyman Mill soil	RES-11-427-01	0	1	Zinc	30.5	MG/KG		6000	nc	NA	N
Lyman Mill soil	RES-11-428-01	0	1	Zinc	92.2	MG/KG		6000	nc	NA	N
Lyman Mill soil	RES-11-429-01	0	1	Zinc	42.6	MG/KG		6000	nc	NA	N
Lyman Mill soil	RES-11-430-01	0	1	Zinc	33.4	MG/KG		6000	nc	NA	N
Lyman Mill soil	RES-11-431-01	0	1	Zinc	195	MG/KG		6000	nc	NA	N
Lyman Mill soil	RES-11-432-01	0	1	Zinc	136	MG/KG		6000	nc	NA	N
Lyman Mill soil	RES-11-433-01	0	1	Zinc	1110	MG/KG		6000	nc	NA	N
Lyman Mill soil	RES-11-486-01	0	1	Zinc	364	MG/KG		6000	nc	NA	N
Lyman Mill soil	RES-11-497-01	0	1	Zinc	99.7	MG/KG		6000	nc	NA	N
Lyman Mill soil	RES-11-577-01	0	1	Zinc	50.4	MG/KG		6000	nc	NA	N
Lyman Mill soil	RES-12-556-01	0	1	Zinc	315	MG/KG		6000	nc	NA	N
Lyman Mill soil	RES-12-560-01	0	1	Zinc	83.1	MG/KG		6000	nc	NA	N
Lyman Mill soil	RES-12-560-02	0	1	Zinc	163	MG/KG		6000	nc	NA	N
Lyman Mill soil	RES-10-044-01	0	1	Zinc	468	MG/KG		6000	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	RES-10-053-01	0	1	Zinc	92.5	MG/KG		6000	nc	NA	N
Lyman Mill sediment	WRL-SD-2038	0	0.5	Aluminum	4140	MG/KG		nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Antimony	0.54	MG/KG	U	10	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Arsenic	1.2	MG/KG		7	nc	NA	N
Lyman Mill sediment	WRL-SD-2038	0	0.5	Barium	66.6	MG/KG		5500	nc	NA	N
Lyman Mill sediment	WRL-SD-2038	0	0.5	Beryllium	0.65	MG/KG		0.4	nc	NA	Y
Lyman Mill sediment	WRL-SD-2038	0	0.5	Cadmium	0.06	MG/KG	U	39	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Calcium	1180	MG/KG		nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Chromium	30.5	MG/KG		390	nc	NA	N
Lyman Mill sediment	WRL-SD-2038	0	0.5	Cobalt	5.7	MG/KG		nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Copper	28.5	MG/KG		3100	nc	NA	N
Lyman Mill sediment	WRL-SD-2038	0	0.5	Iron	9890	MG/KG		nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Lead	139	MG/KG		150	nc	NA	N
Lyman Mill sediment	WRL-SD-2038	0	0.5	Magnesium	1550	MG/KG		nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Manganese	1130	MG/KG		390	nc	NA	Y
Lyman Mill sediment	WRL-SD-2038	0	0.5	Mercury	0.1	MG/KG		23	nc	NA	N
Lyman Mill sediment	WRL-SD-2038	0	0.5	Nickel	14.4	MG/KG		1000	nc	NA	N
Lyman Mill sediment	WRL-SD-2038	0	0.5	Potassium	852	MG/KG		nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Selenium	0.82	MG/KG	U	390	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Silver	2.7	MG/KG	U	200	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Sodium	48.2	MG/KG		nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Thallium	0.38	MG/KG	U	5.5	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Vanadium	19.2	MG/KG		550	nc	NA	N
Lyman Mill sediment	WRL-SD-2038	0	0.5	Zinc	114	MG/KG		6000	nc	NA	N
Lyman Mill sediment	WRL-SD-2038	0	0.5	1,2,4-trichlorobenzene	4.2	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	1,2-dichlorobenzene	4.2	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	1,3-dichlorobenzene	4.2	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	1,4-dichlorobenzene	4.2	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	2,2'-oxybis(1-chloropropane)	4.2	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	2,4,5-trichlorophenol	11	MG/KG	U	330	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	2,4,6-trichlorophenol	4.2	MG/KG	U	58	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	2,4-dichlorophenol	4.2	MG/KG	U	30	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	2,4-dimethylphenol	4.2	MG/KG	U	1400	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	2,4-dinitrophenol	11	MG/KG	U	160	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	2,4-dinitrotoluene	4.2	MG/KG	U	0.9	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	2,6-dinitrotoluene	4.2	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	2-chloronaphthalene	4.2	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	2-chlorophenol	4.2	MG/KG	U	50	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	2-methylnaphthalene	4.2	MG/KG	U	123	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	2-methylphenol	4.2	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	2-nitroaniline	11	MG/KG	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill sediment	WRL-SD-2038	0	0.5	2-nitrophenol	4.2	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	3,3'-dichlorobenzidine	4.2	MG/KG	U	1.4	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	3-nitroaniline	11	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	4,6-dinitro-2-methylphenol	11	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	4-bromophenyl-phenylether	4.2	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	4-chloro-3-methylphenol	4.2	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	4-chloroaniline	4.2	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	4-chlorophenyl-phenylether	4.2	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	4-methylphenol	4.2	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	4-nitroaniline	11	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	4-nitrophenol	11	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Acenaphthene	4.2	MG/KG	U	43	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Acenaphthylene	4.2	MG/KG	U	23	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Anthracene	4.2	MG/KG	U	35	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Bapeq	1.5	MG/KG		nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Benzo(a)anthracene	1.2	MG/KG	J	0.9	nc	NA	Y
Lyman Mill sediment	WRL-SD-2038	0	0.5	Benzo(a)pyrene	1.2	MG/KG	J	0.4	nc	NA	Y
Lyman Mill sediment	WRL-SD-2038	0	0.5	Benzo(b)fluoranthene	1.2	MG/KG	J	0.9	nc	NA	Y
Lyman Mill sediment	WRL-SD-2038	0	0.5	Benzo(g,h,i)perylene	0.61	MG/KG	J	0.8	nc	NA	N
Lyman Mill sediment	WRL-SD-2038	0	0.5	Benzo(k)fluoranthene	1.2	MG/KG	J	0.9	nc	NA	Y
Lyman Mill sediment	WRL-SD-2038	0	0.5	Bis(2-chloroethoxy)methane	4.2	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Bis(2-chloroethyl)ether	4.2	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Bis(2-ethylhexyl)phthalate	4.2	MG/KG	U	46	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Butylbenzylphthalate	4.2	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Carbazole	4.2	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Chrysene	1.5	MG/KG	J	0.4	nc	NA	Y
Lyman Mill sediment	WRL-SD-2038	0	0.5	Dibenzo(a,h)anthracene	4.2	MG/KG	U	0.4	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Dibenzofuran	4.2	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Diethylphthalate	4.2	MG/KG	U	340	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Dimethylphthalate	4.2	MG/KG	U	1900	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Di-n-butylphthalate	4.2	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Di-n-octylphthalate	4.2	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Fluoranthene	2.7	MG/KG	J	20	nc	NA	N
Lyman Mill sediment	WRL-SD-2038	0	0.5	Fluorene	4.2	MG/KG	U	28	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Hexachlorobenzene	4.2	MG/KG	U	0.4	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Hexachlorobutadiene	4.2	MG/KG	U	8.2	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Hexachlorocyclopentadiene	4.2	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Hexachloroethane	4.2	MG/KG	U	46	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	High Molecular Weight Pahs	12	MG/KG		nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Indeno(1,2,3-cd)pyrene	0.71	MG/KG	J	0.9	nc	NA	N
Lyman Mill sediment	WRL-SD-2038	0	0.5	Isophorone	4.2	MG/KG	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill sediment	WRL-SD-2038	0	0.5	Low Molecular Weight Pahs	1.5	MG/KG		nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Naphthalene	4.2	MG/KG	U	54	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Nitrobenzene	4.2	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	N-nitroso-di-n-propylamine	4.2	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	N-nitroso-diphenylamine	4.2	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Pentachlorophenol	11	MG/KG	U	5.3	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Phenanthrene	1.5	MG/KG	J	40	nc	NA	N
Lyman Mill sediment	WRL-SD-2038	0	0.5	Phenol	4.2	MG/KG	U	6000	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Pyrene	1.9	MG/KG	J	13	nc	NA	N
Lyman Mill sediment	WRL-SD-2038	0	0.5	Total PAH	14	MG/KG		nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	4,4'-DDD	0.0042	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	4,4'-DDE	0.0042	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	4,4'-DDT	0.0061	MG/KG		nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Aldrin	0.0022	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	alpha-BHC	0.0022	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	alpha-Chlordane	0.0022	MG/KG		0.5	nc	NA	N
Lyman Mill sediment	WRL-SD-2038	0	0.5	Aroclor, Total	0.13	MG/KG		10	nc	1	N
Lyman Mill sediment	WRL-SD-2038	0	0.5	Aroclor-1016	0.042	MG/KG	U	10	nc	1	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Aroclor-1221	0.085	MG/KG	U	10	nc	1	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Aroclor-1232	0.042	MG/KG	U	10	nc	1	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Aroclor-1242	0.042	MG/KG	U	10	nc	1	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Aroclor-1248	0.042	MG/KG	U	10	nc	1	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Aroclor-1254	0.13	MG/KG		10	nc	1	N
Lyman Mill sediment	WRL-SD-2038	0	0.5	Aroclor-1260	0.042	MG/KG	U	10	nc	1	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	beta-BHC	0.0022	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	delta-BHC	0.0022	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Dieldrin	0.0042	MG/KG	U	0.04	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Endosulfan I	0.0022	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Endosulfan II	0.0042	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Endosulfan Sulfate	0.0042	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Endrin	0.0042	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Endrin Aldehyde	0.0042	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Endrin Ketone	0.0042	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	gamma-BHC	0.0022	MG/KG	UJ	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	gamma-Chlordane	0.0031	MG/KG		0.5	nc	NA	N
Lyman Mill sediment	WRL-SD-2038	0	0.5	Heptachlor	0.0022	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Heptachlor Epoxide	0.0022	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Methoxychlor	0.022	MG/KG	U	nc	nc	NA	NA
Lyman Mill sediment	WRL-SD-2038	0	0.5	Toxaphene	0.22	MG/KG	U	nc	nc	NA	NA
2010 Investigation Data											
Oxbow Area soil	SS_G-01	1	2	Antimony	0.01	MG/KG_DRY	UJ	10	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-01	0	1	Antimony	0.311	MG/KG_DRY		10	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Antimony	0.294	MG/KG_DRY		10	nc	NA	N
Oxbow Area soil	SS_G-01-01	0	1	Antimony	0.725	MG/KG_DRY	J	10	nc	NA	N
Oxbow Area soil	SS_G-01-02	0	1	Antimony	0.238	MG/KG_DRY	J	10	nc	NA	N
Oxbow Area soil	SS_G-01-03	0	1	Antimony	0.574	MG/KG_DRY	J	10	nc	NA	N
Oxbow Area soil	SS_G-01-04	0	1	Antimony	0.023	MG/KG_DRY	UJ	10	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Antimony	0.273	MG/KG_DRY		10	nc	NA	N
Oxbow Area soil	SS_G-03	0	1	Antimony	0.235	MG/KG_DRY		10	nc	NA	N
Oxbow Area soil	SS_G-04	0	1	Antimony	0.965	MG/KG_DRY		10	nc	NA	N
Oxbow Area soil	SS_G-05	1	2	Antimony	0.049	MG/KG_DRY	U	10	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Antimony	0.089	MG/KG_DRY	U	10	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Antimony	0.112	MG/KG_DRY	U	10	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Antimony	0.638	MG/KG_DRY		10	nc	NA	N
Oxbow Area soil	SS_G-08	0	1	Antimony	0.636	MG/KG_DRY		10	nc	NA	N
Oxbow Area soil	SS_G-09	0	1	Antimony	1.33	MG/KG_DRY		10	nc	NA	N
Oxbow Area soil	SS_G-10	0	1	Antimony	0.017	MG/KG_DRY	UJ	10	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Antimony	0.82	MG/KG_DRY	J	10	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Antimony	0.49	MG/KG_DRY	J	10	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Antimony	0.28	MG/KG_DRY	J	10	nc	NA	N
Oxbow Area soil	SS_G-14	0	1	Antimony	0.488	MG/KG_DRY		10	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	Antimony	0.402	MG/KG_DRY		10	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	Antimony	0.955	MG/KG_DRY		10	nc	NA	N
Oxbow Area soil	SS_G-23	0	1	Antimony	0.564	MG/KG_DRY		10	nc	NA	N
Oxbow Area soil	SS_G-26	1	2	Antimony	0.037	MG/KG_DRY	U	10	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Antimony	0.237	MG/KG_DRY		10	nc	NA	N
Oxbow Area soil	SS_G-29	0	1	Antimony	0.599	MG/KG_DRY		10	nc	NA	N
Oxbow Area soil	SS_G-29-01	0	1	Antimony	1.51	MG/KG_DRY	J	10	nc	NA	N
Oxbow Area soil	SS_G-29-02	0	1	Antimony	0.05	MG/KG_DRY	UJ	10	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Antimony	3.18	MG/KG_DRY		10	nc	NA	N
Lyman Mill soil	SS_G-31	0	1	Antimony	1.38	MG/KG_DRY		10	nc	NA	N
Lyman Mill soil	SS_G-32	0	1	Antimony	0.249	MG/KG_DRY		10	nc	NA	N
Lyman Mill soil	SS_G-33	0	1	Antimony	0.131	MG/KG_DRY		10	nc	NA	N
Oxbow Area soil	SS_H-01	0	1	Antimony	0.129	MG/KG_DRY		10	nc	NA	N
Oxbow Area soil	SS_H-03	0	1	Antimony	0.085	MG/KG_DRY	U	10	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Antimony	0.098	MG/KG_DRY	U	10	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Antimony	0.08	MG/KG_DRY	U	10	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Antimony	0.196	MG/KG_DRY		10	nc	NA	N
Oxbow Area soil	SS_H-13	0	1	Antimony	0.137	MG/KG_DRY		10	nc	NA	N
Oxbow Area soil	SS_H-16	0	1	Antimony	0.12	MG/KG_DRY		10	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Antimony	0.257	MG/KG_DRY		10	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Antimony	0.217	MG/KG_DRY		10	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_H-19	0	1	Antimony	0.186	MG/KG_DRY		10	nc	NA	N
Oxbow Area soil	SS_H-22	0	1	Antimony	0.154	MG/KG_DRY		10	nc	NA	N
Oxbow Area soil	SS_G-01	1	2	Arsenic	3	MG/KG_DRY		7	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Arsenic	3.9	MG/KG_DRY		7	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Arsenic	3.5	MG/KG_DRY		7	nc	NA	N
Oxbow Area soil	SS_G-01-01	0	1	Arsenic	8.6	MG/KG_DRY		7	nc	NA	Y
Oxbow Area soil	SS_G-01-02	0	1	Arsenic	5.2	MG/KG_DRY		7	nc	NA	N
Oxbow Area soil	SS_G-01-03	0	1	Arsenic	6.1	MG/KG_DRY		7	nc	NA	N
Oxbow Area soil	SS_G-01-04	0	1	Arsenic	3.2	MG/KG_DRY		7	nc	NA	N
Oxbow Area soil	SS_G-02	0	1	Arsenic	13.3	MG/KG_DRY		7	nc	NA	Y
Oxbow Area soil	SS_G-03	0	1	Arsenic	10	MG/KG_DRY		7	nc	NA	Y
Oxbow Area soil	SS_G-04	0	1	Arsenic	9.2	MG/KG_DRY		7	nc	NA	Y
Oxbow Area soil	SS_G-05	1	2	Arsenic	5.7	MG/KG_DRY		7	nc	NA	N
Oxbow Area soil	SS_G-05	0	1	Arsenic	7.7	MG/KG_DRY		7	nc	NA	Y
Oxbow Area soil	SS_G-06	0	1	Arsenic	3.3	MG/KG_DRY		7	nc	NA	N
Oxbow Area soil	SS_G-07	0	1	Arsenic	4.5	MG/KG_DRY		7	nc	NA	N
Oxbow Area soil	SS_G-08	0	1	Arsenic	4.2	MG/KG_DRY		7	nc	NA	N
Oxbow Area soil	SS_G-09	0	1	Arsenic	6.1	MG/KG_DRY		7	nc	NA	N
Oxbow Area soil	SS_G-10	0	1	Arsenic	3.4	MG/KG_DRY		7	nc	NA	N
Oxbow Area soil	SS_G-12	0	1	Arsenic	10.6	MG/KG_DRY		7	nc	NA	Y
Oxbow Area soil	SS_G-13	0	1	Arsenic	7	MG/KG_DRY		7	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Arsenic	5.1	MG/KG_DRY		7	nc	NA	N
Oxbow Area soil	SS_G-14	0	1	Arsenic	4.5	MG/KG_DRY		7	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	Arsenic	3.4	MG/KG_DRY		7	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	Arsenic	4.9	MG/KG_DRY		7	nc	NA	N
Oxbow Area soil	SS_G-23	0	1	Arsenic	4.8	MG/KG_DRY		7	nc	NA	N
Oxbow Area soil	SS_G-26	1	2	Arsenic	2	MG/KG_DRY	J	7	nc	NA	N
Oxbow Area soil	SS_G-26	0	1	Arsenic	3.1	MG/KG_DRY		7	nc	NA	N
Oxbow Area soil	SS_G-29	0	1	Arsenic	2.1	MG/KG_DRY	J	7	nc	NA	N
Oxbow Area soil	SS_G-29-01	0	1	Arsenic	18.4	MG/KG_DRY		7	nc	NA	Y
Oxbow Area soil	SS_G-29-02	0	1	Arsenic	1.2	MG/KG_DRY	U	7	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Arsenic	6.3	MG/KG_DRY		7	nc	NA	N
Lyman Mill soil	SS_G-31	0	1	Arsenic	5.3	MG/KG_DRY		7	nc	NA	N
Lyman Mill soil	SS_G-32	0	1	Arsenic	13.7	MG/KG_DRY		7	nc	NA	Y
Lyman Mill soil	SS_G-33	0	1	Arsenic	6	MG/KG_DRY		7	nc	NA	N
Oxbow Area soil	SS_H-01	0	1	Arsenic	2.4	MG/KG_DRY		7	nc	NA	N
Oxbow Area soil	SS_H-03	0	1	Arsenic	2.8	MG/KG_DRY		7	nc	NA	N
Oxbow Area soil	SS_H-06	0	1	Arsenic	2.5	MG/KG_DRY		7	nc	NA	N
Oxbow Area soil	SS_H-07	0	1	Arsenic	1.7	MG/KG_DRY	J	7	nc	NA	N
Oxbow Area soil	SS_H-10	0	1	Arsenic	2.3	MG/KG_DRY		7	nc	NA	N
Oxbow Area soil	SS_H-13	0	1	Arsenic	2	MG/KG_DRY	J	7	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_H-16	0	1	Arsenic	2.9	MG/KG_DRY		7	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Arsenic	3.3	MG/KG_DRY		7	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Arsenic	3.4	MG/KG_DRY		7	nc	NA	N
Oxbow Area soil	SS_H-19	0	1	Arsenic	2.6	MG/KG_DRY		7	nc	NA	N
Oxbow Area soil	SS_H-22	0	1	Arsenic	8.9	MG/KG_DRY		7	nc	NA	Y
Oxbow Area soil	SS_G-01	1	2	Barium	18.8	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Barium	17	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Barium	22	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_G-01-01	0	1	Barium	51.2	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_G-01-02	0	1	Barium	26.7	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_G-01-03	0	1	Barium	65.5	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_G-01-04	0	1	Barium	27.8	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_G-02	0	1	Barium	83.7	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_G-03	0	1	Barium	51	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_G-04	0	1	Barium	191	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_G-05	1	2	Barium	20.4	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_G-05	0	1	Barium	23.3	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_G-06	0	1	Barium	36	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_G-07	0	1	Barium	42	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_G-08	0	1	Barium	35	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_G-09	0	1	Barium	37	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_G-10	0	1	Barium	23.7	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_G-12	0	1	Barium	57.5	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Barium	120	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Barium	132	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_G-14	0	1	Barium	17	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	Barium	15.3	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	Barium	38.7	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_G-23	0	1	Barium	76.3	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_G-26	1	2	Barium	19.9	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_G-26	0	1	Barium	31.4	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_G-29	0	1	Barium	43.2	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_G-29-01	0	1	Barium	113	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_G-29-02	0	1	Barium	14.8	MG/KG_DRY		5500	nc	NA	N
Lyman Mill soil	SS_G-30	0	1	Barium	105	MG/KG_DRY		5500	nc	NA	N
Lyman Mill soil	SS_G-31	0	1	Barium	83	MG/KG_DRY		5500	nc	NA	N
Lyman Mill soil	SS_G-32	0	1	Barium	78.2	MG/KG_DRY		5500	nc	NA	N
Lyman Mill soil	SS_G-33	0	1	Barium	37.6	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_H-01	0	1	Barium	20	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_H-03	0	1	Barium	26	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_H-06	0	1	Barium	17	MG/KG_DRY		5500	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_H-07	0	1	Barium	18	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_H-10	0	1	Barium	29	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_H-13	0	1	Barium	18	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_H-16	0	1	Barium	15	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Barium	13	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Barium	12	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_H-19	0	1	Barium	19.6	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_H-22	0	1	Barium	25	MG/KG_DRY		5500	nc	NA	N
Oxbow Area soil	SS_G-01	1	2	Beryllium	0.52	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-01	0	1	Beryllium	0.78	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-01	0	1	Beryllium	0.76	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-01-01	0	1	Beryllium	1.92	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-01-02	0	1	Beryllium	1.17	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-01-03	0	1	Beryllium	1.43	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-01-04	0	1	Beryllium	0.44	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-02	0	1	Beryllium	1.26	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-03	0	1	Beryllium	1.57	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-04	0	1	Beryllium	0.9	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-05	1	2	Beryllium	0.95	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-05	0	1	Beryllium	1.28	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-06	0	1	Beryllium	0.72	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-07	0	1	Beryllium	0.46	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-08	0	1	Beryllium	0.43	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-09	0	1	Beryllium	0.51	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-10	0	1	Beryllium	0.28	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-12	0	1	Beryllium	0.55	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-13	0	1	Beryllium	0.54	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-13	0	1	Beryllium	0.57	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-14	0	1	Beryllium	0.25	MG/KG_DRY	J	0.4	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	Beryllium	0.26	MG/KG_DRY	J	0.4	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	Beryllium	0.54	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-23	0	1	Beryllium	0.9	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-26	1	2	Beryllium	0.28	MG/KG_DRY	J	0.4	nc	NA	N
Oxbow Area soil	SS_G-26	0	1	Beryllium	0.42	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-29	0	1	Beryllium	0.79	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-29-01	0	1	Beryllium	2.08	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-29-02	0	1	Beryllium	0.28	MG/KG_DRY		0.4	nc	NA	N
Lyman Mill soil	SS_G-30	0	1	Beryllium	0.34	MG/KG_DRY		0.4	nc	NA	N
Lyman Mill soil	SS_G-31	0	1	Beryllium	0.6	MG/KG_DRY		0.4	nc	NA	Y
Lyman Mill soil	SS_G-32	0	1	Beryllium	0.89	MG/KG_DRY		0.4	nc	NA	Y
Lyman Mill soil	SS_G-33	0	1	Beryllium	0.23	MG/KG_DRY	J	0.4	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_H-01	0	1	Beryllium	0.33	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_H-03	0	1	Beryllium	0.42	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_H-06	0	1	Beryllium	0.24	MG/KG_DRY	J	0.4	nc	NA	N
Oxbow Area soil	SS_H-07	0	1	Beryllium	0.32	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_H-10	0	1	Beryllium	0.38	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_H-13	0	1	Beryllium	0.32	MG/KG_DRY	J	0.4	nc	NA	N
Oxbow Area soil	SS_H-16	0	1	Beryllium	0.29	MG/KG_DRY	J	0.4	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Beryllium	0.31	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Beryllium	0.3	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_H-19	0	1	Beryllium	0.36	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_H-22	0	1	Beryllium	0.4	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-01	1	2	Cadmium	0.2	MG/KG_DRY		39	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Cadmium	0.31	MG/KG_DRY		39	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Cadmium	0.22	MG/KG_DRY		39	nc	NA	N
Oxbow Area soil	SS_G-01-01	0	1	Cadmium	0.6	MG/KG_DRY		39	nc	NA	N
Oxbow Area soil	SS_G-01-02	0	1	Cadmium	0.4	MG/KG_DRY		39	nc	NA	N
Oxbow Area soil	SS_G-01-03	0	1	Cadmium	0.9	MG/KG_DRY		39	nc	NA	N
Oxbow Area soil	SS_G-01-04	0	1	Cadmium	0.3	MG/KG_DRY		39	nc	NA	N
Oxbow Area soil	SS_G-02	0	1	Cadmium	0.08	MG/KG_DRY	J	39	nc	NA	N
Oxbow Area soil	SS_G-03	0	1	Cadmium	0.24	MG/KG_DRY		39	nc	NA	N
Oxbow Area soil	SS_G-04	0	1	Cadmium	1.05	MG/KG_DRY		39	nc	NA	N
Oxbow Area soil	SS_G-05	1	2	Cadmium	0.04	MG/KG_DRY	U	39	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Cadmium	0.11	MG/KG_DRY		39	nc	NA	N
Oxbow Area soil	SS_G-06	0	1	Cadmium	0.17	MG/KG_DRY		39	nc	NA	N
Oxbow Area soil	SS_G-07	0	1	Cadmium	0.16	MG/KG_DRY		39	nc	NA	N
Oxbow Area soil	SS_G-08	0	1	Cadmium	0.08	MG/KG_DRY	J	39	nc	NA	N
Oxbow Area soil	SS_G-09	0	1	Cadmium	0.04	MG/KG_DRY	U	39	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Cadmium	0.2	MG/KG_DRY		39	nc	NA	N
Oxbow Area soil	SS_G-12	0	1	Cadmium	2.1	MG/KG_DRY		39	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Cadmium	0.9	MG/KG_DRY		39	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Cadmium	0.6	MG/KG_DRY		39	nc	NA	N
Oxbow Area soil	SS_G-14	0	1	Cadmium	0.08	MG/KG_DRY	J	39	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	Cadmium	0.04	MG/KG_DRY	J	39	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	Cadmium	0.29	MG/KG_DRY		39	nc	NA	N
Oxbow Area soil	SS_G-23	0	1	Cadmium	0.42	MG/KG_DRY		39	nc	NA	N
Oxbow Area soil	SS_G-26	1	2	Cadmium	0.05	MG/KG_DRY	J	39	nc	NA	N
Oxbow Area soil	SS_G-26	0	1	Cadmium	0.19	MG/KG_DRY		39	nc	NA	N
Oxbow Area soil	SS_G-29	0	1	Cadmium	0.3	MG/KG_DRY		39	nc	NA	N
Oxbow Area soil	SS_G-29-01	0	1	Cadmium	2.4	MG/KG_DRY		39	nc	NA	N
Oxbow Area soil	SS_G-29-02	0	1	Cadmium	0.1	MG/KG_DRY	J	39	nc	NA	N
Lyman Mill soil	SS_G-30	0	1	Cadmium	2.43	MG/KG_DRY		39	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	SS_G-31	0	1	Cadmium	0.83	MG/KG_DRY		39	nc	NA	N
Lyman Mill soil	SS_G-32	0	1	Cadmium	0.44	MG/KG_DRY		39	nc	NA	N
Lyman Mill soil	SS_G-33	0	1	Cadmium	0.99	MG/KG_DRY		39	nc	NA	N
Oxbow Area soil	SS_H-01	0	1	Cadmium	0.1	MG/KG_DRY		39	nc	NA	N
Oxbow Area soil	SS_H-03	0	1	Cadmium	0.04	MG/KG_DRY	U	39	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Cadmium	0.1	MG/KG_DRY		39	nc	NA	N
Oxbow Area soil	SS_H-07	0	1	Cadmium	0.05	MG/KG_DRY	U	39	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Cadmium	0.16	MG/KG_DRY		39	nc	NA	N
Oxbow Area soil	SS_H-13	0	1	Cadmium	0.11	MG/KG_DRY		39	nc	NA	N
Oxbow Area soil	SS_H-16	0	1	Cadmium	0.09	MG/KG_DRY	J	39	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Cadmium	0.05	MG/KG_DRY	U	39	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Cadmium	0.04	MG/KG_DRY	U	39	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Cadmium	0.07	MG/KG_DRY	J	39	nc	NA	N
Oxbow Area soil	SS_H-22	0	1	Cadmium	0.15	MG/KG_DRY		39	nc	NA	N
Oxbow Area soil	SS_G-01	1	2	Chromium	14.5	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Chromium	24.3	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Chromium	27.2	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_G-01-01	0	1	Chromium	67.4	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_G-01-02	0	1	Chromium	31.9	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_G-01-03	0	1	Chromium	56.5	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_G-01-04	0	1	Chromium	6.8	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_G-02	0	1	Chromium	15.3	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_G-03	0	1	Chromium	15.7	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_G-04	0	1	Chromium	48.4	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_G-05	1	2	Chromium	9	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_G-05	0	1	Chromium	11.4	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_G-06	0	1	Chromium	5.66	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_G-07	0	1	Chromium	20.7	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_G-08	0	1	Chromium	17.5	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_G-09	0	1	Chromium	33.2	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_G-10	0	1	Chromium	8.4	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_G-12	0	1	Chromium	17.5	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Chromium	20	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Chromium	34.7	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_G-14	0	1	Chromium	19	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	Chromium	11.9	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	Chromium	29.3	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_G-23	0	1	Chromium	41.4	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_G-26	1	2	Chromium	4.3	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_G-26	0	1	Chromium	13.6	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_G-29	0	1	Chromium	54.2	MG/KG_DRY		390	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-29-01	0	1	Chromium	92.6	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_G-29-02	0	1	Chromium	8.2	MG/KG_DRY		390	nc	NA	N
Lyman Mill soil	SS_G-30	0	1	Chromium	12.8	MG/KG_DRY		390	nc	NA	N
Lyman Mill soil	SS_G-31	0	1	Chromium	18.2	MG/KG_DRY		390	nc	NA	N
Lyman Mill soil	SS_G-32	0	1	Chromium	17.3	MG/KG_DRY		390	nc	NA	N
Lyman Mill soil	SS_G-33	0	1	Chromium	4.9	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_H-01	0	1	Chromium	6.41	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_H-03	0	1	Chromium	3.88	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_H-06	0	1	Chromium	4.28	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_H-07	0	1	Chromium	5.72	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_H-10	0	1	Chromium	4.01	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_H-13	0	1	Chromium	6.93	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_H-16	0	1	Chromium	4.67	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Chromium	6.06	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Chromium	5.23	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_H-19	0	1	Chromium	7.8	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_H-22	0	1	Chromium	5.41	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_G-01	1	2	Cobalt	3.4	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Cobalt	4.65	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Cobalt	5.26	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Cobalt	9.4	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Cobalt	5.8	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Cobalt	6.4	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	Cobalt	3	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Cobalt	7.25	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Cobalt	10	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Cobalt	8.05	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Cobalt	7.26	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Cobalt	8.64	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Cobalt	3.49	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Cobalt	1.87	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Cobalt	2.42	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Cobalt	2.39	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Cobalt	1.8	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Cobalt	4.8	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Cobalt	3.8	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Cobalt	3.4	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Cobalt	1.3	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	Cobalt	0.94	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Cobalt	3.41	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Cobalt	6.7	MG/KG_DRY		nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-26	1	2	Cobalt	2.19	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Cobalt	2.68	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Cobalt	2.51	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Cobalt	7.3	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Cobalt	1.1	MG/KG_DRY		nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Cobalt	3.25	MG/KG_DRY		nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Cobalt	3.64	MG/KG_DRY		nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Cobalt	9.11	MG/KG_DRY		nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Cobalt	2.28	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Cobalt	1.82	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Cobalt	1.3	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Cobalt	2.18	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Cobalt	1.14	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Cobalt	1.6	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Cobalt	1.19	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Cobalt	1.09	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Cobalt	0.75	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Cobalt	1.05	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Cobalt	1.65	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Cobalt	2.2	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Copper	6	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Copper	28.1	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Copper	31.3	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_G-01-01	0	1	Copper	66	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_G-01-02	0	1	Copper	37.9	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_G-01-03	0	1	Copper	55.7	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_G-01-04	0	1	Copper	11	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_G-02	0	1	Copper	30.7	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_G-03	0	1	Copper	20.5	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_G-04	0	1	Copper	46.4	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_G-05	1	2	Copper	3.6	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_G-05	0	1	Copper	6.2	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_G-06	0	1	Copper	7.1	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_G-07	0	1	Copper	24.2	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_G-08	0	1	Copper	21.5	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_G-09	0	1	Copper	37.7	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_G-10	0	1	Copper	10.4	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_G-12	0	1	Copper	61.2	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Copper	117	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Copper	151	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_G-14	0	1	Copper	16.2	MG/KG_DRY		3100	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-15	0	1	Copper	10.7	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	Copper	32.9	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_G-23	0	1	Copper	41.1	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_G-26	1	2	Copper	5.8	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_G-26	0	1	Copper	14.9	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_G-29	0	1	Copper	38.8	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_G-29-01	0	1	Copper	92.7	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_G-29-02	0	1	Copper	6.4	MG/KG_DRY		3100	nc	NA	N
Lyman Mill soil	SS_G-30	0	1	Copper	91.9	MG/KG_DRY		3100	nc	NA	N
Lyman Mill soil	SS_G-31	0	1	Copper	119	MG/KG_DRY		3100	nc	NA	N
Lyman Mill soil	SS_G-32	0	1	Copper	35.3	MG/KG_DRY		3100	nc	NA	N
Lyman Mill soil	SS_G-33	0	1	Copper	16.2	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_H-01	0	1	Copper	5.2	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_H-03	0	1	Copper	5.9	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_H-06	0	1	Copper	5.4	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_H-07	0	1	Copper	8.3	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_H-10	0	1	Copper	7.2	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_H-13	0	1	Copper	8.8	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_H-16	0	1	Copper	8.6	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Copper	13.5	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Copper	14.4	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_H-19	0	1	Copper	8.9	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_H-22	0	1	Copper	10.9	MG/KG_DRY		3100	nc	NA	N
Oxbow Area soil	SS_G-01	1	2	Lead	9.8	MG/KG_DRY		150	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Lead	64.1	MG/KG_DRY		150	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Lead	61	MG/KG_DRY		150	nc	NA	N
Oxbow Area soil	SS_G-01-01	0	1	Lead	232	MG/KG_DRY		150	nc	NA	Y
Oxbow Area soil	SS_G-01-02	0	1	Lead	86.6	MG/KG_DRY		150	nc	NA	N
Oxbow Area soil	SS_G-01-03	0	1	Lead	137	MG/KG_DRY		150	nc	NA	N
Oxbow Area soil	SS_G-01-04	0	1	Lead	26.1	MG/KG_DRY		150	nc	NA	N
Oxbow Area soil	SS_G-02	0	1	Lead	67	MG/KG_DRY		150	nc	NA	N
Oxbow Area soil	SS_G-03	0	1	Lead	48.5	MG/KG_DRY		150	nc	NA	N
Oxbow Area soil	SS_G-04	0	1	Lead	93	MG/KG_DRY		150	nc	NA	N
Oxbow Area soil	SS_G-05	1	2	Lead	14	MG/KG_DRY		150	nc	NA	N
Oxbow Area soil	SS_G-05	0	1	Lead	26	MG/KG_DRY		150	nc	NA	N
Oxbow Area soil	SS_G-06	0	1	Lead	32.3	MG/KG_DRY		150	nc	NA	N
Oxbow Area soil	SS_G-07	0	1	Lead	334	MG/KG_DRY		150	nc	NA	Y
Oxbow Area soil	SS_G-08	0	1	Lead	73.8	MG/KG_DRY		150	nc	NA	N
Oxbow Area soil	SS_G-09	0	1	Lead	161	MG/KG_DRY		150	nc	NA	Y
Oxbow Area soil	SS_G-10	0	1	Lead	69.3	MG/KG_DRY		150	nc	NA	N
Oxbow Area soil	SS_G-12	0	1	Lead	408	MG/KG_DRY		150	nc	NA	Y

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-13	0	1	Lead	792	MG/KG_DRY		150	nc	NA	Y
Oxbow Area soil	SS_G-13	0	1	Lead	645	MG/KG_DRY		150	nc	NA	Y
Oxbow Area soil	SS_G-14	0	1	Lead	118	MG/KG_DRY		150	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	Lead	83	MG/KG_DRY		150	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	Lead	149	MG/KG_DRY		150	nc	NA	N
Oxbow Area soil	SS_G-23	0	1	Lead	124	MG/KG_DRY		150	nc	NA	N
Oxbow Area soil	SS_G-26	1	2	Lead	9	MG/KG_DRY		150	nc	NA	N
Oxbow Area soil	SS_G-26	0	1	Lead	48	MG/KG_DRY		150	nc	NA	N
Oxbow Area soil	SS_G-29	0	1	Lead	192	MG/KG_DRY		150	nc	NA	Y
Oxbow Area soil	SS_G-29-01	0	1	Lead	308	MG/KG_DRY		150	nc	NA	Y
Oxbow Area soil	SS_G-29-02	0	1	Lead	15.9	MG/KG_DRY		150	nc	NA	N
Lyman Mill soil	SS_G-30	0	1	Lead	337	MG/KG_DRY		150	nc	NA	Y
Lyman Mill soil	SS_G-31	0	1	Lead	213	MG/KG_DRY		150	nc	NA	Y
Lyman Mill soil	SS_G-32	0	1	Lead	93	MG/KG_DRY		150	nc	NA	N
Lyman Mill soil	SS_G-33	0	1	Lead	25	MG/KG_DRY		150	nc	NA	N
Oxbow Area soil	SS_H-01	0	1	Lead	26	MG/KG_DRY		150	nc	NA	N
Oxbow Area soil	SS_H-03	0	1	Lead	21.7	MG/KG_DRY		150	nc	NA	N
Oxbow Area soil	SS_H-06	0	1	Lead	23.7	MG/KG_DRY		150	nc	NA	N
Oxbow Area soil	SS_H-07	0	1	Lead	22.4	MG/KG_DRY		150	nc	NA	N
Oxbow Area soil	SS_H-10	0	1	Lead	41.4	MG/KG_DRY		150	nc	NA	N
Oxbow Area soil	SS_H-13	0	1	Lead	36.4	MG/KG_DRY		150	nc	NA	N
Oxbow Area soil	SS_H-16	0	1	Lead	34.6	MG/KG_DRY		150	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Lead	38.7	MG/KG_DRY		150	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Lead	40.8	MG/KG_DRY		150	nc	NA	N
Oxbow Area soil	SS_H-19	0	1	Lead	45	MG/KG_DRY		150	nc	NA	N
Oxbow Area soil	SS_H-22	0	1	Lead	32.6	MG/KG_DRY		150	nc	NA	N
Oxbow Area soil	SS_G-01	1	2	Manganese	477	MG/KG_DRY		390	nc	NA	Y
Oxbow Area soil	SS_G-01	0	1	Manganese	488	MG/KG_DRY		390	nc	NA	Y
Oxbow Area soil	SS_G-01	0	1	Manganese	448	MG/KG_DRY		390	nc	NA	Y
Oxbow Area soil	SS_G-01-01	0	1	Manganese	1290	MG/KG_DRY		390	nc	NA	Y
Oxbow Area soil	SS_G-01-02	0	1	Manganese	752	MG/KG_DRY		390	nc	NA	Y
Oxbow Area soil	SS_G-01-03	0	1	Manganese	932	MG/KG_DRY		390	nc	NA	Y
Oxbow Area soil	SS_G-01-04	0	1	Manganese	446	MG/KG_DRY		390	nc	NA	Y
Oxbow Area soil	SS_G-02	0	1	Manganese	489	MG/KG_DRY	J	390	nc	NA	Y
Oxbow Area soil	SS_G-03	0	1	Manganese	2440	MG/KG_DRY		390	nc	NA	Y
Oxbow Area soil	SS_G-04	0	1	Manganese	1790	MG/KG_DRY	J	390	nc	NA	Y
Oxbow Area soil	SS_G-05	1	2	Manganese	966	MG/KG_DRY	J	390	nc	NA	Y
Oxbow Area soil	SS_G-05	0	1	Manganese	1140	MG/KG_DRY	J	390	nc	NA	Y
Oxbow Area soil	SS_G-06	0	1	Manganese	1220	MG/KG_DRY		390	nc	NA	Y
Oxbow Area soil	SS_G-07	0	1	Manganese	1140	MG/KG_DRY		390	nc	NA	Y
Oxbow Area soil	SS_G-08	0	1	Manganese	250	MG/KG_DRY		390	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-09	0	1	Manganese	249	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_G-10	0	1	Manganese	187	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_G-12	0	1	Manganese	350	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Manganese	226	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Manganese	209	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_G-14	0	1	Manganese	187	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	Manganese	156	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	Manganese	317	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_G-23	0	1	Manganese	831	MG/KG_DRY	J	390	nc	NA	Y
Oxbow Area soil	SS_G-26	1	2	Manganese	198	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_G-26	0	1	Manganese	178	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_G-29	0	1	Manganese	201	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_G-29-01	0	1	Manganese	578	MG/KG_DRY		390	nc	NA	Y
Oxbow Area soil	SS_G-29-02	0	1	Manganese	198	MG/KG_DRY		390	nc	NA	N
Lyman Mill soil	SS_G-30	0	1	Manganese	150	MG/KG_DRY	J	390	nc	NA	N
Lyman Mill soil	SS_G-31	0	1	Manganese	516	MG/KG_DRY	J	390	nc	NA	Y
Lyman Mill soil	SS_G-32	0	1	Manganese	882	MG/KG_DRY	J	390	nc	NA	Y
Lyman Mill soil	SS_G-33	0	1	Manganese	65.7	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_H-01	0	1	Manganese	137	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_H-03	0	1	Manganese	181	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_H-06	0	1	Manganese	721	MG/KG_DRY	J	390	nc	NA	Y
Oxbow Area soil	SS_H-07	0	1	Manganese	82.9	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_H-10	0	1	Manganese	452	MG/KG_DRY		390	nc	NA	Y
Oxbow Area soil	SS_H-13	0	1	Manganese	150	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_H-16	0	1	Manganese	106	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Manganese	40.5	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Manganese	39.7	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_H-19	0	1	Manganese	177	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_H-22	0	1	Manganese	276	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_G-01	1	2	Molybdenum	1.6	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Molybdenum	6.63	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Molybdenum	6.65	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Molybdenum	19.1	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Molybdenum	7.7	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Molybdenum	10.9	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	Molybdenum	0.6	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Molybdenum	1.4	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Molybdenum	2.2	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Molybdenum	2.23	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Molybdenum	3.68	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Molybdenum	4.74	MG/KG_DRY		nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-06	0	1	Molybdenum	1.67	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Molybdenum	3.03	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Molybdenum	3.26	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Molybdenum	6.62	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Molybdenum	0.4	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Molybdenum	1.5	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Molybdenum	1.8	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Molybdenum	1.2	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Molybdenum	2.42	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	Molybdenum	1.39	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Molybdenum	4.51	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Molybdenum	4.32	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Molybdenum	0.33	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Molybdenum	1.76	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Molybdenum	2.4	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Molybdenum	14.8	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Molybdenum	0.8	MG/KG_DRY		nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Molybdenum	1.06	MG/KG_DRY		nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Molybdenum	1.73	MG/KG_DRY		nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Molybdenum	1.12	MG/KG_DRY		nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Molybdenum	0.53	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Molybdenum	1.44	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Molybdenum	0.74	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Molybdenum	0.99	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Molybdenum	0.76	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Molybdenum	0.63	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Molybdenum	0.82	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Molybdenum	1.07	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Molybdenum	1.2	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Molybdenum	1.26	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Molybdenum	1.05	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Molybdenum	0.89	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Nickel	9.7	MG/KG_DRY		1000	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Nickel	6.61	MG/KG_DRY	J	1000	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Nickel	7.96	MG/KG_DRY	J	1000	nc	NA	N
Oxbow Area soil	SS_G-01-01	0	1	Nickel	12.7	MG/KG_DRY		1000	nc	NA	N
Oxbow Area soil	SS_G-01-02	0	1	Nickel	8.6	MG/KG_DRY		1000	nc	NA	N
Oxbow Area soil	SS_G-01-03	0	1	Nickel	19.3	MG/KG_DRY		1000	nc	NA	N
Oxbow Area soil	SS_G-01-04	0	1	Nickel	5.3	MG/KG_DRY		1000	nc	NA	N
Oxbow Area soil	SS_G-02	0	1	Nickel	12.5	MG/KG_DRY	J	1000	nc	NA	N
Oxbow Area soil	SS_G-03	0	1	Nickel	9.09	MG/KG_DRY	J	1000	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-04	0	1	Nickel	148	MG/KG_DRY	J	1000	nc	NA	N
Oxbow Area soil	SS_G-05	1	2	Nickel	5.79	MG/KG_DRY	J	1000	nc	NA	N
Oxbow Area soil	SS_G-05	0	1	Nickel	5.95	MG/KG_DRY	J	1000	nc	NA	N
Oxbow Area soil	SS_G-06	0	1	Nickel	3.21	MG/KG_DRY	J	1000	nc	NA	N
Oxbow Area soil	SS_G-07	0	1	Nickel	6.39	MG/KG_DRY	J	1000	nc	NA	N
Oxbow Area soil	SS_G-08	0	1	Nickel	4.99	MG/KG_DRY	J	1000	nc	NA	N
Oxbow Area soil	SS_G-09	0	1	Nickel	8.11	MG/KG_DRY	J	1000	nc	NA	N
Oxbow Area soil	SS_G-10	0	1	Nickel	4.8	MG/KG_DRY		1000	nc	NA	N
Oxbow Area soil	SS_G-12	0	1	Nickel	16.9	MG/KG_DRY		1000	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Nickel	12.9	MG/KG_DRY		1000	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Nickel	13.5	MG/KG_DRY		1000	nc	NA	N
Oxbow Area soil	SS_G-14	0	1	Nickel	6.25	MG/KG_DRY	J	1000	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	Nickel	2.57	MG/KG_DRY	J	1000	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	Nickel	8.58	MG/KG_DRY	J	1000	nc	NA	N
Oxbow Area soil	SS_G-23	0	1	Nickel	17.5	MG/KG_DRY	J	1000	nc	NA	N
Oxbow Area soil	SS_G-26	1	2	Nickel	3.76	MG/KG_DRY	J	1000	nc	NA	N
Oxbow Area soil	SS_G-26	0	1	Nickel	5.95	MG/KG_DRY	J	1000	nc	NA	N
Oxbow Area soil	SS_G-29	0	1	Nickel	9.48	MG/KG_DRY	J	1000	nc	NA	N
Oxbow Area soil	SS_G-29-01	0	1	Nickel	23.4	MG/KG_DRY		1000	nc	NA	N
Oxbow Area soil	SS_G-29-02	0	1	Nickel	5.4	MG/KG_DRY		1000	nc	NA	N
Lyman Mill soil	SS_G-30	0	1	Nickel	28.6	MG/KG_DRY	J	1000	nc	NA	N
Lyman Mill soil	SS_G-31	0	1	Nickel	28.3	MG/KG_DRY	J	1000	nc	NA	N
Lyman Mill soil	SS_G-32	0	1	Nickel	20.7	MG/KG_DRY	J	1000	nc	NA	N
Lyman Mill soil	SS_G-33	0	1	Nickel	5.16	MG/KG_DRY	J	1000	nc	NA	N
Oxbow Area soil	SS_H-01	0	1	Nickel	4.05	MG/KG_DRY	J	1000	nc	NA	N
Oxbow Area soil	SS_H-03	0	1	Nickel	3.08	MG/KG_DRY	J	1000	nc	NA	N
Oxbow Area soil	SS_H-06	0	1	Nickel	3.01	MG/KG_DRY	J	1000	nc	NA	N
Oxbow Area soil	SS_H-07	0	1	Nickel	3.34	MG/KG_DRY	J	1000	nc	NA	N
Oxbow Area soil	SS_H-10	0	1	Nickel	3.04	MG/KG_DRY	J	1000	nc	NA	N
Oxbow Area soil	SS_H-13	0	1	Nickel	3.69	MG/KG_DRY	J	1000	nc	NA	N
Oxbow Area soil	SS_H-16	0	1	Nickel	2.73	MG/KG_DRY	J	1000	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Nickel	2.05	MG/KG_DRY	J	1000	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Nickel	2	MG/KG_DRY	J	1000	nc	NA	N
Oxbow Area soil	SS_H-19	0	1	Nickel	4.41	MG/KG_DRY	J	1000	nc	NA	N
Oxbow Area soil	SS_H-22	0	1	Nickel	3.13	MG/KG_DRY	J	1000	nc	NA	N
Oxbow Area soil	SS_G-01	1	2	Selenium	0.3	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Selenium	0.4	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Selenium	0.4	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_G-01-01	0	1	Selenium	2.2	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_G-01-02	0	1	Selenium	1.1	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_G-01-03	0	1	Selenium	1.2	MG/KG_DRY		390	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-01-04	0	1	Selenium	0.7	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_G-02	0	1	Selenium	0.8	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_G-03	0	1	Selenium	1.4	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_G-04	0	1	Selenium	1.2	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_G-05	1	2	Selenium	0.6	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_G-05	0	1	Selenium	1.2	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_G-06	0	1	Selenium	0.7	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_G-07	0	1	Selenium	0.7	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_G-08	0	1	Selenium	0.7	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_G-09	0	1	Selenium	0.8	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_G-10	0	1	Selenium	0.5	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_G-12	0	1	Selenium	0.9	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Selenium	0.9	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Selenium	0.8	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_G-14	0	1	Selenium	1.1	MG/KG_DRY		390	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	Selenium	0.5	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	Selenium	0.7	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_G-23	0	1	Selenium	0.5	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_G-26	1	2	Selenium	0.1	MG/KG_DRY	U	390	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Selenium	0.1	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_G-29	0	1	Selenium	0.4	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_G-29-01	0	1	Selenium	1.5	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_G-29-02	0	1	Selenium	0.3	MG/KG_DRY	U	390	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Selenium	0.4	MG/KG_DRY	J	390	nc	NA	N
Lyman Mill soil	SS_G-31	0	1	Selenium	4.5	MG/KG_DRY		390	nc	NA	N
Lyman Mill soil	SS_G-32	0	1	Selenium	0.6	MG/KG_DRY	J	390	nc	NA	N
Lyman Mill soil	SS_G-33	0	1	Selenium	0.1	MG/KG_DRY	U	390	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Selenium	0.2	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_H-03	0	1	Selenium	0.2	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_H-06	0	1	Selenium	0.1	MG/KG_DRY	U	390	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Selenium	0.2	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_H-10	0	1	Selenium	0.3	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_H-13	0	1	Selenium	0.3	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_H-16	0	1	Selenium	0.3	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Selenium	0.5	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Selenium	0.6	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_H-19	0	1	Selenium	0.7	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_H-22	0	1	Selenium	0.2	MG/KG_DRY	J	390	nc	NA	N
Oxbow Area soil	SS_G-01	1	2	Silver	0.2	MG/KG_DRY	U	200	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Silver	0.2	MG/KG_DRY	UJ	200	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Silver	0.2	MG/KG_DRY	UJ	200	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-01-01	0	1	Silver	0.4	MG/KG_DRY	J	200	nc	NA	N
Oxbow Area soil	SS_G-01-02	0	1	Silver	0.3	MG/KG_DRY	U	200	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Silver	0.3	MG/KG_DRY	J	200	nc	NA	N
Oxbow Area soil	SS_G-01-04	0	1	Silver	0.2	MG/KG_DRY	U	200	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Silver	0.2	MG/KG_DRY	U	200	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Silver	0.2	MG/KG_DRY	UJ	200	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Silver	0.3	MG/KG_DRY		200	nc	NA	N
Oxbow Area soil	SS_G-05	1	2	Silver	0.2	MG/KG_DRY	U	200	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Silver	0.2	MG/KG_DRY	U	200	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Silver	0.2	MG/KG_DRY	UJ	200	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Silver	0.3	MG/KG_DRY	J	200	nc	NA	N
Oxbow Area soil	SS_G-08	0	1	Silver	0.2	MG/KG_DRY	J	200	nc	NA	N
Oxbow Area soil	SS_G-09	0	1	Silver	0.3	MG/KG_DRY	J	200	nc	NA	N
Oxbow Area soil	SS_G-10	0	1	Silver	0.2	MG/KG_DRY	U	200	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Silver	0.3	MG/KG_DRY	U	200	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Silver	0.2	MG/KG_DRY	U	200	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Silver	0.2	MG/KG_DRY	U	200	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Silver	0.3	MG/KG_DRY	J	200	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	Silver	0.2	MG/KG_DRY	J	200	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	Silver	0.2	MG/KG_DRY	U	200	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Silver	0.2	MG/KG_DRY	U	200	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Silver	0.2	MG/KG_DRY	U	200	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Silver	0.2	MG/KG_DRY	U	200	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Silver	0.3	MG/KG_DRY	J	200	nc	NA	N
Oxbow Area soil	SS_G-29-01	0	1	Silver	0.5	MG/KG_DRY	U	200	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Silver	0.3	MG/KG_DRY	U	200	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Silver	0.4	MG/KG_DRY	J	200	nc	NA	N
Lyman Mill soil	SS_G-31	0	1	Silver	2.2	MG/KG_DRY		200	nc	NA	N
Lyman Mill soil	SS_G-32	0	1	Silver	0.2	MG/KG_DRY	U	200	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Silver	0.2	MG/KG_DRY	U	200	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Silver	0.2	MG/KG_DRY	UJ	200	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Silver	0.2	MG/KG_DRY	U	200	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Silver	0.2	MG/KG_DRY	UJ	200	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Silver	0.2	MG/KG_DRY	U	200	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Silver	0.2	MG/KG_DRY	UJ	200	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Silver	0.2	MG/KG_DRY	UJ	200	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Silver	0.2	MG/KG_DRY	UJ	200	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Silver	0.2	MG/KG_DRY	U	200	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Silver	0.2	MG/KG_DRY	U	200	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Silver	0.2	MG/KG_DRY	U	200	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Silver	0.2	MG/KG_DRY	UJ	200	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-01	1	2	Thallium	0.4	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Thallium	0.4	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Thallium	0.4	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Thallium	0.7	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Thallium	0.5	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Thallium	0.6	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	Thallium	0.5	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Thallium	0.4	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Thallium	0.4	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Thallium	0.7	MG/KG_DRY		5.5	nc	NA	N
Oxbow Area soil	SS_G-05	1	2	Thallium	0.4	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Thallium	0.4	MG/KG_DRY	J	5.5	nc	NA	N
Oxbow Area soil	SS_G-06	0	1	Thallium	0.4	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Thallium	0.5	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Thallium	0.4	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Thallium	0.4	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Thallium	0.5	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Thallium	0.5	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Thallium	0.5	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Thallium	0.5	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Thallium	0.4	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	Thallium	0.4	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Thallium	0.5	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Thallium	0.4	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Thallium	0.5	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Thallium	0.4	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Thallium	0.4	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Thallium	0.9	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Thallium	0.5	MG/KG_DRY	U	5.5	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Thallium	0.4	MG/KG_DRY	U	5.5	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Thallium	0.5	MG/KG_DRY	U	5.5	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Thallium	0.8	MG/KG_DRY	J	5.5	nc	NA	N
Lyman Mill soil	SS_G-33	0	1	Thallium	0.4	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Thallium	0.4	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Thallium	0.4	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Thallium	0.4	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Thallium	0.5	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Thallium	0.5	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Thallium	0.4	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Thallium	0.4	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Thallium	0.5	MG/KG_DRY	U	5.5	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_H-18	0	1	Thallium	0.4	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Thallium	0.5	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Thallium	0.4	MG/KG_DRY	U	5.5	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Vanadium	12	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Vanadium	22	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Vanadium	24	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_G-01-01	0	1	Vanadium	45.2	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_G-01-02	0	1	Vanadium	26.8	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_G-01-03	0	1	Vanadium	35	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_G-01-04	0	1	Vanadium	17.6	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_G-02	0	1	Vanadium	27.7	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_G-03	0	1	Vanadium	31	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_G-04	0	1	Vanadium	27.3	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_G-05	1	2	Vanadium	20.2	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_G-05	0	1	Vanadium	25.4	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_G-06	0	1	Vanadium	18	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_G-07	0	1	Vanadium	23	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_G-08	0	1	Vanadium	20	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_G-09	0	1	Vanadium	31	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_G-10	0	1	Vanadium	11	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_G-12	0	1	Vanadium	28.5	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Vanadium	45.1	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Vanadium	43	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_G-14	0	1	Vanadium	23.8	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	Vanadium	22.3	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	Vanadium	30.3	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_G-23	0	1	Vanadium	30.8	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_G-26	1	2	Vanadium	9	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_G-26	0	1	Vanadium	16.2	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_G-29	0	1	Vanadium	19	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_G-29-01	0	1	Vanadium	52.3	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_G-29-02	0	1	Vanadium	4.6	MG/KG_DRY		550	nc	NA	N
Lyman Mill soil	SS_G-30	0	1	Vanadium	13.5	MG/KG_DRY		550	nc	NA	N
Lyman Mill soil	SS_G-31	0	1	Vanadium	12.9	MG/KG_DRY		550	nc	NA	N
Lyman Mill soil	SS_G-32	0	1	Vanadium	22.8	MG/KG_DRY		550	nc	NA	N
Lyman Mill soil	SS_G-33	0	1	Vanadium	7.1	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_H-01	0	1	Vanadium	19	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_H-03	0	1	Vanadium	18	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_H-06	0	1	Vanadium	12	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_H-07	0	1	Vanadium	13	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_H-10	0	1	Vanadium	20	MG/KG_DRY		550	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_H-13	0	1	Vanadium	18	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_H-16	0	1	Vanadium	19	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Vanadium	18	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Vanadium	18	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_H-19	0	1	Vanadium	25.7	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_H-22	0	1	Vanadium	20	MG/KG_DRY		550	nc	NA	N
Oxbow Area soil	SS_G-01	1	2	Zinc	24.2	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Zinc	38.9	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Zinc	40	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_G-01-01	0	1	Zinc	69.5	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_G-01-02	0	1	Zinc	51	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_G-01-03	0	1	Zinc	166	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_G-01-04	0	1	Zinc	41.4	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_G-02	0	1	Zinc	85.5	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_G-03	0	1	Zinc	59	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_G-04	0	1	Zinc	156	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_G-05	1	2	Zinc	42.1	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_G-05	0	1	Zinc	47	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_G-06	0	1	Zinc	27.1	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_G-07	0	1	Zinc	54	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_G-08	0	1	Zinc	54	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_G-09	0	1	Zinc	41.5	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_G-10	0	1	Zinc	38	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_G-12	0	1	Zinc	296	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Zinc	354	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Zinc	253	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_G-14	0	1	Zinc	22.5	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	Zinc	16	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	Zinc	64.5	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_G-23	0	1	Zinc	118	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_G-26	1	2	Zinc	34.6	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_G-26	0	1	Zinc	53.8	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_G-29	0	1	Zinc	90.3	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_G-29-01	0	1	Zinc	199	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_G-29-02	0	1	Zinc	35.5	MG/KG_DRY		6000	nc	NA	N
Lyman Mill soil	SS_G-30	0	1	Zinc	188	MG/KG_DRY		6000	nc	NA	N
Lyman Mill soil	SS_G-31	0	1	Zinc	190	MG/KG_DRY		6000	nc	NA	N
Lyman Mill soil	SS_G-32	0	1	Zinc	127	MG/KG_DRY		6000	nc	NA	N
Lyman Mill soil	SS_G-33	0	1	Zinc	67.2	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_H-01	0	1	Zinc	24.3	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_H-03	0	1	Zinc	32.3	MG/KG_DRY		6000	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_H-06	0	1	Zinc	17.1	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_H-07	0	1	Zinc	19.2	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_H-10	0	1	Zinc	29.7	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_H-13	0	1	Zinc	28.2	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_H-16	0	1	Zinc	20.1	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Zinc	11.5	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Zinc	11.9	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_H-19	0	1	Zinc	28.4	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_H-22	0	1	Zinc	22.8	MG/KG_DRY		6000	nc	NA	N
Oxbow Area soil	SS_G-01	1	2	1,2,4-Trichlorobenzene	0.0026	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	1,2,4-Trichlorobenzene	0.013	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	1,2,4-Trichlorobenzene	0.013	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	1,2,4-Trichlorobenzene	0.026	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	1,2,4-Trichlorobenzene	0.013	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	1,2,4-Trichlorobenzene	0.013	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	1,2,4-Trichlorobenzene	0.013	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	1,2,4-Trichlorobenzene	0.0026	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	1,2,4-Trichlorobenzene	0.0026	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	1,2,4-Trichlorobenzene	0.035	MG/KG_DRY	UJ	96	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	1,2,4-Trichlorobenzene	0.0026	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	1,2,4-Trichlorobenzene	0.0026	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	1,2,4-Trichlorobenzene	0.0026	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	1,2,4-Trichlorobenzene	0.014	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	1,2,4-Trichlorobenzene	0.024	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	1,2,4-Trichlorobenzene	0.052	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	1,2,4-Trichlorobenzene	0.026	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	1,2,4-Trichlorobenzene	0.026	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	1,2,4-Trichlorobenzene	0.13	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	1,2,4-Trichlorobenzene	0.26	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	1,2,4-Trichlorobenzene	0.0029	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	1,2,4-Trichlorobenzene	0.0026	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	1,2,4-Trichlorobenzene	0.065	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	1,2,4-Trichlorobenzene	0.095	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	1,2,4-Trichlorobenzene	0.0026	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	1,2,4-Trichlorobenzene	0.013	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	1,2,4-Trichlorobenzene	0.065	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	1,2,4-Trichlorobenzene	0.074	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	1,2,4-Trichlorobenzene	0.026	MG/KG_DRY	U	96	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	1,2,4-Trichlorobenzene	0.026	MG/KG_DRY	U	96	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	1,2,4-Trichlorobenzene	0.026	MG/KG_DRY	U	96	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	1,2,4-Trichlorobenzene	0.026	MG/KG_DRY	U	96	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	SS_G-33	0	1	1,2,4-Trichlorobenzene	0.0026	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	1,2,4-Trichlorobenzene	0.0026	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	1,2,4-Trichlorobenzene	0.0026	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	1,2,4-Trichlorobenzene	0.013	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	1,2,4-Trichlorobenzene	0.0026	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	1,2,4-Trichlorobenzene	0.0026	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	1,2,4-Trichlorobenzene	0.026	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	1,2,4-Trichlorobenzene	0.0026	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	1,2,4-Trichlorobenzene	0.0026	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	1,2,4-Trichlorobenzene	0.0026	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	1,2,4-Trichlorobenzene	0.0026	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	1,2,4-Trichlorobenzene	0.013	MG/KG_DRY	U	96	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	1,2-Dichlorobenzene	0.0029	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	1,2-Dichlorobenzene	0.015	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	1,2-Dichlorobenzene	0.015	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	1,2-Dichlorobenzene	0.029	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	1,2-Dichlorobenzene	0.015	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	1,2-Dichlorobenzene	0.015	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	1,2-Dichlorobenzene	0.015	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	1,2-Dichlorobenzene	0.0029	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	1,2-Dichlorobenzene	0.0029	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	1,2-Dichlorobenzene	0.039	MG/KG_DRY	UJ	510	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	1,2-Dichlorobenzene	0.0029	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	1,2-Dichlorobenzene	0.0029	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	1,2-Dichlorobenzene	0.0029	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	1,2-Dichlorobenzene	0.015	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	1,2-Dichlorobenzene	0.026	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	1,2-Dichlorobenzene	0.058	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	1,2-Dichlorobenzene	0.029	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	1,2-Dichlorobenzene	0.029	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	1,2-Dichlorobenzene	0.15	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	1,2-Dichlorobenzene	0.29	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	1,2-Dichlorobenzene	0.0032	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	1,2-Dichlorobenzene	0.0029	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	1,2-Dichlorobenzene	0.073	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	1,2-Dichlorobenzene	0.11	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	1,2-Dichlorobenzene	0.0029	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	1,2-Dichlorobenzene	0.015	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	1,2-Dichlorobenzene	0.073	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	1,2-Dichlorobenzene	0.082	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	1,2-Dichlorobenzene	0.029	MG/KG_DRY	U	510	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	SS_G-30	0	1	1,2-Dichlorobenzene	0.029	MG/KG_DRY	U	510	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	1,2-Dichlorobenzene	0.029	MG/KG_DRY	U	510	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	1,2-Dichlorobenzene	0.029	MG/KG_DRY	U	510	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	1,2-Dichlorobenzene	0.0029	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	1,2-Dichlorobenzene	0.0029	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	1,2-Dichlorobenzene	0.0029	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	1,2-Dichlorobenzene	0.015	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	1,2-Dichlorobenzene	0.0029	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	1,2-Dichlorobenzene	0.0029	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	1,2-Dichlorobenzene	0.029	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	1,2-Dichlorobenzene	0.0029	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	1,2-Dichlorobenzene	0.0029	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	1,2-Dichlorobenzene	0.0029	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	1,2-Dichlorobenzene	0.0029	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	1,2-Dichlorobenzene	0.015	MG/KG_DRY	U	510	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	1,3-Dichlorobenzene	0.003	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	1,3-Dichlorobenzene	0.015	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	1,3-Dichlorobenzene	0.015	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	1,3-Dichlorobenzene	0.03	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	1,3-Dichlorobenzene	0.015	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	1,3-Dichlorobenzene	0.015	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	1,3-Dichlorobenzene	0.015	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	1,3-Dichlorobenzene	0.003	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	1,3-Dichlorobenzene	0.003	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	1,3-Dichlorobenzene	0.04	MG/KG_DRY	UJ	430	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	1,3-Dichlorobenzene	0.003	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	1,3-Dichlorobenzene	0.003	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	1,3-Dichlorobenzene	0.003	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	1,3-Dichlorobenzene	0.016	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	1,3-Dichlorobenzene	0.027	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	1,3-Dichlorobenzene	0.06	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	1,3-Dichlorobenzene	0.03	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	1,3-Dichlorobenzene	0.03	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	1,3-Dichlorobenzene	0.15	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	1,3-Dichlorobenzene	0.3	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	1,3-Dichlorobenzene	0.0034	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	1,3-Dichlorobenzene	0.003	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	1,3-Dichlorobenzene	0.075	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	1,3-Dichlorobenzene	0.11	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	1,3-Dichlorobenzene	0.003	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	1,3-Dichlorobenzene	0.015	MG/KG_DRY	U	430	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-29	0	1	1,3-Dichlorobenzene	0.075	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	1,3-Dichlorobenzene	0.085	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	1,3-Dichlorobenzene	0.03	MG/KG_DRY	U	430	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	1,3-Dichlorobenzene	0.03	MG/KG_DRY	U	430	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	1,3-Dichlorobenzene	0.03	MG/KG_DRY	U	430	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	1,3-Dichlorobenzene	0.03	MG/KG_DRY	U	430	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	1,3-Dichlorobenzene	0.003	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	1,3-Dichlorobenzene	0.003	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	1,3-Dichlorobenzene	0.003	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	1,3-Dichlorobenzene	0.015	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	1,3-Dichlorobenzene	0.003	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	1,3-Dichlorobenzene	0.003	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	1,3-Dichlorobenzene	0.03	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	1,3-Dichlorobenzene	0.003	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	1,3-Dichlorobenzene	0.003	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	1,3-Dichlorobenzene	0.003	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	1,3-Dichlorobenzene	0.003	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	1,3-Dichlorobenzene	0.015	MG/KG_DRY	U	430	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	1,4-Dichlorobenzene	0.0029	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	1,4-Dichlorobenzene	0.015	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	1,4-Dichlorobenzene	0.015	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	1,4-Dichlorobenzene	0.029	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	1,4-Dichlorobenzene	0.015	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	1,4-Dichlorobenzene	0.015	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	1,4-Dichlorobenzene	0.015	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	1,4-Dichlorobenzene	0.0029	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	1,4-Dichlorobenzene	0.0029	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	1,4-Dichlorobenzene	0.039	MG/KG_DRY	UJ	27	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	1,4-Dichlorobenzene	0.0029	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	1,4-Dichlorobenzene	0.0029	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	1,4-Dichlorobenzene	0.0029	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	1,4-Dichlorobenzene	0.015	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	1,4-Dichlorobenzene	0.026	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	1,4-Dichlorobenzene	0.058	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	1,4-Dichlorobenzene	0.029	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	1,4-Dichlorobenzene	0.029	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	1,4-Dichlorobenzene	0.15	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	1,4-Dichlorobenzene	0.29	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	1,4-Dichlorobenzene	0.0032	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	1,4-Dichlorobenzene	0.0029	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	1,4-Dichlorobenzene	0.073	MG/KG_DRY	U	27	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-23	0	1	1,4-Dichlorobenzene	0.11	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	1,4-Dichlorobenzene	0.0029	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	1,4-Dichlorobenzene	0.015	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	1,4-Dichlorobenzene	0.073	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	1,4-Dichlorobenzene	0.082	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	1,4-Dichlorobenzene	0.029	MG/KG_DRY	U	27	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	1,4-Dichlorobenzene	0.029	MG/KG_DRY	U	27	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	1,4-Dichlorobenzene	0.029	MG/KG_DRY	U	27	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	1,4-Dichlorobenzene	0.029	MG/KG_DRY	U	27	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	1,4-Dichlorobenzene	0.0029	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	1,4-Dichlorobenzene	0.0029	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	1,4-Dichlorobenzene	0.0029	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	1,4-Dichlorobenzene	0.015	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	1,4-Dichlorobenzene	0.0029	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	1,4-Dichlorobenzene	0.0029	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	1,4-Dichlorobenzene	0.029	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	1,4-Dichlorobenzene	0.0029	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	1,4-Dichlorobenzene	0.0029	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	1,4-Dichlorobenzene	0.0029	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	1,4-Dichlorobenzene	0.0029	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	1,4-Dichlorobenzene	0.015	MG/KG_DRY	U	27	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	2,4,5-Trichlorophenol	0.0015	MG/KG_DRY	U	330	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	2,4,5-Trichlorophenol	0.025	MG/KG_DRY	J	330	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	2,4,5-Trichlorophenol	0.023	MG/KG_DRY	J	330	nc	NA	N
Oxbow Area soil	SS_G-01-01	0	1	2,4,5-Trichlorophenol	0.015	MG/KG_DRY	U	330	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	2,4,5-Trichlorophenol	0.0075	MG/KG_DRY	U	330	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	2,4,5-Trichlorophenol	0.017	MG/KG_DRY	J	330	nc	NA	N
Oxbow Area soil	SS_G-01-04	0	1	2,4,5-Trichlorophenol	0.0075	MG/KG_DRY	U	330	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	2,4,5-Trichlorophenol	0.0015	MG/KG_DRY	U	330	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	2,4,5-Trichlorophenol	0.0015	MG/KG_DRY	U	330	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	2,4,5-Trichlorophenol	0.02	MG/KG_DRY	UJ	330	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	2,4,5-Trichlorophenol	0.0015	MG/KG_DRY	U	330	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	2,4,5-Trichlorophenol	0.0015	MG/KG_DRY	U	330	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	2,4,5-Trichlorophenol	0.0015	MG/KG_DRY	U	330	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	2,4,5-Trichlorophenol	0.0077	MG/KG_DRY	U	330	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	2,4,5-Trichlorophenol	0.014	MG/KG_DRY	U	330	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	2,4,5-Trichlorophenol	0.03	MG/KG_DRY	U	330	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	2,4,5-Trichlorophenol	0.015	MG/KG_DRY	U	330	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	2,4,5-Trichlorophenol	0.015	MG/KG_DRY	U	330	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	2,4,5-Trichlorophenol	0.075	MG/KG_DRY	U	330	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	2,4,5-Trichlorophenol	0.15	MG/KG_DRY	U	330	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-14	0	1	2,4,5-Trichlorophenol	0.0033	MG/KG_DRY	J	330	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	2,4,5-Trichlorophenol	0.0016	MG/KG_DRY	J	330	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	2,4,5-Trichlorophenol	0.038	MG/KG_DRY	U	330	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	2,4,5-Trichlorophenol	0.055	MG/KG_DRY	U	330	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	2,4,5-Trichlorophenol	0.0015	MG/KG_DRY	U	330	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	2,4,5-Trichlorophenol	0.0075	MG/KG_DRY	U	330	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	2,4,5-Trichlorophenol	0.038	MG/KG_DRY	U	330	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	2,4,5-Trichlorophenol	0.043	MG/KG_DRY	U	330	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	2,4,5-Trichlorophenol	0.015	MG/KG_DRY	U	330	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	2,4,5-Trichlorophenol	0.015	MG/KG_DRY	U	330	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	2,4,5-Trichlorophenol	0.015	MG/KG_DRY	U	330	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	2,4,5-Trichlorophenol	0.015	MG/KG_DRY	U	330	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	2,4,5-Trichlorophenol	0.0015	MG/KG_DRY	U	330	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	2,4,5-Trichlorophenol	0.0015	MG/KG_DRY	U	330	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	2,4,5-Trichlorophenol	0.0015	MG/KG_DRY	U	330	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	2,4,5-Trichlorophenol	0.0075	MG/KG_DRY	U	330	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	2,4,5-Trichlorophenol	0.0015	MG/KG_DRY	U	330	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	2,4,5-Trichlorophenol	0.0015	MG/KG_DRY	U	330	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	2,4,5-Trichlorophenol	0.015	MG/KG_DRY	U	330	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	2,4,5-Trichlorophenol	0.0015	MG/KG_DRY	U	330	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	2,4,5-Trichlorophenol	0.0015	MG/KG_DRY	U	330	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	2,4,5-Trichlorophenol	0.0015	MG/KG_DRY	U	330	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	2,4,5-Trichlorophenol	0.0015	MG/KG_DRY	U	330	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	2,4,5-Trichlorophenol	0.0075	MG/KG_DRY	U	330	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	2,4,6-Trichlorophenol	0.0014	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	2,4,6-Trichlorophenol	0.007	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	2,4,6-Trichlorophenol	0.007	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	2,4,6-Trichlorophenol	0.014	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	2,4,6-Trichlorophenol	0.007	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	2,4,6-Trichlorophenol	0.007	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	2,4,6-Trichlorophenol	0.007	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	2,4,6-Trichlorophenol	0.0052	MG/KG_DRY	J	58	nc	NA	N
Oxbow Area soil	SS_G-03	0	1	2,4,6-Trichlorophenol	0.0014	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	2,4,6-Trichlorophenol	0.019	MG/KG_DRY	UJ	58	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	2,4,6-Trichlorophenol	0.0014	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	2,4,6-Trichlorophenol	0.0014	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	2,4,6-Trichlorophenol	0.0014	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	2,4,6-Trichlorophenol	0.0072	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	2,4,6-Trichlorophenol	0.013	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	2,4,6-Trichlorophenol	0.028	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	2,4,6-Trichlorophenol	0.014	MG/KG_DRY	U	58	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-12	0	1	2,4,6-Trichlorophenol	0.014	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	2,4,6-Trichlorophenol	0.07	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	2,4,6-Trichlorophenol	0.14	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	2,4,6-Trichlorophenol	0.0016	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	2,4,6-Trichlorophenol	0.0014	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	2,4,6-Trichlorophenol	0.035	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	2,4,6-Trichlorophenol	0.051	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	2,4,6-Trichlorophenol	0.0014	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	2,4,6-Trichlorophenol	0.007	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	2,4,6-Trichlorophenol	0.035	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	2,4,6-Trichlorophenol	0.04	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	2,4,6-Trichlorophenol	0.014	MG/KG_DRY	U	58	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	2,4,6-Trichlorophenol	0.014	MG/KG_DRY	U	58	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	2,4,6-Trichlorophenol	0.014	MG/KG_DRY	U	58	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	2,4,6-Trichlorophenol	0.014	MG/KG_DRY	U	58	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	2,4,6-Trichlorophenol	0.0014	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	2,4,6-Trichlorophenol	0.0014	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	2,4,6-Trichlorophenol	0.0014	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	2,4,6-Trichlorophenol	0.007	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	2,4,6-Trichlorophenol	0.0014	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	2,4,6-Trichlorophenol	0.0014	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	2,4,6-Trichlorophenol	0.014	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	2,4,6-Trichlorophenol	0.0014	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	2,4,6-Trichlorophenol	0.0014	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	2,4,6-Trichlorophenol	0.0014	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	2,4,6-Trichlorophenol	0.0014	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	2,4,6-Trichlorophenol	0.007	MG/KG_DRY	U	58	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	2,4-Dichlorophenol	0.001	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	2,4-Dichlorophenol	0.005	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	2,4-Dichlorophenol	0.005	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	2,4-Dichlorophenol	0.01	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	2,4-Dichlorophenol	0.005	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	2,4-Dichlorophenol	0.005	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	2,4-Dichlorophenol	0.005	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	2,4-Dichlorophenol	0.001	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	2,4-Dichlorophenol	0.001	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	2,4-Dichlorophenol	0.014	MG/KG_DRY	UJ	30	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	2,4-Dichlorophenol	0.001	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	2,4-Dichlorophenol	0.001	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	2,4-Dichlorophenol	0.001	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	2,4-Dichlorophenol	0.0051	MG/KG_DRY	U	30	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-08	0	1	2,4-Dichlorophenol	0.0089	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	2,4-Dichlorophenol	0.02	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	2,4-Dichlorophenol	0.01	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	2,4-Dichlorophenol	0.01	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	2,4-Dichlorophenol	0.05	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	2,4-Dichlorophenol	0.1	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	2,4-Dichlorophenol	0.0012	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	2,4-Dichlorophenol	0.001	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	2,4-Dichlorophenol	0.025	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	2,4-Dichlorophenol	0.037	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	2,4-Dichlorophenol	0.001	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	2,4-Dichlorophenol	0.005	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	2,4-Dichlorophenol	0.025	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	2,4-Dichlorophenol	0.029	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	2,4-Dichlorophenol	0.01	MG/KG_DRY	U	30	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	2,4-Dichlorophenol	0.01	MG/KG_DRY	U	30	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	2,4-Dichlorophenol	0.01	MG/KG_DRY	U	30	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	2,4-Dichlorophenol	0.01	MG/KG_DRY	U	30	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	2,4-Dichlorophenol	0.001	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	2,4-Dichlorophenol	0.001	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	2,4-Dichlorophenol	0.001	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	2,4-Dichlorophenol	0.005	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	2,4-Dichlorophenol	0.001	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	2,4-Dichlorophenol	0.001	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	2,4-Dichlorophenol	0.01	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	2,4-Dichlorophenol	0.001	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	2,4-Dichlorophenol	0.001	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	2,4-Dichlorophenol	0.001	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	2,4-Dichlorophenol	0.001	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	2,4-Dichlorophenol	0.005	MG/KG_DRY	U	30	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	2,4-Dimethylphenol	0.0055	MG/KG_DRY	U	1400	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	2,4-Dimethylphenol	0.028	MG/KG_DRY	U	1400	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	2,4-Dimethylphenol	0.028	MG/KG_DRY	U	1400	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	2,4-Dimethylphenol	0.055	MG/KG_DRY	U	1400	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	2,4-Dimethylphenol	0.028	MG/KG_DRY	U	1400	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	2,4-Dimethylphenol	0.028	MG/KG_DRY	U	1400	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	2,4-Dimethylphenol	0.028	MG/KG_DRY	U	1400	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	2,4-Dimethylphenol	0.0055	MG/KG_DRY	UJ	1400	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	2,4-Dimethylphenol	0.0055	MG/KG_DRY	U	1400	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	2,4-Dimethylphenol	0.073	MG/KG_DRY	UJ	1400	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	2,4-Dimethylphenol	0.0055	MG/KG_DRY	UJ	1400	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-05	0	1	2,4-Dimethylphenol	0.0055	MG/KG_DRY	UJ	1400	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	2,4-Dimethylphenol	0.0055	MG/KG_DRY	U	1400	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	2,4-Dimethylphenol	0.028	MG/KG_DRY	U	1400	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	2,4-Dimethylphenol	0.049	MG/KG_DRY	U	1400	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	2,4-Dimethylphenol	0.11	MG/KG_DRY	U	1400	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	2,4-Dimethylphenol	0.055	MG/KG_DRY	U	1400	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	2,4-Dimethylphenol	0.055	MG/KG_DRY	U	1400	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	2,4-Dimethylphenol	0.28	MG/KG_DRY	U	1400	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	2,4-Dimethylphenol	0.55	MG/KG_DRY	U	1400	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	2,4-Dimethylphenol	0.0061	MG/KG_DRY	UJ	1400	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	2,4-Dimethylphenol	0.0055	MG/KG_DRY	UJ	1400	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	2,4-Dimethylphenol	0.14	MG/KG_DRY	UJ	1400	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	2,4-Dimethylphenol	0.21	MG/KG_DRY	UJ	1400	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	2,4-Dimethylphenol	0.0055	MG/KG_DRY	UJ	1400	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	2,4-Dimethylphenol	0.028	MG/KG_DRY	UJ	1400	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	2,4-Dimethylphenol	0.14	MG/KG_DRY	UJ	1400	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	2,4-Dimethylphenol	0.16	MG/KG_DRY	U	1400	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	2,4-Dimethylphenol	0.055	MG/KG_DRY	U	1400	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	2,4-Dimethylphenol	0.055	MG/KG_DRY	UJ	1400	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	2,4-Dimethylphenol	0.055	MG/KG_DRY	UJ	1400	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	2,4-Dimethylphenol	0.055	MG/KG_DRY	UJ	1400	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	2,4-Dimethylphenol	0.0055	MG/KG_DRY	UJ	1400	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	2,4-Dimethylphenol	0.0055	MG/KG_DRY	U	1400	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	2,4-Dimethylphenol	0.0055	MG/KG_DRY	U	1400	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	2,4-Dimethylphenol	0.028	MG/KG_DRY	U	1400	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	2,4-Dimethylphenol	0.0055	MG/KG_DRY	U	1400	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	2,4-Dimethylphenol	0.0055	MG/KG_DRY	U	1400	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	2,4-Dimethylphenol	0.055	MG/KG_DRY	U	1400	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	2,4-Dimethylphenol	0.0055	MG/KG_DRY	U	1400	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	2,4-Dimethylphenol	0.0055	MG/KG_DRY	U	1400	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	2,4-Dimethylphenol	0.0055	MG/KG_DRY	U	1400	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	2,4-Dimethylphenol	0.0055	MG/KG_DRY	UJ	1400	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	2,4-Dimethylphenol	0.028	MG/KG_DRY	U	1400	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	2,4-Dinitrophenol	0.017	MG/KG_DRY	R	160	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	2,4-Dinitrophenol	0.085	MG/KG_DRY	U	160	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	2,4-Dinitrophenol	0.085	MG/KG_DRY	U	160	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	2,4-Dinitrophenol	0.17	MG/KG_DRY	R	160	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	2,4-Dinitrophenol	0.085	MG/KG_DRY	R	160	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	2,4-Dinitrophenol	0.085	MG/KG_DRY	R	160	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	2,4-Dinitrophenol	0.085	MG/KG_DRY	R	160	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	2,4-Dinitrophenol	0.017	MG/KG_DRY	UJ	160	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-03	0	1	2,4-Dinitrophenol	0.017	MG/KG_DRY	U	160	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	2,4-Dinitrophenol	0.23	MG/KG_DRY	UJ	160	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	2,4-Dinitrophenol	0.017	MG/KG_DRY	UJ	160	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	2,4-Dinitrophenol	0.017	MG/KG_DRY	UJ	160	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	2,4-Dinitrophenol	0.017	MG/KG_DRY	U	160	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	2,4-Dinitrophenol	0.087	MG/KG_DRY	U	160	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	2,4-Dinitrophenol	0.16	MG/KG_DRY	U	160	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	2,4-Dinitrophenol	0.34	MG/KG_DRY	U	160	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	2,4-Dinitrophenol	0.17	MG/KG_DRY	R	160	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	2,4-Dinitrophenol	0.17	MG/KG_DRY	R	160	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	2,4-Dinitrophenol	0.85	MG/KG_DRY	R	160	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	2,4-Dinitrophenol	1.7	MG/KG_DRY	R	160	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	2,4-Dinitrophenol	0.019	MG/KG_DRY	UJ	160	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	2,4-Dinitrophenol	0.017	MG/KG_DRY	UJ	160	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	2,4-Dinitrophenol	0.43	MG/KG_DRY	UJ	160	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	2,4-Dinitrophenol	0.62	MG/KG_DRY	UJ	160	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	2,4-Dinitrophenol	0.017	MG/KG_DRY	UJ	160	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	2,4-Dinitrophenol	0.085	MG/KG_DRY	UJ	160	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	2,4-Dinitrophenol	0.43	MG/KG_DRY	UJ	160	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	2,4-Dinitrophenol	0.48	MG/KG_DRY	R	160	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	2,4-Dinitrophenol	0.17	MG/KG_DRY	R	160	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	2,4-Dinitrophenol	0.17	MG/KG_DRY	UJ	160	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	2,4-Dinitrophenol	0.17	MG/KG_DRY	UJ	160	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	2,4-Dinitrophenol	0.17	MG/KG_DRY	UJ	160	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	2,4-Dinitrophenol	0.017	MG/KG_DRY	UJ	160	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	2,4-Dinitrophenol	0.017	MG/KG_DRY	U	160	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	2,4-Dinitrophenol	0.017	MG/KG_DRY	U	160	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	2,4-Dinitrophenol	0.085	MG/KG_DRY	U	160	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	2,4-Dinitrophenol	0.017	MG/KG_DRY	U	160	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	2,4-Dinitrophenol	0.017	MG/KG_DRY	U	160	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	2,4-Dinitrophenol	0.17	MG/KG_DRY	U	160	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	2,4-Dinitrophenol	0.017	MG/KG_DRY	U	160	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	2,4-Dinitrophenol	0.017	MG/KG_DRY	U	160	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	2,4-Dinitrophenol	0.017	MG/KG_DRY	U	160	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	2,4-Dinitrophenol	0.017	MG/KG_DRY	UJ	160	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	2,4-Dinitrophenol	0.085	MG/KG_DRY	U	160	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	2,4-Dinitrotoluene	0.0015	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	2,4-Dinitrotoluene	0.0075	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	2,4-Dinitrotoluene	0.0075	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	2,4-Dinitrotoluene	0.015	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	2,4-Dinitrotoluene	0.0075	MG/KG_DRY	U	0.9	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-01-03	0	1	2,4-Dinitrotoluene	0.0075	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	2,4-Dinitrotoluene	0.0075	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	2,4-Dinitrotoluene	0.0015	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	2,4-Dinitrotoluene	0.0015	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	2,4-Dinitrotoluene	0.02	MG/KG_DRY	UJ	0.9	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	2,4-Dinitrotoluene	0.0015	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	2,4-Dinitrotoluene	0.0015	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	2,4-Dinitrotoluene	0.0015	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	2,4-Dinitrotoluene	0.0077	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	2,4-Dinitrotoluene	0.014	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	2,4-Dinitrotoluene	0.03	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	2,4-Dinitrotoluene	0.015	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	2,4-Dinitrotoluene	0.015	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	2,4-Dinitrotoluene	0.075	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	2,4-Dinitrotoluene	0.15	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	2,4-Dinitrotoluene	0.0017	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	2,4-Dinitrotoluene	0.0015	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	2,4-Dinitrotoluene	0.038	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	2,4-Dinitrotoluene	0.055	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	2,4-Dinitrotoluene	0.0015	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	2,4-Dinitrotoluene	0.0075	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	2,4-Dinitrotoluene	0.038	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	2,4-Dinitrotoluene	0.043	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	2,4-Dinitrotoluene	0.015	MG/KG_DRY	U	0.9	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	2,4-Dinitrotoluene	0.015	MG/KG_DRY	U	0.9	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	2,4-Dinitrotoluene	0.015	MG/KG_DRY	U	0.9	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	2,4-Dinitrotoluene	0.015	MG/KG_DRY	U	0.9	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	2,4-Dinitrotoluene	0.0015	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	2,4-Dinitrotoluene	0.0015	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	2,4-Dinitrotoluene	0.0015	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	2,4-Dinitrotoluene	0.0075	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	2,4-Dinitrotoluene	0.0015	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	2,4-Dinitrotoluene	0.0015	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	2,4-Dinitrotoluene	0.015	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	2,4-Dinitrotoluene	0.0015	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	2,4-Dinitrotoluene	0.0015	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	2,4-Dinitrotoluene	0.0015	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	2,4-Dinitrotoluene	0.034	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-22	0	1	2,4-Dinitrotoluene	0.0075	MG/KG_DRY	U	0.9	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	2,6-Dinitrotoluene	0.002	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	2,6-Dinitrotoluene	0.01	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-01	0	1	2,6-Dinitrotoluene	0.01	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	2,6-Dinitrotoluene	0.02	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	2,6-Dinitrotoluene	0.01	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	2,6-Dinitrotoluene	0.01	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	2,6-Dinitrotoluene	0.01	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	2,6-Dinitrotoluene	0.002	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	2,6-Dinitrotoluene	0.002	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	2,6-Dinitrotoluene	0.027	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	2,6-Dinitrotoluene	0.002	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	2,6-Dinitrotoluene	0.002	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	2,6-Dinitrotoluene	0.002	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	2,6-Dinitrotoluene	0.011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	2,6-Dinitrotoluene	0.018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	2,6-Dinitrotoluene	0.04	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	2,6-Dinitrotoluene	0.02	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	2,6-Dinitrotoluene	0.02	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	2,6-Dinitrotoluene	0.1	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	2,6-Dinitrotoluene	0.2	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	2,6-Dinitrotoluene	0.0023	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	2,6-Dinitrotoluene	0.002	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	2,6-Dinitrotoluene	0.05	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	2,6-Dinitrotoluene	0.073	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	2,6-Dinitrotoluene	0.002	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	2,6-Dinitrotoluene	0.01	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	2,6-Dinitrotoluene	0.05	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	2,6-Dinitrotoluene	0.057	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	2,6-Dinitrotoluene	0.02	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	2,6-Dinitrotoluene	0.02	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	2,6-Dinitrotoluene	0.02	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	2,6-Dinitrotoluene	0.02	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	2,6-Dinitrotoluene	0.002	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	2,6-Dinitrotoluene	0.002	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	2,6-Dinitrotoluene	0.002	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	2,6-Dinitrotoluene	0.01	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	2,6-Dinitrotoluene	0.002	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	2,6-Dinitrotoluene	0.002	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	2,6-Dinitrotoluene	0.02	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	2,6-Dinitrotoluene	0.002	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	2,6-Dinitrotoluene	0.002	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	2,6-Dinitrotoluene	0.002	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	2,6-Dinitrotoluene	0.002	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_H-22	0	1	2,6-Dinitrotoluene	0.01	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	2-Chloronaphthalene	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	2-Chloronaphthalene	0.008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	2-Chloronaphthalene	0.008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	2-Chloronaphthalene	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	2-Chloronaphthalene	0.008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	2-Chloronaphthalene	0.008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	2-Chloronaphthalene	0.008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	2-Chloronaphthalene	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	2-Chloronaphthalene	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	2-Chloronaphthalene	0.022	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	2-Chloronaphthalene	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	2-Chloronaphthalene	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	2-Chloronaphthalene	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	2-Chloronaphthalene	0.0082	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	2-Chloronaphthalene	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	2-Chloronaphthalene	0.032	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	2-Chloronaphthalene	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	2-Chloronaphthalene	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	2-Chloronaphthalene	0.08	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	2-Chloronaphthalene	0.16	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	2-Chloronaphthalene	0.0018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	2-Chloronaphthalene	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	2-Chloronaphthalene	0.04	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	2-Chloronaphthalene	0.059	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	2-Chloronaphthalene	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	2-Chloronaphthalene	0.008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	2-Chloronaphthalene	0.04	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	2-Chloronaphthalene	0.046	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	2-Chloronaphthalene	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	2-Chloronaphthalene	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	2-Chloronaphthalene	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	2-Chloronaphthalene	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	2-Chloronaphthalene	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	2-Chloronaphthalene	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	2-Chloronaphthalene	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	2-Chloronaphthalene	0.008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	2-Chloronaphthalene	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	2-Chloronaphthalene	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	2-Chloronaphthalene	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	2-Chloronaphthalene	0.0016	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_H-18	0	1	2-Chloronaphthalene	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	2-Chloronaphthalene	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	2-Chloronaphthalene	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	2-Chloronaphthalene	0.008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	2-Chlorophenol	0.002	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	2-Chlorophenol	0.01	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	2-Chlorophenol	0.01	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	2-Chlorophenol	0.02	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	2-Chlorophenol	0.01	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	2-Chlorophenol	0.01	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	2-Chlorophenol	0.01	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	2-Chlorophenol	0.002	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	2-Chlorophenol	0.002	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	2-Chlorophenol	0.027	MG/KG_DRY	UJ	50	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	2-Chlorophenol	0.002	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	2-Chlorophenol	0.002	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	2-Chlorophenol	0.002	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	2-Chlorophenol	0.011	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	2-Chlorophenol	0.018	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	2-Chlorophenol	0.04	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	2-Chlorophenol	0.02	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	2-Chlorophenol	0.02	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	2-Chlorophenol	0.1	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	2-Chlorophenol	0.2	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	2-Chlorophenol	0.0023	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	2-Chlorophenol	0.002	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	2-Chlorophenol	0.05	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	2-Chlorophenol	0.073	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	2-Chlorophenol	0.002	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	2-Chlorophenol	0.01	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	2-Chlorophenol	0.05	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	2-Chlorophenol	0.057	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	2-Chlorophenol	0.02	MG/KG_DRY	U	50	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	2-Chlorophenol	0.02	MG/KG_DRY	U	50	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	2-Chlorophenol	0.02	MG/KG_DRY	U	50	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	2-Chlorophenol	0.02	MG/KG_DRY	U	50	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	2-Chlorophenol	0.002	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	2-Chlorophenol	0.002	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	2-Chlorophenol	0.002	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	2-Chlorophenol	0.01	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	2-Chlorophenol	0.002	MG/KG_DRY	U	50	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_H-10	0	1	2-Chlorophenol	0.002	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	2-Chlorophenol	0.02	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	2-Chlorophenol	0.002	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	2-Chlorophenol	0.002	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	2-Chlorophenol	0.002	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	2-Chlorophenol	0.002	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	2-Chlorophenol	0.01	MG/KG_DRY	U	50	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	2-Methyl-4,6-dinitrophenol	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	2-Methyl-4,6-dinitrophenol	0.007	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	2-Methyl-4,6-dinitrophenol	0.007	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	2-Methyl-4,6-dinitrophenol	0.014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	2-Methyl-4,6-dinitrophenol	0.007	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	2-Methyl-4,6-dinitrophenol	0.007	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	2-Methyl-4,6-dinitrophenol	0.007	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	2-Methyl-4,6-dinitrophenol	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	2-Methyl-4,6-dinitrophenol	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	2-Methyl-4,6-dinitrophenol	0.019	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	2-Methyl-4,6-dinitrophenol	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	2-Methyl-4,6-dinitrophenol	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	2-Methyl-4,6-dinitrophenol	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	2-Methyl-4,6-dinitrophenol	0.0072	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	2-Methyl-4,6-dinitrophenol	0.013	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	2-Methyl-4,6-dinitrophenol	0.028	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	2-Methyl-4,6-dinitrophenol	0.014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	2-Methyl-4,6-dinitrophenol	0.014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	2-Methyl-4,6-dinitrophenol	0.07	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	2-Methyl-4,6-dinitrophenol	0.14	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	2-Methyl-4,6-dinitrophenol	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	2-Methyl-4,6-dinitrophenol	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	2-Methyl-4,6-dinitrophenol	0.035	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	2-Methyl-4,6-dinitrophenol	0.051	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	2-Methyl-4,6-dinitrophenol	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	2-Methyl-4,6-dinitrophenol	0.007	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	2-Methyl-4,6-dinitrophenol	0.035	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	2-Methyl-4,6-dinitrophenol	0.04	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	2-Methyl-4,6-dinitrophenol	0.014	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	2-Methyl-4,6-dinitrophenol	0.014	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	2-Methyl-4,6-dinitrophenol	0.014	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	2-Methyl-4,6-dinitrophenol	0.014	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	2-Methyl-4,6-dinitrophenol	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	2-Methyl-4,6-dinitrophenol	0.0014	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_H-03	0	1	2-Methyl-4,6-dinitrophenol	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	2-Methyl-4,6-dinitrophenol	0.007	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	2-Methyl-4,6-dinitrophenol	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	2-Methyl-4,6-dinitrophenol	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	2-Methyl-4,6-dinitrophenol	0.014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	2-Methyl-4,6-dinitrophenol	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	2-Methyl-4,6-dinitrophenol	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	2-Methyl-4,6-dinitrophenol	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	2-Methyl-4,6-dinitrophenol	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	2-Methyl-4,6-dinitrophenol	0.007	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	2-Methylnaphthalene	0.0022	MG/KG_DRY	U	123	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	2-Methylnaphthalene	0.011	MG/KG_DRY	U	123	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	2-Methylnaphthalene	0.011	MG/KG_DRY	U	123	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	2-Methylnaphthalene	0.029	MG/KG_DRY	J	123	nc	NA	N
Oxbow Area soil	SS_G-01-02	0	1	2-Methylnaphthalene	0.011	MG/KG_DRY	U	123	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	2-Methylnaphthalene	0.013	MG/KG_DRY	J	123	nc	NA	N
Oxbow Area soil	SS_G-01-04	0	1	2-Methylnaphthalene	0.011	MG/KG_DRY	U	123	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	2-Methylnaphthalene	0.0032	MG/KG_DRY	J	123	nc	NA	N
Oxbow Area soil	SS_G-03	0	1	2-Methylnaphthalene	0.0022	MG/KG_DRY	U	123	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	2-Methylnaphthalene	0.029	MG/KG_DRY	UJ	123	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	2-Methylnaphthalene	0.0022	MG/KG_DRY	U	123	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	2-Methylnaphthalene	0.0022	MG/KG_DRY	U	123	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	2-Methylnaphthalene	0.0022	MG/KG_DRY	U	123	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	2-Methylnaphthalene	0.012	MG/KG_DRY	U	123	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	2-Methylnaphthalene	0.02	MG/KG_DRY	U	123	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	2-Methylnaphthalene	0.044	MG/KG_DRY	U	123	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	2-Methylnaphthalene	0.022	MG/KG_DRY	U	123	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	2-Methylnaphthalene	0.022	MG/KG_DRY	U	123	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	2-Methylnaphthalene	0.29	MG/KG_DRY	J	123	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	2-Methylnaphthalene	1.9	MG/KG_DRY		123	nc	NA	N
Oxbow Area soil	SS_G-14	0	1	2-Methylnaphthalene	0.0059	MG/KG_DRY	J	123	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	2-Methylnaphthalene	0.0031	MG/KG_DRY	J	123	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	2-Methylnaphthalene	0.055	MG/KG_DRY	U	123	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	2-Methylnaphthalene	0.081	MG/KG_DRY	U	123	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	2-Methylnaphthalene	0.0022	MG/KG_DRY	U	123	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	2-Methylnaphthalene	0.011	MG/KG_DRY	U	123	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	2-Methylnaphthalene	0.055	MG/KG_DRY	U	123	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	2-Methylnaphthalene	0.063	MG/KG_DRY	U	123	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	2-Methylnaphthalene	0.029	MG/KG_DRY	J	123	nc	NA	N
Lyman Mill soil	SS_G-30	0	1	2-Methylnaphthalene	0.022	MG/KG_DRY	U	123	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	2-Methylnaphthalene	0.022	MG/KG_DRY	U	123	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	SS_G-32	0	1	2-Methylnaphthalene	0.022	MG/KG_DRY	U	123	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	2-Methylnaphthalene	0.0022	MG/KG_DRY	U	123	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	2-Methylnaphthalene	0.0022	MG/KG_DRY	U	123	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	2-Methylnaphthalene	0.0022	MG/KG_DRY	U	123	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	2-Methylnaphthalene	0.011	MG/KG_DRY	U	123	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	2-Methylnaphthalene	0.0022	MG/KG_DRY	U	123	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	2-Methylnaphthalene	0.0025	MG/KG_DRY	J	123	nc	NA	N
Oxbow Area soil	SS_H-13	0	1	2-Methylnaphthalene	0.022	MG/KG_DRY	U	123	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	2-Methylnaphthalene	0.0035	MG/KG_DRY	J	123	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	2-Methylnaphthalene	0.0022	MG/KG_DRY	U	123	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	2-Methylnaphthalene	0.0022	MG/KG_DRY	U	123	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	2-Methylnaphthalene	0.003	MG/KG_DRY	J	123	nc	NA	N
Oxbow Area soil	SS_H-22	0	1	2-Methylnaphthalene	0.011	MG/KG_DRY	U	123	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	2-Methylphenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	2-Methylphenol	0.0075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	2-Methylphenol	0.0075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	2-Methylphenol	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	2-Methylphenol	0.0075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	2-Methylphenol	0.0075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	2-Methylphenol	0.0075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	2-Methylphenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	2-Methylphenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	2-Methylphenol	0.02	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	2-Methylphenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	2-Methylphenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	2-Methylphenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	2-Methylphenol	0.0077	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	2-Methylphenol	0.014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	2-Methylphenol	0.03	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	2-Methylphenol	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	2-Methylphenol	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	2-Methylphenol	0.075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	2-Methylphenol	0.15	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	2-Methylphenol	0.0017	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	2-Methylphenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	2-Methylphenol	0.038	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	2-Methylphenol	0.055	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	2-Methylphenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	2-Methylphenol	0.0075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	2-Methylphenol	0.038	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	2-Methylphenol	0.043	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-29-02	0	1	2-Methylphenol	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	2-Methylphenol	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	2-Methylphenol	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	2-Methylphenol	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	2-Methylphenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	2-Methylphenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	2-Methylphenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	2-Methylphenol	0.0075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	2-Methylphenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	2-Methylphenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	2-Methylphenol	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	2-Methylphenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	2-Methylphenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	2-Methylphenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	2-Methylphenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	2-Methylphenol	0.0075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	2-Nitroaniline	0.0032	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	2-Nitroaniline	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	2-Nitroaniline	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	2-Nitroaniline	0.032	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	2-Nitroaniline	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	2-Nitroaniline	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	2-Nitroaniline	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	2-Nitroaniline	0.0032	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	2-Nitroaniline	0.0032	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	2-Nitroaniline	0.043	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	2-Nitroaniline	0.0032	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	2-Nitroaniline	0.0032	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	2-Nitroaniline	0.0032	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	2-Nitroaniline	0.017	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	2-Nitroaniline	0.029	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	2-Nitroaniline	0.064	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	2-Nitroaniline	0.032	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	2-Nitroaniline	0.032	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	2-Nitroaniline	0.16	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	2-Nitroaniline	0.32	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	2-Nitroaniline	0.0036	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	2-Nitroaniline	0.0032	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	2-Nitroaniline	0.08	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	2-Nitroaniline	0.12	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	2-Nitroaniline	0.0032	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-26	0	1	2-Nitroaniline	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	2-Nitroaniline	0.08	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	2-Nitroaniline	0.091	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	2-Nitroaniline	0.032	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	2-Nitroaniline	0.032	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	2-Nitroaniline	0.032	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	2-Nitroaniline	0.032	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	2-Nitroaniline	0.0032	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	2-Nitroaniline	0.0032	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	2-Nitroaniline	0.0032	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	2-Nitroaniline	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	2-Nitroaniline	0.0032	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	2-Nitroaniline	0.0032	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	2-Nitroaniline	0.032	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	2-Nitroaniline	0.0032	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	2-Nitroaniline	0.0032	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	2-Nitroaniline	0.0032	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	2-Nitroaniline	0.0032	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	2-Nitroaniline	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	2-Nitrophenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	2-Nitrophenol	0.0075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	2-Nitrophenol	0.0075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	2-Nitrophenol	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	2-Nitrophenol	0.0075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	2-Nitrophenol	0.0075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	2-Nitrophenol	0.0075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	2-Nitrophenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	2-Nitrophenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	2-Nitrophenol	0.02	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	2-Nitrophenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	2-Nitrophenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	2-Nitrophenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	2-Nitrophenol	0.0077	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	2-Nitrophenol	0.014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	2-Nitrophenol	0.03	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	2-Nitrophenol	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	2-Nitrophenol	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	2-Nitrophenol	0.075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	2-Nitrophenol	0.15	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	2-Nitrophenol	0.0017	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	2-Nitrophenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-18	0	1	2-Nitrophenol	0.038	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	2-Nitrophenol	0.055	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	2-Nitrophenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	2-Nitrophenol	0.0075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	2-Nitrophenol	0.038	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	2-Nitrophenol	0.043	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	2-Nitrophenol	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	2-Nitrophenol	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	2-Nitrophenol	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	2-Nitrophenol	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	2-Nitrophenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	2-Nitrophenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	2-Nitrophenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	2-Nitrophenol	0.0075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	2-Nitrophenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	2-Nitrophenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	2-Nitrophenol	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	2-Nitrophenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	2-Nitrophenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	2-Nitrophenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	2-Nitrophenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	2-Nitrophenol	0.0075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	3,3'-Dichlorobenzidine	0.0037	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	3,3'-Dichlorobenzidine	0.019	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	3,3'-Dichlorobenzidine	0.019	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	3,3'-Dichlorobenzidine	0.037	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	3,3'-Dichlorobenzidine	0.019	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	3,3'-Dichlorobenzidine	0.019	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	3,3'-Dichlorobenzidine	0.019	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	3,3'-Dichlorobenzidine	0.0037	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	3,3'-Dichlorobenzidine	0.0037	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	3,3'-Dichlorobenzidine	0.049	MG/KG_DRY	UJ	1.4	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	3,3'-Dichlorobenzidine	0.0037	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	3,3'-Dichlorobenzidine	0.0037	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	3,3'-Dichlorobenzidine	0.0037	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	3,3'-Dichlorobenzidine	0.019	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	3,3'-Dichlorobenzidine	0.033	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	3,3'-Dichlorobenzidine	0.074	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	3,3'-Dichlorobenzidine	0.037	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	3,3'-Dichlorobenzidine	0.037	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	3,3'-Dichlorobenzidine	0.19	MG/KG_DRY	U	1.4	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-13	0	1	3,3'-Dichlorobenzidine	0.37	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	3,3'-Dichlorobenzidine	0.0041	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	3,3'-Dichlorobenzidine	0.0037	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	3,3'-Dichlorobenzidine	0.093	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	3,3'-Dichlorobenzidine	0.14	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	3,3'-Dichlorobenzidine	0.0037	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	3,3'-Dichlorobenzidine	0.019	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	3,3'-Dichlorobenzidine	0.093	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	3,3'-Dichlorobenzidine	0.11	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	3,3'-Dichlorobenzidine	0.037	MG/KG_DRY	U	1.4	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	3,3'-Dichlorobenzidine	0.037	MG/KG_DRY	U	1.4	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	3,3'-Dichlorobenzidine	0.037	MG/KG_DRY	U	1.4	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	3,3'-Dichlorobenzidine	0.037	MG/KG_DRY	U	1.4	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	3,3'-Dichlorobenzidine	0.0037	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	3,3'-Dichlorobenzidine	0.0037	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	3,3'-Dichlorobenzidine	0.0037	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	3,3'-Dichlorobenzidine	0.019	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	3,3'-Dichlorobenzidine	0.0037	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	3,3'-Dichlorobenzidine	0.0037	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	3,3'-Dichlorobenzidine	0.037	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	3,3'-Dichlorobenzidine	0.0037	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	3,3'-Dichlorobenzidine	0.0037	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	3,3'-Dichlorobenzidine	0.0037	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	3,3'-Dichlorobenzidine	0.0037	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	3,3'-Dichlorobenzidine	0.019	MG/KG_DRY	U	1.4	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	3-Nitroaniline	0.0025	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	3-Nitroaniline	0.013	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	3-Nitroaniline	0.013	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	3-Nitroaniline	0.025	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	3-Nitroaniline	0.013	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	3-Nitroaniline	0.013	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	3-Nitroaniline	0.013	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	3-Nitroaniline	0.0025	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	3-Nitroaniline	0.0025	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	3-Nitroaniline	0.033	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	3-Nitroaniline	0.0025	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	3-Nitroaniline	0.0025	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	3-Nitroaniline	0.0025	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	3-Nitroaniline	0.013	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	3-Nitroaniline	0.023	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	3-Nitroaniline	0.05	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-10	0	1	3-Nitroaniline	0.025	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	3-Nitroaniline	0.025	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	3-Nitroaniline	0.13	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	3-Nitroaniline	0.25	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	3-Nitroaniline	0.0028	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	3-Nitroaniline	0.0025	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	3-Nitroaniline	0.063	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	3-Nitroaniline	0.091	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	3-Nitroaniline	0.0025	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	3-Nitroaniline	0.013	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	3-Nitroaniline	0.063	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	3-Nitroaniline	0.071	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	3-Nitroaniline	0.025	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	3-Nitroaniline	0.025	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	3-Nitroaniline	0.025	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	3-Nitroaniline	0.025	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	3-Nitroaniline	0.0025	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	3-Nitroaniline	0.0025	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	3-Nitroaniline	0.0025	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	3-Nitroaniline	0.013	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	3-Nitroaniline	0.0025	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	3-Nitroaniline	0.0025	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	3-Nitroaniline	0.025	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	3-Nitroaniline	0.0025	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	3-Nitroaniline	0.0025	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	3-Nitroaniline	0.0025	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	3-Nitroaniline	0.0025	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	3-Nitroaniline	0.013	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	4-Bromophenyl Phenyl Ether	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	4-Bromophenyl Phenyl Ether	0.008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	4-Bromophenyl Phenyl Ether	0.008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	4-Bromophenyl Phenyl Ether	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	4-Bromophenyl Phenyl Ether	0.008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	4-Bromophenyl Phenyl Ether	0.008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	4-Bromophenyl Phenyl Ether	0.008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	4-Bromophenyl Phenyl Ether	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	4-Bromophenyl Phenyl Ether	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	4-Bromophenyl Phenyl Ether	0.022	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	4-Bromophenyl Phenyl Ether	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	4-Bromophenyl Phenyl Ether	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	4-Bromophenyl Phenyl Ether	0.0016	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-07	0	1	4-Bromophenyl Phenyl Ether	0.0082	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	4-Bromophenyl Phenyl Ether	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	4-Bromophenyl Phenyl Ether	0.032	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	4-Bromophenyl Phenyl Ether	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	4-Bromophenyl Phenyl Ether	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	4-Bromophenyl Phenyl Ether	0.08	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	4-Bromophenyl Phenyl Ether	0.16	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	4-Bromophenyl Phenyl Ether	0.0018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	4-Bromophenyl Phenyl Ether	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	4-Bromophenyl Phenyl Ether	0.04	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	4-Bromophenyl Phenyl Ether	0.059	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	4-Bromophenyl Phenyl Ether	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	4-Bromophenyl Phenyl Ether	0.008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	4-Bromophenyl Phenyl Ether	0.04	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	4-Bromophenyl Phenyl Ether	0.046	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	4-Bromophenyl Phenyl Ether	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	4-Bromophenyl Phenyl Ether	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	4-Bromophenyl Phenyl Ether	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	4-Bromophenyl Phenyl Ether	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	4-Bromophenyl Phenyl Ether	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	4-Bromophenyl Phenyl Ether	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	4-Bromophenyl Phenyl Ether	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	4-Bromophenyl Phenyl Ether	0.008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	4-Bromophenyl Phenyl Ether	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	4-Bromophenyl Phenyl Ether	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	4-Bromophenyl Phenyl Ether	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	4-Bromophenyl Phenyl Ether	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	4-Bromophenyl Phenyl Ether	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	4-Bromophenyl Phenyl Ether	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	4-Bromophenyl Phenyl Ether	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	4-Bromophenyl Phenyl Ether	0.008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	4-Chloro-3-methylphenol	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	4-Chloro-3-methylphenol	0.007	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	4-Chloro-3-methylphenol	0.007	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	4-Chloro-3-methylphenol	0.014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	4-Chloro-3-methylphenol	0.007	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	4-Chloro-3-methylphenol	0.007	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	4-Chloro-3-methylphenol	0.007	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	4-Chloro-3-methylphenol	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	4-Chloro-3-methylphenol	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	4-Chloro-3-methylphenol	0.019	MG/KG_DRY	UJ	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-05	1	2	4-Chloro-3-methylphenol	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	4-Chloro-3-methylphenol	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	4-Chloro-3-methylphenol	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	4-Chloro-3-methylphenol	0.0072	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	4-Chloro-3-methylphenol	0.013	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	4-Chloro-3-methylphenol	0.028	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	4-Chloro-3-methylphenol	0.014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	4-Chloro-3-methylphenol	0.014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	4-Chloro-3-methylphenol	0.07	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	4-Chloro-3-methylphenol	0.14	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	4-Chloro-3-methylphenol	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	4-Chloro-3-methylphenol	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	4-Chloro-3-methylphenol	0.035	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	4-Chloro-3-methylphenol	0.051	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	4-Chloro-3-methylphenol	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	4-Chloro-3-methylphenol	0.007	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	4-Chloro-3-methylphenol	0.035	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	4-Chloro-3-methylphenol	0.04	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	4-Chloro-3-methylphenol	0.014	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	4-Chloro-3-methylphenol	0.014	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	4-Chloro-3-methylphenol	0.014	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	4-Chloro-3-methylphenol	0.014	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	4-Chloro-3-methylphenol	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	4-Chloro-3-methylphenol	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	4-Chloro-3-methylphenol	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	4-Chloro-3-methylphenol	0.007	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	4-Chloro-3-methylphenol	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	4-Chloro-3-methylphenol	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	4-Chloro-3-methylphenol	0.014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	4-Chloro-3-methylphenol	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	4-Chloro-3-methylphenol	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	4-Chloro-3-methylphenol	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	4-Chloro-3-methylphenol	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	4-Chloro-3-methylphenol	0.007	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	4-Chloroaniline	0.0019	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	4-Chloroaniline	0.0095	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	4-Chloroaniline	0.0095	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	4-Chloroaniline	0.019	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	4-Chloroaniline	0.0095	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	4-Chloroaniline	0.0095	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	4-Chloroaniline	0.0095	MG/KG_DRY	U	310	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-02	0	1	4-Chloroaniline	0.0019	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	4-Chloroaniline	0.0019	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	4-Chloroaniline	0.025	MG/KG_DRY	UJ	310	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	4-Chloroaniline	0.0019	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	4-Chloroaniline	0.0019	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	4-Chloroaniline	0.0019	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	4-Chloroaniline	0.0097	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	4-Chloroaniline	0.017	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	4-Chloroaniline	0.038	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	4-Chloroaniline	0.019	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	4-Chloroaniline	0.019	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	4-Chloroaniline	0.095	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	4-Chloroaniline	0.19	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	4-Chloroaniline	0.0021	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	4-Chloroaniline	0.0019	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	4-Chloroaniline	0.048	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	4-Chloroaniline	0.07	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	4-Chloroaniline	0.0019	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	4-Chloroaniline	0.0095	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	4-Chloroaniline	0.048	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	4-Chloroaniline	0.054	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	4-Chloroaniline	0.019	MG/KG_DRY	U	310	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	4-Chloroaniline	0.019	MG/KG_DRY	U	310	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	4-Chloroaniline	0.019	MG/KG_DRY	U	310	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	4-Chloroaniline	0.019	MG/KG_DRY	U	310	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	4-Chloroaniline	0.0019	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	4-Chloroaniline	0.0019	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	4-Chloroaniline	0.0019	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	4-Chloroaniline	0.0095	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	4-Chloroaniline	0.0019	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	4-Chloroaniline	0.0019	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	4-Chloroaniline	0.019	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	4-Chloroaniline	0.0019	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	4-Chloroaniline	0.0019	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	4-Chloroaniline	0.0019	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	4-Chloroaniline	0.0019	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	4-Chloroaniline	0.0095	MG/KG_DRY	U	310	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	4-Chlorophenyl Phenyl Ether	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	4-Chlorophenyl Phenyl Ether	0.007	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	4-Chlorophenyl Phenyl Ether	0.007	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	4-Chlorophenyl Phenyl Ether	0.014	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-01-02	0	1	4-Chlorophenyl Phenyl Ether	0.007	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	4-Chlorophenyl Phenyl Ether	0.007	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	4-Chlorophenyl Phenyl Ether	0.007	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	4-Chlorophenyl Phenyl Ether	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	4-Chlorophenyl Phenyl Ether	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	4-Chlorophenyl Phenyl Ether	0.019	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	4-Chlorophenyl Phenyl Ether	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	4-Chlorophenyl Phenyl Ether	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	4-Chlorophenyl Phenyl Ether	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	4-Chlorophenyl Phenyl Ether	0.0072	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	4-Chlorophenyl Phenyl Ether	0.013	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	4-Chlorophenyl Phenyl Ether	0.028	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	4-Chlorophenyl Phenyl Ether	0.014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	4-Chlorophenyl Phenyl Ether	0.014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	4-Chlorophenyl Phenyl Ether	0.07	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	4-Chlorophenyl Phenyl Ether	0.14	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	4-Chlorophenyl Phenyl Ether	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	4-Chlorophenyl Phenyl Ether	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	4-Chlorophenyl Phenyl Ether	0.035	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	4-Chlorophenyl Phenyl Ether	0.051	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	4-Chlorophenyl Phenyl Ether	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	4-Chlorophenyl Phenyl Ether	0.007	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	4-Chlorophenyl Phenyl Ether	0.035	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	4-Chlorophenyl Phenyl Ether	0.04	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	4-Chlorophenyl Phenyl Ether	0.014	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	4-Chlorophenyl Phenyl Ether	0.014	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	4-Chlorophenyl Phenyl Ether	0.014	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	4-Chlorophenyl Phenyl Ether	0.014	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	4-Chlorophenyl Phenyl Ether	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	4-Chlorophenyl Phenyl Ether	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	4-Chlorophenyl Phenyl Ether	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	4-Chlorophenyl Phenyl Ether	0.007	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	4-Chlorophenyl Phenyl Ether	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	4-Chlorophenyl Phenyl Ether	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	4-Chlorophenyl Phenyl Ether	0.014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	4-Chlorophenyl Phenyl Ether	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	4-Chlorophenyl Phenyl Ether	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	4-Chlorophenyl Phenyl Ether	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	4-Chlorophenyl Phenyl Ether	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	4-Chlorophenyl Phenyl Ether	0.007	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	4-Methylphenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-01	0	1	4-Methylphenol	0.0075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	4-Methylphenol	0.0075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	4-Methylphenol	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	4-Methylphenol	0.0075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	4-Methylphenol	0.0075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	4-Methylphenol	0.0075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	4-Methylphenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	4-Methylphenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	4-Methylphenol	0.02	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	4-Methylphenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	4-Methylphenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	4-Methylphenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	4-Methylphenol	0.0077	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	4-Methylphenol	0.014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	4-Methylphenol	0.03	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	4-Methylphenol	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	4-Methylphenol	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	4-Methylphenol	0.075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	4-Methylphenol	0.15	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	4-Methylphenol	0.0017	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	4-Methylphenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	4-Methylphenol	0.038	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	4-Methylphenol	0.055	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	4-Methylphenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	4-Methylphenol	0.0075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	4-Methylphenol	0.038	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	4-Methylphenol	0.043	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	4-Methylphenol	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	4-Methylphenol	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	4-Methylphenol	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	4-Methylphenol	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	4-Methylphenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	4-Methylphenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	4-Methylphenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	4-Methylphenol	0.0075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	4-Methylphenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	4-Methylphenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	4-Methylphenol	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	4-Methylphenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	4-Methylphenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	4-Methylphenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_H-19	0	1	4-Methylphenol	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	4-Methylphenol	0.0075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	4-Nitroaniline	0.0018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	4-Nitroaniline	0.009	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	4-Nitroaniline	0.009	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	4-Nitroaniline	0.018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	4-Nitroaniline	0.009	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	4-Nitroaniline	0.009	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	4-Nitroaniline	0.009	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	4-Nitroaniline	0.0018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	4-Nitroaniline	0.0018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	4-Nitroaniline	0.024	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	4-Nitroaniline	0.0018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	4-Nitroaniline	0.0018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	4-Nitroaniline	0.0018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	4-Nitroaniline	0.0092	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	4-Nitroaniline	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	4-Nitroaniline	0.036	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	4-Nitroaniline	0.018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	4-Nitroaniline	0.018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	4-Nitroaniline	0.09	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	4-Nitroaniline	0.18	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	4-Nitroaniline	0.002	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	4-Nitroaniline	0.0018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	4-Nitroaniline	0.045	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	4-Nitroaniline	0.066	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	4-Nitroaniline	0.0018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	4-Nitroaniline	0.009	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	4-Nitroaniline	0.045	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	4-Nitroaniline	0.051	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	4-Nitroaniline	0.018	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	4-Nitroaniline	0.018	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	4-Nitroaniline	0.018	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	4-Nitroaniline	0.018	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	4-Nitroaniline	0.0018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	4-Nitroaniline	0.0018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	4-Nitroaniline	0.0018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	4-Nitroaniline	0.009	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	4-Nitroaniline	0.0018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	4-Nitroaniline	0.0018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	4-Nitroaniline	0.018	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_H-16	0	1	4-Nitroaniline	0.0018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	4-Nitroaniline	0.0018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	4-Nitroaniline	0.0018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	4-Nitroaniline	0.0018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	4-Nitroaniline	0.009	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	4-Nitrophenol	0.018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	4-Nitrophenol	0.09	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	4-Nitrophenol	0.09	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	4-Nitrophenol	0.18	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	4-Nitrophenol	0.09	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	4-Nitrophenol	0.09	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	4-Nitrophenol	0.09	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	4-Nitrophenol	0.018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	4-Nitrophenol	0.018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	4-Nitrophenol	0.24	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	4-Nitrophenol	0.018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	4-Nitrophenol	0.018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	4-Nitrophenol	0.018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	4-Nitrophenol	0.092	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	4-Nitrophenol	0.16	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	4-Nitrophenol	0.36	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	4-Nitrophenol	0.18	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	4-Nitrophenol	0.18	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	4-Nitrophenol	0.9	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	4-Nitrophenol	1.8	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	4-Nitrophenol	0.02	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	4-Nitrophenol	0.018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	4-Nitrophenol	0.45	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	4-Nitrophenol	0.66	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	4-Nitrophenol	0.018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	4-Nitrophenol	0.09	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	4-Nitrophenol	0.45	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	4-Nitrophenol	0.51	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	4-Nitrophenol	0.18	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	4-Nitrophenol	0.18	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	4-Nitrophenol	0.18	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	4-Nitrophenol	0.18	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	4-Nitrophenol	0.018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	4-Nitrophenol	0.018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	4-Nitrophenol	0.018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	4-Nitrophenol	0.09	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_H-07	0	1	4-Nitrophenol	0.018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	4-Nitrophenol	0.018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	4-Nitrophenol	0.18	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	4-Nitrophenol	0.018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	4-Nitrophenol	0.018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	4-Nitrophenol	0.018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	4-Nitrophenol	0.018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	4-Nitrophenol	0.09	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Acenaphthene	0.0014	MG/KG_DRY	U	43	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Acenaphthene	0.014	MG/KG_DRY	J	43	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Acenaphthene	0.014	MG/KG_DRY	J	43	nc	NA	N
Oxbow Area soil	SS_G-01-01	0	1	Acenaphthene	0.072	MG/KG_DRY	J	43	nc	NA	N
Oxbow Area soil	SS_G-01-02	0	1	Acenaphthene	0.018	MG/KG_DRY	J	43	nc	NA	N
Oxbow Area soil	SS_G-01-03	0	1	Acenaphthene	0.029	MG/KG_DRY	J	43	nc	NA	N
Oxbow Area soil	SS_G-01-04	0	1	Acenaphthene	0.007	MG/KG_DRY	U	43	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Acenaphthene	0.0029	MG/KG_DRY	J	43	nc	NA	N
Oxbow Area soil	SS_G-03	0	1	Acenaphthene	0.0014	MG/KG_DRY	U	43	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Acenaphthene	0.019	MG/KG_DRY	UJ	43	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Acenaphthene	0.0014	MG/KG_DRY	U	43	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Acenaphthene	0.0014	MG/KG_DRY	U	43	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Acenaphthene	0.0018	MG/KG_DRY	J	43	nc	NA	N
Oxbow Area soil	SS_G-07	0	1	Acenaphthene	0.014	MG/KG_DRY	J	43	nc	NA	N
Oxbow Area soil	SS_G-08	0	1	Acenaphthene	0.015	MG/KG_DRY	J	43	nc	NA	N
Oxbow Area soil	SS_G-09	0	1	Acenaphthene	0.03	MG/KG_DRY	J	43	nc	NA	N
Oxbow Area soil	SS_G-10	0	1	Acenaphthene	0.014	MG/KG_DRY	U	43	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Acenaphthene	0.014	MG/KG_DRY	U	43	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Acenaphthene	1.7	MG/KG_DRY		43	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Acenaphthene	7	MG/KG_DRY		43	nc	NA	N
Oxbow Area soil	SS_G-14	0	1	Acenaphthene	0.0055	MG/KG_DRY	J	43	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	Acenaphthene	0.0033	MG/KG_DRY	J	43	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	Acenaphthene	0.035	MG/KG_DRY	U	43	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Acenaphthene	0.06	MG/KG_DRY	J	43	nc	NA	N
Oxbow Area soil	SS_G-26	1	2	Acenaphthene	0.0014	MG/KG_DRY	U	43	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Acenaphthene	0.014	MG/KG_DRY	J	43	nc	NA	N
Oxbow Area soil	SS_G-29	0	1	Acenaphthene	0.057	MG/KG_DRY	J	43	nc	NA	N
Oxbow Area soil	SS_G-29-01	0	1	Acenaphthene	0.11	MG/KG_DRY	J	43	nc	NA	N
Oxbow Area soil	SS_G-29-02	0	1	Acenaphthene	0.19	MG/KG_DRY		43	nc	NA	N
Lyman Mill soil	SS_G-30	0	1	Acenaphthene	0.014	MG/KG_DRY	U	43	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Acenaphthene	0.025	MG/KG_DRY	J	43	nc	NA	N
Lyman Mill soil	SS_G-32	0	1	Acenaphthene	0.014	MG/KG_DRY	U	43	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Acenaphthene	0.0014	MG/KG_DRY	U	43	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_H-01	0	1	Acenaphthene	0.0018	MG/KG_DRY	J	43	nc	NA	N
Oxbow Area soil	SS_H-03	0	1	Acenaphthene	0.0014	MG/KG_DRY	U	43	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Acenaphthene	0.007	MG/KG_DRY	U	43	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Acenaphthene	0.0014	MG/KG_DRY	U	43	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Acenaphthene	0.0014	MG/KG_DRY	U	43	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Acenaphthene	0.014	MG/KG_DRY	U	43	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Acenaphthene	0.0021	MG/KG_DRY	J	43	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Acenaphthene	0.0014	MG/KG_DRY	U	43	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Acenaphthene	0.0014	MG/KG_DRY	U	43	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Acenaphthene	0.0024	MG/KG_DRY	J	43	nc	NA	N
Oxbow Area soil	SS_H-22	0	1	Acenaphthene	0.007	MG/KG_DRY	U	43	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Acenaphthylene	0.0035	MG/KG_DRY	J	23	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Acenaphthylene	0.052	MG/KG_DRY		23	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Acenaphthylene	0.054	MG/KG_DRY		23	nc	NA	N
Oxbow Area soil	SS_G-01-01	0	1	Acenaphthylene	0.15	MG/KG_DRY		23	nc	NA	N
Oxbow Area soil	SS_G-01-02	0	1	Acenaphthylene	0.064	MG/KG_DRY		23	nc	NA	N
Oxbow Area soil	SS_G-01-03	0	1	Acenaphthylene	0.12	MG/KG_DRY		23	nc	NA	N
Oxbow Area soil	SS_G-01-04	0	1	Acenaphthylene	0.012	MG/KG_DRY	J	23	nc	NA	N
Oxbow Area soil	SS_G-02	0	1	Acenaphthylene	0.012	MG/KG_DRY		23	nc	NA	N
Oxbow Area soil	SS_G-03	0	1	Acenaphthylene	0.0092	MG/KG_DRY		23	nc	NA	N
Oxbow Area soil	SS_G-04	0	1	Acenaphthylene	0.047	MG/KG_DRY	J	23	nc	NA	N
Oxbow Area soil	SS_G-05	1	2	Acenaphthylene	0.0012	MG/KG_DRY	J	23	nc	NA	N
Oxbow Area soil	SS_G-05	0	1	Acenaphthylene	0.0044	MG/KG_DRY	J	23	nc	NA	N
Oxbow Area soil	SS_G-06	0	1	Acenaphthylene	0.0067	MG/KG_DRY		23	nc	NA	N
Oxbow Area soil	SS_G-07	0	1	Acenaphthylene	0.099	MG/KG_DRY		23	nc	NA	N
Oxbow Area soil	SS_G-08	0	1	Acenaphthylene	0.091	MG/KG_DRY		23	nc	NA	N
Oxbow Area soil	SS_G-09	0	1	Acenaphthylene	0.16	MG/KG_DRY	J	23	nc	NA	N
Oxbow Area soil	SS_G-10	0	1	Acenaphthylene	0.27	MG/KG_DRY		23	nc	NA	N
Oxbow Area soil	SS_G-12	0	1	Acenaphthylene	0.11	MG/KG_DRY		23	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Acenaphthylene	1.7	MG/KG_DRY		23	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Acenaphthylene	3.6	MG/KG_DRY		23	nc	NA	N
Oxbow Area soil	SS_G-14	0	1	Acenaphthylene	0.026	MG/KG_DRY		23	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	Acenaphthylene	0.017	MG/KG_DRY		23	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	Acenaphthylene	0.094	MG/KG_DRY	J	23	nc	NA	N
Oxbow Area soil	SS_G-23	0	1	Acenaphthylene	0.72	MG/KG_DRY		23	nc	NA	N
Oxbow Area soil	SS_G-26	1	2	Acenaphthylene	0.0018	MG/KG_DRY	J	23	nc	NA	N
Oxbow Area soil	SS_G-26	0	1	Acenaphthylene	0.04	MG/KG_DRY		23	nc	NA	N
Oxbow Area soil	SS_G-29	0	1	Acenaphthylene	0.3	MG/KG_DRY		23	nc	NA	N
Oxbow Area soil	SS_G-29-01	0	1	Acenaphthylene	0.5	MG/KG_DRY		23	nc	NA	N
Oxbow Area soil	SS_G-29-02	0	1	Acenaphthylene	0.31	MG/KG_DRY		23	nc	NA	N
Lyman Mill soil	SS_G-30	0	1	Acenaphthylene	0.24	MG/KG_DRY		23	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	SS_G-31	0	1	Acenaphthylene	0.14	MG/KG_DRY		23	nc	NA	N
Lyman Mill soil	SS_G-32	0	1	Acenaphthylene	0.074	MG/KG_DRY	J	23	nc	NA	N
Lyman Mill soil	SS_G-33	0	1	Acenaphthylene	0.016	MG/KG_DRY		23	nc	NA	N
Oxbow Area soil	SS_H-01	0	1	Acenaphthylene	0.0091	MG/KG_DRY		23	nc	NA	N
Oxbow Area soil	SS_H-03	0	1	Acenaphthylene	0.0067	MG/KG_DRY		23	nc	NA	N
Oxbow Area soil	SS_H-06	0	1	Acenaphthylene	0.0072	MG/KG_DRY	J	23	nc	NA	N
Oxbow Area soil	SS_H-07	0	1	Acenaphthylene	0.0051	MG/KG_DRY	J	23	nc	NA	N
Oxbow Area soil	SS_H-10	0	1	Acenaphthylene	0.0085	MG/KG_DRY		23	nc	NA	N
Oxbow Area soil	SS_H-13	0	1	Acenaphthylene	0.013	MG/KG_DRY	J	23	nc	NA	N
Oxbow Area soil	SS_H-16	0	1	Acenaphthylene	0.016	MG/KG_DRY		23	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Acenaphthylene	0.0075	MG/KG_DRY	J	23	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Acenaphthylene	0.0048	MG/KG_DRY	J	23	nc	NA	N
Oxbow Area soil	SS_H-19	0	1	Acenaphthylene	0.016	MG/KG_DRY		23	nc	NA	N
Oxbow Area soil	SS_H-22	0	1	Acenaphthylene	0.0083	MG/KG_DRY	J	23	nc	NA	N
Oxbow Area soil	SS_G-01	1	2	Anthracene	0.0043	MG/KG_DRY	J	35	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Anthracene	0.068	MG/KG_DRY		35	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Anthracene	0.059	MG/KG_DRY		35	nc	NA	N
Oxbow Area soil	SS_G-01-01	0	1	Anthracene	0.23	MG/KG_DRY		35	nc	NA	N
Oxbow Area soil	SS_G-01-02	0	1	Anthracene	0.079	MG/KG_DRY		35	nc	NA	N
Oxbow Area soil	SS_G-01-03	0	1	Anthracene	0.13	MG/KG_DRY		35	nc	NA	N
Oxbow Area soil	SS_G-01-04	0	1	Anthracene	0.015	MG/KG_DRY	J	35	nc	NA	N
Oxbow Area soil	SS_G-02	0	1	Anthracene	0.014	MG/KG_DRY		35	nc	NA	N
Oxbow Area soil	SS_G-03	0	1	Anthracene	0.0074	MG/KG_DRY	J	35	nc	NA	N
Oxbow Area soil	SS_G-04	0	1	Anthracene	0.043	MG/KG_DRY	J	35	nc	NA	N
Oxbow Area soil	SS_G-05	1	2	Anthracene	0.0016	MG/KG_DRY	U	35	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Anthracene	0.0042	MG/KG_DRY	J	35	nc	NA	N
Oxbow Area soil	SS_G-06	0	1	Anthracene	0.0068	MG/KG_DRY		35	nc	NA	N
Oxbow Area soil	SS_G-07	0	1	Anthracene	0.074	MG/KG_DRY		35	nc	NA	N
Oxbow Area soil	SS_G-08	0	1	Anthracene	0.071	MG/KG_DRY	J	35	nc	NA	N
Oxbow Area soil	SS_G-09	0	1	Anthracene	0.15	MG/KG_DRY	J	35	nc	NA	N
Oxbow Area soil	SS_G-10	0	1	Anthracene	0.21	MG/KG_DRY		35	nc	NA	N
Oxbow Area soil	SS_G-12	0	1	Anthracene	0.078	MG/KG_DRY		35	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Anthracene	5.5	MG/KG_DRY		35	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Anthracene	20	MG/KG_DRY		35	nc	NA	N
Oxbow Area soil	SS_G-14	0	1	Anthracene	0.027	MG/KG_DRY		35	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	Anthracene	0.017	MG/KG_DRY		35	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	Anthracene	0.1	MG/KG_DRY	J	35	nc	NA	N
Oxbow Area soil	SS_G-23	0	1	Anthracene	0.45	MG/KG_DRY		35	nc	NA	N
Oxbow Area soil	SS_G-26	1	2	Anthracene	0.0027	MG/KG_DRY	J	35	nc	NA	N
Oxbow Area soil	SS_G-26	0	1	Anthracene	0.05	MG/KG_DRY		35	nc	NA	N
Oxbow Area soil	SS_G-29	0	1	Anthracene	0.31	MG/KG_DRY		35	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-29-01	0	1	Anthracene	0.56	MG/KG_DRY		35	nc	NA	N
Oxbow Area soil	SS_G-29-02	0	1	Anthracene	1	MG/KG_DRY		35	nc	NA	N
Lyman Mill soil	SS_G-30	0	1	Anthracene	0.15	MG/KG_DRY		35	nc	NA	N
Lyman Mill soil	SS_G-31	0	1	Anthracene	0.17	MG/KG_DRY		35	nc	NA	N
Lyman Mill soil	SS_G-32	0	1	Anthracene	0.068	MG/KG_DRY	J	35	nc	NA	N
Lyman Mill soil	SS_G-33	0	1	Anthracene	0.01	MG/KG_DRY		35	nc	NA	N
Oxbow Area soil	SS_H-01	0	1	Anthracene	0.01	MG/KG_DRY		35	nc	NA	N
Oxbow Area soil	SS_H-03	0	1	Anthracene	0.0057	MG/KG_DRY	J	35	nc	NA	N
Oxbow Area soil	SS_H-06	0	1	Anthracene	0.008	MG/KG_DRY	U	35	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Anthracene	0.0046	MG/KG_DRY	J	35	nc	NA	N
Oxbow Area soil	SS_H-10	0	1	Anthracene	0.0061	MG/KG_DRY	J	35	nc	NA	N
Oxbow Area soil	SS_H-13	0	1	Anthracene	0.016	MG/KG_DRY	U	35	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Anthracene	0.011	MG/KG_DRY		35	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Anthracene	0.0046	MG/KG_DRY	J	35	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Anthracene	0.0037	MG/KG_DRY	J	35	nc	NA	N
Oxbow Area soil	SS_H-19	0	1	Anthracene	0.015	MG/KG_DRY		35	nc	NA	N
Oxbow Area soil	SS_H-22	0	1	Anthracene	0.008	MG/KG_DRY	U	35	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Benz(a)anthracene	0.02	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Benz(a)anthracene	0.24	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Benz(a)anthracene	0.22	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-01-01	0	1	Benz(a)anthracene	0.97	MG/KG_DRY		0.9	nc	NA	Y
Oxbow Area soil	SS_G-01-02	0	1	Benz(a)anthracene	0.37	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-01-03	0	1	Benz(a)anthracene	0.67	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-01-04	0	1	Benz(a)anthracene	0.068	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-02	0	1	Benz(a)anthracene	0.078	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-03	0	1	Benz(a)anthracene	0.028	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-04	0	1	Benz(a)anthracene	0.19	MG/KG_DRY	J	0.9	nc	NA	N
Oxbow Area soil	SS_G-05	1	2	Benz(a)anthracene	0.0056	MG/KG_DRY	J	0.9	nc	NA	N
Oxbow Area soil	SS_G-05	0	1	Benz(a)anthracene	0.016	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-06	0	1	Benz(a)anthracene	0.027	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-07	0	1	Benz(a)anthracene	0.24	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-08	0	1	Benz(a)anthracene	0.27	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-09	0	1	Benz(a)anthracene	0.48	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-10	0	1	Benz(a)anthracene	0.91	MG/KG_DRY		0.9	nc	NA	Y
Oxbow Area soil	SS_G-12	0	1	Benz(a)anthracene	0.26	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Benz(a)anthracene	19	MG/KG_DRY		0.9	nc	NA	Y
Oxbow Area soil	SS_G-13	0	1	Benz(a)anthracene	52	MG/KG_DRY		0.9	nc	NA	Y
Oxbow Area soil	SS_G-14	0	1	Benz(a)anthracene	0.091	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	Benz(a)anthracene	0.061	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	Benz(a)anthracene	0.44	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-23	0	1	Benz(a)anthracene	1.6	MG/KG_DRY		0.9	nc	NA	Y

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-26	1	2	Benz(a)anthracene	0.01	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-26	0	1	Benz(a)anthracene	0.25	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-29	0	1	Benz(a)anthracene	1.3	MG/KG_DRY		0.9	nc	NA	Y
Oxbow Area soil	SS_G-29-01	0	1	Benz(a)anthracene	2.7	MG/KG_DRY		0.9	nc	NA	Y
Oxbow Area soil	SS_G-29-02	0	1	Benz(a)anthracene	3.1	MG/KG_DRY		0.9	nc	NA	Y
Lyman Mill soil	SS_G-30	0	1	Benz(a)anthracene	0.3	MG/KG_DRY		0.9	nc	NA	N
Lyman Mill soil	SS_G-31	0	1	Benz(a)anthracene	0.59	MG/KG_DRY		0.9	nc	NA	N
Lyman Mill soil	SS_G-32	0	1	Benz(a)anthracene	0.22	MG/KG_DRY		0.9	nc	NA	N
Lyman Mill soil	SS_G-33	0	1	Benz(a)anthracene	0.023	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-01	0	1	Benz(a)anthracene	0.029	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-03	0	1	Benz(a)anthracene	0.018	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-06	0	1	Benz(a)anthracene	0.024	MG/KG_DRY	J	0.9	nc	NA	N
Oxbow Area soil	SS_H-07	0	1	Benz(a)anthracene	0.018	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-10	0	1	Benz(a)anthracene	0.02	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-13	0	1	Benz(a)anthracene	0.039	MG/KG_DRY	J	0.9	nc	NA	N
Oxbow Area soil	SS_H-16	0	1	Benz(a)anthracene	0.038	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Benz(a)anthracene	0.018	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Benz(a)anthracene	0.016	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-19	0	1	Benz(a)anthracene	0.04	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-22	0	1	Benz(a)anthracene	0.024	MG/KG_DRY	J	0.9	nc	NA	N
Oxbow Area soil	SS_G-01	1	2	Benzaldehyde	0.0077	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Benzaldehyde	0.039	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Benzaldehyde	0.039	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Benzaldehyde	0.077	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Benzaldehyde	0.039	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Benzaldehyde	0.039	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	Benzaldehyde	0.039	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Benzaldehyde	0.012	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Benzaldehyde	0.0077	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Benzaldehyde	0.11	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Benzaldehyde	0.0077	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Benzaldehyde	0.0077	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Benzaldehyde	0.0077	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Benzaldehyde	0.04	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Benzaldehyde	0.069	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Benzaldehyde	0.16	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Benzaldehyde	0.077	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Benzaldehyde	0.077	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Benzaldehyde	0.39	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Benzaldehyde	0.77	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Benzaldehyde	0.018	MG/KG_DRY	J	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-15	0	1	Benzaldehyde	0.0087	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Benzaldehyde	0.2	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Benzaldehyde	0.29	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Benzaldehyde	0.0077	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Benzaldehyde	0.039	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Benzaldehyde	0.2	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Benzaldehyde	0.22	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Benzaldehyde	0.077	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Benzaldehyde	0.077	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Benzaldehyde	0.077	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Benzaldehyde	0.077	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Benzaldehyde	0.0077	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Benzaldehyde	0.0077	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Benzaldehyde	0.011	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Benzaldehyde	0.039	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Benzaldehyde	0.012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Benzaldehyde	0.017	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Benzaldehyde	0.077	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Benzaldehyde	0.0077	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Benzaldehyde	0.01	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Benzaldehyde	0.0077	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Benzaldehyde	0.013	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Benzaldehyde	0.039	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Benzo(a)pyrene	0.023	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Benzo(a)pyrene	0.28	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Benzo(a)pyrene	0.28	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-01-01	0	1	Benzo(a)pyrene	1.3	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-01-02	0	1	Benzo(a)pyrene	0.43	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-01-03	0	1	Benzo(a)pyrene	0.83	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-01-04	0	1	Benzo(a)pyrene	0.073	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-02	0	1	Benzo(a)pyrene	0.13	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-03	0	1	Benzo(a)pyrene	0.042	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-04	0	1	Benzo(a)pyrene	0.37	MG/KG_DRY	J	0.4	nc	NA	N
Oxbow Area soil	SS_G-05	1	2	Benzo(a)pyrene	0.007	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-05	0	1	Benzo(a)pyrene	0.023	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-06	0	1	Benzo(a)pyrene	0.056	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-07	0	1	Benzo(a)pyrene	0.23	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-08	0	1	Benzo(a)pyrene	0.29	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-09	0	1	Benzo(a)pyrene	0.46	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-10	0	1	Benzo(a)pyrene	1	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-12	0	1	Benzo(a)pyrene	0.36	MG/KG_DRY		0.4	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-13	0	1	Benzo(a)pyrene	20	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-13	0	1	Benzo(a)pyrene	52	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-14	0	1	Benzo(a)pyrene	0.17	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	Benzo(a)pyrene	0.12	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	Benzo(a)pyrene	0.57	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-23	0	1	Benzo(a)pyrene	2.4	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-26	1	2	Benzo(a)pyrene	0.014	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-26	0	1	Benzo(a)pyrene	0.33	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-29	0	1	Benzo(a)pyrene	1.5	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-29-01	0	1	Benzo(a)pyrene	3.9	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-29-02	0	1	Benzo(a)pyrene	2.9	MG/KG_DRY		0.4	nc	NA	Y
Lyman Mill soil	SS_G-30	0	1	Benzo(a)pyrene	0.41	MG/KG_DRY		0.4	nc	NA	Y
Lyman Mill soil	SS_G-31	0	1	Benzo(a)pyrene	0.67	MG/KG_DRY		0.4	nc	NA	Y
Lyman Mill soil	SS_G-32	0	1	Benzo(a)pyrene	0.29	MG/KG_DRY		0.4	nc	NA	N
Lyman Mill soil	SS_G-33	0	1	Benzo(a)pyrene	0.042	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_H-01	0	1	Benzo(a)pyrene	0.051	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_H-03	0	1	Benzo(a)pyrene	0.015	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_H-06	0	1	Benzo(a)pyrene	0.047	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Benzo(a)pyrene	0.038	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Benzo(a)pyrene	0.049	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Benzo(a)pyrene	0.062	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Benzo(a)pyrene	0.088	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Benzo(a)pyrene	0.015	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Benzo(a)pyrene	0.013	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_H-19	0	1	Benzo(a)pyrene	0.072	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_H-22	0	1	Benzo(a)pyrene	0.03	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Benzo(b)fluoranthene	0.033	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Benzo(b)fluoranthene	0.44	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Benzo(b)fluoranthene	0.42	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-01-01	0	1	Benzo(b)fluoranthene	1.5	MG/KG_DRY		0.9	nc	NA	Y
Oxbow Area soil	SS_G-01-02	0	1	Benzo(b)fluoranthene	0.57	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-01-03	0	1	Benzo(b)fluoranthene	1	MG/KG_DRY		0.9	nc	NA	Y
Oxbow Area soil	SS_G-01-04	0	1	Benzo(b)fluoranthene	0.11	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-02	0	1	Benzo(b)fluoranthene	0.23	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-03	0	1	Benzo(b)fluoranthene	0.052	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-04	0	1	Benzo(b)fluoranthene	0.59	MG/KG_DRY	J	0.9	nc	NA	N
Oxbow Area soil	SS_G-05	1	2	Benzo(b)fluoranthene	0.0098	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-05	0	1	Benzo(b)fluoranthene	0.029	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-06	0	1	Benzo(b)fluoranthene	0.055	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-07	0	1	Benzo(b)fluoranthene	0.37	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-08	0	1	Benzo(b)fluoranthene	0.41	MG/KG_DRY		0.9	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-09	0	1	Benzo(b)fluoranthene	0.7	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-10	0	1	Benzo(b)fluoranthene	1.2	MG/KG_DRY		0.9	nc	NA	Y
Oxbow Area soil	SS_G-12	0	1	Benzo(b)fluoranthene	0.49	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Benzo(b)fluoranthene	22	MG/KG_DRY		0.9	nc	NA	Y
Oxbow Area soil	SS_G-13	0	1	Benzo(b)fluoranthene	50	MG/KG_DRY		0.9	nc	NA	Y
Oxbow Area soil	SS_G-14	0	1	Benzo(b)fluoranthene	0.17	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	Benzo(b)fluoranthene	0.11	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	Benzo(b)fluoranthene	0.83	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-23	0	1	Benzo(b)fluoranthene	3.2	MG/KG_DRY		0.9	nc	NA	Y
Oxbow Area soil	SS_G-26	1	2	Benzo(b)fluoranthene	0.019	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-26	0	1	Benzo(b)fluoranthene	0.48	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-29	0	1	Benzo(b)fluoranthene	2.1	MG/KG_DRY		0.9	nc	NA	Y
Oxbow Area soil	SS_G-29-01	0	1	Benzo(b)fluoranthene	5	MG/KG_DRY		0.9	nc	NA	Y
Oxbow Area soil	SS_G-29-02	0	1	Benzo(b)fluoranthene	3.6	MG/KG_DRY		0.9	nc	NA	Y
Lyman Mill soil	SS_G-30	0	1	Benzo(b)fluoranthene	0.58	MG/KG_DRY		0.9	nc	NA	N
Lyman Mill soil	SS_G-31	0	1	Benzo(b)fluoranthene	0.91	MG/KG_DRY		0.9	nc	NA	Y
Lyman Mill soil	SS_G-32	0	1	Benzo(b)fluoranthene	0.41	MG/KG_DRY		0.9	nc	NA	N
Lyman Mill soil	SS_G-33	0	1	Benzo(b)fluoranthene	0.051	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-01	0	1	Benzo(b)fluoranthene	0.051	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-03	0	1	Benzo(b)fluoranthene	0.027	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-06	0	1	Benzo(b)fluoranthene	0.048	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-07	0	1	Benzo(b)fluoranthene	0.036	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-10	0	1	Benzo(b)fluoranthene	0.044	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-13	0	1	Benzo(b)fluoranthene	0.074	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-16	0	1	Benzo(b)fluoranthene	0.08	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Benzo(b)fluoranthene	0.024	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Benzo(b)fluoranthene	0.021	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-19	0	1	Benzo(b)fluoranthene	0.075	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-22	0	1	Benzo(b)fluoranthene	0.047	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-01	1	2	Benzo(g,h,i)perylene	0.017	MG/KG_DRY		0.8	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Benzo(g,h,i)perylene	0.24	MG/KG_DRY		0.8	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Benzo(g,h,i)perylene	0.22	MG/KG_DRY		0.8	nc	NA	N
Oxbow Area soil	SS_G-01-01	0	1	Benzo(g,h,i)perylene	0.74	MG/KG_DRY		0.8	nc	NA	N
Oxbow Area soil	SS_G-01-02	0	1	Benzo(g,h,i)perylene	0.27	MG/KG_DRY		0.8	nc	NA	N
Oxbow Area soil	SS_G-01-03	0	1	Benzo(g,h,i)perylene	0.52	MG/KG_DRY		0.8	nc	NA	N
Oxbow Area soil	SS_G-01-04	0	1	Benzo(g,h,i)perylene	0.051	MG/KG_DRY		0.8	nc	NA	N
Oxbow Area soil	SS_G-02	0	1	Benzo(g,h,i)perylene	0.13	MG/KG_DRY		0.8	nc	NA	N
Oxbow Area soil	SS_G-03	0	1	Benzo(g,h,i)perylene	0.032	MG/KG_DRY		0.8	nc	NA	N
Oxbow Area soil	SS_G-04	0	1	Benzo(g,h,i)perylene	0.35	MG/KG_DRY	J	0.8	nc	NA	N
Oxbow Area soil	SS_G-05	1	2	Benzo(g,h,i)perylene	0.0061	MG/KG_DRY	J	0.8	nc	NA	N
Oxbow Area soil	SS_G-05	0	1	Benzo(g,h,i)perylene	0.017	MG/KG_DRY		0.8	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-06	0	1	Benzo(g,h,i)perylene	0.032	MG/KG_DRY		0.8	nc	NA	N
Oxbow Area soil	SS_G-07	0	1	Benzo(g,h,i)perylene	0.14	MG/KG_DRY		0.8	nc	NA	N
Oxbow Area soil	SS_G-08	0	1	Benzo(g,h,i)perylene	0.21	MG/KG_DRY		0.8	nc	NA	N
Oxbow Area soil	SS_G-09	0	1	Benzo(g,h,i)perylene	0.38	MG/KG_DRY		0.8	nc	NA	N
Oxbow Area soil	SS_G-10	0	1	Benzo(g,h,i)perylene	0.6	MG/KG_DRY		0.8	nc	NA	N
Oxbow Area soil	SS_G-12	0	1	Benzo(g,h,i)perylene	0.26	MG/KG_DRY		0.8	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Benzo(g,h,i)perylene	9.7	MG/KG_DRY		0.8	nc	NA	Y
Oxbow Area soil	SS_G-13	0	1	Benzo(g,h,i)perylene	25	MG/KG_DRY		0.8	nc	NA	Y
Oxbow Area soil	SS_G-14	0	1	Benzo(g,h,i)perylene	0.1	MG/KG_DRY		0.8	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	Benzo(g,h,i)perylene	0.071	MG/KG_DRY		0.8	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	Benzo(g,h,i)perylene	0.2	MG/KG_DRY	J	0.8	nc	NA	N
Oxbow Area soil	SS_G-23	0	1	Benzo(g,h,i)perylene	2.3	MG/KG_DRY		0.8	nc	NA	Y
Oxbow Area soil	SS_G-26	1	2	Benzo(g,h,i)perylene	0.011	MG/KG_DRY		0.8	nc	NA	N
Oxbow Area soil	SS_G-26	0	1	Benzo(g,h,i)perylene	0.25	MG/KG_DRY		0.8	nc	NA	N
Oxbow Area soil	SS_G-29	0	1	Benzo(g,h,i)perylene	1.1	MG/KG_DRY		0.8	nc	NA	Y
Oxbow Area soil	SS_G-29-01	0	1	Benzo(g,h,i)perylene	2.5	MG/KG_DRY		0.8	nc	NA	Y
Oxbow Area soil	SS_G-29-02	0	1	Benzo(g,h,i)perylene	1.4	MG/KG_DRY		0.8	nc	NA	Y
Lyman Mill soil	SS_G-30	0	1	Benzo(g,h,i)perylene	0.35	MG/KG_DRY		0.8	nc	NA	N
Lyman Mill soil	SS_G-31	0	1	Benzo(g,h,i)perylene	0.51	MG/KG_DRY		0.8	nc	NA	N
Lyman Mill soil	SS_G-32	0	1	Benzo(g,h,i)perylene	0.26	MG/KG_DRY		0.8	nc	NA	N
Lyman Mill soil	SS_G-33	0	1	Benzo(g,h,i)perylene	0.032	MG/KG_DRY		0.8	nc	NA	N
Oxbow Area soil	SS_H-01	0	1	Benzo(g,h,i)perylene	0.027	MG/KG_DRY		0.8	nc	NA	N
Oxbow Area soil	SS_H-03	0	1	Benzo(g,h,i)perylene	0.015	MG/KG_DRY		0.8	nc	NA	N
Oxbow Area soil	SS_H-06	0	1	Benzo(g,h,i)perylene	0.028	MG/KG_DRY		0.8	nc	NA	N
Oxbow Area soil	SS_H-07	0	1	Benzo(g,h,i)perylene	0.025	MG/KG_DRY		0.8	nc	NA	N
Oxbow Area soil	SS_H-10	0	1	Benzo(g,h,i)perylene	0.033	MG/KG_DRY		0.8	nc	NA	N
Oxbow Area soil	SS_H-13	0	1	Benzo(g,h,i)perylene	0.038	MG/KG_DRY	J	0.8	nc	NA	N
Oxbow Area soil	SS_H-16	0	1	Benzo(g,h,i)perylene	0.051	MG/KG_DRY		0.8	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Benzo(g,h,i)perylene	0.015	MG/KG_DRY		0.8	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Benzo(g,h,i)perylene	0.012	MG/KG_DRY		0.8	nc	NA	N
Oxbow Area soil	SS_H-19	0	1	Benzo(g,h,i)perylene	0.049	MG/KG_DRY		0.8	nc	NA	N
Oxbow Area soil	SS_H-22	0	1	Benzo(g,h,i)perylene	0.031	MG/KG_DRY	J	0.8	nc	NA	N
Oxbow Area soil	SS_G-01	1	2	Benzo(k)fluoranthene	0.01	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Benzo(k)fluoranthene	0.13	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Benzo(k)fluoranthene	0.13	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-01-01	0	1	Benzo(k)fluoranthene	0.55	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-01-02	0	1	Benzo(k)fluoranthene	0.19	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-01-03	0	1	Benzo(k)fluoranthene	0.38	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-01-04	0	1	Benzo(k)fluoranthene	0.037	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-02	0	1	Benzo(k)fluoranthene	0.081	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-03	0	1	Benzo(k)fluoranthene	0.018	MG/KG_DRY		0.9	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-04	0	1	Benzo(k)fluoranthene	0.2	MG/KG_DRY	J	0.9	nc	NA	N
Oxbow Area soil	SS_G-05	1	2	Benzo(k)fluoranthene	0.004	MG/KG_DRY	J	0.9	nc	NA	N
Oxbow Area soil	SS_G-05	0	1	Benzo(k)fluoranthene	0.011	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-06	0	1	Benzo(k)fluoranthene	0.016	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-07	0	1	Benzo(k)fluoranthene	0.18	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-08	0	1	Benzo(k)fluoranthene	0.24	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-09	0	1	Benzo(k)fluoranthene	0.36	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-10	0	1	Benzo(k)fluoranthene	0.44	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-12	0	1	Benzo(k)fluoranthene	0.17	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Benzo(k)fluoranthene	7.3	MG/KG_DRY		0.9	nc	NA	Y
Oxbow Area soil	SS_G-13	0	1	Benzo(k)fluoranthene	19	MG/KG_DRY		0.9	nc	NA	Y
Oxbow Area soil	SS_G-14	0	1	Benzo(k)fluoranthene	0.045	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	Benzo(k)fluoranthene	0.04	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	Benzo(k)fluoranthene	0.28	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-23	0	1	Benzo(k)fluoranthene	0.98	MG/KG_DRY		0.9	nc	NA	Y
Oxbow Area soil	SS_G-26	1	2	Benzo(k)fluoranthene	0.0071	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-26	0	1	Benzo(k)fluoranthene	0.16	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-29	0	1	Benzo(k)fluoranthene	0.64	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-29-01	0	1	Benzo(k)fluoranthene	1.7	MG/KG_DRY		0.9	nc	NA	Y
Oxbow Area soil	SS_G-29-02	0	1	Benzo(k)fluoranthene	1.1	MG/KG_DRY		0.9	nc	NA	Y
Lyman Mill soil	SS_G-30	0	1	Benzo(k)fluoranthene	0.17	MG/KG_DRY		0.9	nc	NA	N
Lyman Mill soil	SS_G-31	0	1	Benzo(k)fluoranthene	0.3	MG/KG_DRY		0.9	nc	NA	N
Lyman Mill soil	SS_G-32	0	1	Benzo(k)fluoranthene	0.14	MG/KG_DRY		0.9	nc	NA	N
Lyman Mill soil	SS_G-33	0	1	Benzo(k)fluoranthene	0.017	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-01	0	1	Benzo(k)fluoranthene	0.02	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-03	0	1	Benzo(k)fluoranthene	0.013	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-06	0	1	Benzo(k)fluoranthene	0.017	MG/KG_DRY	J	0.9	nc	NA	N
Oxbow Area soil	SS_H-07	0	1	Benzo(k)fluoranthene	0.013	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-10	0	1	Benzo(k)fluoranthene	0.014	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-13	0	1	Benzo(k)fluoranthene	0.02	MG/KG_DRY	J	0.9	nc	NA	N
Oxbow Area soil	SS_H-16	0	1	Benzo(k)fluoranthene	0.025	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Benzo(k)fluoranthene	0.012	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Benzo(k)fluoranthene	0.0095	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-19	0	1	Benzo(k)fluoranthene	0.02	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-22	0	1	Benzo(k)fluoranthene	0.015	MG/KG_DRY	J	0.9	nc	NA	N
Oxbow Area soil	SS_G-01	1	2	Benzoic Acid	0.096	MG/KG_DRY	R	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Benzoic Acid	0.48	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Benzoic Acid	0.48	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Benzoic Acid	0.96	MG/KG_DRY	R	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Benzoic Acid	0.48	MG/KG_DRY	R	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Benzoic Acid	0.48	MG/KG_DRY	R	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-01-04	0	1	Benzoic Acid	0.48	MG/KG_DRY	R	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Benzoic Acid	0.096	MG/KG_DRY	R	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Benzoic Acid	0.096	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Benzoic Acid	1.3	MG/KG_DRY	R	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Benzoic Acid	0.096	MG/KG_DRY	R	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Benzoic Acid	0.096	MG/KG_DRY	R	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Benzoic Acid	0.8	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Benzoic Acid	0.5	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Benzoic Acid	0.86	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Benzoic Acid	2	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Benzoic Acid	0.96	MG/KG_DRY	R	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Benzoic Acid	0.96	MG/KG_DRY	R	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Benzoic Acid	4.8	MG/KG_DRY	R	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Benzoic Acid	9.6	MG/KG_DRY	R	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Benzoic Acid	0.2	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	Benzoic Acid	0.13	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Benzoic Acid	2.4	MG/KG_DRY	R	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Benzoic Acid	3.5	MG/KG_DRY	R	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Benzoic Acid	0.096	MG/KG_DRY	R	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Benzoic Acid	0.48	MG/KG_DRY	R	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Benzoic Acid	2.4	MG/KG_DRY	R	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Benzoic Acid	2.8	MG/KG_DRY	R	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Benzoic Acid	0.96	MG/KG_DRY	R	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Benzoic Acid	0.96	MG/KG_DRY	R	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Benzoic Acid	0.96	MG/KG_DRY	R	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Benzoic Acid	0.96	MG/KG_DRY	R	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Benzoic Acid	0.096	MG/KG_DRY	R	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Benzoic Acid	0.096	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Benzoic Acid	0.11	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Benzoic Acid	0.48	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Benzoic Acid	0.14	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Benzoic Acid	0.15	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Benzoic Acid	0.96	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Benzoic Acid	0.096	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Benzoic Acid	0.14	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Benzoic Acid	0.15	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Benzoic Acid	0.19	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Benzoic Acid	0.48	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Benzyl Alcohol	0.0021	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Benzyl Alcohol	0.011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Benzyl Alcohol	0.011	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-01-01	0	1	Benzyl Alcohol	0.021	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Benzyl Alcohol	0.011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Benzyl Alcohol	0.011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	Benzyl Alcohol	0.011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Benzyl Alcohol	0.007	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Benzyl Alcohol	0.0021	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Benzyl Alcohol	0.058	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Benzyl Alcohol	0.003	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Benzyl Alcohol	0.0054	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Benzyl Alcohol	0.014	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Benzyl Alcohol	0.011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Benzyl Alcohol	0.019	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Benzyl Alcohol	0.042	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Benzyl Alcohol	0.021	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Benzyl Alcohol	0.021	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Benzyl Alcohol	0.11	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Benzyl Alcohol	0.21	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Benzyl Alcohol	0.0024	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	Benzyl Alcohol	0.0052	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Benzyl Alcohol	0.053	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Benzyl Alcohol	0.077	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Benzyl Alcohol	0.0021	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Benzyl Alcohol	0.011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Benzyl Alcohol	0.053	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Benzyl Alcohol	0.06	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Benzyl Alcohol	0.021	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Benzyl Alcohol	0.021	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Benzyl Alcohol	0.021	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Benzyl Alcohol	0.021	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Benzyl Alcohol	0.0026	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Benzyl Alcohol	0.0021	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Benzyl Alcohol	0.0021	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Benzyl Alcohol	0.011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Benzyl Alcohol	0.0021	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Benzyl Alcohol	0.0021	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Benzyl Alcohol	0.021	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Benzyl Alcohol	0.0068	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Benzyl Alcohol	0.0039	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Benzyl Alcohol	0.0053	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Benzyl Alcohol	0.007	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Benzyl Alcohol	0.011	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-01	1	2	Biphenyl	0.0019	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Biphenyl	0.0095	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Biphenyl	0.0095	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Biphenyl	0.019	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Biphenyl	0.0095	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Biphenyl	0.0095	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	Biphenyl	0.0095	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Biphenyl	0.0019	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Biphenyl	0.0019	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Biphenyl	0.025	MG/KG_DRY	UJ	0.8	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Biphenyl	0.0019	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Biphenyl	0.0019	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Biphenyl	0.0019	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Biphenyl	0.0097	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Biphenyl	0.017	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Biphenyl	0.038	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Biphenyl	0.019	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Biphenyl	0.019	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Biphenyl	0.095	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Biphenyl	0.43	MG/KG_DRY	J	0.8	nc	NA	N
Oxbow Area soil	SS_G-14	0	1	Biphenyl	0.0024	MG/KG_DRY	J	0.8	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	Biphenyl	0.0019	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Biphenyl	0.048	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Biphenyl	0.07	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Biphenyl	0.0019	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Biphenyl	0.0095	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Biphenyl	0.048	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Biphenyl	0.054	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Biphenyl	0.019	MG/KG_DRY	U	0.8	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Biphenyl	0.019	MG/KG_DRY	U	0.8	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Biphenyl	0.019	MG/KG_DRY	U	0.8	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Biphenyl	0.019	MG/KG_DRY	U	0.8	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Biphenyl	0.0019	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Biphenyl	0.0019	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Biphenyl	0.0019	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Biphenyl	0.0095	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Biphenyl	0.0019	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Biphenyl	0.0019	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Biphenyl	0.019	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Biphenyl	0.0019	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Biphenyl	0.0019	MG/KG_DRY	U	0.8	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_H-18	0	1	Biphenyl	0.0019	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Biphenyl	0.0019	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Biphenyl	0.0095	MG/KG_DRY	U	0.8	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Bis(2-chloroethoxy)methane	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Bis(2-chloroethoxy)methane	0.0075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Bis(2-chloroethoxy)methane	0.0075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Bis(2-chloroethoxy)methane	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Bis(2-chloroethoxy)methane	0.0075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Bis(2-chloroethoxy)methane	0.0075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	Bis(2-chloroethoxy)methane	0.0075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Bis(2-chloroethoxy)methane	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Bis(2-chloroethoxy)methane	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Bis(2-chloroethoxy)methane	0.02	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Bis(2-chloroethoxy)methane	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Bis(2-chloroethoxy)methane	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Bis(2-chloroethoxy)methane	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Bis(2-chloroethoxy)methane	0.0077	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Bis(2-chloroethoxy)methane	0.014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Bis(2-chloroethoxy)methane	0.03	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Bis(2-chloroethoxy)methane	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Bis(2-chloroethoxy)methane	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Bis(2-chloroethoxy)methane	0.075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Bis(2-chloroethoxy)methane	0.15	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Bis(2-chloroethoxy)methane	0.0017	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	Bis(2-chloroethoxy)methane	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Bis(2-chloroethoxy)methane	0.038	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Bis(2-chloroethoxy)methane	0.055	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Bis(2-chloroethoxy)methane	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Bis(2-chloroethoxy)methane	0.0075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Bis(2-chloroethoxy)methane	0.038	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Bis(2-chloroethoxy)methane	0.043	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Bis(2-chloroethoxy)methane	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Bis(2-chloroethoxy)methane	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Bis(2-chloroethoxy)methane	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Bis(2-chloroethoxy)methane	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Bis(2-chloroethoxy)methane	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Bis(2-chloroethoxy)methane	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Bis(2-chloroethoxy)methane	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Bis(2-chloroethoxy)methane	0.0075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Bis(2-chloroethoxy)methane	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Bis(2-chloroethoxy)methane	0.0015	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_H-13	0	1	Bis(2-chloroethoxy)methane	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Bis(2-chloroethoxy)methane	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Bis(2-chloroethoxy)methane	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Bis(2-chloroethoxy)methane	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Bis(2-chloroethoxy)methane	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Bis(2-chloroethoxy)methane	0.0075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Bis(2-chloroethyl) Ether	0.0019	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Bis(2-chloroethyl) Ether	0.0095	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Bis(2-chloroethyl) Ether	0.0095	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Bis(2-chloroethyl) Ether	0.019	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Bis(2-chloroethyl) Ether	0.0095	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Bis(2-chloroethyl) Ether	0.0095	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	Bis(2-chloroethyl) Ether	0.0095	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Bis(2-chloroethyl) Ether	0.0019	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Bis(2-chloroethyl) Ether	0.0019	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Bis(2-chloroethyl) Ether	0.025	MG/KG_DRY	UJ	0.6	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Bis(2-chloroethyl) Ether	0.0019	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Bis(2-chloroethyl) Ether	0.0019	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Bis(2-chloroethyl) Ether	0.0019	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Bis(2-chloroethyl) Ether	0.0097	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Bis(2-chloroethyl) Ether	0.017	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Bis(2-chloroethyl) Ether	0.038	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Bis(2-chloroethyl) Ether	0.019	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Bis(2-chloroethyl) Ether	0.019	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Bis(2-chloroethyl) Ether	0.095	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Bis(2-chloroethyl) Ether	0.19	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Bis(2-chloroethyl) Ether	0.0021	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	Bis(2-chloroethyl) Ether	0.0019	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Bis(2-chloroethyl) Ether	0.048	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Bis(2-chloroethyl) Ether	0.07	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Bis(2-chloroethyl) Ether	0.0019	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Bis(2-chloroethyl) Ether	0.0095	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Bis(2-chloroethyl) Ether	0.048	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Bis(2-chloroethyl) Ether	0.054	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Bis(2-chloroethyl) Ether	0.019	MG/KG_DRY	U	0.6	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Bis(2-chloroethyl) Ether	0.019	MG/KG_DRY	U	0.6	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Bis(2-chloroethyl) Ether	0.019	MG/KG_DRY	U	0.6	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Bis(2-chloroethyl) Ether	0.019	MG/KG_DRY	U	0.6	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Bis(2-chloroethyl) Ether	0.0019	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Bis(2-chloroethyl) Ether	0.0019	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Bis(2-chloroethyl) Ether	0.0019	MG/KG_DRY	U	0.6	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_H-06	0	1	Bis(2-chloroethyl) Ether	0.0095	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Bis(2-chloroethyl) Ether	0.0019	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Bis(2-chloroethyl) Ether	0.0019	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Bis(2-chloroethyl) Ether	0.019	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Bis(2-chloroethyl) Ether	0.0019	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Bis(2-chloroethyl) Ether	0.0019	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Bis(2-chloroethyl) Ether	0.0019	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Bis(2-chloroethyl) Ether	0.0019	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Bis(2-chloroethyl) Ether	0.0095	MG/KG_DRY	U	0.6	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Bis(2-chloroisopropyl) Ether	0.0026	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Bis(2-chloroisopropyl) Ether	0.013	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Bis(2-chloroisopropyl) Ether	0.013	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Bis(2-chloroisopropyl) Ether	0.026	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Bis(2-chloroisopropyl) Ether	0.013	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Bis(2-chloroisopropyl) Ether	0.013	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	Bis(2-chloroisopropyl) Ether	0.013	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Bis(2-chloroisopropyl) Ether	0.0026	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Bis(2-chloroisopropyl) Ether	0.0026	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Bis(2-chloroisopropyl) Ether	0.035	MG/KG_DRY	UJ	9.1	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Bis(2-chloroisopropyl) Ether	0.0026	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Bis(2-chloroisopropyl) Ether	0.0026	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Bis(2-chloroisopropyl) Ether	0.0026	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Bis(2-chloroisopropyl) Ether	0.014	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Bis(2-chloroisopropyl) Ether	0.024	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Bis(2-chloroisopropyl) Ether	0.052	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Bis(2-chloroisopropyl) Ether	0.026	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Bis(2-chloroisopropyl) Ether	0.026	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Bis(2-chloroisopropyl) Ether	0.13	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Bis(2-chloroisopropyl) Ether	0.26	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Bis(2-chloroisopropyl) Ether	0.0029	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	Bis(2-chloroisopropyl) Ether	0.0026	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Bis(2-chloroisopropyl) Ether	0.065	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Bis(2-chloroisopropyl) Ether	0.095	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Bis(2-chloroisopropyl) Ether	0.0026	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Bis(2-chloroisopropyl) Ether	0.013	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Bis(2-chloroisopropyl) Ether	0.065	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Bis(2-chloroisopropyl) Ether	0.074	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Bis(2-chloroisopropyl) Ether	0.026	MG/KG_DRY	U	9.1	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Bis(2-chloroisopropyl) Ether	0.026	MG/KG_DRY	U	9.1	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Bis(2-chloroisopropyl) Ether	0.026	MG/KG_DRY	U	9.1	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Bis(2-chloroisopropyl) Ether	0.026	MG/KG_DRY	U	9.1	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	SS_G-33	0	1	Bis(2-chloroisopropyl) Ether	0.0026	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Bis(2-chloroisopropyl) Ether	0.0026	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Bis(2-chloroisopropyl) Ether	0.0026	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Bis(2-chloroisopropyl) Ether	0.013	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Bis(2-chloroisopropyl) Ether	0.0026	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Bis(2-chloroisopropyl) Ether	0.0026	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Bis(2-chloroisopropyl) Ether	0.026	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Bis(2-chloroisopropyl) Ether	0.0026	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Bis(2-chloroisopropyl) Ether	0.0026	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Bis(2-chloroisopropyl) Ether	0.0026	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Bis(2-chloroisopropyl) Ether	0.0026	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Bis(2-chloroisopropyl) Ether	0.013	MG/KG_DRY	U	9.1	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Bis(2-ethylhexyl) Phthalate	0.02	MG/KG_DRY	J	46	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Bis(2-ethylhexyl) Phthalate	0.18	MG/KG_DRY	J	46	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Bis(2-ethylhexyl) Phthalate	0.17	MG/KG_DRY	J	46	nc	NA	N
Oxbow Area soil	SS_G-01-01	0	1	Bis(2-ethylhexyl) Phthalate	0.85	MG/KG_DRY	J	46	nc	NA	N
Oxbow Area soil	SS_G-01-02	0	1	Bis(2-ethylhexyl) Phthalate	0.21	MG/KG_DRY	J	46	nc	NA	N
Oxbow Area soil	SS_G-01-03	0	1	Bis(2-ethylhexyl) Phthalate	0.28	MG/KG_DRY	J	46	nc	NA	N
Oxbow Area soil	SS_G-01-04	0	1	Bis(2-ethylhexyl) Phthalate	0.035	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Bis(2-ethylhexyl) Phthalate	0.031	MG/KG_DRY	J	46	nc	NA	N
Oxbow Area soil	SS_G-03	0	1	Bis(2-ethylhexyl) Phthalate	0.012	MG/KG_DRY	J	46	nc	NA	N
Oxbow Area soil	SS_G-04	0	1	Bis(2-ethylhexyl) Phthalate	0.11	MG/KG_DRY	J	46	nc	NA	N
Oxbow Area soil	SS_G-05	1	2	Bis(2-ethylhexyl) Phthalate	0.007	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Bis(2-ethylhexyl) Phthalate	0.01	MG/KG_DRY	J	46	nc	NA	N
Oxbow Area soil	SS_G-06	0	1	Bis(2-ethylhexyl) Phthalate	0.01	MG/KG_DRY	J	46	nc	NA	N
Oxbow Area soil	SS_G-07	0	1	Bis(2-ethylhexyl) Phthalate	0.11	MG/KG_DRY	J	46	nc	NA	N
Oxbow Area soil	SS_G-08	0	1	Bis(2-ethylhexyl) Phthalate	0.17	MG/KG_DRY	J	46	nc	NA	N
Oxbow Area soil	SS_G-09	0	1	Bis(2-ethylhexyl) Phthalate	0.24	MG/KG_DRY	J	46	nc	NA	N
Oxbow Area soil	SS_G-10	0	1	Bis(2-ethylhexyl) Phthalate	0.07	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Bis(2-ethylhexyl) Phthalate	0.31	MG/KG_DRY	J	46	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Bis(2-ethylhexyl) Phthalate	0.35	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Bis(2-ethylhexyl) Phthalate	0.7	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Bis(2-ethylhexyl) Phthalate	0.041	MG/KG_DRY	J	46	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	Bis(2-ethylhexyl) Phthalate	0.025	MG/KG_DRY	J	46	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	Bis(2-ethylhexyl) Phthalate	0.18	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Bis(2-ethylhexyl) Phthalate	0.33	MG/KG_DRY	J	46	nc	NA	N
Oxbow Area soil	SS_G-26	1	2	Bis(2-ethylhexyl) Phthalate	0.011	MG/KG_DRY	J	46	nc	NA	N
Oxbow Area soil	SS_G-26	0	1	Bis(2-ethylhexyl) Phthalate	0.095	MG/KG_DRY	J	46	nc	NA	N
Oxbow Area soil	SS_G-29	0	1	Bis(2-ethylhexyl) Phthalate	0.53	MG/KG_DRY	J	46	nc	NA	N
Oxbow Area soil	SS_G-29-01	0	1	Bis(2-ethylhexyl) Phthalate	1.3	MG/KG_DRY	J	46	nc	NA	N
Oxbow Area soil	SS_G-29-02	0	1	Bis(2-ethylhexyl) Phthalate	0.14	MG/KG_DRY	J	46	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	SS_G-30	0	1	Bis(2-ethylhexyl) Phthalate	0.07	MG/KG_DRY	U	46	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Bis(2-ethylhexyl) Phthalate	1.2	MG/KG_DRY		46	nc	NA	N
Lyman Mill soil	SS_G-32	0	1	Bis(2-ethylhexyl) Phthalate	0.3	MG/KG_DRY	J	46	nc	NA	N
Lyman Mill soil	SS_G-33	0	1	Bis(2-ethylhexyl) Phthalate	0.017	MG/KG_DRY	J	46	nc	NA	N
Oxbow Area soil	SS_H-01	0	1	Bis(2-ethylhexyl) Phthalate	0.012	MG/KG_DRY	J	46	nc	NA	N
Oxbow Area soil	SS_H-03	0	1	Bis(2-ethylhexyl) Phthalate	0.011	MG/KG_DRY	J	46	nc	NA	N
Oxbow Area soil	SS_H-06	0	1	Bis(2-ethylhexyl) Phthalate	0.035	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Bis(2-ethylhexyl) Phthalate	0.011	MG/KG_DRY	J	46	nc	NA	N
Oxbow Area soil	SS_H-10	0	1	Bis(2-ethylhexyl) Phthalate	0.011	MG/KG_DRY	J	46	nc	NA	N
Oxbow Area soil	SS_H-13	0	1	Bis(2-ethylhexyl) Phthalate	0.07	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Bis(2-ethylhexyl) Phthalate	0.013	MG/KG_DRY	J	46	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Bis(2-ethylhexyl) Phthalate	0.0073	MG/KG_DRY	J	46	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Bis(2-ethylhexyl) Phthalate	0.007	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Bis(2-ethylhexyl) Phthalate	0.018	MG/KG_DRY	J	46	nc	NA	N
Oxbow Area soil	SS_H-22	0	1	Bis(2-ethylhexyl) Phthalate	0.035	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Butyl Benzyl Phthalate	0.0037	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Butyl Benzyl Phthalate	0.031	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Butyl Benzyl Phthalate	0.033	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Butyl Benzyl Phthalate	0.23	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Butyl Benzyl Phthalate	0.048	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Butyl Benzyl Phthalate	0.088	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	Butyl Benzyl Phthalate	0.018	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Butyl Benzyl Phthalate	0.024	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Butyl Benzyl Phthalate	0.0071	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Butyl Benzyl Phthalate	0.11	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Butyl Benzyl Phthalate	0.0032	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Butyl Benzyl Phthalate	0.0058	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Butyl Benzyl Phthalate	0.0059	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Butyl Benzyl Phthalate	0.046	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Butyl Benzyl Phthalate	0.047	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Butyl Benzyl Phthalate	0.091	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Butyl Benzyl Phthalate	0.034	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Butyl Benzyl Phthalate	0.22	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Butyl Benzyl Phthalate	0.16	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Butyl Benzyl Phthalate	0.32	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Butyl Benzyl Phthalate	0.021	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	Butyl Benzyl Phthalate	0.01	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Butyl Benzyl Phthalate	0.095	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Butyl Benzyl Phthalate	0.12	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Butyl Benzyl Phthalate	0.0032	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Butyl Benzyl Phthalate	0.035	MG/KG_DRY		nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-29	0	1	Butyl Benzyl Phthalate	0.08	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Butyl Benzyl Phthalate	0.41	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Butyl Benzyl Phthalate	0.032	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Butyl Benzyl Phthalate	0.032	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Butyl Benzyl Phthalate	0.23	MG/KG_DRY		nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Butyl Benzyl Phthalate	0.084	MG/KG_DRY		nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Butyl Benzyl Phthalate	0.0042	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Butyl Benzyl Phthalate	0.0063	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Butyl Benzyl Phthalate	0.0064	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Butyl Benzyl Phthalate	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Butyl Benzyl Phthalate	0.0087	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Butyl Benzyl Phthalate	0.007	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Butyl Benzyl Phthalate	0.032	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Butyl Benzyl Phthalate	0.0072	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Butyl Benzyl Phthalate	0.0052	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Butyl Benzyl Phthalate	0.0055	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Butyl Benzyl Phthalate	0.01	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Butyl Benzyl Phthalate	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Carbazole	0.0028	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Carbazole	0.032	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Carbazole	0.036	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Carbazole	0.13	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Carbazole	0.05	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Carbazole	0.09	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	Carbazole	0.011	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Carbazole	0.019	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Carbazole	0.0046	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Carbazole	0.043	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Carbazole	0.0014	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Carbazole	0.0034	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Carbazole	0.0054	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Carbazole	0.048	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Carbazole	0.06	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Carbazole	0.089	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Carbazole	0.054	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Carbazole	0.038	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Carbazole	2	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Carbazole	6.8	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Carbazole	0.017	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	Carbazole	0.011	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Carbazole	0.075	MG/KG_DRY	J	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-23	0	1	Carbazole	0.2	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Carbazole	0.0021	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Carbazole	0.04	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Carbazole	0.14	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Carbazole	0.37	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Carbazole	0.57	MG/KG_DRY		nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Carbazole	0.049	MG/KG_DRY	J	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Carbazole	0.053	MG/KG_DRY	J	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Carbazole	0.028	MG/KG_DRY	J	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Carbazole	0.0039	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Carbazole	0.0056	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Carbazole	0.0036	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Carbazole	0.0065	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Carbazole	0.0036	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Carbazole	0.0043	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Carbazole	0.013	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Carbazole	0.0072	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Carbazole	0.0034	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Carbazole	0.003	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Carbazole	0.0081	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Carbazole	0.0065	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Chrysene	0.026	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Chrysene	0.36	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Chrysene	0.33	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-01-01	0	1	Chrysene	1.2	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-01-02	0	1	Chrysene	0.46	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-01-03	0	1	Chrysene	0.88	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-01-04	0	1	Chrysene	0.091	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-02	0	1	Chrysene	0.17	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-03	0	1	Chrysene	0.043	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-04	0	1	Chrysene	0.32	MG/KG_DRY	J	0.4	nc	NA	N
Oxbow Area soil	SS_G-05	1	2	Chrysene	0.0064	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-05	0	1	Chrysene	0.024	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-06	0	1	Chrysene	0.044	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-07	0	1	Chrysene	0.35	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-08	0	1	Chrysene	0.46	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-09	0	1	Chrysene	0.61	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-10	0	1	Chrysene	0.94	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-12	0	1	Chrysene	0.36	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Chrysene	19	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-13	0	1	Chrysene	52	MG/KG_DRY		0.4	nc	NA	Y

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-14	0	1	Chrysene	0.14	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	Chrysene	0.094	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	Chrysene	0.64	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-23	0	1	Chrysene	2.4	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-26	1	2	Chrysene	0.015	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-26	0	1	Chrysene	0.37	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-29	0	1	Chrysene	1.6	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-29-01	0	1	Chrysene	3.7	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-29-02	0	1	Chrysene	3.3	MG/KG_DRY		0.4	nc	NA	Y
Lyman Mill soil	SS_G-30	0	1	Chrysene	0.45	MG/KG_DRY		0.4	nc	NA	Y
Lyman Mill soil	SS_G-31	0	1	Chrysene	0.74	MG/KG_DRY		0.4	nc	NA	Y
Lyman Mill soil	SS_G-32	0	1	Chrysene	0.32	MG/KG_DRY		0.4	nc	NA	N
Lyman Mill soil	SS_G-33	0	1	Chrysene	0.036	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_H-01	0	1	Chrysene	0.034	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_H-03	0	1	Chrysene	0.026	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_H-06	0	1	Chrysene	0.042	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_H-07	0	1	Chrysene	0.029	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_H-10	0	1	Chrysene	0.036	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_H-13	0	1	Chrysene	0.047	MG/KG_DRY	J	0.4	nc	NA	N
Oxbow Area soil	SS_H-16	0	1	Chrysene	0.062	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Chrysene	0.025	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Chrysene	0.021	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_H-19	0	1	Chrysene	0.068	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_H-22	0	1	Chrysene	0.033	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-01	1	2	Dibenz(a,h)anthracene	0.0037	MG/KG_DRY	J	0.4	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Dibenz(a,h)anthracene	0.058	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Dibenz(a,h)anthracene	0.054	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-01-01	0	1	Dibenz(a,h)anthracene	0.2	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-01-02	0	1	Dibenz(a,h)anthracene	0.074	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-01-03	0	1	Dibenz(a,h)anthracene	0.13	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-01-04	0	1	Dibenz(a,h)anthracene	0.013	MG/KG_DRY	J	0.4	nc	NA	N
Oxbow Area soil	SS_G-02	0	1	Dibenz(a,h)anthracene	0.023	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-03	0	1	Dibenz(a,h)anthracene	0.0076	MG/KG_DRY	J	0.4	nc	NA	N
Oxbow Area soil	SS_G-04	0	1	Dibenz(a,h)anthracene	0.057	MG/KG_DRY	J	0.4	nc	NA	N
Oxbow Area soil	SS_G-05	1	2	Dibenz(a,h)anthracene	0.0015	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Dibenz(a,h)anthracene	0.0038	MG/KG_DRY	J	0.4	nc	NA	N
Oxbow Area soil	SS_G-06	0	1	Dibenz(a,h)anthracene	0.0064	MG/KG_DRY	J	0.4	nc	NA	N
Oxbow Area soil	SS_G-07	0	1	Dibenz(a,h)anthracene	0.031	MG/KG_DRY	J	0.4	nc	NA	N
Oxbow Area soil	SS_G-08	0	1	Dibenz(a,h)anthracene	0.041	MG/KG_DRY	J	0.4	nc	NA	N
Oxbow Area soil	SS_G-09	0	1	Dibenz(a,h)anthracene	0.082	MG/KG_DRY	J	0.4	nc	NA	N
Oxbow Area soil	SS_G-10	0	1	Dibenz(a,h)anthracene	0.16	MG/KG_DRY		0.4	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-12	0	1	Dibenz(a,h)anthracene	0.068	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Dibenz(a,h)anthracene	2.8	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-13	0	1	Dibenz(a,h)anthracene	7.3	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-14	0	1	Dibenz(a,h)anthracene	0.021	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	Dibenz(a,h)anthracene	0.014	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	Dibenz(a,h)anthracene	0.1	MG/KG_DRY	J	0.4	nc	NA	N
Oxbow Area soil	SS_G-23	0	1	Dibenz(a,h)anthracene	0.49	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-26	1	2	Dibenz(a,h)anthracene	0.0026	MG/KG_DRY	J	0.4	nc	NA	N
Oxbow Area soil	SS_G-26	0	1	Dibenz(a,h)anthracene	0.055	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-29	0	1	Dibenz(a,h)anthracene	0.27	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_G-29-01	0	1	Dibenz(a,h)anthracene	0.68	MG/KG_DRY		0.4	nc	NA	Y
Oxbow Area soil	SS_G-29-02	0	1	Dibenz(a,h)anthracene	0.43	MG/KG_DRY		0.4	nc	NA	Y
Lyman Mill soil	SS_G-30	0	1	Dibenz(a,h)anthracene	0.079	MG/KG_DRY		0.4	nc	NA	N
Lyman Mill soil	SS_G-31	0	1	Dibenz(a,h)anthracene	0.12	MG/KG_DRY		0.4	nc	NA	N
Lyman Mill soil	SS_G-32	0	1	Dibenz(a,h)anthracene	0.054	MG/KG_DRY	J	0.4	nc	NA	N
Lyman Mill soil	SS_G-33	0	1	Dibenz(a,h)anthracene	0.0062	MG/KG_DRY	J	0.4	nc	NA	N
Oxbow Area soil	SS_H-01	0	1	Dibenz(a,h)anthracene	0.0063	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_H-03	0	1	Dibenz(a,h)anthracene	0.003	MG/KG_DRY	J	0.4	nc	NA	N
Oxbow Area soil	SS_H-06	0	1	Dibenz(a,h)anthracene	0.0075	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Dibenz(a,h)anthracene	0.0053	MG/KG_DRY	J	0.4	nc	NA	N
Oxbow Area soil	SS_H-10	0	1	Dibenz(a,h)anthracene	0.0015	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Dibenz(a,h)anthracene	0.015	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Dibenz(a,h)anthracene	0.0083	MG/KG_DRY		0.4	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Dibenz(a,h)anthracene	0.0025	MG/KG_DRY	J	0.4	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Dibenz(a,h)anthracene	0.0022	MG/KG_DRY	J	0.4	nc	NA	N
Oxbow Area soil	SS_H-19	0	1	Dibenz(a,h)anthracene	0.0015	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Dibenz(a,h)anthracene	0.0075	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Dibenzofuran	0.0012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Dibenzofuran	0.0089	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Dibenzofuran	0.0098	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Dibenzofuran	0.041	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Dibenzofuran	0.013	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Dibenzofuran	0.02	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	Dibenzofuran	0.006	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Dibenzofuran	0.0025	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Dibenzofuran	0.0012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Dibenzofuran	0.016	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Dibenzofuran	0.0012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Dibenzofuran	0.0012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Dibenzofuran	0.0015	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Dibenzofuran	0.011	MG/KG_DRY	J	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-08	0	1	Dibenzofuran	0.011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Dibenzofuran	0.024	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Dibenzofuran	0.012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Dibenzofuran	0.012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Dibenzofuran	0.81	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Dibenzofuran	4.1	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Dibenzofuran	0.0053	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	Dibenzofuran	0.0025	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Dibenzofuran	0.03	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Dibenzofuran	0.057	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Dibenzofuran	0.0012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Dibenzofuran	0.0087	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Dibenzofuran	0.041	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Dibenzofuran	0.075	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Dibenzofuran	0.14	MG/KG_DRY		nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Dibenzofuran	0.019	MG/KG_DRY	J	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Dibenzofuran	0.016	MG/KG_DRY	J	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Dibenzofuran	0.012	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Dibenzofuran	0.0012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Dibenzofuran	0.0014	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Dibenzofuran	0.0013	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Dibenzofuran	0.006	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Dibenzofuran	0.0012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Dibenzofuran	0.0017	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Dibenzofuran	0.012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Dibenzofuran	0.0019	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Dibenzofuran	0.0012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Dibenzofuran	0.0012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Dibenzofuran	0.0023	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Dibenzofuran	0.006	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Diethyl Phthalate	0.0013	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Diethyl Phthalate	0.0065	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Diethyl Phthalate	0.0065	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Diethyl Phthalate	0.013	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Diethyl Phthalate	0.0065	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Diethyl Phthalate	0.0065	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	Diethyl Phthalate	0.054	MG/KG_DRY		340	nc	NA	N
Oxbow Area soil	SS_G-02	0	1	Diethyl Phthalate	0.0013	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Diethyl Phthalate	0.0013	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Diethyl Phthalate	0.018	MG/KG_DRY	UJ	340	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Diethyl Phthalate	0.0013	MG/KG_DRY	U	340	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-05	0	1	Diethyl Phthalate	0.0013	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Diethyl Phthalate	0.0013	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Diethyl Phthalate	0.0067	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Diethyl Phthalate	0.012	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Diethyl Phthalate	0.026	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Diethyl Phthalate	0.013	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Diethyl Phthalate	0.013	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Diethyl Phthalate	0.065	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Diethyl Phthalate	0.13	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Diethyl Phthalate	0.0021	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	Diethyl Phthalate	0.0013	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Diethyl Phthalate	0.033	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Diethyl Phthalate	0.048	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Diethyl Phthalate	0.0013	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Diethyl Phthalate	0.0065	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Diethyl Phthalate	0.033	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Diethyl Phthalate	0.037	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Diethyl Phthalate	0.013	MG/KG_DRY	U	340	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Diethyl Phthalate	0.013	MG/KG_DRY	U	340	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Diethyl Phthalate	0.013	MG/KG_DRY	U	340	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Diethyl Phthalate	0.013	MG/KG_DRY	U	340	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Diethyl Phthalate	0.0015	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Diethyl Phthalate	0.0016	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Diethyl Phthalate	0.0013	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Diethyl Phthalate	0.0065	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Diethyl Phthalate	0.0013	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Diethyl Phthalate	0.0013	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Diethyl Phthalate	0.013	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Diethyl Phthalate	0.0013	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Diethyl Phthalate	0.0013	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Diethyl Phthalate	0.0013	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Diethyl Phthalate	0.0013	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Diethyl Phthalate	0.0065	MG/KG_DRY	U	340	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Dimethyl Phthalate	0.001	MG/KG_DRY	U	1900	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Dimethyl Phthalate	0.035	MG/KG_DRY		1900	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Dimethyl Phthalate	0.03	MG/KG_DRY	J	1900	nc	NA	N
Oxbow Area soil	SS_G-01-01	0	1	Dimethyl Phthalate	0.055	MG/KG_DRY	J	1900	nc	NA	N
Oxbow Area soil	SS_G-01-02	0	1	Dimethyl Phthalate	0.065	MG/KG_DRY		1900	nc	NA	N
Oxbow Area soil	SS_G-01-03	0	1	Dimethyl Phthalate	0.16	MG/KG_DRY		1900	nc	NA	N
Oxbow Area soil	SS_G-01-04	0	1	Dimethyl Phthalate	0.005	MG/KG_DRY	U	1900	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Dimethyl Phthalate	0.001	MG/KG_DRY	U	1900	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-03	0	1	Dimethyl Phthalate	0.001	MG/KG_DRY	U	1900	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Dimethyl Phthalate	0.12	MG/KG_DRY	J	1900	nc	NA	N
Oxbow Area soil	SS_G-05	1	2	Dimethyl Phthalate	0.001	MG/KG_DRY	U	1900	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Dimethyl Phthalate	0.001	MG/KG_DRY	U	1900	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Dimethyl Phthalate	0.001	MG/KG_DRY	U	1900	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Dimethyl Phthalate	0.052	MG/KG_DRY		1900	nc	NA	N
Oxbow Area soil	SS_G-08	0	1	Dimethyl Phthalate	0.082	MG/KG_DRY	J	1900	nc	NA	N
Oxbow Area soil	SS_G-09	0	1	Dimethyl Phthalate	0.067	MG/KG_DRY	J	1900	nc	NA	N
Oxbow Area soil	SS_G-10	0	1	Dimethyl Phthalate	0.079	MG/KG_DRY		1900	nc	NA	N
Oxbow Area soil	SS_G-12	0	1	Dimethyl Phthalate	0.04	MG/KG_DRY	J	1900	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Dimethyl Phthalate	0.05	MG/KG_DRY	U	1900	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Dimethyl Phthalate	0.1	MG/KG_DRY	U	1900	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Dimethyl Phthalate	0.0012	MG/KG_DRY	U	1900	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	Dimethyl Phthalate	0.001	MG/KG_DRY	U	1900	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Dimethyl Phthalate	0.046	MG/KG_DRY	J	1900	nc	NA	N
Oxbow Area soil	SS_G-23	0	1	Dimethyl Phthalate	0.13	MG/KG_DRY	J	1900	nc	NA	N
Oxbow Area soil	SS_G-26	1	2	Dimethyl Phthalate	0.001	MG/KG_DRY	U	1900	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Dimethyl Phthalate	0.025	MG/KG_DRY	J	1900	nc	NA	N
Oxbow Area soil	SS_G-29	0	1	Dimethyl Phthalate	0.047	MG/KG_DRY	J	1900	nc	NA	N
Oxbow Area soil	SS_G-29-01	0	1	Dimethyl Phthalate	0.038	MG/KG_DRY	J	1900	nc	NA	N
Oxbow Area soil	SS_G-29-02	0	1	Dimethyl Phthalate	0.033	MG/KG_DRY	J	1900	nc	NA	N
Lyman Mill soil	SS_G-30	0	1	Dimethyl Phthalate	0.028	MG/KG_DRY	J	1900	nc	NA	N
Lyman Mill soil	SS_G-31	0	1	Dimethyl Phthalate	0.07	MG/KG_DRY	J	1900	nc	NA	N
Lyman Mill soil	SS_G-32	0	1	Dimethyl Phthalate	0.048	MG/KG_DRY	J	1900	nc	NA	N
Lyman Mill soil	SS_G-33	0	1	Dimethyl Phthalate	0.001	MG/KG_DRY	U	1900	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Dimethyl Phthalate	0.001	MG/KG_DRY	U	1900	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Dimethyl Phthalate	0.001	MG/KG_DRY	U	1900	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Dimethyl Phthalate	0.005	MG/KG_DRY	U	1900	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Dimethyl Phthalate	0.001	MG/KG_DRY	U	1900	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Dimethyl Phthalate	0.001	MG/KG_DRY	U	1900	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Dimethyl Phthalate	0.03	MG/KG_DRY	J	1900	nc	NA	N
Oxbow Area soil	SS_H-16	0	1	Dimethyl Phthalate	0.001	MG/KG_DRY	U	1900	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Dimethyl Phthalate	0.001	MG/KG_DRY	U	1900	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Dimethyl Phthalate	0.001	MG/KG_DRY	U	1900	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Dimethyl Phthalate	0.001	MG/KG_DRY	U	1900	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Dimethyl Phthalate	0.005	MG/KG_DRY	U	1900	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Di-n-butyl Phthalate	0.0079	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Di-n-butyl Phthalate	0.04	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Di-n-butyl Phthalate	0.04	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Di-n-butyl Phthalate	0.079	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Di-n-butyl Phthalate	0.04	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-01-03	0	1	Di-n-butyl Phthalate	0.04	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	Di-n-butyl Phthalate	0.04	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Di-n-butyl Phthalate	0.0079	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Di-n-butyl Phthalate	0.0079	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Di-n-butyl Phthalate	0.11	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Di-n-butyl Phthalate	0.0079	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Di-n-butyl Phthalate	0.0079	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Di-n-butyl Phthalate	0.0079	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Di-n-butyl Phthalate	0.041	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Di-n-butyl Phthalate	0.071	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Di-n-butyl Phthalate	0.16	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Di-n-butyl Phthalate	0.079	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Di-n-butyl Phthalate	0.079	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Di-n-butyl Phthalate	0.4	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Di-n-butyl Phthalate	0.79	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Di-n-butyl Phthalate	0.0091	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	Di-n-butyl Phthalate	0.0079	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Di-n-butyl Phthalate	0.2	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Di-n-butyl Phthalate	0.29	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Di-n-butyl Phthalate	0.0079	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Di-n-butyl Phthalate	0.04	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Di-n-butyl Phthalate	0.2	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Di-n-butyl Phthalate	0.23	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Di-n-butyl Phthalate	0.079	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Di-n-butyl Phthalate	0.079	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Di-n-butyl Phthalate	0.079	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Di-n-butyl Phthalate	0.079	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Di-n-butyl Phthalate	0.0079	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Di-n-butyl Phthalate	0.0079	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Di-n-butyl Phthalate	0.0079	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Di-n-butyl Phthalate	0.04	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Di-n-butyl Phthalate	0.0079	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Di-n-butyl Phthalate	0.0079	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Di-n-butyl Phthalate	0.079	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Di-n-butyl Phthalate	0.0084	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Di-n-butyl Phthalate	0.0079	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Di-n-butyl Phthalate	0.0079	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Di-n-butyl Phthalate	0.01	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Di-n-butyl Phthalate	0.04	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Di-n-octyl Phthalate	0.0017	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Di-n-octyl Phthalate	0.0085	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-01	0	1	Di-n-octyl Phthalate	0.0085	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Di-n-octyl Phthalate	0.017	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Di-n-octyl Phthalate	0.0085	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Di-n-octyl Phthalate	0.0085	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	Di-n-octyl Phthalate	0.0085	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Di-n-octyl Phthalate	0.0017	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Di-n-octyl Phthalate	0.0017	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Di-n-octyl Phthalate	0.023	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Di-n-octyl Phthalate	0.0017	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Di-n-octyl Phthalate	0.0017	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Di-n-octyl Phthalate	0.0017	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Di-n-octyl Phthalate	0.0087	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Di-n-octyl Phthalate	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Di-n-octyl Phthalate	0.034	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Di-n-octyl Phthalate	0.017	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Di-n-octyl Phthalate	0.062	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Di-n-octyl Phthalate	0.085	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Di-n-octyl Phthalate	0.17	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Di-n-octyl Phthalate	0.0019	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	Di-n-octyl Phthalate	0.0017	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Di-n-octyl Phthalate	0.043	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Di-n-octyl Phthalate	0.062	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Di-n-octyl Phthalate	0.0017	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Di-n-octyl Phthalate	0.0085	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Di-n-octyl Phthalate	0.043	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Di-n-octyl Phthalate	0.048	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Di-n-octyl Phthalate	0.017	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Di-n-octyl Phthalate	0.017	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Di-n-octyl Phthalate	0.017	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Di-n-octyl Phthalate	0.017	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Di-n-octyl Phthalate	0.0017	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Di-n-octyl Phthalate	0.0017	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Di-n-octyl Phthalate	0.0017	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Di-n-octyl Phthalate	0.0085	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Di-n-octyl Phthalate	0.0017	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Di-n-octyl Phthalate	0.0017	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Di-n-octyl Phthalate	0.017	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Di-n-octyl Phthalate	0.0017	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Di-n-octyl Phthalate	0.0017	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Di-n-octyl Phthalate	0.0017	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Di-n-octyl Phthalate	0.0017	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_H-22	0	1	Di-n-octyl Phthalate	0.0085	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Fluoranthene	0.044	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Fluoranthene	0.5	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Fluoranthene	0.5	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_G-01-01	0	1	Fluoranthene	2.2	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_G-01-02	0	1	Fluoranthene	0.79	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_G-01-03	0	1	Fluoranthene	1.4	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_G-01-04	0	1	Fluoranthene	0.13	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_G-02	0	1	Fluoranthene	0.28	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_G-03	0	1	Fluoranthene	0.061	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_G-04	0	1	Fluoranthene	0.58	MG/KG_DRY	J	20	nc	NA	N
Oxbow Area soil	SS_G-05	1	2	Fluoranthene	0.012	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_G-05	0	1	Fluoranthene	0.037	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_G-06	0	1	Fluoranthene	0.067	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_G-07	0	1	Fluoranthene	0.68	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_G-08	0	1	Fluoranthene	0.83	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_G-09	0	1	Fluoranthene	1	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_G-10	0	1	Fluoranthene	1.8	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_G-12	0	1	Fluoranthene	0.48	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Fluoranthene	34	MG/KG_DRY		20	nc	NA	Y
Oxbow Area soil	SS_G-13	0	1	Fluoranthene	100	MG/KG_DRY		20	nc	NA	Y
Oxbow Area soil	SS_G-14	0	1	Fluoranthene	0.23	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	Fluoranthene	0.15	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	Fluoranthene	0.98	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_G-23	0	1	Fluoranthene	2.7	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_G-26	1	2	Fluoranthene	0.022	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_G-26	0	1	Fluoranthene	0.59	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_G-29	0	1	Fluoranthene	2.6	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_G-29-01	0	1	Fluoranthene	6.6	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_G-29-02	0	1	Fluoranthene	5.8	MG/KG_DRY		20	nc	NA	N
Lyman Mill soil	SS_G-30	0	1	Fluoranthene	0.64	MG/KG_DRY		20	nc	NA	N
Lyman Mill soil	SS_G-31	0	1	Fluoranthene	1.3	MG/KG_DRY		20	nc	NA	N
Lyman Mill soil	SS_G-32	0	1	Fluoranthene	0.47	MG/KG_DRY		20	nc	NA	N
Lyman Mill soil	SS_G-33	0	1	Fluoranthene	0.052	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_H-01	0	1	Fluoranthene	0.071	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_H-03	0	1	Fluoranthene	0.042	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_H-06	0	1	Fluoranthene	0.067	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_H-07	0	1	Fluoranthene	0.046	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_H-10	0	1	Fluoranthene	0.054	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_H-13	0	1	Fluoranthene	0.086	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_H-16	0	1	Fluoranthene	0.099	MG/KG_DRY		20	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_H-18	0	1	Fluoranthene	0.037	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Fluoranthene	0.032	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_H-19	0	1	Fluoranthene	0.11	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_H-22	0	1	Fluoranthene	0.055	MG/KG_DRY		20	nc	NA	N
Oxbow Area soil	SS_G-01	1	2	Fluorene	0.0012	MG/KG_DRY	J	28	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Fluorene	0.016	MG/KG_DRY	J	28	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Fluorene	0.018	MG/KG_DRY	J	28	nc	NA	N
Oxbow Area soil	SS_G-01-01	0	1	Fluorene	0.079	MG/KG_DRY	J	28	nc	NA	N
Oxbow Area soil	SS_G-01-02	0	1	Fluorene	0.024	MG/KG_DRY	J	28	nc	NA	N
Oxbow Area soil	SS_G-01-03	0	1	Fluorene	0.041	MG/KG_DRY		28	nc	NA	N
Oxbow Area soil	SS_G-01-04	0	1	Fluorene	0.0055	MG/KG_DRY	U	28	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Fluorene	0.0036	MG/KG_DRY	J	28	nc	NA	N
Oxbow Area soil	SS_G-03	0	1	Fluorene	0.0026	MG/KG_DRY	J	28	nc	NA	N
Oxbow Area soil	SS_G-04	0	1	Fluorene	0.015	MG/KG_DRY	UJ	28	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Fluorene	0.0011	MG/KG_DRY	U	28	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Fluorene	0.0011	MG/KG_DRY	J	28	nc	NA	N
Oxbow Area soil	SS_G-06	0	1	Fluorene	0.0027	MG/KG_DRY	J	28	nc	NA	N
Oxbow Area soil	SS_G-07	0	1	Fluorene	0.02	MG/KG_DRY	J	28	nc	NA	N
Oxbow Area soil	SS_G-08	0	1	Fluorene	0.022	MG/KG_DRY	J	28	nc	NA	N
Oxbow Area soil	SS_G-09	0	1	Fluorene	0.036	MG/KG_DRY	J	28	nc	NA	N
Oxbow Area soil	SS_G-10	0	1	Fluorene	0.03	MG/KG_DRY	J	28	nc	NA	N
Oxbow Area soil	SS_G-12	0	1	Fluorene	0.016	MG/KG_DRY	J	28	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Fluorene	1.6	MG/KG_DRY		28	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Fluorene	7.2	MG/KG_DRY		28	nc	NA	N
Oxbow Area soil	SS_G-14	0	1	Fluorene	0.0074	MG/KG_DRY	J	28	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	Fluorene	0.0044	MG/KG_DRY	J	28	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	Fluorene	0.039	MG/KG_DRY	J	28	nc	NA	N
Oxbow Area soil	SS_G-23	0	1	Fluorene	0.078	MG/KG_DRY	J	28	nc	NA	N
Oxbow Area soil	SS_G-26	1	2	Fluorene	0.0011	MG/KG_DRY	U	28	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Fluorene	0.016	MG/KG_DRY	J	28	nc	NA	N
Oxbow Area soil	SS_G-29	0	1	Fluorene	0.086	MG/KG_DRY	J	28	nc	NA	N
Oxbow Area soil	SS_G-29-01	0	1	Fluorene	0.17	MG/KG_DRY	J	28	nc	NA	N
Oxbow Area soil	SS_G-29-02	0	1	Fluorene	0.35	MG/KG_DRY		28	nc	NA	N
Lyman Mill soil	SS_G-30	0	1	Fluorene	0.034	MG/KG_DRY	J	28	nc	NA	N
Lyman Mill soil	SS_G-31	0	1	Fluorene	0.045	MG/KG_DRY	J	28	nc	NA	N
Lyman Mill soil	SS_G-32	0	1	Fluorene	0.011	MG/KG_DRY	U	28	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Fluorene	0.0019	MG/KG_DRY	J	28	nc	NA	N
Oxbow Area soil	SS_H-01	0	1	Fluorene	0.0029	MG/KG_DRY	J	28	nc	NA	N
Oxbow Area soil	SS_H-03	0	1	Fluorene	0.0021	MG/KG_DRY	J	28	nc	NA	N
Oxbow Area soil	SS_H-06	0	1	Fluorene	0.0055	MG/KG_DRY	U	28	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Fluorene	0.0011	MG/KG_DRY	U	28	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_H-10	0	1	Fluorene	0.0011	MG/KG_DRY	U	28	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Fluorene	0.011	MG/KG_DRY	U	28	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Fluorene	0.003	MG/KG_DRY	J	28	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Fluorene	0.0022	MG/KG_DRY	J	28	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Fluorene	0.0014	MG/KG_DRY	J	28	nc	NA	N
Oxbow Area soil	SS_H-19	0	1	Fluorene	0.0037	MG/KG_DRY	J	28	nc	NA	N
Oxbow Area soil	SS_H-22	0	1	Fluorene	0.0055	MG/KG_DRY	U	28	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Hexachlorobenzene	0.0012	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Hexachlorobenzene	0.006	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Hexachlorobenzene	0.006	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Hexachlorobenzene	0.012	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Hexachlorobenzene	0.006	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Hexachlorobenzene	0.006	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	Hexachlorobenzene	0.006	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Hexachlorobenzene	0.0012	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Hexachlorobenzene	0.0012	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Hexachlorobenzene	0.016	MG/KG_DRY	UJ	0.4	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Hexachlorobenzene	0.0012	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Hexachlorobenzene	0.0012	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Hexachlorobenzene	0.0012	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Hexachlorobenzene	0.0061	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Hexachlorobenzene	0.011	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Hexachlorobenzene	0.024	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Hexachlorobenzene	0.012	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Hexachlorobenzene	0.012	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Hexachlorobenzene	0.06	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Hexachlorobenzene	0.12	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Hexachlorobenzene	0.0014	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	Hexachlorobenzene	0.0012	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Hexachlorobenzene	0.03	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Hexachlorobenzene	0.044	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Hexachlorobenzene	0.0012	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Hexachlorobenzene	0.006	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Hexachlorobenzene	0.03	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Hexachlorobenzene	0.034	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Hexachlorobenzene	0.012	MG/KG_DRY	U	0.4	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Hexachlorobenzene	0.012	MG/KG_DRY	U	0.4	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Hexachlorobenzene	0.012	MG/KG_DRY	U	0.4	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Hexachlorobenzene	0.012	MG/KG_DRY	U	0.4	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Hexachlorobenzene	0.0012	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Hexachlorobenzene	0.0012	MG/KG_DRY	U	0.4	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_H-03	0	1	Hexachlorobenzene	0.0012	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Hexachlorobenzene	0.006	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Hexachlorobenzene	0.0012	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Hexachlorobenzene	0.0012	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Hexachlorobenzene	0.012	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Hexachlorobenzene	0.0012	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Hexachlorobenzene	0.0012	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Hexachlorobenzene	0.0012	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Hexachlorobenzene	0.0012	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Hexachlorobenzene	0.006	MG/KG_DRY	U	0.4	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Hexachlorobutadiene	0.0025	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Hexachlorobutadiene	0.013	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Hexachlorobutadiene	0.013	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Hexachlorobutadiene	0.025	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Hexachlorobutadiene	0.013	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Hexachlorobutadiene	0.013	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	Hexachlorobutadiene	0.013	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Hexachlorobutadiene	0.0025	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Hexachlorobutadiene	0.0025	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Hexachlorobutadiene	0.033	MG/KG_DRY	UJ	8.2	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Hexachlorobutadiene	0.0025	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Hexachlorobutadiene	0.0025	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Hexachlorobutadiene	0.0025	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Hexachlorobutadiene	0.013	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Hexachlorobutadiene	0.023	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Hexachlorobutadiene	0.05	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Hexachlorobutadiene	0.025	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Hexachlorobutadiene	0.025	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Hexachlorobutadiene	0.13	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Hexachlorobutadiene	0.25	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Hexachlorobutadiene	0.0028	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	Hexachlorobutadiene	0.0025	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Hexachlorobutadiene	0.063	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Hexachlorobutadiene	0.091	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Hexachlorobutadiene	0.0025	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Hexachlorobutadiene	0.013	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Hexachlorobutadiene	0.063	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Hexachlorobutadiene	0.071	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Hexachlorobutadiene	0.025	MG/KG_DRY	U	8.2	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Hexachlorobutadiene	0.025	MG/KG_DRY	U	8.2	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Hexachlorobutadiene	0.025	MG/KG_DRY	U	8.2	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	SS_G-32	0	1	Hexachlorobutadiene	0.025	MG/KG_DRY	U	8.2	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Hexachlorobutadiene	0.0025	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Hexachlorobutadiene	0.0025	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Hexachlorobutadiene	0.0025	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Hexachlorobutadiene	0.013	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Hexachlorobutadiene	0.0025	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Hexachlorobutadiene	0.0025	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Hexachlorobutadiene	0.025	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Hexachlorobutadiene	0.0025	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Hexachlorobutadiene	0.0025	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Hexachlorobutadiene	0.0025	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Hexachlorobutadiene	0.0025	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Hexachlorobutadiene	0.013	MG/KG_DRY	U	8.2	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Hexachlorocyclopentadiene	0.029	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Hexachlorocyclopentadiene	0.15	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Hexachlorocyclopentadiene	0.15	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Hexachlorocyclopentadiene	0.29	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Hexachlorocyclopentadiene	0.15	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Hexachlorocyclopentadiene	0.15	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	Hexachlorocyclopentadiene	0.15	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Hexachlorocyclopentadiene	0.029	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Hexachlorocyclopentadiene	0.029	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Hexachlorocyclopentadiene	0.39	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Hexachlorocyclopentadiene	0.029	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Hexachlorocyclopentadiene	0.029	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Hexachlorocyclopentadiene	0.029	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Hexachlorocyclopentadiene	0.15	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Hexachlorocyclopentadiene	0.26	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Hexachlorocyclopentadiene	0.58	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Hexachlorocyclopentadiene	0.29	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Hexachlorocyclopentadiene	0.29	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Hexachlorocyclopentadiene	1.5	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Hexachlorocyclopentadiene	2.9	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Hexachlorocyclopentadiene	0.032	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	Hexachlorocyclopentadiene	0.029	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Hexachlorocyclopentadiene	0.73	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Hexachlorocyclopentadiene	1.1	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Hexachlorocyclopentadiene	0.029	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Hexachlorocyclopentadiene	0.15	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Hexachlorocyclopentadiene	0.73	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Hexachlorocyclopentadiene	0.82	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-29-02	0	1	Hexachlorocyclopentadiene	0.29	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Hexachlorocyclopentadiene	0.29	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Hexachlorocyclopentadiene	0.29	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Hexachlorocyclopentadiene	0.29	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Hexachlorocyclopentadiene	0.029	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Hexachlorocyclopentadiene	0.029	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Hexachlorocyclopentadiene	0.029	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Hexachlorocyclopentadiene	0.15	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Hexachlorocyclopentadiene	0.029	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Hexachlorocyclopentadiene	0.029	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Hexachlorocyclopentadiene	0.29	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Hexachlorocyclopentadiene	0.029	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Hexachlorocyclopentadiene	0.029	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Hexachlorocyclopentadiene	0.029	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Hexachlorocyclopentadiene	0.029	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Hexachlorocyclopentadiene	0.15	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Hexachloroethane	0.0031	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Hexachloroethane	0.016	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Hexachloroethane	0.016	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Hexachloroethane	0.031	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Hexachloroethane	0.016	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Hexachloroethane	0.016	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	Hexachloroethane	0.016	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Hexachloroethane	0.0031	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Hexachloroethane	0.0031	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Hexachloroethane	0.041	MG/KG_DRY	UJ	46	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Hexachloroethane	0.0031	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Hexachloroethane	0.0031	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Hexachloroethane	0.0031	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Hexachloroethane	0.016	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Hexachloroethane	0.028	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Hexachloroethane	0.062	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Hexachloroethane	0.031	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Hexachloroethane	0.031	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Hexachloroethane	0.16	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Hexachloroethane	0.31	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Hexachloroethane	0.0035	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	Hexachloroethane	0.0031	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Hexachloroethane	0.078	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Hexachloroethane	0.12	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Hexachloroethane	0.0031	MG/KG_DRY	U	46	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-26	0	1	Hexachloroethane	0.016	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Hexachloroethane	0.078	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Hexachloroethane	0.088	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Hexachloroethane	0.031	MG/KG_DRY	U	46	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Hexachloroethane	0.031	MG/KG_DRY	U	46	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Hexachloroethane	0.031	MG/KG_DRY	U	46	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Hexachloroethane	0.031	MG/KG_DRY	U	46	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Hexachloroethane	0.0031	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Hexachloroethane	0.0031	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Hexachloroethane	0.0031	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Hexachloroethane	0.016	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Hexachloroethane	0.0031	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Hexachloroethane	0.0031	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Hexachloroethane	0.031	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Hexachloroethane	0.0031	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Hexachloroethane	0.0031	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Hexachloroethane	0.0031	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Hexachloroethane	0.0031	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Hexachloroethane	0.016	MG/KG_DRY	U	46	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Indeno(1,2,3-cd)pyrene	0.017	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Indeno(1,2,3-cd)pyrene	0.24	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Indeno(1,2,3-cd)pyrene	0.23	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-01-01	0	1	Indeno(1,2,3-cd)pyrene	0.74	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-01-02	0	1	Indeno(1,2,3-cd)pyrene	0.3	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-01-03	0	1	Indeno(1,2,3-cd)pyrene	0.56	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-01-04	0	1	Indeno(1,2,3-cd)pyrene	0.058	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-02	0	1	Indeno(1,2,3-cd)pyrene	0.13	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-03	0	1	Indeno(1,2,3-cd)pyrene	0.031	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-04	0	1	Indeno(1,2,3-cd)pyrene	0.37	MG/KG_DRY	J	0.9	nc	NA	N
Oxbow Area soil	SS_G-05	1	2	Indeno(1,2,3-cd)pyrene	0.0057	MG/KG_DRY	J	0.9	nc	NA	N
Oxbow Area soil	SS_G-05	0	1	Indeno(1,2,3-cd)pyrene	0.017	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-06	0	1	Indeno(1,2,3-cd)pyrene	0.031	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-07	0	1	Indeno(1,2,3-cd)pyrene	0.23	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-08	0	1	Indeno(1,2,3-cd)pyrene	0.28	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-09	0	1	Indeno(1,2,3-cd)pyrene	0.49	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-10	0	1	Indeno(1,2,3-cd)pyrene	0.65	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-12	0	1	Indeno(1,2,3-cd)pyrene	0.27	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Indeno(1,2,3-cd)pyrene	11	MG/KG_DRY		0.9	nc	NA	Y
Oxbow Area soil	SS_G-13	0	1	Indeno(1,2,3-cd)pyrene	30	MG/KG_DRY		0.9	nc	NA	Y
Oxbow Area soil	SS_G-14	0	1	Indeno(1,2,3-cd)pyrene	0.1	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	Indeno(1,2,3-cd)pyrene	0.076	MG/KG_DRY		0.9	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-18	0	1	Indeno(1,2,3-cd)pyrene	0.46	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-23	0	1	Indeno(1,2,3-cd)pyrene	2.1	MG/KG_DRY		0.9	nc	NA	Y
Oxbow Area soil	SS_G-26	1	2	Indeno(1,2,3-cd)pyrene	0.011	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-26	0	1	Indeno(1,2,3-cd)pyrene	0.26	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_G-29	0	1	Indeno(1,2,3-cd)pyrene	1.1	MG/KG_DRY		0.9	nc	NA	Y
Oxbow Area soil	SS_G-29-01	0	1	Indeno(1,2,3-cd)pyrene	2.8	MG/KG_DRY		0.9	nc	NA	Y
Oxbow Area soil	SS_G-29-02	0	1	Indeno(1,2,3-cd)pyrene	1.7	MG/KG_DRY		0.9	nc	NA	Y
Lyman Mill soil	SS_G-30	0	1	Indeno(1,2,3-cd)pyrene	0.37	MG/KG_DRY		0.9	nc	NA	N
Lyman Mill soil	SS_G-31	0	1	Indeno(1,2,3-cd)pyrene	0.53	MG/KG_DRY		0.9	nc	NA	N
Lyman Mill soil	SS_G-32	0	1	Indeno(1,2,3-cd)pyrene	0.24	MG/KG_DRY		0.9	nc	NA	N
Lyman Mill soil	SS_G-33	0	1	Indeno(1,2,3-cd)pyrene	0.036	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-01	0	1	Indeno(1,2,3-cd)pyrene	0.03	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-03	0	1	Indeno(1,2,3-cd)pyrene	0.018	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-06	0	1	Indeno(1,2,3-cd)pyrene	0.027	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-07	0	1	Indeno(1,2,3-cd)pyrene	0.025	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-10	0	1	Indeno(1,2,3-cd)pyrene	0.03	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-13	0	1	Indeno(1,2,3-cd)pyrene	0.048	MG/KG_DRY	J	0.9	nc	NA	N
Oxbow Area soil	SS_H-16	0	1	Indeno(1,2,3-cd)pyrene	0.053	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Indeno(1,2,3-cd)pyrene	0.014	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Indeno(1,2,3-cd)pyrene	0.012	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-19	0	1	Indeno(1,2,3-cd)pyrene	0.045	MG/KG_DRY		0.9	nc	NA	N
Oxbow Area soil	SS_H-22	0	1	Indeno(1,2,3-cd)pyrene	0.028	MG/KG_DRY	J	0.9	nc	NA	N
Oxbow Area soil	SS_G-01	1	2	Isophorone	0.001	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Isophorone	0.005	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Isophorone	0.005	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Isophorone	0.01	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Isophorone	0.005	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Isophorone	0.005	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	Isophorone	0.005	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Isophorone	0.001	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Isophorone	0.001	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Isophorone	0.014	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Isophorone	0.001	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Isophorone	0.001	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Isophorone	0.001	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Isophorone	0.0051	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Isophorone	0.0089	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Isophorone	0.02	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Isophorone	0.01	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Isophorone	0.01	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Isophorone	0.05	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-13	0	1	Isophorone	0.1	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Isophorone	0.0012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	Isophorone	0.001	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Isophorone	0.025	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Isophorone	0.037	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Isophorone	0.001	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Isophorone	0.005	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Isophorone	0.025	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Isophorone	0.029	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Isophorone	0.01	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Isophorone	0.01	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Isophorone	0.01	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Isophorone	0.01	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Isophorone	0.001	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Isophorone	0.001	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Isophorone	0.001	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Isophorone	0.005	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Isophorone	0.001	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Isophorone	0.001	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Isophorone	0.01	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Isophorone	0.001	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Isophorone	0.001	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Isophorone	0.001	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Isophorone	0.001	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Isophorone	0.005	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Naphthalene	0.0023	MG/KG_DRY	U	54	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Naphthalene	0.015	MG/KG_DRY	J	54	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Naphthalene	0.013	MG/KG_DRY	J	54	nc	NA	N
Oxbow Area soil	SS_G-01-01	0	1	Naphthalene	0.032	MG/KG_DRY	J	54	nc	NA	N
Oxbow Area soil	SS_G-01-02	0	1	Naphthalene	0.012	MG/KG_DRY	U	54	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Naphthalene	0.02	MG/KG_DRY	J	54	nc	NA	N
Oxbow Area soil	SS_G-01-04	0	1	Naphthalene	0.012	MG/KG_DRY	U	54	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Naphthalene	0.0037	MG/KG_DRY	J	54	nc	NA	N
Oxbow Area soil	SS_G-03	0	1	Naphthalene	0.0033	MG/KG_DRY	J	54	nc	NA	N
Oxbow Area soil	SS_G-04	0	1	Naphthalene	0.031	MG/KG_DRY	UJ	54	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Naphthalene	0.0023	MG/KG_DRY	U	54	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Naphthalene	0.0023	MG/KG_DRY	U	54	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Naphthalene	0.0026	MG/KG_DRY	J	54	nc	NA	N
Oxbow Area soil	SS_G-07	0	1	Naphthalene	0.019	MG/KG_DRY	J	54	nc	NA	N
Oxbow Area soil	SS_G-08	0	1	Naphthalene	0.021	MG/KG_DRY	U	54	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Naphthalene	0.046	MG/KG_DRY	U	54	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-10	0	1	Naphthalene	0.023	MG/KG_DRY	U	54	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Naphthalene	0.023	MG/KG_DRY	U	54	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Naphthalene	0.47	MG/KG_DRY		54	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Naphthalene	3.8	MG/KG_DRY		54	nc	NA	N
Oxbow Area soil	SS_G-14	0	1	Naphthalene	0.0091	MG/KG_DRY	J	54	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	Naphthalene	0.0041	MG/KG_DRY	J	54	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	Naphthalene	0.058	MG/KG_DRY	U	54	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Naphthalene	0.084	MG/KG_DRY	U	54	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Naphthalene	0.0023	MG/KG_DRY	U	54	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Naphthalene	0.012	MG/KG_DRY	U	54	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Naphthalene	0.058	MG/KG_DRY	U	54	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Naphthalene	0.084	MG/KG_DRY	J	54	nc	NA	N
Oxbow Area soil	SS_G-29-02	0	1	Naphthalene	0.037	MG/KG_DRY	J	54	nc	NA	N
Lyman Mill soil	SS_G-30	0	1	Naphthalene	0.025	MG/KG_DRY	J	54	nc	NA	N
Lyman Mill soil	SS_G-31	0	1	Naphthalene	0.023	MG/KG_DRY	U	54	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Naphthalene	0.023	MG/KG_DRY	U	54	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Naphthalene	0.0023	MG/KG_DRY	U	54	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Naphthalene	0.003	MG/KG_DRY	J	54	nc	NA	N
Oxbow Area soil	SS_H-03	0	1	Naphthalene	0.0023	MG/KG_DRY	U	54	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Naphthalene	0.012	MG/KG_DRY	U	54	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Naphthalene	0.0023	MG/KG_DRY	U	54	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Naphthalene	0.0032	MG/KG_DRY	J	54	nc	NA	N
Oxbow Area soil	SS_H-13	0	1	Naphthalene	0.023	MG/KG_DRY	U	54	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Naphthalene	0.0041	MG/KG_DRY	J	54	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Naphthalene	0.0023	MG/KG_DRY	U	54	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Naphthalene	0.0023	MG/KG_DRY	U	54	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Naphthalene	0.0038	MG/KG_DRY	J	54	nc	NA	N
Oxbow Area soil	SS_H-22	0	1	Naphthalene	0.012	MG/KG_DRY	U	54	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Nitrobenzene	0.0022	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Nitrobenzene	0.019	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Nitrobenzene	0.016	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Nitrobenzene	0.022	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Nitrobenzene	0.011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Nitrobenzene	0.011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	Nitrobenzene	0.011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Nitrobenzene	0.0022	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Nitrobenzene	0.0022	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Nitrobenzene	0.029	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Nitrobenzene	0.0022	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Nitrobenzene	0.0022	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Nitrobenzene	0.0022	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-07	0	1	Nitrobenzene	0.012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Nitrobenzene	0.02	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Nitrobenzene	0.044	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Nitrobenzene	0.022	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Nitrobenzene	0.022	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Nitrobenzene	2.9	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Nitrobenzene	3.5	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Nitrobenzene	0.0025	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	Nitrobenzene	0.0022	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Nitrobenzene	0.055	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Nitrobenzene	0.081	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Nitrobenzene	0.0022	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Nitrobenzene	0.011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Nitrobenzene	0.055	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Nitrobenzene	0.063	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Nitrobenzene	0.022	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Nitrobenzene	0.022	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Nitrobenzene	0.022	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Nitrobenzene	0.022	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Nitrobenzene	0.0022	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Nitrobenzene	0.0022	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Nitrobenzene	0.0022	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Nitrobenzene	0.011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Nitrobenzene	0.0022	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Nitrobenzene	0.0022	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Nitrobenzene	0.022	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Nitrobenzene	0.0022	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Nitrobenzene	0.0022	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Nitrobenzene	0.0022	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Nitrobenzene	0.0022	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Nitrobenzene	0.011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	N-Nitrosodi-n-propylamine	0.0024	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	N-Nitrosodi-n-propylamine	0.012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	N-Nitrosodi-n-propylamine	0.012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	N-Nitrosodi-n-propylamine	0.024	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	N-Nitrosodi-n-propylamine	0.012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	N-Nitrosodi-n-propylamine	0.012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	N-Nitrosodi-n-propylamine	0.012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	N-Nitrosodi-n-propylamine	0.0024	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	N-Nitrosodi-n-propylamine	0.0024	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	N-Nitrosodi-n-propylamine	0.032	MG/KG_DRY	UJ	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-05	1	2	N-Nitrosodi-n-propylamine	0.0024	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	N-Nitrosodi-n-propylamine	0.0024	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	N-Nitrosodi-n-propylamine	0.0024	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	N-Nitrosodi-n-propylamine	0.013	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	N-Nitrosodi-n-propylamine	0.022	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	N-Nitrosodi-n-propylamine	0.048	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	N-Nitrosodi-n-propylamine	0.024	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	N-Nitrosodi-n-propylamine	0.024	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	N-Nitrosodi-n-propylamine	0.12	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	N-Nitrosodi-n-propylamine	0.24	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	N-Nitrosodi-n-propylamine	0.0027	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	N-Nitrosodi-n-propylamine	0.0024	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	N-Nitrosodi-n-propylamine	0.06	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	N-Nitrosodi-n-propylamine	0.088	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	N-Nitrosodi-n-propylamine	0.0024	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	N-Nitrosodi-n-propylamine	0.012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	N-Nitrosodi-n-propylamine	0.06	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	N-Nitrosodi-n-propylamine	0.068	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	N-Nitrosodi-n-propylamine	0.024	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	N-Nitrosodi-n-propylamine	0.024	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	N-Nitrosodi-n-propylamine	0.024	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	N-Nitrosodi-n-propylamine	0.024	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	N-Nitrosodi-n-propylamine	0.0024	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	N-Nitrosodi-n-propylamine	0.0024	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	N-Nitrosodi-n-propylamine	0.0024	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	N-Nitrosodi-n-propylamine	0.012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	N-Nitrosodi-n-propylamine	0.0024	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	N-Nitrosodi-n-propylamine	0.0024	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	N-Nitrosodi-n-propylamine	0.024	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	N-Nitrosodi-n-propylamine	0.0024	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	N-Nitrosodi-n-propylamine	0.0024	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	N-Nitrosodi-n-propylamine	0.0024	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	N-Nitrosodi-n-propylamine	0.0024	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	N-Nitrosodi-n-propylamine	0.012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	N-Nitrosodiphenylamine	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	N-Nitrosodiphenylamine	0.008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	N-Nitrosodiphenylamine	0.008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	N-Nitrosodiphenylamine	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	N-Nitrosodiphenylamine	0.008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	N-Nitrosodiphenylamine	0.008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	N-Nitrosodiphenylamine	0.008	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-02	0	1	N-Nitrosodiphenylamine	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	N-Nitrosodiphenylamine	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	N-Nitrosodiphenylamine	0.022	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	N-Nitrosodiphenylamine	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	N-Nitrosodiphenylamine	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	N-Nitrosodiphenylamine	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	N-Nitrosodiphenylamine	0.0082	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	N-Nitrosodiphenylamine	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	N-Nitrosodiphenylamine	0.032	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	N-Nitrosodiphenylamine	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	N-Nitrosodiphenylamine	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	N-Nitrosodiphenylamine	0.08	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	N-Nitrosodiphenylamine	0.16	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	N-Nitrosodiphenylamine	0.0018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	N-Nitrosodiphenylamine	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	N-Nitrosodiphenylamine	0.04	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	N-Nitrosodiphenylamine	0.059	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	N-Nitrosodiphenylamine	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	N-Nitrosodiphenylamine	0.008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	N-Nitrosodiphenylamine	0.04	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	N-Nitrosodiphenylamine	0.046	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	N-Nitrosodiphenylamine	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	N-Nitrosodiphenylamine	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	N-Nitrosodiphenylamine	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	N-Nitrosodiphenylamine	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	N-Nitrosodiphenylamine	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	N-Nitrosodiphenylamine	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	N-Nitrosodiphenylamine	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	N-Nitrosodiphenylamine	0.008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	N-Nitrosodiphenylamine	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	N-Nitrosodiphenylamine	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	N-Nitrosodiphenylamine	0.016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	N-Nitrosodiphenylamine	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	N-Nitrosodiphenylamine	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	N-Nitrosodiphenylamine	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	N-Nitrosodiphenylamine	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	N-Nitrosodiphenylamine	0.008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Pentachlorophenol	0.02	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Pentachlorophenol	0.1	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Pentachlorophenol	0.1	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Pentachlorophenol	0.2	MG/KG_DRY	U	5.3	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-01-02	0	1	Pentachlorophenol	0.1	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Pentachlorophenol	0.1	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	Pentachlorophenol	0.1	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Pentachlorophenol	0.02	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Pentachlorophenol	0.02	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Pentachlorophenol	0.27	MG/KG_DRY	UJ	5.3	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Pentachlorophenol	0.02	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Pentachlorophenol	0.02	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Pentachlorophenol	0.02	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Pentachlorophenol	0.11	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Pentachlorophenol	0.18	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Pentachlorophenol	0.4	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Pentachlorophenol	0.2	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Pentachlorophenol	0.2	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Pentachlorophenol	1	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Pentachlorophenol	2	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Pentachlorophenol	0.023	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	Pentachlorophenol	0.02	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Pentachlorophenol	0.5	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Pentachlorophenol	0.73	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Pentachlorophenol	0.02	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Pentachlorophenol	0.1	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Pentachlorophenol	0.5	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Pentachlorophenol	0.57	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Pentachlorophenol	0.2	MG/KG_DRY	U	5.3	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Pentachlorophenol	0.2	MG/KG_DRY	U	5.3	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Pentachlorophenol	0.2	MG/KG_DRY	U	5.3	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Pentachlorophenol	0.2	MG/KG_DRY	U	5.3	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Pentachlorophenol	0.02	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Pentachlorophenol	0.02	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Pentachlorophenol	0.02	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Pentachlorophenol	0.1	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Pentachlorophenol	0.02	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Pentachlorophenol	0.02	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Pentachlorophenol	0.2	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Pentachlorophenol	0.02	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Pentachlorophenol	0.02	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Pentachlorophenol	0.02	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Pentachlorophenol	0.02	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Pentachlorophenol	0.1	MG/KG_DRY	U	5.3	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Phenanthrene	0.019	MG/KG_DRY		40	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-01	0	1	Phenanthrene	0.24	MG/KG_DRY		40	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Phenanthrene	0.23	MG/KG_DRY		40	nc	NA	N
Oxbow Area soil	SS_G-01-01	0	1	Phenanthrene	0.97	MG/KG_DRY		40	nc	NA	N
Oxbow Area soil	SS_G-01-02	0	1	Phenanthrene	0.33	MG/KG_DRY		40	nc	NA	N
Oxbow Area soil	SS_G-01-03	0	1	Phenanthrene	0.58	MG/KG_DRY		40	nc	NA	N
Oxbow Area soil	SS_G-01-04	0	1	Phenanthrene	0.05	MG/KG_DRY		40	nc	NA	N
Oxbow Area soil	SS_G-02	0	1	Phenanthrene	0.084	MG/KG_DRY		40	nc	NA	N
Oxbow Area soil	SS_G-03	0	1	Phenanthrene	0.028	MG/KG_DRY		40	nc	NA	N
Oxbow Area soil	SS_G-04	0	1	Phenanthrene	0.18	MG/KG_DRY	J	40	nc	NA	N
Oxbow Area soil	SS_G-05	1	2	Phenanthrene	0.0057	MG/KG_DRY	J	40	nc	NA	N
Oxbow Area soil	SS_G-05	0	1	Phenanthrene	0.018	MG/KG_DRY		40	nc	NA	N
Oxbow Area soil	SS_G-06	0	1	Phenanthrene	0.029	MG/KG_DRY		40	nc	NA	N
Oxbow Area soil	SS_G-07	0	1	Phenanthrene	0.25	MG/KG_DRY		40	nc	NA	N
Oxbow Area soil	SS_G-08	0	1	Phenanthrene	0.28	MG/KG_DRY		40	nc	NA	N
Oxbow Area soil	SS_G-09	0	1	Phenanthrene	0.45	MG/KG_DRY		40	nc	NA	N
Oxbow Area soil	SS_G-10	0	1	Phenanthrene	0.35	MG/KG_DRY		40	nc	NA	N
Oxbow Area soil	SS_G-12	0	1	Phenanthrene	0.17	MG/KG_DRY		40	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Phenanthrene	21	MG/KG_DRY		40	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Phenanthrene	67	MG/KG_DRY		40	nc	NA	Y
Oxbow Area soil	SS_G-14	0	1	Phenanthrene	0.11	MG/KG_DRY		40	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	Phenanthrene	0.064	MG/KG_DRY		40	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	Phenanthrene	0.42	MG/KG_DRY		40	nc	NA	N
Oxbow Area soil	SS_G-23	0	1	Phenanthrene	1.1	MG/KG_DRY		40	nc	NA	N
Oxbow Area soil	SS_G-26	1	2	Phenanthrene	0.0089	MG/KG_DRY		40	nc	NA	N
Oxbow Area soil	SS_G-26	0	1	Phenanthrene	0.24	MG/KG_DRY		40	nc	NA	N
Oxbow Area soil	SS_G-29	0	1	Phenanthrene	1.1	MG/KG_DRY		40	nc	NA	N
Oxbow Area soil	SS_G-29-01	0	1	Phenanthrene	2.3	MG/KG_DRY		40	nc	NA	N
Oxbow Area soil	SS_G-29-02	0	1	Phenanthrene	5	MG/KG_DRY		40	nc	NA	N
Lyman Mill soil	SS_G-30	0	1	Phenanthrene	0.37	MG/KG_DRY		40	nc	NA	N
Lyman Mill soil	SS_G-31	0	1	Phenanthrene	0.57	MG/KG_DRY		40	nc	NA	N
Lyman Mill soil	SS_G-32	0	1	Phenanthrene	0.17	MG/KG_DRY		40	nc	NA	N
Lyman Mill soil	SS_G-33	0	1	Phenanthrene	0.023	MG/KG_DRY		40	nc	NA	N
Oxbow Area soil	SS_H-01	0	1	Phenanthrene	0.039	MG/KG_DRY		40	nc	NA	N
Oxbow Area soil	SS_H-03	0	1	Phenanthrene	0.023	MG/KG_DRY		40	nc	NA	N
Oxbow Area soil	SS_H-06	0	1	Phenanthrene	0.033	MG/KG_DRY		40	nc	NA	N
Oxbow Area soil	SS_H-07	0	1	Phenanthrene	0.022	MG/KG_DRY		40	nc	NA	N
Oxbow Area soil	SS_H-10	0	1	Phenanthrene	0.029	MG/KG_DRY		40	nc	NA	N
Oxbow Area soil	SS_H-13	0	1	Phenanthrene	0.046	MG/KG_DRY	J	40	nc	NA	N
Oxbow Area soil	SS_H-16	0	1	Phenanthrene	0.046	MG/KG_DRY		40	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Phenanthrene	0.021	MG/KG_DRY		40	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Phenanthrene	0.018	MG/KG_DRY		40	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_H-19	0	1	Phenanthrene	0.055	MG/KG_DRY		40	nc	NA	N
Oxbow Area soil	SS_H-22	0	1	Phenanthrene	0.03	MG/KG_DRY	J	40	nc	NA	N
Oxbow Area soil	SS_G-01	1	2	Phenol	0.002	MG/KG_DRY	U	6000	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Phenol	0.01	MG/KG_DRY	U	6000	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Phenol	0.01	MG/KG_DRY	U	6000	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Phenol	0.02	MG/KG_DRY	U	6000	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Phenol	0.01	MG/KG_DRY	U	6000	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Phenol	0.01	MG/KG_DRY	U	6000	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	Phenol	0.01	MG/KG_DRY	U	6000	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Phenol	0.0049	MG/KG_DRY	J	6000	nc	NA	N
Oxbow Area soil	SS_G-03	0	1	Phenol	0.002	MG/KG_DRY	U	6000	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Phenol	0.033	MG/KG_DRY	J	6000	nc	NA	N
Oxbow Area soil	SS_G-05	1	2	Phenol	0.002	MG/KG_DRY	U	6000	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Phenol	0.002	MG/KG_DRY	U	6000	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Phenol	0.002	MG/KG_DRY	U	6000	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Phenol	0.011	MG/KG_DRY	U	6000	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Phenol	0.018	MG/KG_DRY	U	6000	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Phenol	0.04	MG/KG_DRY	U	6000	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Phenol	0.02	MG/KG_DRY	U	6000	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Phenol	0.02	MG/KG_DRY	U	6000	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Phenol	0.1	MG/KG_DRY	U	6000	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Phenol	0.2	MG/KG_DRY	U	6000	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Phenol	0.0023	MG/KG_DRY	U	6000	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	Phenol	0.0068	MG/KG_DRY	J	6000	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	Phenol	0.05	MG/KG_DRY	U	6000	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Phenol	0.073	MG/KG_DRY	U	6000	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Phenol	0.002	MG/KG_DRY	U	6000	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Phenol	0.01	MG/KG_DRY	U	6000	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Phenol	0.05	MG/KG_DRY	U	6000	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Phenol	0.057	MG/KG_DRY	U	6000	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Phenol	0.02	MG/KG_DRY	U	6000	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Phenol	0.02	MG/KG_DRY	U	6000	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Phenol	0.02	MG/KG_DRY	U	6000	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Phenol	0.02	MG/KG_DRY	U	6000	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Phenol	0.002	MG/KG_DRY	U	6000	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Phenol	0.002	MG/KG_DRY	U	6000	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Phenol	0.002	MG/KG_DRY	U	6000	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Phenol	0.01	MG/KG_DRY	U	6000	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Phenol	0.002	MG/KG_DRY	U	6000	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Phenol	0.002	MG/KG_DRY	U	6000	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Phenol	0.02	MG/KG_DRY	U	6000	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_H-16	0	1	Phenol	0.002	MG/KG_DRY	U	6000	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Phenol	0.002	MG/KG_DRY	U	6000	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Phenol	0.0026	MG/KG_DRY	J	6000	nc	NA	N
Oxbow Area soil	SS_H-19	0	1	Phenol	0.0029	MG/KG_DRY	J	6000	nc	NA	N
Oxbow Area soil	SS_H-22	0	1	Phenol	0.01	MG/KG_DRY	U	6000	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Pyrene	0.04	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Pyrene	0.47	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Pyrene	0.45	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_G-01-01	0	1	Pyrene	2	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_G-01-02	0	1	Pyrene	0.76	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_G-01-03	0	1	Pyrene	1.4	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_G-01-04	0	1	Pyrene	0.13	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_G-02	0	1	Pyrene	0.23	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_G-03	0	1	Pyrene	0.059	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_G-04	0	1	Pyrene	0.5	MG/KG_DRY	J	13	nc	NA	N
Oxbow Area soil	SS_G-05	1	2	Pyrene	0.013	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_G-05	0	1	Pyrene	0.037	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_G-06	0	1	Pyrene	0.066	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_G-07	0	1	Pyrene	0.55	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_G-08	0	1	Pyrene	0.69	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_G-09	0	1	Pyrene	0.91	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_G-10	0	1	Pyrene	1.7	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_G-12	0	1	Pyrene	0.52	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Pyrene	33	MG/KG_DRY		13	nc	NA	Y
Oxbow Area soil	SS_G-13	0	1	Pyrene	90	MG/KG_DRY		13	nc	NA	Y
Oxbow Area soil	SS_G-14	0	1	Pyrene	0.22	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	Pyrene	0.15	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	Pyrene	0.91	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_G-23	0	1	Pyrene	2.7	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_G-26	1	2	Pyrene	0.022	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_G-26	0	1	Pyrene	0.55	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_G-29	0	1	Pyrene	2.4	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_G-29-01	0	1	Pyrene	5.5	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_G-29-02	0	1	Pyrene	6.8	MG/KG_DRY		13	nc	NA	N
Lyman Mill soil	SS_G-30	0	1	Pyrene	0.65	MG/KG_DRY		13	nc	NA	N
Lyman Mill soil	SS_G-31	0	1	Pyrene	1.2	MG/KG_DRY		13	nc	NA	N
Lyman Mill soil	SS_G-32	0	1	Pyrene	0.45	MG/KG_DRY		13	nc	NA	N
Lyman Mill soil	SS_G-33	0	1	Pyrene	0.051	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_H-01	0	1	Pyrene	0.076	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_H-03	0	1	Pyrene	0.041	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_H-06	0	1	Pyrene	0.059	MG/KG_DRY		13	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_H-07	0	1	Pyrene	0.044	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_H-10	0	1	Pyrene	0.055	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_H-13	0	1	Pyrene	0.086	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_H-16	0	1	Pyrene	0.1	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Pyrene	0.039	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Pyrene	0.032	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_H-19	0	1	Pyrene	0.11	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_H-22	0	1	Pyrene	0.052	MG/KG_DRY		13	nc	NA	N
Oxbow Area soil	SS_G-01			4,4'-DDD	0.00096	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	4,4'-DDD	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	4,4'-DDD	0.00063	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	4,4'-DDD	0.00055	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	4,4'-DDD	0.0008	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	4,4'-DDD	0.00011	MG/KG_DRY	R	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	4,4'-DDD	0.00099	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	4,4'-DDD	0.0002	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	4,4'-DDD	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	4,4'-DDD	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	4,4'-DDD	0.003	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	4,4'-DDD	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	4,4'-DDD	0.00018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	4,4'-DDD	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	4,4'-DDD	0.0022	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	4,4'-DDD	0.00048	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	4,4'-DDD	0.0011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	4,4'-DDD	0.00096	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	4,4'-DDD	0.00062	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	4,4'-DDD	0.0013	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	4,4'-DDD	0.0018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	4,4'-DDD	0.00014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	4,4'-DDD	0.00016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	4,4'-DDD	0.00079	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	4,4'-DDD	0.0041	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	4,4'-DDD	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	4,4'-DDD	0.00065	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	4,4'-DDD	0.0026	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	4,4'-DDD	0.0064	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	4,4'-DDD	0.001	MG/KG_DRY		nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	4,4'-DDD	0.0038	MG/KG_DRY		nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	4,4'-DDD	0.014	MG/KG_DRY		nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	4,4'-DDD	0.0041	MG/KG_DRY		nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	SS_G-33	0	1	4,4'-DDD	0.0007	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	4,4'-DDD	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	4,4'-DDD	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	4,4'-DDD	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	4,4'-DDD	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	4,4'-DDD	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	4,4'-DDD	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	4,4'-DDD	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	4,4'-DDD	0.00024	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	4,4'-DDD	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	4,4'-DDD	0.00013	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	4,4'-DDD	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01			4,4'-DDE	0.0037	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	4,4'-DDE	0.00097	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	4,4'-DDE	0.0036	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	4,4'-DDE	0.004	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	4,4'-DDE	0.0073	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	4,4'-DDE	0.001	MG/KG_DRY	R	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	4,4'-DDE	0.0078	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	4,4'-DDE	0.00091	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	4,4'-DDE	0.0018	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	4,4'-DDE	0.0017	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	4,4'-DDE	0.0058	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	4,4'-DDE	0.0007	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	4,4'-DDE	0.0012	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	4,4'-DDE	0.001	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	4,4'-DDE	0.012	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	4,4'-DDE	0.0063	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	4,4'-DDE	0.014	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	4,4'-DDE	0.0033	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	4,4'-DDE	0.0012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	4,4'-DDE	0.0024	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	4,4'-DDE	0.0023	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	4,4'-DDE	0.0019	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	4,4'-DDE	0.0017	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	4,4'-DDE	0.0065	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	4,4'-DDE	0.0053	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	4,4'-DDE	0.00026	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	4,4'-DDE	0.0026	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	4,4'-DDE	0.0052	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	4,4'-DDE	0.011	MG/KG_DRY		nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-29-02	0	1	4,4'-DDE	0.0024	MG/KG_DRY		nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	4,4'-DDE	0.036	MG/KG_DRY		nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	4,4'-DDE	0.0085	MG/KG_DRY	J	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	4,4'-DDE	0.0088	MG/KG_DRY		nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	4,4'-DDE	0.0011	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	4,4'-DDE	0.0022	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	4,4'-DDE	0.00049	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	4,4'-DDE	0.00046	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	4,4'-DDE	0.0012	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	4,4'-DDE	0.0004	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	4,4'-DDE	0.0024	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	4,4'-DDE	0.00057	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	4,4'-DDE	0.0029	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	4,4'-DDE	0.003	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	4,4'-DDE	0.0025	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	4,4'-DDE	0.00088	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01			4,4'-DDT	0.027	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	4,4'-DDT	0.0025	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	4,4'-DDT	0.034	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	4,4'-DDT	0.04	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	4,4'-DDT	0.034	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	4,4'-DDT	0.0037	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	4,4'-DDT	0.078	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	4,4'-DDT	0.0034	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	4,4'-DDT	0.0012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	4,4'-DDT	0.0018	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	4,4'-DDT	0.0059	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	4,4'-DDT	0.00035	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	4,4'-DDT	0.00094	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	4,4'-DDT	0.002	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	4,4'-DDT	0.012	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	4,4'-DDT	0.01	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	4,4'-DDT	0.027	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	4,4'-DDT	0.009	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	4,4'-DDT	0.015	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	4,4'-DDT	0.011	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	4,4'-DDT	0.0094	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	4,4'-DDT	0.0061	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	4,4'-DDT	0.004	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	4,4'-DDT	0.018	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	4,4'-DDT	0.017	MG/KG_DRY		nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-26	1	2	4,4'-DDT	0.0004	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	4,4'-DDT	0.0054	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	4,4'-DDT	0.042	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	4,4'-DDT	0.04	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	4,4'-DDT	0.0058	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	4,4'-DDT	0.052	MG/KG_DRY		nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	4,4'-DDT	0.053	MG/KG_DRY	J	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	4,4'-DDT	0.014	MG/KG_DRY		nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	4,4'-DDT	0.0012	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	4,4'-DDT	0.0025	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	4,4'-DDT	0.00053	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	4,4'-DDT	0.00085	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	4,4'-DDT	0.002	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	4,4'-DDT	0.00058	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	4,4'-DDT	0.0015	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	4,4'-DDT	0.0017	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	4,4'-DDT	0.0024	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	4,4'-DDT	0.0019	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	4,4'-DDT	0.0037	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	4,4'-DDT	0.002	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01			Aldrin	0.00016	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Aldrin	0.00016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Aldrin	0.00016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Aldrin	0.00016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Aldrin	0.001	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Aldrin	0.00016	MG/KG_DRY	R	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Aldrin	0.00016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	Aldrin	0.00016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Aldrin	0.00016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Aldrin	0.00016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Aldrin	0.00043	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Aldrin	0.00016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Aldrin	0.00016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Aldrin	0.00016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Aldrin	0.00086	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Aldrin	0.00016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Aldrin	0.00096	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Aldrin	0.0002	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Aldrin	0.00034	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Aldrin	0.00016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Aldrin	0.00016	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-14	0	1	Aldrin	0.00018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	Aldrin	0.00016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Aldrin	0.00017	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Aldrin	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Aldrin	0.00016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Aldrin	0.00016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Aldrin	0.00077	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Aldrin	0.0012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Aldrin	0.00097	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Aldrin	0.00016	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Aldrin	0.0008	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Aldrin	0.00017	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Aldrin	0.00016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Aldrin	0.00016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Aldrin	0.00016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Aldrin	0.00016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Aldrin	0.00016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Aldrin	0.00016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Aldrin	0.00016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Aldrin	0.00016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Aldrin	0.00016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Aldrin	0.00016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Aldrin	0.00016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Aldrin	0.00016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01			alpha-BHC	0.00011	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	alpha-BHC	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	alpha-BHC	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	alpha-BHC	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	alpha-BHC	0.00015	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	alpha-BHC	0.00011	MG/KG_DRY	R	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	alpha-BHC	0.00012	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	alpha-BHC	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	alpha-BHC	0.00088	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	alpha-BHC	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	alpha-BHC	0.00031	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	alpha-BHC	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	alpha-BHC	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	alpha-BHC	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	alpha-BHC	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	alpha-BHC	0.00089	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	alpha-BHC	0.00014	MG/KG_DRY	J	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-10	0	1	alpha-BHC	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	alpha-BHC	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	alpha-BHC	0.0012	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	alpha-BHC	0.0015	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	alpha-BHC	0.00013	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	alpha-BHC	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	alpha-BHC	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	alpha-BHC	0.00027	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	alpha-BHC	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	alpha-BHC	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	alpha-BHC	0.00018	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	alpha-BHC	0.00026	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	alpha-BHC	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	alpha-BHC	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	alpha-BHC	0.00019	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	alpha-BHC	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	alpha-BHC	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	alpha-BHC	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	alpha-BHC	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	alpha-BHC	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	alpha-BHC	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	alpha-BHC	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	alpha-BHC	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	alpha-BHC	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	alpha-BHC	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	alpha-BHC	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	alpha-BHC	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	alpha-BHC	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01			alpha-Chlordane	0.0012	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_G-01	1	2	alpha-Chlordane	0.0001	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	alpha-Chlordane	0.0011	MG/KG_DRY		0.5	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	alpha-Chlordane	0.0011	MG/KG_DRY		0.5	nc	NA	N
Oxbow Area soil	SS_G-01-01	0	1	alpha-Chlordane	0.0017	MG/KG_DRY		0.5	nc	NA	N
Oxbow Area soil	SS_G-01-02	0	1	alpha-Chlordane	0.00011	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_G-01-03	0	1	alpha-Chlordane	0.0023	MG/KG_DRY		0.5	nc	NA	N
Oxbow Area soil	SS_G-01-04	0	1	alpha-Chlordane	0.00013	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_G-02	0	1	alpha-Chlordane	0.00028	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_G-03	0	1	alpha-Chlordane	0.0001	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	alpha-Chlordane	0.0036	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_G-05	1	2	alpha-Chlordane	0.0001	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	alpha-Chlordane	0.0001	MG/KG_DRY	U	0.5	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-06	0	1	alpha-Chlordane	0.0001	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	alpha-Chlordane	0.0016	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	alpha-Chlordane	0.001	MG/KG_DRY		0.5	nc	NA	N
Oxbow Area soil	SS_G-09	0	1	alpha-Chlordane	0.0011	MG/KG_DRY		0.5	nc	NA	N
Oxbow Area soil	SS_G-10	0	1	alpha-Chlordane	0.085	MG/KG_DRY		0.5	nc	NA	N
Oxbow Area soil	SS_G-12	0	1	alpha-Chlordane	0.001	MG/KG_DRY		0.5	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	alpha-Chlordane	0.0028	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	alpha-Chlordane	0.0029	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	alpha-Chlordane	0.00012	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	alpha-Chlordane	0.00017	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	alpha-Chlordane	0.00094	MG/KG_DRY		0.5	nc	NA	N
Oxbow Area soil	SS_G-23	0	1	alpha-Chlordane	0.03	MG/KG_DRY		0.5	nc	NA	N
Oxbow Area soil	SS_G-26	1	2	alpha-Chlordane	0.0001	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	alpha-Chlordane	0.0016	MG/KG_DRY		0.5	nc	NA	N
Oxbow Area soil	SS_G-29	0	1	alpha-Chlordane	0.0086	MG/KG_DRY		0.5	nc	NA	N
Oxbow Area soil	SS_G-29-01	0	1	alpha-Chlordane	0.012	MG/KG_DRY		0.5	nc	NA	N
Oxbow Area soil	SS_G-29-02	0	1	alpha-Chlordane	0.0027	MG/KG_DRY		0.5	nc	NA	N
Lyman Mill soil	SS_G-30	0	1	alpha-Chlordane	0.00033	MG/KG_DRY	U	0.5	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	alpha-Chlordane	0.0064	MG/KG_DRY		0.5	nc	NA	N
Lyman Mill soil	SS_G-32	0	1	alpha-Chlordane	0.0028	MG/KG_DRY		0.5	nc	NA	N
Lyman Mill soil	SS_G-33	0	1	alpha-Chlordane	0.00032	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_H-01	0	1	alpha-Chlordane	0.0001	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	alpha-Chlordane	0.0001	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	alpha-Chlordane	0.0001	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	alpha-Chlordane	0.0001	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	alpha-Chlordane	0.0001	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	alpha-Chlordane	0.0001	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	alpha-Chlordane	0.0001	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	alpha-Chlordane	0.00026	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	alpha-Chlordane	0.0001	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	alpha-Chlordane	0.00013	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_H-22	0	1	alpha-Chlordane	0.0001	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_G-01			beta-BHC	0.00018	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	beta-BHC	0.00018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	beta-BHC	0.00018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	beta-BHC	0.00018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	beta-BHC	0.00018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	beta-BHC	0.00018	MG/KG_DRY	R	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	beta-BHC	0.00099	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	beta-BHC	0.00018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	beta-BHC	0.00018	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-03	0	1	beta-BHC	0.00019	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	beta-BHC	0.00048	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	beta-BHC	0.00018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	beta-BHC	0.00018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	beta-BHC	0.00018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	beta-BHC	0.00037	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	beta-BHC	0.00018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	beta-BHC	0.00048	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	beta-BHC	0.00018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	beta-BHC	0.00028	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	beta-BHC	0.0053	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	beta-BHC	0.0051	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	beta-BHC	0.0002	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	beta-BHC	0.00018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	beta-BHC	0.00018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	beta-BHC	0.0013	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	beta-BHC	0.00018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	beta-BHC	0.00018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	beta-BHC	0.00077	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	beta-BHC	0.00021	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	beta-BHC	0.00018	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	beta-BHC	0.00018	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	beta-BHC	0.0008	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	beta-BHC	0.00045	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	beta-BHC	0.00018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	beta-BHC	0.00018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	beta-BHC	0.00018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	beta-BHC	0.00018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	beta-BHC	0.00018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	beta-BHC	0.00018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	beta-BHC	0.00018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	beta-BHC	0.00018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	beta-BHC	0.00018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	beta-BHC	0.00018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	beta-BHC	0.00018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	beta-BHC	0.00055	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01			Chlordane	0.044	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_G-01	1	2	Chlordane	0.0047	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Chlordane	0.046	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Chlordane	0.062	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Chlordane	0.038	MG/KG_DRY		0.5	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-01-02	0	1	Chlordane	0.0062	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_G-01-03	0	1	Chlordane	0.097	MG/KG_DRY		0.5	nc	NA	N
Oxbow Area soil	SS_G-01-04	0	1	Chlordane	0.0039	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_G-02	0	1	Chlordane	0.0061	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_G-03	0	1	Chlordane	0.0046	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Chlordane	0.058	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_G-05	1	2	Chlordane	0.0019	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Chlordane	0.003	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Chlordane	0.0034	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Chlordane	0.034	MG/KG_DRY		0.5	nc	NA	N
Oxbow Area soil	SS_G-08	0	1	Chlordane	0.024	MG/KG_DRY		0.5	nc	NA	N
Oxbow Area soil	SS_G-09	0	1	Chlordane	0.031	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Chlordane	0.57	MG/KG_DRY		0.5	nc	NA	Y
Oxbow Area soil	SS_G-12	0	1	Chlordane	0.019	MG/KG_DRY		0.5	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	Chlordane	0.054	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Chlordane	0.052	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Chlordane	0.0072	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	Chlordane	0.0077	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Chlordane	0.024	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Chlordane	0.54	MG/KG_DRY		0.5	nc	NA	Y
Oxbow Area soil	SS_G-26	1	2	Chlordane	0.0024	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_G-26	0	1	Chlordane	0.028	MG/KG_DRY		0.5	nc	NA	N
Oxbow Area soil	SS_G-29	0	1	Chlordane	0.15	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_G-29-01	0	1	Chlordane	0.13	MG/KG_DRY		0.5	nc	NA	N
Oxbow Area soil	SS_G-29-02	0	1	Chlordane	0.027	MG/KG_DRY		0.5	nc	NA	N
Lyman Mill soil	SS_G-30	0	1	Chlordane	0.0095	MG/KG_DRY	U	0.5	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Chlordane	0.064	MG/KG_DRY	J	0.5	nc	NA	N
Lyman Mill soil	SS_G-32	0	1	Chlordane	0.042	MG/KG_DRY		0.5	nc	NA	N
Lyman Mill soil	SS_G-33	0	1	Chlordane	0.0058	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_H-01	0	1	Chlordane	0.0034	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Chlordane	0.0019	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Chlordane	0.0022	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Chlordane	0.0039	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Chlordane	0.0019	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Chlordane	0.0041	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Chlordane	0.0024	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Chlordane	0.0058	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Chlordane	0.0044	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Chlordane	0.0041	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Chlordane	0.0023	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_G-01			delta-BHC	0.000074	MG/KG_DRY	UJ	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-01	1	2	delta-BHC	0.000074	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	delta-BHC	0.000074	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	delta-BHC	0.000074	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	delta-BHC	0.00018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	delta-BHC	0.000074	MG/KG_DRY	R	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	delta-BHC	0.00014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	delta-BHC	0.000074	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	delta-BHC	0.000074	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	delta-BHC	0.000074	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	delta-BHC	0.0003	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	delta-BHC	0.000074	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	delta-BHC	0.000074	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	delta-BHC	0.000074	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	delta-BHC	0.000077	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	delta-BHC	0.00047	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	delta-BHC	0.000074	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	delta-BHC	0.000074	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	delta-BHC	0.000085	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	delta-BHC	0.0017	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	delta-BHC	0.00096	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	delta-BHC	0.000082	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	delta-BHC	0.00017	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	delta-BHC	0.000074	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	delta-BHC	0.00023	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	delta-BHC	0.000074	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	delta-BHC	0.000074	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	delta-BHC	0.00077	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	delta-BHC	0.00029	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	delta-BHC	0.000074	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	delta-BHC	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	delta-BHC	0.00047	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	delta-BHC	0.000074	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	delta-BHC	0.000074	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	delta-BHC	0.000074	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	delta-BHC	0.000074	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	delta-BHC	0.000074	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	delta-BHC	0.000074	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	delta-BHC	0.000074	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	delta-BHC	0.000083	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	delta-BHC	0.000074	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	delta-BHC	0.000074	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_H-18	0	1	delta-BHC	0.000074	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	delta-BHC	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	delta-BHC	0.000074	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01			Dieldrin	0.0067	MG/KG_DRY	J	0.04	nc	NA	N
Oxbow Area soil	SS_G-01	1	2	Dieldrin	0.0004	MG/KG_DRY	J	0.04	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Dieldrin	0.0073	MG/KG_DRY		0.04	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	Dieldrin	0.0075	MG/KG_DRY		0.04	nc	NA	N
Oxbow Area soil	SS_G-01-01	0	1	Dieldrin	0.0058	MG/KG_DRY	U	0.04	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Dieldrin	0.00063	MG/KG_DRY	J	0.04	nc	NA	N
Oxbow Area soil	SS_G-01-03	0	1	Dieldrin	0.017	MG/KG_DRY		0.04	nc	NA	N
Oxbow Area soil	SS_G-01-04	0	1	Dieldrin	0.00014	MG/KG_DRY	U	0.04	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Dieldrin	0.00014	MG/KG_DRY	U	0.04	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Dieldrin	0.00045	MG/KG_DRY	U	0.04	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Dieldrin	0.00037	MG/KG_DRY	UJ	0.04	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Dieldrin	0.00014	MG/KG_DRY	U	0.04	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Dieldrin	0.00014	MG/KG_DRY	U	0.04	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Dieldrin	0.00014	MG/KG_DRY	U	0.04	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Dieldrin	0.0016	MG/KG_DRY	U	0.04	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Dieldrin	0.0025	MG/KG_DRY	U	0.04	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Dieldrin	0.0049	MG/KG_DRY	U	0.04	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Dieldrin	0.00096	MG/KG_DRY	U	0.04	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Dieldrin	0.00097	MG/KG_DRY	U	0.04	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Dieldrin	0.0031	MG/KG_DRY	U	0.04	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Dieldrin	0.003	MG/KG_DRY	U	0.04	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Dieldrin	0.00052	MG/KG_DRY	J	0.04	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	Dieldrin	0.0012	MG/KG_DRY		0.04	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	Dieldrin	0.0018	MG/KG_DRY	U	0.04	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Dieldrin	0.0018	MG/KG_DRY	U	0.04	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Dieldrin	0.00014	MG/KG_DRY	U	0.04	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Dieldrin	0.00065	MG/KG_DRY	U	0.04	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Dieldrin	0.0039	MG/KG_DRY	U	0.04	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Dieldrin	0.0024	MG/KG_DRY	U	0.04	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Dieldrin	0.0037	MG/KG_DRY	U	0.04	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Dieldrin	0.0024	MG/KG_DRY	U	0.04	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Dieldrin	0.0008	MG/KG_DRY	U	0.04	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Dieldrin	0.00081	MG/KG_DRY	U	0.04	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Dieldrin	0.00014	MG/KG_DRY	U	0.04	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Dieldrin	0.00022	MG/KG_DRY	J	0.04	nc	NA	N
Oxbow Area soil	SS_H-03	0	1	Dieldrin	0.00014	MG/KG_DRY	U	0.04	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Dieldrin	0.00014	MG/KG_DRY	U	0.04	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Dieldrin	0.00025	MG/KG_DRY	J	0.04	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_H-10	0	1	Dieldrin	0.00014	MG/KG_DRY	U	0.04	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Dieldrin	0.00014	MG/KG_DRY	U	0.04	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Dieldrin	0.00014	MG/KG_DRY	U	0.04	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Dieldrin	0.00071	MG/KG_DRY	J	0.04	nc	NA	N
Oxbow Area soil	SS_H-18	0	1	Dieldrin	0.00073	MG/KG_DRY	J	0.04	nc	NA	N
Oxbow Area soil	SS_H-19	0	1	Dieldrin	0.00014	MG/KG_DRY	U	0.04	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Dieldrin	0.00014	MG/KG_DRY	U	0.04	nc	NA	NA
Oxbow Area soil	SS_G-01			Endosulfan I	0.0018	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Endosulfan I	0.00022	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Endosulfan I	0.0025	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Endosulfan I	0.0027	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Endosulfan I	0.002	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Endosulfan I	0.00022	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Endosulfan I	0.0028	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	Endosulfan I	0.000092	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Endosulfan I	0.00088	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Endosulfan I	0.000063	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Endosulfan I	0.0027	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Endosulfan I	0.000063	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Endosulfan I	0.000063	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Endosulfan I	0.000063	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Endosulfan I	0.0011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Endosulfan I	0.00089	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Endosulfan I	0.00093	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Endosulfan I	0.0048	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Endosulfan I	0.00097	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Endosulfan I	0.0012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Endosulfan I	0.00089	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Endosulfan I	0.00007	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	Endosulfan I	0.000063	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Endosulfan I	0.00079	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Endosulfan I	0.0026	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Endosulfan I	0.000063	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Endosulfan I	0.00065	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Endosulfan I	0.0034	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Endosulfan I	0.0056	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Endosulfan I	0.00097	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Endosulfan I	0.00029	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Endosulfan I	0.0035	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Endosulfan I	0.00081	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Endosulfan I	0.00011	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_H-01	0	1	Endosulfan I	0.000063	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Endosulfan I	0.000063	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Endosulfan I	0.000079	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Endosulfan I	0.000063	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Endosulfan I	0.000063	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Endosulfan I	0.00013	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Endosulfan I	0.000063	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Endosulfan I	0.000077	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Endosulfan I	0.000081	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Endosulfan I	0.000077	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Endosulfan I	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01			Endosulfan II	0.0039	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Endosulfan II	0.00073	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Endosulfan II	0.0011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Endosulfan II	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Endosulfan II	0.0061	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Endosulfan II	0.00091	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Endosulfan II	0.006	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	Endosulfan II	0.00097	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Endosulfan II	0.00088	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Endosulfan II	0.00034	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Endosulfan II	0.0027	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Endosulfan II	0.00014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Endosulfan II	0.00015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Endosulfan II	0.00014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Endosulfan II	0.0021	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Endosulfan II	0.0017	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Endosulfan II	0.0031	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Endosulfan II	0.0034	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Endosulfan II	0.0017	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Endosulfan II	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Endosulfan II	0.0011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Endosulfan II	0.0012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	Endosulfan II	0.00067	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Endosulfan II	0.0023	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Endosulfan II	0.004	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Endosulfan II	0.00014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Endosulfan II	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Endosulfan II	0.0036	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Endosulfan II	0.0075	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Endosulfan II	0.00097	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	SS_G-30	0	1	Endosulfan II	0.00055	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Endosulfan II	0.0043	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Endosulfan II	0.00014	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Endosulfan II	0.00014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Endosulfan II	0.00018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Endosulfan II	0.00014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Endosulfan II	0.00014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Endosulfan II	0.00014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Endosulfan II	0.00014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Endosulfan II	0.00042	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Endosulfan II	0.00014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Endosulfan II	0.00014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Endosulfan II	0.00014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Endosulfan II	0.00014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Endosulfan II	0.00055	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01			Endosulfan Sulfate	0.00029	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Endosulfan Sulfate	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Endosulfan Sulfate	0.00055	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Endosulfan Sulfate	0.00054	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Endosulfan Sulfate	0.001	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Endosulfan Sulfate	0.00011	MG/KG_DRY	R	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Endosulfan Sulfate	0.00053	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	Endosulfan Sulfate	0.00015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Endosulfan Sulfate	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Endosulfan Sulfate	0.00019	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Endosulfan Sulfate	0.00029	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Endosulfan Sulfate	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Endosulfan Sulfate	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Endosulfan Sulfate	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Endosulfan Sulfate	0.00028	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Endosulfan Sulfate	0.00033	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Endosulfan Sulfate	0.00048	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Endosulfan Sulfate	0.00097	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Endosulfan Sulfate	0.00097	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Endosulfan Sulfate	0.011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Endosulfan Sulfate	0.0024	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Endosulfan Sulfate	0.00013	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	Endosulfan Sulfate	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Endosulfan Sulfate	0.00079	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Endosulfan Sulfate	0.034	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Endosulfan Sulfate	0.00011	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-26	0	1	Endosulfan Sulfate	0.00065	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Endosulfan Sulfate	0.00077	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Endosulfan Sulfate	0.00053	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Endosulfan Sulfate	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Endosulfan Sulfate	0.0012	MG/KG_DRY		nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Endosulfan Sulfate	0.0023	MG/KG_DRY		nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Endosulfan Sulfate	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Endosulfan Sulfate	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Endosulfan Sulfate	0.00053	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Endosulfan Sulfate	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Endosulfan Sulfate	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Endosulfan Sulfate	0.00022	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Endosulfan Sulfate	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Endosulfan Sulfate	0.0004	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Endosulfan Sulfate	0.00054	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Endosulfan Sulfate	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Endosulfan Sulfate	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Endosulfan Sulfate	0.0003	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Endosulfan Sulfate	0.00055	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01			Endrin	0.0016	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Endrin	0.00018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Endrin	0.00075	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Endrin	0.0007	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Endrin	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Endrin	0.000094	MG/KG_DRY	R	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Endrin	0.003	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	Endrin	0.000094	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Endrin	0.000094	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Endrin	0.00024	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Endrin	0.00045	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Endrin	0.000094	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Endrin	0.000094	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Endrin	0.000094	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Endrin	0.0011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Endrin	0.00019	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Endrin	0.00093	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Endrin	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Endrin	0.00097	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Endrin	0.01	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Endrin	0.0099	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Endrin	0.00013	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-15	0	1	Endrin	0.00025	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Endrin	0.0011	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Endrin	0.0006	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Endrin	0.000094	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Endrin	0.00021	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Endrin	0.0013	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Endrin	0.0022	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Endrin	0.00028	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Endrin	0.000094	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Endrin	0.0008	MG/KG_DRY		nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Endrin	0.00051	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Endrin	0.000094	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Endrin	0.000094	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Endrin	0.000094	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Endrin	0.000094	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Endrin	0.000094	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Endrin	0.000094	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Endrin	0.000094	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Endrin	0.000094	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Endrin	0.000094	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Endrin	0.000094	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Endrin	0.000094	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Endrin	0.000094	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01			Endrin Aldehyde	0.0021	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Endrin Aldehyde	0.00029	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Endrin Aldehyde	0.0017	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Endrin Aldehyde	0.0018	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Endrin Aldehyde	0.0017	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Endrin Aldehyde	0.00026	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Endrin Aldehyde	0.0046	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	Endrin Aldehyde	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Endrin Aldehyde	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Endrin Aldehyde	0.00023	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Endrin Aldehyde	0.00055	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Endrin Aldehyde	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Endrin Aldehyde	0.00015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Endrin Aldehyde	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Endrin Aldehyde	0.0011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Endrin Aldehyde	0.00068	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Endrin Aldehyde	0.00093	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Endrin Aldehyde	0.00096	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-12	0	1	Endrin Aldehyde	0.00097	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Endrin Aldehyde	0.011	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Endrin Aldehyde	0.0084	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Endrin Aldehyde	0.00014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	Endrin Aldehyde	0.00025	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Endrin Aldehyde	0.00039	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Endrin Aldehyde	0.00016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Endrin Aldehyde	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Endrin Aldehyde	0.00065	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Endrin Aldehyde	0.0018	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Endrin Aldehyde	0.0023	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Endrin Aldehyde	0.00067	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Endrin Aldehyde	0.00064	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Endrin Aldehyde	0.0016	MG/KG_DRY	J	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Endrin Aldehyde	0.00081	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Endrin Aldehyde	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Endrin Aldehyde	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Endrin Aldehyde	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Endrin Aldehyde	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Endrin Aldehyde	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Endrin Aldehyde	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Endrin Aldehyde	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Endrin Aldehyde	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Endrin Aldehyde	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Endrin Aldehyde	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Endrin Aldehyde	0.00089	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Endrin Aldehyde	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01			Endrin Ketone	0.00048	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Endrin Ketone	0.00015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Endrin Ketone	0.00078	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Endrin Ketone	0.00086	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Endrin Ketone	0.0011	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Endrin Ketone	0.000093	MG/KG_DRY	R	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Endrin Ketone	0.0023	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	Endrin Ketone	0.00016	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Endrin Ketone	0.000093	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Endrin Ketone	0.000093	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Endrin Ketone	0.00032	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Endrin Ketone	0.000093	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Endrin Ketone	0.000093	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Endrin Ketone	0.000093	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-07	0	1	Endrin Ketone	0.00014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Endrin Ketone	0.00089	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Endrin Ketone	0.00077	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Endrin Ketone	0.00096	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Endrin Ketone	0.00097	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Endrin Ketone	0.051	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Endrin Ketone	0.0065	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Endrin Ketone	0.00011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	Endrin Ketone	0.000093	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Endrin Ketone	0.00079	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Endrin Ketone	0.004	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Endrin Ketone	0.000093	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Endrin Ketone	0.00065	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Endrin Ketone	0.0011	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Endrin Ketone	0.0019	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Endrin Ketone	0.00028	MG/KG_DRY	J	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Endrin Ketone	0.00064	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Endrin Ketone	0.00088	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Endrin Ketone	0.00054	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Endrin Ketone	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Endrin Ketone	0.000097	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Endrin Ketone	0.000093	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Endrin Ketone	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Endrin Ketone	0.000093	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Endrin Ketone	0.000093	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Endrin Ketone	0.000093	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Endrin Ketone	0.000093	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Endrin Ketone	0.000093	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Endrin Ketone	0.000093	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Endrin Ketone	0.000093	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Endrin Ketone	0.000093	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01			gamma-BHC (Lindane)	0.00027	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	gamma-BHC (Lindane)	0.00008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	gamma-BHC (Lindane)	0.00065	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	gamma-BHC (Lindane)	0.00091	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	gamma-BHC (Lindane)	0.0023	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	gamma-BHC (Lindane)	0.00008	MG/KG_DRY	R	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	gamma-BHC (Lindane)	0.00077	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	gamma-BHC (Lindane)	0.00008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	gamma-BHC (Lindane)	0.00018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	gamma-BHC (Lindane)	0.00008	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-04	0	1	gamma-BHC (Lindane)	0.00052	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	gamma-BHC (Lindane)	0.00008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	gamma-BHC (Lindane)	0.00008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	gamma-BHC (Lindane)	0.00008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	gamma-BHC (Lindane)	0.00018	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	gamma-BHC (Lindane)	0.00008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	gamma-BHC (Lindane)	0.0015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	gamma-BHC (Lindane)	0.001	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	gamma-BHC (Lindane)	0.00097	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	gamma-BHC (Lindane)	0.045	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	gamma-BHC (Lindane)	0.055	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	gamma-BHC (Lindane)	0.0002	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	gamma-BHC (Lindane)	0.000093	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	gamma-BHC (Lindane)	0.00079	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	gamma-BHC (Lindane)	0.0029	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	gamma-BHC (Lindane)	0.00008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	gamma-BHC (Lindane)	0.00076	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	gamma-BHC (Lindane)	0.0051	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	gamma-BHC (Lindane)	0.0012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	gamma-BHC (Lindane)	0.00097	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	gamma-BHC (Lindane)	0.0017	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	gamma-BHC (Lindane)	0.0008	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	gamma-BHC (Lindane)	0.00016	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	gamma-BHC (Lindane)	0.00015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	gamma-BHC (Lindane)	0.00008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	gamma-BHC (Lindane)	0.00008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	gamma-BHC (Lindane)	0.00008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	gamma-BHC (Lindane)	0.00008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	gamma-BHC (Lindane)	0.00008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	gamma-BHC (Lindane)	0.00008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	gamma-BHC (Lindane)	0.00013	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	gamma-BHC (Lindane)	0.00008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	gamma-BHC (Lindane)	0.00008	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	gamma-BHC (Lindane)	0.0002	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	gamma-BHC (Lindane)	0.00027	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01			gamma-Chlordane	0.0096	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_G-01	1	2	gamma-Chlordane	0.00078	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	gamma-Chlordane	0.0086	MG/KG_DRY		0.5	nc	NA	N
Oxbow Area soil	SS_G-01	0	1	gamma-Chlordane	0.0085	MG/KG_DRY		0.5	nc	NA	N
Oxbow Area soil	SS_G-01-01	0	1	gamma-Chlordane	0.01	MG/KG_DRY		0.5	nc	NA	N
Oxbow Area soil	SS_G-01-02	0	1	gamma-Chlordane	0.00095	MG/KG_DRY	J	0.5	nc	NA	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-01-03	0	1	gamma-Chlordane	0.016	MG/KG_DRY		0.5	nc	NA	N
Oxbow Area soil	SS_G-01-04	0	1	gamma-Chlordane	0.00019	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_G-02	0	1	gamma-Chlordane	0.00028	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_G-03	0	1	gamma-Chlordane	0.00035	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_G-04	0	1	gamma-Chlordane	0.0044	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_G-05	1	2	gamma-Chlordane	0.00009	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	gamma-Chlordane	0.00009	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	gamma-Chlordane	0.00015	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_G-07	0	1	gamma-Chlordane	0.0034	MG/KG_DRY		0.5	nc	NA	N
Oxbow Area soil	SS_G-08	0	1	gamma-Chlordane	0.0033	MG/KG_DRY		0.5	nc	NA	N
Oxbow Area soil	SS_G-09	0	1	gamma-Chlordane	0.005	MG/KG_DRY		0.5	nc	NA	N
Oxbow Area soil	SS_G-10	0	1	gamma-Chlordane	0.074	MG/KG_DRY		0.5	nc	NA	N
Oxbow Area soil	SS_G-12	0	1	gamma-Chlordane	0.0031	MG/KG_DRY		0.5	nc	NA	N
Oxbow Area soil	SS_G-13	0	1	gamma-Chlordane	0.003	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	gamma-Chlordane	0.0023	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	gamma-Chlordane	0.00041	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_G-15	0	1	gamma-Chlordane	0.00052	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_G-18	0	1	gamma-Chlordane	0.0028	MG/KG_DRY		0.5	nc	NA	N
Oxbow Area soil	SS_G-23	0	1	gamma-Chlordane	0.045	MG/KG_DRY		0.5	nc	NA	N
Oxbow Area soil	SS_G-26	1	2	gamma-Chlordane	0.00021	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_G-26	0	1	gamma-Chlordane	0.003	MG/KG_DRY		0.5	nc	NA	N
Oxbow Area soil	SS_G-29	0	1	gamma-Chlordane	0.016	MG/KG_DRY		0.5	nc	NA	N
Oxbow Area soil	SS_G-29-01	0	1	gamma-Chlordane	0.026	MG/KG_DRY		0.5	nc	NA	N
Oxbow Area soil	SS_G-29-02	0	1	gamma-Chlordane	0.0052	MG/KG_DRY		0.5	nc	NA	N
Lyman Mill soil	SS_G-30	0	1	gamma-Chlordane	0.0011	MG/KG_DRY	U	0.5	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	gamma-Chlordane	0.013	MG/KG_DRY		0.5	nc	NA	N
Lyman Mill soil	SS_G-32	0	1	gamma-Chlordane	0.0045	MG/KG_DRY		0.5	nc	NA	N
Lyman Mill soil	SS_G-33	0	1	gamma-Chlordane	0.00028	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_H-01	0	1	gamma-Chlordane	0.00018	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_H-03	0	1	gamma-Chlordane	0.00009	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	gamma-Chlordane	0.000098	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_H-07	0	1	gamma-Chlordane	0.00009	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	gamma-Chlordane	0.00009	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	gamma-Chlordane	0.00016	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	gamma-Chlordane	0.00017	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	gamma-Chlordane	0.00011	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	gamma-Chlordane	0.00013	MG/KG_DRY	U	0.5	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	gamma-Chlordane	0.00019	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_H-22	0	1	gamma-Chlordane	0.0001	MG/KG_DRY	J	0.5	nc	NA	N
Oxbow Area soil	SS_G-01			Heptachlor	0.00012	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Heptachlor	0.00012	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-01	0	1	Heptachlor	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Heptachlor	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Heptachlor	0.001	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Heptachlor	0.00012	MG/KG_DRY	R	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Heptachlor	0.00013	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	Heptachlor	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Heptachlor	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Heptachlor	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Heptachlor	0.00032	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Heptachlor	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Heptachlor	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Heptachlor	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Heptachlor	0.00013	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Heptachlor	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Heptachlor	0.00093	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Heptachlor	0.0013	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Heptachlor	0.00097	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Heptachlor	0.0042	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Heptachlor	0.0038	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Heptachlor	0.00014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	Heptachlor	0.00093	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Heptachlor	0.00079	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Heptachlor	0.0062	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Heptachlor	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Heptachlor	0.00013	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Heptachlor	0.00035	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Heptachlor	0.00057	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Heptachlor	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Heptachlor	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Heptachlor	0.0008	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Heptachlor	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Heptachlor	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Heptachlor	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Heptachlor	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Heptachlor	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Heptachlor	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Heptachlor	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Heptachlor	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Heptachlor	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Heptachlor	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Heptachlor	0.00012	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_H-19	0	1	Heptachlor	0.00059	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Heptachlor	0.00012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01			Heptachlor Epoxide	0.000084	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Heptachlor Epoxide	0.00014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Heptachlor Epoxide	0.00055	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Heptachlor Epoxide	0.00054	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Heptachlor Epoxide	0.0011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Heptachlor Epoxide	0.00012	MG/KG_DRY	R	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Heptachlor Epoxide	0.00058	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	Heptachlor Epoxide	0.000084	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Heptachlor Epoxide	0.000084	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Heptachlor Epoxide	0.000084	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Heptachlor Epoxide	0.00025	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Heptachlor Epoxide	0.000084	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Heptachlor Epoxide	0.000084	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Heptachlor Epoxide	0.000084	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Heptachlor Epoxide	0.0011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Heptachlor Epoxide	0.00089	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Heptachlor Epoxide	0.0018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Heptachlor Epoxide	0.011	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Heptachlor Epoxide	0.00097	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Heptachlor Epoxide	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Heptachlor Epoxide	0.0032	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Heptachlor Epoxide	0.00026	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	Heptachlor Epoxide	0.000085	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Heptachlor Epoxide	0.00068	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Heptachlor Epoxide	0.0013	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Heptachlor Epoxide	0.000084	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Heptachlor Epoxide	0.000084	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Heptachlor Epoxide	0.00058	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Heptachlor Epoxide	0.0012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Heptachlor Epoxide	0.00024	MG/KG_DRY	J	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Heptachlor Epoxide	0.00064	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Heptachlor Epoxide	0.00023	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Heptachlor Epoxide	0.00081	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Heptachlor Epoxide	0.000084	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Heptachlor Epoxide	0.000084	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Heptachlor Epoxide	0.000084	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Heptachlor Epoxide	0.000084	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Heptachlor Epoxide	0.000095	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Heptachlor Epoxide	0.000086	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_H-13	0	1	Heptachlor Epoxide	0.000084	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Heptachlor Epoxide	0.00013	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Heptachlor Epoxide	0.00053	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Heptachlor Epoxide	0.00052	MG/KG_DRY	J	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Heptachlor Epoxide	0.000084	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Heptachlor Epoxide	0.000084	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01			Methoxychlor	0.0012	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Methoxychlor	0.00019	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Methoxychlor	0.00019	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Methoxychlor	0.00075	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Methoxychlor	0.001	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Methoxychlor	0.00019	MG/KG_DRY	R	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Methoxychlor	0.00099	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	Methoxychlor	0.00019	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Methoxychlor	0.00019	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Methoxychlor	0.00019	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Methoxychlor	0.0005	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Methoxychlor	0.00019	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Methoxychlor	0.00019	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Methoxychlor	0.00019	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Methoxychlor	0.0002	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Methoxychlor	0.00089	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Methoxychlor	0.0012	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Methoxychlor	0.00065	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Methoxychlor	0.0024	MG/KG_DRY		nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Methoxychlor	0.0043	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Methoxychlor	0.0046	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Methoxychlor	0.00022	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	Methoxychlor	0.00019	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Methoxychlor	0.00047	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Methoxychlor	0.0018	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Methoxychlor	0.00019	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Methoxychlor	0.00049	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Methoxychlor	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Methoxychlor	0.0016	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Methoxychlor	0.002	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Methoxychlor	0.00076	MG/KG_DRY		nc	nc	NA	NA
Lyman Mill soil	SS_G-31	0	1	Methoxychlor	0.0027	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Methoxychlor	0.0014	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Methoxychlor	0.00019	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Methoxychlor	0.00019	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_H-03	0	1	Methoxychlor	0.00019	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Methoxychlor	0.00019	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Methoxychlor	0.00019	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Methoxychlor	0.00019	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Methoxychlor	0.00021	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Methoxychlor	0.00019	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Methoxychlor	0.00019	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Methoxychlor	0.00019	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Methoxychlor	0.00019	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Methoxychlor	0.00019	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01			Toxaphene	0.13	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	1	2	Toxaphene	0.034	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Toxaphene	0.13	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01	0	1	Toxaphene	0.14	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-01	0	1	Toxaphene	0.3	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-02	0	1	Toxaphene	0.065	MG/KG_DRY	R	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-03	0	1	Toxaphene	0.25	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01-04	0	1	Toxaphene	0.017	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-02	0	1	Toxaphene	0.019	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-03	0	1	Toxaphene	0.024	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-04	0	1	Toxaphene	0.14	MG/KG_DRY	UJ	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	1	2	Toxaphene	0.0063	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-05	0	1	Toxaphene	0.014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-06	0	1	Toxaphene	0.021	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-07	0	1	Toxaphene	0.054	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-08	0	1	Toxaphene	0.081	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-09	0	1	Toxaphene	0.11	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-10	0	1	Toxaphene	0.093	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-12	0	1	Toxaphene	0.15	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Toxaphene	0.43	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-13	0	1	Toxaphene	0.32	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-14	0	1	Toxaphene	0.04	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-15	0	1	Toxaphene	0.041	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-18	0	1	Toxaphene	0.14	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-23	0	1	Toxaphene	0.13	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	1	2	Toxaphene	0.011	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-26	0	1	Toxaphene	0.084	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29	0	1	Toxaphene	0.22	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-01	0	1	Toxaphene	0.38	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-29-02	0	1	Toxaphene	0.083	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-30	0	1	Toxaphene	0.057	MG/KG_DRY	U	nc	nc	NA	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	SS_G-31	0	1	Toxaphene	0.22	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-32	0	1	Toxaphene	0.16	MG/KG_DRY	U	nc	nc	NA	NA
Lyman Mill soil	SS_G-33	0	1	Toxaphene	0.014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-01	0	1	Toxaphene	0.015	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-03	0	1	Toxaphene	0.0064	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-06	0	1	Toxaphene	0.0064	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-07	0	1	Toxaphene	0.0072	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-10	0	1	Toxaphene	0.029	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-13	0	1	Toxaphene	0.051	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-16	0	1	Toxaphene	0.027	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Toxaphene	0.042	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-18	0	1	Toxaphene	0.014	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-19	0	1	Toxaphene	0.023	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_H-22	0	1	Toxaphene	0.028	MG/KG_DRY	U	nc	nc	NA	NA
Oxbow Area soil	SS_G-01			Aroclor 1016	0.0021	MG/KG_DRY	UJ	10	10	1	NA
Oxbow Area soil	SS_G-01	1	2	Aroclor 1016	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01	0	1	Aroclor 1016	0.011	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01	0	1	Aroclor 1016	0.011	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01-01	0	1	Aroclor 1016	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01-02	0	1	Aroclor 1016	0.0021	MG/KG_DRY	R	10	10	1	NA
Oxbow Area soil	SS_G-01-03	0	1	Aroclor 1016	0.011	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01-04	0	1	Aroclor 1016	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-02	0	1	Aroclor 1016	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-03	0	1	Aroclor 1016	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-04	0	1	Aroclor 1016	0.0056	MG/KG_DRY	UJ	10	10	1	NA
Oxbow Area soil	SS_G-05	1	2	Aroclor 1016	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-05	0	1	Aroclor 1016	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-06	0	1	Aroclor 1016	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-07	0	1	Aroclor 1016	0.0022	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-08	0	1	Aroclor 1016	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-09	0	1	Aroclor 1016	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-10	0	1	Aroclor 1016	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-12	0	1	Aroclor 1016	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-13	0	1	Aroclor 1016	0.012	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-13	0	1	Aroclor 1016	0.023	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-14	0	1	Aroclor 1016	0.0024	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-15	0	1	Aroclor 1016	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-18	0	1	Aroclor 1016	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-23	0	1	Aroclor 1016	0.0027	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-26	1	2	Aroclor 1016	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-26	0	1	Aroclor 1016	0.0021	MG/KG_DRY	U	10	10	1	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-29	0	1	Aroclor 1016	0.011	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-29-01	0	1	Aroclor 1016	0.0024	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-29-02	0	1	Aroclor 1016	0.0021	MG/KG_DRY	U	10	10	1	NA
Lyman Mill soil	SS_G-30	0	1	Aroclor 1016	0.0021	MG/KG_DRY	U	10	10	1	NA
Lyman Mill soil	SS_G-31	0	1	Aroclor 1016	0.011	MG/KG_DRY	U	10	10	1	NA
Lyman Mill soil	SS_G-32	0	1	Aroclor 1016	0.0021	MG/KG_DRY	U	10	10	1	NA
Lyman Mill soil	SS_G-33	0	1	Aroclor 1016	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-01	0	1	Aroclor 1016	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-03	0	1	Aroclor 1016	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-06	0	1	Aroclor 1016	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-07	0	1	Aroclor 1016	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-10	0	1	Aroclor 1016	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-13	0	1	Aroclor 1016	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-16	0	1	Aroclor 1016	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-18	0	1	Aroclor 1016	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-18	0	1	Aroclor 1016	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-19	0	1	Aroclor 1016	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-22	0	1	Aroclor 1016	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01			Aroclor 1221	0.0021	MG/KG_DRY	UJ	10	10	1	NA
Oxbow Area soil	SS_G-01	1	2	Aroclor 1221	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01	0	1	Aroclor 1221	0.011	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01	0	1	Aroclor 1221	0.011	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01-01	0	1	Aroclor 1221	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01-02	0	1	Aroclor 1221	0.0021	MG/KG_DRY	R	10	10	1	NA
Oxbow Area soil	SS_G-01-03	0	1	Aroclor 1221	0.011	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01-04	0	1	Aroclor 1221	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-02	0	1	Aroclor 1221	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-03	0	1	Aroclor 1221	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-04	0	1	Aroclor 1221	0.0056	MG/KG_DRY	UJ	10	10	1	NA
Oxbow Area soil	SS_G-05	1	2	Aroclor 1221	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-05	0	1	Aroclor 1221	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-06	0	1	Aroclor 1221	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-07	0	1	Aroclor 1221	0.0022	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-08	0	1	Aroclor 1221	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-09	0	1	Aroclor 1221	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-10	0	1	Aroclor 1221	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-12	0	1	Aroclor 1221	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-13	0	1	Aroclor 1221	0.02	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-13	0	1	Aroclor 1221	0.022	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-14	0	1	Aroclor 1221	0.0024	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-15	0	1	Aroclor 1221	0.0021	MG/KG_DRY	U	10	10	1	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-18	0	1	Aroclor 1221	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-23	0	1	Aroclor 1221	0.0027	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-26	1	2	Aroclor 1221	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-26	0	1	Aroclor 1221	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-29	0	1	Aroclor 1221	0.011	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-29-01	0	1	Aroclor 1221	0.0024	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-29-02	0	1	Aroclor 1221	0.0021	MG/KG_DRY	U	10	10	1	NA
Lyman Mill soil	SS_G-30	0	1	Aroclor 1221	0.0021	MG/KG_DRY	U	10	10	1	NA
Lyman Mill soil	SS_G-31	0	1	Aroclor 1221	0.011	MG/KG_DRY	U	10	10	1	NA
Lyman Mill soil	SS_G-32	0	1	Aroclor 1221	0.0021	MG/KG_DRY	U	10	10	1	NA
Lyman Mill soil	SS_G-33	0	1	Aroclor 1221	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-01	0	1	Aroclor 1221	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-03	0	1	Aroclor 1221	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-06	0	1	Aroclor 1221	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-07	0	1	Aroclor 1221	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-10	0	1	Aroclor 1221	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-13	0	1	Aroclor 1221	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-16	0	1	Aroclor 1221	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-18	0	1	Aroclor 1221	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-18	0	1	Aroclor 1221	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-19	0	1	Aroclor 1221	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-22	0	1	Aroclor 1221	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01			Aroclor 1232	0.0021	MG/KG_DRY	UJ	10	10	1	NA
Oxbow Area soil	SS_G-01	1	2	Aroclor 1232	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01	0	1	Aroclor 1232	0.011	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01	0	1	Aroclor 1232	0.011	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01-01	0	1	Aroclor 1232	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01-02	0	1	Aroclor 1232	0.0021	MG/KG_DRY	R	10	10	1	NA
Oxbow Area soil	SS_G-01-03	0	1	Aroclor 1232	0.011	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01-04	0	1	Aroclor 1232	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-02	0	1	Aroclor 1232	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-03	0	1	Aroclor 1232	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-04	0	1	Aroclor 1232	0.0056	MG/KG_DRY	UJ	10	10	1	NA
Oxbow Area soil	SS_G-05	1	2	Aroclor 1232	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-05	0	1	Aroclor 1232	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-06	0	1	Aroclor 1232	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-07	0	1	Aroclor 1232	0.0022	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-08	0	1	Aroclor 1232	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-09	0	1	Aroclor 1232	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-10	0	1	Aroclor 1232	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-12	0	1	Aroclor 1232	0.0021	MG/KG_DRY	U	10	10	1	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-13	0	1	Aroclor 1232	0.034	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-13	0	1	Aroclor 1232	0.063	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-14	0	1	Aroclor 1232	0.0024	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-15	0	1	Aroclor 1232	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-18	0	1	Aroclor 1232	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-23	0	1	Aroclor 1232	0.0027	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-26	1	2	Aroclor 1232	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-26	0	1	Aroclor 1232	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-29	0	1	Aroclor 1232	0.011	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-29-01	0	1	Aroclor 1232	0.0024	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-29-02	0	1	Aroclor 1232	0.0021	MG/KG_DRY	U	10	10	1	NA
Lyman Mill soil	SS_G-30	0	1	Aroclor 1232	0.0021	MG/KG_DRY	U	10	10	1	NA
Lyman Mill soil	SS_G-31	0	1	Aroclor 1232	0.011	MG/KG_DRY	U	10	10	1	NA
Lyman Mill soil	SS_G-32	0	1	Aroclor 1232	0.0021	MG/KG_DRY	U	10	10	1	NA
Lyman Mill soil	SS_G-33	0	1	Aroclor 1232	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-01	0	1	Aroclor 1232	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-03	0	1	Aroclor 1232	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-06	0	1	Aroclor 1232	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-07	0	1	Aroclor 1232	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-10	0	1	Aroclor 1232	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-13	0	1	Aroclor 1232	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-16	0	1	Aroclor 1232	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-18	0	1	Aroclor 1232	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-18	0	1	Aroclor 1232	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-19	0	1	Aroclor 1232	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-22	0	1	Aroclor 1232	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01			Aroclor 1242	0.0021	MG/KG_DRY	UJ	10	10	1	NA
Oxbow Area soil	SS_G-01	1	2	Aroclor 1242	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01	0	1	Aroclor 1242	0.011	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01	0	1	Aroclor 1242	0.011	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01-01	0	1	Aroclor 1242	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01-02	0	1	Aroclor 1242	0.0021	MG/KG_DRY	R	10	10	1	NA
Oxbow Area soil	SS_G-01-03	0	1	Aroclor 1242	0.011	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01-04	0	1	Aroclor 1242	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-02	0	1	Aroclor 1242	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-03	0	1	Aroclor 1242	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-04	0	1	Aroclor 1242	0.0056	MG/KG_DRY	UJ	10	10	1	NA
Oxbow Area soil	SS_G-05	1	2	Aroclor 1242	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-05	0	1	Aroclor 1242	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-06	0	1	Aroclor 1242	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-07	0	1	Aroclor 1242	0.0022	MG/KG_DRY	U	10	10	1	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-08	0	1	Aroclor 1242	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-09	0	1	Aroclor 1242	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-10	0	1	Aroclor 1242	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-12	0	1	Aroclor 1242	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-13	0	1	Aroclor 1242	0.016	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-13	0	1	Aroclor 1242	0.025	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-14	0	1	Aroclor 1242	0.0024	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-15	0	1	Aroclor 1242	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-18	0	1	Aroclor 1242	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-23	0	1	Aroclor 1242	0.0027	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-26	1	2	Aroclor 1242	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-26	0	1	Aroclor 1242	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-29	0	1	Aroclor 1242	0.011	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-29-01	0	1	Aroclor 1242	0.0024	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-29-02	0	1	Aroclor 1242	0.0021	MG/KG_DRY	U	10	10	1	NA
Lyman Mill soil	SS_G-30	0	1	Aroclor 1242	0.0021	MG/KG_DRY	U	10	10	1	NA
Lyman Mill soil	SS_G-31	0	1	Aroclor 1242	0.011	MG/KG_DRY	U	10	10	1	NA
Lyman Mill soil	SS_G-32	0	1	Aroclor 1242	0.0021	MG/KG_DRY	U	10	10	1	NA
Lyman Mill soil	SS_G-33	0	1	Aroclor 1242	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-01	0	1	Aroclor 1242	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-03	0	1	Aroclor 1242	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-06	0	1	Aroclor 1242	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-07	0	1	Aroclor 1242	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-10	0	1	Aroclor 1242	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-13	0	1	Aroclor 1242	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-16	0	1	Aroclor 1242	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-18	0	1	Aroclor 1242	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-18	0	1	Aroclor 1242	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-19	0	1	Aroclor 1242	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-22	0	1	Aroclor 1242	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01			Aroclor 1248	0.0021	MG/KG_DRY	UJ	10	10	1	NA
Oxbow Area soil	SS_G-01	1	2	Aroclor 1248	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01	0	1	Aroclor 1248	0.011	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01	0	1	Aroclor 1248	0.011	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01-01	0	1	Aroclor 1248	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01-02	0	1	Aroclor 1248	0.0021	MG/KG_DRY	R	10	10	1	NA
Oxbow Area soil	SS_G-01-03	0	1	Aroclor 1248	0.011	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01-04	0	1	Aroclor 1248	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-02	0	1	Aroclor 1248	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-03	0	1	Aroclor 1248	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-04	0	1	Aroclor 1248	0.0056	MG/KG_DRY	UJ	10	10	1	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-05	1	2	Aroclor 1248	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-05	0	1	Aroclor 1248	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-06	0	1	Aroclor 1248	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-07	0	1	Aroclor 1248	0.0022	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-08	0	1	Aroclor 1248	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-09	0	1	Aroclor 1248	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-10	0	1	Aroclor 1248	0.047	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-12	0	1	Aroclor 1248	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-13	0	1	Aroclor 1248	0.052	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-13	0	1	Aroclor 1248	0.042	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-14	0	1	Aroclor 1248	0.0024	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-15	0	1	Aroclor 1248	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-18	0	1	Aroclor 1248	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-23	0	1	Aroclor 1248	0.0027	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-26	1	2	Aroclor 1248	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-26	0	1	Aroclor 1248	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-29	0	1	Aroclor 1248	0.011	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-29-01	0	1	Aroclor 1248	0.0024	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-29-02	0	1	Aroclor 1248	0.0021	MG/KG_DRY	U	10	10	1	NA
Lyman Mill soil	SS_G-30	0	1	Aroclor 1248	0.0021	MG/KG_DRY	U	10	10	1	NA
Lyman Mill soil	SS_G-31	0	1	Aroclor 1248	0.011	MG/KG_DRY	U	10	10	1	NA
Lyman Mill soil	SS_G-32	0	1	Aroclor 1248	0.0021	MG/KG_DRY	U	10	10	1	NA
Lyman Mill soil	SS_G-33	0	1	Aroclor 1248	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-01	0	1	Aroclor 1248	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-03	0	1	Aroclor 1248	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-06	0	1	Aroclor 1248	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-07	0	1	Aroclor 1248	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-10	0	1	Aroclor 1248	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-13	0	1	Aroclor 1248	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-16	0	1	Aroclor 1248	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-18	0	1	Aroclor 1248	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-18	0	1	Aroclor 1248	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-19	0	1	Aroclor 1248	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-22	0	1	Aroclor 1248	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01			Aroclor 1254	0.27	MG/KG_DRY	J	10	10	1	N
Oxbow Area soil	SS_G-01	1	2	Aroclor 1254	0.027	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-01	0	1	Aroclor 1254	0.29	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-01	0	1	Aroclor 1254	0.34	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-01-01	0	1	Aroclor 1254	0.22	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-01-02	0	1	Aroclor 1254	0.042	MG/KG_DRY	J	10	10	1	N
Oxbow Area soil	SS_G-01-03	0	1	Aroclor 1254	0.57	MG/KG_DRY		10	10	1	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-01-04	0	1	Aroclor 1254	0.003	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-02	0	1	Aroclor 1254	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-03	0	1	Aroclor 1254	0.0077	MG/KG_DRY	J	10	10	1	N
Oxbow Area soil	SS_G-04	0	1	Aroclor 1254	0.049	MG/KG_DRY	J	10	10	1	N
Oxbow Area soil	SS_G-05	1	2	Aroclor 1254	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-05	0	1	Aroclor 1254	0.0028	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-06	0	1	Aroclor 1254	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-07	0	1	Aroclor 1254	0.11	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-08	0	1	Aroclor 1254	0.058	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-09	0	1	Aroclor 1254	0.096	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-10	0	1	Aroclor 1254	0.029	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-12	0	1	Aroclor 1254	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-13	0	1	Aroclor 1254	0.053	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-13	0	1	Aroclor 1254	0.081	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-14	0	1	Aroclor 1254	0.011	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-15	0	1	Aroclor 1254	0.011	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-18	0	1	Aroclor 1254	0.055	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-23	0	1	Aroclor 1254	0.1	MG/KG_DRY	J	10	10	1	N
Oxbow Area soil	SS_G-26	1	2	Aroclor 1254	0.0027	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-26	0	1	Aroclor 1254	0.04	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-29	0	1	Aroclor 1254	0.36	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-29-01	0	1	Aroclor 1254	0.31	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-29-02	0	1	Aroclor 1254	0.05	MG/KG_DRY		10	10	1	N
Lyman Mill soil	SS_G-30	0	1	Aroclor 1254	0.026	MG/KG_DRY		10	10	1	N
Lyman Mill soil	SS_G-31	0	1	Aroclor 1254	0.25	MG/KG_DRY		10	10	1	N
Lyman Mill soil	SS_G-32	0	1	Aroclor 1254	0.051	MG/KG_DRY		10	10	1	N
Lyman Mill soil	SS_G-33	0	1	Aroclor 1254	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-01	0	1	Aroclor 1254	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-03	0	1	Aroclor 1254	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-06	0	1	Aroclor 1254	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-07	0	1	Aroclor 1254	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-10	0	1	Aroclor 1254	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-13	0	1	Aroclor 1254	0.0038	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-16	0	1	Aroclor 1254	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-18	0	1	Aroclor 1254	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-18	0	1	Aroclor 1254	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-19	0	1	Aroclor 1254	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-22	0	1	Aroclor 1254	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01			Aroclor 1260	0.0021	MG/KG_DRY	UJ	10	10	1	NA
Oxbow Area soil	SS_G-01	1	2	Aroclor 1260	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01	0	1	Aroclor 1260	0.011	MG/KG_DRY	U	10	10	1	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-01	0	1	Aroclor 1260	0.011	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01-01	0	1	Aroclor 1260	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01-02	0	1	Aroclor 1260	0.0021	MG/KG_DRY	R	10	10	1	NA
Oxbow Area soil	SS_G-01-03	0	1	Aroclor 1260	0.011	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01-04	0	1	Aroclor 1260	0.0066	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-02	0	1	Aroclor 1260	0.0049	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-03	0	1	Aroclor 1260	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-04	0	1	Aroclor 1260	0.0056	MG/KG_DRY	UJ	10	10	1	NA
Oxbow Area soil	SS_G-05	1	2	Aroclor 1260	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-05	0	1	Aroclor 1260	0.004	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-06	0	1	Aroclor 1260	0.0036	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-07	0	1	Aroclor 1260	0.0022	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-08	0	1	Aroclor 1260	0.062	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-09	0	1	Aroclor 1260	0.12	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-10	0	1	Aroclor 1260	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-12	0	1	Aroclor 1260	0.12	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-13	0	1	Aroclor 1260	0.093	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-13	0	1	Aroclor 1260	0.084	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-14	0	1	Aroclor 1260	0.019	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-15	0	1	Aroclor 1260	0.018	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-18	0	1	Aroclor 1260	0.067	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-23	0	1	Aroclor 1260	0.0027	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-26	1	2	Aroclor 1260	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-26	0	1	Aroclor 1260	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-29	0	1	Aroclor 1260	0.011	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-29-01	0	1	Aroclor 1260	0.0024	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-29-02	0	1	Aroclor 1260	0.0021	MG/KG_DRY	U	10	10	1	NA
Lyman Mill soil	SS_G-30	0	1	Aroclor 1260	0.029	MG/KG_DRY		10	10	1	N
Lyman Mill soil	SS_G-31	0	1	Aroclor 1260	0.28	MG/KG_DRY		10	10	1	N
Lyman Mill soil	SS_G-32	0	1	Aroclor 1260	0.092	MG/KG_DRY		10	10	1	N
Lyman Mill soil	SS_G-33	0	1	Aroclor 1260	0.0031	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-01	0	1	Aroclor 1260	0.0048	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-03	0	1	Aroclor 1260	0.0024	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-06	0	1	Aroclor 1260	0.0023	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-07	0	1	Aroclor 1260	0.0031	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-10	0	1	Aroclor 1260	0.0053	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-13	0	1	Aroclor 1260	0.0065	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-16	0	1	Aroclor 1260	0.0038	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-18	0	1	Aroclor 1260	0.0043	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-18	0	1	Aroclor 1260	0.0054	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-19	0	1	Aroclor 1260	0.0055	MG/KG_DRY	U	10	10	1	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_H-22	0	1	Aroclor 1260	0.0023	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01			Aroclor 1262	0.0021	MG/KG_DRY	UJ	10	10	1	NA
Oxbow Area soil	SS_G-01	1	2	Aroclor 1262	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01	0	1	Aroclor 1262	0.011	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01	0	1	Aroclor 1262	0.011	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01-01	0	1	Aroclor 1262	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01-02	0	1	Aroclor 1262	0.0021	MG/KG_DRY	R	10	10	1	NA
Oxbow Area soil	SS_G-01-03	0	1	Aroclor 1262	0.011	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01-04	0	1	Aroclor 1262	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-02	0	1	Aroclor 1262	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-03	0	1	Aroclor 1262	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-04	0	1	Aroclor 1262	0.0056	MG/KG_DRY	UJ	10	10	1	NA
Oxbow Area soil	SS_G-05	1	2	Aroclor 1262	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-05	0	1	Aroclor 1262	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-06	0	1	Aroclor 1262	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-07	0	1	Aroclor 1262	0.0022	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-08	0	1	Aroclor 1262	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-09	0	1	Aroclor 1262	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-10	0	1	Aroclor 1262	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-12	0	1	Aroclor 1262	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-13	0	1	Aroclor 1262	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-13	0	1	Aroclor 1262	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-14	0	1	Aroclor 1262	0.0024	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-15	0	1	Aroclor 1262	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-18	0	1	Aroclor 1262	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-23	0	1	Aroclor 1262	0.0027	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-26	1	2	Aroclor 1262	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-26	0	1	Aroclor 1262	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-29	0	1	Aroclor 1262	0.011	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-29-01	0	1	Aroclor 1262	0.0024	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-29-02	0	1	Aroclor 1262	0.0021	MG/KG_DRY	U	10	10	1	NA
Lyman Mill soil	SS_G-30	0	1	Aroclor 1262	0.0021	MG/KG_DRY	U	10	10	1	NA
Lyman Mill soil	SS_G-31	0	1	Aroclor 1262	0.011	MG/KG_DRY	U	10	10	1	NA
Lyman Mill soil	SS_G-32	0	1	Aroclor 1262	0.0021	MG/KG_DRY	U	10	10	1	NA
Lyman Mill soil	SS_G-33	0	1	Aroclor 1262	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-01	0	1	Aroclor 1262	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-03	0	1	Aroclor 1262	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-06	0	1	Aroclor 1262	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-07	0	1	Aroclor 1262	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-10	0	1	Aroclor 1262	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-13	0	1	Aroclor 1262	0.0021	MG/KG_DRY	U	10	10	1	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_H-16	0	1	Aroclor 1262	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-18	0	1	Aroclor 1262	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-18	0	1	Aroclor 1262	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-19	0	1	Aroclor 1262	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-22	0	1	Aroclor 1262	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01			Aroclor 1268	0.024	MG/KG_DRY	J	10	10	1	N
Oxbow Area soil	SS_G-01	1	2	Aroclor 1268	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01	0	1	Aroclor 1268	0.011	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01	0	1	Aroclor 1268	0.011	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01-01	0	1	Aroclor 1268	0.033	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-01-02	0	1	Aroclor 1268	0.0021	MG/KG_DRY	R	10	10	1	NA
Oxbow Area soil	SS_G-01-03	0	1	Aroclor 1268	0.038	MG/KG_DRY	J	10	10	1	N
Oxbow Area soil	SS_G-01-04	0	1	Aroclor 1268	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-02	0	1	Aroclor 1268	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-03	0	1	Aroclor 1268	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-04	0	1	Aroclor 1268	0.0056	MG/KG_DRY	UJ	10	10	1	NA
Oxbow Area soil	SS_G-05	1	2	Aroclor 1268	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-05	0	1	Aroclor 1268	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-06	0	1	Aroclor 1268	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-07	0	1	Aroclor 1268	0.0022	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-08	0	1	Aroclor 1268	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-09	0	1	Aroclor 1268	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-10	0	1	Aroclor 1268	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-12	0	1	Aroclor 1268	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-13	0	1	Aroclor 1268	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-13	0	1	Aroclor 1268	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-14	0	1	Aroclor 1268	0.0024	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-15	0	1	Aroclor 1268	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-18	0	1	Aroclor 1268	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-23	0	1	Aroclor 1268	0.0027	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-26	1	2	Aroclor 1268	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-26	0	1	Aroclor 1268	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-29	0	1	Aroclor 1268	0.011	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-29-01	0	1	Aroclor 1268	0.054	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-29-02	0	1	Aroclor 1268	0.0021	MG/KG_DRY	U	10	10	1	NA
Lyman Mill soil	SS_G-30	0	1	Aroclor 1268	0.0021	MG/KG_DRY	U	10	10	1	NA
Lyman Mill soil	SS_G-31	0	1	Aroclor 1268	0.011	MG/KG_DRY	U	10	10	1	NA
Lyman Mill soil	SS_G-32	0	1	Aroclor 1268	0.0021	MG/KG_DRY	U	10	10	1	NA
Lyman Mill soil	SS_G-33	0	1	Aroclor 1268	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-01	0	1	Aroclor 1268	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-03	0	1	Aroclor 1268	0.0021	MG/KG_DRY	U	10	10	1	NA

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_H-06	0	1	Aroclor 1268	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-07	0	1	Aroclor 1268	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-10	0	1	Aroclor 1268	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-13	0	1	Aroclor 1268	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-16	0	1	Aroclor 1268	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-18	0	1	Aroclor 1268	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-18	0	1	Aroclor 1268	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-19	0	1	Aroclor 1268	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-22	0	1	Aroclor 1268	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-01	0	1	Mammal_2005_TEQ	2481.41038	PG/G_DRY		nc	nc	1000	Y
Oxbow Area soil	SS_G-01	0	1	Mammal_2005_TEQ	2608.07816	PG/G_DRY		nc	nc	1000	Y
Oxbow Area soil	SS_G-01	1	2	Mammal_2005_TEQ	329.843713	PG/G_DRY		nc	nc	1000	N
Oxbow Area soil	SS_G-01-01	0	1	Mammal_2005_TEQ	4887.6998	PG/G_DRY		nc	nc	1000	Y
Oxbow Area soil	SS_G-01-02	0	1	Mammal_2005_TEQ	3480.66405	PG/G_DRY		nc	nc	1000	Y
Oxbow Area soil	SS_G-01-03	0	1	Mammal_2005_TEQ	14633.1328	PG/G_DRY		nc	nc	1000	Y
Oxbow Area soil	SS_G-01-04	0	1	Mammal_2005_TEQ	16.082848	PG/G_DRY		nc	nc	1000	N
Oxbow Area soil	SS_G-02	0	1	Mammal_2005_TEQ	8.28059	PG/G_DRY		nc	nc	1000	N
Oxbow Area soil	SS_G-03	0	1	Mammal_2005_TEQ	235.247376	PG/G_DRY		nc	nc	1000	N
Oxbow Area soil	SS_G-04	0	1	Mammal_2005_TEQ	516.4473	PG/G_DRY		nc	nc	1000	N
Oxbow Area soil	SS_G-05	0	1	Mammal_2005_TEQ	45.374012	PG/G_DRY		nc	nc	1000	N
Oxbow Area soil	SS_G-05	1	2	Mammal_2005_TEQ	10.5644495	PG/G_DRY		nc	nc	1000	N
Oxbow Area soil	SS_G-06	0	1	Mammal_2005_TEQ	9.292369	PG/G_DRY		nc	nc	1000	N
Oxbow Area soil	SS_G-07	0	1	Mammal_2005_TEQ	2070.71595	PG/G_DRY		nc	nc	1000	Y
Oxbow Area soil	SS_G-08	0	1	Mammal_2005_TEQ	591.78697	PG/G_DRY		nc	nc	1000	N
Oxbow Area soil	SS_G-09	0	1	Mammal_2005_TEQ	2286.22516	PG/G_DRY		nc	nc	1000	Y
Oxbow Area soil	SS_G-10	0	1	Mammal_2005_TEQ	8.25802	PG/G_DRY		nc	nc	1000	N
Oxbow Area soil	SS_G-12	0	1	Mammal_2005_TEQ	78.29951	PG/G_DRY		nc	nc	1000	N
Oxbow Area soil	SS_G-13	0	1	Mammal_2005_TEQ	577.90174	PG/G_DRY		nc	nc	1000	N
Oxbow Area soil	SS_G-13	0	1	Mammal_2005_TEQ	648.09371	PG/G_DRY		nc	nc	1000	N
Oxbow Area soil	SS_G-14	0	1	Mammal_2005_TEQ	395.57293	PG/G_DRY		nc	nc	1000	N
Oxbow Area soil	SS_G-15	0	1	Mammal_2005_TEQ	397.23751	PG/G_DRY		nc	nc	1000	N
Oxbow Area soil	SS_G-18	0	1	Mammal_2005_TEQ	1204.4016	PG/G_DRY		nc	nc	1000	Y
Oxbow Area soil	SS_G-23	0	1	Mammal_2005_TEQ	1013.2593	PG/G_DRY		nc	nc	1000	Y
Oxbow Area soil	SS_G-26	0	1	Mammal_2005_TEQ	594.27242	PG/G_DRY		nc	nc	1000	N
Oxbow Area soil	SS_G-26	1	2	Mammal_2005_TEQ	15.091688	PG/G_DRY		nc	nc	1000	N
Oxbow Area soil	SS_G-29	0	1	Mammal_2005_TEQ	5150.147	PG/G_DRY		nc	nc	1000	Y
Oxbow Area soil	SS_G-29-01	0	1	Mammal_2005_TEQ	12641.6199	PG/G_DRY		nc	nc	1000	Y
Oxbow Area soil	SS_G-29-02	0	1	Mammal_2005_TEQ	800.99214	PG/G_DRY		nc	nc	1000	N
Lyman Mill soil	SS_G-30	0	1	Mammal_2005_TEQ	14.71175	PG/G_DRY		nc	nc	1000	N
Lyman Mill soil	SS_G-31	0	1	Mammal_2005_TEQ	48.6968	PG/G_DRY		nc	nc	1000	N
Lyman Mill soil	SS_G-32	0	1	Mammal_2005_TEQ	141.94689	PG/G_DRY		nc	nc	1000	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Lyman Mill soil	SS_G-33	0	1	Mammal_2005_TEQ	0.99793	PG/G_DRY		nc	nc	1000	N
Oxbow Area soil	SS_H-01	0	1	Mammal_2005_TEQ	5.89966	PG/G_DRY		nc	nc	1000	N
Oxbow Area soil	SS_H-03	0	1	Mammal_2005_TEQ	1.489892	PG/G_DRY		nc	nc	1000	N
Oxbow Area soil	SS_H-06	0	1	Mammal_2005_TEQ	3.056921	PG/G_DRY		nc	nc	1000	N
Oxbow Area soil	SS_H-07	0	1	Mammal_2005_TEQ	2.698	PG/G_DRY		nc	nc	1000	N
Oxbow Area soil	SS_H-10	0	1	Mammal_2005_TEQ	2.484861	PG/G_DRY		nc	nc	1000	N
Oxbow Area soil	SS_H-13	0	1	Mammal_2005_TEQ	8.729027	PG/G_DRY		nc	nc	1000	N
Oxbow Area soil	SS_H-16	0	1	Mammal_2005_TEQ	2.810085	PG/G_DRY		nc	nc	1000	N
Oxbow Area soil	SS_H-18	0	1	Mammal_2005_TEQ	4.467397	PG/G_DRY		nc	nc	1000	N
Oxbow Area soil	SS_H-18	0	1	Mammal_2005_TEQ	6.116249	PG/G_DRY		nc	nc	1000	N
Oxbow Area soil	SS_H-19	0	1	Mammal_2005_TEQ	4.166234	PG/G_DRY		nc	nc	1000	N
Oxbow Area soil	SS_H-22	0	1	Mammal_2005_TEQ	3.05814	PG/G_DRY		nc	nc	1000	N
Oxbow Area soil	SS_G-01	0	1	Total Aroclor	0.29	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-01	0	1	Total Aroclor	0.34	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-01	1	2	Total Aroclor	0.027	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-01-01	0	1	Total Aroclor	0.253	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-01-02	0	1	Total Aroclor	0.042	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-01-02	0	1	Total Aroclor	0.294	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-01-03	0	1	Total Aroclor	0.608	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-01-04	0	1	Total Aroclor	0.0066	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-02	0	1	Total Aroclor	0.0049	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-03	0	1	Total Aroclor	0.0077	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-04	0	1	Total Aroclor	0.049	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-05	0	1	Total Aroclor	0.004	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-05	1	2	Total Aroclor	0.0021	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-06	0	1	Total Aroclor	0.0036	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-07	0	1	Total Aroclor	0.11	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-08	0	1	Total Aroclor	0.12	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-09	0	1	Total Aroclor	0.216	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-10	0	1	Total Aroclor	0.047	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-12	0	1	Total Aroclor	0.12	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-13	0	1	Total Aroclor	0.146	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-13	0	1	Total Aroclor	0.165	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-14	0	1	Total Aroclor	0.019	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-15	0	1	Total Aroclor	0.018	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-18	0	1	Total Aroclor	0.067	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-23	0	1	Total Aroclor	0.1	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-26	0	1	Total Aroclor	0.04	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-26	1	2	Total Aroclor	0.0027	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_G-29	0	1	Total Aroclor	0.36	MG/KG_DRY		10	10	1	N
Oxbow Area soil	SS_G-29-01	0	1	Total Aroclor	0.364	MG/KG_DRY		10	10	1	N

Table F-2b. Comparison of Allendale and Lyman Mill Reach Floodplain Soil Data to Potential ARARs and TBCs

								Potential ARARs and TBCs[1]			
RI_SAMPLE_GROUP	BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNIT	QUAL	RIDEM Direct Exposure Criteria (MG/KG)	RIDEM GB Leachability Criteria (MG/KG)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
Oxbow Area soil	SS_G-29-02	0	1	Total Aroclor	0.05	MG/KG_DRY		10	10	1	N
Lyman Mill soil	SS_G-30	0	1	Total Aroclor	0.055	MG/KG_DRY		10	10	1	N
Lyman Mill soil	SS_G-31	0	1	Total Aroclor	0.53	MG/KG_DRY		10	10	1	N
Lyman Mill soil	SS_G-32	0	1	Total Aroclor	0.143	MG/KG_DRY		10	10	1	N
Lyman Mill soil	SS_G-33	0	1	Total Aroclor	0.0031	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-01	0	1	Total Aroclor	0.0048	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-03	0	1	Total Aroclor	0.0024	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-06	0	1	Total Aroclor	0.0023	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-07	0	1	Total Aroclor	0.0031	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-10	0	1	Total Aroclor	0.0053	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-13	0	1	Total Aroclor	0.0065	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-16	0	1	Total Aroclor	0.0038	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-18	0	1	Total Aroclor	0.0043	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-18	0	1	Total Aroclor	0.0054	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-19	0	1	Total Aroclor	0.0055	MG/KG_DRY	U	10	10	1	NA
Oxbow Area soil	SS_H-22	0	1	Total Aroclor	0.0023	MG/KG_DRY	U	10	10	1	NA

Notes:

[1] Potential ARARs include RIDEM residential direct exposure and GB leachability criteria (RIDEM, 2004) and TBC criteria include EPA's recommended residential level for dioxin (EPA, 1998) and PCB (EPA, 1990) in soil.

[2] Soils located along western bank of the Woonasquatucket River between RT44 (Smith Street) and Cap Area #1 at Source Area; soils included in Allendale reach floodplain soil action area.

NA - Undetected contaminants (where qualifier = U, UJ or UEMPC) and/or rejected data (where qualifier = R) were not compared to potential ARAR/TBCs. Nor were cleanup goals developed for undetected contaminants where the laboratory detection limits (reported in the LAB_RESULT field) are in excess of ARAR/TBCs.

Key

ARAR - Applicable or Relevant and Appropriate Requirement; TBC - To Be Considered; nc - no criteria; NA - not applicable; N - No; Y - Yes; MG/KG - milligrams per kilogram; NG/KG - nanograms per kilogram.

Table F-4a. Proposed Cleanup Goals for Source Area Soil
(All units in mg/kg, except dioxin)

	Potential ARARs and TBCs				
Contaminant[a]	**RIDEM Residential Direct Exposure Criteria**	**RIDEM GA Leachability Criteria**	**EPA's Recommended Residential Level**	**Proposed Cleanup Goal[b]**	**Basis[c]**
Volatile Organics (mg/kg)					
Benzene	2.5	0.2	NA	0,2	ARAR[GA leachability]
Chlorobenzene	210	3.2	NA	3.2	ARAR[GA leachability]
1,2-dichloroethane	0.9	0.1	NA	0.1	ARAR[GA leachability]
Cis-1,2-dichloroethene	NA[d]	1.7	NA	1.7	ARAR[GA leachability]
Ethylbenzene	71	27	NA	27	ARAR[GA leachability]
Tetrachloroethene	12	0.1	NA	0.1	ARAR[GA leachability]
Toluene	190	32	NA	32	ARAR[GA leachability]
Trichloroethene	13	0.2	NA	0.2	ARAR[GA leachability]
Vinyl Chloride	0.02	0.3	NA	0.02	ARAR[residential direct exposure]
Total Xylenes	110	NA[d]	NA	110	ARAR[residential direct exposure]
1,1,1-trichloroethane	NA[d]	11	NA	11	ARAR[GA leachability]
1,1,2-trichloroethane	NA[d]	0.1	NA	0.1	ARAR[GA leachability]
1,2-dichlorobenzene	510	41	NA	41	ARAR[GA leachability]
1,4-dichlorobenzene	27	NA[d]	NA	27	ARAR[residential direct exposure]
1,2,4-trichlorobenzene	96	140	NA	96	ARAR[residential direct exposure]
Styrene	NA[d]	2.9	NA	2.9	ARAR[GA leachability]
Trans-1,2-dichloroethene	NA[d]	3.3	NA	3.3	ARAR[GA leachability]
Semivolatiles (mg/kg)					
Benzo(a)anthracene	0.9	nc	NA	0.9	ARAR[residential direct exposure]
Benzo(a)pyrene	0.4	NA[d]	NA	0.4	ARAR[residential direct exposure]
Benzo(b)fluoranthene	0.9	nc	NA	0.9	ARAR[residential direct exposure]
Benzo(g,h,i)perylene	0.8	nc	NA	0.8	ARAR[residential direct exposure]
Benzo(k)fluoranthene	0.9	nc	NA	0.9	ARAR[residential direct exposure]
Biphenyl	0.8	nc	NA	0.8	ARAR[residential direct exposure]
Bis(2-ethylhexyl)phthalate	46	nc	NA	46	ARAR[residential direct exposure]
Chrysene	0.4	nc	NA	0.4	ARAR[residential direct exposure]
Dibenzo(a,h)anthracene	0.4	nc	NA	0.4	ARAR[residential direct exposure]
Fluoranthene	20	nc	NA	20	ARAR[residential direct exposure]
Indeno(1,2,3-cd)pyrene	0.9	nc	NA	0.9	ARAR[residential direct exposure]
Naphthalene	54	0.8	NA	0.8	ARAR[GA leachability]
Pentachlorophenol	5.3	7.1	NA	5.3	ARAR[residential direct exposure]
Pyrene	13	nc	NA	13	ARAR[residential direct exposure]
Pesticides/PCBs (mg/kg)					
Technical Chlordane	0.5	1.4	NA	0.5	ARAR[residential direct exposure]
Dieldrin	0.04	nc	NA	0.04	ARAR[residential direct exposure]
Aroclor, Total	10	10	1	1	TBC[EPA's recommended residential level]
Dioxin (ng/kg)					
TEQ	nc	nc	1000	1000	TBC [EPA's recommended residential level]
Inorganics (mg/kg)					
Antimony	10	nc[e]	NA	10	ARAR[residential direct exposure]
Arsenic	7	nc[e]	NA	7	ARAR[residential direct exposure]
Beryllium	0.4	nc[e]	NA	0.4	ARAR[residential direct exposure]
Cadmium	39	nc[e]	NA	39	ARAR[residential direct exposure]
Lead	150	nc[e]	NA	150	ARAR[residential direct exposure]
Manganese	390	nc[e]	NA	390	ARAR[residential direct exposure]
Thallium	5.5	nc[e]	NA	5.5	ARAR[residential direct exposure]

Notes

(a) Cleanup goals were developed for contaminants detected at concentrations in excess of the potential ARARs (RIDEM residential direct exposure and GA leachability criteria; applicable to vadoze zone soils [0-5 ft below ground surface]) and TBCs (EPA's Recommended Residential Level for PCB and Dioxin in Soil; applicable to surface soils [0-1 ft below ground surface]).

Cleanup goals were not developed for contaminants that were undetected (i.e., results are 'U' or 'UJ' qualified) or detected at concentrations below ARARs. Nor were cleanup goals developed for undetected contaminants where the laboratory detection limits are in excess of ARARs.

In addition, all numeric criteria included in ARARs identified for the CMRP site are cleanup goals regardless of whether or not they are identified above in this Appendix F (except where background is an issue).

(b) Proposed Cleanup Goal is the lower of the potential ARAR values.

(c) The basis of the Cleanup Goal is:

ARAR Applicable or Relevant and Appropriate Requirement
TBC To Be Considered criteria

(d) Detected concentrations do not exceed criteria.
(e) Criteria are available based on TCLP/SPLP analysis only; metals data available for site soils, but not on TCLP/SPLP basis.

Key
ARAR - applicable or relevant and appropriate requirement; nc - no criteria; NA - not applicable; mg/kg - milligrams per kilogram; ng/kg - nanograms per kilogram; TBC - to be considered.

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-089	0	1	1,1,1,2-tetrachloroethane	0.005	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-098	0	1	1,1,1,2-tetrachloroethane	0.0097	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-118	0	1	1,1,1,2-tetrachloroethane	0.0048	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-142	0	1	1,1,1,2-tetrachloroethane	0.0095	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-159	0	1	1,1,1,2-tetrachloroethane	0.021	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-173	0	1	1,1,1,2-tetrachloroethane	0.024	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-407	0	1	1,1,1,2-tetrachloroethane	0.005	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-408	0	1	1,1,1,2-tetrachloroethane	0.0043	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-417	0	1	1,1,1,2-tetrachloroethane	59	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-456	0	1	1,1,1,2-tetrachloroethane	0.0075	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-702	0	1	1,1,1,2-tetrachloroethane	0.0087	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-703	0	1	1,1,1,2-tetrachloroethane	0.0061	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-142	0	1	1,1,1,2-tetrachloroethane	0.011	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-060	0	1	1,1,1,2-tetrachloroethane	2.7	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-065	0	10	1,1,1,2-tetrachloroethane	3.9	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-089	1	2	1,1,1,2-tetrachloroethane	0.0048	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-118	1	2	1,1,1,2-tetrachloroethane	0.006	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-173	1	2	1,1,1,2-tetrachloroethane	0.0083	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-407	1	2	1,1,1,2-tetrachloroethane	0.0074	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-408	1	2	1,1,1,2-tetrachloroethane	2.2	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-417	1	2	1,1,1,2-tetrachloroethane	130	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-419	1	2	1,1,1,2-tetrachloroethane	28	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-423	1	2	1,1,1,2-tetrachloroethane	0.0062	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-427	1	2	1,1,1,2-tetrachloroethane	0.0045	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-428	1	2	1,1,1,2-tetrachloroethane	0.0054	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-456	1	2	1,1,1,2-tetrachloroethane	0.0089	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-060	2	3	1,1,1,2-tetrachloroethane	0.27	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-089	2	3	1,1,1,2-tetrachloroethane	0.0047	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-118	2	3	1,1,1,2-tetrachloroethane	0.0074	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-407	2	3	1,1,1,2-tetrachloroethane	0.0087	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-408	2	3	1,1,1,2-tetrachloroethane	6.6	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-417	2	3	1,1,1,2-tetrachloroethane	17	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-455	2	3	1,1,1,2-tetrachloroethane	0.33	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-060	3	4	1,1,1,2-tetrachloroethane	0.0058	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-089	3	4	1,1,1,2-tetrachloroethane	0.0041	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-407	3	4	1,1,1,2-tetrachloroethane	0.32	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-419	3	4	1,1,1,2-tetrachloroethane	0.32	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-423	3	4	1,1,1,2-tetrachloroethane	0.0045	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-427	3	4	1,1,1,2-tetrachloroethane	0.0054	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-428	3	4	1,1,1,2-tetrachloroethane	0.0057	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-423	3	4	1,1,1,2-tetrachloroethane	0.0049	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-060	4	5	1,1,1,2-tetrachloroethane	0.0048	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-118	4	5	1,1,1,2-tetrachloroethane	0.0059	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-405	4	5	1,1,1,2-tetrachloroethane	1	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-455	4	5	1,1,1,2-tetrachloroethane	0.0072	MG/KG	U	2.2	NA	nc	NA	nc	NA
CMS-164	0	1	1,1,1,2-tetrachloroethane	0.015	MG/KG	UJ	2.2	NA	nc	NA	nc	NA
CMS-237	0	1	1,1,1,2-tetrachloroethane	0.0059	MG/KG	UJ	2.2	NA	nc	NA	nc	NA
CMS-060	1	2	1,1,1,2-tetrachloroethane	5.1	MG/KG	UJ	2.2	NA	nc	NA	nc	NA
CMS-237	1	2	1,1,1,2-tetrachloroethane	0.0069	MG/KG	UJ	2.2	NA	nc	NA	nc	NA
CMS-405	1	2	1,1,1,2-tetrachloroethane	4	MG/KG	UJ	2.2	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-405	1	2	1,1,1,2-tetrachloroethane	2.9	MG/KG	UJ	2.2	NA	nc	NA	nc	NA
CMS-118	3	4	1,1,1,2-tetrachloroethane	0.0084	MG/KG	UJ	2.2	NA	nc	NA	nc	NA
CMS-417	3	4	1,1,1,2-tetrachloroethane	0.28	MG/KG	UJ	2.2	NA	nc	NA	nc	NA
CMS-417	0	1	1,1,1-trichloroethane	27	MG/KG	J	540	N	11	Y	nc	NA
CMS-417	1	2	1,1,1-trichloroethane	110	MG/KG	J	540	N	11	Y	nc	NA
CMS-089	0	1	1,1,1-trichloroethane	0.005	MG/KG	U	540	NA	11	NA	nc	NA
CMS-098	0	1	1,1,1-trichloroethane	0.0097	MG/KG	U	540	NA	11	NA	nc	NA
CMS-118	0	1	1,1,1-trichloroethane	0.0048	MG/KG	U	540	NA	11	NA	nc	NA
CMS-142	0	1	1,1,1-trichloroethane	0.0095	MG/KG	U	540	NA	11	NA	nc	NA
CMS-159	0	1	1,1,1-trichloroethane	0.021	MG/KG	U	540	NA	11	NA	nc	NA
CMS-164	0	1	1,1,1-trichloroethane	0.015	MG/KG	U	540	NA	11	NA	nc	NA
CMS-173	0	1	1,1,1-trichloroethane	0.024	MG/KG	U	540	NA	11	NA	nc	NA
CMS-407	0	1	1,1,1-trichloroethane	0.005	MG/KG	U	540	NA	11	NA	nc	NA
CMS-408	0	1	1,1,1-trichloroethane	0.0043	MG/KG	U	540	NA	11	NA	nc	NA
CMS-456	0	1	1,1,1-trichloroethane	0.0075	MG/KG	U	540	NA	11	NA	nc	NA
CMS-702	0	1	1,1,1-trichloroethane	0.0087	MG/KG	U	540	NA	11	NA	nc	NA
CMS-703	0	1	1,1,1-trichloroethane	0.0061	MG/KG	U	540	NA	11	NA	nc	NA
CMS-142	0	1	1,1,1-trichloroethane	0.011	MG/KG	U	540	NA	11	NA	nc	NA
CMS-060	0	1	1,1,1-trichloroethane	2.7	MG/KG	U	540	NA	11	NA	nc	NA
CMS-065	0	10	1,1,1-trichloroethane	0.79	MG/KG	U	540	NA	11	NA	nc	NA
MW05S	1	2	1,1,1-trichloroethane	0.095	MG/KG	U	540	NA	11	NA	nc	NA
MW01S	1	2	1,1,1-trichloroethane	0.34	MG/KG	U	540	NA	11	NA	nc	NA
MW05S	1	2	1,1,1-trichloroethane	0.11	MG/KG	U	540	NA	11	NA	nc	NA
MW08S	1	2	1,1,1-trichloroethane	0.26	MG/KG	U	540	NA	11	NA	nc	NA
MW14M	1	2	1,1,1-trichloroethane	0.11	MG/KG	U	540	NA	11	NA	nc	NA
CMS-089	1	2	1,1,1-trichloroethane	0.0048	MG/KG	U	540	NA	11	NA	nc	NA
CMS-118	1	2	1,1,1-trichloroethane	0.006	MG/KG	U	540	NA	11	NA	nc	NA
CMS-173	1	2	1,1,1-trichloroethane	0.0083	MG/KG	U	540	NA	11	NA	nc	NA
CMS-237	1	2	1,1,1-trichloroethane	0.0069	MG/KG	U	540	NA	11	NA	nc	NA
CMS-405	1	2	1,1,1-trichloroethane	4	MG/KG	U	540	NA	11	NA	nc	NA
CMS-407	1	2	1,1,1-trichloroethane	0.0074	MG/KG	U	540	NA	11	NA	nc	NA
CMS-408	1	2	1,1,1-trichloroethane	2.2	MG/KG	U	540	NA	11	NA	nc	NA
CMS-419	1	2	1,1,1-trichloroethane	28	MG/KG	U	540	NA	11	NA	nc	NA
CMS-423	1	2	1,1,1-trichloroethane	0.0062	MG/KG	U	540	NA	11	NA	nc	NA
CMS-427	1	2	1,1,1-trichloroethane	0.0045	MG/KG	U	540	NA	11	NA	nc	NA
CMS-428	1	2	1,1,1-trichloroethane	0.0054	MG/KG	U	540	NA	11	NA	nc	NA
CMS-456	1	2	1,1,1-trichloroethane	0.0089	MG/KG	U	540	NA	11	NA	nc	NA
CMS-060	2	3	1,1,1-trichloroethane	0.27	MG/KG	U	540	NA	11	NA	nc	NA
CMS-089	2	3	1,1,1-trichloroethane	0.0047	MG/KG	U	540	NA	11	NA	nc	NA
CMS-118	2	3	1,1,1-trichloroethane	0.0074	MG/KG	U	540	NA	11	NA	nc	NA
CMS-407	2	3	1,1,1-trichloroethane	0.0087	MG/KG	U	540	NA	11	NA	nc	NA
CMS-408	2	3	1,1,1-trichloroethane	6.6	MG/KG	U	540	NA	11	NA	nc	NA
CMS-417	2	3	1,1,1-trichloroethane	17	MG/KG	U	540	NA	11	NA	nc	NA
CMS-455	2	3	1,1,1-trichloroethane	0.33	MG/KG	U	540	NA	11	NA	nc	NA
MW08S	2	4	1,1,1-trichloroethane	0.21	MG/KG	U	540	NA	11	NA	nc	NA
MW01S	2	4	1,1,1-trichloroethane	0.22	MG/KG	U	540	NA	11	NA	nc	NA
MW02S	2	4	1,1,1-trichloroethane	0.2	MG/KG	U	540	NA	11	NA	nc	NA
MW04D	2	4	1,1,1-trichloroethane	0.5	MG/KG	U	540	NA	11	NA	nc	NA
MW05S	2	4	1,1,1-trichloroethane	0.1	MG/KG	U	540	NA	11	NA	nc	NA
MW06S	2	4	1,1,1-trichloroethane	0.3	MG/KG	U	540	NA	11	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW06S	2	4	1,1,1-trichloroethane	0.3	MG/KG	U	540	NA	11	NA	nc	NA
MW08S	2	4	1,1,1-trichloroethane	0.32	MG/KG	U	540	NA	11	NA	nc	NA
MW14M	2	4	1,1,1-trichloroethane	0.14	MG/KG	U	540	NA	11	NA	nc	NA
MW15D	2	4	1,1,1-trichloroethane	0.14	MG/KG	U	540	NA	11	NA	nc	NA
SB02	2	4	1,1,1-trichloroethane	0.38	MG/KG	U	540	NA	11	NA	nc	NA
SB03	2	4	1,1,1-trichloroethane	0.3	MG/KG	U	540	NA	11	NA	nc	NA
MW07S	3	4	1,1,1-trichloroethane	0.5	MG/KG	U	540	NA	11	NA	nc	NA
CMS-060	3	4	1,1,1-trichloroethane	0.0058	MG/KG	U	540	NA	11	NA	nc	NA
CMS-089	3	4	1,1,1-trichloroethane	0.0041	MG/KG	U	540	NA	11	NA	nc	NA
CMS-118	3	4	1,1,1-trichloroethane	0.0084	MG/KG	U	540	NA	11	NA	nc	NA
CMS-407	3	4	1,1,1-trichloroethane	0.32	MG/KG	U	540	NA	11	NA	nc	NA
CMS-417	3	4	1,1,1-trichloroethane	0.28	MG/KG	U	540	NA	11	NA	nc	NA
CMS-419	3	4	1,1,1-trichloroethane	0.32	MG/KG	U	540	NA	11	NA	nc	NA
CMS-423	3	4	1,1,1-trichloroethane	0.0045	MG/KG	U	540	NA	11	NA	nc	NA
CMS-427	3	4	1,1,1-trichloroethane	0.0054	MG/KG	U	540	NA	11	NA	nc	NA
CMS-428	3	4	1,1,1-trichloroethane	0.0057	MG/KG	U	540	NA	11	NA	nc	NA
CMS-423	3	4	1,1,1-trichloroethane	0.0049	MG/KG	U	540	NA	11	NA	nc	NA
CMS-060	4	5	1,1,1-trichloroethane	0.0048	MG/KG	U	540	NA	11	NA	nc	NA
CMS-118	4	5	1,1,1-trichloroethane	0.0059	MG/KG	U	540	NA	11	NA	nc	NA
CMS-405	4	5	1,1,1-trichloroethane	1	MG/KG	U	540	NA	11	NA	nc	NA
CMS-455	4	5	1,1,1-trichloroethane	0.0072	MG/KG	U	540	NA	11	NA	nc	NA
MW15D	4	6	1,1,1-trichloroethane	0.1	MG/KG	U	540	NA	11	NA	nc	NA
MW02S	4	6	1,1,1-trichloroethane	0.55	MG/KG	U	540	NA	11	NA	nc	NA
SB03	4	6	1,1,1-trichloroethane	0.2	MG/KG	U	540	NA	11	NA	nc	NA
MW01S	4	6	1,1,1-trichloroethane	0.24	MG/KG	U	540	NA	11	NA	nc	NA
MW02S	4	6	1,1,1-trichloroethane	0.42	MG/KG	U	540	NA	11	NA	nc	NA
MW03S	4	6	1,1,1-trichloroethane	0.35	MG/KG	U	540	NA	11	NA	nc	NA
MW04D	4	6	1,1,1-trichloroethane	0.18	MG/KG	U	540	NA	11	NA	nc	NA
MW06S	4	6	1,1,1-trichloroethane	0.43	MG/KG	U	540	NA	11	NA	nc	NA
MW07S	4	6	1,1,1-trichloroethane	0.26	MG/KG	U	540	NA	11	NA	nc	NA
MW08S	4	6	1,1,1-trichloroethane	0.3	MG/KG	U	540	NA	11	NA	nc	NA
MW09S	4	6	1,1,1-trichloroethane	0.26	MG/KG	U	540	NA	11	NA	nc	NA
MW15D	4	6	1,1,1-trichloroethane	0.12	MG/KG	U	540	NA	11	NA	nc	NA
SB02	4	6	1,1,1-trichloroethane	0.26	MG/KG	U	540	NA	11	NA	nc	NA
SB03	4	6	1,1,1-trichloroethane	0.18	MG/KG	U	540	NA	11	NA	nc	NA
CMS-237	0	1	1,1,1-trichloroethane	0.0059	MG/KG	UJ	540	NA	11	NA	nc	NA
MW14M	1	2	1,1,1-trichloroethane	0.15	MG/KG	UJ	540	NA	11	NA	nc	NA
SB-14-271	1	2	1,1,1-trichloroethane	0.12	MG/KG	UJ	540	NA	11	NA	nc	NA
CMS-060	1	2	1,1,1-trichloroethane	5.1	MG/KG	UJ	540	NA	11	NA	nc	NA
CMS-405	1	2	1,1,1-trichloroethane	2.9	MG/KG	UJ	540	NA	11	NA	nc	NA
SB-14-271	2	4	1,1,1-trichloroethane	0.13	MG/KG	UJ	540	NA	11	NA	nc	NA
MW05S	4	6	1,1,1-trichloroethane	0.11	MG/KG	UJ	540	NA	11	NA	nc	NA
SB-14-271	4	6	1,1,1-trichloroethane	0.11	MG/KG	UJ	540	NA	11	NA	nc	NA
CMS-089	0	1	1,1,2,2-tetrachloroethane	0.005	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-118	0	1	1,1,2,2-tetrachloroethane	0.0048	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-159	0	1	1,1,2,2-tetrachloroethane	0.021	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-407	0	1	1,1,2,2-tetrachloroethane	0.005	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-408	0	1	1,1,2,2-tetrachloroethane	0.0043	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-417	0	1	1,1,2,2-tetrachloroethane	59	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-456	0	1	1,1,2,2-tetrachloroethane	0.0075	MG/KG	U	1.3	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-702	0	1	1,1,2,2-tetrachloroethane	0.0087	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-060	0	1	1,1,2,2-tetrachloroethane	2.7	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-065	0	10	1,1,2,2-tetrachloroethane	0.79	MG/KG	U	1.3	NA	nc	NA	nc	NA
MW05S	1	2	1,1,2,2-tetrachloroethane	0.095	MG/KG	U	1.3	NA	nc	NA	nc	NA
MW01S	1	2	1,1,2,2-tetrachloroethane	0.34	MG/KG	U	1.3	NA	nc	NA	nc	NA
MW05S	1	2	1,1,2,2-tetrachloroethane	0.11	MG/KG	U	1.3	NA	nc	NA	nc	NA
MW08S	1	2	1,1,2,2-tetrachloroethane	0.26	MG/KG	U	1.3	NA	nc	NA	nc	NA
MW14M	1	2	1,1,2,2-tetrachloroethane	0.11	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-060	1	2	1,1,2,2-tetrachloroethane	5.1	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-089	1	2	1,1,2,2-tetrachloroethane	0.0048	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-405	1	2	1,1,2,2-tetrachloroethane	4	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-408	1	2	1,1,2,2-tetrachloroethane	2.2	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-417	1	2	1,1,2,2-tetrachloroethane	130	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-419	1	2	1,1,2,2-tetrachloroethane	28	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-423	1	2	1,1,2,2-tetrachloroethane	0.0062	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-427	1	2	1,1,2,2-tetrachloroethane	0.0045	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-428	1	2	1,1,2,2-tetrachloroethane	0.0054	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-407	2	3	1,1,2,2-tetrachloroethane	0.0087	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-408	2	3	1,1,2,2-tetrachloroethane	6.6	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-417	2	3	1,1,2,2-tetrachloroethane	17	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-455	2	3	1,1,2,2-tetrachloroethane	0.33	MG/KG	U	1.3	NA	nc	NA	nc	NA
MW08S	2	4	1,1,2,2-tetrachloroethane	0.21	MG/KG	U	1.3	NA	nc	NA	nc	NA
MW01S	2	4	1,1,2,2-tetrachloroethane	0.22	MG/KG	U	1.3	NA	nc	NA	nc	NA
MW02S	2	4	1,1,2,2-tetrachloroethane	0.2	MG/KG	U	1.3	NA	nc	NA	nc	NA
MW04D	2	4	1,1,2,2-tetrachloroethane	0.5	MG/KG	U	1.3	NA	nc	NA	nc	NA
MW05S	2	4	1,1,2,2-tetrachloroethane	0.1	MG/KG	U	1.3	NA	nc	NA	nc	NA
MW06S	2	4	1,1,2,2-tetrachloroethane	0.3	MG/KG	U	1.3	NA	nc	NA	nc	NA
MW06S	2	4	1,1,2,2-tetrachloroethane	0.3	MG/KG	U	1.3	NA	nc	NA	nc	NA
MW08S	2	4	1,1,2,2-tetrachloroethane	0.32	MG/KG	U	1.3	NA	nc	NA	nc	NA
MW14M	2	4	1,1,2,2-tetrachloroethane	0.14	MG/KG	U	1.3	NA	nc	NA	nc	NA
MW15D	2	4	1,1,2,2-tetrachloroethane	0.14	MG/KG	U	1.3	NA	nc	NA	nc	NA
SB02	2	4	1,1,2,2-tetrachloroethane	0.38	MG/KG	U	1.3	NA	nc	NA	nc	NA
SB03	2	4	1,1,2,2-tetrachloroethane	0.3	MG/KG	U	1.3	NA	nc	NA	nc	NA
MW07S	3	4	1,1,2,2-tetrachloroethane	0.5	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-060	3	4	1,1,2,2-tetrachloroethane	0.0058	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-089	3	4	1,1,2,2-tetrachloroethane	0.0041	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-407	3	4	1,1,2,2-tetrachloroethane	0.32	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-417	3	4	1,1,2,2-tetrachloroethane	0.28	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-419	3	4	1,1,2,2-tetrachloroethane	0.32	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-423	3	4	1,1,2,2-tetrachloroethane	0.0045	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-427	3	4	1,1,2,2-tetrachloroethane	0.0054	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-428	3	4	1,1,2,2-tetrachloroethane	0.0057	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-423	3	4	1,1,2,2-tetrachloroethane	0.0049	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-060	4	5	1,1,2,2-tetrachloroethane	0.0048	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-118	4	5	1,1,2,2-tetrachloroethane	0.0059	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-405	4	5	1,1,2,2-tetrachloroethane	1	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-455	4	5	1,1,2,2-tetrachloroethane	0.0072	MG/KG	U	1.3	NA	nc	NA	nc	NA
MW15D	4	6	1,1,2,2-tetrachloroethane	0.1	MG/KG	U	1.3	NA	nc	NA	nc	NA
MW02S	4	6	1,1,2,2-tetrachloroethane	0.55	MG/KG	U	1.3	NA	nc	NA	nc	NA
SB03	4	6	1,1,2,2-tetrachloroethane	0.2	MG/KG	U	1.3	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW01S	4	6	1,1,2,2-tetrachloroethane	0.24	MG/KG	U	1.3	NA	nc	NA	nc	NA
MW02S	4	6	1,1,2,2-tetrachloroethane	0.42	MG/KG	U	1.3	NA	nc	NA	nc	NA
MW03S	4	6	1,1,2,2-tetrachloroethane	0.35	MG/KG	U	1.3	NA	nc	NA	nc	NA
MW04D	4	6	1,1,2,2-tetrachloroethane	0.18	MG/KG	U	1.3	NA	nc	NA	nc	NA
MW06S	4	6	1,1,2,2-tetrachloroethane	0.43	MG/KG	U	1.3	NA	nc	NA	nc	NA
MW07S	4	6	1,1,2,2-tetrachloroethane	0.26	MG/KG	U	1.3	NA	nc	NA	nc	NA
MW08S	4	6	1,1,2,2-tetrachloroethane	0.3	MG/KG	U	1.3	NA	nc	NA	nc	NA
MW09S	4	6	1,1,2,2-tetrachloroethane	0.26	MG/KG	U	1.3	NA	nc	NA	nc	NA
MW15D	4	6	1,1,2,2-tetrachloroethane	0.12	MG/KG	U	1.3	NA	nc	NA	nc	NA
SB02	4	6	1,1,2,2-tetrachloroethane	0.26	MG/KG	U	1.3	NA	nc	NA	nc	NA
SB03	4	6	1,1,2,2-tetrachloroethane	0.18	MG/KG	U	1.3	NA	nc	NA	nc	NA
CMS-098	0	1	1,1,2,2-tetrachloroethane	0.0097	MG/KG	UJ	1.3	NA	nc	NA	nc	NA
CMS-142	0	1	1,1,2,2-tetrachloroethane	0.0095	MG/KG	UJ	1.3	NA	nc	NA	nc	NA
CMS-164	0	1	1,1,2,2-tetrachloroethane	0.015	MG/KG	UJ	1.3	NA	nc	NA	nc	NA
CMS-173	0	1	1,1,2,2-tetrachloroethane	0.024	MG/KG	UJ	1.3	NA	nc	NA	nc	NA
CMS-237	0	1	1,1,2,2-tetrachloroethane	0.0059	MG/KG	UJ	1.3	NA	nc	NA	nc	NA
CMS-703	0	1	1,1,2,2-tetrachloroethane	0.0061	MG/KG	UJ	1.3	NA	nc	NA	nc	NA
CMS-142	0	1	1,1,2,2-tetrachloroethane	0.011	MG/KG	UJ	1.3	NA	nc	NA	nc	NA
MW14M	1	2	1,1,2,2-tetrachloroethane	0.15	MG/KG	UJ	1.3	NA	nc	NA	nc	NA
SB-14-271	1	2	1,1,2,2-tetrachloroethane	0.12	MG/KG	UJ	1.3	NA	nc	NA	nc	NA
CMS-118	1	2	1,1,2,2-tetrachloroethane	0.006	MG/KG	UJ	1.3	NA	nc	NA	nc	NA
CMS-173	1	2	1,1,2,2-tetrachloroethane	0.0083	MG/KG	UJ	1.3	NA	nc	NA	nc	NA
CMS-237	1	2	1,1,2,2-tetrachloroethane	0.0069	MG/KG	UJ	1.3	NA	nc	NA	nc	NA
CMS-407	1	2	1,1,2,2-tetrachloroethane	0.0074	MG/KG	UJ	1.3	NA	nc	NA	nc	NA
CMS-456	1	2	1,1,2,2-tetrachloroethane	0.0089	MG/KG	UJ	1.3	NA	nc	NA	nc	NA
CMS-405	1	2	1,1,2,2-tetrachloroethane	2.9	MG/KG	UJ	1.3	NA	nc	NA	nc	NA
CMS-060	2	3	1,1,2,2-tetrachloroethane	0.27	MG/KG	UJ	1.3	NA	nc	NA	nc	NA
CMS-089	2	3	1,1,2,2-tetrachloroethane	0.0047	MG/KG	UJ	1.3	NA	nc	NA	nc	NA
CMS-118	2	3	1,1,2,2-tetrachloroethane	0.0074	MG/KG	UJ	1.3	NA	nc	NA	nc	NA
SB-14-271	2	4	1,1,2,2-tetrachloroethane	0.13	MG/KG	UJ	1.3	NA	nc	NA	nc	NA
CMS-118	3	4	1,1,2,2-tetrachloroethane	0.0084	MG/KG	UJ	1.3	NA	nc	NA	nc	NA
MW05S	4	6	1,1,2,2-tetrachloroethane	0.11	MG/KG	UJ	1.3	NA	nc	NA	nc	NA
SB-14-271	4	6	1,1,2,2-tetrachloroethane	0.11	MG/KG	UJ	1.3	NA	nc	NA	nc	NA
MW06S	4	6	1,1,2-trichloroethane	0.12	MG/KG	J	3.6	N	0.1	Y	nc	NA
CMS-089	0	1	1,1,2-trichloroethane	0.005	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-098	0	1	1,1,2-trichloroethane	0.0097	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-118	0	1	1,1,2-trichloroethane	0.0048	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-142	0	1	1,1,2-trichloroethane	0.0095	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-159	0	1	1,1,2-trichloroethane	0.021	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-173	0	1	1,1,2-trichloroethane	0.024	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-407	0	1	1,1,2-trichloroethane	0.005	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-408	0	1	1,1,2-trichloroethane	0.0043	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-417	0	1	1,1,2-trichloroethane	59	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-456	0	1	1,1,2-trichloroethane	0.0075	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-702	0	1	1,1,2-trichloroethane	0.0087	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-703	0	1	1,1,2-trichloroethane	0.0061	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-142	0	1	1,1,2-trichloroethane	0.011	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-060	0	1	1,1,2-trichloroethane	2.7	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-065	0	10	1,1,2-trichloroethane	1.2	MG/KG	U	3.6	NA	0.1	NA	nc	NA
MW05S	1	2	1,1,2-trichloroethane	0.095	MG/KG	U	3.6	NA	0.1	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW01S	1	2	1,1,2-trichloroethane	0.34	MG/KG	U	3.6	NA	0.1	NA	nc	NA
MW05S	1	2	1,1,2-trichloroethane	0.11	MG/KG	U	3.6	NA	0.1	NA	nc	NA
MW08S	1	2	1,1,2-trichloroethane	0.26	MG/KG	U	3.6	NA	0.1	NA	nc	NA
MW14M	1	2	1,1,2-trichloroethane	0.11	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-089	1	2	1,1,2-trichloroethane	0.0048	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-118	1	2	1,1,2-trichloroethane	0.006	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-173	1	2	1,1,2-trichloroethane	0.0083	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-407	1	2	1,1,2-trichloroethane	0.0074	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-408	1	2	1,1,2-trichloroethane	2.2	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-417	1	2	1,1,2-trichloroethane	130	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-419	1	2	1,1,2-trichloroethane	28	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-423	1	2	1,1,2-trichloroethane	0.0062	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-427	1	2	1,1,2-trichloroethane	0.0045	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-428	1	2	1,1,2-trichloroethane	0.0054	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-456	1	2	1,1,2-trichloroethane	0.0089	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-060	2	3	1,1,2-trichloroethane	0.27	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-089	2	3	1,1,2-trichloroethane	0.0047	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-118	2	3	1,1,2-trichloroethane	0.0074	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-407	2	3	1,1,2-trichloroethane	0.0087	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-408	2	3	1,1,2-trichloroethane	6.6	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-417	2	3	1,1,2-trichloroethane	17	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-455	2	3	1,1,2-trichloroethane	0.33	MG/KG	U	3.6	NA	0.1	NA	nc	NA
MW08S	2	4	1,1,2-trichloroethane	0.21	MG/KG	U	3.6	NA	0.1	NA	nc	NA
MW01S	2	4	1,1,2-trichloroethane	0.22	MG/KG	U	3.6	NA	0.1	NA	nc	NA
MW02S	2	4	1,1,2-trichloroethane	0.2	MG/KG	U	3.6	NA	0.1	NA	nc	NA
MW04D	2	4	1,1,2-trichloroethane	0.5	MG/KG	U	3.6	NA	0.1	NA	nc	NA
MW05S	2	4	1,1,2-trichloroethane	0.1	MG/KG	U	3.6	NA	0.1	NA	nc	NA
MW06S	2	4	1,1,2-trichloroethane	0.3	MG/KG	U	3.6	NA	0.1	NA	nc	NA
MW06S	2	4	1,1,2-trichloroethane	0.3	MG/KG	U	3.6	NA	0.1	NA	nc	NA
MW08S	2	4	1,1,2-trichloroethane	0.32	MG/KG	U	3.6	NA	0.1	NA	nc	NA
MW14M	2	4	1,1,2-trichloroethane	0.14	MG/KG	U	3.6	NA	0.1	NA	nc	NA
MW15D	2	4	1,1,2-trichloroethane	0.14	MG/KG	U	3.6	NA	0.1	NA	nc	NA
SB02	2	4	1,1,2-trichloroethane	0.38	MG/KG	U	3.6	NA	0.1	NA	nc	NA
SB03	2	4	1,1,2-trichloroethane	0.3	MG/KG	U	3.6	NA	0.1	NA	nc	NA
MW07S	3	4	1,1,2-trichloroethane	0.5	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-060	3	4	1,1,2-trichloroethane	0.0058	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-089	3	4	1,1,2-trichloroethane	0.0041	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-118	3	4	1,1,2-trichloroethane	0.0084	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-407	3	4	1,1,2-trichloroethane	0.32	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-419	3	4	1,1,2-trichloroethane	0.32	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-423	3	4	1,1,2-trichloroethane	0.0045	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-427	3	4	1,1,2-trichloroethane	0.0054	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-428	3	4	1,1,2-trichloroethane	0.0057	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-423	3	4	1,1,2-trichloroethane	0.0049	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-060	4	5	1,1,2-trichloroethane	0.0048	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-118	4	5	1,1,2-trichloroethane	0.0059	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-405	4	5	1,1,2-trichloroethane	1	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-455	4	5	1,1,2-trichloroethane	0.0072	MG/KG	U	3.6	NA	0.1	NA	nc	NA
MW15D	4	6	1,1,2-trichloroethane	0.1	MG/KG	U	3.6	NA	0.1	NA	nc	NA
MW02S	4	6	1,1,2-trichloroethane	0.55	MG/KG	U	3.6	NA	0.1	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
SB03	4	6	1,1,2-trichloroethane	0.2	MG/KG	U	3.6	NA	0.1	NA	nc	NA
MW01S	4	6	1,1,2-trichloroethane	0.24	MG/KG	U	3.6	NA	0.1	NA	nc	NA
MW02S	4	6	1,1,2-trichloroethane	0.42	MG/KG	U	3.6	NA	0.1	NA	nc	NA
MW03S	4	6	1,1,2-trichloroethane	0.35	MG/KG	U	3.6	NA	0.1	NA	nc	NA
MW04D	4	6	1,1,2-trichloroethane	0.18	MG/KG	U	3.6	NA	0.1	NA	nc	NA
MW07S	4	6	1,1,2-trichloroethane	0.26	MG/KG	U	3.6	NA	0.1	NA	nc	NA
MW08S	4	6	1,1,2-trichloroethane	0.3	MG/KG	U	3.6	NA	0.1	NA	nc	NA
MW09S	4	6	1,1,2-trichloroethane	0.26	MG/KG	U	3.6	NA	0.1	NA	nc	NA
MW15D	4	6	1,1,2-trichloroethane	0.12	MG/KG	U	3.6	NA	0.1	NA	nc	NA
SB02	4	6	1,1,2-trichloroethane	0.26	MG/KG	U	3.6	NA	0.1	NA	nc	NA
SB03	4	6	1,1,2-trichloroethane	0.18	MG/KG	U	3.6	NA	0.1	NA	nc	NA
CMS-164	0	1	1,1,2-trichloroethane	0.015	MG/KG	UJ	3.6	NA	0.1	NA	nc	NA
CMS-237	0	1	1,1,2-trichloroethane	0.0059	MG/KG	UJ	3.6	NA	0.1	NA	nc	NA
MW14M	1	2	1,1,2-trichloroethane	0.15	MG/KG	UJ	3.6	NA	0.1	NA	nc	NA
SB-14-271	1	2	1,1,2-trichloroethane	0.12	MG/KG	UJ	3.6	NA	0.1	NA	nc	NA
CMS-060	1	2	1,1,2-trichloroethane	5.1	MG/KG	UJ	3.6	NA	0.1	NA	nc	NA
CMS-237	1	2	1,1,2-trichloroethane	0.0069	MG/KG	UJ	3.6	NA	0.1	NA	nc	NA
CMS-405	1	2	1,1,2-trichloroethane	4	MG/KG	UJ	3.6	NA	0.1	NA	nc	NA
CMS-405	1	2	1,1,2-trichloroethane	2.9	MG/KG	UJ	3.6	NA	0.1	NA	nc	NA
SB-14-271	2	4	1,1,2-trichloroethane	0.13	MG/KG	UJ	3.6	NA	0.1	NA	nc	NA
CMS-417	3	4	1,1,2-trichloroethane	0.28	MG/KG	UJ	3.6	NA	0.1	NA	nc	NA
MW05S	4	6	1,1,2-trichloroethane	0.11	MG/KG	UJ	3.6	NA	0.1	NA	nc	NA
SB-14-271	4	6	1,1,2-trichloroethane	0.11	MG/KG	UJ	3.6	NA	0.1	NA	nc	NA
MW14M	1	2	1,1'-biphenyl	0.041	MG/KG	J	0.8	N	nc	NA	nc	NA
MW05S	2	4	1,1'-biphenyl	0.082	MG/KG	J	0.8	N	nc	NA	nc	NA
MW15D	4	6	1,1'-biphenyl	0.3	MG/KG	J	0.8	N	nc	NA	nc	NA
MW15D	4	6	1,1'-biphenyl	0.35	MG/KG	J	0.8	N	nc	NA	nc	NA
SB02	4	6	1,1'-biphenyl	0.23	MG/KG	J	0.8	N	nc	NA	nc	NA
RES-14-271-01	0	1	1,1'-biphenyl	0.51	MG/KG	U	0.8	NA	nc	NA	nc	NA
RES-14-272-01	0	1	1,1'-biphenyl	0.62	MG/KG	U	0.8	NA	nc	NA	nc	NA
RES-14-302-01	0	1	1,1'-biphenyl	5	MG/KG	U	0.8	NA	nc	NA	nc	NA
RES-14-303-01	0	1	1,1'-biphenyl	4.8	MG/KG	U	0.8	NA	nc	NA	nc	NA
RES-14-271-01	0	1	1,1'-biphenyl	2.5	MG/KG	U	0.8	NA	nc	NA	nc	NA
RES-14-272-01	0	1	1,1'-biphenyl	3.1	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW05S	1	2	1,1'-biphenyl	0.36	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW14M	1	2	1,1'-biphenyl	0.34	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW14M	1	2	1,1'-biphenyl	0.34	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW01S	1	2	1,1'-biphenyl	0.38	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW05S	1	2	1,1'-biphenyl	0.36	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW08S	1	2	1,1'-biphenyl	0.42	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW14M	1	2	1,1'-biphenyl	0.33	MG/KG	U	0.8	NA	nc	NA	nc	NA
SB-14-271	1	2	1,1'-biphenyl	0.4	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW08S	2	4	1,1'-biphenyl	0.45	MG/KG	U	0.8	NA	nc	NA	nc	NA
SB02	2	4	1,1'-biphenyl	2.3	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW01S	2	4	1,1'-biphenyl	1.6	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW02S	2	4	1,1'-biphenyl	0.38	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW08S	2	4	1,1'-biphenyl	0.41	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW14M	2	4	1,1'-biphenyl	0.38	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW15D	2	4	1,1'-biphenyl	0.37	MG/KG	U	0.8	NA	nc	NA	nc	NA
SB-14-271	2	4	1,1'-biphenyl	0.45	MG/KG	U	0.8	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
SB02	2	4	1,1'-biphenyl	2.2	MG/KG	U	0.8	NA	nc	NA	nc	NA
SB03	2	4	1,1'-biphenyl	0.99	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW07S	3	4	1,1'-biphenyl	0.38	MG/KG	U	0.8	NA	nc	NA	nc	NA
SB03	4	6	1,1'-biphenyl	0.37	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW01S	4	6	1,1'-biphenyl	0.4	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW03S	4	6	1,1'-biphenyl	0.4	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW04D	4	6	1,1'-biphenyl	0.42	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW05S	4	6	1,1'-biphenyl	0.82	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW07S	4	6	1,1'-biphenyl	0.4	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW08S	4	6	1,1'-biphenyl	0.45	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW09S	4	6	1,1'-biphenyl	0.85	MG/KG	U	0.8	NA	nc	NA	nc	NA
SB-14-271	4	6	1,1'-biphenyl	0.4	MG/KG	U	0.8	NA	nc	NA	nc	NA
SB03	4	6	1,1'-biphenyl	0.38	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW06S	2	4	1,1'-biphenyl	0.49	MG/KG		0.8	N	nc	NA	nc	NA
MW06S	2	4	1,1'-biphenyl	0.46	MG/KG		0.8	N	nc	NA	nc	NA
MW06S	4	6	1,1'-biphenyl	0.67	MG/KG		0.8	N	nc	NA	nc	NA
CMS-4105	0	1	Biphenyl	1.607346149	MG/KG	J	0.8	Y	nc	NA	nc	NA
CMS-4110	0	1	Biphenyl	0.337926542	MG/KG	J	0.8	N	nc	NA	nc	NA
CMS-417	2	3	1,1-dichloroethane	7	MG/KG	J	920	N	nc	NA	nc	NA
CMS-417	3	4	1,1-dichloroethane	0.15	MG/KG	J	920	N	nc	NA	nc	NA
CMS-089	0	1	1,1-dichloroethane	0.005	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-098	0	1	1,1-dichloroethane	0.0097	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-118	0	1	1,1-dichloroethane	0.0048	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-142	0	1	1,1-dichloroethane	0.0095	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-159	0	1	1,1-dichloroethane	0.021	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-164	0	1	1,1-dichloroethane	0.015	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-173	0	1	1,1-dichloroethane	0.024	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-407	0	1	1,1-dichloroethane	0.005	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-408	0	1	1,1-dichloroethane	0.0043	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-417	0	1	1,1-dichloroethane	59	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-456	0	1	1,1-dichloroethane	0.0075	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-702	0	1	1,1-dichloroethane	0.0087	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-703	0	1	1,1-dichloroethane	0.0061	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-142	0	1	1,1-dichloroethane	0.011	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-060	0	1	1,1-dichloroethane	2.7	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-065	0	10	1,1-dichloroethane	1.2	MG/KG	U	920	NA	nc	NA	nc	NA
MW05S	1	2	1,1-dichloroethane	0.095	MG/KG	U	920	NA	nc	NA	nc	NA
MW01S	1	2	1,1-dichloroethane	0.34	MG/KG	U	920	NA	nc	NA	nc	NA
MW05S	1	2	1,1-dichloroethane	0.11	MG/KG	U	920	NA	nc	NA	nc	NA
MW08S	1	2	1,1-dichloroethane	0.26	MG/KG	U	920	NA	nc	NA	nc	NA
MW14M	1	2	1,1-dichloroethane	0.11	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-089	1	2	1,1-dichloroethane	0.0048	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-118	1	2	1,1-dichloroethane	0.006	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-173	1	2	1,1-dichloroethane	0.0083	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-237	1	2	1,1-dichloroethane	0.0069	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-405	1	2	1,1-dichloroethane	4	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-407	1	2	1,1-dichloroethane	0.0074	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-408	1	2	1,1-dichloroethane	2.2	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-417	1	2	1,1-dichloroethane	130	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-419	1	2	1,1-dichloroethane	28	MG/KG	U	920	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-423	1	2	1,1-dichloroethane	0.0062	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-427	1	2	1,1-dichloroethane	0.0045	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-428	1	2	1,1-dichloroethane	0.0054	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-456	1	2	1,1-dichloroethane	0.0089	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-060	2	3	1,1-dichloroethane	0.27	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-089	2	3	1,1-dichloroethane	0.0047	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-118	2	3	1,1-dichloroethane	0.0074	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-407	2	3	1,1-dichloroethane	0.0087	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-408	2	3	1,1-dichloroethane	6.6	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-455	2	3	1,1-dichloroethane	0.33	MG/KG	U	920	NA	nc	NA	nc	NA
MW08S	2	4	1,1-dichloroethane	0.21	MG/KG	U	920	NA	nc	NA	nc	NA
MW01S	2	4	1,1-dichloroethane	0.22	MG/KG	U	920	NA	nc	NA	nc	NA
MW02S	2	4	1,1-dichloroethane	0.2	MG/KG	U	920	NA	nc	NA	nc	NA
MW04D	2	4	1,1-dichloroethane	0.5	MG/KG	U	920	NA	nc	NA	nc	NA
MW05S	2	4	1,1-dichloroethane	0.1	MG/KG	U	920	NA	nc	NA	nc	NA
MW06S	2	4	1,1-dichloroethane	0.3	MG/KG	U	920	NA	nc	NA	nc	NA
MW06S	2	4	1,1-dichloroethane	0.3	MG/KG	U	920	NA	nc	NA	nc	NA
MW08S	2	4	1,1-dichloroethane	0.32	MG/KG	U	920	NA	nc	NA	nc	NA
MW14M	2	4	1,1-dichloroethane	0.14	MG/KG	U	920	NA	nc	NA	nc	NA
MW15D	2	4	1,1-dichloroethane	0.14	MG/KG	U	920	NA	nc	NA	nc	NA
SB02	2	4	1,1-dichloroethane	0.38	MG/KG	U	920	NA	nc	NA	nc	NA
SB03	2	4	1,1-dichloroethane	0.3	MG/KG	U	920	NA	nc	NA	nc	NA
MW07S	3	4	1,1-dichloroethane	0.5	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-060	3	4	1,1-dichloroethane	0.0058	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-089	3	4	1,1-dichloroethane	0.0041	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-118	3	4	1,1-dichloroethane	0.0084	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-407	3	4	1,1-dichloroethane	0.32	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-419	3	4	1,1-dichloroethane	0.32	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-423	3	4	1,1-dichloroethane	0.0045	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-427	3	4	1,1-dichloroethane	0.0054	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-428	3	4	1,1-dichloroethane	0.0057	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-423	3	4	1,1-dichloroethane	0.0049	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-060	4	5	1,1-dichloroethane	0.0048	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-118	4	5	1,1-dichloroethane	0.0059	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-405	4	5	1,1-dichloroethane	1	MG/KG	U	920	NA	nc	NA	nc	NA
CMS-455	4	5	1,1-dichloroethane	0.0072	MG/KG	U	920	NA	nc	NA	nc	NA
MW15D	4	6	1,1-dichloroethane	0.1	MG/KG	U	920	NA	nc	NA	nc	NA
MW02S	4	6	1,1-dichloroethane	0.55	MG/KG	U	920	NA	nc	NA	nc	NA
SB03	4	6	1,1-dichloroethane	0.2	MG/KG	U	920	NA	nc	NA	nc	NA
MW01S	4	6	1,1-dichloroethane	0.24	MG/KG	U	920	NA	nc	NA	nc	NA
MW02S	4	6	1,1-dichloroethane	0.42	MG/KG	U	920	NA	nc	NA	nc	NA
MW03S	4	6	1,1-dichloroethane	0.35	MG/KG	U	920	NA	nc	NA	nc	NA
MW04D	4	6	1,1-dichloroethane	0.18	MG/KG	U	920	NA	nc	NA	nc	NA
MW06S	4	6	1,1-dichloroethane	0.43	MG/KG	U	920	NA	nc	NA	nc	NA
MW07S	4	6	1,1-dichloroethane	0.26	MG/KG	U	920	NA	nc	NA	nc	NA
MW08S	4	6	1,1-dichloroethane	0.3	MG/KG	U	920	NA	nc	NA	nc	NA
MW09S	4	6	1,1-dichloroethane	0.26	MG/KG	U	920	NA	nc	NA	nc	NA
MW15D	4	6	1,1-dichloroethane	0.12	MG/KG	U	920	NA	nc	NA	nc	NA
SB02	4	6	1,1-dichloroethane	0.26	MG/KG	U	920	NA	nc	NA	nc	NA
SB03	4	6	1,1-dichloroethane	0.18	MG/KG	U	920	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-237	0	1	1,1-dichloroethane	0.0059	MG/KG	UJ	920	NA	nc	NA	nc	NA
MW14M	1	2	1,1-dichloroethane	0.15	MG/KG	UJ	920	NA	nc	NA	nc	NA
SB-14-271	1	2	1,1-dichloroethane	0.12	MG/KG	UJ	920	NA	nc	NA	nc	NA
CMS-060	1	2	1,1-dichloroethane	5.1	MG/KG	UJ	920	NA	nc	NA	nc	NA
CMS-405	1	2	1,1-dichloroethane	2.9	MG/KG	UJ	920	NA	nc	NA	nc	NA
SB-14-271	2	4	1,1-dichloroethane	0.13	MG/KG	UJ	920	NA	nc	NA	nc	NA
MW05S	4	6	1,1-dichloroethane	0.11	MG/KG	UJ	920	NA	nc	NA	nc	NA
SB-14-271	4	6	1,1-dichloroethane	0.11	MG/KG	UJ	920	NA	nc	NA	nc	NA
MW14M	1	2	1,1-dichloroethene	0.026	MG/KG	J	0.2	N	0.7	N	nc	NA
CMS-089	0	1	1,1-dichloroethene	0.005	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-098	0	1	1,1-dichloroethene	0.0097	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-118	0	1	1,1-dichloroethene	0.0048	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-142	0	1	1,1-dichloroethene	0.0095	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-159	0	1	1,1-dichloroethene	0.021	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-164	0	1	1,1-dichloroethene	0.015	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-173	0	1	1,1-dichloroethene	0.024	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-407	0	1	1,1-dichloroethene	0.005	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-408	0	1	1,1-dichloroethene	0.0043	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-417	0	1	1,1-dichloroethene	59	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-456	0	1	1,1-dichloroethene	0.0075	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-702	0	1	1,1-dichloroethene	0.0087	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-703	0	1	1,1-dichloroethene	0.0061	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-142	0	1	1,1-dichloroethene	0.011	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-060	0	1	1,1-dichloroethene	2.7	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-065	0	10	1,1-dichloroethene	1.2	MG/KG	U	0.2	NA	0.7	NA	nc	NA
MW01S	1	2	1,1-dichloroethene	0.34	MG/KG	U	0.2	NA	0.7	NA	nc	NA
MW08S	1	2	1,1-dichloroethene	0.26	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-060	1	2	1,1-dichloroethene	5.1	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-089	1	2	1,1-dichloroethene	0.0048	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-118	1	2	1,1-dichloroethene	0.006	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-173	1	2	1,1-dichloroethene	0.0083	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-237	1	2	1,1-dichloroethene	0.0069	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-405	1	2	1,1-dichloroethene	4	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-407	1	2	1,1-dichloroethene	0.0074	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-408	1	2	1,1-dichloroethene	2.2	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-417	1	2	1,1-dichloroethene	130	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-419	1	2	1,1-dichloroethene	28	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-423	1	2	1,1-dichloroethene	0.0062	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-427	1	2	1,1-dichloroethene	0.0045	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-428	1	2	1,1-dichloroethene	0.0054	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-456	1	2	1,1-dichloroethene	0.0089	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-060	2	3	1,1-dichloroethene	0.27	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-089	2	3	1,1-dichloroethene	0.0047	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-118	2	3	1,1-dichloroethene	0.0074	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-407	2	3	1,1-dichloroethene	0.0087	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-408	2	3	1,1-dichloroethene	6.6	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-417	2	3	1,1-dichloroethene	17	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-455	2	3	1,1-dichloroethene	0.33	MG/KG	U	0.2	NA	0.7	NA	nc	NA
MW08S	2	4	1,1-dichloroethene	0.21	MG/KG	U	0.2	NA	0.7	NA	nc	NA
MW01S	2	4	1,1-dichloroethene	0.22	MG/KG	U	0.2	NA	0.7	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW02S	2	4	1,1-dichloroethene	0.2	MG/KG	U	0.2	NA	0.7	NA	nc	NA
MW06S	2	4	1,1-dichloroethene	0.3	MG/KG	U	0.2	NA	0.7	NA	nc	NA
MW06S	2	4	1,1-dichloroethene	0.3	MG/KG	U	0.2	NA	0.7	NA	nc	NA
MW08S	2	4	1,1-dichloroethene	0.32	MG/KG	U	0.2	NA	0.7	NA	nc	NA
MW14M	2	4	1,1-dichloroethene	0.14	MG/KG	U	0.2	NA	0.7	NA	nc	NA
MW15D	2	4	1,1-dichloroethene	0.14	MG/KG	U	0.2	NA	0.7	NA	nc	NA
SB02	2	4	1,1-dichloroethene	0.38	MG/KG	U	0.2	NA	0.7	NA	nc	NA
SB03	2	4	1,1-dichloroethene	0.3	MG/KG	U	0.2	NA	0.7	NA	nc	NA
MW07S	3	4	1,1-dichloroethene	0.5	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-060	3	4	1,1-dichloroethene	0.0058	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-089	3	4	1,1-dichloroethene	0.0041	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-118	3	4	1,1-dichloroethene	0.0084	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-407	3	4	1,1-dichloroethene	0.32	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-417	3	4	1,1-dichloroethene	0.28	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-419	3	4	1,1-dichloroethene	0.32	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-423	3	4	1,1-dichloroethene	0.0045	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-427	3	4	1,1-dichloroethene	0.0054	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-428	3	4	1,1-dichloroethene	0.0057	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-423	3	4	1,1-dichloroethene	0.0049	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-060	4	5	1,1-dichloroethene	0.0048	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-118	4	5	1,1-dichloroethene	0.0059	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-405	4	5	1,1-dichloroethene	1	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-455	4	5	1,1-dichloroethene	0.0072	MG/KG	U	0.2	NA	0.7	NA	nc	NA
MW15D	4	6	1,1-dichloroethene	0.1	MG/KG	U	0.2	NA	0.7	NA	nc	NA
MW02S	4	6	1,1-dichloroethene	0.55	MG/KG	U	0.2	NA	0.7	NA	nc	NA
SB03	4	6	1,1-dichloroethene	0.2	MG/KG	U	0.2	NA	0.7	NA	nc	NA
MW01S	4	6	1,1-dichloroethene	0.24	MG/KG	U	0.2	NA	0.7	NA	nc	NA
MW02S	4	6	1,1-dichloroethene	0.42	MG/KG	U	0.2	NA	0.7	NA	nc	NA
MW03S	4	6	1,1-dichloroethene	0.35	MG/KG	U	0.2	NA	0.7	NA	nc	NA
MW04D	4	6	1,1-dichloroethene	0.18	MG/KG	U	0.2	NA	0.7	NA	nc	NA
MW06S	4	6	1,1-dichloroethene	0.43	MG/KG	U	0.2	NA	0.7	NA	nc	NA
MW07S	4	6	1,1-dichloroethene	0.26	MG/KG	U	0.2	NA	0.7	NA	nc	NA
MW08S	4	6	1,1-dichloroethene	0.3	MG/KG	U	0.2	NA	0.7	NA	nc	NA
MW09S	4	6	1,1-dichloroethene	0.26	MG/KG	U	0.2	NA	0.7	NA	nc	NA
MW15D	4	6	1,1-dichloroethene	0.12	MG/KG	U	0.2	NA	0.7	NA	nc	NA
SB02	4	6	1,1-dichloroethene	0.26	MG/KG	U	0.2	NA	0.7	NA	nc	NA
SB03	4	6	1,1-dichloroethene	0.18	MG/KG	U	0.2	NA	0.7	NA	nc	NA
CMS-237	0	1	1,1-dichloroethene	0.0059	MG/KG	UJ	0.2	NA	0.7	NA	nc	NA
MW05S	1	2	1,1-dichloroethene	0.095	MG/KG	UJ	0.2	NA	0.7	NA	nc	NA
MW14M	1	2	1,1-dichloroethene	0.15	MG/KG	UJ	0.2	NA	0.7	NA	nc	NA
MW05S	1	2	1,1-dichloroethene	0.11	MG/KG	UJ	0.2	NA	0.7	NA	nc	NA
SB-14-271	1	2	1,1-dichloroethene	0.12	MG/KG	UJ	0.2	NA	0.7	NA	nc	NA
CMS-405	1	2	1,1-dichloroethene	2.9	MG/KG	UJ	0.2	NA	0.7	NA	nc	NA
MW04D	2	4	1,1-dichloroethene	0.5	MG/KG	UJ	0.2	NA	0.7	NA	nc	NA
MW05S	2	4	1,1-dichloroethene	0.1	MG/KG	UJ	0.2	NA	0.7	NA	nc	NA
SB-14-271	2	4	1,1-dichloroethene	0.13	MG/KG	UJ	0.2	NA	0.7	NA	nc	NA
MW05S	4	6	1,1-dichloroethene	0.11	MG/KG	UJ	0.2	NA	0.7	NA	nc	NA
SB-14-271	4	6	1,1-dichloroethene	0.11	MG/KG	UJ	0.2	NA	0.7	NA	nc	NA
MW08S	1	2	1,2-dibromo-3-chloropropane	0.061	MG/KG	J	0.5	N	nc	NA	nc	NA
MW09S	4	6	1,2-dibromo-3-chloropropane	0.24	MG/KG	J	0.5	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-089	0	1	1,2-dibromo-3-chloropropane	0.01	MG/KG	U	0.5	NA	nc	NA	nc	NA
CMS-118	0	1	1,2-dibromo-3-chloropropane	0.0097	MG/KG	U	0.5	NA	nc	NA	nc	NA
CMS-159	0	1	1,2-dibromo-3-chloropropane	0.041	MG/KG	U	0.5	NA	nc	NA	nc	NA
CMS-407	0	1	1,2-dibromo-3-chloropropane	0.0099	MG/KG	U	0.5	NA	nc	NA	nc	NA
CMS-408	0	1	1,2-dibromo-3-chloropropane	0.0086	MG/KG	U	0.5	NA	nc	NA	nc	NA
CMS-456	0	1	1,2-dibromo-3-chloropropane	0.015	MG/KG	U	0.5	NA	nc	NA	nc	NA
CMS-702	0	1	1,2-dibromo-3-chloropropane	0.017	MG/KG	U	0.5	NA	nc	NA	nc	NA
CMS-060	0	1	1,2-dibromo-3-chloropropane	5.3	MG/KG	U	0.5	NA	nc	NA	nc	NA
CMS-065	0	10	1,2-dibromo-3-chloropropane	3.9	MG/KG	U	0.5	NA	nc	NA	nc	NA
MW01S	1	2	1,2-dibromo-3-chloropropane	0.34	MG/KG	U	0.5	NA	nc	NA	nc	NA
CMS-089	1	2	1,2-dibromo-3-chloropropane	0.0096	MG/KG	U	0.5	NA	nc	NA	nc	NA
CMS-408	1	2	1,2-dibromo-3-chloropropane	4.4	MG/KG	U	0.5	NA	nc	NA	nc	NA
CMS-419	1	2	1,2-dibromo-3-chloropropane	56	MG/KG	U	0.5	NA	nc	NA	nc	NA
CMS-423	1	2	1,2-dibromo-3-chloropropane	0.012	MG/KG	U	0.5	NA	nc	NA	nc	NA
CMS-427	1	2	1,2-dibromo-3-chloropropane	0.0091	MG/KG	U	0.5	NA	nc	NA	nc	NA
CMS-428	1	2	1,2-dibromo-3-chloropropane	0.011	MG/KG	U	0.5	NA	nc	NA	nc	NA
CMS-407	2	3	1,2-dibromo-3-chloropropane	0.017	MG/KG	U	0.5	NA	nc	NA	nc	NA
CMS-408	2	3	1,2-dibromo-3-chloropropane	13	MG/KG	U	0.5	NA	nc	NA	nc	NA
CMS-455	2	3	1,2-dibromo-3-chloropropane	0.67	MG/KG	U	0.5	NA	nc	NA	nc	NA
MW08S	2	4	1,2-dibromo-3-chloropropane	0.21	MG/KG	U	0.5	NA	nc	NA	nc	NA
MW01S	2	4	1,2-dibromo-3-chloropropane	0.22	MG/KG	U	0.5	NA	nc	NA	nc	NA
MW02S	2	4	1,2-dibromo-3-chloropropane	0.2	MG/KG	U	0.5	NA	nc	NA	nc	NA
MW04D	2	4	1,2-dibromo-3-chloropropane	0.5	MG/KG	U	0.5	NA	nc	NA	nc	NA
MW06S	2	4	1,2-dibromo-3-chloropropane	0.3	MG/KG	U	0.5	NA	nc	NA	nc	NA
MW06S	2	4	1,2-dibromo-3-chloropropane	0.3	MG/KG	U	0.5	NA	nc	NA	nc	NA
MW08S	2	4	1,2-dibromo-3-chloropropane	0.32	MG/KG	U	0.5	NA	nc	NA	nc	NA
MW07S	3	4	1,2-dibromo-3-chloropropane	0.5	MG/KG	U	0.5	NA	nc	NA	nc	NA
CMS-060	3	4	1,2-dibromo-3-chloropropane	0.012	MG/KG	U	0.5	NA	nc	NA	nc	NA
CMS-089	3	4	1,2-dibromo-3-chloropropane	0.0082	MG/KG	U	0.5	NA	nc	NA	nc	NA
CMS-407	3	4	1,2-dibromo-3-chloropropane	0.65	MG/KG	U	0.5	NA	nc	NA	nc	NA
CMS-423	3	4	1,2-dibromo-3-chloropropane	0.009	MG/KG	U	0.5	NA	nc	NA	nc	NA
CMS-427	3	4	1,2-dibromo-3-chloropropane	0.011	MG/KG	U	0.5	NA	nc	NA	nc	NA
CMS-428	3	4	1,2-dibromo-3-chloropropane	0.011	MG/KG	U	0.5	NA	nc	NA	nc	NA
CMS-423	3	4	1,2-dibromo-3-chloropropane	0.0099	MG/KG	U	0.5	NA	nc	NA	nc	NA
CMS-060	4	5	1,2-dibromo-3-chloropropane	0.0095	MG/KG	U	0.5	NA	nc	NA	nc	NA
CMS-118	4	5	1,2-dibromo-3-chloropropane	0.012	MG/KG	U	0.5	NA	nc	NA	nc	NA
CMS-455	4	5	1,2-dibromo-3-chloropropane	0.014	MG/KG	U	0.5	NA	nc	NA	nc	NA
MW02S	4	6	1,2-dibromo-3-chloropropane	0.55	MG/KG	U	0.5	NA	nc	NA	nc	NA
MW01S	4	6	1,2-dibromo-3-chloropropane	0.24	MG/KG	U	0.5	NA	nc	NA	nc	NA
MW02S	4	6	1,2-dibromo-3-chloropropane	0.42	MG/KG	U	0.5	NA	nc	NA	nc	NA
MW03S	4	6	1,2-dibromo-3-chloropropane	0.35	MG/KG	U	0.5	NA	nc	NA	nc	NA
MW04D	4	6	1,2-dibromo-3-chloropropane	0.18	MG/KG	U	0.5	NA	nc	NA	nc	NA
MW06S	4	6	1,2-dibromo-3-chloropropane	0.43	MG/KG	U	0.5	NA	nc	NA	nc	NA
MW07S	4	6	1,2-dibromo-3-chloropropane	0.26	MG/KG	U	0.5	NA	nc	NA	nc	NA
MW08S	4	6	1,2-dibromo-3-chloropropane	0.3	MG/KG	U	0.5	NA	nc	NA	nc	NA
CMS-098	0	1	1,2-dibromo-3-chloropropane	0.019	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
CMS-142	0	1	1,2-dibromo-3-chloropropane	0.019	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
CMS-164	0	1	1,2-dibromo-3-chloropropane	0.031	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
CMS-173	0	1	1,2-dibromo-3-chloropropane	0.047	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
CMS-237	0	1	1,2-dibromo-3-chloropropane	0.012	MG/KG	UJ	0.5	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-417	0	1	1,2-dibromo-3-chloropropane	120	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
CMS-703	0	1	1,2-dibromo-3-chloropropane	0.012	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
CMS-142	0	1	1,2-dibromo-3-chloropropane	0.022	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
MW05S	1	2	1,2-dibromo-3-chloropropane	0.095	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
MW05S	1	2	1,2-dibromo-3-chloropropane	0.11	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
SB-14-271	1	2	1,2-dibromo-3-chloropropane	0.12	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
CMS-060	1	2	1,2-dibromo-3-chloropropane	10	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
CMS-118	1	2	1,2-dibromo-3-chloropropane	0.012	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
CMS-173	1	2	1,2-dibromo-3-chloropropane	0.017	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
CMS-237	1	2	1,2-dibromo-3-chloropropane	0.014	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
CMS-405	1	2	1,2-dibromo-3-chloropropane	8	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
CMS-407	1	2	1,2-dibromo-3-chloropropane	0.015	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
CMS-417	1	2	1,2-dibromo-3-chloropropane	270	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
CMS-456	1	2	1,2-dibromo-3-chloropropane	0.018	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
CMS-405	1	2	1,2-dibromo-3-chloropropane	5.7	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
CMS-060	2	3	1,2-dibromo-3-chloropropane	0.55	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
CMS-089	2	3	1,2-dibromo-3-chloropropane	0.0094	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
CMS-118	2	3	1,2-dibromo-3-chloropropane	0.015	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
CMS-417	2	3	1,2-dibromo-3-chloropropane	33	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
MW05S	2	4	1,2-dibromo-3-chloropropane	0.1	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
SB-14-271	2	4	1,2-dibromo-3-chloropropane	0.13	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
SB02	2	4	1,2-dibromo-3-chloropropane	0.38	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
SB03	2	4	1,2-dibromo-3-chloropropane	0.3	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
CMS-118	3	4	1,2-dibromo-3-chloropropane	0.017	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
CMS-417	3	4	1,2-dibromo-3-chloropropane	0.57	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
CMS-419	3	4	1,2-dibromo-3-chloropropane	0.64	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
CMS-405	4	5	1,2-dibromo-3-chloropropane	2.1	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
SB03	4	6	1,2-dibromo-3-chloropropane	0.2	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
MW05S	4	6	1,2-dibromo-3-chloropropane	0.11	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
SB-14-271	4	6	1,2-dibromo-3-chloropropane	0.11	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
SB02	4	6	1,2-dibromo-3-chloropropane	0.26	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
SB03	4	6	1,2-dibromo-3-chloropropane	0.18	MG/KG	UJ	0.5	NA	nc	NA	nc	NA
CMS-405	4	5	1,2-dichloroethane	1.7	MG/KG	J	0.9	Y	0.1	Y	nc	NA
MW06S	4	6	1,2-dichloroethane	0.16	MG/KG	J	0.9	N	0.1	Y	nc	NA
CMS-089	0	1	1,2-dichloroethane	0.005	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-098	0	1	1,2-dichloroethane	0.0097	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-118	0	1	1,2-dichloroethane	0.0048	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-142	0	1	1,2-dichloroethane	0.0095	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-159	0	1	1,2-dichloroethane	0.021	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-164	0	1	1,2-dichloroethane	0.015	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-173	0	1	1,2-dichloroethane	0.024	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-407	0	1	1,2-dichloroethane	0.005	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-408	0	1	1,2-dichloroethane	0.0043	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-417	0	1	1,2-dichloroethane	59	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-456	0	1	1,2-dichloroethane	0.0075	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-702	0	1	1,2-dichloroethane	0.0087	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-703	0	1	1,2-dichloroethane	0.0061	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-142	0	1	1,2-dichloroethane	0.011	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-060	0	1	1,2-dichloroethane	2.7	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-065	0	10	1,2-dichloroethane	1.2	MG/KG	U	0.9	NA	0.1	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW05S	1	2	1,2-dichloroethane	0.095	MG/KG	U	0.9	NA	0.1	NA	nc	NA
MW01S	1	2	1,2-dichloroethane	0.34	MG/KG	U	0.9	NA	0.1	NA	nc	NA
MW05S	1	2	1,2-dichloroethane	0.11	MG/KG	U	0.9	NA	0.1	NA	nc	NA
MW08S	1	2	1,2-dichloroethane	0.26	MG/KG	U	0.9	NA	0.1	NA	nc	NA
MW14M	1	2	1,2-dichloroethane	0.11	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-060	1	2	1,2-dichloroethane	5.1	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-089	1	2	1,2-dichloroethane	0.0048	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-118	1	2	1,2-dichloroethane	0.006	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-173	1	2	1,2-dichloroethane	0.0083	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-237	1	2	1,2-dichloroethane	0.0069	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-405	1	2	1,2-dichloroethane	4	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-407	1	2	1,2-dichloroethane	0.0074	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-408	1	2	1,2-dichloroethane	2.2	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-417	1	2	1,2-dichloroethane	130	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-419	1	2	1,2-dichloroethane	28	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-423	1	2	1,2-dichloroethane	0.0062	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-427	1	2	1,2-dichloroethane	0.0045	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-428	1	2	1,2-dichloroethane	0.0054	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-456	1	2	1,2-dichloroethane	0.0089	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-060	2	3	1,2-dichloroethane	0.27	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-089	2	3	1,2-dichloroethane	0.0047	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-118	2	3	1,2-dichloroethane	0.0074	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-407	2	3	1,2-dichloroethane	0.0087	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-408	2	3	1,2-dichloroethane	6.6	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-417	2	3	1,2-dichloroethane	17	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-455	2	3	1,2-dichloroethane	0.33	MG/KG	U	0.9	NA	0.1	NA	nc	NA
MW08S	2	4	1,2-dichloroethane	0.21	MG/KG	U	0.9	NA	0.1	NA	nc	NA
MW01S	2	4	1,2-dichloroethane	0.22	MG/KG	U	0.9	NA	0.1	NA	nc	NA
MW02S	2	4	1,2-dichloroethane	0.2	MG/KG	U	0.9	NA	0.1	NA	nc	NA
MW04D	2	4	1,2-dichloroethane	0.5	MG/KG	U	0.9	NA	0.1	NA	nc	NA
MW05S	2	4	1,2-dichloroethane	0.1	MG/KG	U	0.9	NA	0.1	NA	nc	NA
MW06S	2	4	1,2-dichloroethane	0.3	MG/KG	U	0.9	NA	0.1	NA	nc	NA
MW06S	2	4	1,2-dichloroethane	0.3	MG/KG	U	0.9	NA	0.1	NA	nc	NA
MW08S	2	4	1,2-dichloroethane	0.32	MG/KG	U	0.9	NA	0.1	NA	nc	NA
MW14M	2	4	1,2-dichloroethane	0.14	MG/KG	U	0.9	NA	0.1	NA	nc	NA
MW15D	2	4	1,2-dichloroethane	0.14	MG/KG	U	0.9	NA	0.1	NA	nc	NA
SB02	2	4	1,2-dichloroethane	0.38	MG/KG	U	0.9	NA	0.1	NA	nc	NA
SB03	2	4	1,2-dichloroethane	0.3	MG/KG	U	0.9	NA	0.1	NA	nc	NA
MW07S	3	4	1,2-dichloroethane	0.5	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-060	3	4	1,2-dichloroethane	0.0058	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-089	3	4	1,2-dichloroethane	0.0041	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-118	3	4	1,2-dichloroethane	0.0084	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-407	3	4	1,2-dichloroethane	0.32	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-417	3	4	1,2-dichloroethane	0.28	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-419	3	4	1,2-dichloroethane	0.32	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-423	3	4	1,2-dichloroethane	0.0045	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-427	3	4	1,2-dichloroethane	0.0054	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-428	3	4	1,2-dichloroethane	0.0057	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-423	3	4	1,2-dichloroethane	0.0049	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-060	4	5	1,2-dichloroethane	0.0048	MG/KG	U	0.9	NA	0.1	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-118	4	5	1,2-dichloroethane	0.0059	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-455	4	5	1,2-dichloroethane	0.0072	MG/KG	U	0.9	NA	0.1	NA	nc	NA
MW15D	4	6	1,2-dichloroethane	0.1	MG/KG	U	0.9	NA	0.1	NA	nc	NA
MW02S	4	6	1,2-dichloroethane	0.55	MG/KG	U	0.9	NA	0.1	NA	nc	NA
SB03	4	6	1,2-dichloroethane	0.2	MG/KG	U	0.9	NA	0.1	NA	nc	NA
MW01S	4	6	1,2-dichloroethane	0.24	MG/KG	U	0.9	NA	0.1	NA	nc	NA
MW02S	4	6	1,2-dichloroethane	0.42	MG/KG	U	0.9	NA	0.1	NA	nc	NA
MW03S	4	6	1,2-dichloroethane	0.35	MG/KG	U	0.9	NA	0.1	NA	nc	NA
MW04D	4	6	1,2-dichloroethane	0.18	MG/KG	U	0.9	NA	0.1	NA	nc	NA
MW07S	4	6	1,2-dichloroethane	0.26	MG/KG	U	0.9	NA	0.1	NA	nc	NA
MW08S	4	6	1,2-dichloroethane	0.3	MG/KG	U	0.9	NA	0.1	NA	nc	NA
MW09S	4	6	1,2-dichloroethane	0.26	MG/KG	U	0.9	NA	0.1	NA	nc	NA
MW15D	4	6	1,2-dichloroethane	0.12	MG/KG	U	0.9	NA	0.1	NA	nc	NA
SB02	4	6	1,2-dichloroethane	0.26	MG/KG	U	0.9	NA	0.1	NA	nc	NA
SB03	4	6	1,2-dichloroethane	0.18	MG/KG	U	0.9	NA	0.1	NA	nc	NA
CMS-237	0	1	1,2-dichloroethane	0.0059	MG/KG	UJ	0.9	NA	0.1	NA	nc	NA
MW14M	1	2	1,2-dichloroethane	0.15	MG/KG	UJ	0.9	NA	0.1	NA	nc	NA
SB-14-271	1	2	1,2-dichloroethane	0.12	MG/KG	UJ	0.9	NA	0.1	NA	nc	NA
CMS-405	1	2	1,2-dichloroethane	2.9	MG/KG	UJ	0.9	NA	0.1	NA	nc	NA
SB-14-271	2	4	1,2-dichloroethane	0.13	MG/KG	UJ	0.9	NA	0.1	NA	nc	NA
MW05S	4	6	1,2-dichloroethane	0.11	MG/KG	UJ	0.9	NA	0.1	NA	nc	NA
SB-14-271	4	6	1,2-dichloroethane	0.11	MG/KG	UJ	0.9	NA	0.1	NA	nc	NA
CMS-089	0	1	1,2-dichloropropane	0.005	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-098	0	1	1,2-dichloropropane	0.0097	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-118	0	1	1,2-dichloropropane	0.0048	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-142	0	1	1,2-dichloropropane	0.0095	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-159	0	1	1,2-dichloropropane	0.021	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-164	0	1	1,2-dichloropropane	0.015	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-173	0	1	1,2-dichloropropane	0.024	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-407	0	1	1,2-dichloropropane	0.005	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-408	0	1	1,2-dichloropropane	0.0043	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-417	0	1	1,2-dichloropropane	59	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-456	0	1	1,2-dichloropropane	0.0075	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-702	0	1	1,2-dichloropropane	0.0087	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-703	0	1	1,2-dichloropropane	0.0061	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-142	0	1	1,2-dichloropropane	0.011	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-060	0	1	1,2-dichloropropane	2.7	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-065	0	10	1,2-dichloropropane	2.8	MG/KG	U	1.9	NA	0.1	NA	nc	NA
MW05S	1	2	1,2-dichloropropane	0.095	MG/KG	U	1.9	NA	0.1	NA	nc	NA
MW01S	1	2	1,2-dichloropropane	0.34	MG/KG	U	1.9	NA	0.1	NA	nc	NA
MW05S	1	2	1,2-dichloropropane	0.11	MG/KG	U	1.9	NA	0.1	NA	nc	NA
MW08S	1	2	1,2-dichloropropane	0.26	MG/KG	U	1.9	NA	0.1	NA	nc	NA
MW14M	1	2	1,2-dichloropropane	0.11	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-089	1	2	1,2-dichloropropane	0.0048	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-118	1	2	1,2-dichloropropane	0.006	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-173	1	2	1,2-dichloropropane	0.0083	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-237	1	2	1,2-dichloropropane	0.0069	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-405	1	2	1,2-dichloropropane	4	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-407	1	2	1,2-dichloropropane	0.0074	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-408	1	2	1,2-dichloropropane	2.2	MG/KG	U	1.9	NA	0.1	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-417	1	2	1,2-dichloropropane	130	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-419	1	2	1,2-dichloropropane	28	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-423	1	2	1,2-dichloropropane	0.0062	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-427	1	2	1,2-dichloropropane	0.0045	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-428	1	2	1,2-dichloropropane	0.0054	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-456	1	2	1,2-dichloropropane	0.0089	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-060	2	3	1,2-dichloropropane	0.27	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-089	2	3	1,2-dichloropropane	0.0047	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-118	2	3	1,2-dichloropropane	0.0074	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-407	2	3	1,2-dichloropropane	0.0087	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-408	2	3	1,2-dichloropropane	6.6	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-417	2	3	1,2-dichloropropane	17	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-455	2	3	1,2-dichloropropane	0.33	MG/KG	U	1.9	NA	0.1	NA	nc	NA
MW08S	2	4	1,2-dichloropropane	0.21	MG/KG	U	1.9	NA	0.1	NA	nc	NA
MW01S	2	4	1,2-dichloropropane	0.22	MG/KG	U	1.9	NA	0.1	NA	nc	NA
MW02S	2	4	1,2-dichloropropane	0.2	MG/KG	U	1.9	NA	0.1	NA	nc	NA
MW04D	2	4	1,2-dichloropropane	0.5	MG/KG	U	1.9	NA	0.1	NA	nc	NA
MW05S	2	4	1,2-dichloropropane	0.1	MG/KG	U	1.9	NA	0.1	NA	nc	NA
MW06S	2	4	1,2-dichloropropane	0.3	MG/KG	U	1.9	NA	0.1	NA	nc	NA
MW06S	2	4	1,2-dichloropropane	0.3	MG/KG	U	1.9	NA	0.1	NA	nc	NA
MW08S	2	4	1,2-dichloropropane	0.32	MG/KG	U	1.9	NA	0.1	NA	nc	NA
MW14M	2	4	1,2-dichloropropane	0.14	MG/KG	U	1.9	NA	0.1	NA	nc	NA
MW15D	2	4	1,2-dichloropropane	0.14	MG/KG	U	1.9	NA	0.1	NA	nc	NA
SB02	2	4	1,2-dichloropropane	0.38	MG/KG	U	1.9	NA	0.1	NA	nc	NA
SB03	2	4	1,2-dichloropropane	0.3	MG/KG	U	1.9	NA	0.1	NA	nc	NA
MW07S	3	4	1,2-dichloropropane	0.5	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-060	3	4	1,2-dichloropropane	0.0058	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-089	3	4	1,2-dichloropropane	0.0041	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-118	3	4	1,2-dichloropropane	0.0084	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-407	3	4	1,2-dichloropropane	0.32	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-417	3	4	1,2-dichloropropane	0.28	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-419	3	4	1,2-dichloropropane	0.32	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-423	3	4	1,2-dichloropropane	0.0045	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-427	3	4	1,2-dichloropropane	0.0054	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-428	3	4	1,2-dichloropropane	0.0057	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-423	3	4	1,2-dichloropropane	0.0049	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-060	4	5	1,2-dichloropropane	0.0048	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-118	4	5	1,2-dichloropropane	0.0059	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-405	4	5	1,2-dichloropropane	1	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-455	4	5	1,2-dichloropropane	0.0072	MG/KG	U	1.9	NA	0.1	NA	nc	NA
MW15D	4	6	1,2-dichloropropane	0.1	MG/KG	U	1.9	NA	0.1	NA	nc	NA
MW02S	4	6	1,2-dichloropropane	0.55	MG/KG	U	1.9	NA	0.1	NA	nc	NA
SB03	4	6	1,2-dichloropropane	0.2	MG/KG	U	1.9	NA	0.1	NA	nc	NA
MW01S	4	6	1,2-dichloropropane	0.24	MG/KG	U	1.9	NA	0.1	NA	nc	NA
MW02S	4	6	1,2-dichloropropane	0.42	MG/KG	U	1.9	NA	0.1	NA	nc	NA
MW03S	4	6	1,2-dichloropropane	0.35	MG/KG	U	1.9	NA	0.1	NA	nc	NA
MW04D	4	6	1,2-dichloropropane	0.18	MG/KG	U	1.9	NA	0.1	NA	nc	NA
MW06S	4	6	1,2-dichloropropane	0.43	MG/KG	U	1.9	NA	0.1	NA	nc	NA
MW07S	4	6	1,2-dichloropropane	0.26	MG/KG	U	1.9	NA	0.1	NA	nc	NA
MW08S	4	6	1,2-dichloropropane	0.3	MG/KG	U	1.9	NA	0.1	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW09S	4	6	1,2-dichloropropane	0.26	MG/KG	U	1.9	NA	0.1	NA	nc	NA
MW15D	4	6	1,2-dichloropropane	0.12	MG/KG	U	1.9	NA	0.1	NA	nc	NA
SB02	4	6	1,2-dichloropropane	0.26	MG/KG	U	1.9	NA	0.1	NA	nc	NA
SB03	4	6	1,2-dichloropropane	0.18	MG/KG	U	1.9	NA	0.1	NA	nc	NA
CMS-237	0	1	1,2-dichloropropane	0.0059	MG/KG	UJ	1.9	NA	0.1	NA	nc	NA
MW14M	1	2	1,2-dichloropropane	0.15	MG/KG	UJ	1.9	NA	0.1	NA	nc	NA
SB-14-271	1	2	1,2-dichloropropane	0.12	MG/KG	UJ	1.9	NA	0.1	NA	nc	NA
CMS-060	1	2	1,2-dichloropropane	5.1	MG/KG	UJ	1.9	NA	0.1	NA	nc	NA
CMS-405	1	2	1,2-dichloropropane	2.9	MG/KG	UJ	1.9	NA	0.1	NA	nc	NA
SB-14-271	2	4	1,2-dichloropropane	0.13	MG/KG	UJ	1.9	NA	0.1	NA	nc	NA
MW05S	4	6	1,2-dichloropropane	0.11	MG/KG	UJ	1.9	NA	0.1	NA	nc	NA
SB-14-271	4	6	1,2-dichloropropane	0.11	MG/KG	UJ	1.9	NA	0.1	NA	nc	NA
MW05S	4	6	2,4,5-trichlorophenol	16	MG/KG	*	330	N	nc	NA	nc	NA
CMS-456	0	1	2,4,5-trichlorophenol	0.17	MG/KG	J	330	N	nc	NA	nc	NA
CMS-456	1	2	2,4,5-trichlorophenol	0.56	MG/KG	J	330	N	nc	NA	nc	NA
MW05S	2	4	2,4,5-trichlorophenol	0.086	MG/KG	J	330	N	nc	NA	nc	NA
MW01S	4	6	2,4,5-trichlorophenol	0.073	MG/KG	J	330	N	nc	NA	nc	NA
SS-01	0	0	2,4,5-trichlorophenol	1.1	MG/KG	U	330	NA	nc	NA	nc	NA
CMW-SD-2016	0	0.5	2,4,5-trichlorophenol	2	MG/KG	U	330	NA	nc	NA	nc	NA
CMW-SD-2017	0	0.5	2,4,5-trichlorophenol	2.2	MG/KG	U	330	NA	nc	NA	nc	NA
CMW-SD-2018	0	0.5	2,4,5-trichlorophenol	5.3	MG/KG	U	330	NA	nc	NA	nc	NA
CMW-SD-2019	0	0.5	2,4,5-trichlorophenol	2.4	MG/KG	U	330	NA	nc	NA	nc	NA
CMW-SD-2020	0	0.5	2,4,5-trichlorophenol	1.2	MG/KG	U	330	NA	nc	NA	nc	NA
CMW-SD-2021	0	0.5	2,4,5-trichlorophenol	5.2	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-089	0	1	2,4,5-trichlorophenol	0.67	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-098	0	1	2,4,5-trichlorophenol	0.6	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-142	0	1	2,4,5-trichlorophenol	0.58	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-164	0	1	2,4,5-trichlorophenol	2	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-173	0	1	2,4,5-trichlorophenol	1.1	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-237	0	1	2,4,5-trichlorophenol	1.3	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-405	0	1	2,4,5-trichlorophenol	0.35	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-407	0	1	2,4,5-trichlorophenol	0.35	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-408	0	1	2,4,5-trichlorophenol	0.34	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-417	0	1	2,4,5-trichlorophenol	35	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-142	0	1	2,4,5-trichlorophenol	0.55	MG/KG	U	330	NA	nc	NA	nc	NA
RES-14-271-01	0	1	2,4,5-trichlorophenol	1.3	MG/KG	U	330	NA	nc	NA	nc	NA
RES-14-272-01	0	1	2,4,5-trichlorophenol	1.6	MG/KG	U	330	NA	nc	NA	nc	NA
RES-14-302-01	0	1	2,4,5-trichlorophenol	12	MG/KG	U	330	NA	nc	NA	nc	NA
RES-14-303-01	0	1	2,4,5-trichlorophenol	12	MG/KG	U	330	NA	nc	NA	nc	NA
RES-14-271-01	0	1	2,4,5-trichlorophenol	6.3	MG/KG	U	330	NA	nc	NA	nc	NA
RES-14-272-01	0	1	2,4,5-trichlorophenol	7.7	MG/KG	U	330	NA	nc	NA	nc	NA
SS-02	0	1.3	2,4,5-trichlorophenol	1.3	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-703	0	2	2,4,5-trichlorophenol	6.2	MG/KG	U	330	NA	nc	NA	nc	NA
SS-06	0	2	2,4,5-trichlorophenol	2.1	MG/KG	U	330	NA	nc	NA	nc	NA
BV01COMP	0	4	2,4,5-trichlorophenol	0.38	MG/KG	U	330	NA	nc	NA	nc	NA
CMW-SD-2022	0.5	2	2,4,5-trichlorophenol	11	MG/KG	U	330	NA	nc	NA	nc	NA
MW05S	1	2	2,4,5-trichlorophenol	0.9	MG/KG	U	330	NA	nc	NA	nc	NA
MW14M	1	2	2,4,5-trichlorophenol	0.86	MG/KG	U	330	NA	nc	NA	nc	NA
MW14M	1	2	2,4,5-trichlorophenol	0.86	MG/KG	U	330	NA	nc	NA	nc	NA
MW01S	1	2	2,4,5-trichlorophenol	0.95	MG/KG	U	330	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW05S	1	2	2,4,5-trichlorophenol	0.89	MG/KG	U	330	NA	nc	NA	nc	NA
MW08S	1	2	2,4,5-trichlorophenol	1.1	MG/KG	U	330	NA	nc	NA	nc	NA
MW14M	1	2	2,4,5-trichlorophenol	0.84	MG/KG	U	330	NA	nc	NA	nc	NA
MW14M	1	2	2,4,5-trichlorophenol	0.84	MG/KG	U	330	NA	nc	NA	nc	NA
SB-14-271	1	2	2,4,5-trichlorophenol	1	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-060	1	2	2,4,5-trichlorophenol	0.34	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-089	1	2	2,4,5-trichlorophenol	0.35	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-118	1	2	2,4,5-trichlorophenol	0.37	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-173	1	2	2,4,5-trichlorophenol	0.52	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-237	1	2	2,4,5-trichlorophenol	0.83	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-405	1	2	2,4,5-trichlorophenol	0.63	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-407	1	2	2,4,5-trichlorophenol	0.44	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-408	1	2	2,4,5-trichlorophenol	8.7	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-417	1	2	2,4,5-trichlorophenol	35	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-419	1	2	2,4,5-trichlorophenol	74	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-423	1	2	2,4,5-trichlorophenol	0.35	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-427	1	2	2,4,5-trichlorophenol	3.6	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-428	1	2	2,4,5-trichlorophenol	0.35	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-405	1	2	2,4,5-trichlorophenol	1.2	MG/KG	U	330	NA	nc	NA	nc	NA
CMW-SD-2022	2	2.5	2,4,5-trichlorophenol	2.2	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-060	2	3	2,4,5-trichlorophenol	0.36	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-089	2	3	2,4,5-trichlorophenol	0.7	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-118	2	3	2,4,5-trichlorophenol	0.44	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-237	2	3	2,4,5-trichlorophenol	0.63	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-405	2	3	2,4,5-trichlorophenol	0.64	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-407	2	3	2,4,5-trichlorophenol	1.1	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-408	2	3	2,4,5-trichlorophenol	0.43	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-417	2	3	2,4,5-trichlorophenol	9.8	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-455	2	3	2,4,5-trichlorophenol	0.4	MG/KG	U	330	NA	nc	NA	nc	NA
MW08S	2	4	2,4,5-trichlorophenol	1.1	MG/KG	U	330	NA	nc	NA	nc	NA
SB02	2	4	2,4,5-trichlorophenol	5.8	MG/KG	U	330	NA	nc	NA	nc	NA
MW01S	2	4	2,4,5-trichlorophenol	4	MG/KG	U	330	NA	nc	NA	nc	NA
MW02S	2	4	2,4,5-trichlorophenol	0.97	MG/KG	U	330	NA	nc	NA	nc	NA
MW06S	2	4	2,4,5-trichlorophenol	0.91	MG/KG	U	330	NA	nc	NA	nc	NA
MW06S	2	4	2,4,5-trichlorophenol	0.92	MG/KG	U	330	NA	nc	NA	nc	NA
MW08S	2	4	2,4,5-trichlorophenol	1	MG/KG	U	330	NA	nc	NA	nc	NA
MW14M	2	4	2,4,5-trichlorophenol	0.94	MG/KG	U	330	NA	nc	NA	nc	NA
MW15D	2	4	2,4,5-trichlorophenol	0.93	MG/KG	U	330	NA	nc	NA	nc	NA
SB-14-271	2	4	2,4,5-trichlorophenol	1.1	MG/KG	U	330	NA	nc	NA	nc	NA
SB02	2	4	2,4,5-trichlorophenol	5.5	MG/KG	U	330	NA	nc	NA	nc	NA
SB03	2	4	2,4,5-trichlorophenol	2.5	MG/KG	U	330	NA	nc	NA	nc	NA
SS-03	2.5	3.5	2,4,5-trichlorophenol	1	MG/KG	U	330	NA	nc	NA	nc	NA
MW07S	3	4	2,4,5-trichlorophenol	0.97	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-060	3	4	2,4,5-trichlorophenol	0.45	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-089	3	4	2,4,5-trichlorophenol	1.8	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-118	3	4	2,4,5-trichlorophenol	0.5	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-405	3	4	2,4,5-trichlorophenol	0.38	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-407	3	4	2,4,5-trichlorophenol	0.42	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-417	3	4	2,4,5-trichlorophenol	1.9	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-419	3	4	2,4,5-trichlorophenol	0.42	MG/KG	U	330	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-423	3	4	2,4,5-trichlorophenol	0.37	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-427	3	4	2,4,5-trichlorophenol	0.41	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-428	3	4	2,4,5-trichlorophenol	0.37	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-423	3	4	2,4,5-trichlorophenol	0.39	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-118	4	5	2,4,5-trichlorophenol	0.43	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-405	4	5	2,4,5-trichlorophenol	0.46	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-455	4	5	2,4,5-trichlorophenol	0.48	MG/KG	U	330	NA	nc	NA	nc	NA
SB03	4	6	2,4,5-trichlorophenol	0.93	MG/KG	U	330	NA	nc	NA	nc	NA
MW15D	4	6	2,4,5-trichlorophenol	1	MG/KG	U	330	NA	nc	NA	nc	NA
MW03S	4	6	2,4,5-trichlorophenol	1	MG/KG	U	330	NA	nc	NA	nc	NA
MW04D	4	6	2,4,5-trichlorophenol	1.1	MG/KG	U	330	NA	nc	NA	nc	NA
MW06S	4	6	2,4,5-trichlorophenol	1.2	MG/KG	U	330	NA	nc	NA	nc	NA
MW07S	4	6	2,4,5-trichlorophenol	1	MG/KG	U	330	NA	nc	NA	nc	NA
MW08S	4	6	2,4,5-trichlorophenol	1.1	MG/KG	U	330	NA	nc	NA	nc	NA
MW09S	4	6	2,4,5-trichlorophenol	2.1	MG/KG	U	330	NA	nc	NA	nc	NA
MW15D	4	6	2,4,5-trichlorophenol	0.89	MG/KG	U	330	NA	nc	NA	nc	NA
SB-14-271	4	6	2,4,5-trichlorophenol	1	MG/KG	U	330	NA	nc	NA	nc	NA
SB02	4	6	2,4,5-trichlorophenol	2.1	MG/KG	U	330	NA	nc	NA	nc	NA
SB03	4	6	2,4,5-trichlorophenol	0.94	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-4105	0	1	2,4,5-trichlorophenol	2.7	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-4110	0	1	2,4,5-trichlorophenol	3.2	MG/KG	U	330	NA	nc	NA	nc	NA
CMS-060	0	1	2,4,5-trichlorophenol	0.34	MG/KG	UJ	330	NA	nc	NA	nc	NA
CMS-118	0	1	2,4,5-trichlorophenol	0.36	MG/KG	UJ	330	NA	nc	NA	nc	NA
CMS-159	0	1	2,4,5-trichlorophenol	2.2	MG/KG	UJ	330	NA	nc	NA	nc	NA
CMS-060	0	1	2,4,5-trichlorophenol	0.35	MG/KG	UJ	330	NA	nc	NA	nc	NA
CMS-060	4	5	2,4,5-trichlorophenol	0.38	MG/KG	UJ	330	NA	nc	NA	nc	NA
SS-01	0	0	2,4,6-trichlorophenol	0.43	MG/KG	U	58	NA	nc	NA	nc	NA
CMW-SD-2016	0	0.5	2,4,6-trichlorophenol	0.8	MG/KG	U	58	NA	nc	NA	nc	NA
CMW-SD-2017	0	0.5	2,4,6-trichlorophenol	0.87	MG/KG	U	58	NA	nc	NA	nc	NA
CMW-SD-2018	0	0.5	2,4,6-trichlorophenol	2.1	MG/KG	U	58	NA	nc	NA	nc	NA
CMW-SD-2019	0	0.5	2,4,6-trichlorophenol	0.95	MG/KG	U	58	NA	nc	NA	nc	NA
CMW-SD-2020	0	0.5	2,4,6-trichlorophenol	0.46	MG/KG	U	58	NA	nc	NA	nc	NA
CMW-SD-2021	0	0.5	2,4,6-trichlorophenol	2.1	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-089	0	1	2,4,6-trichlorophenol	0.67	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-098	0	1	2,4,6-trichlorophenol	0.6	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-142	0	1	2,4,6-trichlorophenol	0.58	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-164	0	1	2,4,6-trichlorophenol	2	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-173	0	1	2,4,6-trichlorophenol	1.1	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-237	0	1	2,4,6-trichlorophenol	1.3	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-405	0	1	2,4,6-trichlorophenol	0.35	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-407	0	1	2,4,6-trichlorophenol	0.35	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-408	0	1	2,4,6-trichlorophenol	0.34	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-417	0	1	2,4,6-trichlorophenol	35	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-456	0	1	2,4,6-trichlorophenol	0.49	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-142	0	1	2,4,6-trichlorophenol	0.55	MG/KG	U	58	NA	nc	NA	nc	NA
RES-14-271-01	0	1	2,4,6-trichlorophenol	0.51	MG/KG	U	58	NA	nc	NA	nc	NA
RES-14-272-01	0	1	2,4,6-trichlorophenol	0.62	MG/KG	U	58	NA	nc	NA	nc	NA
RES-14-302-01	0	1	2,4,6-trichlorophenol	5	MG/KG	U	58	NA	nc	NA	nc	NA
RES-14-303-01	0	1	2,4,6-trichlorophenol	4.8	MG/KG	U	58	NA	nc	NA	nc	NA
RES-14-271-01	0	1	2,4,6-trichlorophenol	2.5	MG/KG	U	58	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
RES-14-272-01	0	1	2,4,6-trichlorophenol	3.1	MG/KG	U	58	NA	nc	NA	nc	NA
SS-02	0	1.3	2,4,6-trichlorophenol	0.52	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-703	0	2	2,4,6-trichlorophenol	6.2	MG/KG	U	58	NA	nc	NA	nc	NA
SS-06	0	2	2,4,6-trichlorophenol	0.84	MG/KG	U	58	NA	nc	NA	nc	NA
BV01COMP	0	4	2,4,6-trichlorophenol	0.38	MG/KG	U	58	NA	nc	NA	nc	NA
CMW-SD-2022	0.5	2	2,4,6-trichlorophenol	4.2	MG/KG	U	58	NA	nc	NA	nc	NA
MW05S	1	2	2,4,6-trichlorophenol	0.36	MG/KG	U	58	NA	nc	NA	nc	NA
MW14M	1	2	2,4,6-trichlorophenol	0.34	MG/KG	U	58	NA	nc	NA	nc	NA
MW14M	1	2	2,4,6-trichlorophenol	0.34	MG/KG	U	58	NA	nc	NA	nc	NA
MW01S	1	2	2,4,6-trichlorophenol	0.38	MG/KG	U	58	NA	nc	NA	nc	NA
MW05S	1	2	2,4,6-trichlorophenol	0.36	MG/KG	U	58	NA	nc	NA	nc	NA
MW08S	1	2	2,4,6-trichlorophenol	0.42	MG/KG	U	58	NA	nc	NA	nc	NA
MW14M	1	2	2,4,6-trichlorophenol	0.33	MG/KG	U	58	NA	nc	NA	nc	NA
MW14M	1	2	2,4,6-trichlorophenol	0.33	MG/KG	U	58	NA	nc	NA	nc	NA
SB-14-271	1	2	2,4,6-trichlorophenol	0.4	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-060	1	2	2,4,6-trichlorophenol	0.34	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-089	1	2	2,4,6-trichlorophenol	0.35	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-118	1	2	2,4,6-trichlorophenol	0.37	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-173	1	2	2,4,6-trichlorophenol	0.52	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-237	1	2	2,4,6-trichlorophenol	0.83	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-405	1	2	2,4,6-trichlorophenol	0.63	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-407	1	2	2,4,6-trichlorophenol	0.44	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-408	1	2	2,4,6-trichlorophenol	8.7	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-417	1	2	2,4,6-trichlorophenol	35	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-419	1	2	2,4,6-trichlorophenol	74	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-423	1	2	2,4,6-trichlorophenol	0.35	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-427	1	2	2,4,6-trichlorophenol	3.6	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-428	1	2	2,4,6-trichlorophenol	0.35	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-456	1	2	2,4,6-trichlorophenol	1.2	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-405	1	2	2,4,6-trichlorophenol	1.2	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-060	2	3	2,4,6-trichlorophenol	0.36	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-089	2	3	2,4,6-trichlorophenol	0.7	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-118	2	3	2,4,6-trichlorophenol	0.44	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-237	2	3	2,4,6-trichlorophenol	0.63	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-405	2	3	2,4,6-trichlorophenol	0.64	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-407	2	3	2,4,6-trichlorophenol	1.1	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-408	2	3	2,4,6-trichlorophenol	0.43	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-417	2	3	2,4,6-trichlorophenol	9.8	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-455	2	3	2,4,6-trichlorophenol	0.4	MG/KG	U	58	NA	nc	NA	nc	NA
MW08S	2	4	2,4,6-trichlorophenol	0.45	MG/KG	U	58	NA	nc	NA	nc	NA
SB02	2	4	2,4,6-trichlorophenol	2.3	MG/KG	U	58	NA	nc	NA	nc	NA
MW01S	2	4	2,4,6-trichlorophenol	1.6	MG/KG	U	58	NA	nc	NA	nc	NA
MW02S	2	4	2,4,6-trichlorophenol	0.38	MG/KG	U	58	NA	nc	NA	nc	NA
MW06S	2	4	2,4,6-trichlorophenol	0.36	MG/KG	U	58	NA	nc	NA	nc	NA
MW06S	2	4	2,4,6-trichlorophenol	0.37	MG/KG	U	58	NA	nc	NA	nc	NA
MW08S	2	4	2,4,6-trichlorophenol	0.41	MG/KG	U	58	NA	nc	NA	nc	NA
MW14M	2	4	2,4,6-trichlorophenol	0.38	MG/KG	U	58	NA	nc	NA	nc	NA
MW15D	2	4	2,4,6-trichlorophenol	0.37	MG/KG	U	58	NA	nc	NA	nc	NA
SB-14-271	2	4	2,4,6-trichlorophenol	0.45	MG/KG	U	58	NA	nc	NA	nc	NA
SB02	2	4	2,4,6-trichlorophenol	2.2	MG/KG	U	58	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
SB03	2	4	2,4,6-trichlorophenol	0.99	MG/KG	U	58	NA	nc	NA	nc	NA
SS-03	2.5	3.5	2,4,6-trichlorophenol	0.4	MG/KG	U	58	NA	nc	NA	nc	NA
MW07S	3	4	2,4,6-trichlorophenol	0.38	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-060	3	4	2,4,6-trichlorophenol	0.45	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-089	3	4	2,4,6-trichlorophenol	1.8	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-118	3	4	2,4,6-trichlorophenol	0.5	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-405	3	4	2,4,6-trichlorophenol	0.38	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-407	3	4	2,4,6-trichlorophenol	0.42	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-417	3	4	2,4,6-trichlorophenol	1.9	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-419	3	4	2,4,6-trichlorophenol	0.42	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-423	3	4	2,4,6-trichlorophenol	0.37	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-427	3	4	2,4,6-trichlorophenol	0.41	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-428	3	4	2,4,6-trichlorophenol	0.37	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-423	3	4	2,4,6-trichlorophenol	0.39	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-118	4	5	2,4,6-trichlorophenol	0.43	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-405	4	5	2,4,6-trichlorophenol	0.46	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-455	4	5	2,4,6-trichlorophenol	0.48	MG/KG	U	58	NA	nc	NA	nc	NA
SB03	4	6	2,4,6-trichlorophenol	0.37	MG/KG	U	58	NA	nc	NA	nc	NA
MW15D	4	6	2,4,6-trichlorophenol	0.4	MG/KG	U	58	NA	nc	NA	nc	NA
MW01S	4	6	2,4,6-trichlorophenol	0.4	MG/KG	U	58	NA	nc	NA	nc	NA
MW03S	4	6	2,4,6-trichlorophenol	0.4	MG/KG	U	58	NA	nc	NA	nc	NA
MW04D	4	6	2,4,6-trichlorophenol	0.42	MG/KG	U	58	NA	nc	NA	nc	NA
MW05S	4	6	2,4,6-trichlorophenol	0.82	MG/KG	U	58	NA	nc	NA	nc	NA
MW06S	4	6	2,4,6-trichlorophenol	0.46	MG/KG	U	58	NA	nc	NA	nc	NA
MW07S	4	6	2,4,6-trichlorophenol	0.4	MG/KG	U	58	NA	nc	NA	nc	NA
MW08S	4	6	2,4,6-trichlorophenol	0.45	MG/KG	U	58	NA	nc	NA	nc	NA
MW09S	4	6	2,4,6-trichlorophenol	0.85	MG/KG	U	58	NA	nc	NA	nc	NA
MW15D	4	6	2,4,6-trichlorophenol	0.35	MG/KG	U	58	NA	nc	NA	nc	NA
SB-14-271	4	6	2,4,6-trichlorophenol	0.4	MG/KG	U	58	NA	nc	NA	nc	NA
SB02	4	6	2,4,6-trichlorophenol	0.83	MG/KG	U	58	NA	nc	NA	nc	NA
SB03	4	6	2,4,6-trichlorophenol	0.38	MG/KG	U	58	NA	nc	NA	nc	NA
CMS-060	0	1	2,4,6-trichlorophenol	0.34	MG/KG	UJ	58	NA	nc	NA	nc	NA
CMS-118	0	1	2,4,6-trichlorophenol	0.36	MG/KG	UJ	58	NA	nc	NA	nc	NA
CMS-159	0	1	2,4,6-trichlorophenol	2.2	MG/KG	UJ	58	NA	nc	NA	nc	NA
CMS-060	0	1	2,4,6-trichlorophenol	0.35	MG/KG	UJ	58	NA	nc	NA	nc	NA
CMW-SD-2022	2	2.5	2,4,6-trichlorophenol	0.86	MG/KG	UJ	58	NA	nc	NA	nc	NA
MW05S	2	4	2,4,6-trichlorophenol	0.37	MG/KG	UJ	58	NA	nc	NA	nc	NA
CMS-060	4	5	2,4,6-trichlorophenol	0.38	MG/KG	UJ	58	NA	nc	NA	nc	NA
SS-01	0	0	2,4-dichlorophenol	0.43	MG/KG	U	30	NA	nc	NA	nc	NA
CMW-SD-2016	0	0.5	2,4-dichlorophenol	0.8	MG/KG	U	30	NA	nc	NA	nc	NA
CMW-SD-2017	0	0.5	2,4-dichlorophenol	0.87	MG/KG	U	30	NA	nc	NA	nc	NA
CMW-SD-2018	0	0.5	2,4-dichlorophenol	2.1	MG/KG	U	30	NA	nc	NA	nc	NA
CMW-SD-2019	0	0.5	2,4-dichlorophenol	0.95	MG/KG	U	30	NA	nc	NA	nc	NA
CMW-SD-2020	0	0.5	2,4-dichlorophenol	0.46	MG/KG	U	30	NA	nc	NA	nc	NA
CMW-SD-2021	0	0.5	2,4-dichlorophenol	2.1	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-089	0	1	2,4-dichlorophenol	0.67	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-098	0	1	2,4-dichlorophenol	0.6	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-142	0	1	2,4-dichlorophenol	0.58	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-164	0	1	2,4-dichlorophenol	2	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-173	0	1	2,4-dichlorophenol	1.1	MG/KG	U	30	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-237	0	1	2,4-dichlorophenol	1.3	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-405	0	1	2,4-dichlorophenol	0.35	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-407	0	1	2,4-dichlorophenol	0.35	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-408	0	1	2,4-dichlorophenol	0.34	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-417	0	1	2,4-dichlorophenol	35	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-456	0	1	2,4-dichlorophenol	0.49	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-142	0	1	2,4-dichlorophenol	0.55	MG/KG	U	30	NA	nc	NA	nc	NA
RES-14-271-01	0	1	2,4-dichlorophenol	0.51	MG/KG	U	30	NA	nc	NA	nc	NA
RES-14-272-01	0	1	2,4-dichlorophenol	0.62	MG/KG	U	30	NA	nc	NA	nc	NA
RES-14-302-01	0	1	2,4-dichlorophenol	5	MG/KG	U	30	NA	nc	NA	nc	NA
RES-14-303-01	0	1	2,4-dichlorophenol	4.8	MG/KG	U	30	NA	nc	NA	nc	NA
RES-14-271-01	0	1	2,4-dichlorophenol	2.5	MG/KG	U	30	NA	nc	NA	nc	NA
RES-14-272-01	0	1	2,4-dichlorophenol	3.1	MG/KG	U	30	NA	nc	NA	nc	NA
SS-02	0	1.3	2,4-dichlorophenol	0.52	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-703	0	2	2,4-dichlorophenol	6.2	MG/KG	U	30	NA	nc	NA	nc	NA
SS-06	0	2	2,4-dichlorophenol	0.84	MG/KG	U	30	NA	nc	NA	nc	NA
BV01COMP	0	4	2,4-dichlorophenol	0.38	MG/KG	U	30	NA	nc	NA	nc	NA
CMW-SD-2022	0.5	2	2,4-dichlorophenol	4.2	MG/KG	U	30	NA	nc	NA	nc	NA
MW05S	1	2	2,4-dichlorophenol	0.36	MG/KG	U	30	NA	nc	NA	nc	NA
MW14M	1	2	2,4-dichlorophenol	0.34	MG/KG	U	30	NA	nc	NA	nc	NA
MW14M	1	2	2,4-dichlorophenol	0.34	MG/KG	U	30	NA	nc	NA	nc	NA
MW01S	1	2	2,4-dichlorophenol	0.38	MG/KG	U	30	NA	nc	NA	nc	NA
MW05S	1	2	2,4-dichlorophenol	0.36	MG/KG	U	30	NA	nc	NA	nc	NA
MW08S	1	2	2,4-dichlorophenol	0.42	MG/KG	U	30	NA	nc	NA	nc	NA
MW14M	1	2	2,4-dichlorophenol	0.33	MG/KG	U	30	NA	nc	NA	nc	NA
MW14M	1	2	2,4-dichlorophenol	0.33	MG/KG	U	30	NA	nc	NA	nc	NA
SB-14-271	1	2	2,4-dichlorophenol	0.4	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-060	1	2	2,4-dichlorophenol	0.34	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-089	1	2	2,4-dichlorophenol	0.35	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-118	1	2	2,4-dichlorophenol	0.37	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-173	1	2	2,4-dichlorophenol	0.52	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-237	1	2	2,4-dichlorophenol	0.83	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-405	1	2	2,4-dichlorophenol	0.63	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-407	1	2	2,4-dichlorophenol	0.44	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-408	1	2	2,4-dichlorophenol	8.7	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-417	1	2	2,4-dichlorophenol	35	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-419	1	2	2,4-dichlorophenol	74	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-423	1	2	2,4-dichlorophenol	0.35	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-427	1	2	2,4-dichlorophenol	3.6	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-428	1	2	2,4-dichlorophenol	0.35	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-456	1	2	2,4-dichlorophenol	1.2	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-405	1	2	2,4-dichlorophenol	1.2	MG/KG	U	30	NA	nc	NA	nc	NA
CMW-SD-2022	2	2.5	2,4-dichlorophenol	0.86	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-060	2	3	2,4-dichlorophenol	0.36	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-089	2	3	2,4-dichlorophenol	0.7	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-118	2	3	2,4-dichlorophenol	0.44	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-237	2	3	2,4-dichlorophenol	0.63	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-405	2	3	2,4-dichlorophenol	0.64	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-407	2	3	2,4-dichlorophenol	1.1	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-408	2	3	2,4-dichlorophenol	0.43	MG/KG	U	30	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-417	2	3	2,4-dichlorophenol	9.8	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-455	2	3	2,4-dichlorophenol	0.4	MG/KG	U	30	NA	nc	NA	nc	NA
MW08S	2	4	2,4-dichlorophenol	0.45	MG/KG	U	30	NA	nc	NA	nc	NA
SB02	2	4	2,4-dichlorophenol	2.3	MG/KG	U	30	NA	nc	NA	nc	NA
MW01S	2	4	2,4-dichlorophenol	1.6	MG/KG	U	30	NA	nc	NA	nc	NA
MW02S	2	4	2,4-dichlorophenol	0.38	MG/KG	U	30	NA	nc	NA	nc	NA
MW06S	2	4	2,4-dichlorophenol	0.36	MG/KG	U	30	NA	nc	NA	nc	NA
MW06S	2	4	2,4-dichlorophenol	0.37	MG/KG	U	30	NA	nc	NA	nc	NA
MW08S	2	4	2,4-dichlorophenol	0.41	MG/KG	U	30	NA	nc	NA	nc	NA
MW14M	2	4	2,4-dichlorophenol	0.38	MG/KG	U	30	NA	nc	NA	nc	NA
MW15D	2	4	2,4-dichlorophenol	0.37	MG/KG	U	30	NA	nc	NA	nc	NA
SB-14-271	2	4	2,4-dichlorophenol	0.45	MG/KG	U	30	NA	nc	NA	nc	NA
SB02	2	4	2,4-dichlorophenol	2.2	MG/KG	U	30	NA	nc	NA	nc	NA
SB03	2	4	2,4-dichlorophenol	0.99	MG/KG	U	30	NA	nc	NA	nc	NA
SS-03	2.5	3.5	2,4-dichlorophenol	0.4	MG/KG	U	30	NA	nc	NA	nc	NA
MW07S	3	4	2,4-dichlorophenol	0.38	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-060	3	4	2,4-dichlorophenol	0.45	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-089	3	4	2,4-dichlorophenol	1.8	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-118	3	4	2,4-dichlorophenol	0.5	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-405	3	4	2,4-dichlorophenol	0.38	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-407	3	4	2,4-dichlorophenol	0.42	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-417	3	4	2,4-dichlorophenol	1.9	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-419	3	4	2,4-dichlorophenol	0.42	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-423	3	4	2,4-dichlorophenol	0.37	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-427	3	4	2,4-dichlorophenol	0.41	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-428	3	4	2,4-dichlorophenol	0.37	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-423	3	4	2,4-dichlorophenol	0.39	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-118	4	5	2,4-dichlorophenol	0.43	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-405	4	5	2,4-dichlorophenol	0.46	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-455	4	5	2,4-dichlorophenol	0.48	MG/KG	U	30	NA	nc	NA	nc	NA
SB03	4	6	2,4-dichlorophenol	0.37	MG/KG	U	30	NA	nc	NA	nc	NA
MW15D	4	6	2,4-dichlorophenol	0.4	MG/KG	U	30	NA	nc	NA	nc	NA
MW01S	4	6	2,4-dichlorophenol	0.4	MG/KG	U	30	NA	nc	NA	nc	NA
MW03S	4	6	2,4-dichlorophenol	0.4	MG/KG	U	30	NA	nc	NA	nc	NA
MW04D	4	6	2,4-dichlorophenol	0.42	MG/KG	U	30	NA	nc	NA	nc	NA
MW05S	4	6	2,4-dichlorophenol	0.82	MG/KG	U	30	NA	nc	NA	nc	NA
MW06S	4	6	2,4-dichlorophenol	0.46	MG/KG	U	30	NA	nc	NA	nc	NA
MW07S	4	6	2,4-dichlorophenol	0.4	MG/KG	U	30	NA	nc	NA	nc	NA
MW08S	4	6	2,4-dichlorophenol	0.45	MG/KG	U	30	NA	nc	NA	nc	NA
MW09S	4	6	2,4-dichlorophenol	0.85	MG/KG	U	30	NA	nc	NA	nc	NA
MW15D	4	6	2,4-dichlorophenol	0.35	MG/KG	U	30	NA	nc	NA	nc	NA
SB-14-271	4	6	2,4-dichlorophenol	0.4	MG/KG	U	30	NA	nc	NA	nc	NA
SB02	4	6	2,4-dichlorophenol	0.83	MG/KG	U	30	NA	nc	NA	nc	NA
SB03	4	6	2,4-dichlorophenol	0.38	MG/KG	U	30	NA	nc	NA	nc	NA
CMS-060	0	1	2,4-dichlorophenol	0.34	MG/KG	UJ	30	NA	nc	NA	nc	NA
CMS-118	0	1	2,4-dichlorophenol	0.36	MG/KG	UJ	30	NA	nc	NA	nc	NA
CMS-159	0	1	2,4-dichlorophenol	2.2	MG/KG	UJ	30	NA	nc	NA	nc	NA
CMS-060	0	1	2,4-dichlorophenol	0.35	MG/KG	UJ	30	NA	nc	NA	nc	NA
MW05S	2	4	2,4-dichlorophenol	0.37	MG/KG	UJ	30	NA	nc	NA	nc	NA
CMS-060	4	5	2,4-dichlorophenol	0.38	MG/KG	UJ	30	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-417	3	4	2,4-dimethylphenol	0.9	MG/KG	J	1400	N	nc	NA	nc	NA
CMS-419	3	4	2,4-dimethylphenol	0.14	MG/KG	J	1400	N	nc	NA	nc	NA
MW15D	4	6	2,4-dimethylphenol	0.044	MG/KG	J	1400	N	nc	NA	nc	NA
MW15D	4	6	2,4-dimethylphenol	0.048	MG/KG	J	1400	N	nc	NA	nc	NA
SB02	4	6	2,4-dimethylphenol	0.085	MG/KG	J	1400	N	nc	NA	nc	NA
SS-01	0	0	2,4-dimethylphenol	0.43	MG/KG	U	1400	NA	nc	NA	nc	NA
CMW-SD-2016	0	0.5	2,4-dimethylphenol	0.8	MG/KG	U	1400	NA	nc	NA	nc	NA
CMW-SD-2017	0	0.5	2,4-dimethylphenol	0.87	MG/KG	U	1400	NA	nc	NA	nc	NA
CMW-SD-2018	0	0.5	2,4-dimethylphenol	2.1	MG/KG	U	1400	NA	nc	NA	nc	NA
CMW-SD-2019	0	0.5	2,4-dimethylphenol	0.95	MG/KG	U	1400	NA	nc	NA	nc	NA
CMW-SD-2020	0	0.5	2,4-dimethylphenol	0.46	MG/KG	U	1400	NA	nc	NA	nc	NA
CMW-SD-2021	0	0.5	2,4-dimethylphenol	2.1	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-089	0	1	2,4-dimethylphenol	0.67	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-098	0	1	2,4-dimethylphenol	0.6	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-142	0	1	2,4-dimethylphenol	0.58	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-164	0	1	2,4-dimethylphenol	2	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-173	0	1	2,4-dimethylphenol	1.1	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-237	0	1	2,4-dimethylphenol	1.3	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-405	0	1	2,4-dimethylphenol	0.35	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-407	0	1	2,4-dimethylphenol	0.35	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-408	0	1	2,4-dimethylphenol	0.34	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-417	0	1	2,4-dimethylphenol	35	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-456	0	1	2,4-dimethylphenol	0.49	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-142	0	1	2,4-dimethylphenol	0.55	MG/KG	U	1400	NA	nc	NA	nc	NA
RES-14-271-01	0	1	2,4-dimethylphenol	0.51	MG/KG	U	1400	NA	nc	NA	nc	NA
RES-14-272-01	0	1	2,4-dimethylphenol	0.62	MG/KG	U	1400	NA	nc	NA	nc	NA
RES-14-302-01	0	1	2,4-dimethylphenol	5	MG/KG	U	1400	NA	nc	NA	nc	NA
RES-14-303-01	0	1	2,4-dimethylphenol	4.8	MG/KG	U	1400	NA	nc	NA	nc	NA
RES-14-271-01	0	1	2,4-dimethylphenol	2.5	MG/KG	U	1400	NA	nc	NA	nc	NA
RES-14-272-01	0	1	2,4-dimethylphenol	3.1	MG/KG	U	1400	NA	nc	NA	nc	NA
SS-02	0	1.3	2,4-dimethylphenol	0.52	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-703	0	2	2,4-dimethylphenol	6.2	MG/KG	U	1400	NA	nc	NA	nc	NA
SS-06	0	2	2,4-dimethylphenol	0.84	MG/KG	U	1400	NA	nc	NA	nc	NA
BV01COMP	0	4	2,4-dimethylphenol	0.38	MG/KG	U	1400	NA	nc	NA	nc	NA
MW14M	1	2	2,4-dimethylphenol	0.34	MG/KG	U	1400	NA	nc	NA	nc	NA
MW14M	1	2	2,4-dimethylphenol	0.34	MG/KG	U	1400	NA	nc	NA	nc	NA
MW01S	1	2	2,4-dimethylphenol	0.38	MG/KG	U	1400	NA	nc	NA	nc	NA
MW08S	1	2	2,4-dimethylphenol	0.42	MG/KG	U	1400	NA	nc	NA	nc	NA
MW14M	1	2	2,4-dimethylphenol	0.33	MG/KG	U	1400	NA	nc	NA	nc	NA
MW14M	1	2	2,4-dimethylphenol	0.33	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-060	1	2	2,4-dimethylphenol	0.34	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-089	1	2	2,4-dimethylphenol	0.35	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-118	1	2	2,4-dimethylphenol	0.37	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-173	1	2	2,4-dimethylphenol	0.52	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-237	1	2	2,4-dimethylphenol	0.83	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-405	1	2	2,4-dimethylphenol	0.63	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-408	1	2	2,4-dimethylphenol	8.7	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-417	1	2	2,4-dimethylphenol	35	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-419	1	2	2,4-dimethylphenol	74	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-423	1	2	2,4-dimethylphenol	0.35	MG/KG	U	1400	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-427	1	2	2,4-dimethylphenol	3.6	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-428	1	2	2,4-dimethylphenol	0.35	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-456	1	2	2,4-dimethylphenol	1.2	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-405	1	2	2,4-dimethylphenol	1.2	MG/KG	U	1400	NA	nc	NA	nc	NA
CMW-SD-2022	2	2.5	2,4-dimethylphenol	0.86	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-060	2	3	2,4-dimethylphenol	0.36	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-089	2	3	2,4-dimethylphenol	0.7	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-118	2	3	2,4-dimethylphenol	0.44	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-237	2	3	2,4-dimethylphenol	0.63	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-405	2	3	2,4-dimethylphenol	0.64	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-407	2	3	2,4-dimethylphenol	1.1	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-408	2	3	2,4-dimethylphenol	0.43	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-417	2	3	2,4-dimethylphenol	9.8	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-455	2	3	2,4-dimethylphenol	0.4	MG/KG	U	1400	NA	nc	NA	nc	NA
MW08S	2	4	2,4-dimethylphenol	0.45	MG/KG	U	1400	NA	nc	NA	nc	NA
SB02	2	4	2,4-dimethylphenol	2.3	MG/KG	U	1400	NA	nc	NA	nc	NA
MW01S	2	4	2,4-dimethylphenol	1.6	MG/KG	U	1400	NA	nc	NA	nc	NA
MW02S	2	4	2,4-dimethylphenol	0.38	MG/KG	U	1400	NA	nc	NA	nc	NA
MW06S	2	4	2,4-dimethylphenol	0.36	MG/KG	U	1400	NA	nc	NA	nc	NA
MW06S	2	4	2,4-dimethylphenol	0.37	MG/KG	U	1400	NA	nc	NA	nc	NA
MW08S	2	4	2,4-dimethylphenol	0.41	MG/KG	U	1400	NA	nc	NA	nc	NA
MW14M	2	4	2,4-dimethylphenol	0.38	MG/KG	U	1400	NA	nc	NA	nc	NA
MW15D	2	4	2,4-dimethylphenol	0.37	MG/KG	U	1400	NA	nc	NA	nc	NA
SB02	2	4	2,4-dimethylphenol	2.2	MG/KG	U	1400	NA	nc	NA	nc	NA
SB03	2	4	2,4-dimethylphenol	0.99	MG/KG	U	1400	NA	nc	NA	nc	NA
SS-03	2.5	3.5	2,4-dimethylphenol	0.4	MG/KG	U	1400	NA	nc	NA	nc	NA
MW07S	3	4	2,4-dimethylphenol	0.38	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-060	3	4	2,4-dimethylphenol	0.45	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-089	3	4	2,4-dimethylphenol	1.8	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-118	3	4	2,4-dimethylphenol	0.5	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-405	3	4	2,4-dimethylphenol	0.38	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-407	3	4	2,4-dimethylphenol	0.42	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-423	3	4	2,4-dimethylphenol	0.37	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-427	3	4	2,4-dimethylphenol	0.41	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-428	3	4	2,4-dimethylphenol	0.37	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-423	3	4	2,4-dimethylphenol	0.39	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-118	4	5	2,4-dimethylphenol	0.43	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-405	4	5	2,4-dimethylphenol	0.46	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-455	4	5	2,4-dimethylphenol	0.48	MG/KG	U	1400	NA	nc	NA	nc	NA
SB03	4	6	2,4-dimethylphenol	0.37	MG/KG	U	1400	NA	nc	NA	nc	NA
MW01S	4	6	2,4-dimethylphenol	0.4	MG/KG	U	1400	NA	nc	NA	nc	NA
MW03S	4	6	2,4-dimethylphenol	0.4	MG/KG	U	1400	NA	nc	NA	nc	NA
MW05S	4	6	2,4-dimethylphenol	0.82	MG/KG	U	1400	NA	nc	NA	nc	NA
MW06S	4	6	2,4-dimethylphenol	0.46	MG/KG	U	1400	NA	nc	NA	nc	NA
MW07S	4	6	2,4-dimethylphenol	0.4	MG/KG	U	1400	NA	nc	NA	nc	NA
MW08S	4	6	2,4-dimethylphenol	0.45	MG/KG	U	1400	NA	nc	NA	nc	NA
MW09S	4	6	2,4-dimethylphenol	0.85	MG/KG	U	1400	NA	nc	NA	nc	NA
SB03	4	6	2,4-dimethylphenol	0.38	MG/KG	U	1400	NA	nc	NA	nc	NA
CMS-060	0	1	2,4-dimethylphenol	0.34	MG/KG	UJ	1400	NA	nc	NA	nc	NA
CMS-118	0	1	2,4-dimethylphenol	0.36	MG/KG	UJ	1400	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-159	0	1	2,4-dimethylphenol	2.2	MG/KG	UJ	1400	NA	nc	NA	nc	NA
CMS-060	0	1	2,4-dimethylphenol	0.35	MG/KG	UJ	1400	NA	nc	NA	nc	NA
CMW-SD-2022	0.5	2	2,4-dimethylphenol	4.2	MG/KG	UJ	1400	NA	nc	NA	nc	NA
MW05S	1	2	2,4-dimethylphenol	0.36	MG/KG	UJ	1400	NA	nc	NA	nc	NA
MW05S	1	2	2,4-dimethylphenol	0.36	MG/KG	UJ	1400	NA	nc	NA	nc	NA
SB-14-271	1	2	2,4-dimethylphenol	0.4	MG/KG	UJ	1400	NA	nc	NA	nc	NA
CMS-407	1	2	2,4-dimethylphenol	0.44	MG/KG	UJ	1400	NA	nc	NA	nc	NA
MW05S	2	4	2,4-dimethylphenol	0.37	MG/KG	UJ	1400	NA	nc	NA	nc	NA
SB-14-271	2	4	2,4-dimethylphenol	0.45	MG/KG	UJ	1400	NA	nc	NA	nc	NA
CMS-060	4	5	2,4-dimethylphenol	0.38	MG/KG	UJ	1400	NA	nc	NA	nc	NA
MW04D	4	6	2,4-dimethylphenol	0.42	MG/KG	UJ	1400	NA	nc	NA	nc	NA
SB-14-271	4	6	2,4-dimethylphenol	0.4	MG/KG	UJ	1400	NA	nc	NA	nc	NA
SS-01	0	0	2,4-dinitrophenol	1.1	MG/KG	U	160	NA	nc	NA	nc	NA
CMS-405	0	1	2,4-dinitrophenol	1.7	MG/KG	U	160	NA	nc	NA	nc	NA
CMS-417	0	1	2,4-dinitrophenol	170	MG/KG	U	160	NA	nc	NA	nc	NA
CMS-456	0	1	2,4-dinitrophenol	2.4	MG/KG	U	160	NA	nc	NA	nc	NA
RES-14-271-01	0	1	2,4-dinitrophenol	1.3	MG/KG	U	160	NA	nc	NA	nc	NA
RES-14-272-01	0	1	2,4-dinitrophenol	1.6	MG/KG	U	160	NA	nc	NA	nc	NA
RES-14-303-01	0	1	2,4-dinitrophenol	12	MG/KG	U	160	NA	nc	NA	nc	NA
RES-14-271-01	0	1	2,4-dinitrophenol	6.3	MG/KG	U	160	NA	nc	NA	nc	NA
RES-14-272-01	0	1	2,4-dinitrophenol	7.7	MG/KG	U	160	NA	nc	NA	nc	NA
SS-02	0	1.3	2,4-dinitrophenol	1.3	MG/KG	U	160	NA	nc	NA	nc	NA
CMS-703	0	2	2,4-dinitrophenol	30	MG/KG	U	160	NA	nc	NA	nc	NA
SS-06	0	2	2,4-dinitrophenol	2.1	MG/KG	U	160	NA	nc	NA	nc	NA
BV01COMP	0	4	2,4-dinitrophenol	1.8	MG/KG	U	160	NA	nc	NA	nc	NA
MW05S	1	2	2,4-dinitrophenol	0.9	MG/KG	U	160	NA	nc	NA	nc	NA
MW14M	1	2	2,4-dinitrophenol	0.86	MG/KG	U	160	NA	nc	NA	nc	NA
MW14M	1	2	2,4-dinitrophenol	0.86	MG/KG	U	160	NA	nc	NA	nc	NA
MW01S	1	2	2,4-dinitrophenol	0.95	MG/KG	U	160	NA	nc	NA	nc	NA
MW05S	1	2	2,4-dinitrophenol	0.89	MG/KG	U	160	NA	nc	NA	nc	NA
MW08S	1	2	2,4-dinitrophenol	1.1	MG/KG	U	160	NA	nc	NA	nc	NA
MW14M	1	2	2,4-dinitrophenol	0.84	MG/KG	U	160	NA	nc	NA	nc	NA
MW14M	1	2	2,4-dinitrophenol	0.84	MG/KG	U	160	NA	nc	NA	nc	NA
SB-14-271	1	2	2,4-dinitrophenol	1	MG/KG	U	160	NA	nc	NA	nc	NA
CMS-237	1	2	2,4-dinitrophenol	4	MG/KG	U	160	NA	nc	NA	nc	NA
CMS-405	1	2	2,4-dinitrophenol	3.1	MG/KG	U	160	NA	nc	NA	nc	NA
CMS-407	1	2	2,4-dinitrophenol	2.1	MG/KG	U	160	NA	nc	NA	nc	NA
CMS-419	1	2	2,4-dinitrophenol	360	MG/KG	U	160	NA	nc	NA	nc	NA
CMS-423	1	2	2,4-dinitrophenol	1.7	MG/KG	U	160	NA	nc	NA	nc	NA
CMS-427	1	2	2,4-dinitrophenol	17	MG/KG	U	160	NA	nc	NA	nc	NA
CMS-428	1	2	2,4-dinitrophenol	1.7	MG/KG	U	160	NA	nc	NA	nc	NA
CMS-456	1	2	2,4-dinitrophenol	5.7	MG/KG	U	160	NA	nc	NA	nc	NA
CMS-405	1	2	2,4-dinitrophenol	6	MG/KG	U	160	NA	nc	NA	nc	NA
CMW-SD-2022	2	2.5	2,4-dinitrophenol	2.2	MG/KG	U	160	NA	nc	NA	nc	NA
CMS-237	2	3	2,4-dinitrophenol	3.1	MG/KG	U	160	NA	nc	NA	nc	NA
CMS-455	2	3	2,4-dinitrophenol	1.9	MG/KG	U	160	NA	nc	NA	nc	NA
MW08S	2	4	2,4-dinitrophenol	1.1	MG/KG	U	160	NA	nc	NA	nc	NA
SB02	2	4	2,4-dinitrophenol	5.8	MG/KG	U	160	NA	nc	NA	nc	NA
MW01S	2	4	2,4-dinitrophenol	4	MG/KG	U	160	NA	nc	NA	nc	NA
MW02S	2	4	2,4-dinitrophenol	0.97	MG/KG	U	160	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW08S	2	4	2,4-dinitrophenol	1	MG/KG	U	160	NA	nc	NA	nc	NA
MW14M	2	4	2,4-dinitrophenol	0.94	MG/KG	U	160	NA	nc	NA	nc	NA
MW15D	2	4	2,4-dinitrophenol	0.93	MG/KG	U	160	NA	nc	NA	nc	NA
SB-14-271	2	4	2,4-dinitrophenol	1.1	MG/KG	U	160	NA	nc	NA	nc	NA
SB02	2	4	2,4-dinitrophenol	5.5	MG/KG	U	160	NA	nc	NA	nc	NA
SS-03	2.5	3.5	2,4-dinitrophenol	1	MG/KG	U	160	NA	nc	NA	nc	NA
CMS-405	3	4	2,4-dinitrophenol	1.8	MG/KG	U	160	NA	nc	NA	nc	NA
CMS-419	3	4	2,4-dinitrophenol	2	MG/KG	U	160	NA	nc	NA	nc	NA
CMS-423	3	4	2,4-dinitrophenol	1.8	MG/KG	U	160	NA	nc	NA	nc	NA
CMS-427	3	4	2,4-dinitrophenol	2	MG/KG	U	160	NA	nc	NA	nc	NA
CMS-428	3	4	2,4-dinitrophenol	1.8	MG/KG	U	160	NA	nc	NA	nc	NA
CMS-423	3	4	2,4-dinitrophenol	1.9	MG/KG	U	160	NA	nc	NA	nc	NA
CMS-405	4	5	2,4-dinitrophenol	2.2	MG/KG	U	160	NA	nc	NA	nc	NA
CMS-455	4	5	2,4-dinitrophenol	2.3	MG/KG	U	160	NA	nc	NA	nc	NA
SB03	4	6	2,4-dinitrophenol	0.93	MG/KG	U	160	NA	nc	NA	nc	NA
MW01S	4	6	2,4-dinitrophenol	1	MG/KG	U	160	NA	nc	NA	nc	NA
MW03S	4	6	2,4-dinitrophenol	1	MG/KG	U	160	NA	nc	NA	nc	NA
MW04D	4	6	2,4-dinitrophenol	1.1	MG/KG	U	160	NA	nc	NA	nc	NA
MW08S	4	6	2,4-dinitrophenol	1.1	MG/KG	U	160	NA	nc	NA	nc	NA
SB-14-271	4	6	2,4-dinitrophenol	1	MG/KG	U	160	NA	nc	NA	nc	NA
SB02	4	6	2,4-dinitrophenol	2.1	MG/KG	U	160	NA	nc	NA	nc	NA
SB03	4	6	2,4-dinitrophenol	0.94	MG/KG	U	160	NA	nc	NA	nc	NA
CMS-4105	0	1	2,4-dinitrophenol	13	MG/KG	U	160	NA	nc	NA	nc	NA
CMS-4110	0	1	2,4-dinitrophenol	16	MG/KG	U	160	NA	nc	NA	nc	NA
CMW-SD-2016	0	0.5	2,4-dinitrophenol	2	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMW-SD-2017	0	0.5	2,4-dinitrophenol	2.2	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMW-SD-2018	0	0.5	2,4-dinitrophenol	5.3	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMW-SD-2019	0	0.5	2,4-dinitrophenol	2.4	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMW-SD-2020	0	0.5	2,4-dinitrophenol	1.2	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMW-SD-2021	0	0.5	2,4-dinitrophenol	5.2	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMS-060	0	1	2,4-dinitrophenol	1.6	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMS-089	0	1	2,4-dinitrophenol	3.3	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMS-098	0	1	2,4-dinitrophenol	2.9	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMS-118	0	1	2,4-dinitrophenol	1.7	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMS-142	0	1	2,4-dinitrophenol	2.8	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMS-159	0	1	2,4-dinitrophenol	11	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMS-164	0	1	2,4-dinitrophenol	9.8	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMS-173	0	1	2,4-dinitrophenol	5.3	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMS-237	0	1	2,4-dinitrophenol	6.2	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMS-407	0	1	2,4-dinitrophenol	1.7	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMS-408	0	1	2,4-dinitrophenol	1.7	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMS-142	0	1	2,4-dinitrophenol	2.7	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMS-060	0	1	2,4-dinitrophenol	1.7	MG/KG	UJ	160	NA	nc	NA	nc	NA
RES-14-302-01	0	1	2,4-dinitrophenol	12	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMW-SD-2022	0.5	2	2,4-dinitrophenol	11	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMS-060	1	2	2,4-dinitrophenol	1.6	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMS-089	1	2	2,4-dinitrophenol	1.7	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMS-118	1	2	2,4-dinitrophenol	1.8	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMS-173	1	2	2,4-dinitrophenol	2.5	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMS-408	1	2	2,4-dinitrophenol	42	MG/KG	UJ	160	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-417	1	2	2,4-dinitrophenol	170	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMS-060	2	3	2,4-dinitrophenol	1.7	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMS-089	2	3	2,4-dinitrophenol	3.4	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMS-118	2	3	2,4-dinitrophenol	2.1	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMS-405	2	3	2,4-dinitrophenol	3.1	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMS-407	2	3	2,4-dinitrophenol	5.3	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMS-408	2	3	2,4-dinitrophenol	2.1	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMS-417	2	3	2,4-dinitrophenol	47	MG/KG	UJ	160	NA	nc	NA	nc	NA
MW05S	2	4	2,4-dinitrophenol	0.94	MG/KG	UJ	160	NA	nc	NA	nc	NA
MW06S	2	4	2,4-dinitrophenol	0.91	MG/KG	UJ	160	NA	nc	NA	nc	NA
MW06S	2	4	2,4-dinitrophenol	0.92	MG/KG	UJ	160	NA	nc	NA	nc	NA
SB03	2	4	2,4-dinitrophenol	2.5	MG/KG	UJ	160	NA	nc	NA	nc	NA
MW07S	3	4	2,4-dinitrophenol	0.97	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMS-060	3	4	2,4-dinitrophenol	2.2	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMS-089	3	4	2,4-dinitrophenol	8.5	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMS-118	3	4	2,4-dinitrophenol	2.4	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMS-407	3	4	2,4-dinitrophenol	2.1	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMS-417	3	4	2,4-dinitrophenol	9.2	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMS-060	4	5	2,4-dinitrophenol	1.9	MG/KG	UJ	160	NA	nc	NA	nc	NA
CMS-118	4	5	2,4-dinitrophenol	2.1	MG/KG	UJ	160	NA	nc	NA	nc	NA
MW15D	4	6	2,4-dinitrophenol	1	MG/KG	UJ	160	NA	nc	NA	nc	NA
MW05S	4	6	2,4-dinitrophenol	2.1	MG/KG	UJ	160	NA	nc	NA	nc	NA
MW06S	4	6	2,4-dinitrophenol	1.2	MG/KG	UJ	160	NA	nc	NA	nc	NA
MW07S	4	6	2,4-dinitrophenol	1	MG/KG	UJ	160	NA	nc	NA	nc	NA
MW09S	4	6	2,4-dinitrophenol	2.1	MG/KG	UJ	160	NA	nc	NA	nc	NA
MW15D	4	6	2,4-dinitrophenol	0.89	MG/KG	UJ	160	NA	nc	NA	nc	NA
SS-01	0	0	2,4-dinitrotoluene	0.43	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMW-SD-2016	0	0.5	2,4-dinitrotoluene	0.8	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMW-SD-2017	0	0.5	2,4-dinitrotoluene	0.87	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMW-SD-2018	0	0.5	2,4-dinitrotoluene	2.1	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMW-SD-2019	0	0.5	2,4-dinitrotoluene	0.95	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMW-SD-2020	0	0.5	2,4-dinitrotoluene	0.46	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMW-SD-2021	0	0.5	2,4-dinitrotoluene	2.1	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-089	0	1	2,4-dinitrotoluene	0.67	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-098	0	1	2,4-dinitrotoluene	0.6	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-142	0	1	2,4-dinitrotoluene	0.58	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-164	0	1	2,4-dinitrotoluene	2	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-173	0	1	2,4-dinitrotoluene	1.1	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-237	0	1	2,4-dinitrotoluene	1.3	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-405	0	1	2,4-dinitrotoluene	0.35	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-407	0	1	2,4-dinitrotoluene	0.35	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-408	0	1	2,4-dinitrotoluene	0.34	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-417	0	1	2,4-dinitrotoluene	35	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-456	0	1	2,4-dinitrotoluene	0.49	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-142	0	1	2,4-dinitrotoluene	0.55	MG/KG	U	0.9	NA	nc	NA	nc	NA
RES-14-271-01	0	1	2,4-dinitrotoluene	0.51	MG/KG	U	0.9	NA	nc	NA	nc	NA
RES-14-272-01	0	1	2,4-dinitrotoluene	0.62	MG/KG	U	0.9	NA	nc	NA	nc	NA
RES-14-302-01	0	1	2,4-dinitrotoluene	5	MG/KG	U	0.9	NA	nc	NA	nc	NA
RES-14-303-01	0	1	2,4-dinitrotoluene	4.8	MG/KG	U	0.9	NA	nc	NA	nc	NA
RES-14-271-01	0	1	2,4-dinitrotoluene	2.5	MG/KG	U	0.9	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
RES-14-272-01	0	1	2,4-dinitrotoluene	3.1	MG/KG	U	0.9	NA	nc	NA	nc	NA
SS-02	0	1.3	2,4-dinitrotoluene	0.52	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-703	0	2	2,4-dinitrotoluene	6.2	MG/KG	U	0.9	NA	nc	NA	nc	NA
SS-06	0	2	2,4-dinitrotoluene	0.84	MG/KG	U	0.9	NA	nc	NA	nc	NA
BV01COMP	0	4	2,4-dinitrotoluene	0.38	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMW-SD-2022	0.5	2	2,4-dinitrotoluene	4.2	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW05S	1	2	2,4-dinitrotoluene	0.36	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW14M	1	2	2,4-dinitrotoluene	0.34	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW14M	1	2	2,4-dinitrotoluene	0.34	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW01S	1	2	2,4-dinitrotoluene	0.38	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW05S	1	2	2,4-dinitrotoluene	0.36	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW08S	1	2	2,4-dinitrotoluene	0.42	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW14M	1	2	2,4-dinitrotoluene	0.33	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW14M	1	2	2,4-dinitrotoluene	0.33	MG/KG	U	0.9	NA	nc	NA	nc	NA
SB-14-271	1	2	2,4-dinitrotoluene	0.4	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-060	1	2	2,4-dinitrotoluene	0.34	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-089	1	2	2,4-dinitrotoluene	0.35	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-118	1	2	2,4-dinitrotoluene	0.37	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-173	1	2	2,4-dinitrotoluene	0.52	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-237	1	2	2,4-dinitrotoluene	0.83	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-405	1	2	2,4-dinitrotoluene	0.63	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-407	1	2	2,4-dinitrotoluene	0.44	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-408	1	2	2,4-dinitrotoluene	8.7	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-417	1	2	2,4-dinitrotoluene	35	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-419	1	2	2,4-dinitrotoluene	74	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-423	1	2	2,4-dinitrotoluene	0.35	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-427	1	2	2,4-dinitrotoluene	3.6	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-428	1	2	2,4-dinitrotoluene	0.35	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-456	1	2	2,4-dinitrotoluene	1.2	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-405	1	2	2,4-dinitrotoluene	1.2	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMW-SD-2022	2	2.5	2,4-dinitrotoluene	0.86	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-060	2	3	2,4-dinitrotoluene	0.36	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-089	2	3	2,4-dinitrotoluene	0.7	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-118	2	3	2,4-dinitrotoluene	0.44	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-237	2	3	2,4-dinitrotoluene	0.63	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-405	2	3	2,4-dinitrotoluene	0.64	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-407	2	3	2,4-dinitrotoluene	1.1	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-408	2	3	2,4-dinitrotoluene	0.43	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-417	2	3	2,4-dinitrotoluene	9.8	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-455	2	3	2,4-dinitrotoluene	0.4	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW08S	2	4	2,4-dinitrotoluene	0.45	MG/KG	U	0.9	NA	nc	NA	nc	NA
SB02	2	4	2,4-dinitrotoluene	2.3	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW01S	2	4	2,4-dinitrotoluene	1.6	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW02S	2	4	2,4-dinitrotoluene	0.38	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW06S	2	4	2,4-dinitrotoluene	0.36	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW06S	2	4	2,4-dinitrotoluene	0.37	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW08S	2	4	2,4-dinitrotoluene	0.41	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW14M	2	4	2,4-dinitrotoluene	0.38	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW15D	2	4	2,4-dinitrotoluene	0.37	MG/KG	U	0.9	NA	nc	NA	nc	NA
SB-14-271	2	4	2,4-dinitrotoluene	0.45	MG/KG	U	0.9	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
SB02	2	4	2,4-dinitrotoluene	2.2	MG/KG	U	0.9	NA	nc	NA	nc	NA
SB03	2	4	2,4-dinitrotoluene	0.99	MG/KG	U	0.9	NA	nc	NA	nc	NA
SS-03	2.5	3.5	2,4-dinitrotoluene	0.4	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW07S	3	4	2,4-dinitrotoluene	0.38	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-060	3	4	2,4-dinitrotoluene	0.45	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-089	3	4	2,4-dinitrotoluene	1.8	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-118	3	4	2,4-dinitrotoluene	0.5	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-405	3	4	2,4-dinitrotoluene	0.38	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-407	3	4	2,4-dinitrotoluene	0.42	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-417	3	4	2,4-dinitrotoluene	1.9	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-419	3	4	2,4-dinitrotoluene	0.42	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-423	3	4	2,4-dinitrotoluene	0.37	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-427	3	4	2,4-dinitrotoluene	0.41	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-428	3	4	2,4-dinitrotoluene	0.37	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-423	3	4	2,4-dinitrotoluene	0.39	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-118	4	5	2,4-dinitrotoluene	0.43	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-405	4	5	2,4-dinitrotoluene	0.46	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-455	4	5	2,4-dinitrotoluene	0.48	MG/KG	U	0.9	NA	nc	NA	nc	NA
SB03	4	6	2,4-dinitrotoluene	0.37	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW15D	4	6	2,4-dinitrotoluene	0.4	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW01S	4	6	2,4-dinitrotoluene	0.4	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW03S	4	6	2,4-dinitrotoluene	0.4	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW04D	4	6	2,4-dinitrotoluene	0.42	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW05S	4	6	2,4-dinitrotoluene	0.82	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW06S	4	6	2,4-dinitrotoluene	0.46	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW07S	4	6	2,4-dinitrotoluene	0.4	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW08S	4	6	2,4-dinitrotoluene	0.45	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW09S	4	6	2,4-dinitrotoluene	0.85	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW15D	4	6	2,4-dinitrotoluene	0.35	MG/KG	U	0.9	NA	nc	NA	nc	NA
SB-14-271	4	6	2,4-dinitrotoluene	0.4	MG/KG	U	0.9	NA	nc	NA	nc	NA
SB02	4	6	2,4-dinitrotoluene	0.83	MG/KG	U	0.9	NA	nc	NA	nc	NA
SB03	4	6	2,4-dinitrotoluene	0.38	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-060	0	1	2,4-dinitrotoluene	0.34	MG/KG	UJ	0.9	NA	nc	NA	nc	NA
CMS-118	0	1	2,4-dinitrotoluene	0.36	MG/KG	UJ	0.9	NA	nc	NA	nc	NA
CMS-159	0	1	2,4-dinitrotoluene	2.2	MG/KG	UJ	0.9	NA	nc	NA	nc	NA
CMS-060	0	1	2,4-dinitrotoluene	0.35	MG/KG	UJ	0.9	NA	nc	NA	nc	NA
MW05S	2	4	2,4-dinitrotoluene	0.37	MG/KG	UJ	0.9	NA	nc	NA	nc	NA
CMS-060	4	5	2,4-dinitrotoluene	0.38	MG/KG	UJ	0.9	NA	nc	NA	nc	NA
SS-01	0	0	2-chlorophenol	0.43	MG/KG	U	50	NA	nc	NA	nc	NA
CMW-SD-2016	0	0.5	2-chlorophenol	0.8	MG/KG	U	50	NA	nc	NA	nc	NA
CMW-SD-2017	0	0.5	2-chlorophenol	0.87	MG/KG	U	50	NA	nc	NA	nc	NA
CMW-SD-2018	0	0.5	2-chlorophenol	2.1	MG/KG	U	50	NA	nc	NA	nc	NA
CMW-SD-2019	0	0.5	2-chlorophenol	0.95	MG/KG	U	50	NA	nc	NA	nc	NA
CMW-SD-2020	0	0.5	2-chlorophenol	0.46	MG/KG	U	50	NA	nc	NA	nc	NA
CMW-SD-2021	0	0.5	2-chlorophenol	2.1	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-089	0	1	2-chlorophenol	0.67	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-098	0	1	2-chlorophenol	0.6	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-142	0	1	2-chlorophenol	0.58	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-164	0	1	2-chlorophenol	2	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-173	0	1	2-chlorophenol	1.1	MG/KG	U	50	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-237	0	1	2-chlorophenol	1.3	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-405	0	1	2-chlorophenol	0.35	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-407	0	1	2-chlorophenol	0.35	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-408	0	1	2-chlorophenol	0.34	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-417	0	1	2-chlorophenol	35	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-456	0	1	2-chlorophenol	0.49	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-142	0	1	2-chlorophenol	0.55	MG/KG	U	50	NA	nc	NA	nc	NA
RES-14-271-01	0	1	2-chlorophenol	0.51	MG/KG	U	50	NA	nc	NA	nc	NA
RES-14-272-01	0	1	2-chlorophenol	0.62	MG/KG	U	50	NA	nc	NA	nc	NA
RES-14-302-01	0	1	2-chlorophenol	5	MG/KG	U	50	NA	nc	NA	nc	NA
RES-14-303-01	0	1	2-chlorophenol	4.8	MG/KG	U	50	NA	nc	NA	nc	NA
RES-14-271-01	0	1	2-chlorophenol	2.5	MG/KG	U	50	NA	nc	NA	nc	NA
RES-14-272-01	0	1	2-chlorophenol	3.1	MG/KG	U	50	NA	nc	NA	nc	NA
SS-02	0	1.3	2-chlorophenol	0.52	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-703	0	2	2-chlorophenol	6.2	MG/KG	U	50	NA	nc	NA	nc	NA
SS-06	0	2	2-chlorophenol	0.84	MG/KG	U	50	NA	nc	NA	nc	NA
BV01COMP	0	4	2-chlorophenol	0.38	MG/KG	U	50	NA	nc	NA	nc	NA
CMW-SD-2022	0.5	2	2-chlorophenol	4.2	MG/KG	U	50	NA	nc	NA	nc	NA
MW05S	1	2	2-chlorophenol	0.36	MG/KG	U	50	NA	nc	NA	nc	NA
MW14M	1	2	2-chlorophenol	0.34	MG/KG	U	50	NA	nc	NA	nc	NA
MW14M	1	2	2-chlorophenol	0.34	MG/KG	U	50	NA	nc	NA	nc	NA
MW01S	1	2	2-chlorophenol	0.38	MG/KG	U	50	NA	nc	NA	nc	NA
MW05S	1	2	2-chlorophenol	0.36	MG/KG	U	50	NA	nc	NA	nc	NA
MW08S	1	2	2-chlorophenol	0.42	MG/KG	U	50	NA	nc	NA	nc	NA
MW14M	1	2	2-chlorophenol	0.33	MG/KG	U	50	NA	nc	NA	nc	NA
MW14M	1	2	2-chlorophenol	0.33	MG/KG	U	50	NA	nc	NA	nc	NA
SB-14-271	1	2	2-chlorophenol	0.4	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-060	1	2	2-chlorophenol	0.34	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-089	1	2	2-chlorophenol	0.35	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-118	1	2	2-chlorophenol	0.37	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-173	1	2	2-chlorophenol	0.52	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-237	1	2	2-chlorophenol	0.83	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-405	1	2	2-chlorophenol	0.63	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-407	1	2	2-chlorophenol	0.44	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-408	1	2	2-chlorophenol	8.7	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-417	1	2	2-chlorophenol	35	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-419	1	2	2-chlorophenol	74	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-423	1	2	2-chlorophenol	0.35	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-427	1	2	2-chlorophenol	3.6	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-428	1	2	2-chlorophenol	0.35	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-456	1	2	2-chlorophenol	1.2	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-405	1	2	2-chlorophenol	1.2	MG/KG	U	50	NA	nc	NA	nc	NA
CMW-SD-2022	2	2.5	2-chlorophenol	0.86	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-060	2	3	2-chlorophenol	0.36	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-089	2	3	2-chlorophenol	0.7	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-118	2	3	2-chlorophenol	0.44	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-237	2	3	2-chlorophenol	0.63	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-405	2	3	2-chlorophenol	0.64	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-407	2	3	2-chlorophenol	1.1	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-408	2	3	2-chlorophenol	0.43	MG/KG	U	50	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-417	2	3	2-chlorophenol	9.8	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-455	2	3	2-chlorophenol	0.4	MG/KG	U	50	NA	nc	NA	nc	NA
MW08S	2	4	2-chlorophenol	0.45	MG/KG	U	50	NA	nc	NA	nc	NA
SB02	2	4	2-chlorophenol	2.3	MG/KG	U	50	NA	nc	NA	nc	NA
MW01S	2	4	2-chlorophenol	1.6	MG/KG	U	50	NA	nc	NA	nc	NA
MW02S	2	4	2-chlorophenol	0.38	MG/KG	U	50	NA	nc	NA	nc	NA
MW06S	2	4	2-chlorophenol	0.36	MG/KG	U	50	NA	nc	NA	nc	NA
MW06S	2	4	2-chlorophenol	0.37	MG/KG	U	50	NA	nc	NA	nc	NA
MW08S	2	4	2-chlorophenol	0.41	MG/KG	U	50	NA	nc	NA	nc	NA
MW14M	2	4	2-chlorophenol	0.38	MG/KG	U	50	NA	nc	NA	nc	NA
MW15D	2	4	2-chlorophenol	0.37	MG/KG	U	50	NA	nc	NA	nc	NA
SB-14-271	2	4	2-chlorophenol	0.45	MG/KG	U	50	NA	nc	NA	nc	NA
SB02	2	4	2-chlorophenol	2.2	MG/KG	U	50	NA	nc	NA	nc	NA
SB03	2	4	2-chlorophenol	0.99	MG/KG	U	50	NA	nc	NA	nc	NA
SS-03	2.5	3.5	2-chlorophenol	0.4	MG/KG	U	50	NA	nc	NA	nc	NA
MW07S	3	4	2-chlorophenol	0.38	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-060	3	4	2-chlorophenol	0.45	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-089	3	4	2-chlorophenol	1.8	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-118	3	4	2-chlorophenol	0.5	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-405	3	4	2-chlorophenol	0.38	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-407	3	4	2-chlorophenol	0.42	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-417	3	4	2-chlorophenol	1.9	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-419	3	4	2-chlorophenol	0.42	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-423	3	4	2-chlorophenol	0.37	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-427	3	4	2-chlorophenol	0.41	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-428	3	4	2-chlorophenol	0.37	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-423	3	4	2-chlorophenol	0.39	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-118	4	5	2-chlorophenol	0.43	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-405	4	5	2-chlorophenol	0.46	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-455	4	5	2-chlorophenol	0.48	MG/KG	U	50	NA	nc	NA	nc	NA
SB03	4	6	2-chlorophenol	0.37	MG/KG	U	50	NA	nc	NA	nc	NA
MW15D	4	6	2-chlorophenol	0.4	MG/KG	U	50	NA	nc	NA	nc	NA
MW01S	4	6	2-chlorophenol	0.4	MG/KG	U	50	NA	nc	NA	nc	NA
MW03S	4	6	2-chlorophenol	0.4	MG/KG	U	50	NA	nc	NA	nc	NA
MW04D	4	6	2-chlorophenol	0.42	MG/KG	U	50	NA	nc	NA	nc	NA
MW05S	4	6	2-chlorophenol	0.82	MG/KG	U	50	NA	nc	NA	nc	NA
MW06S	4	6	2-chlorophenol	0.46	MG/KG	U	50	NA	nc	NA	nc	NA
MW07S	4	6	2-chlorophenol	0.4	MG/KG	U	50	NA	nc	NA	nc	NA
MW08S	4	6	2-chlorophenol	0.45	MG/KG	U	50	NA	nc	NA	nc	NA
MW09S	4	6	2-chlorophenol	0.85	MG/KG	U	50	NA	nc	NA	nc	NA
MW15D	4	6	2-chlorophenol	0.35	MG/KG	U	50	NA	nc	NA	nc	NA
SB-14-271	4	6	2-chlorophenol	0.4	MG/KG	U	50	NA	nc	NA	nc	NA
SB02	4	6	2-chlorophenol	0.83	MG/KG	U	50	NA	nc	NA	nc	NA
SB03	4	6	2-chlorophenol	0.38	MG/KG	U	50	NA	nc	NA	nc	NA
CMS-060	0	1	2-chlorophenol	0.34	MG/KG	UJ	50	NA	nc	NA	nc	NA
CMS-118	0	1	2-chlorophenol	0.36	MG/KG	UJ	50	NA	nc	NA	nc	NA
CMS-159	0	1	2-chlorophenol	2.2	MG/KG	UJ	50	NA	nc	NA	nc	NA
CMS-060	0	1	2-chlorophenol	0.35	MG/KG	UJ	50	NA	nc	NA	nc	NA
MW05S	2	4	2-chlorophenol	0.37	MG/KG	UJ	50	NA	nc	NA	nc	NA
CMS-060	4	5	2-chlorophenol	0.38	MG/KG	UJ	50	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-4105	0	1	2-methylnaphthalene	0.493230233	MG/KG	J	123	N	nc	NA	nc	NA
CMS-4110	0	1	2-methylnaphthalene	0.482442218	MG/KG	J	123	N	nc	NA	nc	NA
CMS-237	0	1	2-methylnaphthalene	0.086	MG/KG	J	123	N	nc	NA	nc	NA
CMS-417	0	1	2-methylnaphthalene	6.3	MG/KG	J	123	N	nc	NA	nc	NA
CMS-456	0	1	2-methylnaphthalene	0.08	MG/KG	J	123	N	nc	NA	nc	NA
CMS-060	0	1	2-methylnaphthalene	0.068	MG/KG	J	123	N	nc	NA	nc	NA
MW14M	1	2	2-methylnaphthalene	0.24	MG/KG	J	123	N	nc	NA	nc	NA
MW14M	1	2	2-methylnaphthalene	0.24	MG/KG	J	123	N	nc	NA	nc	NA
MW08S	1	2	2-methylnaphthalene	0.05	MG/KG	J	123	N	nc	NA	nc	NA
MW14M	1	2	2-methylnaphthalene	0.18	MG/KG	J	123	N	nc	NA	nc	NA
MW14M	1	2	2-methylnaphthalene	0.19	MG/KG	J	123	N	nc	NA	nc	NA
CMS-118	1	2	2-methylnaphthalene	0.12	MG/KG	J	123	N	nc	NA	nc	NA
CMS-417	1	2	2-methylnaphthalene	9.3	MG/KG	J	123	N	nc	NA	nc	NA
CMS-427	1	2	2-methylnaphthalene	0.78	MG/KG	J	123	N	nc	NA	nc	NA
CMS-456	1	2	2-methylnaphthalene	0.09	MG/KG	J	123	N	nc	NA	nc	NA
CMS-089	2	3	2-methylnaphthalene	0.061	MG/KG	J	123	N	nc	NA	nc	NA
CMS-408	2	3	2-methylnaphthalene	0.088	MG/KG	J	123	N	nc	NA	nc	NA
CMS-417	2	3	2-methylnaphthalene	6.6	MG/KG	J	123	N	nc	NA	nc	NA
MW06S	2	4	2-methylnaphthalene	0.21	MG/KG	J	123	N	nc	NA	nc	NA
MW06S	2	4	2-methylnaphthalene	0.18	MG/KG	J	123	N	nc	NA	nc	NA
CMS-405	3	4	2-methylnaphthalene	0.19	MG/KG	J	123	N	nc	NA	nc	NA
CMS-423	3	4	2-methylnaphthalene	0.081	MG/KG	J	123	N	nc	NA	nc	NA
MW15D	4	6	2-methylnaphthalene	0.25	MG/KG	J	123	N	nc	NA	nc	NA
MW06S	4	6	2-methylnaphthalene	0.18	MG/KG	J	123	N	nc	NA	nc	NA
MW15D	4	6	2-methylnaphthalene	0.21	MG/KG	J	123	N	nc	NA	nc	NA
SB02	4	6	2-methylnaphthalene	0.12	MG/KG	J	123	N	nc	NA	nc	NA
SS-01	0	0	2-methylnaphthalene	0.43	MG/KG	U	123	NA	nc	NA	nc	NA
CMW-SD-2016	0	0.5	2-methylnaphthalene	0.8	MG/KG	U	123	NA	nc	NA	nc	NA
CMW-SD-2017	0	0.5	2-methylnaphthalene	0.87	MG/KG	U	123	NA	nc	NA	nc	NA
CMW-SD-2018	0	0.5	2-methylnaphthalene	2.1	MG/KG	U	123	NA	nc	NA	nc	NA
CMW-SD-2019	0	0.5	2-methylnaphthalene	0.95	MG/KG	U	123	NA	nc	NA	nc	NA
CMW-SD-2020	0	0.5	2-methylnaphthalene	0.46	MG/KG	U	123	NA	nc	NA	nc	NA
CMW-SD-2021	0	0.5	2-methylnaphthalene	2.1	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-089	0	1	2-methylnaphthalene	0.67	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-098	0	1	2-methylnaphthalene	0.6	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-142	0	1	2-methylnaphthalene	0.58	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-164	0	1	2-methylnaphthalene	2	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-173	0	1	2-methylnaphthalene	1.1	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-405	0	1	2-methylnaphthalene	0.35	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-407	0	1	2-methylnaphthalene	0.35	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-408	0	1	2-methylnaphthalene	0.34	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-142	0	1	2-methylnaphthalene	0.55	MG/KG	U	123	NA	nc	NA	nc	NA
RES-14-271-01	0	1	2-methylnaphthalene	0.51	MG/KG	U	123	NA	nc	NA	nc	NA
RES-14-272-01	0	1	2-methylnaphthalene	0.62	MG/KG	U	123	NA	nc	NA	nc	NA
RES-14-302-01	0	1	2-methylnaphthalene	5	MG/KG	U	123	NA	nc	NA	nc	NA
RES-14-303-01	0	1	2-methylnaphthalene	4.8	MG/KG	U	123	NA	nc	NA	nc	NA
RES-14-271-01	0	1	2-methylnaphthalene	2.5	MG/KG	U	123	NA	nc	NA	nc	NA
RES-14-272-01	0	1	2-methylnaphthalene	3.1	MG/KG	U	123	NA	nc	NA	nc	NA
SS-02	0	1.3	2-methylnaphthalene	0.52	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-703	0	2	2-methylnaphthalene	6.2	MG/KG	U	123	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
SS-06	0	2	2-methylnaphthalene	0.84	MG/KG	U	123	NA	nc	NA	nc	NA
BV01COMP	0	4	2-methylnaphthalene	0.38	MG/KG	U	123	NA	nc	NA	nc	NA
CMW-SD-2022	0.5	2	2-methylnaphthalene	4.2	MG/KG	U	123	NA	nc	NA	nc	NA
MW05S	1	2	2-methylnaphthalene	0.36	MG/KG	U	123	NA	nc	NA	nc	NA
MW01S	1	2	2-methylnaphthalene	0.38	MG/KG	U	123	NA	nc	NA	nc	NA
MW05S	1	2	2-methylnaphthalene	0.36	MG/KG	U	123	NA	nc	NA	nc	NA
SB-14-271	1	2	2-methylnaphthalene	0.4	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-060	1	2	2-methylnaphthalene	0.34	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-089	1	2	2-methylnaphthalene	0.35	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-173	1	2	2-methylnaphthalene	0.52	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-237	1	2	2-methylnaphthalene	0.83	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-407	1	2	2-methylnaphthalene	0.44	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-408	1	2	2-methylnaphthalene	8.7	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-419	1	2	2-methylnaphthalene	74	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-423	1	2	2-methylnaphthalene	0.35	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-428	1	2	2-methylnaphthalene	0.35	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-405	1	2	2-methylnaphthalene	1.2	MG/KG	U	123	NA	nc	NA	nc	NA
CMW-SD-2022	2	2.5	2-methylnaphthalene	0.86	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-060	2	3	2-methylnaphthalene	0.36	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-118	2	3	2-methylnaphthalene	0.44	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-237	2	3	2-methylnaphthalene	0.63	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-405	2	3	2-methylnaphthalene	0.64	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-407	2	3	2-methylnaphthalene	1.1	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-455	2	3	2-methylnaphthalene	0.4	MG/KG	U	123	NA	nc	NA	nc	NA
MW08S	2	4	2-methylnaphthalene	0.45	MG/KG	U	123	NA	nc	NA	nc	NA
SB02	2	4	2-methylnaphthalene	2.3	MG/KG	U	123	NA	nc	NA	nc	NA
MW01S	2	4	2-methylnaphthalene	1.6	MG/KG	U	123	NA	nc	NA	nc	NA
MW02S	2	4	2-methylnaphthalene	0.38	MG/KG	U	123	NA	nc	NA	nc	NA
MW08S	2	4	2-methylnaphthalene	0.41	MG/KG	U	123	NA	nc	NA	nc	NA
MW14M	2	4	2-methylnaphthalene	0.38	MG/KG	U	123	NA	nc	NA	nc	NA
MW15D	2	4	2-methylnaphthalene	0.37	MG/KG	U	123	NA	nc	NA	nc	NA
SB-14-271	2	4	2-methylnaphthalene	0.45	MG/KG	U	123	NA	nc	NA	nc	NA
SB02	2	4	2-methylnaphthalene	2.2	MG/KG	U	123	NA	nc	NA	nc	NA
SB03	2	4	2-methylnaphthalene	0.99	MG/KG	U	123	NA	nc	NA	nc	NA
SS-03	2.5	3.5	2-methylnaphthalene	0.4	MG/KG	U	123	NA	nc	NA	nc	NA
MW07S	3	4	2-methylnaphthalene	0.38	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-060	3	4	2-methylnaphthalene	0.45	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-089	3	4	2-methylnaphthalene	1.8	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-118	3	4	2-methylnaphthalene	0.5	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-407	3	4	2-methylnaphthalene	0.42	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-417	3	4	2-methylnaphthalene	1.9	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-419	3	4	2-methylnaphthalene	0.42	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-427	3	4	2-methylnaphthalene	0.41	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-428	3	4	2-methylnaphthalene	0.37	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-423	3	4	2-methylnaphthalene	0.39	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-118	4	5	2-methylnaphthalene	0.43	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-405	4	5	2-methylnaphthalene	0.46	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-455	4	5	2-methylnaphthalene	0.48	MG/KG	U	123	NA	nc	NA	nc	NA
SB03	4	6	2-methylnaphthalene	0.37	MG/KG	U	123	NA	nc	NA	nc	NA
MW01S	4	6	2-methylnaphthalene	0.4	MG/KG	U	123	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW03S	4	6	2-methylnaphthalene	0.4	MG/KG	U	123	NA	nc	NA	nc	NA
MW04D	4	6	2-methylnaphthalene	0.42	MG/KG	U	123	NA	nc	NA	nc	NA
MW07S	4	6	2-methylnaphthalene	0.4	MG/KG	U	123	NA	nc	NA	nc	NA
MW08S	4	6	2-methylnaphthalene	0.45	MG/KG	U	123	NA	nc	NA	nc	NA
MW09S	4	6	2-methylnaphthalene	0.85	MG/KG	U	123	NA	nc	NA	nc	NA
SB-14-271	4	6	2-methylnaphthalene	0.4	MG/KG	U	123	NA	nc	NA	nc	NA
SB03	4	6	2-methylnaphthalene	0.38	MG/KG	U	123	NA	nc	NA	nc	NA
GEC-6	2.5	4.5	2-methylnaphthalene	0.15	MG/KG	U	123	NA	nc	NA	nc	NA
CMS-060	0	1	2-methylnaphthalene	0.34	MG/KG	UJ	123	NA	nc	NA	nc	NA
CMS-118	0	1	2-methylnaphthalene	0.36	MG/KG	UJ	123	NA	nc	NA	nc	NA
CMS-159	0	1	2-methylnaphthalene	2.2	MG/KG	UJ	123	NA	nc	NA	nc	NA
MW05S	2	4	2-methylnaphthalene	0.24	MG/KG	UJ	123	NA	nc	NA	nc	NA
CMS-060	4	5	2-methylnaphthalene	0.38	MG/KG	UJ	123	NA	nc	NA	nc	NA
CMS-405	1	2	2-methylnaphthalene	0.89	MG/KG		123	N	nc	NA	nc	NA
MW05S	4	6	2-methylnaphthalene	2.4	MG/KG		123	N	nc	NA	nc	NA
SS-01	0	0	3,3'-dichlorobenzidine	0.43	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-089	0	1	3,3'-dichlorobenzidine	3.3	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-098	0	1	3,3'-dichlorobenzidine	2.9	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-142	0	1	3,3'-dichlorobenzidine	2.8	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-164	0	1	3,3'-dichlorobenzidine	9.8	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-173	0	1	3,3'-dichlorobenzidine	5.3	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-237	0	1	3,3'-dichlorobenzidine	6.2	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-405	0	1	3,3'-dichlorobenzidine	1.7	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-407	0	1	3,3'-dichlorobenzidine	1.7	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-408	0	1	3,3'-dichlorobenzidine	1.7	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-417	0	1	3,3'-dichlorobenzidine	170	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-456	0	1	3,3'-dichlorobenzidine	2.4	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-142	0	1	3,3'-dichlorobenzidine	2.7	MG/KG	U	1.4	NA	nc	NA	nc	NA
RES-14-271-01	0	1	3,3'-dichlorobenzidine	0.51	MG/KG	U	1.4	NA	nc	NA	nc	NA
RES-14-272-01	0	1	3,3'-dichlorobenzidine	0.62	MG/KG	U	1.4	NA	nc	NA	nc	NA
RES-14-303-01	0	1	3,3'-dichlorobenzidine	4.8	MG/KG	U	1.4	NA	nc	NA	nc	NA
RES-14-271-01	0	1	3,3'-dichlorobenzidine	2.5	MG/KG	U	1.4	NA	nc	NA	nc	NA
RES-14-272-01	0	1	3,3'-dichlorobenzidine	3.1	MG/KG	U	1.4	NA	nc	NA	nc	NA
SS-02	0	1.3	3,3'-dichlorobenzidine	0.52	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-703	0	2	3,3'-dichlorobenzidine	30	MG/KG	U	1.4	NA	nc	NA	nc	NA
SS-06	0	2	3,3'-dichlorobenzidine	0.84	MG/KG	U	1.4	NA	nc	NA	nc	NA
BV01COMP	0	4	3,3'-dichlorobenzidine	1.8	MG/KG	U	1.4	NA	nc	NA	nc	NA
MW05S	1	2	3,3'-dichlorobenzidine	0.36	MG/KG	U	1.4	NA	nc	NA	nc	NA
MW14M	1	2	3,3'-dichlorobenzidine	0.34	MG/KG	U	1.4	NA	nc	NA	nc	NA
MW14M	1	2	3,3'-dichlorobenzidine	0.34	MG/KG	U	1.4	NA	nc	NA	nc	NA
MW01S	1	2	3,3'-dichlorobenzidine	0.38	MG/KG	U	1.4	NA	nc	NA	nc	NA
MW05S	1	2	3,3'-dichlorobenzidine	0.36	MG/KG	U	1.4	NA	nc	NA	nc	NA
MW08S	1	2	3,3'-dichlorobenzidine	0.42	MG/KG	U	1.4	NA	nc	NA	nc	NA
MW14M	1	2	3,3'-dichlorobenzidine	0.33	MG/KG	U	1.4	NA	nc	NA	nc	NA
MW14M	1	2	3,3'-dichlorobenzidine	0.33	MG/KG	U	1.4	NA	nc	NA	nc	NA
SB-14-271	1	2	3,3'-dichlorobenzidine	0.4	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-060	1	2	3,3'-dichlorobenzidine	1.6	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-089	1	2	3,3'-dichlorobenzidine	1.7	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-118	1	2	3,3'-dichlorobenzidine	1.8	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-173	1	2	3,3'-dichlorobenzidine	2.5	MG/KG	U	1.4	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-237	1	2	3,3'-dichlorobenzidine	4	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-405	1	2	3,3'-dichlorobenzidine	3.1	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-407	1	2	3,3'-dichlorobenzidine	2.1	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-408	1	2	3,3'-dichlorobenzidine	42	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-417	1	2	3,3'-dichlorobenzidine	170	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-419	1	2	3,3'-dichlorobenzidine	360	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-423	1	2	3,3'-dichlorobenzidine	1.7	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-427	1	2	3,3'-dichlorobenzidine	17	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-428	1	2	3,3'-dichlorobenzidine	1.7	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-456	1	2	3,3'-dichlorobenzidine	5.7	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-405	1	2	3,3'-dichlorobenzidine	6	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-060	2	3	3,3'-dichlorobenzidine	1.7	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-089	2	3	3,3'-dichlorobenzidine	3.4	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-118	2	3	3,3'-dichlorobenzidine	2.1	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-237	2	3	3,3'-dichlorobenzidine	3.1	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-405	2	3	3,3'-dichlorobenzidine	3.1	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-407	2	3	3,3'-dichlorobenzidine	5.3	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-408	2	3	3,3'-dichlorobenzidine	2.1	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-417	2	3	3,3'-dichlorobenzidine	47	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-455	2	3	3,3'-dichlorobenzidine	1.9	MG/KG	U	1.4	NA	nc	NA	nc	NA
MW08S	2	4	3,3'-dichlorobenzidine	0.45	MG/KG	U	1.4	NA	nc	NA	nc	NA
SB02	2	4	3,3'-dichlorobenzidine	2.3	MG/KG	U	1.4	NA	nc	NA	nc	NA
MW01S	2	4	3,3'-dichlorobenzidine	1.6	MG/KG	U	1.4	NA	nc	NA	nc	NA
MW02S	2	4	3,3'-dichlorobenzidine	0.38	MG/KG	U	1.4	NA	nc	NA	nc	NA
MW06S	2	4	3,3'-dichlorobenzidine	0.36	MG/KG	U	1.4	NA	nc	NA	nc	NA
MW06S	2	4	3,3'-dichlorobenzidine	0.37	MG/KG	U	1.4	NA	nc	NA	nc	NA
MW08S	2	4	3,3'-dichlorobenzidine	0.41	MG/KG	U	1.4	NA	nc	NA	nc	NA
MW14M	2	4	3,3'-dichlorobenzidine	0.38	MG/KG	U	1.4	NA	nc	NA	nc	NA
MW15D	2	4	3,3'-dichlorobenzidine	0.37	MG/KG	U	1.4	NA	nc	NA	nc	NA
SB-14-271	2	4	3,3'-dichlorobenzidine	0.45	MG/KG	U	1.4	NA	nc	NA	nc	NA
SB02	2	4	3,3'-dichlorobenzidine	2.2	MG/KG	U	1.4	NA	nc	NA	nc	NA
SB03	2	4	3,3'-dichlorobenzidine	0.99	MG/KG	U	1.4	NA	nc	NA	nc	NA
SS-03	2.5	3.5	3,3'-dichlorobenzidine	0.4	MG/KG	U	1.4	NA	nc	NA	nc	NA
MW07S	3	4	3,3'-dichlorobenzidine	0.38	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-060	3	4	3,3'-dichlorobenzidine	2.2	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-089	3	4	3,3'-dichlorobenzidine	8.5	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-118	3	4	3,3'-dichlorobenzidine	2.4	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-405	3	4	3,3'-dichlorobenzidine	1.8	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-407	3	4	3,3'-dichlorobenzidine	2.1	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-417	3	4	3,3'-dichlorobenzidine	9.2	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-419	3	4	3,3'-dichlorobenzidine	2	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-423	3	4	3,3'-dichlorobenzidine	1.8	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-427	3	4	3,3'-dichlorobenzidine	2	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-428	3	4	3,3'-dichlorobenzidine	1.8	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-423	3	4	3,3'-dichlorobenzidine	1.9	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-118	4	5	3,3'-dichlorobenzidine	2.1	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-405	4	5	3,3'-dichlorobenzidine	2.2	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMS-455	4	5	3,3'-dichlorobenzidine	2.3	MG/KG	U	1.4	NA	nc	NA	nc	NA
SB03	4	6	3,3'-dichlorobenzidine	0.37	MG/KG	U	1.4	NA	nc	NA	nc	NA
MW15D	4	6	3,3'-dichlorobenzidine	0.4	MG/KG	U	1.4	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW01S	4	6	3,3'-dichlorobenzidine	0.4	MG/KG	U	1.4	NA	nc	NA	nc	NA
MW03S	4	6	3,3'-dichlorobenzidine	0.4	MG/KG	U	1.4	NA	nc	NA	nc	NA
MW04D	4	6	3,3'-dichlorobenzidine	0.42	MG/KG	U	1.4	NA	nc	NA	nc	NA
MW06S	4	6	3,3'-dichlorobenzidine	0.46	MG/KG	U	1.4	NA	nc	NA	nc	NA
MW07S	4	6	3,3'-dichlorobenzidine	0.4	MG/KG	U	1.4	NA	nc	NA	nc	NA
MW08S	4	6	3,3'-dichlorobenzidine	0.45	MG/KG	U	1.4	NA	nc	NA	nc	NA
MW09S	4	6	3,3'-dichlorobenzidine	0.85	MG/KG	U	1.4	NA	nc	NA	nc	NA
MW15D	4	6	3,3'-dichlorobenzidine	0.35	MG/KG	U	1.4	NA	nc	NA	nc	NA
SB-14-271	4	6	3,3'-dichlorobenzidine	0.4	MG/KG	U	1.4	NA	nc	NA	nc	NA
SB02	4	6	3,3'-dichlorobenzidine	0.83	MG/KG	U	1.4	NA	nc	NA	nc	NA
SB03	4	6	3,3'-dichlorobenzidine	0.38	MG/KG	U	1.4	NA	nc	NA	nc	NA
CMW-SD-2016	0	0.5	3,3'-dichlorobenzidine	0.8	MG/KG	UJ	1.4	NA	nc	NA	nc	NA
CMW-SD-2017	0	0.5	3,3'-dichlorobenzidine	0.87	MG/KG	UJ	1.4	NA	nc	NA	nc	NA
CMW-SD-2018	0	0.5	3,3'-dichlorobenzidine	2.1	MG/KG	UJ	1.4	NA	nc	NA	nc	NA
CMW-SD-2019	0	0.5	3,3'-dichlorobenzidine	0.95	MG/KG	UJ	1.4	NA	nc	NA	nc	NA
CMW-SD-2020	0	0.5	3,3'-dichlorobenzidine	0.46	MG/KG	UJ	1.4	NA	nc	NA	nc	NA
CMW-SD-2021	0	0.5	3,3'-dichlorobenzidine	2.1	MG/KG	UJ	1.4	NA	nc	NA	nc	NA
CMS-060	0	1	3,3'-dichlorobenzidine	1.6	MG/KG	UJ	1.4	NA	nc	NA	nc	NA
CMS-118	0	1	3,3'-dichlorobenzidine	1.7	MG/KG	UJ	1.4	NA	nc	NA	nc	NA
CMS-159	0	1	3,3'-dichlorobenzidine	11	MG/KG	UJ	1.4	NA	nc	NA	nc	NA
CMS-060	0	1	3,3'-dichlorobenzidine	1.7	MG/KG	UJ	1.4	NA	nc	NA	nc	NA
RES-14-302-01	0	1	3,3'-dichlorobenzidine	5	MG/KG	UJ	1.4	NA	nc	NA	nc	NA
CMW-SD-2022	0.5	2	3,3'-dichlorobenzidine	4.2	MG/KG	UJ	1.4	NA	nc	NA	nc	NA
CMW-SD-2022	2	2.5	3,3'-dichlorobenzidine	0.86	MG/KG	UJ	1.4	NA	nc	NA	nc	NA
MW05S	2	4	3,3'-dichlorobenzidine	0.37	MG/KG	UJ	1.4	NA	nc	NA	nc	NA
CMS-060	4	5	3,3'-dichlorobenzidine	1.9	MG/KG	UJ	1.4	NA	nc	NA	nc	NA
CMS-089	1	2	4-chloroaniline	0.41	MG/KG	J	310	N	nc	NA	nc	NA
CMS-456	1	2	4-chloroaniline	0.73	MG/KG	J	310	N	nc	NA	nc	NA
MW15D	4	6	4-chloroaniline	0.076	MG/KG	J	310	N	nc	NA	nc	NA
MW15D	4	6	4-chloroaniline	0.059	MG/KG	J	310	N	nc	NA	nc	NA
SS-01	0	0	4-chloroaniline	0.43	MG/KG	U	310	NA	nc	NA	nc	NA
CMW-SD-2016	0	0.5	4-chloroaniline	0.8	MG/KG	U	310	NA	nc	NA	nc	NA
CMW-SD-2017	0	0.5	4-chloroaniline	0.87	MG/KG	U	310	NA	nc	NA	nc	NA
CMW-SD-2018	0	0.5	4-chloroaniline	2.1	MG/KG	U	310	NA	nc	NA	nc	NA
CMW-SD-2019	0	0.5	4-chloroaniline	0.95	MG/KG	U	310	NA	nc	NA	nc	NA
CMW-SD-2020	0	0.5	4-chloroaniline	0.46	MG/KG	U	310	NA	nc	NA	nc	NA
CMW-SD-2021	0	0.5	4-chloroaniline	2.1	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-089	0	1	4-chloroaniline	0.67	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-098	0	1	4-chloroaniline	0.6	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-142	0	1	4-chloroaniline	0.58	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-164	0	1	4-chloroaniline	2	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-173	0	1	4-chloroaniline	1.1	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-237	0	1	4-chloroaniline	1.3	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-405	0	1	4-chloroaniline	0.35	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-407	0	1	4-chloroaniline	0.35	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-408	0	1	4-chloroaniline	0.34	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-456	0	1	4-chloroaniline	0.49	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-142	0	1	4-chloroaniline	0.55	MG/KG	U	310	NA	nc	NA	nc	NA
RES-14-271-01	0	1	4-chloroaniline	0.51	MG/KG	U	310	NA	nc	NA	nc	NA
RES-14-272-01	0	1	4-chloroaniline	0.62	MG/KG	U	310	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
RES-14-302-01	0	1	4-chloroaniline	5	MG/KG	U	310	NA	nc	NA	nc	NA
RES-14-303-01	0	1	4-chloroaniline	4.8	MG/KG	U	310	NA	nc	NA	nc	NA
RES-14-271-01	0	1	4-chloroaniline	2.5	MG/KG	U	310	NA	nc	NA	nc	NA
RES-14-272-01	0	1	4-chloroaniline	3.1	MG/KG	U	310	NA	nc	NA	nc	NA
SS-02	0	1.3	4-chloroaniline	0.52	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-703	0	2	4-chloroaniline	6.2	MG/KG	U	310	NA	nc	NA	nc	NA
SS-06	0	2	4-chloroaniline	0.84	MG/KG	U	310	NA	nc	NA	nc	NA
BV01COMP	0	4	4-chloroaniline	0.38	MG/KG	U	310	NA	nc	NA	nc	NA
CMW-SD-2022	0.5	2	4-chloroaniline	4.2	MG/KG	U	310	NA	nc	NA	nc	NA
MW05S	1	2	4-chloroaniline	0.36	MG/KG	U	310	NA	nc	NA	nc	NA
MW14M	1	2	4-chloroaniline	0.34	MG/KG	U	310	NA	nc	NA	nc	NA
MW14M	1	2	4-chloroaniline	0.34	MG/KG	U	310	NA	nc	NA	nc	NA
MW01S	1	2	4-chloroaniline	0.38	MG/KG	U	310	NA	nc	NA	nc	NA
MW05S	1	2	4-chloroaniline	0.36	MG/KG	U	310	NA	nc	NA	nc	NA
MW08S	1	2	4-chloroaniline	0.42	MG/KG	U	310	NA	nc	NA	nc	NA
MW14M	1	2	4-chloroaniline	0.33	MG/KG	U	310	NA	nc	NA	nc	NA
MW14M	1	2	4-chloroaniline	0.33	MG/KG	U	310	NA	nc	NA	nc	NA
SB-14-271	1	2	4-chloroaniline	0.4	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-060	1	2	4-chloroaniline	0.34	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-118	1	2	4-chloroaniline	0.37	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-173	1	2	4-chloroaniline	0.52	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-237	1	2	4-chloroaniline	0.83	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-405	1	2	4-chloroaniline	0.63	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-407	1	2	4-chloroaniline	0.44	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-408	1	2	4-chloroaniline	8.7	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-417	1	2	4-chloroaniline	35	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-419	1	2	4-chloroaniline	74	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-423	1	2	4-chloroaniline	0.35	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-428	1	2	4-chloroaniline	0.35	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-405	1	2	4-chloroaniline	1.2	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-060	2	3	4-chloroaniline	0.36	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-089	2	3	4-chloroaniline	0.7	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-118	2	3	4-chloroaniline	0.44	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-237	2	3	4-chloroaniline	0.63	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-405	2	3	4-chloroaniline	0.64	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-407	2	3	4-chloroaniline	1.1	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-408	2	3	4-chloroaniline	0.43	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-417	2	3	4-chloroaniline	9.8	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-455	2	3	4-chloroaniline	0.4	MG/KG	U	310	NA	nc	NA	nc	NA
MW08S	2	4	4-chloroaniline	0.45	MG/KG	U	310	NA	nc	NA	nc	NA
SB02	2	4	4-chloroaniline	2.3	MG/KG	U	310	NA	nc	NA	nc	NA
MW01S	2	4	4-chloroaniline	1.6	MG/KG	U	310	NA	nc	NA	nc	NA
MW02S	2	4	4-chloroaniline	0.38	MG/KG	U	310	NA	nc	NA	nc	NA
MW06S	2	4	4-chloroaniline	0.36	MG/KG	U	310	NA	nc	NA	nc	NA
MW06S	2	4	4-chloroaniline	0.37	MG/KG	U	310	NA	nc	NA	nc	NA
MW08S	2	4	4-chloroaniline	0.41	MG/KG	U	310	NA	nc	NA	nc	NA
MW14M	2	4	4-chloroaniline	0.38	MG/KG	U	310	NA	nc	NA	nc	NA
MW15D	2	4	4-chloroaniline	0.37	MG/KG	U	310	NA	nc	NA	nc	NA
SB-14-271	2	4	4-chloroaniline	0.45	MG/KG	U	310	NA	nc	NA	nc	NA
SB02	2	4	4-chloroaniline	2.2	MG/KG	U	310	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
SB03	2	4	4-chloroaniline	0.99	MG/KG	U	310	NA	nc	NA	nc	NA
SS-03	2.5	3.5	4-chloroaniline	0.4	MG/KG	U	310	NA	nc	NA	nc	NA
MW07S	3	4	4-chloroaniline	0.38	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-060	3	4	4-chloroaniline	0.45	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-089	3	4	4-chloroaniline	1.8	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-118	3	4	4-chloroaniline	0.5	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-405	3	4	4-chloroaniline	0.38	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-407	3	4	4-chloroaniline	0.42	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-417	3	4	4-chloroaniline	1.9	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-419	3	4	4-chloroaniline	0.42	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-423	3	4	4-chloroaniline	0.37	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-427	3	4	4-chloroaniline	0.41	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-428	3	4	4-chloroaniline	0.37	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-423	3	4	4-chloroaniline	0.39	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-118	4	5	4-chloroaniline	0.43	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-405	4	5	4-chloroaniline	0.46	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-455	4	5	4-chloroaniline	0.48	MG/KG	U	310	NA	nc	NA	nc	NA
SB03	4	6	4-chloroaniline	0.37	MG/KG	U	310	NA	nc	NA	nc	NA
MW01S	4	6	4-chloroaniline	0.4	MG/KG	U	310	NA	nc	NA	nc	NA
MW03S	4	6	4-chloroaniline	0.4	MG/KG	U	310	NA	nc	NA	nc	NA
MW04D	4	6	4-chloroaniline	0.42	MG/KG	U	310	NA	nc	NA	nc	NA
MW05S	4	6	4-chloroaniline	0.82	MG/KG	U	310	NA	nc	NA	nc	NA
MW06S	4	6	4-chloroaniline	0.46	MG/KG	U	310	NA	nc	NA	nc	NA
MW07S	4	6	4-chloroaniline	0.4	MG/KG	U	310	NA	nc	NA	nc	NA
MW08S	4	6	4-chloroaniline	0.45	MG/KG	U	310	NA	nc	NA	nc	NA
MW09S	4	6	4-chloroaniline	0.85	MG/KG	U	310	NA	nc	NA	nc	NA
SB-14-271	4	6	4-chloroaniline	0.4	MG/KG	U	310	NA	nc	NA	nc	NA
SB02	4	6	4-chloroaniline	0.83	MG/KG	U	310	NA	nc	NA	nc	NA
SB03	4	6	4-chloroaniline	0.38	MG/KG	U	310	NA	nc	NA	nc	NA
CMS-060	0	1	4-chloroaniline	0.34	MG/KG	UJ	310	NA	nc	NA	nc	NA
CMS-118	0	1	4-chloroaniline	0.36	MG/KG	UJ	310	NA	nc	NA	nc	NA
CMS-159	0	1	4-chloroaniline	2.2	MG/KG	UJ	310	NA	nc	NA	nc	NA
CMS-060	0	1	4-chloroaniline	0.35	MG/KG	UJ	310	NA	nc	NA	nc	NA
CMW-SD-2022	2	2.5	4-chloroaniline	0.86	MG/KG	UJ	310	NA	nc	NA	nc	NA
MW05S	2	4	4-chloroaniline	0.37	MG/KG	UJ	310	NA	nc	NA	nc	NA
CMS-060	4	5	4-chloroaniline	0.38	MG/KG	UJ	310	NA	nc	NA	nc	NA
CMS-417	0	1	4-chloroaniline	280	MG/KG		310	N	nc	NA	nc	NA
CMS-427	1	2	4-chloroaniline	6.1	MG/KG		310	N	nc	NA	nc	NA
CMS-4105	0	1	Acenaphthene	0.33639462	MG/KG	J	43	N	nc	NA	nc	NA
CMS-4110	0	1	Acenaphthene	0.273617478	MG/KG	J	43	N	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Acenaphthene	0.17	MG/KG	J	43	N	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Acenaphthene	0.94	MG/KG	J	43	N	nc	NA	nc	NA
CMS-060	0	1	Acenaphthene	0.062	MG/KG	J	43	N	nc	NA	nc	NA
CMS-089	0	1	Acenaphthene	0.1	MG/KG	J	43	N	nc	NA	nc	NA
CMS-118	0	1	Acenaphthene	0.1	MG/KG	J	43	N	nc	NA	nc	NA
CMS-405	0	1	Acenaphthene	0.22	MG/KG	J	43	N	nc	NA	nc	NA
CMS-407	0	1	Acenaphthene	0.1	MG/KG	J	43	N	nc	NA	nc	NA
CMS-417	0	1	Acenaphthene	4.3	MG/KG	J	43	N	nc	NA	nc	NA
CMS-456	0	1	Acenaphthene	0.16	MG/KG	J	43	N	nc	NA	nc	NA
CMS-060	0	1	Acenaphthene	0.076	MG/KG	J	43	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
BV01COMP	0	4	Acenaphthene	0.074	MG/KG	J	43	N	nc	NA	nc	NA
MW14M	1	2	Acenaphthene	0.041	MG/KG	J	43	N	nc	NA	nc	NA
MW14M	1	2	Acenaphthene	0.044	MG/KG	J	43	N	nc	NA	nc	NA
MW01S	1	2	Acenaphthene	0.076	MG/KG	J	43	N	nc	NA	nc	NA
CMS-405	1	2	Acenaphthene	0.33	MG/KG	J	43	N	nc	NA	nc	NA
CMS-407	1	2	Acenaphthene	0.27	MG/KG	J	43	N	nc	NA	nc	NA
CMS-456	1	2	Acenaphthene	0.18	MG/KG	J	43	N	nc	NA	nc	NA
CMS-407	2	3	Acenaphthene	0.17	MG/KG	J	43	N	nc	NA	nc	NA
CMS-408	2	3	Acenaphthene	0.14	MG/KG	J	43	N	nc	NA	nc	NA
CMS-455	2	3	Acenaphthene	0.084	MG/KG	J	43	N	nc	NA	nc	NA
MW05S	2	4	Acenaphthene	0.95	MG/KG	J	43	N	nc	NA	nc	NA
MW06S	2	4	Acenaphthene	0.23	MG/KG	J	43	N	nc	NA	nc	NA
MW06S	2	4	Acenaphthene	0.17	MG/KG	J	43	N	nc	NA	nc	NA
SB03	2	4	Acenaphthene	0.39	MG/KG	J	43	N	nc	NA	nc	NA
MW07S	3	4	Acenaphthene	0.08	MG/KG	J	43	N	nc	NA	nc	NA
CMS-089	3	4	Acenaphthene	0.3	MG/KG	J	43	N	nc	NA	nc	NA
CMS-405	3	4	Acenaphthene	0.17	MG/KG	J	43	N	nc	NA	nc	NA
MW15D	4	6	Acenaphthene	0.068	MG/KG	J	43	N	nc	NA	nc	NA
MW01S	4	6	Acenaphthene	0.11	MG/KG	J	43	N	nc	NA	nc	NA
MW03S	4	6	Acenaphthene	0.13	MG/KG	J	43	N	nc	NA	nc	NA
MW06S	4	6	Acenaphthene	0.087	MG/KG	J	43	N	nc	NA	nc	NA
MW07S	4	6	Acenaphthene	0.068	MG/KG	J	43	N	nc	NA	nc	NA
MW15D	4	6	Acenaphthene	0.049	MG/KG	J	43	N	nc	NA	nc	NA
SS-01	0	0	Acenaphthene	0.43	MG/KG	U	43	NA	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Acenaphthene	0.87	MG/KG	U	43	NA	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Acenaphthene	0.95	MG/KG	U	43	NA	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Acenaphthene	0.46	MG/KG	U	43	NA	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Acenaphthene	2.1	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-098	0	1	Acenaphthene	0.6	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-142	0	1	Acenaphthene	0.58	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-164	0	1	Acenaphthene	2	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-173	0	1	Acenaphthene	1.1	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-237	0	1	Acenaphthene	1.3	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-408	0	1	Acenaphthene	0.34	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-142	0	1	Acenaphthene	0.55	MG/KG	U	43	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Acenaphthene	0.51	MG/KG	U	43	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Acenaphthene	0.62	MG/KG	U	43	NA	nc	NA	nc	NA
RES-14-302-01	0	1	Acenaphthene	5	MG/KG	U	43	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Acenaphthene	2.5	MG/KG	U	43	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Acenaphthene	3.1	MG/KG	U	43	NA	nc	NA	nc	NA
SS-02	0	1.3	Acenaphthene	0.52	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-703	0	2	Acenaphthene	6.2	MG/KG	U	43	NA	nc	NA	nc	NA
SS-06	0	2	Acenaphthene	0.84	MG/KG	U	43	NA	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Acenaphthene	4.2	MG/KG	U	43	NA	nc	NA	nc	NA
MW05S	1	2	Acenaphthene	0.36	MG/KG	U	43	NA	nc	NA	nc	NA
MW05S	1	2	Acenaphthene	0.36	MG/KG	U	43	NA	nc	NA	nc	NA
MW08S	1	2	Acenaphthene	0.42	MG/KG	U	43	NA	nc	NA	nc	NA
MW14M	1	2	Acenaphthene	0.33	MG/KG	U	43	NA	nc	NA	nc	NA
MW14M	1	2	Acenaphthene	0.33	MG/KG	U	43	NA	nc	NA	nc	NA
SB-14-271	1	2	Acenaphthene	0.4	MG/KG	U	43	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-060	1	2	Acenaphthene	0.34	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-089	1	2	Acenaphthene	0.35	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-173	1	2	Acenaphthene	0.52	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-237	1	2	Acenaphthene	0.83	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-408	1	2	Acenaphthene	8.7	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-417	1	2	Acenaphthene	35	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-419	1	2	Acenaphthene	74	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-423	1	2	Acenaphthene	0.35	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-427	1	2	Acenaphthene	3.6	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-428	1	2	Acenaphthene	0.35	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-405	1	2	Acenaphthene	1.2	MG/KG	U	43	NA	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Acenaphthene	0.86	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-060	2	3	Acenaphthene	0.36	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-089	2	3	Acenaphthene	0.7	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-118	2	3	Acenaphthene	0.44	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-237	2	3	Acenaphthene	0.63	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-405	2	3	Acenaphthene	0.64	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-417	2	3	Acenaphthene	9.8	MG/KG	U	43	NA	nc	NA	nc	NA
MW08S	2	4	Acenaphthene	0.45	MG/KG	U	43	NA	nc	NA	nc	NA
SB02	2	4	Acenaphthene	2.3	MG/KG	U	43	NA	nc	NA	nc	NA
MW01S	2	4	Acenaphthene	1.6	MG/KG	U	43	NA	nc	NA	nc	NA
MW02S	2	4	Acenaphthene	0.38	MG/KG	U	43	NA	nc	NA	nc	NA
MW08S	2	4	Acenaphthene	0.41	MG/KG	U	43	NA	nc	NA	nc	NA
MW14M	2	4	Acenaphthene	0.38	MG/KG	U	43	NA	nc	NA	nc	NA
MW15D	2	4	Acenaphthene	0.37	MG/KG	U	43	NA	nc	NA	nc	NA
SB-14-271	2	4	Acenaphthene	0.45	MG/KG	U	43	NA	nc	NA	nc	NA
SB02	2	4	Acenaphthene	2.2	MG/KG	U	43	NA	nc	NA	nc	NA
SS-03	2.5	3.5	Acenaphthene	0.4	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-060	3	4	Acenaphthene	0.45	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-118	3	4	Acenaphthene	0.5	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-407	3	4	Acenaphthene	0.42	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-417	3	4	Acenaphthene	1.9	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-419	3	4	Acenaphthene	0.42	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-423	3	4	Acenaphthene	0.37	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-427	3	4	Acenaphthene	0.41	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-428	3	4	Acenaphthene	0.37	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-423	3	4	Acenaphthene	0.39	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-118	4	5	Acenaphthene	0.43	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-405	4	5	Acenaphthene	0.46	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-455	4	5	Acenaphthene	0.48	MG/KG	U	43	NA	nc	NA	nc	NA
SB03	4	6	Acenaphthene	0.37	MG/KG	U	43	NA	nc	NA	nc	NA
MW04D	4	6	Acenaphthene	0.42	MG/KG	U	43	NA	nc	NA	nc	NA
MW05S	4	6	Acenaphthene	0.82	MG/KG	U	43	NA	nc	NA	nc	NA
MW08S	4	6	Acenaphthene	0.45	MG/KG	U	43	NA	nc	NA	nc	NA
MW09S	4	6	Acenaphthene	0.85	MG/KG	U	43	NA	nc	NA	nc	NA
SB-14-271	4	6	Acenaphthene	0.4	MG/KG	U	43	NA	nc	NA	nc	NA
SB02	4	6	Acenaphthene	0.83	MG/KG	U	43	NA	nc	NA	nc	NA
SB03	4	6	Acenaphthene	0.38	MG/KG	U	43	NA	nc	NA	nc	NA
CMS-159	0	1	Acenaphthene	2.2	MG/KG	UJ	43	NA	nc	NA	nc	NA
RES-14-303-01	0	1	Acenaphthene	4.8	MG/KG	UJ	43	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-060	4	5	Acenaphthene	0.38	MG/KG	UJ	43	NA	nc	NA	nc	NA
CMS-118	1	2	Acenaphthene	0.4	MG/KG		43	N	nc	NA	nc	NA
CMS-4105	0	1	Acenaphthylene	1.300420261	MG/KG	J	23	N	nc	NA	nc	NA
CMS-4110	0	1	Acenaphthylene	0.930315786	MG/KG	J	23	N	nc	NA	nc	NA
CMS-060	0	1	Acenaphthylene	0.17	MG/KG	J	23	N	nc	NA	nc	NA
CMS-118	0	1	Acenaphthylene	0.07	MG/KG	J	23	N	nc	NA	nc	NA
CMS-159	0	1	Acenaphthylene	0.75	MG/KG	J	23	N	nc	NA	nc	NA
CMS-456	0	1	Acenaphthylene	0.28	MG/KG	J	23	N	nc	NA	nc	NA
CMS-060	0	1	Acenaphthylene	0.29	MG/KG	J	23	N	nc	NA	nc	NA
MW01S	1	2	Acenaphthylene	0.11	MG/KG	J	23	N	nc	NA	nc	NA
SB-14-271	1	2	Acenaphthylene	0.06	MG/KG	J	23	N	nc	NA	nc	NA
CMS-060	1	2	Acenaphthylene	0.085	MG/KG	J	23	N	nc	NA	nc	NA
CMS-089	1	2	Acenaphthylene	0.091	MG/KG	J	23	N	nc	NA	nc	NA
CMS-118	1	2	Acenaphthylene	0.067	MG/KG	J	23	N	nc	NA	nc	NA
CMS-237	1	2	Acenaphthylene	0.11	MG/KG	J	23	N	nc	NA	nc	NA
CMS-405	1	2	Acenaphthylene	4.4	MG/KG	J	23	N	nc	NA	nc	NA
CMS-456	1	2	Acenaphthylene	0.53	MG/KG	J	23	N	nc	NA	nc	NA
CMS-405	1	2	Acenaphthylene	0.39	MG/KG	J	23	N	nc	NA	nc	NA
CMS-089	2	3	Acenaphthylene	0.13	MG/KG	J	23	N	nc	NA	nc	NA
CMS-237	2	3	Acenaphthylene	0.58	MG/KG	J	23	N	nc	NA	nc	NA
CMS-407	2	3	Acenaphthylene	0.36	MG/KG	J	23	N	nc	NA	nc	NA
CMS-455	2	3	Acenaphthylene	0.13	MG/KG	J	23	N	nc	NA	nc	NA
MW08S	2	4	Acenaphthylene	0.066	MG/KG	J	23	N	nc	NA	nc	NA
MW05S	2	4	Acenaphthylene	0.11	MG/KG	J	23	N	nc	NA	nc	NA
MW08S	2	4	Acenaphthylene	0.045	MG/KG	J	23	N	nc	NA	nc	NA
SB03	2	4	Acenaphthylene	0.17	MG/KG	J	23	N	nc	NA	nc	NA
MW07S	3	4	Acenaphthylene	0.092	MG/KG	J	23	N	nc	NA	nc	NA
CMS-089	3	4	Acenaphthylene	0.58	MG/KG	J	23	N	nc	NA	nc	NA
CMS-405	3	4	Acenaphthylene	0.25	MG/KG	J	23	N	nc	NA	nc	NA
CMS-423	3	4	Acenaphthylene	0.12	MG/KG	J	23	N	nc	NA	nc	NA
MW15D	4	6	Acenaphthylene	0.26	MG/KG	J	23	N	nc	NA	nc	NA
MW01S	4	6	Acenaphthylene	0.14	MG/KG	J	23	N	nc	NA	nc	NA
MW03S	4	6	Acenaphthylene	0.14	MG/KG	J	23	N	nc	NA	nc	NA
MW09S	4	6	Acenaphthylene	0.13	MG/KG	J	23	N	nc	NA	nc	NA
MW15D	4	6	Acenaphthylene	0.31	MG/KG	J	23	N	nc	NA	nc	NA
SS-01	0	0	Acenaphthylene	0.43	MG/KG	U	23	NA	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Acenaphthylene	0.8	MG/KG	U	23	NA	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Acenaphthylene	0.87	MG/KG	U	23	NA	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Acenaphthylene	2.1	MG/KG	U	23	NA	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Acenaphthylene	0.95	MG/KG	U	23	NA	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Acenaphthylene	0.46	MG/KG	U	23	NA	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Acenaphthylene	2.1	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-089	0	1	Acenaphthylene	0.67	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-098	0	1	Acenaphthylene	0.6	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-142	0	1	Acenaphthylene	0.58	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-164	0	1	Acenaphthylene	2	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-173	0	1	Acenaphthylene	1.1	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-237	0	1	Acenaphthylene	1.3	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-405	0	1	Acenaphthylene	0.35	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-407	0	1	Acenaphthylene	0.35	MG/KG	U	23	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-408	0	1	Acenaphthylene	0.34	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-417	0	1	Acenaphthylene	35	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-142	0	1	Acenaphthylene	0.55	MG/KG	U	23	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Acenaphthylene	0.51	MG/KG	U	23	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Acenaphthylene	0.62	MG/KG	U	23	NA	nc	NA	nc	NA
RES-14-302-01	0	1	Acenaphthylene	5	MG/KG	U	23	NA	nc	NA	nc	NA
RES-14-303-01	0	1	Acenaphthylene	4.8	MG/KG	U	23	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Acenaphthylene	2.5	MG/KG	U	23	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Acenaphthylene	3.1	MG/KG	U	23	NA	nc	NA	nc	NA
SS-02	0	1.3	Acenaphthylene	0.52	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-703	0	2	Acenaphthylene	6.2	MG/KG	U	23	NA	nc	NA	nc	NA
SS-06	0	2	Acenaphthylene	0.84	MG/KG	U	23	NA	nc	NA	nc	NA
BV01COMP	0	4	Acenaphthylene	0.38	MG/KG	U	23	NA	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Acenaphthylene	4.2	MG/KG	U	23	NA	nc	NA	nc	NA
MW05S	1	2	Acenaphthylene	0.36	MG/KG	U	23	NA	nc	NA	nc	NA
MW14M	1	2	Acenaphthylene	0.34	MG/KG	U	23	NA	nc	NA	nc	NA
MW14M	1	2	Acenaphthylene	0.34	MG/KG	U	23	NA	nc	NA	nc	NA
MW05S	1	2	Acenaphthylene	0.36	MG/KG	U	23	NA	nc	NA	nc	NA
MW08S	1	2	Acenaphthylene	0.42	MG/KG	U	23	NA	nc	NA	nc	NA
MW14M	1	2	Acenaphthylene	0.33	MG/KG	U	23	NA	nc	NA	nc	NA
MW14M	1	2	Acenaphthylene	0.33	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-173	1	2	Acenaphthylene	0.52	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-407	1	2	Acenaphthylene	0.44	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-408	1	2	Acenaphthylene	8.7	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-417	1	2	Acenaphthylene	35	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-419	1	2	Acenaphthylene	74	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-423	1	2	Acenaphthylene	0.35	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-427	1	2	Acenaphthylene	3.6	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-428	1	2	Acenaphthylene	0.35	MG/KG	U	23	NA	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Acenaphthylene	0.86	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-060	2	3	Acenaphthylene	0.36	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-118	2	3	Acenaphthylene	0.44	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-405	2	3	Acenaphthylene	0.64	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-408	2	3	Acenaphthylene	0.43	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-417	2	3	Acenaphthylene	9.8	MG/KG	U	23	NA	nc	NA	nc	NA
SB02	2	4	Acenaphthylene	2.3	MG/KG	U	23	NA	nc	NA	nc	NA
MW01S	2	4	Acenaphthylene	1.6	MG/KG	U	23	NA	nc	NA	nc	NA
MW02S	2	4	Acenaphthylene	0.38	MG/KG	U	23	NA	nc	NA	nc	NA
MW06S	2	4	Acenaphthylene	0.36	MG/KG	U	23	NA	nc	NA	nc	NA
MW06S	2	4	Acenaphthylene	0.37	MG/KG	U	23	NA	nc	NA	nc	NA
MW14M	2	4	Acenaphthylene	0.38	MG/KG	U	23	NA	nc	NA	nc	NA
MW15D	2	4	Acenaphthylene	0.37	MG/KG	U	23	NA	nc	NA	nc	NA
SB-14-271	2	4	Acenaphthylene	0.45	MG/KG	U	23	NA	nc	NA	nc	NA
SB02	2	4	Acenaphthylene	2.2	MG/KG	U	23	NA	nc	NA	nc	NA
SS-03	2.5	3.5	Acenaphthylene	0.4	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-060	3	4	Acenaphthylene	0.45	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-118	3	4	Acenaphthylene	0.5	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-407	3	4	Acenaphthylene	0.42	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-417	3	4	Acenaphthylene	1.9	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-419	3	4	Acenaphthylene	0.42	MG/KG	U	23	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-427	3	4	Acenaphthylene	0.41	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-428	3	4	Acenaphthylene	0.37	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-423	3	4	Acenaphthylene	0.39	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-118	4	5	Acenaphthylene	0.43	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-405	4	5	Acenaphthylene	0.46	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-455	4	5	Acenaphthylene	0.48	MG/KG	U	23	NA	nc	NA	nc	NA
SB03	4	6	Acenaphthylene	0.37	MG/KG	U	23	NA	nc	NA	nc	NA
MW04D	4	6	Acenaphthylene	0.42	MG/KG	U	23	NA	nc	NA	nc	NA
MW05S	4	6	Acenaphthylene	0.82	MG/KG	U	23	NA	nc	NA	nc	NA
MW06S	4	6	Acenaphthylene	0.46	MG/KG	U	23	NA	nc	NA	nc	NA
MW07S	4	6	Acenaphthylene	0.4	MG/KG	U	23	NA	nc	NA	nc	NA
MW08S	4	6	Acenaphthylene	0.45	MG/KG	U	23	NA	nc	NA	nc	NA
SB-14-271	4	6	Acenaphthylene	0.4	MG/KG	U	23	NA	nc	NA	nc	NA
SB02	4	6	Acenaphthylene	0.83	MG/KG	U	23	NA	nc	NA	nc	NA
SB03	4	6	Acenaphthylene	0.38	MG/KG	U	23	NA	nc	NA	nc	NA
GEC-6	2.5	4.5	Acenaphthylene	0.15	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-060	4	5	Acenaphthylene	0.38	MG/KG	UJ	23	NA	nc	NA	nc	NA
MW05S	4	6	Acetone	0.78	MG/KG	J	7800	N	nc	NA	nc	NA
CMS-065	0	10	Acetone	7.9	MG/KG	U	7800	NA	nc	NA	nc	NA
MW08S	1	2	Acetone	0.99	MG/KG	U	7800	NA	nc	NA	nc	NA
MW14M	1	2	Acetone	0.54	MG/KG	U	7800	NA	nc	NA	nc	NA
MW02S	2	4	Acetone	0.49	MG/KG	U	7800	NA	nc	NA	nc	NA
MW04D	2	4	Acetone	0.5	MG/KG	U	7800	NA	nc	NA	nc	NA
MW14M	2	4	Acetone	0.72	MG/KG	U	7800	NA	nc	NA	nc	NA
MW15D	2	4	Acetone	0.5	MG/KG	U	7800	NA	nc	NA	nc	NA
SB02	2	4	Acetone	0.49	MG/KG	U	7800	NA	nc	NA	nc	NA
SB03	2	4	Acetone	0.5	MG/KG	U	7800	NA	nc	NA	nc	NA
MW15D	4	6	Acetone	0.41	MG/KG	U	7800	NA	nc	NA	nc	NA
SB03	4	6	Acetone	0.39	MG/KG	U	7800	NA	nc	NA	nc	NA
MW08S	4	6	Acetone	1.2	MG/KG	U	7800	NA	nc	NA	nc	NA
MW15D	4	6	Acetone	0.49	MG/KG	U	7800	NA	nc	NA	nc	NA
SB02	4	6	Acetone	0.68	MG/KG	U	7800	NA	nc	NA	nc	NA
SB03	4	6	Acetone	0.44	MG/KG	U	7800	NA	nc	NA	nc	NA
MW05S	1	2	Acetone	0.34	MG/KG	UJ	7800	NA	nc	NA	nc	NA
MW14M	1	2	Acetone	0.84	MG/KG	UJ	7800	NA	nc	NA	nc	NA
MW01S	1	2	Acetone	0.34	MG/KG	UJ	7800	NA	nc	NA	nc	NA
MW05S	1	2	Acetone	0.32	MG/KG	UJ	7800	NA	nc	NA	nc	NA
SB-14-271	1	2	Acetone	0.21	MG/KG	UJ	7800	NA	nc	NA	nc	NA
MW08S	2	4	Acetone	0.9	MG/KG	UJ	7800	NA	nc	NA	nc	NA
MW01S	2	4	Acetone	0.41	MG/KG	UJ	7800	NA	nc	NA	nc	NA
MW05S	2	4	Acetone	0.34	MG/KG	UJ	7800	NA	nc	NA	nc	NA
MW06S	2	4	Acetone	1.2	MG/KG	UJ	7800	NA	nc	NA	nc	NA
MW06S	2	4	Acetone	1.3	MG/KG	UJ	7800	NA	nc	NA	nc	NA
MW08S	2	4	Acetone	0.32	MG/KG	UJ	7800	NA	nc	NA	nc	NA
SB-14-271	2	4	Acetone	0.13	MG/KG	UJ	7800	NA	nc	NA	nc	NA
MW07S	3	4	Acetone	0.64	MG/KG	UJ	7800	NA	nc	NA	nc	NA
MW02S	4	6	Acetone	1.3	MG/KG	UJ	7800	NA	nc	NA	nc	NA
MW01S	4	6	Acetone	0.29	MG/KG	UJ	7800	NA	nc	NA	nc	NA
MW02S	4	6	Acetone	0.42	MG/KG	UJ	7800	NA	nc	NA	nc	NA
MW03S	4	6	Acetone	0.49	MG/KG	UJ	7800	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW04D	4	6	Acetone	0.48	MG/KG	UJ	7800	NA	nc	NA	nc	NA
MW06S	4	6	Acetone	3.5	MG/KG	UJ	7800	NA	nc	NA	nc	NA
MW07S	4	6	Acetone	0.26	MG/KG	UJ	7800	NA	nc	NA	nc	NA
MW09S	4	6	Acetone	1.1	MG/KG	UJ	7800	NA	nc	NA	nc	NA
SB-14-271	4	6	Acetone	0.22	MG/KG	UJ	7800	NA	nc	NA	nc	NA
CMS-4105	0	1	Anthracene	1.712588843	MG/KG	J	35	N	nc	NA	nc	NA
CMS-4110	0	1	Anthracene	0.740527637	MG/KG	J	35	N	nc	NA	nc	NA
SS-01	0	0	Anthracene	0.1	MG/KG	J	35	N	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Anthracene	0.35	MG/KG	J	35	N	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Anthracene	0.18	MG/KG	J	35	N	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Anthracene	0.28	MG/KG	J	35	N	nc	NA	nc	NA
CMS-060	0	1	Anthracene	0.32	MG/KG	J	35	N	nc	NA	nc	NA
CMS-089	0	1	Anthracene	0.3	MG/KG	J	35	N	nc	NA	nc	NA
CMS-098	0	1	Anthracene	0.21	MG/KG	J	35	N	nc	NA	nc	NA
CMS-118	0	1	Anthracene	0.27	MG/KG	J	35	N	nc	NA	nc	NA
CMS-159	0	1	Anthracene	0.38	MG/KG	J	35	N	nc	NA	nc	NA
CMS-237	0	1	Anthracene	0.22	MG/KG	J	35	N	nc	NA	nc	NA
CMS-405	0	1	Anthracene	0.29	MG/KG	J	35	N	nc	NA	nc	NA
CMS-407	0	1	Anthracene	0.12	MG/KG	J	35	N	nc	NA	nc	NA
RES-14-271-01	0	1	Anthracene	0.049	MG/KG	J	35	N	nc	NA	nc	NA
RES-14-272-01	0	1	Anthracene	0.088	MG/KG	J	35	N	nc	NA	nc	NA
RES-14-302-01	0	1	Anthracene	0.087	MG/KG	J	35	N	nc	NA	nc	NA
RES-14-303-01	0	1	Anthracene	0.58	MG/KG	J	35	N	nc	NA	nc	NA
RES-14-333-01	0	1	Anthracene	0.68	MG/KG	J	35	N	nc	NA	nc	NA
SS-06	0	2	Anthracene	0.094	MG/KG	J	35	N	nc	NA	nc	NA
BV01COMP	0	4	Anthracene	0.15	MG/KG	J	35	N	nc	NA	nc	NA
MW14M	1	2	Anthracene	0.094	MG/KG	J	35	N	nc	NA	nc	NA
MW14M	1	2	Anthracene	0.093	MG/KG	J	35	N	nc	NA	nc	NA
MW01S	1	2	Anthracene	0.33	MG/KG	J	35	N	nc	NA	nc	NA
MW08S	1	2	Anthracene	0.064	MG/KG	J	35	N	nc	NA	nc	NA
MW14M	1	2	Anthracene	0.063	MG/KG	J	35	N	nc	NA	nc	NA
MW14M	1	2	Anthracene	0.072	MG/KG	J	35	N	nc	NA	nc	NA
CMS-060	1	2	Anthracene	0.19	MG/KG	J	35	N	nc	NA	nc	NA
CMS-089	1	2	Anthracene	0.15	MG/KG	J	35	N	nc	NA	nc	NA
CMS-237	1	2	Anthracene	0.11	MG/KG	J	35	N	nc	NA	nc	NA
CMS-405	1	2	Anthracene	2.1	MG/KG	J	35	N	nc	NA	nc	NA
CMS-407	1	2	Anthracene	0.28	MG/KG	J	35	N	nc	NA	nc	NA
CMS-427	1	2	Anthracene	0.54	MG/KG	J	35	N	nc	NA	nc	NA
CMS-456	1	2	Anthracene	0.5	MG/KG	J	35	N	nc	NA	nc	NA
CMS-405	1	2	Anthracene	0.45	MG/KG	J	35	N	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Anthracene	0.1	MG/KG	J	35	N	nc	NA	nc	NA
CMS-118	2	3	Anthracene	0.083	MG/KG	J	35	N	nc	NA	nc	NA
CMS-237	2	3	Anthracene	0.42	MG/KG	J	35	N	nc	NA	nc	NA
CMS-407	2	3	Anthracene	0.44	MG/KG	J	35	N	nc	NA	nc	NA
CMS-408	2	3	Anthracene	0.16	MG/KG	J	35	N	nc	NA	nc	NA
CMS-455	2	3	Anthracene	0.28	MG/KG	J	35	N	nc	NA	nc	NA
MW08S	2	4	Anthracene	0.08	MG/KG	J	35	N	nc	NA	nc	NA
MW01S	2	4	Anthracene	0.28	MG/KG	J	35	N	nc	NA	nc	NA
MW05S	2	4	Anthracene	2.2	MG/KG	J	35	N	nc	NA	nc	NA
MW06S	2	4	Anthracene	0.11	MG/KG	J	35	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW06S	2	4	Anthracene	0.097	MG/KG	J	35	N	nc	NA	nc	NA
MW08S	2	4	Anthracene	0.063	MG/KG	J	35	N	nc	NA	nc	NA
MW14M	2	4	Anthracene	0.047	MG/KG	J	35	N	nc	NA	nc	NA
MW15D	2	4	Anthracene	0.051	MG/KG	J	35	N	nc	NA	nc	NA
SB03	2	4	Anthracene	0.86	MG/KG	J	35	N	nc	NA	nc	NA
MW07S	3	4	Anthracene	0.24	MG/KG	J	35	N	nc	NA	nc	NA
CMS-089	3	4	Anthracene	0.99	MG/KG	J	35	N	nc	NA	nc	NA
CMS-405	3	4	Anthracene	0.36	MG/KG	J	35	N	nc	NA	nc	NA
CMS-423	3	4	Anthracene	0.089	MG/KG	J	35	N	nc	NA	nc	NA
CMS-060	4	5	Anthracene	0.075	MG/KG	J	35	N	nc	NA	nc	NA
MW15D	4	6	Anthracene	0.4	MG/KG	J	35	N	nc	NA	nc	NA
MW01S	4	6	Anthracene	0.25	MG/KG	J	35	N	nc	NA	nc	NA
MW03S	4	6	Anthracene	0.3	MG/KG	J	35	N	nc	NA	nc	NA
MW07S	4	6	Anthracene	0.093	MG/KG	J	35	N	nc	NA	nc	NA
MW09S	4	6	Anthracene	0.11	MG/KG	J	35	N	nc	NA	nc	NA
MW15D	4	6	Anthracene	0.32	MG/KG	J	35	N	nc	NA	nc	NA
SB02	4	6	Anthracene	0.097	MG/KG	J	35	N	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Anthracene	0.95	MG/KG	U	35	NA	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Anthracene	0.46	MG/KG	U	35	NA	nc	NA	nc	NA
CMS-142	0	1	Anthracene	0.58	MG/KG	U	35	NA	nc	NA	nc	NA
CMS-164	0	1	Anthracene	2	MG/KG	U	35	NA	nc	NA	nc	NA
CMS-173	0	1	Anthracene	1.1	MG/KG	U	35	NA	nc	NA	nc	NA
CMS-408	0	1	Anthracene	0.34	MG/KG	U	35	NA	nc	NA	nc	NA
CMS-417	0	1	Anthracene	35	MG/KG	U	35	NA	nc	NA	nc	NA
CMS-142	0	1	Anthracene	0.55	MG/KG	U	35	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Anthracene	2.5	MG/KG	U	35	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Anthracene	3.1	MG/KG	U	35	NA	nc	NA	nc	NA
SS-02	0	1.3	Anthracene	0.52	MG/KG	U	35	NA	nc	NA	nc	NA
CMS-703	0	2	Anthracene	6.2	MG/KG	U	35	NA	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Anthracene	4.2	MG/KG	U	35	NA	nc	NA	nc	NA
MW05S	1	2	Anthracene	0.36	MG/KG	U	35	NA	nc	NA	nc	NA
MW05S	1	2	Anthracene	0.36	MG/KG	U	35	NA	nc	NA	nc	NA
SB-14-271	1	2	Anthracene	0.4	MG/KG	U	35	NA	nc	NA	nc	NA
CMS-173	1	2	Anthracene	0.52	MG/KG	U	35	NA	nc	NA	nc	NA
CMS-408	1	2	Anthracene	8.7	MG/KG	U	35	NA	nc	NA	nc	NA
CMS-417	1	2	Anthracene	35	MG/KG	U	35	NA	nc	NA	nc	NA
CMS-419	1	2	Anthracene	74	MG/KG	U	35	NA	nc	NA	nc	NA
CMS-423	1	2	Anthracene	0.35	MG/KG	U	35	NA	nc	NA	nc	NA
CMS-428	1	2	Anthracene	0.35	MG/KG	U	35	NA	nc	NA	nc	NA
CMS-060	2	3	Anthracene	0.36	MG/KG	U	35	NA	nc	NA	nc	NA
CMS-089	2	3	Anthracene	0.7	MG/KG	U	35	NA	nc	NA	nc	NA
CMS-405	2	3	Anthracene	0.64	MG/KG	U	35	NA	nc	NA	nc	NA
CMS-417	2	3	Anthracene	9.8	MG/KG	U	35	NA	nc	NA	nc	NA
SB02	2	4	Anthracene	2.3	MG/KG	U	35	NA	nc	NA	nc	NA
MW02S	2	4	Anthracene	0.38	MG/KG	U	35	NA	nc	NA	nc	NA
SB-14-271	2	4	Anthracene	0.45	MG/KG	U	35	NA	nc	NA	nc	NA
SB02	2	4	Anthracene	2.2	MG/KG	U	35	NA	nc	NA	nc	NA
SS-03	2.5	3.5	Anthracene	0.4	MG/KG	U	35	NA	nc	NA	nc	NA
CMS-060	3	4	Anthracene	0.45	MG/KG	U	35	NA	nc	NA	nc	NA
CMS-118	3	4	Anthracene	0.5	MG/KG	U	35	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-407	3	4	Anthracene	0.42	MG/KG	U	35	NA	nc	NA	nc	NA
CMS-417	3	4	Anthracene	1.9	MG/KG	U	35	NA	nc	NA	nc	NA
CMS-419	3	4	Anthracene	0.42	MG/KG	U	35	NA	nc	NA	nc	NA
CMS-427	3	4	Anthracene	0.41	MG/KG	U	35	NA	nc	NA	nc	NA
CMS-428	3	4	Anthracene	0.37	MG/KG	U	35	NA	nc	NA	nc	NA
CMS-423	3	4	Anthracene	0.39	MG/KG	U	35	NA	nc	NA	nc	NA
CMS-118	4	5	Anthracene	0.43	MG/KG	U	35	NA	nc	NA	nc	NA
CMS-405	4	5	Anthracene	0.46	MG/KG	U	35	NA	nc	NA	nc	NA
CMS-455	4	5	Anthracene	0.48	MG/KG	U	35	NA	nc	NA	nc	NA
SB03	4	6	Anthracene	0.37	MG/KG	U	35	NA	nc	NA	nc	NA
MW04D	4	6	Anthracene	0.42	MG/KG	U	35	NA	nc	NA	nc	NA
MW05S	4	6	Anthracene	0.82	MG/KG	U	35	NA	nc	NA	nc	NA
MW06S	4	6	Anthracene	0.46	MG/KG	U	35	NA	nc	NA	nc	NA
MW08S	4	6	Anthracene	0.45	MG/KG	U	35	NA	nc	NA	nc	NA
SB-14-271	4	6	Anthracene	0.4	MG/KG	U	35	NA	nc	NA	nc	NA
SB03	4	6	Anthracene	0.38	MG/KG	U	35	NA	nc	NA	nc	NA
GEC-6	2.5	4.5	Anthracene	0.15	MG/KG	U	35	NA	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Anthracene	2.4	MG/KG		35	N	nc	NA	nc	NA
CMS-456	0	1	Anthracene	0.51	MG/KG		35	N	nc	NA	nc	NA
CMS-060	0	1	Anthracene	0.58	MG/KG		35	N	nc	NA	nc	NA
CMS-118	1	2	Anthracene	0.92	MG/KG		35	N	nc	NA	nc	NA
CMS-098	0	1	Antimony	0.59	MG/KG	J	10	N	nc	NA	nc	NA
CMS-142	0	1	Antimony	0.61	MG/KG	J	10	N	nc	NA	nc	NA
CMS-159	0	1	Antimony	0.83	MG/KG	J	10	N	nc	NA	nc	NA
CMS-164	0	1	Antimony	7.7	MG/KG	J	10	N	nc	NA	nc	NA
CMS-173	0	1	Antimony	3.8	MG/KG	J	10	N	nc	NA	nc	NA
CMS-237	0	1	Antimony	2.8	MG/KG	J	10	N	nc	NA	nc	NA
CMS-417	0	1	Antimony	27.8	MG/KG	J	10	Y	nc	NA	nc	NA
CMS-456	0	1	Antimony	1.1	MG/KG	J	10	N	nc	NA	nc	NA
RES-14-272-01	0	1	Antimony	2	MG/KG	J	10	N	nc	NA	nc	NA
MW08S	1	2	Antimony	6.6	MG/KG	J	10	N	nc	NA	nc	NA
CMS-060	1	2	Antimony	0.24	MG/KG	J	10	N	nc	NA	nc	NA
CMS-089	1	2	Antimony	1.3	MG/KG	J	10	N	nc	NA	nc	NA
CMS-118	1	2	Antimony	0.46	MG/KG	J	10	N	nc	NA	nc	NA
CMS-237	1	2	Antimony	20.3	MG/KG	J	10	Y	nc	NA	nc	NA
CMS-405	1	2	Antimony	1.5	MG/KG	J	10	N	nc	NA	nc	NA
CMS-408	1	2	Antimony	9.7	MG/KG	J	10	N	nc	NA	nc	NA
CMS-417	1	2	Antimony	17.7	MG/KG	J	10	Y	nc	NA	nc	NA
CMS-419	1	2	Antimony	21.4	MG/KG	J	10	Y	nc	NA	nc	NA
CMS-427	1	2	Antimony	1.3	MG/KG	J	10	N	nc	NA	nc	NA
CMS-456	1	2	Antimony	0.98	MG/KG	J	10	N	nc	NA	nc	NA
CMS-405	1	2	Antimony	5.2	MG/KG	J	10	N	nc	NA	nc	NA
CMS-089	2	3	Antimony	0.46	MG/KG	J	10	N	nc	NA	nc	NA
CMS-118	2	3	Antimony	0.78	MG/KG	J	10	N	nc	NA	nc	NA
CMS-237	2	3	Antimony	7.2	MG/KG	J	10	N	nc	NA	nc	NA
CMS-405	2	3	Antimony	4	MG/KG	J	10	N	nc	NA	nc	NA
CMS-407	2	3	Antimony	1.2	MG/KG	J	10	N	nc	NA	nc	NA
CMS-408	2	3	Antimony	2.4	MG/KG	J	10	N	nc	NA	nc	NA
CMS-417	2	3	Antimony	0.33	MG/KG	J	10	N	nc	NA	nc	NA
CMS-455	2	3	Antimony	0.28	MG/KG	J	10	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW02S	2	4	Antimony	0.88	MG/KG	J	10	N	nc	NA	nc	NA
MW06S	2	4	Antimony	5	MG/KG	J	10	N	nc	NA	nc	NA
CMS-089	3	4	Antimony	0.9	MG/KG	J	10	N	nc	NA	nc	NA
CMS-118	3	4	Antimony	0.34	MG/KG	J	10	N	nc	NA	nc	NA
CMS-405	3	4	Antimony	6.2	MG/KG	J	10	N	nc	NA	nc	NA
CMS-407	3	4	Antimony	0.7	MG/KG	J	10	N	nc	NA	nc	NA
CMS-417	3	4	Antimony	0.31	MG/KG	J	10	N	nc	NA	nc	NA
CMS-405	4	5	Antimony	0.3	MG/KG	J	10	N	nc	NA	nc	NA
MW05S	4	6	Antimony	1	MG/KG	J	10	N	nc	NA	nc	NA
SB02	4	6	Antimony	1	MG/KG	J	10	N	nc	NA	nc	NA
CMS-4105	0	1	Antimony	0.815	MG/KG	J	10	N	nc	NA	nc	NA
CMS-4110	0	1	Antimony	0.387	MG/KG	J	10	N	nc	NA	nc	NA
CMS-142	0	1	Antimony	10	MG/KG	U	10	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Antimony	1.6	MG/KG	U	10	NA	nc	NA	nc	NA
RES-14-303-01	0	1	Antimony	6.6	MG/KG	U	10	NA	nc	NA	nc	NA
MW14M	1	2	Antimony	1.9	MG/KG	U	10	NA	nc	NA	nc	NA
MW01S	1	2	Antimony	4.9	MG/KG	U	10	NA	nc	NA	nc	NA
MW14M	1	2	Antimony	1.9	MG/KG	U	10	NA	nc	NA	nc	NA
MW08S	2	4	Antimony	6.4	MG/KG	U	10	NA	nc	NA	nc	NA
MW08S	2	4	Antimony	5.9	MG/KG	U	10	NA	nc	NA	nc	NA
MW14M	2	4	Antimony	2.2	MG/KG	U	10	NA	nc	NA	nc	NA
MW15D	2	4	Antimony	0.38	MG/KG	U	10	NA	nc	NA	nc	NA
SB03	2	4	Antimony	0.53	MG/KG	U	10	NA	nc	NA	nc	NA
SB03	4	6	Antimony	0.53	MG/KG	U	10	NA	nc	NA	nc	NA
MW01S	4	6	Antimony	5.3	MG/KG	U	10	NA	nc	NA	nc	NA
MW03S	4	6	Antimony	5.1	MG/KG	U	10	NA	nc	NA	nc	NA
MW08S	4	6	Antimony	5.1	MG/KG	U	10	NA	nc	NA	nc	NA
SB03	4	6	Antimony	0.52	MG/KG	U	10	NA	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Antimony	0.52	MG/KG	UJ	10	NA	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Antimony	0.72	MG/KG	UJ	10	NA	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Antimony	0.58	MG/KG	UJ	10	NA	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Antimony	2.8	MG/KG	UJ	10	NA	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Antimony	1.6	MG/KG	UJ	10	NA	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Antimony	1	MG/KG	UJ	10	NA	nc	NA	nc	NA
CMS-089	0	1	Antimony	6.1	MG/KG	UJ	10	NA	nc	NA	nc	NA
CMS-405	0	1	Antimony	6.4	MG/KG	UJ	10	NA	nc	NA	nc	NA
CMS-407	0	1	Antimony	6.4	MG/KG	UJ	10	NA	nc	NA	nc	NA
CMS-408	0	1	Antimony	6.2	MG/KG	UJ	10	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Antimony	1.6	MG/KG	UJ	10	NA	nc	NA	nc	NA
RES-14-302-01	0	1	Antimony	1.6	MG/KG	UJ	10	NA	nc	NA	nc	NA
RES-14-333-01	0	1	Antimony	4.7	MG/KG	UJ	10	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Antimony	2.3	MG/KG	UJ	10	NA	nc	NA	nc	NA
CMS-703	0	2	Antimony	7.5	MG/KG	UJ	10	NA	nc	NA	nc	NA
BV01COMP	0	4	Antimony	6.8	MG/KG	UJ	10	NA	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Antimony	1.1	MG/KG	UJ	10	NA	nc	NA	nc	NA
MW05S	1	2	Antimony	0.16	MG/KG	UJ	10	NA	nc	NA	nc	NA
MW05S	1	2	Antimony	0.32	MG/KG	UJ	10	NA	nc	NA	nc	NA
SB-14-271	1	2	Antimony	0.22	MG/KG	UJ	10	NA	nc	NA	nc	NA
CMS-173	1	2	Antimony	9.4	MG/KG	UJ	10	NA	nc	NA	nc	NA
CMS-407	1	2	Antimony	7.9	MG/KG	UJ	10	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-423	1	2	Antimony	6.3	MG/KG	UJ	10	NA	nc	NA	nc	NA
CMS-428	1	2	Antimony	6.4	MG/KG	UJ	10	NA	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Antimony	0.63	MG/KG	UJ	10	NA	nc	NA	nc	NA
MW05S	2	4	Antimony	0.4	MG/KG	UJ	10	NA	nc	NA	nc	NA
MW06S	2	4	Antimony	4.4	MG/KG	UJ	10	NA	nc	NA	nc	NA
SB-14-271	2	4	Antimony	0.29	MG/KG	UJ	10	NA	nc	NA	nc	NA
MW07S	3	4	Antimony	4.5	MG/KG	UJ	10	NA	nc	NA	nc	NA
CMS-419	3	4	Antimony	7.6	MG/KG	UJ	10	NA	nc	NA	nc	NA
CMS-423	3	4	Antimony	6.7	MG/KG	UJ	10	NA	nc	NA	nc	NA
CMS-427	3	4	Antimony	7.4	MG/KG	UJ	10	NA	nc	NA	nc	NA
CMS-428	3	4	Antimony	6.8	MG/KG	UJ	10	NA	nc	NA	nc	NA
CMS-423	3	4	Antimony	7.2	MG/KG	UJ	10	NA	nc	NA	nc	NA
CMS-455	4	5	Antimony	8.7	MG/KG	UJ	10	NA	nc	NA	nc	NA
MW15D	4	6	Antimony	0.49	MG/KG	UJ	10	NA	nc	NA	nc	NA
MW04D	4	6	Antimony	0.4	MG/KG	UJ	10	NA	nc	NA	nc	NA
MW06S	4	6	Antimony	5.5	MG/KG	UJ	10	NA	nc	NA	nc	NA
MW07S	4	6	Antimony	4.8	MG/KG	UJ	10	NA	nc	NA	nc	NA
MW09S	4	6	Antimony	6	MG/KG	UJ	10	NA	nc	NA	nc	NA
MW15D	4	6	Antimony	0.48	MG/KG	UJ	10	NA	nc	NA	nc	NA
SB-14-271	4	6	Antimony	0.29	MG/KG	UJ	10	NA	nc	NA	nc	NA
SB02	2	4	Antimony	3.2	MG/KG		10	N	nc	NA	nc	NA
SB02	2	4	Antimony	18.5	MG/KG		10	Y	nc	NA	nc	NA
MW06S	4	6	Aroclor, Total	4.42	MG/KG	*	10	N	10	N	1	Y
MW06S	2	4	Aroclor, Total	11.9	MG/KG	*J	10	Y	10	Y	1	Y
MW14M	1	2	Aroclor, Total	3.3	MG/KG	DC	10	N	10	N	1	Y
MW14M	1	2	Aroclor, Total	3.8	MG/KG	DC	10	N	10	N	1	Y
CMS-701	0	1	Aroclor, Total	0.024	MG/KG	J	10	N	10	N	1	N
CMS-060	0	1	Aroclor, Total	0.31	MG/KG	J	10	N	10	N	1	N
CMS-089	0	1	Aroclor, Total	0.25	MG/KG	J	10	N	10	N	1	N
CMS-098	0	1	Aroclor, Total	0.49	MG/KG	J	10	N	10	N	1	N
CMS-142	0	1	Aroclor, Total	0.76	MG/KG	J	10	N	10	N	1	N
CMS-152	0	1	Aroclor, Total	9.5	MG/KG	J	10	N	10	N	1	Y
CMS-153	0	1	Aroclor, Total	0.6	MG/KG	J	10	N	10	N	1	N
CMS-154	0	1	Aroclor, Total	44	MG/KG	J	10	Y	10	Y	1	Y
CMS-155	0	1	Aroclor, Total	560	MG/KG	J	10	Y	10	Y	1	Y
CMS-156	0	1	Aroclor, Total	130	MG/KG	J	10	Y	10	Y	1	Y
CMS-160	0	1	Aroclor, Total	0.86	MG/KG	J	10	N	10	N	1	N
CMS-161	0	1	Aroclor, Total	0.29	MG/KG	J	10	N	10	N	1	N
CMS-162	0	1	Aroclor, Total	2.6	MG/KG	J	10	N	10	N	1	Y
CMS-164	0	1	Aroclor, Total	2.8	MG/KG	J	10	N	10	N	1	Y
CMS-169	0	1	Aroclor, Total	0.49	MG/KG	J	10	N	10	N	1	N
CMS-173	0	1	Aroclor, Total	0.38	MG/KG	J	10	N	10	N	1	N
CMS-175	0	1	Aroclor, Total	0.75	MG/KG	J	10	N	10	N	1	N
CMS-400	0	1	Aroclor, Total	0.35	MG/KG	J	10	N	10	N	1	N
CMS-404	0	1	Aroclor, Total	1.6	MG/KG	J	10	N	10	N	1	Y
CMS-408	0	1	Aroclor, Total	0.041	MG/KG	J	10	N	10	N	1	N
CMS-413	0	1	Aroclor, Total	2.9	MG/KG	J	10	N	10	N	1	Y
CMS-414	0	1	Aroclor, Total	1.7	MG/KG	J	10	N	10	N	1	Y
CMS-420	0	1	Aroclor, Total	0.38	MG/KG	J	10	N	10	N	1	N
CMS-429	0	1	Aroclor, Total	0.16	MG/KG	J	10	N	10	N	1	N

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-430	0	1	Aroclor, Total	5.9	MG/KG	J	10	N	10	N	1	Y
CMS-431	0	1	Aroclor, Total	1.6	MG/KG	J	10	N	10	N	1	Y
CMS-432	0	1	Aroclor, Total	0.57	MG/KG	J	10	N	10	N	1	N
CMS-433	0	1	Aroclor, Total	6.6	MG/KG	J	10	N	10	N	1	Y
CMS-701	0	1	Aroclor, Total	0.023	MG/KG	J	10	N	10	N	1	N
CMS-404	0	1	Aroclor, Total	1.8	MG/KG	J	10	N	10	N	1	Y
CMS-162	0	1	Aroclor, Total	3.7	MG/KG	J	10	N	10	N	1	Y
CMS-152	1	2	Aroclor, Total	1.9	MG/KG	J	10	N	10	N	1	Y
CMS-153	1	2	Aroclor, Total	0.58	MG/KG	J	10	N	10	N	1	N
CMS-154	1	2	Aroclor, Total	700	MG/KG	J	10	Y	10	Y	1	Y
CMS-155	1	2	Aroclor, Total	28	MG/KG	J	10	Y	10	Y	1	Y
CMS-160	1	2	Aroclor, Total	0.035	MG/KG	J	10	N	10	N	1	N
CMS-162	1	2	Aroclor, Total	0.65	MG/KG	J	10	N	10	N	1	N
CMS-168	1	2	Aroclor, Total	0.5	MG/KG	J	10	N	10	N	1	N
CMS-170	1	2	Aroclor, Total	0.24	MG/KG	J	10	N	10	N	1	N
CMS-175	1	2	Aroclor, Total	0.51	MG/KG	J	10	N	10	N	1	N
CMS-238	1	2	Aroclor, Total	4.8	MG/KG	J	10	N	10	N	1	Y
CMS-241	1	2	Aroclor, Total	0.19	MG/KG	J	10	N	10	N	1	N
CMS-242	1	2	Aroclor, Total	2.3	MG/KG	J	10	N	10	N	1	Y
CMS-400	1	2	Aroclor, Total	6.9	MG/KG	J	10	N	10	N	1	Y
CMS-401	1	2	Aroclor, Total	6	MG/KG	J	10	N	10	N	1	Y
CMS-402	1	2	Aroclor, Total	0.027	MG/KG	J	10	N	10	N	1	N
CMS-405	1	2	Aroclor, Total	1.3	MG/KG	J	10	N	10	N	1	Y
CMS-406	1	2	Aroclor, Total	2.3	MG/KG	J	10	N	10	N	1	Y
CMS-407	1	2	Aroclor, Total	1.9	MG/KG	J	10	N	10	N	1	Y
CMS-409	1	2	Aroclor, Total	1.3	MG/KG	J	10	N	10	N	1	Y
CMS-413	1	2	Aroclor, Total	2.1	MG/KG	J	10	N	10	N	1	Y
CMS-414	1	2	Aroclor, Total	0.022	MG/KG	J	10	N	10	N	1	N
CMS-415	1	2	Aroclor, Total	0.22	MG/KG	J	10	N	10	N	1	N
CMS-416	1	2	Aroclor, Total	32	MG/KG	J	10	Y	10	Y	1	Y
CMS-420	1	2	Aroclor, Total	0.44	MG/KG	J	10	N	10	N	1	N
CMS-423	1	2	Aroclor, Total	3.3	MG/KG	J	10	N	10	N	1	Y
CMS-426	1	2	Aroclor, Total	31	MG/KG	J	10	Y	10	Y	1	Y
CMS-430	1	2	Aroclor, Total	7	MG/KG	J	10	N	10	N	1	Y
CMS-431	1	2	Aroclor, Total	2.5	MG/KG	J	10	N	10	N	1	Y
CMS-432	1	2	Aroclor, Total	2.6	MG/KG	J	10	N	10	N	1	Y
CMS-454	1	2	Aroclor, Total	0.16	MG/KG	J	10	N	10	N	1	N
CMS-456	1	2	Aroclor, Total	7	MG/KG	J	10	N	10	N	1	Y
CMS-703	1	2	Aroclor, Total	0.16	MG/KG	J	10	N	10	N	1	N
CMS-153	1	2	Aroclor, Total	0.085	MG/KG	J	10	N	10	N	1	N
CMS-405	1	2	Aroclor, Total	19	MG/KG	J	10	Y	10	Y	1	Y
CMS-416	1	2	Aroclor, Total	56	MG/KG	J	10	Y	10	Y	1	Y
CMS-406	1	2	Aroclor, Total	0.02	MG/KG	J	10	N	10	N	1	N
CMS-420	1	2	Aroclor, Total	0.98	MG/KG	J	10	N	10	N	1	N
CMS-426	1	2	Aroclor, Total	11	MG/KG	J	10	Y	10	Y	1	Y
CMS-238	1	2	Aroclor, Total	1.5	MG/KG	J	10	N	10	N	1	Y
CMS-170	1	2	Aroclor, Total	0.14	MG/KG	J	10	N	10	N	1	N
CMS-060	2	3	Aroclor, Total	0.051	MG/KG	J	10	N	10	N	1	N
CMS-131	2	3	Aroclor, Total	0.5	MG/KG	J	10	N	10	N	1	N
CMS-152	2	3	Aroclor, Total	13	MG/KG	J	10	Y	10	Y	1	Y

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-153	2	3	Aroclor, Total	26	MG/KG	J	10	Y	10	Y	1	Y
CMS-154	2	3	Aroclor, Total	19	MG/KG	J	10	Y	10	Y	1	Y
CMS-160	2	3	Aroclor, Total	0.29	MG/KG	J	10	N	10	N	1	N
CMS-162	2	3	Aroclor, Total	1	MG/KG	J	10	N	10	N	1	N
CMS-168	2	3	Aroclor, Total	0.25	MG/KG	J	10	N	10	N	1	N
CMS-175	2	3	Aroclor, Total	1.1	MG/KG	J	10	N	10	N	1	Y
CMS-400	2	3	Aroclor, Total	6.9	MG/KG	J	10	N	10	N	1	Y
CMS-401	2	3	Aroclor, Total	0.33	MG/KG	J	10	N	10	N	1	N
CMS-402	2	3	Aroclor, Total	420	MG/KG	J	10	Y	10	Y	1	Y
CMS-403	2	3	Aroclor, Total	0.085	MG/KG	J	10	N	10	N	1	N
CMS-404	2	3	Aroclor, Total	0.07	MG/KG	J	10	N	10	N	1	N
CMS-405	2	3	Aroclor, Total	0.16	MG/KG	J	10	N	10	N	1	N
CMS-408	2	3	Aroclor, Total	1.3	MG/KG	J	10	N	10	N	1	Y
CMS-411	2	3	Aroclor, Total	3.2	MG/KG	J	10	N	10	N	1	Y
CMS-413	2	3	Aroclor, Total	1.6	MG/KG	J	10	N	10	N	1	Y
CMS-414	2	3	Aroclor, Total	0.48	MG/KG	J	10	N	10	N	1	N
CMS-428	2	3	Aroclor, Total	0.21	MG/KG	J	10	N	10	N	1	N
CMS-433	2	3	Aroclor, Total	16	MG/KG	J	10	Y	10	Y	1	Y
CMS-454	2	3	Aroclor, Total	0.5	MG/KG	J	10	N	10	N	1	N
CMS-455	2	3	Aroclor, Total	0.084	MG/KG	J	10	N	10	N	1	N
CMS-428	2	3	Aroclor, Total	0.68	MG/KG	J	10	N	10	N	1	N
SB02	2	4	Aroclor, Total	8.2	MG/KG	J	10	N	10	N	1	Y
MW06S	2	4	Aroclor, Total	6.74	MG/KG	J	10	N	10	N	1	Y
CMS-089	3	4	Aroclor, Total	2.2	MG/KG	J	10	N	10	N	1	Y
CMS-118	3	4	Aroclor, Total	0.24	MG/KG	J	10	N	10	N	1	N
CMS-131	3	4	Aroclor, Total	0.098	MG/KG	J	10	N	10	N	1	N
CMS-153	3	4	Aroclor, Total	0.54	MG/KG	J	10	N	10	N	1	N
CMS-400	3	4	Aroclor, Total	3.1	MG/KG	J	10	N	10	N	1	Y
CMS-401	3	4	Aroclor, Total	0.48	MG/KG	J	10	N	10	N	1	N
CMS-402	3	4	Aroclor, Total	4.9	MG/KG	J	10	N	10	N	1	Y
CMS-411	3	4	Aroclor, Total	0.95	MG/KG	J	10	N	10	N	1	N
CMS-414	3	4	Aroclor, Total	0.55	MG/KG	J	10	N	10	N	1	N
CMS-416	3	4	Aroclor, Total	0.056	MG/KG	J	10	N	10	N	1	N
CMS-425	3	4	Aroclor, Total	1.8	MG/KG	J	10	N	10	N	1	Y
CMS-427	3	4	Aroclor, Total	0.41	MG/KG	J	10	N	10	N	1	N
CMS-428	3	4	Aroclor, Total	0.017	MG/KG	J	10	N	10	N	1	N
CMS-429	3	4	Aroclor, Total	0.13	MG/KG	J	10	N	10	N	1	N
CMS-453	3	4	Aroclor, Total	0.13	MG/KG	J	10	N	10	N	1	N
CMS-454	3	4	Aroclor, Total	5	MG/KG	J	10	N	10	N	1	Y
CMS-162	3	4	Aroclor, Total	2.1	MG/KG	J	10	N	10	N	1	Y
CMS-453	3	4	Aroclor, Total	0.11	MG/KG	J	10	N	10	N	1	N
CMS-118	4	5	Aroclor, Total	0.038	MG/KG	J	10	N	10	N	1	N
CMS-155	4	5	Aroclor, Total	0.2	MG/KG	J	10	N	10	N	1	N
CMS-402	4	5	Aroclor, Total	0.8	MG/KG	J	10	N	10	N	1	N
CMS-410	4	5	Aroclor, Total	32	MG/KG	J	10	Y	10	Y	1	Y
CMS-423	4	5	Aroclor, Total	0.0074	MG/KG	J	10	N	10	N	1	N
CMS-448	4	5	Aroclor, Total	0.017	MG/KG	J	10	N	10	N	1	N
CMS-449	4	5	Aroclor, Total	0.093	MG/KG	J	10	N	10	N	1	N
CMS-451	4	5	Aroclor, Total	0.078	MG/KG	J	10	N	10	N	1	N
CMS-452	4	5	Aroclor, Total	0.65	MG/KG	J	10	N	10	N	1	N

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-453	4	5	Aroclor, Total	0.019	MG/KG	J	10	N	10	N	1	N
CMS-454	4	5	Aroclor, Total	0.73	MG/KG	J	10	N	10	N	1	N
CMS-410	4	5	Aroclor, Total	13	MG/KG	J	10	Y	10	Y	1	Y
CMS-409	4	5	Aroclor, Total	0.059	MG/KG	J	10	N	10	N	1	N
CMS-452	4	5	Aroclor, Total	0.08	MG/KG	J	10	N	10	N	1	N
MW07S	4	6	Aroclor, Total	0.032	MG/KG	J	10	N	10	N	1	N
CMS-432	1	2	Aroclor, Total	1.6	MG/KG	Ja	10	N	10	N	1	Y
GEC-7	2.5	4.5	Aroclor, Total	0.14	MG/KG	U	10	NA	10	NA	1	NA
CMW-SD-2016	0	0.5	Aroclor, Total	0.081	MG/KG	U	10	NA	10	NA	1	NA
CMW-SD-2017	0	0.5	Aroclor, Total	0.088	MG/KG	U	10	NA	10	NA	1	NA
SD-31	0	0.5	Aroclor, Total	0.08	MG/KG	U	10	NA	10	NA	1	NA
CMS-401	0	1	Aroclor, Total	0.035	MG/KG	U	10	NA	10	NA	1	NA
CMS-407	0	1	Aroclor, Total	0.035	MG/KG	U	10	NA	10	NA	1	NA
CMS-700	0	1	Aroclor, Total	0.051	MG/KG	U	10	NA	10	NA	1	NA
CMS-702	0	1	Aroclor, Total	0.057	MG/KG	U	10	NA	10	NA	1	NA
MW05S	1	2	Aroclor, Total	0.073	MG/KG	U	10	NA	10	NA	1	NA
MW05S	1	2	Aroclor, Total	0.074	MG/KG	U	10	NA	10	NA	1	NA
CMS-173	1	2	Aroclor, Total	0.052	MG/KG	U	10	NA	10	NA	1	NA
CMS-411	1	2	Aroclor, Total	0.035	MG/KG	U	10	NA	10	NA	1	NA
CMS-428	1	2	Aroclor, Total	0.035	MG/KG	U	10	NA	10	NA	1	NA
CMS-433	1	2	Aroclor, Total	0.18	MG/KG	U	10	NA	10	NA	1	NA
CMS-700	1	2	Aroclor, Total	0.057	MG/KG	U	10	NA	10	NA	1	NA
CMS-701	1	2	Aroclor, Total	0.19	MG/KG	U	10	NA	10	NA	1	NA
CMS-407	2	3	Aroclor, Total	0	MG/KG	U	10	NA	10	NA	1	NA
CMS-412	2	3	Aroclor, Total	0.22	MG/KG	U	10	NA	10	NA	1	NA
CMS-429	2	3	Aroclor, Total	0.43	MG/KG	U	10	NA	10	NA	1	NA
CMS-430	2	3	Aroclor, Total	0.36	MG/KG	U	10	NA	10	NA	1	NA
CMS-701	2	3	Aroclor, Total	0.18	MG/KG	U	10	NA	10	NA	1	NA
MW05S	2	4	Aroclor, Total	0.077	MG/KG	U	10	NA	10	NA	1	NA
MW14M	2	4	Aroclor, Total	0.076	MG/KG	U	10	NA	10	NA	1	NA
SB03	2	4	Aroclor, Total	0.1	MG/KG	U	10	NA	10	NA	1	NA
CMS-060	3	4	Aroclor, Total	0.045	MG/KG	U	10	NA	10	NA	1	NA
CMS-403	3	4	Aroclor, Total	0.55	MG/KG	U	10	NA	10	NA	1	NA
CMS-404	3	4	Aroclor, Total	0.48	MG/KG	U	10	NA	10	NA	1	NA
CMS-406	3	4	Aroclor, Total	6	MG/KG	U	10	NA	10	NA	1	NA
CMS-407	3	4	Aroclor, Total	0.42	MG/KG	U	10	NA	10	NA	1	NA
CMS-409	3	4	Aroclor, Total	0.45	MG/KG	U	10	NA	10	NA	1	NA
CMS-412	3	4	Aroclor, Total	0.48	MG/KG	U	10	NA	10	NA	1	NA
CMS-415	3	4	Aroclor, Total	0.47	MG/KG	U	10	NA	10	NA	1	NA
CMS-421	3	4	Aroclor, Total	0.97	MG/KG	U	10	NA	10	NA	1	NA
CMS-448	3	4	Aroclor, Total	0.036	MG/KG	U	10	NA	10	NA	1	NA
CMS-450	3	4	Aroclor, Total	0.11	MG/KG	U	10	NA	10	NA	1	NA
CMS-455	3	4	Aroclor, Total	0.43	MG/KG	U	10	NA	10	NA	1	NA
CMS-153	4	5	Aroclor, Total	0.39	MG/KG	U	10	NA	10	NA	1	NA
CMS-400	4	5	Aroclor, Total	0.56	MG/KG	U	10	NA	10	NA	1	NA
CMS-403	4	5	Aroclor, Total	0.42	MG/KG	U	10	NA	10	NA	1	NA
CMS-404	4	5	Aroclor, Total	0.38	MG/KG	U	10	NA	10	NA	1	NA
CMS-405	4	5	Aroclor, Total	0.23	MG/KG	U	10	NA	10	NA	1	NA
CMS-409	4	5	Aroclor, Total	0.7	MG/KG	U	10	NA	10	NA	1	NA
CMS-411	4	5	Aroclor, Total	0.82	MG/KG	U	10	NA	10	NA	1	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-421	4	5	Aroclor, Total	0.37	MG/KG	U	10	NA	10	NA	1	NA
CMS-424	4	5	Aroclor, Total	0.36	MG/KG	U	10	NA	10	NA	1	NA
CMS-425	4	5	Aroclor, Total	0.041	MG/KG	U	10	NA	10	NA	1	NA
CMS-428	4	5	Aroclor, Total	0.037	MG/KG	U	10	NA	10	NA	1	NA
CMS-429	4	5	Aroclor, Total	0.04	MG/KG	U	10	NA	10	NA	1	NA
CMS-432	4	5	Aroclor, Total	0.39	MG/KG	U	10	NA	10	NA	1	NA
CMS-450	4	5	Aroclor, Total	0.037	MG/KG	U	10	NA	10	NA	1	NA
CMS-455	4	5	Aroclor, Total	0.24	MG/KG	U	10	NA	10	NA	1	NA
SB03	4	6	Aroclor, Total	0.075	MG/KG	U	10	NA	10	NA	1	NA
MW15D	4	6	Aroclor, Total	0.082	MG/KG	U	10	NA	10	NA	1	NA
MW03S	4	6	Aroclor, Total	0.082	MG/KG	U	10	NA	10	NA	1	NA
MW04D	4	6	Aroclor, Total	0.087	MG/KG	U	10	NA	10	NA	1	NA
MW05S	4	6	Aroclor, Total	0.017	MG/KG	U	10	NA	10	NA	1	NA
MW08S	4	6	Aroclor, Total	0.09	MG/KG	U	10	NA	10	NA	1	NA
MW15D	4	6	Aroclor, Total	0.072	MG/KG	U	10	NA	10	NA	1	NA
SB03	4	6	Aroclor, Total	0.076	MG/KG	U	10	NA	10	NA	1	NA
SS-01	0	0	Aroclor, Total	2.3	MG/KG		10	N	10	N	1	Y
CMW-SD-2018	0	0.5	Aroclor, Total	0.026	MG/KG		10	N	10	N	1	N
CMW-SD-2019	0	0.5	Aroclor, Total	5.2	MG/KG		10	N	10	N	1	Y
CMW-SD-2020	0	0.5	Aroclor, Total	2.49	MG/KG		10	N	10	N	1	Y
CMW-SD-2021	0	0.5	Aroclor, Total	0.87	MG/KG		10	N	10	N	1	N
SD-30	0	0.5	Aroclor, Total	1.4	MG/KG		10	N	10	N	1	Y
CMS-118	0	1	Aroclor, Total	0.7	MG/KG		10	N	10	N	1	N
CMS-131	0	1	Aroclor, Total	1.1	MG/KG		10	N	10	N	1	Y
CMS-134	0	1	Aroclor, Total	1.2	MG/KG		10	N	10	N	1	Y
CMS-140	0	1	Aroclor, Total	190	MG/KG		10	Y	10	Y	1	Y
CMS-141	0	1	Aroclor, Total	1.1	MG/KG		10	N	10	N	1	Y
CMS-147	0	1	Aroclor, Total	22	MG/KG		10	Y	10	Y	1	Y
CMS-148	0	1	Aroclor, Total	9.3	MG/KG		10	N	10	N	1	Y
CMS-159	0	1	Aroclor, Total	4.1	MG/KG		10	N	10	N	1	Y
CMS-168	0	1	Aroclor, Total	1.7	MG/KG		10	N	10	N	1	Y
CMS-170	0	1	Aroclor, Total	4	MG/KG		10	N	10	N	1	Y
CMS-171	0	1	Aroclor, Total	1.8	MG/KG		10	N	10	N	1	Y
CMS-237	0	1	Aroclor, Total	13	MG/KG		10	Y	10	Y	1	Y
CMS-238	0	1	Aroclor, Total	86	MG/KG		10	Y	10	Y	1	Y
CMS-239	0	1	Aroclor, Total	35	MG/KG		10	Y	10	Y	1	Y
CMS-240	0	1	Aroclor, Total	16	MG/KG		10	Y	10	Y	1	Y
CMS-241	0	1	Aroclor, Total	3.6	MG/KG		10	N	10	N	1	Y
CMS-242	0	1	Aroclor, Total	16	MG/KG		10	Y	10	Y	1	Y
CMS-402	0	1	Aroclor, Total	0.35	MG/KG		10	N	10	N	1	N
CMS-403	0	1	Aroclor, Total	0.33	MG/KG		10	N	10	N	1	N
CMS-405	0	1	Aroclor, Total	0.083	MG/KG		10	N	10	N	1	N
CMS-406	0	1	Aroclor, Total	0.063	MG/KG		10	N	10	N	1	N
CMS-409	0	1	Aroclor, Total	1.9	MG/KG		10	N	10	N	1	Y
CMS-410	0	1	Aroclor, Total	230	MG/KG		10	Y	10	Y	1	Y
CMS-411	0	1	Aroclor, Total	0.051	MG/KG		10	N	10	N	1	N
CMS-412	0	1	Aroclor, Total	0.087	MG/KG		10	N	10	N	1	N
CMS-415	0	1	Aroclor, Total	0.77	MG/KG		10	N	10	N	1	N
CMS-416	0	1	Aroclor, Total	3.6	MG/KG		10	N	10	N	1	Y
CMS-417	0	1	Aroclor, Total	320	MG/KG		10	Y	10	Y	1	Y

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-419	0	1	Aroclor, Total	27	MG/KG		10	Y	10	Y	1	Y
CMS-421	0	1	Aroclor, Total	1.1	MG/KG		10	N	10	N	1	Y
CMS-422	0	1	Aroclor, Total	0.26	MG/KG		10	N	10	N	1	N
CMS-423	0	1	Aroclor, Total	0.067	MG/KG		10	N	10	N	1	N
CMS-424	0	1	Aroclor, Total	0.12	MG/KG		10	N	10	N	1	N
CMS-425	0	1	Aroclor, Total	7.1	MG/KG		10	N	10	N	1	Y
CMS-426	0	1	Aroclor, Total	4	MG/KG		10	N	10	N	1	Y
CMS-427	0	1	Aroclor, Total	7.7	MG/KG		10	N	10	N	1	Y
CMS-428	0	1	Aroclor, Total	14	MG/KG		10	Y	10	Y	1	Y
CMS-456	0	1	Aroclor, Total	1.4	MG/KG		10	N	10	N	1	Y
CMS-703	0	1	Aroclor, Total	0.3	MG/KG		10	N	10	N	1	N
CMS-142	0	1	Aroclor, Total	0.59	MG/KG		10	N	10	N	1	N
CMS-060	0	1	Aroclor, Total	0.55	MG/KG		10	N	10	N	1	N
RES-14-271-01	0	1	Aroclor, Total	0.18	MG/KG		10	N	10	N	1	N
RES-14-272-01	0	1	Aroclor, Total	0.71	MG/KG		10	N	10	N	1	N
RES-14-302-01	0	1	Aroclor, Total	0.38	MG/KG		10	N	10	N	1	N
RES-14-303-01	0	1	Aroclor, Total	48	MG/KG		10	Y	10	Y	1	Y
RES-14-333-01	0	1	Aroclor, Total	1.49	MG/KG		10	N	10	N	1	Y
RES-14-271-01	0	1	Aroclor, Total	0.23	MG/KG		10	N	10	N	1	N
RES-14-272-01	0	1	Aroclor, Total	0.43	MG/KG		10	N	10	N	1	N
SS-02	0	1.3	Aroclor, Total	9.3	MG/KG		10	N	10	N	1	Y
SS-06	0	2	Aroclor, Total	0.76	MG/KG		10	N	10	N	1	N
CMW-SD-2022	0.5	2	Aroclor, Total	2.07	MG/KG		10	N	10	N	1	Y
MW01S	1	2	Aroclor, Total	0.11	MG/KG		10	N	10	N	1	N
MW08S	1	2	Aroclor, Total	1.8	MG/KG		10	N	10	N	1	Y
CMS-060	1	2	Aroclor, Total	0.25	MG/KG		10	N	10	N	1	N
CMS-089	1	2	Aroclor, Total	13	MG/KG		10	Y	10	Y	1	Y
CMS-118	1	2	Aroclor, Total	1.1	MG/KG		10	N	10	N	1	Y
CMS-131	1	2	Aroclor, Total	2.3	MG/KG		10	N	10	N	1	Y
CMS-147	1	2	Aroclor, Total	350	MG/KG		10	Y	10	Y	1	Y
CMS-161	1	2	Aroclor, Total	0.14	MG/KG		10	N	10	N	1	N
CMS-237	1	2	Aroclor, Total	56	MG/KG		10	Y	10	Y	1	Y
CMS-239	1	2	Aroclor, Total	32	MG/KG		10	Y	10	Y	1	Y
CMS-403	1	2	Aroclor, Total	0.2	MG/KG		10	N	10	N	1	N
CMS-404	1	2	Aroclor, Total	0.78	MG/KG		10	N	10	N	1	N
CMS-408	1	2	Aroclor, Total	23	MG/KG		10	Y	10	Y	1	Y
CMS-410	1	2	Aroclor, Total	9.6	MG/KG		10	N	10	N	1	Y
CMS-412	1	2	Aroclor, Total	4.9	MG/KG		10	N	10	N	1	Y
CMS-417	1	2	Aroclor, Total	27	MG/KG		10	Y	10	Y	1	Y
CMS-419	1	2	Aroclor, Total	490	MG/KG		10	Y	10	Y	1	Y
CMS-421	1	2	Aroclor, Total	36	MG/KG		10	Y	10	Y	1	Y
CMS-422	1	2	Aroclor, Total	160	MG/KG		10	Y	10	Y	1	Y
CMS-424	1	2	Aroclor, Total	1.2	MG/KG		10	N	10	N	1	Y
CMS-425	1	2	Aroclor, Total	1.7	MG/KG		10	N	10	N	1	Y
CMS-427	1	2	Aroclor, Total	17	MG/KG		10	Y	10	Y	1	Y
CMS-429	1	2	Aroclor, Total	1.1	MG/KG		10	N	10	N	1	Y
CMS-702	1	2	Aroclor, Total	0.14	MG/KG		10	N	10	N	1	N
CMS-421	1	2	Aroclor, Total	23	MG/KG		10	Y	10	Y	1	Y
CMW-SD-2022	2	2.5	Aroclor, Total	0.237	MG/KG		10	N	10	N	1	N
CMS-089	2	3	Aroclor, Total	31	MG/KG		10	Y	10	Y	1	Y

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-118	2	3	Aroclor, Total	3.7	MG/KG		10	N	10	N	1	Y
CMS-147	2	3	Aroclor, Total	1300	MG/KG		10	Y	10	Y	1	Y
CMS-237	2	3	Aroclor, Total	8.5	MG/KG		10	N	10	N	1	Y
CMS-406	2	3	Aroclor, Total	0.63	MG/KG		10	N	10	N	1	N
CMS-409	2	3	Aroclor, Total	1.4	MG/KG		10	N	10	N	1	Y
CMS-410	2	3	Aroclor, Total	180	MG/KG		10	Y	10	Y	1	Y
CMS-415	2	3	Aroclor, Total	0.082	MG/KG		10	N	10	N	1	N
CMS-416	2	3	Aroclor, Total	21	MG/KG		10	Y	10	Y	1	Y
CMS-417	2	3	Aroclor, Total	13	MG/KG		10	Y	10	Y	1	Y
CMS-419	2	3	Aroclor, Total	58	MG/KG		10	Y	10	Y	1	Y
CMS-420	2	3	Aroclor, Total	75	MG/KG		10	Y	10	Y	1	Y
CMS-421	2	3	Aroclor, Total	19	MG/KG		10	Y	10	Y	1	Y
CMS-422	2	3	Aroclor, Total	3.3	MG/KG		10	N	10	N	1	Y
CMS-423	2	3	Aroclor, Total	0.094	MG/KG		10	N	10	N	1	N
CMS-424	2	3	Aroclor, Total	0.13	MG/KG		10	N	10	N	1	N
CMS-425	2	3	Aroclor, Total	33	MG/KG		10	Y	10	Y	1	Y
CMS-426	2	3	Aroclor, Total	19	MG/KG		10	Y	10	Y	1	Y
CMS-427	2	3	Aroclor, Total	0.083	MG/KG		10	N	10	N	1	N
CMS-431	2	3	Aroclor, Total	2.9	MG/KG		10	N	10	N	1	Y
CMS-432	2	3	Aroclor, Total	0.2	MG/KG		10	N	10	N	1	N
MW08S	2	4	Aroclor, Total	0.13	MG/KG		10	N	10	N	1	N
MW01S	2	4	Aroclor, Total	0.39	MG/KG		10	N	10	N	1	N
MW02S	2	4	Aroclor, Total	0.185	MG/KG		10	N	10	N	1	N
MW08S	2	4	Aroclor, Total	0.13	MG/KG		10	N	10	N	1	N
MW15D	2	4	Aroclor, Total	0.042	MG/KG		10	N	10	N	1	N
SB02	2	4	Aroclor, Total	4.3	MG/KG		10	N	10	N	1	Y
SS-03	2.5	3.5	Aroclor, Total	0.15	MG/KG		10	N	10	N	1	N
MW07S	3	4	Aroclor, Total	0.12	MG/KG		10	N	10	N	1	N
CMS-155	3	4	Aroclor, Total	2.4	MG/KG		10	N	10	N	1	Y
CMS-162	3	4	Aroclor, Total	2.1	MG/KG		10	N	10	N	1	Y
CMS-175	3	4	Aroclor, Total	0.17	MG/KG		10	N	10	N	1	N
CMS-405	3	4	Aroclor, Total	0.72	MG/KG		10	N	10	N	1	N
CMS-410	3	4	Aroclor, Total	29	MG/KG		10	Y	10	Y	1	Y
CMS-417	3	4	Aroclor, Total	46	MG/KG		10	Y	10	Y	1	Y
CMS-419	3	4	Aroclor, Total	0.25	MG/KG		10	N	10	N	1	N
CMS-420	3	4	Aroclor, Total	860	MG/KG		10	Y	10	Y	1	Y
CMS-422	3	4	Aroclor, Total	2.9	MG/KG		10	N	10	N	1	Y
CMS-423	3	4	Aroclor, Total	12	MG/KG		10	Y	10	Y	1	Y
CMS-424	3	4	Aroclor, Total	0.089	MG/KG		10	N	10	N	1	N
CMS-426	3	4	Aroclor, Total	0.7	MG/KG		10	N	10	N	1	N
CMS-432	3	4	Aroclor, Total	280	MG/KG		10	Y	10	Y	1	Y
CMS-433	3	4	Aroclor, Total	1.9	MG/KG		10	N	10	N	1	Y
CMS-423	3	4	Aroclor, Total	9.1	MG/KG		10	N	10	N	1	Y
CMS-060	4	5	Aroclor, Total	0.23	MG/KG		10	N	10	N	1	N
CMS-419	4	5	Aroclor, Total	0.8	MG/KG		10	N	10	N	1	N
CMS-426	4	5	Aroclor, Total	0.32	MG/KG		10	N	10	N	1	N
CMS-427	4	5	Aroclor, Total	23	MG/KG		10	Y	10	Y	1	Y
MW01S	4	6	Aroclor, Total	0.47	MG/KG		10	N	10	N	1	N
MW09S	4	6	Aroclor, Total	0.15	MG/KG		10	N	10	N	1	N
SB02	4	6	Aroclor, Total	4.2	MG/KG		10	N	10	N	1	Y

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-4105	0	1	Aroclor, Total	18.9	MG/KG		10	Y	10	Y	1	Y
CMS-4110	0	1	Aroclor, Total	11.0	MG/KG		10	Y	10	Y	1	Y
CMW-SD-2019	0	0.5	Arsenic	10.4	MG/KG	J	7	Y	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Arsenic	5.6	MG/KG	J	7	N	nc	NA	nc	NA
CMS-060	0	1	Arsenic	7.6	MG/KG	J	7	Y	nc	NA	nc	NA
CMS-089	0	1	Arsenic	3.5	MG/KG	J	7	N	nc	NA	nc	NA
CMS-098	0	1	Arsenic	3.3	MG/KG	J	7	N	nc	NA	nc	NA
CMS-118	0	1	Arsenic	5	MG/KG	J	7	N	nc	NA	nc	NA
CMS-142	0	1	Arsenic	4.4	MG/KG	J	7	N	nc	NA	nc	NA
CMS-159	0	1	Arsenic	8.1	MG/KG	J	7	Y	nc	NA	nc	NA
CMS-164	0	1	Arsenic	6.6	MG/KG	J	7	N	nc	NA	nc	NA
CMS-173	0	1	Arsenic	8.3	MG/KG	J	7	Y	nc	NA	nc	NA
CMS-237	0	1	Arsenic	4.2	MG/KG	J	7	N	nc	NA	nc	NA
CMS-405	0	1	Arsenic	1.2	MG/KG	J	7	N	nc	NA	nc	NA
CMS-407	0	1	Arsenic	1.3	MG/KG	J	7	N	nc	NA	nc	NA
CMS-408	0	1	Arsenic	1.5	MG/KG	J	7	N	nc	NA	nc	NA
CMS-417	0	1	Arsenic	6.5	MG/KG	J	7	N	nc	NA	nc	NA
CMS-456	0	1	Arsenic	2.8	MG/KG	J	7	N	nc	NA	nc	NA
CMS-142	0	1	Arsenic	3.4	MG/KG	J	7	N	nc	NA	nc	NA
CMS-060	0	1	Arsenic	7.7	MG/KG	J	7	Y	nc	NA	nc	NA
RES-14-302-01	0	1	Arsenic	2	MG/KG	J	7	N	nc	NA	nc	NA
RES-14-303-01	0	1	Arsenic	6.4	MG/KG	J	7	N	nc	NA	nc	NA
RES-14-333-01	0	1	Arsenic	12.1	MG/KG	J	7	Y	nc	NA	nc	NA
RES-14-271-01	0	1	Arsenic	2.8	MG/KG	J	7	N	nc	NA	nc	NA
RES-14-272-01	0	1	Arsenic	4.7	MG/KG	J	7	N	nc	NA	nc	NA
MW05S	1	2	Arsenic	1.8	MG/KG	J	7	N	nc	NA	nc	NA
MW05S	1	2	Arsenic	1.8	MG/KG	J	7	N	nc	NA	nc	NA
SB-14-271	1	2	Arsenic	4.7	MG/KG	J	7	N	nc	NA	nc	NA
CMS-060	1	2	Arsenic	6.7	MG/KG	J	7	N	nc	NA	nc	NA
CMS-089	1	2	Arsenic	3.6	MG/KG	J	7	N	nc	NA	nc	NA
CMS-118	1	2	Arsenic	6.8	MG/KG	J	7	N	nc	NA	nc	NA
CMS-173	1	2	Arsenic	1.5	MG/KG	J	7	N	nc	NA	nc	NA
CMS-237	1	2	Arsenic	12.3	MG/KG	J	7	Y	nc	NA	nc	NA
CMS-405	1	2	Arsenic	5.8	MG/KG	J	7	N	nc	NA	nc	NA
CMS-407	1	2	Arsenic	1.5	MG/KG	J	7	N	nc	NA	nc	NA
CMS-408	1	2	Arsenic	7.6	MG/KG	J	7	Y	nc	NA	nc	NA
CMS-417	1	2	Arsenic	10.2	MG/KG	J	7	Y	nc	NA	nc	NA
CMS-419	1	2	Arsenic	8.3	MG/KG	J	7	Y	nc	NA	nc	NA
CMS-423	1	2	Arsenic	3.4	MG/KG	J	7	N	nc	NA	nc	NA
CMS-427	1	2	Arsenic	3.2	MG/KG	J	7	N	nc	NA	nc	NA
CMS-428	1	2	Arsenic	3.5	MG/KG	J	7	N	nc	NA	nc	NA
CMS-456	1	2	Arsenic	3.1	MG/KG	J	7	N	nc	NA	nc	NA
CMS-405	1	2	Arsenic	12.9	MG/KG	J	7	Y	nc	NA	nc	NA
CMS-060	2	3	Arsenic	9.1	MG/KG	J	7	Y	nc	NA	nc	NA
CMS-089	2	3	Arsenic	3.9	MG/KG	J	7	N	nc	NA	nc	NA
CMS-237	2	3	Arsenic	10.7	MG/KG	J	7	Y	nc	NA	nc	NA
CMS-405	2	3	Arsenic	14.9	MG/KG	J	7	Y	nc	NA	nc	NA
CMS-407	2	3	Arsenic	7.1	MG/KG	J	7	Y	nc	NA	nc	NA
CMS-408	2	3	Arsenic	9.9	MG/KG	J	7	Y	nc	NA	nc	NA
CMS-417	2	3	Arsenic	6.2	MG/KG	J	7	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-455	2	3	Arsenic	9.3	MG/KG	J	7	Y	nc	NA	nc	NA
MW05S	2	4	Arsenic	4.7	MG/KG	J	7	N	nc	NA	nc	NA
MW06S	2	4	Arsenic	5.9	MG/KG	J	7	N	nc	NA	nc	NA
MW15D	2	4	Arsenic	1.4	MG/KG	J	7	N	nc	NA	nc	NA
SB-14-271	2	4	Arsenic	1.1	MG/KG	J	7	N	nc	NA	nc	NA
MW07S	3	4	Arsenic	1.7	MG/KG	J	7	N	nc	NA	nc	NA
CMS-060	3	4	Arsenic	3	MG/KG	J	7	N	nc	NA	nc	NA
CMS-089	3	4	Arsenic	3.7	MG/KG	J	7	N	nc	NA	nc	NA
CMS-118	3	4	Arsenic	7.4	MG/KG	J	7	Y	nc	NA	nc	NA
CMS-405	3	4	Arsenic	11.7	MG/KG	J	7	Y	nc	NA	nc	NA
CMS-407	3	4	Arsenic	2.3	MG/KG	J	7	N	nc	NA	nc	NA
CMS-417	3	4	Arsenic	7.5	MG/KG	J	7	Y	nc	NA	nc	NA
CMS-419	3	4	Arsenic	7.2	MG/KG	J	7	Y	nc	NA	nc	NA
CMS-423	3	4	Arsenic	5.6	MG/KG	J	7	N	nc	NA	nc	NA
CMS-427	3	4	Arsenic	1.9	MG/KG	J	7	N	nc	NA	nc	NA
CMS-428	3	4	Arsenic	4.1	MG/KG	J	7	N	nc	NA	nc	NA
CMS-423	3	4	Arsenic	5.2	MG/KG	J	7	N	nc	NA	nc	NA
CMS-060	4	5	Arsenic	5.9	MG/KG	J	7	N	nc	NA	nc	NA
CMS-118	4	5	Arsenic	2.3	MG/KG	J	7	N	nc	NA	nc	NA
CMS-405	4	5	Arsenic	2.5	MG/KG	J	7	N	nc	NA	nc	NA
CMS-455	4	5	Arsenic	3.1	MG/KG	J	7	N	nc	NA	nc	NA
SB03	4	6	Arsenic	1.1	MG/KG	J	7	N	nc	NA	nc	NA
MW15D	4	6	Arsenic	2.6	MG/KG	J	7	N	nc	NA	nc	NA
MW05S	4	6	Arsenic	5.1	MG/KG	J	7	N	nc	NA	nc	NA
MW06S	4	6	Arsenic	5.4	MG/KG	J	7	N	nc	NA	nc	NA
MW07S	4	6	Arsenic	3.3	MG/KG	J	7	N	nc	NA	nc	NA
MW09S	4	6	Arsenic	5.2	MG/KG	J	7	N	nc	NA	nc	NA
MW15D	4	6	Arsenic	2.6	MG/KG	J	7	N	nc	NA	nc	NA
SB-14-271	4	6	Arsenic	1.1	MG/KG	J	7	N	nc	NA	nc	NA
SB03	4	6	Arsenic	1	MG/KG	J	7	N	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Arsenic	0.54	MG/KG	U	7	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Arsenic	1.9	MG/KG	U	7	NA	nc	NA	nc	NA
CMS-703	0	2	Arsenic	10.7	MG/KG	U	7	NA	nc	NA	nc	NA
BV01COMP	0	4	Arsenic	34.1	MG/KG	U	7	NA	nc	NA	nc	NA
MW01S	4	6	Arsenic	1.4	MG/KG	U	7	NA	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Arsenic	2.4	MG/KG		7	N	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Arsenic	1.8	MG/KG		7	N	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Arsenic	3.3	MG/KG		7	N	nc	NA	nc	NA
RES-14-272-01	0	1	Arsenic	3.5	MG/KG		7	N	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Arsenic	2.2	MG/KG		7	N	nc	NA	nc	NA
MW14M	1	2	Arsenic	6	MG/KG		7	N	nc	NA	nc	NA
MW01S	1	2	Arsenic	2.7	MG/KG		7	N	nc	NA	nc	NA
MW08S	1	2	Arsenic	8	MG/KG		7	Y	nc	NA	nc	NA
MW14M	1	2	Arsenic	6.7	MG/KG		7	N	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Arsenic	1.3	MG/KG		7	N	nc	NA	nc	NA
CMS-118	2	3	Arsenic	49.3	MG/KG		7	Y	nc	NA	nc	NA
MW08S	2	4	Arsenic	9.5	MG/KG		7	Y	nc	NA	nc	NA
SB02	2	4	Arsenic	6.2	MG/KG		7	N	nc	NA	nc	NA
MW02S	2	4	Arsenic	5.1	MG/KG		7	N	nc	NA	nc	NA
MW06S	2	4	Arsenic	6.9	MG/KG		7	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW08S	2	4	Arsenic	5.8	MG/KG		7	N	nc	NA	nc	NA
MW14M	2	4	Arsenic	6.8	MG/KG		7	N	nc	NA	nc	NA
SB02	2	4	Arsenic	6.3	MG/KG		7	N	nc	NA	nc	NA
SB03	2	4	Arsenic	1.9	MG/KG		7	N	nc	NA	nc	NA
GEC-7	2.5	4.5	Arsenic	4.4	MG/KG		7	N	nc	NA	nc	NA
MW03S	4	6	Arsenic	2.2	MG/KG		7	N	nc	NA	nc	NA
MW04D	4	6	Arsenic	7.1	MG/KG		7	Y	nc	NA	nc	NA
MW08S	4	6	Arsenic	2.8	MG/KG		7	N	nc	NA	nc	NA
SB02	4	6	Arsenic	5.4	MG/KG		7	N	nc	NA	nc	NA
CMS-4105	0	1	Arsenic	17.3	MG/KG		7	Y	nc	NA	nc	NA
CMS-4110	0	1	Arsenic	4.93	MG/KG		7	N	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Barium	90.6	MG/KG	J	5500	N	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Barium	99.7	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-089	0	1	Barium	27.7	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-098	0	1	Barium	24.5	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-142	0	1	Barium	21.8	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-164	0	1	Barium	212	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-173	0	1	Barium	104	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-237	0	1	Barium	209	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-405	0	1	Barium	33.4	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-407	0	1	Barium	31.3	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-408	0	1	Barium	24.5	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-417	0	1	Barium	322	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-456	0	1	Barium	34.4	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-142	0	1	Barium	19	MG/KG	J	5500	N	nc	NA	nc	NA
RES-14-333-01	0	1	Barium	115	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-089	1	2	Barium	51.7	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-173	1	2	Barium	27.4	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-237	1	2	Barium	870	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-405	1	2	Barium	210	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-407	1	2	Barium	52	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-408	1	2	Barium	672	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-417	1	2	Barium	1010	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-428	1	2	Barium	46.9	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-456	1	2	Barium	60.8	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-405	1	2	Barium	246	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-089	2	3	Barium	44.9	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-237	2	3	Barium	254	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-405	2	3	Barium	254	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-407	2	3	Barium	32.8	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-408	2	3	Barium	785	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-417	2	3	Barium	154	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-455	2	3	Barium	378	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-060	3	4	Barium	26	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-089	3	4	Barium	40.1	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-405	3	4	Barium	865	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-407	3	4	Barium	29.2	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-417	3	4	Barium	87.5	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-427	3	4	Barium	24.3	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-428	3	4	Barium	31.5	MG/KG	J	5500	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-405	4	5	Barium	23.9	MG/KG	J	5500	N	nc	NA	nc	NA
CMS-455	4	5	Barium	32.4	MG/KG	J	5500	N	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Barium	12.4	MG/KG		5500	N	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Barium	38.6	MG/KG		5500	N	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Barium	9.8	MG/KG		5500	N	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Barium	61.2	MG/KG		5500	N	nc	NA	nc	NA
CMS-060	0	1	Barium	40.2	MG/KG		5500	N	nc	NA	nc	NA
CMS-118	0	1	Barium	55.9	MG/KG		5500	N	nc	NA	nc	NA
CMS-159	0	1	Barium	181	MG/KG		5500	N	nc	NA	nc	NA
CMS-060	0	1	Barium	62.5	MG/KG		5500	N	nc	NA	nc	NA
RES-14-271-01	0	1	Barium	108	MG/KG		5500	N	nc	NA	nc	NA
RES-14-272-01	0	1	Barium	189	MG/KG		5500	N	nc	NA	nc	NA
RES-14-302-01	0	1	Barium	221	MG/KG		5500	N	nc	NA	nc	NA
RES-14-303-01	0	1	Barium	154	MG/KG		5500	N	nc	NA	nc	NA
RES-14-271-01	0	1	Barium	127	MG/KG		5500	N	nc	NA	nc	NA
RES-14-272-01	0	1	Barium	290	MG/KG		5500	N	nc	NA	nc	NA
CMS-703	0	2	Barium	43	MG/KG		5500	N	nc	NA	nc	NA
BV01COMP	0	4	Barium	26.4	MG/KG		5500	N	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Barium	69.3	MG/KG		5500	N	nc	NA	nc	NA
MW05S	1	2	Barium	26	MG/KG		5500	N	nc	NA	nc	NA
MW14M	1	2	Barium	65.5	MG/KG		5500	N	nc	NA	nc	NA
MW01S	1	2	Barium	78.2	MG/KG		5500	N	nc	NA	nc	NA
MW05S	1	2	Barium	28.6	MG/KG		5500	N	nc	NA	nc	NA
MW08S	1	2	Barium	218	MG/KG		5500	N	nc	NA	nc	NA
MW14M	1	2	Barium	87.2	MG/KG		5500	N	nc	NA	nc	NA
SB-14-271	1	2	Barium	76	MG/KG		5500	N	nc	NA	nc	NA
CMS-060	1	2	Barium	73.3	MG/KG		5500	N	nc	NA	nc	NA
CMS-118	1	2	Barium	93.5	MG/KG		5500	N	nc	NA	nc	NA
CMS-419	1	2	Barium	845	MG/KG		5500	N	nc	NA	nc	NA
CMS-423	1	2	Barium	34	MG/KG		5500	N	nc	NA	nc	NA
CMS-427	1	2	Barium	61.5	MG/KG		5500	N	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Barium	17.5	MG/KG		5500	N	nc	NA	nc	NA
CMS-060	2	3	Barium	36.8	MG/KG		5500	N	nc	NA	nc	NA
CMS-118	2	3	Barium	437	MG/KG		5500	N	nc	NA	nc	NA
MW08S	2	4	Barium	60	MG/KG		5500	N	nc	NA	nc	NA
SB02	2	4	Barium	47.4	MG/KG		5500	N	nc	NA	nc	NA
MW02S	2	4	Barium	25.5	MG/KG		5500	N	nc	NA	nc	NA
MW05S	2	4	Barium	53.9	MG/KG		5500	N	nc	NA	nc	NA
MW06S	2	4	Barium	142	MG/KG		5500	N	nc	NA	nc	NA
MW06S	2	4	Barium	85.5	MG/KG		5500	N	nc	NA	nc	NA
MW08S	2	4	Barium	87.2	MG/KG		5500	N	nc	NA	nc	NA
MW14M	2	4	Barium	93.8	MG/KG		5500	N	nc	NA	nc	NA
MW15D	2	4	Barium	16.2	MG/KG		5500	N	nc	NA	nc	NA
SB-14-271	2	4	Barium	24.3	MG/KG		5500	N	nc	NA	nc	NA
SB02	2	4	Barium	33	MG/KG		5500	N	nc	NA	nc	NA
SB03	2	4	Barium	23.8	MG/KG		5500	N	nc	NA	nc	NA
GEC-7	2.5	4.5	Barium	190	MG/KG		5500	N	nc	NA	nc	NA
MW07S	3	4	Barium	42	MG/KG		5500	N	nc	NA	nc	NA
CMS-118	3	4	Barium	150	MG/KG		5500	N	nc	NA	nc	NA
CMS-419	3	4	Barium	76.5	MG/KG		5500	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-423	3	4	Barium	68.4	MG/KG		5500	N	nc	NA	nc	NA
CMS-423	3	4	Barium	108	MG/KG		5500	N	nc	NA	nc	NA
CMS-060	4	5	Barium	41.1	MG/KG		5500	N	nc	NA	nc	NA
CMS-118	4	5	Barium	31.2	MG/KG		5500	N	nc	NA	nc	NA
SB03	4	6	Barium	24.7	MG/KG		5500	N	nc	NA	nc	NA
MW15D	4	6	Barium	32.3	MG/KG		5500	N	nc	NA	nc	NA
MW01S	4	6	Barium	13.9	MG/KG		5500	N	nc	NA	nc	NA
MW03S	4	6	Barium	16.4	MG/KG		5500	N	nc	NA	nc	NA
MW04D	4	6	Barium	9.7	MG/KG		5500	N	nc	NA	nc	NA
MW05S	4	6	Barium	123	MG/KG		5500	N	nc	NA	nc	NA
MW06S	4	6	Barium	259	MG/KG		5500	N	nc	NA	nc	NA
MW07S	4	6	Barium	24.9	MG/KG		5500	N	nc	NA	nc	NA
MW08S	4	6	Barium	26.4	MG/KG		5500	N	nc	NA	nc	NA
MW09S	4	6	Barium	50.1	MG/KG		5500	N	nc	NA	nc	NA
MW15D	4	6	Barium	38.8	MG/KG		5500	N	nc	NA	nc	NA
SB-14-271	4	6	Barium	12.7	MG/KG		5500	N	nc	NA	nc	NA
SB02	4	6	Barium	27.5	MG/KG		5500	N	nc	NA	nc	NA
SB03	4	6	Barium	21.5	MG/KG		5500	N	nc	NA	nc	NA
CMS-4105	0	1	Barium	151	MG/KG		5500	N	nc	NA	nc	NA
CMS-4110	0	1	Barium	106	MG/KG		5500	N	nc	NA	nc	NA
CMS-164	0	1	Benzene	0.064	MG/KG	J	2.5	N	0.2	N	nc	NA
CMS-405	0	1	Benzene	0.0064	MG/KG	J	2.5	N	0.2	N	nc	NA
MW14M	1	2	Benzene	0.04	MG/KG	J	2.5	N	0.2	N	nc	NA
MW08S	1	2	Benzene	0.22	MG/KG	J	2.5	N	0.2	Y	nc	NA
MW14M	1	2	Benzene	0.041	MG/KG	J	2.5	N	0.2	N	nc	NA
CMS-237	1	2	Benzene	0.006	MG/KG	J	2.5	N	0.2	N	nc	NA
CMS-405	1	2	Benzene	140	MG/KG	J	2.5	Y	0.2	Y	nc	NA
CMS-405	1	2	Benzene	83	MG/KG	J	2.5	Y	0.2	Y	nc	NA
CMS-237	2	3	Benzene	0.018	MG/KG	J	2.5	N	0.2	N	nc	NA
CMS-405	2	3	Benzene	27	MG/KG	J	2.5	Y	0.2	Y	nc	NA
CMS-407	2	3	Benzene	0.011	MG/KG	J	2.5	N	0.2	N	nc	NA
CMS-405	3	4	Benzene	130	MG/KG	J	2.5	Y	0.2	Y	nc	NA
CMS-405	4	5	Benzene	66	MG/KG	J	2.5	Y	0.2	Y	nc	NA
CMS-455	4	5	Benzene	0.0017	MG/KG	J	2.5	N	0.2	N	nc	NA
MW08S	4	6	Benzene	0.11	MG/KG	J	2.5	N	0.2	N	nc	NA
CMS-089	0	1	Benzene	0.005	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-098	0	1	Benzene	0.0097	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-118	0	1	Benzene	0.0048	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-142	0	1	Benzene	0.0095	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-159	0	1	Benzene	0.021	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-407	0	1	Benzene	0.005	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-417	0	1	Benzene	59	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-456	0	1	Benzene	0.0075	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-702	0	1	Benzene	0.0087	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-703	0	1	Benzene	0.0061	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-142	0	1	Benzene	0.011	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-060	0	1	Benzene	2.7	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-065	0	10	Benzene	0.79	MG/KG	U	2.5	NA	0.2	NA	nc	NA
MW05S	1	2	Benzene	0.095	MG/KG	U	2.5	NA	0.2	NA	nc	NA
MW01S	1	2	Benzene	0.34	MG/KG	U	2.5	NA	0.2	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW05S	1	2	Benzene	0.11	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-060	1	2	Benzene	5.1	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-089	1	2	Benzene	0.0048	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-118	1	2	Benzene	0.006	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-173	1	2	Benzene	0.0083	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-417	1	2	Benzene	130	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-419	1	2	Benzene	28	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-423	1	2	Benzene	0.0062	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-427	1	2	Benzene	0.0045	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-428	1	2	Benzene	0.0054	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-456	1	2	Benzene	0.0089	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-060	2	3	Benzene	0.27	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-089	2	3	Benzene	0.0047	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-118	2	3	Benzene	0.0074	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-417	2	3	Benzene	17	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-455	2	3	Benzene	0.33	MG/KG	U	2.5	NA	0.2	NA	nc	NA
MW08S	2	4	Benzene	0.21	MG/KG	U	2.5	NA	0.2	NA	nc	NA
MW01S	2	4	Benzene	0.22	MG/KG	U	2.5	NA	0.2	NA	nc	NA
MW02S	2	4	Benzene	0.2	MG/KG	U	2.5	NA	0.2	NA	nc	NA
MW04D	2	4	Benzene	0.5	MG/KG	U	2.5	NA	0.2	NA	nc	NA
MW05S	2	4	Benzene	0.1	MG/KG	U	2.5	NA	0.2	NA	nc	NA
MW06S	2	4	Benzene	0.3	MG/KG	U	2.5	NA	0.2	NA	nc	NA
MW06S	2	4	Benzene	0.3	MG/KG	U	2.5	NA	0.2	NA	nc	NA
MW08S	2	4	Benzene	0.32	MG/KG	U	2.5	NA	0.2	NA	nc	NA
MW14M	2	4	Benzene	0.14	MG/KG	U	2.5	NA	0.2	NA	nc	NA
MW15D	2	4	Benzene	0.14	MG/KG	U	2.5	NA	0.2	NA	nc	NA
SB02	2	4	Benzene	0.38	MG/KG	U	2.5	NA	0.2	NA	nc	NA
SB03	2	4	Benzene	0.3	MG/KG	U	2.5	NA	0.2	NA	nc	NA
GEC-7	2.5	4.5	Benzene	0.03	MG/KG	U	2.5	NA	0.2	NA	nc	NA
MW07S	3	4	Benzene	0.5	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-060	3	4	Benzene	0.0058	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-089	3	4	Benzene	0.0041	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-118	3	4	Benzene	0.0084	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-407	3	4	Benzene	0.32	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-417	3	4	Benzene	0.28	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-419	3	4	Benzene	0.32	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-423	3	4	Benzene	0.0045	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-428	3	4	Benzene	0.0057	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-423	3	4	Benzene	0.0049	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-060	4	5	Benzene	0.0048	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-118	4	5	Benzene	0.0059	MG/KG	U	2.5	NA	0.2	NA	nc	NA
MW15D	4	6	Benzene	0.1	MG/KG	U	2.5	NA	0.2	NA	nc	NA
MW02S	4	6	Benzene	0.55	MG/KG	U	2.5	NA	0.2	NA	nc	NA
SB03	4	6	Benzene	0.2	MG/KG	U	2.5	NA	0.2	NA	nc	NA
MW01S	4	6	Benzene	0.24	MG/KG	U	2.5	NA	0.2	NA	nc	NA
MW02S	4	6	Benzene	0.42	MG/KG	U	2.5	NA	0.2	NA	nc	NA
MW03S	4	6	Benzene	0.35	MG/KG	U	2.5	NA	0.2	NA	nc	NA
MW04D	4	6	Benzene	0.18	MG/KG	U	2.5	NA	0.2	NA	nc	NA
MW06S	4	6	Benzene	0.43	MG/KG	U	2.5	NA	0.2	NA	nc	NA
MW07S	4	6	Benzene	0.26	MG/KG	U	2.5	NA	0.2	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW09S	4	6	Benzene	0.26	MG/KG	U	2.5	NA	0.2	NA	nc	NA
MW15D	4	6	Benzene	0.12	MG/KG	U	2.5	NA	0.2	NA	nc	NA
SB02	4	6	Benzene	0.26	MG/KG	U	2.5	NA	0.2	NA	nc	NA
SB03	4	6	Benzene	0.18	MG/KG	U	2.5	NA	0.2	NA	nc	NA
CMS-237	0	1	Benzene	0.0059	MG/KG	UJ	2.5	NA	0.2	NA	nc	NA
SB-14-271	1	2	Benzene	0.12	MG/KG	UJ	2.5	NA	0.2	NA	nc	NA
SB-14-271	2	4	Benzene	0.13	MG/KG	UJ	2.5	NA	0.2	NA	nc	NA
MW05S	4	6	Benzene	0.11	MG/KG	UJ	2.5	NA	0.2	NA	nc	NA
SB-14-271	4	6	Benzene	0.11	MG/KG	UJ	2.5	NA	0.2	NA	nc	NA
CMS-173	0	1	Benzene	0.098	MG/KG		2.5	N	0.2	N	nc	NA
CMS-408	0	1	Benzene	0.014	MG/KG		2.5	N	0.2	N	nc	NA
CMS-407	1	2	Benzene	0.016	MG/KG		2.5	N	0.2	N	nc	NA
CMS-408	1	2	Benzene	160	MG/KG		2.5	Y	0.2	Y	nc	NA
CMS-408	2	3	Benzene	480	MG/KG		2.5	Y	0.2	Y	nc	NA
GEC-6	2.5	4.5	Benzene	0.12	MG/KG		2.5	N	0.2	N	nc	NA
CMS-427	3	4	Benzene	0.017	MG/KG		2.5	N	0.2	N	nc	NA
SS-01	0	0	Benzo(a)anthracene	0.42	MG/KG	J	0.9	N	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Benzo(a)anthracene	0.52	MG/KG	J	0.9	N	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Benzo(a)anthracene	0.24	MG/KG	J	0.9	N	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Benzo(a)anthracene	2	MG/KG	J	0.9	Y	nc	NA	nc	NA
CMS-060	0	1	Benzo(a)anthracene	0.91	MG/KG	J	0.9	Y	nc	NA	nc	NA
CMS-098	0	1	Benzo(a)anthracene	0.2	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-142	0	1	Benzo(a)anthracene	0.27	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-159	0	1	Benzo(a)anthracene	1.8	MG/KG	J	0.9	Y	nc	NA	nc	NA
CMS-164	0	1	Benzo(a)anthracene	0.24	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-173	0	1	Benzo(a)anthracene	0.48	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-237	0	1	Benzo(a)anthracene	0.99	MG/KG	J	0.9	Y	nc	NA	nc	NA
CMS-408	0	1	Benzo(a)anthracene	0.082	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-142	0	1	Benzo(a)anthracene	0.14	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-060	0	1	Benzo(a)anthracene	1.5	MG/KG	J	0.9	Y	nc	NA	nc	NA
RES-14-271-01	0	1	Benzo(a)anthracene	0.32	MG/KG	J	0.9	N	nc	NA	nc	NA
RES-14-272-01	0	1	Benzo(a)anthracene	0.58	MG/KG	J	0.9	N	nc	NA	nc	NA
RES-14-302-01	0	1	Benzo(a)anthracene	0.56	MG/KG	J	0.9	N	nc	NA	nc	NA
RES-14-303-01	0	1	Benzo(a)anthracene	1.4	MG/KG	J	0.9	Y	nc	NA	nc	NA
RES-14-333-01	0	1	Benzo(a)anthracene	2.3	MG/KG	J	0.9	Y	nc	NA	nc	NA
RES-14-271-01	0	1	Benzo(a)anthracene	0.8	MG/KG	J	0.9	N	nc	NA	nc	NA
RES-14-272-01	0	1	Benzo(a)anthracene	0.78	MG/KG	J	0.9	N	nc	NA	nc	NA
SS-02	0	1.3	Benzo(a)anthracene	0.28	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-703	0	2	Benzo(a)anthracene	0.63	MG/KG	J	0.9	N	nc	NA	nc	NA
SS-06	0	2	Benzo(a)anthracene	0.53	MG/KG	J	0.9	N	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Benzo(a)anthracene	2.2	MG/KG	J	0.9	Y	nc	NA	nc	NA
MW08S	1	2	Benzo(a)anthracene	0.17	MG/KG	J	0.9	N	nc	NA	nc	NA
MW14M	1	2	Benzo(a)anthracene	0.24	MG/KG	J	0.9	N	nc	NA	nc	NA
MW14M	1	2	Benzo(a)anthracene	0.32	MG/KG	J	0.9	N	nc	NA	nc	NA
SB-14-271	1	2	Benzo(a)anthracene	0.21	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-237	1	2	Benzo(a)anthracene	0.4	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-405	1	2	Benzo(a)anthracene	5.5	MG/KG	J	0.9	Y	nc	NA	nc	NA
CMS-408	1	2	Benzo(a)anthracene	0.83	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-423	1	2	Benzo(a)anthracene	0.21	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-427	1	2	Benzo(a)anthracene	1	MG/KG	J	0.9	Y	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-405	1	2	Benzo(a)anthracene	1.1	MG/KG	J	0.9	Y	nc	NA	nc	NA
CMS-060	2	3	Benzo(a)anthracene	0.13	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-118	2	3	Benzo(a)anthracene	0.36	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-405	2	3	Benzo(a)anthracene	0.37	MG/KG	J	0.9	N	nc	NA	nc	NA
MW08S	2	4	Benzo(a)anthracene	0.39	MG/KG	J	0.9	N	nc	NA	nc	NA
SB02	2	4	Benzo(a)anthracene	0.6	MG/KG	J	0.9	N	nc	NA	nc	NA
MW01S	2	4	Benzo(a)anthracene	0.77	MG/KG	J	0.9	N	nc	NA	nc	NA
MW02S	2	4	Benzo(a)anthracene	0.046	MG/KG	J	0.9	N	nc	NA	nc	NA
MW06S	2	4	Benzo(a)anthracene	0.18	MG/KG	J	0.9	N	nc	NA	nc	NA
MW06S	2	4	Benzo(a)anthracene	0.17	MG/KG	J	0.9	N	nc	NA	nc	NA
MW08S	2	4	Benzo(a)anthracene	0.25	MG/KG	J	0.9	N	nc	NA	nc	NA
MW14M	2	4	Benzo(a)anthracene	0.2	MG/KG	J	0.9	N	nc	NA	nc	NA
MW15D	2	4	Benzo(a)anthracene	0.14	MG/KG	J	0.9	N	nc	NA	nc	NA
SB02	2	4	Benzo(a)anthracene	0.7	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-118	3	4	Benzo(a)anthracene	0.095	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-407	3	4	Benzo(a)anthracene	0.19	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-423	3	4	Benzo(a)anthracene	0.23	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-423	3	4	Benzo(a)anthracene	0.18	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-060	4	5	Benzo(a)anthracene	0.22	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-118	4	5	Benzo(a)anthracene	0.069	MG/KG	J	0.9	N	nc	NA	nc	NA
MW15D	4	6	Benzo(a)anthracene	1.1	MG/KG	J	0.9	Y	nc	NA	nc	NA
MW06S	4	6	Benzo(a)anthracene	0.084	MG/KG	J	0.9	N	nc	NA	nc	NA
MW07S	4	6	Benzo(a)anthracene	0.16	MG/KG	J	0.9	N	nc	NA	nc	NA
MW09S	4	6	Benzo(a)anthracene	0.36	MG/KG	J	0.9	N	nc	NA	nc	NA
MW15D	4	6	Benzo(a)anthracene	0.65	MG/KG	J	0.9	N	nc	NA	nc	NA
SB02	4	6	Benzo(a)anthracene	0.39	MG/KG	J	0.9	N	nc	NA	nc	NA
MW05S	2	4	Benzo(a)anthracene	3.9	MG/KG	J*	0.9	Y	nc	NA	nc	NA
CMS-417	0	1	Benzo(a)anthracene	35	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW05S	1	2	Benzo(a)anthracene	0.36	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW05S	1	2	Benzo(a)anthracene	0.36	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-173	1	2	Benzo(a)anthracene	0.52	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-417	1	2	Benzo(a)anthracene	35	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-419	1	2	Benzo(a)anthracene	74	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-428	1	2	Benzo(a)anthracene	0.35	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-089	2	3	Benzo(a)anthracene	0.7	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-417	2	3	Benzo(a)anthracene	9.8	MG/KG	U	0.9	NA	nc	NA	nc	NA
SB-14-271	2	4	Benzo(a)anthracene	0.45	MG/KG	U	0.9	NA	nc	NA	nc	NA
SS-03	2.5	3.5	Benzo(a)anthracene	0.4	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-060	3	4	Benzo(a)anthracene	0.45	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-417	3	4	Benzo(a)anthracene	1.9	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-419	3	4	Benzo(a)anthracene	0.42	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-427	3	4	Benzo(a)anthracene	0.41	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-428	3	4	Benzo(a)anthracene	0.37	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-405	4	5	Benzo(a)anthracene	0.46	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-455	4	5	Benzo(a)anthracene	0.48	MG/KG	U	0.9	NA	nc	NA	nc	NA
SB03	4	6	Benzo(a)anthracene	0.37	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW04D	4	6	Benzo(a)anthracene	0.42	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW05S	4	6	Benzo(a)anthracene	0.82	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW08S	4	6	Benzo(a)anthracene	0.45	MG/KG	U	0.9	NA	nc	NA	nc	NA
SB-14-271	4	6	Benzo(a)anthracene	0.4	MG/KG	U	0.9	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
SB03	4	6	Benzo(a)anthracene	0.38	MG/KG	U	0.9	NA	nc	NA	nc	NA
GEC-6	2.5	4.5	Benzo(a)anthracene	0.15	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Benzo(a)anthracene	1.8	MG/KG		0.9	Y	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Benzo(a)anthracene	1.4	MG/KG		0.9	Y	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Benzo(a)anthracene	8.5	MG/KG		0.9	Y	nc	NA	nc	NA
CMS-089	0	1	Benzo(a)anthracene	2.2	MG/KG		0.9	Y	nc	NA	nc	NA
CMS-118	0	1	Benzo(a)anthracene	1.1	MG/KG		0.9	Y	nc	NA	nc	NA
CMS-405	0	1	Benzo(a)anthracene	1.9	MG/KG		0.9	Y	nc	NA	nc	NA
CMS-407	0	1	Benzo(a)anthracene	0.61	MG/KG		0.9	N	nc	NA	nc	NA
CMS-456	0	1	Benzo(a)anthracene	1.8	MG/KG		0.9	Y	nc	NA	nc	NA
BV01COMP	0	4	Benzo(a)anthracene	1.1	MG/KG		0.9	Y	nc	NA	nc	NA
MW14M	1	2	Benzo(a)anthracene	0.35	MG/KG		0.9	N	nc	NA	nc	NA
MW14M	1	2	Benzo(a)anthracene	0.34	MG/KG		0.9	N	nc	NA	nc	NA
MW01S	1	2	Benzo(a)anthracene	0.85	MG/KG		0.9	N	nc	NA	nc	NA
CMS-060	1	2	Benzo(a)anthracene	0.44	MG/KG		0.9	N	nc	NA	nc	NA
CMS-089	1	2	Benzo(a)anthracene	0.61	MG/KG		0.9	N	nc	NA	nc	NA
CMS-118	1	2	Benzo(a)anthracene	1.5	MG/KG		0.9	Y	nc	NA	nc	NA
CMS-407	1	2	Benzo(a)anthracene	1.2	MG/KG		0.9	Y	nc	NA	nc	NA
CMS-456	1	2	Benzo(a)anthracene	1.8	MG/KG		0.9	Y	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Benzo(a)anthracene	1	MG/KG		0.9	Y	nc	NA	nc	NA
CMS-237	2	3	Benzo(a)anthracene	1.5	MG/KG		0.9	Y	nc	NA	nc	NA
CMS-407	2	3	Benzo(a)anthracene	2	MG/KG		0.9	Y	nc	NA	nc	NA
CMS-408	2	3	Benzo(a)anthracene	0.43	MG/KG		0.9	N	nc	NA	nc	NA
CMS-455	2	3	Benzo(a)anthracene	1	MG/KG		0.9	Y	nc	NA	nc	NA
SB03	2	4	Benzo(a)anthracene	3.4	MG/KG		0.9	Y	nc	NA	nc	NA
MW07S	3	4	Benzo(a)anthracene	0.71	MG/KG		0.9	N	nc	NA	nc	NA
CMS-089	3	4	Benzo(a)anthracene	2.8	MG/KG		0.9	Y	nc	NA	nc	NA
CMS-405	3	4	Benzo(a)anthracene	0.95	MG/KG		0.9	Y	nc	NA	nc	NA
MW01S	4	6	Benzo(a)anthracene	0.81	MG/KG		0.9	N	nc	NA	nc	NA
MW03S	4	6	Benzo(a)anthracene	0.84	MG/KG		0.9	N	nc	NA	nc	NA
CMS-4105	0	1	Benzo[a]anthracene	7.074341334	MG/KG	J	0.9	Y	nc	NA	nc	NA
CMS-4110	0	1	Benzo[a]anthracene	2.980337693	MG/KG	J	0.9	Y	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Benzo(a)pyrene	0.6	MG/KG	J	0.4	Y	240	N	nc	NA
CMW-SD-2020	0	0.5	Benzo(a)pyrene	0.25	MG/KG	J	0.4	N	240	N	nc	NA
CMS-060	0	1	Benzo(a)pyrene	0.73	MG/KG	J	0.4	Y	240	N	nc	NA
CMS-098	0	1	Benzo(a)pyrene	0.21	MG/KG	J	0.4	N	240	N	nc	NA
CMS-118	0	1	Benzo(a)pyrene	1	MG/KG	J	0.4	Y	240	N	nc	NA
CMS-142	0	1	Benzo(a)pyrene	0.25	MG/KG	J	0.4	N	240	N	nc	NA
CMS-159	0	1	Benzo(a)pyrene	2	MG/KG	J	0.4	Y	240	N	nc	NA
CMS-164	0	1	Benzo(a)pyrene	0.32	MG/KG	J	0.4	N	240	N	nc	NA
CMS-173	0	1	Benzo(a)pyrene	0.53	MG/KG	J	0.4	Y	240	N	nc	NA
CMS-237	0	1	Benzo(a)pyrene	0.98	MG/KG	J	0.4	Y	240	N	nc	NA
CMS-408	0	1	Benzo(a)pyrene	0.085	MG/KG	J	0.4	N	240	N	nc	NA
CMS-142	0	1	Benzo(a)pyrene	0.14	MG/KG	J	0.4	N	240	N	nc	NA
CMS-060	0	1	Benzo(a)pyrene	0.96	MG/KG	J	0.4	Y	240	N	nc	NA
RES-14-271-01	0	1	Benzo(a)pyrene	0.5	MG/KG	J	0.4	Y	240	N	nc	NA
RES-14-272-01	0	1	Benzo(a)pyrene	0.59	MG/KG	J	0.4	Y	240	N	nc	NA
RES-14-302-01	0	1	Benzo(a)pyrene	0.63	MG/KG	J	0.4	Y	240	N	nc	NA
RES-14-303-01	0	1	Benzo(a)pyrene	1.3	MG/KG	J	0.4	Y	240	N	nc	NA
RES-14-333-01	0	1	Benzo(a)pyrene	2.8	MG/KG	J	0.4	Y	240	N	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
RES-14-271-01	0	1	Benzo(a)pyrene	1.2	MG/KG	J	0.4	Y	240	N	nc	NA
RES-14-272-01	0	1	Benzo(a)pyrene	0.83	MG/KG	J	0.4	Y	240	N	nc	NA
SS-02	0	1.3	Benzo(a)pyrene	0.29	MG/KG	J	0.4	N	240	N	nc	NA
SS-06	0	2	Benzo(a)pyrene	0.69	MG/KG	J	0.4	Y	240	N	nc	NA
CMW-SD-2022	0.5	2	Benzo(a)pyrene	1.9	MG/KG	J	0.4	Y	240	N	nc	NA
MW08S	1	2	Benzo(a)pyrene	0.17	MG/KG	J	0.4	N	240	N	nc	NA
MW14M	1	2	Benzo(a)pyrene	0.26	MG/KG	J	0.4	N	240	N	nc	NA
MW14M	1	2	Benzo(a)pyrene	0.27	MG/KG	J	0.4	N	240	N	nc	NA
SB-14-271	1	2	Benzo(a)pyrene	0.17	MG/KG	J	0.4	N	240	N	nc	NA
CMS-060	1	2	Benzo(a)pyrene	0.38	MG/KG	J	0.4	N	240	N	nc	NA
CMS-237	1	2	Benzo(a)pyrene	0.4	MG/KG	J	0.4	N	240	N	nc	NA
CMS-405	1	2	Benzo(a)pyrene	7.1	MG/KG	J	0.4	Y	240	N	nc	NA
CMS-408	1	2	Benzo(a)pyrene	0.57	MG/KG	J	0.4	Y	240	N	nc	NA
CMS-423	1	2	Benzo(a)pyrene	0.21	MG/KG	J	0.4	N	240	N	nc	NA
CMS-427	1	2	Benzo(a)pyrene	0.84	MG/KG	J	0.4	Y	240	N	nc	NA
CMS-405	1	2	Benzo(a)pyrene	0.83	MG/KG	J	0.4	Y	240	N	nc	NA
CMS-060	2	3	Benzo(a)pyrene	0.17	MG/KG	J	0.4	N	240	N	nc	NA
CMS-089	2	3	Benzo(a)pyrene	0.11	MG/KG	J	0.4	N	240	N	nc	NA
CMS-118	2	3	Benzo(a)pyrene	0.34	MG/KG	J	0.4	N	240	N	nc	NA
CMS-405	2	3	Benzo(a)pyrene	0.29	MG/KG	J	0.4	N	240	N	nc	NA
MW08S	2	4	Benzo(a)pyrene	0.34	MG/KG	J	0.4	N	240	N	nc	NA
SB02	2	4	Benzo(a)pyrene	0.44	MG/KG	J	0.4	Y	240	N	nc	NA
MW02S	2	4	Benzo(a)pyrene	0.039	MG/KG	J	0.4	N	240	N	nc	NA
MW06S	2	4	Benzo(a)pyrene	0.19	MG/KG	J	0.4	N	240	N	nc	NA
MW06S	2	4	Benzo(a)pyrene	0.16	MG/KG	J	0.4	N	240	N	nc	NA
MW08S	2	4	Benzo(a)pyrene	0.24	MG/KG	J	0.4	N	240	N	nc	NA
MW14M	2	4	Benzo(a)pyrene	0.16	MG/KG	J	0.4	N	240	N	nc	NA
MW15D	2	4	Benzo(a)pyrene	0.13	MG/KG	J	0.4	N	240	N	nc	NA
SB02	2	4	Benzo(a)pyrene	0.55	MG/KG	J	0.4	Y	240	N	nc	NA
CMS-118	3	4	Benzo(a)pyrene	0.088	MG/KG	J	0.4	N	240	N	nc	NA
CMS-407	3	4	Benzo(a)pyrene	0.18	MG/KG	J	0.4	N	240	N	nc	NA
CMS-423	3	4	Benzo(a)pyrene	0.28	MG/KG	J	0.4	N	240	N	nc	NA
CMS-423	3	4	Benzo(a)pyrene	0.17	MG/KG	J	0.4	N	240	N	nc	NA
CMS-060	4	5	Benzo(a)pyrene	0.2	MG/KG	J	0.4	N	240	N	nc	NA
MW06S	4	6	Benzo(a)pyrene	0.072	MG/KG	J	0.4	N	240	N	nc	NA
MW07S	4	6	Benzo(a)pyrene	0.13	MG/KG	J	0.4	N	240	N	nc	NA
MW09S	4	6	Benzo(a)pyrene	0.39	MG/KG	J	0.4	N	240	N	nc	NA
SB02	4	6	Benzo(a)pyrene	0.24	MG/KG	J	0.4	N	240	N	nc	NA
MW05S	2	4	Benzo(a)pyrene	2.3	MG/KG	J*	0.4	Y	240	N	nc	NA
MW01S	2	4	Benzo(a)pyrene	0.75	MG/KG	JEB	0.4	Y	240	N	nc	NA
CMS-417	0	1	Benzo(a)pyrene	35	MG/KG	U	0.4	NA	240	NA	nc	NA
CMS-703	0	2	Benzo(a)pyrene	6.2	MG/KG	U	0.4	NA	240	NA	nc	NA
CMS-173	1	2	Benzo(a)pyrene	0.52	MG/KG	U	0.4	NA	240	NA	nc	NA
CMS-417	1	2	Benzo(a)pyrene	35	MG/KG	U	0.4	NA	240	NA	nc	NA
CMS-419	1	2	Benzo(a)pyrene	74	MG/KG	U	0.4	NA	240	NA	nc	NA
CMS-428	1	2	Benzo(a)pyrene	0.35	MG/KG	U	0.4	NA	240	NA	nc	NA
CMS-417	2	3	Benzo(a)pyrene	9.8	MG/KG	U	0.4	NA	240	NA	nc	NA
SS-03	2.5	3.5	Benzo(a)pyrene	0.4	MG/KG	U	0.4	NA	240	NA	nc	NA
CMS-060	3	4	Benzo(a)pyrene	0.45	MG/KG	U	0.4	NA	240	NA	nc	NA
CMS-417	3	4	Benzo(a)pyrene	1.9	MG/KG	U	0.4	NA	240	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-419	3	4	Benzo(a)pyrene	0.42	MG/KG	U	0.4	NA	240	NA	nc	NA
CMS-427	3	4	Benzo(a)pyrene	0.41	MG/KG	U	0.4	NA	240	NA	nc	NA
CMS-428	3	4	Benzo(a)pyrene	0.37	MG/KG	U	0.4	NA	240	NA	nc	NA
CMS-118	4	5	Benzo(a)pyrene	0.43	MG/KG	U	0.4	NA	240	NA	nc	NA
CMS-405	4	5	Benzo(a)pyrene	0.46	MG/KG	U	0.4	NA	240	NA	nc	NA
CMS-455	4	5	Benzo(a)pyrene	0.48	MG/KG	U	0.4	NA	240	NA	nc	NA
SB03	4	6	Benzo(a)pyrene	0.37	MG/KG	U	0.4	NA	240	NA	nc	NA
MW05S	4	6	Benzo(a)pyrene	0.82	MG/KG	U	0.4	NA	240	NA	nc	NA
MW08S	4	6	Benzo(a)pyrene	0.45	MG/KG	U	0.4	NA	240	NA	nc	NA
SB03	4	6	Benzo(a)pyrene	0.38	MG/KG	U	0.4	NA	240	NA	nc	NA
SS-01	0	0	Benzo(a)pyrene	0.46	MG/KG		0.4	Y	240	N	nc	NA
CMW-SD-2016	0	0.5	Benzo(a)pyrene	1.7	MG/KG		0.4	Y	240	N	nc	NA
CMW-SD-2017	0	0.5	Benzo(a)pyrene	1.6	MG/KG		0.4	Y	240	N	nc	NA
CMW-SD-2018	0	0.5	Benzo(a)pyrene	8.9	MG/KG		0.4	Y	240	N	nc	NA
CMW-SD-2021	0	0.5	Benzo(a)pyrene	2.2	MG/KG		0.4	Y	240	N	nc	NA
CMS-089	0	1	Benzo(a)pyrene	2.4	MG/KG		0.4	Y	240	N	nc	NA
CMS-405	0	1	Benzo(a)pyrene	1.5	MG/KG		0.4	Y	240	N	nc	NA
CMS-407	0	1	Benzo(a)pyrene	0.57	MG/KG		0.4	Y	240	N	nc	NA
CMS-456	0	1	Benzo(a)pyrene	1.7	MG/KG		0.4	Y	240	N	nc	NA
BV01COMP	0	4	Benzo(a)pyrene	1.3	MG/KG		0.4	Y	240	N	nc	NA
MW14M	1	2	Benzo(a)pyrene	0.35	MG/KG		0.4	N	240	N	nc	NA
MW14M	1	2	Benzo(a)pyrene	0.36	MG/KG		0.4	N	240	N	nc	NA
MW01S	1	2	Benzo(a)pyrene	0.9	MG/KG		0.4	Y	240	N	nc	NA
CMS-089	1	2	Benzo(a)pyrene	0.61	MG/KG		0.4	Y	240	N	nc	NA
CMS-118	1	2	Benzo(a)pyrene	1.2	MG/KG		0.4	Y	240	N	nc	NA
CMS-407	1	2	Benzo(a)pyrene	1.1	MG/KG		0.4	Y	240	N	nc	NA
CMS-456	1	2	Benzo(a)pyrene	1.6	MG/KG		0.4	Y	240	N	nc	NA
CMW-SD-2022	2	2.5	Benzo(a)pyrene	1.2	MG/KG		0.4	Y	240	N	nc	NA
CMS-237	2	3	Benzo(a)pyrene	1.5	MG/KG		0.4	Y	240	N	nc	NA
CMS-407	2	3	Benzo(a)pyrene	1.7	MG/KG		0.4	Y	240	N	nc	NA
CMS-408	2	3	Benzo(a)pyrene	0.47	MG/KG		0.4	Y	240	N	nc	NA
CMS-455	2	3	Benzo(a)pyrene	0.93	MG/KG		0.4	Y	240	N	nc	NA
SB03	2	4	Benzo(a)pyrene	2.9	MG/KG		0.4	Y	240	N	nc	NA
MW07S	3	4	Benzo(a)pyrene	0.68	MG/KG		0.4	Y	240	N	nc	NA
CMS-089	3	4	Benzo(a)pyrene	2.7	MG/KG		0.4	Y	240	N	nc	NA
CMS-405	3	4	Benzo(a)pyrene	0.81	MG/KG		0.4	Y	240	N	nc	NA
MW15D	4	6	Benzo(a)pyrene	0.96	MG/KG		0.4	Y	240	N	nc	NA
MW01S	4	6	Benzo(a)pyrene	0.77	MG/KG		0.4	Y	240	N	nc	NA
MW03S	4	6	Benzo(a)pyrene	0.87	MG/KG		0.4	Y	240	N	nc	NA
MW15D	4	6	Benzo(a)pyrene	0.73	MG/KG		0.4	Y	240	N	nc	NA
CMS-4105	0	1	Benzo[a]pyrene	5.843289162	MG/KG	J	0.4	Y	240	N	nc	NA
CMS-4110	0	1	Benzo[a]pyrene	2.321767318	MG/KG	J	0.4	Y	240	N	nc	NA
MW01S	4	6	Benzo(b)fluoranthene	0.75	MG/KG	EB	0.9	N	nc	NA	nc	NA
MW03S	4	6	Benzo(b)fluoranthene	1.3	MG/KG	EB	0.9	Y	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Benzo(b)fluoranthene	0.82	MG/KG	J	0.9	N	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Benzo(b)fluoranthene	0.23	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-060	0	1	Benzo(b)fluoranthene	1.4	MG/KG	J	0.9	Y	nc	NA	nc	NA
CMS-098	0	1	Benzo(b)fluoranthene	0.48	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-118	0	1	Benzo(b)fluoranthene	2.1	MG/KG	J	0.9	Y	nc	NA	nc	NA
CMS-142	0	1	Benzo(b)fluoranthene	0.52	MG/KG	J	0.9	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-164	0	1	Benzo(b)fluoranthene	0.52	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-173	0	1	Benzo(b)fluoranthene	0.97	MG/KG	J	0.9	Y	nc	NA	nc	NA
CMS-408	0	1	Benzo(b)fluoranthene	0.19	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-142	0	1	Benzo(b)fluoranthene	0.27	MG/KG	J	0.9	N	nc	NA	nc	NA
RES-14-271-01	0	1	Benzo(b)fluoranthene	0.61	MG/KG	J	0.9	N	nc	NA	nc	NA
RES-14-302-01	0	1	Benzo(b)fluoranthene	0.65	MG/KG	J	0.9	N	nc	NA	nc	NA
RES-14-303-01	0	1	Benzo(b)fluoranthene	0.5	MG/KG	J	0.9	N	nc	NA	nc	NA
RES-14-333-01	0	1	Benzo(b)fluoranthene	4.2	MG/KG	J	0.9	Y	nc	NA	nc	NA
RES-14-271-01	0	1	Benzo(b)fluoranthene	1.2	MG/KG	J	0.9	Y	nc	NA	nc	NA
RES-14-272-01	0	1	Benzo(b)fluoranthene	1.2	MG/KG	J	0.9	Y	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Benzo(b)fluoranthene	1.8	MG/KG	J	0.9	Y	nc	NA	nc	NA
SB-14-271	1	2	Benzo(b)fluoranthene	0.36	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-060	1	2	Benzo(b)fluoranthene	0.76	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-237	1	2	Benzo(b)fluoranthene	0.78	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-405	1	2	Benzo(b)fluoranthene	10	MG/KG	J	0.9	Y	nc	NA	nc	NA
CMS-408	1	2	Benzo(b)fluoranthene	1.2	MG/KG	J	0.9	Y	nc	NA	nc	NA
CMS-427	1	2	Benzo(b)fluoranthene	1.4	MG/KG	J	0.9	Y	nc	NA	nc	NA
CMS-405	1	2	Benzo(b)fluoranthene	2	MG/KG	J	0.9	Y	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Benzo(b)fluoranthene	0.62	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-089	2	3	Benzo(b)fluoranthene	0.23	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-118	2	3	Benzo(b)fluoranthene	0.63	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-405	2	3	Benzo(b)fluoranthene	0.6	MG/KG	J	0.9	N	nc	NA	nc	NA
SB02	2	4	Benzo(b)fluoranthene	0.55	MG/KG	J	0.9	N	nc	NA	nc	NA
MW01S	2	4	Benzo(b)fluoranthene	0.75	MG/KG	J	0.9	N	nc	NA	nc	NA
MW02S	2	4	Benzo(b)fluoranthene	0.053	MG/KG	J	0.9	N	nc	NA	nc	NA
MW06S	2	4	Benzo(b)fluoranthene	0.25	MG/KG	J	0.9	N	nc	NA	nc	NA
MW14M	2	4	Benzo(b)fluoranthene	0.19	MG/KG	J	0.9	N	nc	NA	nc	NA
MW15D	2	4	Benzo(b)fluoranthene	0.19	MG/KG	J	0.9	N	nc	NA	nc	NA
SB02	2	4	Benzo(b)fluoranthene	0.68	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-118	3	4	Benzo(b)fluoranthene	0.18	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-407	3	4	Benzo(b)fluoranthene	0.33	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-423	3	4	Benzo(b)fluoranthene	0.32	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-060	4	5	Benzo(b)fluoranthene	0.42	MG/KG	J	0.9	N	nc	NA	nc	NA
MW05S	4	6	Benzo(b)fluoranthene	0.47	MG/KG	J	0.9	N	nc	NA	nc	NA
MW06S	4	6	Benzo(b)fluoranthene	0.092	MG/KG	J	0.9	N	nc	NA	nc	NA
MW07S	4	6	Benzo(b)fluoranthene	0.14	MG/KG	J	0.9	N	nc	NA	nc	NA
MW09S	4	6	Benzo(b)fluoranthene	0.41	MG/KG	J	0.9	N	nc	NA	nc	NA
SB02	4	6	Benzo(b)fluoranthene	0.31	MG/KG	J	0.9	N	nc	NA	nc	NA
MW05S	2	4	Benzo(b)fluoranthene	4.2	MG/KG	J*	0.9	Y	nc	NA	nc	NA
MW01S	1	2	Benzo(b)fluoranthene	1.8	MG/KG	JEB	0.9	Y	nc	NA	nc	NA
MW08S	1	2	Benzo(b)fluoranthene	0.19	MG/KG	JEB	0.9	N	nc	NA	nc	NA
MW08S	2	4	Benzo(b)fluoranthene	0.3	MG/KG	JEB	0.9	N	nc	NA	nc	NA
MW08S	2	4	Benzo(b)fluoranthene	0.23	MG/KG	JEB	0.9	N	nc	NA	nc	NA
CMS-417	0	1	Benzo(b)fluoranthene	35	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-703	0	2	Benzo(b)fluoranthene	6.2	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW05S	1	2	Benzo(b)fluoranthene	0.36	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW05S	1	2	Benzo(b)fluoranthene	0.36	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-173	1	2	Benzo(b)fluoranthene	0.52	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-417	1	2	Benzo(b)fluoranthene	35	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-419	1	2	Benzo(b)fluoranthene	74	MG/KG	U	0.9	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-428	1	2	Benzo(b)fluoranthene	0.35	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-417	2	3	Benzo(b)fluoranthene	9.8	MG/KG	U	0.9	NA	nc	NA	nc	NA
SB-14-271	2	4	Benzo(b)fluoranthene	0.45	MG/KG	U	0.9	NA	nc	NA	nc	NA
SS-03	2.5	3.5	Benzo(b)fluoranthene	0.4	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-060	3	4	Benzo(b)fluoranthene	0.45	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-417	3	4	Benzo(b)fluoranthene	1.9	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-419	3	4	Benzo(b)fluoranthene	0.42	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-427	3	4	Benzo(b)fluoranthene	0.41	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-428	3	4	Benzo(b)fluoranthene	0.37	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-118	4	5	Benzo(b)fluoranthene	0.43	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-405	4	5	Benzo(b)fluoranthene	0.46	MG/KG	U	0.9	NA	nc	NA	nc	NA
SB03	4	6	Benzo(b)fluoranthene	0.37	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW04D	4	6	Benzo(b)fluoranthene	0.42	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW08S	4	6	Benzo(b)fluoranthene	0.45	MG/KG	U	0.9	NA	nc	NA	nc	NA
SB-14-271	4	6	Benzo(b)fluoranthene	0.4	MG/KG	U	0.9	NA	nc	NA	nc	NA
SB03	4	6	Benzo(b)fluoranthene	0.38	MG/KG	U	0.9	NA	nc	NA	nc	NA
GEC-6	2.5	4.5	Benzo(b)fluoranthene	0.15	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-159	0	1	Benzo(b)fluoranthene	2.2	MG/KG	UJ	0.9	NA	nc	NA	nc	NA
CMS-060	0	1	Benzo(b)fluoranthene	0.35	MG/KG	UJ	0.9	NA	nc	NA	nc	NA
CMS-455	4	5	Benzo(b)fluoranthene	0.48	MG/KG	UJ	0.9	NA	nc	NA	nc	NA
MW06S	2	4	Benzo(b)fluoranthene	0.34	MG/KG	XJ	0.9	N	nc	NA	nc	NA
SS-01	0	0	Benzo(b)fluoranthene	0.65	MG/KG		0.9	N	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Benzo(b)fluoranthene	1.9	MG/KG		0.9	Y	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Benzo(b)fluoranthene	1.7	MG/KG		0.9	Y	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Benzo(b)fluoranthene	7.8	MG/KG		0.9	Y	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Benzo(b)fluoranthene	2.7	MG/KG		0.9	Y	nc	NA	nc	NA
CMS-089	0	1	Benzo(b)fluoranthene	5.2	MG/KG		0.9	Y	nc	NA	nc	NA
CMS-237	0	1	Benzo(b)fluoranthene	1.9	MG/KG		0.9	Y	nc	NA	nc	NA
CMS-405	0	1	Benzo(b)fluoranthene	3.5	MG/KG		0.9	Y	nc	NA	nc	NA
CMS-407	0	1	Benzo(b)fluoranthene	1.2	MG/KG		0.9	Y	nc	NA	nc	NA
CMS-456	0	1	Benzo(b)fluoranthene	3.3	MG/KG		0.9	Y	nc	NA	nc	NA
RES-14-272-01	0	1	Benzo(b)fluoranthene	0.93	MG/KG		0.9	Y	nc	NA	nc	NA
SS-02	0	1.3	Benzo(b)fluoranthene	0.54	MG/KG		0.9	N	nc	NA	nc	NA
SS-06	0	2	Benzo(b)fluoranthene	0.87	MG/KG		0.9	N	nc	NA	nc	NA
BV01COMP	0	4	Benzo(b)fluoranthene	1.5	MG/KG		0.9	Y	nc	NA	nc	NA
MW14M	1	2	Benzo(b)fluoranthene	0.59	MG/KG		0.9	N	nc	NA	nc	NA
MW14M	1	2	Benzo(b)fluoranthene	0.56	MG/KG		0.9	N	nc	NA	nc	NA
MW14M	1	2	Benzo(b)fluoranthene	0.43	MG/KG		0.9	N	nc	NA	nc	NA
MW14M	1	2	Benzo(b)fluoranthene	0.34	MG/KG		0.9	N	nc	NA	nc	NA
CMS-089	1	2	Benzo(b)fluoranthene	1.2	MG/KG		0.9	Y	nc	NA	nc	NA
CMS-118	1	2	Benzo(b)fluoranthene	1.9	MG/KG		0.9	Y	nc	NA	nc	NA
CMS-407	1	2	Benzo(b)fluoranthene	2.3	MG/KG		0.9	Y	nc	NA	nc	NA
CMS-423	1	2	Benzo(b)fluoranthene	0.44	MG/KG		0.9	N	nc	NA	nc	NA
CMS-456	1	2	Benzo(b)fluoranthene	2.9	MG/KG		0.9	Y	nc	NA	nc	NA
CMS-060	2	3	Benzo(b)fluoranthene	0.39	MG/KG		0.9	N	nc	NA	nc	NA
CMS-237	2	3	Benzo(b)fluoranthene	2.7	MG/KG		0.9	Y	nc	NA	nc	NA
CMS-407	2	3	Benzo(b)fluoranthene	3.2	MG/KG		0.9	Y	nc	NA	nc	NA
CMS-408	2	3	Benzo(b)fluoranthene	0.89	MG/KG		0.9	N	nc	NA	nc	NA
CMS-455	2	3	Benzo(b)fluoranthene	1.5	MG/KG		0.9	Y	nc	NA	nc	NA
SB03	2	4	Benzo(b)fluoranthene	3.1	MG/KG		0.9	Y	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW07S	3	4	Benzo(b)fluoranthene	0.81	MG/KG		0.9	N	nc	NA	nc	NA
CMS-089	3	4	Benzo(b)fluoranthene	5.2	MG/KG		0.9	Y	nc	NA	nc	NA
CMS-405	3	4	Benzo(b)fluoranthene	1.6	MG/KG		0.9	Y	nc	NA	nc	NA
CMS-423	3	4	Benzo(b)fluoranthene	0.52	MG/KG		0.9	N	nc	NA	nc	NA
MW15D	4	6	Benzo(b)fluoranthene	1.3	MG/KG		0.9	Y	nc	NA	nc	NA
MW15D	4	6	Benzo(b)fluoranthene	1.1	MG/KG		0.9	Y	nc	NA	nc	NA
CMS-4105	0	1	Benzo[b]fluoranthene	6.381910567	MG/KG	J	0.9	Y	nc	NA	nc	NA
CMS-4110	0	1	Benzo[b]fluoranthene	3.219090067	MG/KG	J	0.9	Y	nc	NA	nc	NA
SS-01	0	0	Benzo(g,h,i)perylene	0.26	MG/KG	J	0.8	N	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Benzo(g,h,i)perylene	0.49	MG/KG	J	0.8	N	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Benzo(g,h,i)perylene	0.19	MG/KG	J	0.8	N	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Benzo(g,h,i)perylene	1.7	MG/KG	J	0.8	Y	nc	NA	nc	NA
CMS-060	0	1	Benzo(g,h,i)perylene	0.32	MG/KG	J	0.8	N	nc	NA	nc	NA
CMS-118	0	1	Benzo(g,h,i)perylene	0.38	MG/KG	J	0.8	N	nc	NA	nc	NA
CMS-159	0	1	Benzo(g,h,i)perylene	1.1	MG/KG	J	0.8	Y	nc	NA	nc	NA
CMS-237	0	1	Benzo(g,h,i)perylene	0.61	MG/KG	J	0.8	N	nc	NA	nc	NA
CMS-407	0	1	Benzo(g,h,i)perylene	0.32	MG/KG	J	0.8	N	nc	NA	nc	NA
CMS-060	0	1	Benzo(g,h,i)perylene	0.59	MG/KG	J	0.8	N	nc	NA	nc	NA
RES-14-271-01	0	1	Benzo(g,h,i)perylene	0.45	MG/KG	J	0.8	N	nc	NA	nc	NA
RES-14-272-01	0	1	Benzo(g,h,i)perylene	0.19	MG/KG	J	0.8	N	nc	NA	nc	NA
RES-14-302-01	0	1	Benzo(g,h,i)perylene	0.51	MG/KG	J	0.8	N	nc	NA	nc	NA
RES-14-303-01	0	1	Benzo(g,h,i)perylene	1	MG/KG	J	0.8	Y	nc	NA	nc	NA
RES-14-333-01	0	1	Benzo(g,h,i)perylene	2.6	MG/KG	J	0.8	Y	nc	NA	nc	NA
RES-14-271-01	0	1	Benzo(g,h,i)perylene	1.1	MG/KG	J	0.8	Y	nc	NA	nc	NA
SS-02	0	1.3	Benzo(g,h,i)perylene	0.16	MG/KG	J	0.8	N	nc	NA	nc	NA
SS-06	0	2	Benzo(g,h,i)perylene	0.35	MG/KG	J	0.8	N	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Benzo(g,h,i)perylene	1.2	MG/KG	J	0.8	Y	nc	NA	nc	NA
MW14M	1	2	Benzo(g,h,i)perylene	0.056	MG/KG	J	0.8	N	nc	NA	nc	NA
MW14M	1	2	Benzo(g,h,i)perylene	0.043	MG/KG	J	0.8	N	nc	NA	nc	NA
MW01S	1	2	Benzo(g,h,i)perylene	0.19	MG/KG	J	0.8	N	nc	NA	nc	NA
MW08S	1	2	Benzo(g,h,i)perylene	0.066	MG/KG	J	0.8	N	nc	NA	nc	NA
MW14M	1	2	Benzo(g,h,i)perylene	0.069	MG/KG	J	0.8	N	nc	NA	nc	NA
MW14M	1	2	Benzo(g,h,i)perylene	0.25	MG/KG	J	0.8	N	nc	NA	nc	NA
CMS-060	1	2	Benzo(g,h,i)perylene	0.18	MG/KG	J	0.8	N	nc	NA	nc	NA
CMS-089	1	2	Benzo(g,h,i)perylene	0.36	MG/KG	J	0.8	N	nc	NA	nc	NA
CMS-118	1	2	Benzo(g,h,i)perylene	0.62	MG/KG	J	0.8	N	nc	NA	nc	NA
CMS-237	1	2	Benzo(g,h,i)perylene	0.2	MG/KG	J	0.8	N	nc	NA	nc	NA
CMS-405	1	2	Benzo(g,h,i)perylene	4.2	MG/KG	J	0.8	Y	nc	NA	nc	NA
CMS-407	1	2	Benzo(g,h,i)perylene	0.53	MG/KG	J	0.8	N	nc	NA	nc	NA
CMS-456	1	2	Benzo(g,h,i)perylene	1	MG/KG	J	0.8	Y	nc	NA	nc	NA
CMS-405	1	2	Benzo(g,h,i)perylene	0.39	MG/KG	J	0.8	N	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Benzo(g,h,i)perylene	0.59	MG/KG	J	0.8	N	nc	NA	nc	NA
CMS-118	2	3	Benzo(g,h,i)perylene	0.2	MG/KG	J	0.8	N	nc	NA	nc	NA
CMS-407	2	3	Benzo(g,h,i)perylene	0.81	MG/KG	J	0.8	Y	nc	NA	nc	NA
CMS-408	2	3	Benzo(g,h,i)perylene	0.24	MG/KG	J	0.8	N	nc	NA	nc	NA
CMS-455	2	3	Benzo(g,h,i)perylene	0.37	MG/KG	J	0.8	N	nc	NA	nc	NA
MW08S	2	4	Benzo(g,h,i)perylene	0.13	MG/KG	J	0.8	N	nc	NA	nc	NA
MW01S	2	4	Benzo(g,h,i)perylene	0.3	MG/KG	J	0.8	N	nc	NA	nc	NA
MW05S	2	4	Benzo(g,h,i)perylene	1.1	MG/KG	J	0.8	Y	nc	NA	nc	NA
MW06S	2	4	Benzo(g,h,i)perylene	0.13	MG/KG	J	0.8	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW06S	2	4	Benzo(g,h,i)perylene	0.12	MG/KG	J	0.8	N	nc	NA	nc	NA
MW08S	2	4	Benzo(g,h,i)perylene	0.11	MG/KG	J	0.8	N	nc	NA	nc	NA
MW15D	2	4	Benzo(g,h,i)perylene	0.077	MG/KG	J	0.8	N	nc	NA	nc	NA
SB02	2	4	Benzo(g,h,i)perylene	0.27	MG/KG	J	0.8	N	nc	NA	nc	NA
CMS-089	3	4	Benzo(g,h,i)perylene	1.5	MG/KG	J	0.8	Y	nc	NA	nc	NA
CMS-423	3	4	Benzo(g,h,i)perylene	0.17	MG/KG	J	0.8	N	nc	NA	nc	NA
MW01S	4	6	Benzo(g,h,i)perylene	0.31	MG/KG	J	0.8	N	nc	NA	nc	NA
MW03S	4	6	Benzo(g,h,i)perylene	0.24	MG/KG	J	0.8	N	nc	NA	nc	NA
MW06S	4	6	Benzo(g,h,i)perylene	0.053	MG/KG	J	0.8	N	nc	NA	nc	NA
MW07S	4	6	Benzo(g,h,i)perylene	0.079	MG/KG	J	0.8	N	nc	NA	nc	NA
MW09S	4	6	Benzo(g,h,i)perylene	0.4	MG/KG	J	0.8	N	nc	NA	nc	NA
SB02	4	6	Benzo(g,h,i)perylene	0.099	MG/KG	J	0.8	N	nc	NA	nc	NA
CMS-098	0	1	Benzo(g,h,i)perylene	0.6	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-142	0	1	Benzo(g,h,i)perylene	0.58	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-173	0	1	Benzo(g,h,i)perylene	1.1	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-408	0	1	Benzo(g,h,i)perylene	0.34	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-417	0	1	Benzo(g,h,i)perylene	35	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-142	0	1	Benzo(g,h,i)perylene	0.55	MG/KG	U	0.8	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Benzo(g,h,i)perylene	3.1	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-703	0	2	Benzo(g,h,i)perylene	6.2	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW05S	1	2	Benzo(g,h,i)perylene	0.36	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW05S	1	2	Benzo(g,h,i)perylene	0.36	MG/KG	U	0.8	NA	nc	NA	nc	NA
SB-14-271	1	2	Benzo(g,h,i)perylene	0.4	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-173	1	2	Benzo(g,h,i)perylene	0.52	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-417	1	2	Benzo(g,h,i)perylene	35	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-419	1	2	Benzo(g,h,i)perylene	74	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-423	1	2	Benzo(g,h,i)perylene	0.35	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-427	1	2	Benzo(g,h,i)perylene	3.6	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-428	1	2	Benzo(g,h,i)perylene	0.35	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-089	2	3	Benzo(g,h,i)perylene	0.7	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-405	2	3	Benzo(g,h,i)perylene	0.64	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-417	2	3	Benzo(g,h,i)perylene	9.8	MG/KG	U	0.8	NA	nc	NA	nc	NA
SB02	2	4	Benzo(g,h,i)perylene	2.3	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW02S	2	4	Benzo(g,h,i)perylene	0.38	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW14M	2	4	Benzo(g,h,i)perylene	0.38	MG/KG	U	0.8	NA	nc	NA	nc	NA
SB-14-271	2	4	Benzo(g,h,i)perylene	0.45	MG/KG	U	0.8	NA	nc	NA	nc	NA
SS-03	2.5	3.5	Benzo(g,h,i)perylene	0.4	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-407	3	4	Benzo(g,h,i)perylene	0.42	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-417	3	4	Benzo(g,h,i)perylene	1.9	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-419	3	4	Benzo(g,h,i)perylene	0.42	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-427	3	4	Benzo(g,h,i)perylene	0.41	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-428	3	4	Benzo(g,h,i)perylene	0.37	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-423	3	4	Benzo(g,h,i)perylene	0.39	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-405	4	5	Benzo(g,h,i)perylene	0.46	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-455	4	5	Benzo(g,h,i)perylene	0.48	MG/KG	U	0.8	NA	nc	NA	nc	NA
SB03	4	6	Benzo(g,h,i)perylene	0.37	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW04D	4	6	Benzo(g,h,i)perylene	0.42	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW05S	4	6	Benzo(g,h,i)perylene	0.82	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW08S	4	6	Benzo(g,h,i)perylene	0.45	MG/KG	U	0.8	NA	nc	NA	nc	NA
SB-14-271	4	6	Benzo(g,h,i)perylene	0.4	MG/KG	U	0.8	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
SB03	4	6	Benzo(g,h,i)perylene	0.38	MG/KG	U	0.8	NA	nc	NA	nc	NA
GEC-6	2.5	4.5	Benzo(g,h,i)perylene	0.15	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-164	0	1	Benzo(g,h,i)perylene	2	MG/KG	UJ	0.8	NA	nc	NA	nc	NA
CMS-408	1	2	Benzo(g,h,i)perylene	8.7	MG/KG	UJ	0.8	NA	nc	NA	nc	NA
CMS-060	2	3	Benzo(g,h,i)perylene	0.36	MG/KG	UJ	0.8	NA	nc	NA	nc	NA
CMS-060	3	4	Benzo(g,h,i)perylene	0.45	MG/KG	UJ	0.8	NA	nc	NA	nc	NA
CMS-118	3	4	Benzo(g,h,i)perylene	0.5	MG/KG	UJ	0.8	NA	nc	NA	nc	NA
CMS-060	4	5	Benzo(g,h,i)perylene	0.38	MG/KG	UJ	0.8	NA	nc	NA	nc	NA
CMS-118	4	5	Benzo(g,h,i)perylene	0.43	MG/KG	UJ	0.8	NA	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Benzo(g,h,i)perylene	1	MG/KG		0.8	Y	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Benzo(g,h,i)perylene	0.99	MG/KG		0.8	Y	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Benzo(g,h,i)perylene	5.3	MG/KG		0.8	Y	nc	NA	nc	NA
CMS-089	0	1	Benzo(g,h,i)perylene	0.94	MG/KG		0.8	Y	nc	NA	nc	NA
CMS-405	0	1	Benzo(g,h,i)perylene	0.91	MG/KG		0.8	Y	nc	NA	nc	NA
CMS-456	0	1	Benzo(g,h,i)perylene	0.95	MG/KG		0.8	Y	nc	NA	nc	NA
BV01COMP	0	4	Benzo(g,h,i)perylene	0.76	MG/KG		0.8	N	nc	NA	nc	NA
CMS-237	2	3	Benzo(g,h,i)perylene	0.71	MG/KG		0.8	N	nc	NA	nc	NA
SB03	2	4	Benzo(g,h,i)perylene	1.4	MG/KG		0.8	Y	nc	NA	nc	NA
MW07S	3	4	Benzo(g,h,i)perylene	0.45	MG/KG		0.8	N	nc	NA	nc	NA
CMS-405	3	4	Benzo(g,h,i)perylene	0.37	MG/KG		0.8	N	nc	NA	nc	NA
MW15D	4	6	Benzo(g,h,i)perylene	0.47	MG/KG		0.8	N	nc	NA	nc	NA
MW15D	4	6	Benzo(g,h,i)perylene	0.44	MG/KG		0.8	N	nc	NA	nc	NA
CMS-4105	0	1	Benzo[g,h,i]perylene	4.367743706	MG/KG	J	0.8	Y	nc	NA	nc	NA
CMS-4110	0	1	Benzo[g,h,i]perylene	1.794481184	MG/KG	J	0.8	Y	nc	NA	nc	NA
SS-01	0	0	Benzo(k)fluoranthene	0.18	MG/KG	J	0.9	N	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Benzo(k)fluoranthene	0.54	MG/KG	J	0.9	N	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Benzo(k)fluoranthene	0.3	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-159	0	1	Benzo(k)fluoranthene	3.8	MG/KG	J	0.9	Y	nc	NA	nc	NA
CMS-060	0	1	Benzo(k)fluoranthene	2.3	MG/KG	J	0.9	Y	nc	NA	nc	NA
RES-14-271-01	0	1	Benzo(k)fluoranthene	0.41	MG/KG	J	0.9	N	nc	NA	nc	NA
RES-14-302-01	0	1	Benzo(k)fluoranthene	0.62	MG/KG	J	0.9	N	nc	NA	nc	NA
RES-14-303-01	0	1	Benzo(k)fluoranthene	0.63	MG/KG	J	0.9	N	nc	NA	nc	NA
RES-14-333-01	0	1	Benzo(k)fluoranthene	3.4	MG/KG	J	0.9	Y	nc	NA	nc	NA
RES-14-271-01	0	1	Benzo(k)fluoranthene	1.2	MG/KG	J	0.9	Y	nc	NA	nc	NA
RES-14-272-01	0	1	Benzo(k)fluoranthene	0.87	MG/KG	J	0.9	N	nc	NA	nc	NA
SS-02	0	1.3	Benzo(k)fluoranthene	0.12	MG/KG	J	0.9	N	nc	NA	nc	NA
SS-06	0	2	Benzo(k)fluoranthene	0.36	MG/KG	J	0.9	N	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Benzo(k)fluoranthene	2	MG/KG	J	0.9	Y	nc	NA	nc	NA
MW14M	1	2	Benzo(k)fluoranthene	0.3	MG/KG	J	0.9	N	nc	NA	nc	NA
MW01S	1	2	Benzo(k)fluoranthene	1.6	MG/KG	J	0.9	Y	nc	NA	nc	NA
MW08S	1	2	Benzo(k)fluoranthene	0.19	MG/KG	J	0.9	N	nc	NA	nc	NA
MW14M	1	2	Benzo(k)fluoranthene	0.2	MG/KG	J	0.9	N	nc	NA	nc	NA
MW14M	1	2	Benzo(k)fluoranthene	0.17	MG/KG	J	0.9	N	nc	NA	nc	NA
SB-14-271	1	2	Benzo(k)fluoranthene	0.11	MG/KG	J	0.9	N	nc	NA	nc	NA
MW08S	2	4	Benzo(k)fluoranthene	0.35	MG/KG	J	0.9	N	nc	NA	nc	NA
SB02	2	4	Benzo(k)fluoranthene	0.41	MG/KG	J	0.9	N	nc	NA	nc	NA
MW01S	2	4	Benzo(k)fluoranthene	0.54	MG/KG	J	0.9	N	nc	NA	nc	NA
MW02S	2	4	Benzo(k)fluoranthene	0.041	MG/KG	J	0.9	N	nc	NA	nc	NA
MW05S	2	4	Benzo(k)fluoranthene	1.6	MG/KG	J	0.9	Y	nc	NA	nc	NA
MW06S	2	4	Benzo(k)fluoranthene	0.17	MG/KG	J	0.9	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW08S	2	4	Benzo(k)fluoranthene	0.24	MG/KG	J	0.9	N	nc	NA	nc	NA
MW14M	2	4	Benzo(k)fluoranthene	0.14	MG/KG	J	0.9	N	nc	NA	nc	NA
MW15D	2	4	Benzo(k)fluoranthene	0.079	MG/KG	J	0.9	N	nc	NA	nc	NA
SB02	2	4	Benzo(k)fluoranthene	0.45	MG/KG	J	0.9	N	nc	NA	nc	NA
MW06S	4	6	Benzo(k)fluoranthene	0.085	MG/KG	J	0.9	N	nc	NA	nc	NA
MW07S	4	6	Benzo(k)fluoranthene	0.11	MG/KG	J	0.9	N	nc	NA	nc	NA
MW09S	4	6	Benzo(k)fluoranthene	0.35	MG/KG	J	0.9	N	nc	NA	nc	NA
SB02	4	6	Benzo(k)fluoranthene	0.19	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-089	0	1	Benzo(k)fluoranthene	0.67	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-098	0	1	Benzo(k)fluoranthene	0.6	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-142	0	1	Benzo(k)fluoranthene	0.58	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-173	0	1	Benzo(k)fluoranthene	1.1	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-237	0	1	Benzo(k)fluoranthene	1.3	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-405	0	1	Benzo(k)fluoranthene	0.35	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-407	0	1	Benzo(k)fluoranthene	0.35	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-408	0	1	Benzo(k)fluoranthene	0.34	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-417	0	1	Benzo(k)fluoranthene	35	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-456	0	1	Benzo(k)fluoranthene	0.49	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-142	0	1	Benzo(k)fluoranthene	0.55	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-703	0	2	Benzo(k)fluoranthene	6.2	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW05S	1	2	Benzo(k)fluoranthene	0.36	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW05S	1	2	Benzo(k)fluoranthene	0.36	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-089	1	2	Benzo(k)fluoranthene	0.35	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-118	1	2	Benzo(k)fluoranthene	0.37	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-173	1	2	Benzo(k)fluoranthene	0.52	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-237	1	2	Benzo(k)fluoranthene	0.83	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-407	1	2	Benzo(k)fluoranthene	0.44	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-408	1	2	Benzo(k)fluoranthene	8.7	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-417	1	2	Benzo(k)fluoranthene	35	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-419	1	2	Benzo(k)fluoranthene	74	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-423	1	2	Benzo(k)fluoranthene	0.35	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-427	1	2	Benzo(k)fluoranthene	3.6	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-456	1	2	Benzo(k)fluoranthene	1.2	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-405	1	2	Benzo(k)fluoranthene	1.2	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-060	2	3	Benzo(k)fluoranthene	0.36	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-089	2	3	Benzo(k)fluoranthene	0.7	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-118	2	3	Benzo(k)fluoranthene	0.44	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-237	2	3	Benzo(k)fluoranthene	0.63	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-405	2	3	Benzo(k)fluoranthene	0.64	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-407	2	3	Benzo(k)fluoranthene	1.1	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-408	2	3	Benzo(k)fluoranthene	0.43	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-417	2	3	Benzo(k)fluoranthene	9.8	MG/KG	U	0.9	NA	nc	NA	nc	NA
SB-14-271	2	4	Benzo(k)fluoranthene	0.45	MG/KG	U	0.9	NA	nc	NA	nc	NA
SS-03	2.5	3.5	Benzo(k)fluoranthene	0.4	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-060	3	4	Benzo(k)fluoranthene	0.45	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-089	3	4	Benzo(k)fluoranthene	1.8	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-118	3	4	Benzo(k)fluoranthene	0.5	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-405	3	4	Benzo(k)fluoranthene	0.38	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-407	3	4	Benzo(k)fluoranthene	0.42	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-417	3	4	Benzo(k)fluoranthene	1.9	MG/KG	U	0.9	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-419	3	4	Benzo(k)fluoranthene	0.42	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-423	3	4	Benzo(k)fluoranthene	0.37	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-427	3	4	Benzo(k)fluoranthene	0.41	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-423	3	4	Benzo(k)fluoranthene	0.39	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-118	4	5	Benzo(k)fluoranthene	0.43	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-405	4	5	Benzo(k)fluoranthene	0.46	MG/KG	U	0.9	NA	nc	NA	nc	NA
SB03	4	6	Benzo(k)fluoranthene	0.37	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW04D	4	6	Benzo(k)fluoranthene	0.42	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW05S	4	6	Benzo(k)fluoranthene	0.82	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW08S	4	6	Benzo(k)fluoranthene	0.45	MG/KG	U	0.9	NA	nc	NA	nc	NA
SB-14-271	4	6	Benzo(k)fluoranthene	0.4	MG/KG	U	0.9	NA	nc	NA	nc	NA
SB03	4	6	Benzo(k)fluoranthene	0.38	MG/KG	U	0.9	NA	nc	NA	nc	NA
GEC-6	2.5	4.5	Benzo(k)fluoranthene	0.15	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-060	0	1	Benzo(k)fluoranthene	0.34	MG/KG	UJ	0.9	NA	nc	NA	nc	NA
CMS-118	0	1	Benzo(k)fluoranthene	0.36	MG/KG	UJ	0.9	NA	nc	NA	nc	NA
CMS-164	0	1	Benzo(k)fluoranthene	2	MG/KG	UJ	0.9	NA	nc	NA	nc	NA
CMS-060	1	2	Benzo(k)fluoranthene	0.34	MG/KG	UJ	0.9	NA	nc	NA	nc	NA
CMS-405	1	2	Benzo(k)fluoranthene	0.63	MG/KG	UJ	0.9	NA	nc	NA	nc	NA
CMS-428	1	2	Benzo(k)fluoranthene	0.35	MG/KG	UJ	0.9	NA	nc	NA	nc	NA
CMS-455	2	3	Benzo(k)fluoranthene	0.4	MG/KG	UJ	0.9	NA	nc	NA	nc	NA
CMS-428	3	4	Benzo(k)fluoranthene	0.37	MG/KG	UJ	0.9	NA	nc	NA	nc	NA
CMS-060	4	5	Benzo(k)fluoranthene	0.38	MG/KG	UJ	0.9	NA	nc	NA	nc	NA
CMS-455	4	5	Benzo(k)fluoranthene	0.48	MG/KG	UJ	0.9	NA	nc	NA	nc	NA
MW06S	2	4	Benzo(k)fluoranthene	0.31	MG/KG	XJ	0.9	N	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Benzo(k)fluoranthene	1.4	MG/KG		0.9	Y	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Benzo(k)fluoranthene	1.6	MG/KG		0.9	Y	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Benzo(k)fluoranthene	8.8	MG/KG		0.9	Y	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Benzo(k)fluoranthene	2.4	MG/KG		0.9	Y	nc	NA	nc	NA
RES-14-272-01	0	1	Benzo(k)fluoranthene	0.95	MG/KG		0.9	Y	nc	NA	nc	NA
BV01COMP	0	4	Benzo(k)fluoranthene	1.2	MG/KG		0.9	Y	nc	NA	nc	NA
MW14M	1	2	Benzo(k)fluoranthene	0.4	MG/KG		0.9	N	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Benzo(k)fluoranthene	0.93	MG/KG		0.9	Y	nc	NA	nc	NA
SB03	2	4	Benzo(k)fluoranthene	2.2	MG/KG		0.9	Y	nc	NA	nc	NA
MW07S	3	4	Benzo(k)fluoranthene	0.59	MG/KG		0.9	N	nc	NA	nc	NA
MW15D	4	6	Benzo(k)fluoranthene	0.79	MG/KG		0.9	N	nc	NA	nc	NA
MW01S	4	6	Benzo(k)fluoranthene	0.65	MG/KG		0.9	N	nc	NA	nc	NA
MW03S	4	6	Benzo(k)fluoranthene	1	MG/KG		0.9	Y	nc	NA	nc	NA
MW15D	4	6	Benzo(k)fluoranthene	0.49	MG/KG		0.9	N	nc	NA	nc	NA
CMS-4105	0	1	Benzo[k]fluoranthene	7.142038132	MG/KG	J	0.9	Y	nc	NA	nc	NA
CMS-4110	0	1	Benzo[k]fluoranthene	3.050311933	MG/KG	J	0.9	Y	nc	NA	nc	NA
MW07S	3	4	Benzo[k]fluoranthene	0.454	MG/KG	NJ	0.9	N	nc	NA	nc	NA
MW07S	4	6	Benzo[k]fluoranthene	0.09309	MG/KG	NJ	0.9	N	nc	NA	nc	NA
CMS-060	0	1	Beryllium	0.66	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-098	0	1	Beryllium	0.74	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-142	0	1	Beryllium	0.53	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-159	0	1	Beryllium	0.65	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-405	0	1	Beryllium	0.33	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-407	0	1	Beryllium	0.37	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-408	0	1	Beryllium	0.34	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-417	0	1	Beryllium	0.2	MG/KG	J	0.4	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-456	0	1	Beryllium	0.41	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-142	0	1	Beryllium	0.55	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-060	0	1	Beryllium	1.3	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-703	0	2	Beryllium	0.4	MG/KG	J	0.4	N	nc	NA	nc	NA
BV01COMP	0	4	Beryllium	0.31	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-089	1	2	Beryllium	0.36	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-237	1	2	Beryllium	0.5	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-405	1	2	Beryllium	0.46	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-407	1	2	Beryllium	0.41	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-408	1	2	Beryllium	0.52	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-417	1	2	Beryllium	0.44	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-419	1	2	Beryllium	0.43	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-423	1	2	Beryllium	0.39	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-427	1	2	Beryllium	0.49	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-456	1	2	Beryllium	0.63	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-405	1	2	Beryllium	0.28	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-060	2	3	Beryllium	0.52	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-089	2	3	Beryllium	0.38	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-405	2	3	Beryllium	0.21	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-407	2	3	Beryllium	0.52	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-408	2	3	Beryllium	0.45	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-417	2	3	Beryllium	0.49	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-089	3	4	Beryllium	0.45	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-405	3	4	Beryllium	0.41	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-407	3	4	Beryllium	0.54	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-427	3	4	Beryllium	0.43	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-060	4	5	Beryllium	0.51	MG/KG	J	0.4	Y	nc	NA	nc	NA
MW05S	4	6	Beryllium	0.75	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Beryllium	0.44	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Beryllium	0.21	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Beryllium	0.66	MG/KG	U	0.4	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Beryllium	0.31	MG/KG	U	0.4	NA	nc	NA	nc	NA
RES-14-303-01	0	1	Beryllium	0.57	MG/KG	U	0.4	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Beryllium	0.32	MG/KG	U	0.4	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Beryllium	0.4	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Beryllium	0.53	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW01S	1	2	Beryllium	0.05	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Beryllium	0.38	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW02S	2	4	Beryllium	0.3	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW15D	2	4	Beryllium	0.41	MG/KG	U	0.4	NA	nc	NA	nc	NA
SB03	2	4	Beryllium	0.29	MG/KG	U	0.4	NA	nc	NA	nc	NA
SB03	4	6	Beryllium	0.28	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW15D	4	6	Beryllium	0.37	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW03S	4	6	Beryllium	0.05	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW08S	4	6	Beryllium	0.05	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW15D	4	6	Beryllium	0.5	MG/KG	U	0.4	NA	nc	NA	nc	NA
SB03	4	6	Beryllium	0.28	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Beryllium	0.13	MG/KG	UJ	0.4	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Beryllium	0.4	MG/KG	UJ	0.4	NA	nc	NA	nc	NA
MW08S	1	2	Beryllium	0.05	MG/KG	UJ	0.4	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW08S	2	4	Beryllium	0.06	MG/KG	UJ	0.4	NA	nc	NA	nc	NA
MW08S	2	4	Beryllium	0.06	MG/KG	UJ	0.4	NA	nc	NA	nc	NA
MW01S	4	6	Beryllium	0.05	MG/KG	UJ	0.4	NA	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Beryllium	1	MG/KG		0.4	Y	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Beryllium	0.87	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-089	0	1	Beryllium	0.7	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-118	0	1	Beryllium	0.61	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-164	0	1	Beryllium	1.9	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-173	0	1	Beryllium	1.9	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-237	0	1	Beryllium	0.67	MG/KG		0.4	Y	nc	NA	nc	NA
RES-14-302-01	0	1	Beryllium	0.36	MG/KG		0.4	N	nc	NA	nc	NA
MW05S	1	2	Beryllium	0.27	MG/KG		0.4	N	nc	NA	nc	NA
MW14M	1	2	Beryllium	0.63	MG/KG		0.4	Y	nc	NA	nc	NA
MW05S	1	2	Beryllium	0.39	MG/KG		0.4	N	nc	NA	nc	NA
MW14M	1	2	Beryllium	0.83	MG/KG		0.4	Y	nc	NA	nc	NA
SB-14-271	1	2	Beryllium	0.48	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-060	1	2	Beryllium	0.53	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-118	1	2	Beryllium	0.61	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-173	1	2	Beryllium	1.3	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-428	1	2	Beryllium	0.79	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-118	2	3	Beryllium	2.1	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-237	2	3	Beryllium	1.5	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-455	2	3	Beryllium	1.5	MG/KG		0.4	Y	nc	NA	nc	NA
SB02	2	4	Beryllium	0.58	MG/KG		0.4	Y	nc	NA	nc	NA
MW05S	2	4	Beryllium	0.6	MG/KG		0.4	Y	nc	NA	nc	NA
MW06S	2	4	Beryllium	0.24	MG/KG		0.4	N	nc	NA	nc	NA
MW06S	2	4	Beryllium	0.26	MG/KG		0.4	N	nc	NA	nc	NA
MW14M	2	4	Beryllium	0.64	MG/KG		0.4	Y	nc	NA	nc	NA
SB-14-271	2	4	Beryllium	0.82	MG/KG		0.4	Y	nc	NA	nc	NA
SB02	2	4	Beryllium	0.58	MG/KG		0.4	Y	nc	NA	nc	NA
MW07S	3	4	Beryllium	0.29	MG/KG		0.4	N	nc	NA	nc	NA
CMS-060	3	4	Beryllium	0.73	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-118	3	4	Beryllium	1.1	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-417	3	4	Beryllium	0.71	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-419	3	4	Beryllium	1	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-423	3	4	Beryllium	0.67	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-428	3	4	Beryllium	0.74	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-423	3	4	Beryllium	0.73	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-118	4	5	Beryllium	0.68	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-405	4	5	Beryllium	0.69	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-455	4	5	Beryllium	0.84	MG/KG		0.4	Y	nc	NA	nc	NA
MW04D	4	6	Beryllium	1	MG/KG		0.4	Y	nc	NA	nc	NA
MW06S	4	6	Beryllium	0.44	MG/KG		0.4	Y	nc	NA	nc	NA
MW07S	4	6	Beryllium	0.29	MG/KG		0.4	N	nc	NA	nc	NA
MW09S	4	6	Beryllium	0.51	MG/KG		0.4	Y	nc	NA	nc	NA
SB-14-271	4	6	Beryllium	0.19	MG/KG		0.4	N	nc	NA	nc	NA
SB02	4	6	Beryllium	0.82	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-4105	0	1	Beryllium	1.03	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-4110	0	1	Beryllium	0.95	MG/KG		0.4	Y	nc	NA	nc	NA
SS-01	0	0	Bis(2-chloroethyl)ether	0.43	MG/KG	U	0.6	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMW-SD-2016	0	0.5	Bis(2-chloroethyl)ether	0.8	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Bis(2-chloroethyl)ether	0.87	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Bis(2-chloroethyl)ether	2.1	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Bis(2-chloroethyl)ether	0.95	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Bis(2-chloroethyl)ether	0.46	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Bis(2-chloroethyl)ether	2.1	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-089	0	1	Bis(2-chloroethyl)ether	0.67	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-098	0	1	Bis(2-chloroethyl)ether	0.6	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-142	0	1	Bis(2-chloroethyl)ether	0.58	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-164	0	1	Bis(2-chloroethyl)ether	2	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-173	0	1	Bis(2-chloroethyl)ether	1.1	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-237	0	1	Bis(2-chloroethyl)ether	1.3	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-405	0	1	Bis(2-chloroethyl)ether	0.35	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-407	0	1	Bis(2-chloroethyl)ether	0.35	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-408	0	1	Bis(2-chloroethyl)ether	0.34	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-417	0	1	Bis(2-chloroethyl)ether	35	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-456	0	1	Bis(2-chloroethyl)ether	0.49	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-142	0	1	Bis(2-chloroethyl)ether	0.55	MG/KG	U	0.6	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Bis(2-chloroethyl)ether	0.51	MG/KG	U	0.6	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Bis(2-chloroethyl)ether	0.62	MG/KG	U	0.6	NA	nc	NA	nc	NA
RES-14-302-01	0	1	Bis(2-chloroethyl)ether	5	MG/KG	U	0.6	NA	nc	NA	nc	NA
RES-14-303-01	0	1	Bis(2-chloroethyl)ether	4.8	MG/KG	U	0.6	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Bis(2-chloroethyl)ether	2.5	MG/KG	U	0.6	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Bis(2-chloroethyl)ether	3.1	MG/KG	U	0.6	NA	nc	NA	nc	NA
SS-02	0	1.3	Bis(2-chloroethyl)ether	0.52	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-703	0	2	Bis(2-chloroethyl)ether	6.2	MG/KG	U	0.6	NA	nc	NA	nc	NA
SS-06	0	2	Bis(2-chloroethyl)ether	0.84	MG/KG	U	0.6	NA	nc	NA	nc	NA
BV01COMP	0	4	Bis(2-chloroethyl)ether	0.38	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Bis(2-chloroethyl)ether	4.2	MG/KG	U	0.6	NA	nc	NA	nc	NA
MW05S	1	2	Bis(2-chloroethyl)ether	0.36	MG/KG	U	0.6	NA	nc	NA	nc	NA
MW14M	1	2	Bis(2-chloroethyl)ether	0.34	MG/KG	U	0.6	NA	nc	NA	nc	NA
MW14M	1	2	Bis(2-chloroethyl)ether	0.34	MG/KG	U	0.6	NA	nc	NA	nc	NA
MW01S	1	2	Bis(2-chloroethyl)ether	0.38	MG/KG	U	0.6	NA	nc	NA	nc	NA
MW05S	1	2	Bis(2-chloroethyl)ether	0.36	MG/KG	U	0.6	NA	nc	NA	nc	NA
MW08S	1	2	Bis(2-chloroethyl)ether	0.42	MG/KG	U	0.6	NA	nc	NA	nc	NA
MW14M	1	2	Bis(2-chloroethyl)ether	0.33	MG/KG	U	0.6	NA	nc	NA	nc	NA
MW14M	1	2	Bis(2-chloroethyl)ether	0.33	MG/KG	U	0.6	NA	nc	NA	nc	NA
SB-14-271	1	2	Bis(2-chloroethyl)ether	0.4	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-060	1	2	Bis(2-chloroethyl)ether	0.34	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-089	1	2	Bis(2-chloroethyl)ether	0.35	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-118	1	2	Bis(2-chloroethyl)ether	0.37	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-173	1	2	Bis(2-chloroethyl)ether	0.52	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-237	1	2	Bis(2-chloroethyl)ether	0.83	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-405	1	2	Bis(2-chloroethyl)ether	0.63	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-407	1	2	Bis(2-chloroethyl)ether	0.44	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-408	1	2	Bis(2-chloroethyl)ether	8.7	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-417	1	2	Bis(2-chloroethyl)ether	35	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-419	1	2	Bis(2-chloroethyl)ether	74	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-423	1	2	Bis(2-chloroethyl)ether	0.35	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-427	1	2	Bis(2-chloroethyl)ether	3.6	MG/KG	U	0.6	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-428	1	2	Bis(2-chloroethyl)ether	0.35	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-456	1	2	Bis(2-chloroethyl)ether	1.2	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-405	1	2	Bis(2-chloroethyl)ether	1.2	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Bis(2-chloroethyl)ether	0.86	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-060	2	3	Bis(2-chloroethyl)ether	0.36	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-089	2	3	Bis(2-chloroethyl)ether	0.7	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-118	2	3	Bis(2-chloroethyl)ether	0.44	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-237	2	3	Bis(2-chloroethyl)ether	0.63	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-405	2	3	Bis(2-chloroethyl)ether	0.64	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-407	2	3	Bis(2-chloroethyl)ether	1.1	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-408	2	3	Bis(2-chloroethyl)ether	0.43	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-417	2	3	Bis(2-chloroethyl)ether	9.8	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-455	2	3	Bis(2-chloroethyl)ether	0.4	MG/KG	U	0.6	NA	nc	NA	nc	NA
MW08S	2	4	Bis(2-chloroethyl)ether	0.45	MG/KG	U	0.6	NA	nc	NA	nc	NA
SB02	2	4	Bis(2-chloroethyl)ether	2.3	MG/KG	U	0.6	NA	nc	NA	nc	NA
MW01S	2	4	Bis(2-chloroethyl)ether	1.6	MG/KG	U	0.6	NA	nc	NA	nc	NA
MW02S	2	4	Bis(2-chloroethyl)ether	0.38	MG/KG	U	0.6	NA	nc	NA	nc	NA
MW06S	2	4	Bis(2-chloroethyl)ether	0.36	MG/KG	U	0.6	NA	nc	NA	nc	NA
MW06S	2	4	Bis(2-chloroethyl)ether	0.37	MG/KG	U	0.6	NA	nc	NA	nc	NA
MW08S	2	4	Bis(2-chloroethyl)ether	0.41	MG/KG	U	0.6	NA	nc	NA	nc	NA
MW14M	2	4	Bis(2-chloroethyl)ether	0.38	MG/KG	U	0.6	NA	nc	NA	nc	NA
MW15D	2	4	Bis(2-chloroethyl)ether	0.37	MG/KG	U	0.6	NA	nc	NA	nc	NA
SB-14-271	2	4	Bis(2-chloroethyl)ether	0.45	MG/KG	U	0.6	NA	nc	NA	nc	NA
SB02	2	4	Bis(2-chloroethyl)ether	2.2	MG/KG	U	0.6	NA	nc	NA	nc	NA
SB03	2	4	Bis(2-chloroethyl)ether	0.99	MG/KG	U	0.6	NA	nc	NA	nc	NA
SS-03	2.5	3.5	Bis(2-chloroethyl)ether	0.4	MG/KG	U	0.6	NA	nc	NA	nc	NA
MW07S	3	4	Bis(2-chloroethyl)ether	0.38	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-060	3	4	Bis(2-chloroethyl)ether	0.45	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-089	3	4	Bis(2-chloroethyl)ether	1.8	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-118	3	4	Bis(2-chloroethyl)ether	0.5	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-405	3	4	Bis(2-chloroethyl)ether	0.38	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-407	3	4	Bis(2-chloroethyl)ether	0.42	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-417	3	4	Bis(2-chloroethyl)ether	1.9	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-419	3	4	Bis(2-chloroethyl)ether	0.42	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-423	3	4	Bis(2-chloroethyl)ether	0.37	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-427	3	4	Bis(2-chloroethyl)ether	0.41	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-428	3	4	Bis(2-chloroethyl)ether	0.37	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-423	3	4	Bis(2-chloroethyl)ether	0.39	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-118	4	5	Bis(2-chloroethyl)ether	0.43	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-405	4	5	Bis(2-chloroethyl)ether	0.46	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-455	4	5	Bis(2-chloroethyl)ether	0.48	MG/KG	U	0.6	NA	nc	NA	nc	NA
SB03	4	6	Bis(2-chloroethyl)ether	0.37	MG/KG	U	0.6	NA	nc	NA	nc	NA
MW15D	4	6	Bis(2-chloroethyl)ether	0.4	MG/KG	U	0.6	NA	nc	NA	nc	NA
MW01S	4	6	Bis(2-chloroethyl)ether	0.4	MG/KG	U	0.6	NA	nc	NA	nc	NA
MW03S	4	6	Bis(2-chloroethyl)ether	0.4	MG/KG	U	0.6	NA	nc	NA	nc	NA
MW04D	4	6	Bis(2-chloroethyl)ether	0.42	MG/KG	U	0.6	NA	nc	NA	nc	NA
MW05S	4	6	Bis(2-chloroethyl)ether	0.82	MG/KG	U	0.6	NA	nc	NA	nc	NA
MW06S	4	6	Bis(2-chloroethyl)ether	0.46	MG/KG	U	0.6	NA	nc	NA	nc	NA
MW07S	4	6	Bis(2-chloroethyl)ether	0.4	MG/KG	U	0.6	NA	nc	NA	nc	NA
MW08S	4	6	Bis(2-chloroethyl)ether	0.45	MG/KG	U	0.6	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW09S	4	6	Bis(2-chloroethyl)ether	0.85	MG/KG	U	0.6	NA	nc	NA	nc	NA
MW15D	4	6	Bis(2-chloroethyl)ether	0.35	MG/KG	U	0.6	NA	nc	NA	nc	NA
SB-14-271	4	6	Bis(2-chloroethyl)ether	0.4	MG/KG	U	0.6	NA	nc	NA	nc	NA
SB02	4	6	Bis(2-chloroethyl)ether	0.83	MG/KG	U	0.6	NA	nc	NA	nc	NA
SB03	4	6	Bis(2-chloroethyl)ether	0.38	MG/KG	U	0.6	NA	nc	NA	nc	NA
CMS-060	0	1	Bis(2-chloroethyl)ether	0.34	MG/KG	UJ	0.6	NA	nc	NA	nc	NA
CMS-118	0	1	Bis(2-chloroethyl)ether	0.36	MG/KG	UJ	0.6	NA	nc	NA	nc	NA
CMS-159	0	1	Bis(2-chloroethyl)ether	2.2	MG/KG	UJ	0.6	NA	nc	NA	nc	NA
CMS-060	0	1	Bis(2-chloroethyl)ether	0.35	MG/KG	UJ	0.6	NA	nc	NA	nc	NA
MW05S	2	4	Bis(2-chloroethyl)ether	0.37	MG/KG	UJ	0.6	NA	nc	NA	nc	NA
CMS-060	4	5	Bis(2-chloroethyl)ether	0.38	MG/KG	UJ	0.6	NA	nc	NA	nc	NA
CMS-089	0	1	Bis-(2-chloroisopropyl)ether	0.67	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-098	0	1	Bis-(2-chloroisopropyl)ether	0.6	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-142	0	1	Bis-(2-chloroisopropyl)ether	0.58	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-164	0	1	Bis-(2-chloroisopropyl)ether	2	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-173	0	1	Bis-(2-chloroisopropyl)ether	1.1	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-237	0	1	Bis-(2-chloroisopropyl)ether	1.3	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-405	0	1	Bis-(2-chloroisopropyl)ether	0.35	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-407	0	1	Bis-(2-chloroisopropyl)ether	0.35	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-408	0	1	Bis-(2-chloroisopropyl)ether	0.34	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-417	0	1	Bis-(2-chloroisopropyl)ether	35	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-142	0	1	Bis-(2-chloroisopropyl)ether	0.55	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-703	0	2	Bis-(2-chloroisopropyl)ether	6.2	MG/KG	U	9.1	NA	nc	NA	nc	NA
BV01COMP	0	4	Bis-(2-chloroisopropyl)ether	0.38	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-060	1	2	Bis-(2-chloroisopropyl)ether	0.34	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-089	1	2	Bis-(2-chloroisopropyl)ether	0.35	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-118	1	2	Bis-(2-chloroisopropyl)ether	0.37	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-173	1	2	Bis-(2-chloroisopropyl)ether	0.52	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-237	1	2	Bis-(2-chloroisopropyl)ether	0.83	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-405	1	2	Bis-(2-chloroisopropyl)ether	0.63	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-407	1	2	Bis-(2-chloroisopropyl)ether	0.44	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-408	1	2	Bis-(2-chloroisopropyl)ether	8.7	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-417	1	2	Bis-(2-chloroisopropyl)ether	35	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-419	1	2	Bis-(2-chloroisopropyl)ether	74	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-428	1	2	Bis-(2-chloroisopropyl)ether	0.35	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-405	1	2	Bis-(2-chloroisopropyl)ether	1.2	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-060	2	3	Bis-(2-chloroisopropyl)ether	0.36	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-089	2	3	Bis-(2-chloroisopropyl)ether	0.7	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-118	2	3	Bis-(2-chloroisopropyl)ether	0.44	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-237	2	3	Bis-(2-chloroisopropyl)ether	0.63	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-405	2	3	Bis-(2-chloroisopropyl)ether	0.64	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-407	2	3	Bis-(2-chloroisopropyl)ether	1.1	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-408	2	3	Bis-(2-chloroisopropyl)ether	0.43	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-417	2	3	Bis-(2-chloroisopropyl)ether	9.8	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-455	2	3	Bis-(2-chloroisopropyl)ether	0.4	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-060	3	4	Bis-(2-chloroisopropyl)ether	0.45	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-089	3	4	Bis-(2-chloroisopropyl)ether	1.8	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-118	3	4	Bis-(2-chloroisopropyl)ether	0.5	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-405	3	4	Bis-(2-chloroisopropyl)ether	0.38	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-407	3	4	Bis-(2-chloroisopropyl)ether	0.42	MG/KG	U	9.1	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-417	3	4	Bis-(2-chloroisopropyl)ether	1.9	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-428	3	4	Bis-(2-chloroisopropyl)ether	0.37	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-118	4	5	Bis-(2-chloroisopropyl)ether	0.43	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-405	4	5	Bis-(2-chloroisopropyl)ether	0.46	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-455	4	5	Bis-(2-chloroisopropyl)ether	0.48	MG/KG	U	9.1	NA	nc	NA	nc	NA
CMS-060	0	1	Bis-(2-chloroisopropyl)ether	0.34	MG/KG	UJ	9.1	NA	nc	NA	nc	NA
CMS-118	0	1	Bis-(2-chloroisopropyl)ether	0.36	MG/KG	UJ	9.1	NA	nc	NA	nc	NA
CMS-159	0	1	Bis-(2-chloroisopropyl)ether	2.2	MG/KG	UJ	9.1	NA	nc	NA	nc	NA
CMS-456	0	1	Bis-(2-chloroisopropyl)ether	0.49	MG/KG	UJ	9.1	NA	nc	NA	nc	NA
CMS-060	0	1	Bis-(2-chloroisopropyl)ether	0.35	MG/KG	UJ	9.1	NA	nc	NA	nc	NA
CMS-423	1	2	Bis-(2-chloroisopropyl)ether	0.35	MG/KG	UJ	9.1	NA	nc	NA	nc	NA
CMS-427	1	2	Bis-(2-chloroisopropyl)ether	3.6	MG/KG	UJ	9.1	NA	nc	NA	nc	NA
CMS-456	1	2	Bis-(2-chloroisopropyl)ether	1.2	MG/KG	UJ	9.1	NA	nc	NA	nc	NA
CMS-419	3	4	Bis-(2-chloroisopropyl)ether	0.42	MG/KG	UJ	9.1	NA	nc	NA	nc	NA
CMS-423	3	4	Bis-(2-chloroisopropyl)ether	0.37	MG/KG	UJ	9.1	NA	nc	NA	nc	NA
CMS-427	3	4	Bis-(2-chloroisopropyl)ether	0.41	MG/KG	UJ	9.1	NA	nc	NA	nc	NA
CMS-423	3	4	Bis-(2-chloroisopropyl)ether	0.39	MG/KG	UJ	9.1	NA	nc	NA	nc	NA
CMS-060	4	5	Bis-(2-chloroisopropyl)ether	0.38	MG/KG	UJ	9.1	NA	nc	NA	nc	NA
CMS-4105	0	1	Bis(2-ethylhexyl) Phthalate	28	MG/KG	J	46	N	nc	NA	nc	NA
CMS-4110	0	1	Bis(2-ethylhexyl) Phthalate	33	MG/KG	J	46	N	nc	NA	nc	NA
SS-02	0	1.3	Bis(2-ethylhexyl)phthalate	4.4	MG/KG	*	46	N	nc	NA	nc	NA
MW06S	2	4	Bis(2-ethylhexyl)phthalate	34	MG/KG	*	46	N	nc	NA	nc	NA
MW06S	2	4	Bis(2-ethylhexyl)phthalate	41	MG/KG	*	46	N	nc	NA	nc	NA
MW07S	3	4	Bis(2-ethylhexyl)phthalate	20	MG/KG	*	46	N	nc	NA	nc	NA
MW06S	4	6	Bis(2-ethylhexyl)phthalate	36	MG/KG	*	46	N	nc	NA	nc	NA
MW08S	1	2	Bis(2-ethylhexyl)phthalate	5.4	MG/KG	*J	46	N	nc	NA	nc	NA
SS-01	0	0	Bis(2-ethylhexyl)phthalate	0.13	MG/KG	J	46	N	nc	NA	nc	NA
CMS-060	0	1	Bis(2-ethylhexyl)phthalate	0.1	MG/KG	J	46	N	nc	NA	nc	NA
CMS-089	0	1	Bis(2-ethylhexyl)phthalate	0.28	MG/KG	J	46	N	nc	NA	nc	NA
CMS-098	0	1	Bis(2-ethylhexyl)phthalate	0.17	MG/KG	J	46	N	nc	NA	nc	NA
CMS-142	0	1	Bis(2-ethylhexyl)phthalate	0.28	MG/KG	J	46	N	nc	NA	nc	NA
CMS-405	0	1	Bis(2-ethylhexyl)phthalate	0.074	MG/KG	J	46	N	nc	NA	nc	NA
CMS-142	0	1	Bis(2-ethylhexyl)phthalate	0.15	MG/KG	J	46	N	nc	NA	nc	NA
CMS-060	0	1	Bis(2-ethylhexyl)phthalate	0.21	MG/KG	J	46	N	nc	NA	nc	NA
RES-14-302-01	0	1	Bis(2-ethylhexyl)phthalate	0.78	MG/KG	J	46	N	nc	NA	nc	NA
SS-06	0	2	Bis(2-ethylhexyl)phthalate	0.45	MG/KG	J	46	N	nc	NA	nc	NA
BV01COMP	0	4	Bis(2-ethylhexyl)phthalate	0.073	MG/KG	J	46	N	nc	NA	nc	NA
MW01S	1	2	Bis(2-ethylhexyl)phthalate	0.086	MG/KG	J	46	N	nc	NA	nc	NA
CMS-060	1	2	Bis(2-ethylhexyl)phthalate	0.19	MG/KG	J	46	N	nc	NA	nc	NA
CMS-405	1	2	Bis(2-ethylhexyl)phthalate	1.1	MG/KG	J	46	N	nc	NA	nc	NA
CMS-428	1	2	Bis(2-ethylhexyl)phthalate	0.081	MG/KG	J	46	N	nc	NA	nc	NA
CMS-405	1	2	Bis(2-ethylhexyl)phthalate	8	MG/KG	J	46	N	nc	NA	nc	NA
CMS-060	2	3	Bis(2-ethylhexyl)phthalate	0.072	MG/KG	J	46	N	nc	NA	nc	NA
CMS-089	2	3	Bis(2-ethylhexyl)phthalate	0.5	MG/KG	J	46	N	nc	NA	nc	NA
CMS-118	2	3	Bis(2-ethylhexyl)phthalate	0.27	MG/KG	J	46	N	nc	NA	nc	NA
CMS-417	2	3	Bis(2-ethylhexyl)phthalate	9.6	MG/KG	J	46	N	nc	NA	nc	NA
CMS-455	2	3	Bis(2-ethylhexyl)phthalate	0.061	MG/KG	J	46	N	nc	NA	nc	NA
MW08S	2	4	Bis(2-ethylhexyl)phthalate	0.26	MG/KG	J	46	N	nc	NA	nc	NA
MW01S	2	4	Bis(2-ethylhexyl)phthalate	0.47	MG/KG	J	46	N	nc	NA	nc	NA
MW08S	2	4	Bis(2-ethylhexyl)phthalate	0.17	MG/KG	J	46	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW14M	2	4	Bis(2-ethylhexyl)phthalate	0.064	MG/KG	J	46	N	nc	NA	nc	NA
SS-03	2.5	3.5	Bis(2-ethylhexyl)phthalate	0.087	MG/KG	J	46	N	nc	NA	nc	NA
CMS-118	3	4	Bis(2-ethylhexyl)phthalate	0.13	MG/KG	J	46	N	nc	NA	nc	NA
CMS-405	3	4	Bis(2-ethylhexyl)phthalate	0.3	MG/KG	J	46	N	nc	NA	nc	NA
CMS-417	3	4	Bis(2-ethylhexyl)phthalate	0.55	MG/KG	J	46	N	nc	NA	nc	NA
CMS-060	4	5	Bis(2-ethylhexyl)phthalate	0.076	MG/KG	J	46	N	nc	NA	nc	NA
MW08S	4	6	Bis(2-ethylhexyl)phthalate	0.13	MG/KG	J	46	N	nc	NA	nc	NA
MW09S	4	6	Bis(2-ethylhexyl)phthalate	0.11	MG/KG	J	46	N	nc	NA	nc	NA
MW15D	2	4	Bis(2-ethylhexyl)phthalate	0.49	MG/KG	JEB	46	N	nc	NA	nc	NA
MW15D	4	6	Bis(2-ethylhexyl)phthalate	1.2	MG/KG	JEB	46	N	nc	NA	nc	NA
MW15D	4	6	Bis(2-ethylhexyl)phthalate	2.1	MG/KG	JEB	46	N	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Bis(2-ethylhexyl)phthalate	0.8	MG/KG	U	46	NA	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Bis(2-ethylhexyl)phthalate	0.87	MG/KG	U	46	NA	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Bis(2-ethylhexyl)phthalate	0.95	MG/KG	U	46	NA	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Bis(2-ethylhexyl)phthalate	0.46	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-173	0	1	Bis(2-ethylhexyl)phthalate	1.1	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-407	0	1	Bis(2-ethylhexyl)phthalate	0.35	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-408	0	1	Bis(2-ethylhexyl)phthalate	0.34	MG/KG	U	46	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Bis(2-ethylhexyl)phthalate	0.51	MG/KG	U	46	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Bis(2-ethylhexyl)phthalate	0.67	MG/KG	U	46	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Bis(2-ethylhexyl)phthalate	2.5	MG/KG	U	46	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Bis(2-ethylhexyl)phthalate	3.1	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-703	0	2	Bis(2-ethylhexyl)phthalate	6.2	MG/KG	U	46	NA	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Bis(2-ethylhexyl)phthalate	4.2	MG/KG	U	46	NA	nc	NA	nc	NA
MW05S	1	2	Bis(2-ethylhexyl)phthalate	0.36	MG/KG	U	46	NA	nc	NA	nc	NA
MW05S	1	2	Bis(2-ethylhexyl)phthalate	0.36	MG/KG	U	46	NA	nc	NA	nc	NA
SB-14-271	1	2	Bis(2-ethylhexyl)phthalate	0.4	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-173	1	2	Bis(2-ethylhexyl)phthalate	0.52	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-407	2	3	Bis(2-ethylhexyl)phthalate	1.1	MG/KG	U	46	NA	nc	NA	nc	NA
MW02S	2	4	Bis(2-ethylhexyl)phthalate	0.38	MG/KG	U	46	NA	nc	NA	nc	NA
SB-14-271	2	4	Bis(2-ethylhexyl)phthalate	0.45	MG/KG	U	46	NA	nc	NA	nc	NA
SB03	2	4	Bis(2-ethylhexyl)phthalate	0.99	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-060	3	4	Bis(2-ethylhexyl)phthalate	0.45	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-407	3	4	Bis(2-ethylhexyl)phthalate	0.42	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-428	3	4	Bis(2-ethylhexyl)phthalate	0.37	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-118	4	5	Bis(2-ethylhexyl)phthalate	0.43	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-405	4	5	Bis(2-ethylhexyl)phthalate	0.46	MG/KG	U	46	NA	nc	NA	nc	NA
SB03	4	6	Bis(2-ethylhexyl)phthalate	0.37	MG/KG	U	46	NA	nc	NA	nc	NA
MW04D	4	6	Bis(2-ethylhexyl)phthalate	0.42	MG/KG	U	46	NA	nc	NA	nc	NA
MW07S	4	6	Bis(2-ethylhexyl)phthalate	0.4	MG/KG	U	46	NA	nc	NA	nc	NA
SB-14-271	4	6	Bis(2-ethylhexyl)phthalate	0.4	MG/KG	U	46	NA	nc	NA	nc	NA
SB03	4	6	Bis(2-ethylhexyl)phthalate	0.38	MG/KG	U	46	NA	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Bis(2-ethylhexyl)phthalate	2.1	MG/KG	UJ	46	NA	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Bis(2-ethylhexyl)phthalate	2.1	MG/KG	UJ	46	NA	nc	NA	nc	NA
RES-14-333-01	0	1	Bis(2-ethylhexyl)phthalate	7.1	MG/KG	UJ	46	NA	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Bis(2-ethylhexyl)phthalate	0.86	MG/KG	UJ	46	NA	nc	NA	nc	NA
MW05S	2	4	Bis(2-ethylhexyl)phthalate	0.54	MG/KG	UJ	46	NA	nc	NA	nc	NA
CMS-455	4	5	Bis(2-ethylhexyl)phthalate	0.48	MG/KG	UJ	46	NA	nc	NA	nc	NA
CMS-118	0	1	Bis(2-ethylhexyl)phthalate	0.48	MG/KG		46	N	nc	NA	nc	NA
CMS-159	0	1	Bis(2-ethylhexyl)phthalate	20	MG/KG		46	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-164	0	1	Bis(2-ethylhexyl)phthalate	2.4	MG/KG		46	N	nc	NA	nc	NA
CMS-237	0	1	Bis(2-ethylhexyl)phthalate	17	MG/KG		46	N	nc	NA	nc	NA
CMS-417	0	1	Bis(2-ethylhexyl)phthalate	460	MG/KG		46	Y	nc	NA	nc	NA
CMS-456	0	1	Bis(2-ethylhexyl)phthalate	2.9	MG/KG		46	N	nc	NA	nc	NA
RES-14-303-01	0	1	Bis(2-ethylhexyl)phthalate	10	MG/KG		46	N	nc	NA	nc	NA
MW14M	1	2	Bis(2-ethylhexyl)phthalate	1.7	MG/KG		46	N	nc	NA	nc	NA
MW14M	1	2	Bis(2-ethylhexyl)phthalate	1.8	MG/KG		46	N	nc	NA	nc	NA
MW14M	1	2	Bis(2-ethylhexyl)phthalate	1	MG/KG		46	N	nc	NA	nc	NA
MW14M	1	2	Bis(2-ethylhexyl)phthalate	1.2	MG/KG		46	N	nc	NA	nc	NA
CMS-089	1	2	Bis(2-ethylhexyl)phthalate	1.7	MG/KG		46	N	nc	NA	nc	NA
CMS-118	1	2	Bis(2-ethylhexyl)phthalate	0.57	MG/KG		46	N	nc	NA	nc	NA
CMS-237	1	2	Bis(2-ethylhexyl)phthalate	6.1	MG/KG		46	N	nc	NA	nc	NA
CMS-407	1	2	Bis(2-ethylhexyl)phthalate	1.4	MG/KG		46	N	nc	NA	nc	NA
CMS-408	1	2	Bis(2-ethylhexyl)phthalate	80	MG/KG		46	Y	nc	NA	nc	NA
CMS-417	1	2	Bis(2-ethylhexyl)phthalate	36	MG/KG		46	N	nc	NA	nc	NA
CMS-419	1	2	Bis(2-ethylhexyl)phthalate	390	MG/KG		46	Y	nc	NA	nc	NA
CMS-423	1	2	Bis(2-ethylhexyl)phthalate	0.72	MG/KG		46	N	nc	NA	nc	NA
CMS-427	1	2	Bis(2-ethylhexyl)phthalate	27	MG/KG		46	N	nc	NA	nc	NA
CMS-456	1	2	Bis(2-ethylhexyl)phthalate	14	MG/KG		46	N	nc	NA	nc	NA
CMS-237	2	3	Bis(2-ethylhexyl)phthalate	2.7	MG/KG		46	N	nc	NA	nc	NA
CMS-405	2	3	Bis(2-ethylhexyl)phthalate	0.82	MG/KG		46	N	nc	NA	nc	NA
CMS-408	2	3	Bis(2-ethylhexyl)phthalate	0.44	MG/KG		46	N	nc	NA	nc	NA
SB02	2	4	Bis(2-ethylhexyl)phthalate	4.8	MG/KG		46	N	nc	NA	nc	NA
SB02	2	4	Bis(2-ethylhexyl)phthalate	6	MG/KG		46	N	nc	NA	nc	NA
CMS-089	3	4	Bis(2-ethylhexyl)phthalate	1.6	MG/KG		46	N	nc	NA	nc	NA
CMS-419	3	4	Bis(2-ethylhexyl)phthalate	0.81	MG/KG		46	N	nc	NA	nc	NA
CMS-423	3	4	Bis(2-ethylhexyl)phthalate	1.7	MG/KG		46	N	nc	NA	nc	NA
CMS-427	3	4	Bis(2-ethylhexyl)phthalate	0.8	MG/KG		46	N	nc	NA	nc	NA
CMS-423	3	4	Bis(2-ethylhexyl)phthalate	2.3	MG/KG		46	N	nc	NA	nc	NA
MW01S	4	6	Bis(2-ethylhexyl)phthalate	0.48	MG/KG		46	N	nc	NA	nc	NA
MW03S	4	6	Bis(2-ethylhexyl)phthalate	0.9	MG/KG		46	N	nc	NA	nc	NA
MW05S	4	6	Bis(2-ethylhexyl)phthalate	1.3	MG/KG		46	N	nc	NA	nc	NA
SB02	4	6	Bis(2-ethylhexyl)phthalate	3.5	MG/KG		46	N	nc	NA	nc	NA
CMS-089	0	1	Bromodichloromethane	0.005	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-098	0	1	Bromodichloromethane	0.0097	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-118	0	1	Bromodichloromethane	0.0048	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-142	0	1	Bromodichloromethane	0.0095	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-159	0	1	Bromodichloromethane	0.021	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-164	0	1	Bromodichloromethane	0.015	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-173	0	1	Bromodichloromethane	0.024	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-407	0	1	Bromodichloromethane	0.005	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-408	0	1	Bromodichloromethane	0.0043	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-417	0	1	Bromodichloromethane	59	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-456	0	1	Bromodichloromethane	0.0075	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-702	0	1	Bromodichloromethane	0.0087	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-703	0	1	Bromodichloromethane	0.0061	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-142	0	1	Bromodichloromethane	0.011	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-060	0	1	Bromodichloromethane	2.7	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-065	0	10	Bromodichloromethane	0.79	MG/KG	U	10	NA	nc	NA	nc	NA
MW05S	1	2	Bromodichloromethane	0.095	MG/KG	U	10	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW01S	1	2	Bromodichloromethane	0.34	MG/KG	U	10	NA	nc	NA	nc	NA
MW05S	1	2	Bromodichloromethane	0.11	MG/KG	U	10	NA	nc	NA	nc	NA
MW08S	1	2	Bromodichloromethane	0.26	MG/KG	U	10	NA	nc	NA	nc	NA
MW14M	1	2	Bromodichloromethane	0.11	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-089	1	2	Bromodichloromethane	0.0048	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-118	1	2	Bromodichloromethane	0.006	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-173	1	2	Bromodichloromethane	0.0083	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-237	1	2	Bromodichloromethane	0.0069	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-405	1	2	Bromodichloromethane	4	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-407	1	2	Bromodichloromethane	0.0074	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-408	1	2	Bromodichloromethane	2.2	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-417	1	2	Bromodichloromethane	130	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-419	1	2	Bromodichloromethane	28	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-423	1	2	Bromodichloromethane	0.0062	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-427	1	2	Bromodichloromethane	0.0045	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-428	1	2	Bromodichloromethane	0.0054	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-456	1	2	Bromodichloromethane	0.0089	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-060	2	3	Bromodichloromethane	0.27	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-089	2	3	Bromodichloromethane	0.0047	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-118	2	3	Bromodichloromethane	0.0074	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-407	2	3	Bromodichloromethane	0.0087	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-408	2	3	Bromodichloromethane	6.6	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-417	2	3	Bromodichloromethane	17	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-455	2	3	Bromodichloromethane	0.33	MG/KG	U	10	NA	nc	NA	nc	NA
MW08S	2	4	Bromodichloromethane	0.21	MG/KG	U	10	NA	nc	NA	nc	NA
MW01S	2	4	Bromodichloromethane	0.22	MG/KG	U	10	NA	nc	NA	nc	NA
MW02S	2	4	Bromodichloromethane	0.2	MG/KG	U	10	NA	nc	NA	nc	NA
MW04D	2	4	Bromodichloromethane	0.5	MG/KG	U	10	NA	nc	NA	nc	NA
MW05S	2	4	Bromodichloromethane	0.1	MG/KG	U	10	NA	nc	NA	nc	NA
MW06S	2	4	Bromodichloromethane	0.3	MG/KG	U	10	NA	nc	NA	nc	NA
MW06S	2	4	Bromodichloromethane	0.3	MG/KG	U	10	NA	nc	NA	nc	NA
MW08S	2	4	Bromodichloromethane	0.32	MG/KG	U	10	NA	nc	NA	nc	NA
MW14M	2	4	Bromodichloromethane	0.14	MG/KG	U	10	NA	nc	NA	nc	NA
MW15D	2	4	Bromodichloromethane	0.14	MG/KG	U	10	NA	nc	NA	nc	NA
SB02	2	4	Bromodichloromethane	0.38	MG/KG	U	10	NA	nc	NA	nc	NA
SB03	2	4	Bromodichloromethane	0.3	MG/KG	U	10	NA	nc	NA	nc	NA
MW07S	3	4	Bromodichloromethane	0.5	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-060	3	4	Bromodichloromethane	0.0058	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-089	3	4	Bromodichloromethane	0.0041	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-118	3	4	Bromodichloromethane	0.0084	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-407	3	4	Bromodichloromethane	0.32	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-417	3	4	Bromodichloromethane	0.28	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-419	3	4	Bromodichloromethane	0.32	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-423	3	4	Bromodichloromethane	0.0045	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-427	3	4	Bromodichloromethane	0.0054	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-428	3	4	Bromodichloromethane	0.0057	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-423	3	4	Bromodichloromethane	0.0049	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-060	4	5	Bromodichloromethane	0.0048	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-118	4	5	Bromodichloromethane	0.0059	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-405	4	5	Bromodichloromethane	1	MG/KG	U	10	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-455	4	5	Bromodichloromethane	0.0072	MG/KG	U	10	NA	nc	NA	nc	NA
MW15D	4	6	Bromodichloromethane	0.1	MG/KG	U	10	NA	nc	NA	nc	NA
MW02S	4	6	Bromodichloromethane	0.55	MG/KG	U	10	NA	nc	NA	nc	NA
SB03	4	6	Bromodichloromethane	0.2	MG/KG	U	10	NA	nc	NA	nc	NA
MW01S	4	6	Bromodichloromethane	0.24	MG/KG	U	10	NA	nc	NA	nc	NA
MW02S	4	6	Bromodichloromethane	0.42	MG/KG	U	10	NA	nc	NA	nc	NA
MW03S	4	6	Bromodichloromethane	0.35	MG/KG	U	10	NA	nc	NA	nc	NA
MW04D	4	6	Bromodichloromethane	0.18	MG/KG	U	10	NA	nc	NA	nc	NA
MW06S	4	6	Bromodichloromethane	0.43	MG/KG	U	10	NA	nc	NA	nc	NA
MW07S	4	6	Bromodichloromethane	0.26	MG/KG	U	10	NA	nc	NA	nc	NA
MW08S	4	6	Bromodichloromethane	0.3	MG/KG	U	10	NA	nc	NA	nc	NA
MW09S	4	6	Bromodichloromethane	0.26	MG/KG	U	10	NA	nc	NA	nc	NA
MW15D	4	6	Bromodichloromethane	0.12	MG/KG	U	10	NA	nc	NA	nc	NA
SB02	4	6	Bromodichloromethane	0.26	MG/KG	U	10	NA	nc	NA	nc	NA
SB03	4	6	Bromodichloromethane	0.18	MG/KG	U	10	NA	nc	NA	nc	NA
CMS-237	0	1	Bromodichloromethane	0.0059	MG/KG	UJ	10	NA	nc	NA	nc	NA
MW14M	1	2	Bromodichloromethane	0.15	MG/KG	UJ	10	NA	nc	NA	nc	NA
SB-14-271	1	2	Bromodichloromethane	0.12	MG/KG	UJ	10	NA	nc	NA	nc	NA
CMS-060	1	2	Bromodichloromethane	5.1	MG/KG	UJ	10	NA	nc	NA	nc	NA
CMS-405	1	2	Bromodichloromethane	2.9	MG/KG	UJ	10	NA	nc	NA	nc	NA
SB-14-271	2	4	Bromodichloromethane	0.13	MG/KG	UJ	10	NA	nc	NA	nc	NA
MW05S	4	6	Bromodichloromethane	0.11	MG/KG	UJ	10	NA	nc	NA	nc	NA
SB-14-271	4	6	Bromodichloromethane	0.11	MG/KG	UJ	10	NA	nc	NA	nc	NA
CMS-089	0	1	Bromoform	0.005	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-098	0	1	Bromoform	0.0097	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-118	0	1	Bromoform	0.0048	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-142	0	1	Bromoform	0.0095	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-159	0	1	Bromoform	0.021	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-173	0	1	Bromoform	0.024	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-407	0	1	Bromoform	0.005	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-408	0	1	Bromoform	0.0043	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-417	0	1	Bromoform	59	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-456	0	1	Bromoform	0.0075	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-702	0	1	Bromoform	0.0087	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-703	0	1	Bromoform	0.0061	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-142	0	1	Bromoform	0.011	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-060	0	1	Bromoform	2.7	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-065	0	10	Bromoform	0.79	MG/KG	U	81	NA	nc	NA	nc	NA
MW05S	1	2	Bromoform	0.095	MG/KG	U	81	NA	nc	NA	nc	NA
MW01S	1	2	Bromoform	0.34	MG/KG	U	81	NA	nc	NA	nc	NA
MW05S	1	2	Bromoform	0.11	MG/KG	U	81	NA	nc	NA	nc	NA
MW08S	1	2	Bromoform	0.26	MG/KG	U	81	NA	nc	NA	nc	NA
MW14M	1	2	Bromoform	0.11	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-089	1	2	Bromoform	0.0048	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-118	1	2	Bromoform	0.006	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-173	1	2	Bromoform	0.0083	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-407	1	2	Bromoform	0.0074	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-408	1	2	Bromoform	2.2	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-417	1	2	Bromoform	130	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-419	1	2	Bromoform	28	MG/KG	U	81	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-423	1	2	Bromoform	0.0062	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-427	1	2	Bromoform	0.0045	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-428	1	2	Bromoform	0.0054	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-456	1	2	Bromoform	0.0089	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-060	2	3	Bromoform	0.27	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-089	2	3	Bromoform	0.0047	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-118	2	3	Bromoform	0.0074	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-407	2	3	Bromoform	0.0087	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-408	2	3	Bromoform	6.6	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-455	2	3	Bromoform	0.33	MG/KG	U	81	NA	nc	NA	nc	NA
MW08S	2	4	Bromoform	0.21	MG/KG	U	81	NA	nc	NA	nc	NA
MW01S	2	4	Bromoform	0.22	MG/KG	U	81	NA	nc	NA	nc	NA
MW02S	2	4	Bromoform	0.2	MG/KG	U	81	NA	nc	NA	nc	NA
MW04D	2	4	Bromoform	0.5	MG/KG	U	81	NA	nc	NA	nc	NA
MW05S	2	4	Bromoform	0.1	MG/KG	U	81	NA	nc	NA	nc	NA
MW06S	2	4	Bromoform	0.3	MG/KG	U	81	NA	nc	NA	nc	NA
MW06S	2	4	Bromoform	0.3	MG/KG	U	81	NA	nc	NA	nc	NA
MW08S	2	4	Bromoform	0.32	MG/KG	U	81	NA	nc	NA	nc	NA
MW14M	2	4	Bromoform	0.14	MG/KG	U	81	NA	nc	NA	nc	NA
MW15D	2	4	Bromoform	0.14	MG/KG	U	81	NA	nc	NA	nc	NA
SB02	2	4	Bromoform	0.38	MG/KG	U	81	NA	nc	NA	nc	NA
SB03	2	4	Bromoform	0.3	MG/KG	U	81	NA	nc	NA	nc	NA
MW07S	3	4	Bromoform	0.5	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-060	3	4	Bromoform	0.0058	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-089	3	4	Bromoform	0.0041	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-407	3	4	Bromoform	0.32	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-423	3	4	Bromoform	0.0045	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-427	3	4	Bromoform	0.0054	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-428	3	4	Bromoform	0.0057	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-423	3	4	Bromoform	0.0049	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-060	4	5	Bromoform	0.0048	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-118	4	5	Bromoform	0.0059	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-455	4	5	Bromoform	0.0072	MG/KG	U	81	NA	nc	NA	nc	NA
MW15D	4	6	Bromoform	0.1	MG/KG	U	81	NA	nc	NA	nc	NA
MW02S	4	6	Bromoform	0.55	MG/KG	U	81	NA	nc	NA	nc	NA
SB03	4	6	Bromoform	0.2	MG/KG	U	81	NA	nc	NA	nc	NA
MW01S	4	6	Bromoform	0.24	MG/KG	U	81	NA	nc	NA	nc	NA
MW02S	4	6	Bromoform	0.42	MG/KG	U	81	NA	nc	NA	nc	NA
MW03S	4	6	Bromoform	0.35	MG/KG	U	81	NA	nc	NA	nc	NA
MW04D	4	6	Bromoform	0.18	MG/KG	U	81	NA	nc	NA	nc	NA
MW06S	4	6	Bromoform	0.43	MG/KG	U	81	NA	nc	NA	nc	NA
MW07S	4	6	Bromoform	0.26	MG/KG	U	81	NA	nc	NA	nc	NA
MW08S	4	6	Bromoform	0.3	MG/KG	U	81	NA	nc	NA	nc	NA
MW09S	4	6	Bromoform	0.26	MG/KG	U	81	NA	nc	NA	nc	NA
MW15D	4	6	Bromoform	0.12	MG/KG	U	81	NA	nc	NA	nc	NA
SB02	4	6	Bromoform	0.26	MG/KG	U	81	NA	nc	NA	nc	NA
SB03	4	6	Bromoform	0.18	MG/KG	U	81	NA	nc	NA	nc	NA
CMS-164	0	1	Bromoform	0.015	MG/KG	UJ	81	NA	nc	NA	nc	NA
CMS-237	0	1	Bromoform	0.0059	MG/KG	UJ	81	NA	nc	NA	nc	NA
MW14M	1	2	Bromoform	0.15	MG/KG	UJ	81	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
SB-14-271	1	2	Bromoform	0.12	MG/KG	UJ	81	NA	nc	NA	nc	NA
CMS-060	1	2	Bromoform	5.1	MG/KG	UJ	81	NA	nc	NA	nc	NA
CMS-237	1	2	Bromoform	0.0069	MG/KG	UJ	81	NA	nc	NA	nc	NA
CMS-405	1	2	Bromoform	4	MG/KG	UJ	81	NA	nc	NA	nc	NA
CMS-405	1	2	Bromoform	2.9	MG/KG	UJ	81	NA	nc	NA	nc	NA
CMS-417	2	3	Bromoform	17	MG/KG	UJ	81	NA	nc	NA	nc	NA
SB-14-271	2	4	Bromoform	0.13	MG/KG	UJ	81	NA	nc	NA	nc	NA
CMS-118	3	4	Bromoform	0.0084	MG/KG	UJ	81	NA	nc	NA	nc	NA
CMS-417	3	4	Bromoform	0.28	MG/KG	UJ	81	NA	nc	NA	nc	NA
CMS-419	3	4	Bromoform	0.32	MG/KG	UJ	81	NA	nc	NA	nc	NA
CMS-405	4	5	Bromoform	1	MG/KG	UJ	81	NA	nc	NA	nc	NA
MW05S	4	6	Bromoform	0.11	MG/KG	UJ	81	NA	nc	NA	nc	NA
SB-14-271	4	6	Bromoform	0.11	MG/KG	UJ	81	NA	nc	NA	nc	NA
CMS-089	0	1	Bromomethane	0.01	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-098	0	1	Bromomethane	0.019	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-118	0	1	Bromomethane	0.0048	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-142	0	1	Bromomethane	0.019	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-159	0	1	Bromomethane	0.021	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-173	0	1	Bromomethane	0.047	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-407	0	1	Bromomethane	0.0099	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-408	0	1	Bromomethane	0.0086	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-417	0	1	Bromomethane	120	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-456	0	1	Bromomethane	0.0075	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-702	0	1	Bromomethane	0.0087	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-703	0	1	Bromomethane	0.0061	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-142	0	1	Bromomethane	0.022	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-060	0	1	Bromomethane	2.7	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-065	0	10	Bromomethane	1.6	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW05S	1	2	Bromomethane	0.095	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW01S	1	2	Bromomethane	0.34	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW05S	1	2	Bromomethane	0.11	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW08S	1	2	Bromomethane	0.26	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW14M	1	2	Bromomethane	0.11	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-060	1	2	Bromomethane	5.1	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-089	1	2	Bromomethane	0.0096	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-118	1	2	Bromomethane	0.006	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-173	1	2	Bromomethane	0.017	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-405	1	2	Bromomethane	8	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-407	1	2	Bromomethane	0.015	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-408	1	2	Bromomethane	4.4	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-417	1	2	Bromomethane	270	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-419	1	2	Bromomethane	28	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-423	1	2	Bromomethane	0.0062	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-427	1	2	Bromomethane	0.0045	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-428	1	2	Bromomethane	0.0054	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-456	1	2	Bromomethane	0.0089	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-060	2	3	Bromomethane	0.27	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-089	2	3	Bromomethane	0.0094	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-118	2	3	Bromomethane	0.0074	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-407	2	3	Bromomethane	0.017	MG/KG	U	0.8	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-408	2	3	Bromomethane	13	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-417	2	3	Bromomethane	33	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-455	2	3	Bromomethane	0.33	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW08S	2	4	Bromomethane	0.21	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW01S	2	4	Bromomethane	0.22	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW02S	2	4	Bromomethane	0.2	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW04D	2	4	Bromomethane	0.5	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW05S	2	4	Bromomethane	0.1	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW06S	2	4	Bromomethane	0.3	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW06S	2	4	Bromomethane	0.3	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW08S	2	4	Bromomethane	0.32	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW14M	2	4	Bromomethane	0.14	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW15D	2	4	Bromomethane	0.14	MG/KG	U	0.8	NA	nc	NA	nc	NA
SB02	2	4	Bromomethane	0.38	MG/KG	U	0.8	NA	nc	NA	nc	NA
SB03	2	4	Bromomethane	0.3	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW07S	3	4	Bromomethane	0.5	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-060	3	4	Bromomethane	0.0058	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-089	3	4	Bromomethane	0.0082	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-118	3	4	Bromomethane	0.0084	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-407	3	4	Bromomethane	0.65	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-417	3	4	Bromomethane	0.57	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-419	3	4	Bromomethane	0.32	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-423	3	4	Bromomethane	0.0045	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-427	3	4	Bromomethane	0.0054	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-428	3	4	Bromomethane	0.0057	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-423	3	4	Bromomethane	0.0049	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-060	4	5	Bromomethane	0.0048	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-118	4	5	Bromomethane	0.0059	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-405	4	5	Bromomethane	2.1	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-455	4	5	Bromomethane	0.0072	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW15D	4	6	Bromomethane	0.1	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW02S	4	6	Bromomethane	0.55	MG/KG	U	0.8	NA	nc	NA	nc	NA
SB03	4	6	Bromomethane	0.2	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW01S	4	6	Bromomethane	0.24	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW02S	4	6	Bromomethane	0.42	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW03S	4	6	Bromomethane	0.35	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW04D	4	6	Bromomethane	0.18	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW06S	4	6	Bromomethane	0.43	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW07S	4	6	Bromomethane	0.26	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW08S	4	6	Bromomethane	0.3	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW09S	4	6	Bromomethane	0.26	MG/KG	U	0.8	NA	nc	NA	nc	NA
MW15D	4	6	Bromomethane	0.12	MG/KG	U	0.8	NA	nc	NA	nc	NA
SB02	4	6	Bromomethane	0.26	MG/KG	U	0.8	NA	nc	NA	nc	NA
SB03	4	6	Bromomethane	0.18	MG/KG	U	0.8	NA	nc	NA	nc	NA
CMS-164	0	1	Bromomethane	0.031	MG/KG	UJ	0.8	NA	nc	NA	nc	NA
CMS-237	0	1	Bromomethane	0.012	MG/KG	UJ	0.8	NA	nc	NA	nc	NA
MW14M	1	2	Bromomethane	0.15	MG/KG	UJ	0.8	NA	nc	NA	nc	NA
SB-14-271	1	2	Bromomethane	0.12	MG/KG	UJ	0.8	NA	nc	NA	nc	NA
CMS-237	1	2	Bromomethane	0.014	MG/KG	UJ	0.8	NA	nc	NA	nc	NA
CMS-405	1	2	Bromomethane	5.7	MG/KG	UJ	0.8	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
SB-14-271	2	4	Bromomethane	0.13	MG/KG	UJ	0.8	NA	nc	NA	nc	NA
MW05S	4	6	Bromomethane	0.11	MG/KG	UJ	0.8	NA	nc	NA	nc	NA
SB-14-271	4	6	Bromomethane	0.11	MG/KG	UJ	0.8	NA	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Cadmium	5.2	MG/KG	J	39	N	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Cadmium	2.6	MG/KG	J	39	N	nc	NA	nc	NA
CMS-060	0	1	Cadmium	0.21	MG/KG	J	39	N	nc	NA	nc	NA
CMS-118	0	1	Cadmium	0.53	MG/KG	J	39	N	nc	NA	nc	NA
CMS-164	0	1	Cadmium	1.2	MG/KG	J	39	N	nc	NA	nc	NA
CMS-173	0	1	Cadmium	1.7	MG/KG	J	39	N	nc	NA	nc	NA
CMS-060	0	1	Cadmium	0.52	MG/KG	J	39	N	nc	NA	nc	NA
RES-14-272-01	0	1	Cadmium	0.32	MG/KG	J	39	N	nc	NA	nc	NA
MW05S	1	2	Cadmium	0.67	MG/KG	J	39	N	nc	NA	nc	NA
MW05S	1	2	Cadmium	0.56	MG/KG	J	39	N	nc	NA	nc	NA
MW08S	1	2	Cadmium	3.5	MG/KG	J	39	N	nc	NA	nc	NA
SB-14-271	1	2	Cadmium	1.6	MG/KG	J	39	N	nc	NA	nc	NA
CMS-060	1	2	Cadmium	0.16	MG/KG	J	39	N	nc	NA	nc	NA
CMS-089	1	2	Cadmium	2.1	MG/KG	J	39	N	nc	NA	nc	NA
CMS-173	1	2	Cadmium	0.64	MG/KG	J	39	N	nc	NA	nc	NA
CMS-407	1	2	Cadmium	0.72	MG/KG	J	39	N	nc	NA	nc	NA
CMS-408	1	2	Cadmium	18	MG/KG	J	39	N	nc	NA	nc	NA
CMS-419	1	2	Cadmium	35.9	MG/KG	J	39	N	nc	NA	nc	NA
CMS-423	1	2	Cadmium	4	MG/KG	J	39	N	nc	NA	nc	NA
CMS-427	1	2	Cadmium	3.3	MG/KG	J	39	N	nc	NA	nc	NA
CMS-089	2	3	Cadmium	3.1	MG/KG	J	39	N	nc	NA	nc	NA
CMS-408	2	3	Cadmium	1	MG/KG	J	39	N	nc	NA	nc	NA
CMS-417	2	3	Cadmium	0.26	MG/KG	J	39	N	nc	NA	nc	NA
CMS-455	2	3	Cadmium	0.42	MG/KG	J	39	N	nc	NA	nc	NA
MW08S	2	4	Cadmium	2.4	MG/KG	J	39	N	nc	NA	nc	NA
MW05S	2	4	Cadmium	1	MG/KG	J	39	N	nc	NA	nc	NA
MW06S	2	4	Cadmium	11.1	MG/KG	J	39	N	nc	NA	nc	NA
MW06S	2	4	Cadmium	3.7	MG/KG	J	39	N	nc	NA	nc	NA
MW08S	2	4	Cadmium	1.7	MG/KG	J	39	N	nc	NA	nc	NA
SB-14-271	2	4	Cadmium	0.66	MG/KG	J	39	N	nc	NA	nc	NA
MW07S	3	4	Cadmium	0.36	MG/KG	J	39	N	nc	NA	nc	NA
CMS-089	3	4	Cadmium	1.2	MG/KG	J	39	N	nc	NA	nc	NA
CMS-118	3	4	Cadmium	0.46	MG/KG	J	39	N	nc	NA	nc	NA
CMS-417	3	4	Cadmium	0.23	MG/KG	J	39	N	nc	NA	nc	NA
CMS-423	3	4	Cadmium	3.7	MG/KG	J	39	N	nc	NA	nc	NA
CMS-427	3	4	Cadmium	0.47	MG/KG	J	39	N	nc	NA	nc	NA
CMS-428	3	4	Cadmium	0.28	MG/KG	J	39	N	nc	NA	nc	NA
CMS-423	3	4	Cadmium	4.1	MG/KG	J	39	N	nc	NA	nc	NA
CMS-060	4	5	Cadmium	0.15	MG/KG	J	39	N	nc	NA	nc	NA
CMS-118	4	5	Cadmium	0.19	MG/KG	J	39	N	nc	NA	nc	NA
CMS-405	4	5	Cadmium	0.2	MG/KG	J	39	N	nc	NA	nc	NA
CMS-455	4	5	Cadmium	0.21	MG/KG	J	39	N	nc	NA	nc	NA
MW04D	4	6	Cadmium	0.44	MG/KG	J	39	N	nc	NA	nc	NA
MW05S	4	6	Cadmium	0.8	MG/KG	J	39	N	nc	NA	nc	NA
MW06S	4	6	Cadmium	7.6	MG/KG	J	39	N	nc	NA	nc	NA
MW07S	4	6	Cadmium	0.17	MG/KG	J	39	N	nc	NA	nc	NA
MW09S	4	6	Cadmium	0.54	MG/KG	J	39	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
SB-14-271	4	6	Cadmium	0.46	MG/KG	J	39	N	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Cadmium	0.06	MG/KG	U	39	NA	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Cadmium	0.08	MG/KG	U	39	NA	nc	NA	nc	NA
CMS-089	0	1	Cadmium	0.33	MG/KG	U	39	NA	nc	NA	nc	NA
CMS-098	0	1	Cadmium	0.48	MG/KG	U	39	NA	nc	NA	nc	NA
CMS-142	0	1	Cadmium	0.47	MG/KG	U	39	NA	nc	NA	nc	NA
CMS-405	0	1	Cadmium	0.53	MG/KG	U	39	NA	nc	NA	nc	NA
CMS-407	0	1	Cadmium	0.34	MG/KG	U	39	NA	nc	NA	nc	NA
CMS-408	0	1	Cadmium	0.3	MG/KG	U	39	NA	nc	NA	nc	NA
CMS-142	0	1	Cadmium	0.49	MG/KG	U	39	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Cadmium	0.31	MG/KG	U	39	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Cadmium	0.32	MG/KG	U	39	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Cadmium	0.4	MG/KG	U	39	NA	nc	NA	nc	NA
CMS-703	0	2	Cadmium	0.62	MG/KG	U	39	NA	nc	NA	nc	NA
BV01COMP	0	4	Cadmium	0.57	MG/KG	U	39	NA	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Cadmium	0.07	MG/KG	U	39	NA	nc	NA	nc	NA
CMS-060	2	3	Cadmium	0.55	MG/KG	U	39	NA	nc	NA	nc	NA
CMS-407	2	3	Cadmium	0.32	MG/KG	U	39	NA	nc	NA	nc	NA
MW02S	2	4	Cadmium	0.066	MG/KG	U	39	NA	nc	NA	nc	NA
MW15D	2	4	Cadmium	0.089	MG/KG	U	39	NA	nc	NA	nc	NA
SB03	2	4	Cadmium	0.069	MG/KG	U	39	NA	nc	NA	nc	NA
GEC-7	2.5	4.5	Cadmium	0.22	MG/KG	U	39	NA	nc	NA	nc	NA
CMS-060	3	4	Cadmium	0.68	MG/KG	U	39	NA	nc	NA	nc	NA
CMS-407	3	4	Cadmium	0.14	MG/KG	U	39	NA	nc	NA	nc	NA
CMS-419	3	4	Cadmium	0.64	MG/KG	U	39	NA	nc	NA	nc	NA
SB03	4	6	Cadmium	0.07	MG/KG	U	39	NA	nc	NA	nc	NA
MW01S	4	6	Cadmium	0.35	MG/KG	U	39	NA	nc	NA	nc	NA
MW08S	4	6	Cadmium	0.24	MG/KG	U	39	NA	nc	NA	nc	NA
SB03	4	6	Cadmium	0.068	MG/KG	U	39	NA	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Cadmium	0.06	MG/KG	UJ	39	NA	nc	NA	nc	NA
MW15D	4	6	Cadmium	0.12	MG/KG	UJ	39	NA	nc	NA	nc	NA
MW15D	4	6	Cadmium	0.12	MG/KG	UJ	39	NA	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Cadmium	1.2	MG/KG		39	N	nc	NA	nc	NA
CMS-159	0	1	Cadmium	3.1	MG/KG		39	N	nc	NA	nc	NA
CMS-237	0	1	Cadmium	8.4	MG/KG		39	N	nc	NA	nc	NA
CMS-417	0	1	Cadmium	14.7	MG/KG		39	N	nc	NA	nc	NA
CMS-456	0	1	Cadmium	0.91	MG/KG		39	N	nc	NA	nc	NA
RES-14-302-01	0	1	Cadmium	1.2	MG/KG		39	N	nc	NA	nc	NA
RES-14-303-01	0	1	Cadmium	7.9	MG/KG		39	N	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Cadmium	0.51	MG/KG		39	N	nc	NA	nc	NA
MW14M	1	2	Cadmium	1.1	MG/KG		39	N	nc	NA	nc	NA
MW01S	1	2	Cadmium	0.64	MG/KG		39	N	nc	NA	nc	NA
MW14M	1	2	Cadmium	1.1	MG/KG		39	N	nc	NA	nc	NA
CMS-118	1	2	Cadmium	0.88	MG/KG		39	N	nc	NA	nc	NA
CMS-237	1	2	Cadmium	33.7	MG/KG		39	N	nc	NA	nc	NA
CMS-405	1	2	Cadmium	11.5	MG/KG		39	N	nc	NA	nc	NA
CMS-417	1	2	Cadmium	180	MG/KG		39	Y	nc	NA	nc	NA
CMS-428	1	2	Cadmium	0.54	MG/KG		39	N	nc	NA	nc	NA
CMS-456	1	2	Cadmium	3.7	MG/KG		39	N	nc	NA	nc	NA
CMS-405	1	2	Cadmium	10.6	MG/KG		39	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-118	2	3	Cadmium	1.7	MG/KG		39	N	nc	NA	nc	NA
CMS-237	2	3	Cadmium	12.2	MG/KG		39	N	nc	NA	nc	NA
CMS-405	2	3	Cadmium	7.7	MG/KG		39	N	nc	NA	nc	NA
SB02	2	4	Cadmium	1.1	MG/KG		39	N	nc	NA	nc	NA
MW14M	2	4	Cadmium	0.36	MG/KG		39	N	nc	NA	nc	NA
SB02	2	4	Cadmium	0.67	MG/KG		39	N	nc	NA	nc	NA
CMS-405	3	4	Cadmium	2.8	MG/KG		39	N	nc	NA	nc	NA
MW03S	4	6	Cadmium	0.43	MG/KG		39	N	nc	NA	nc	NA
SB02	4	6	Cadmium	0.34	MG/KG		39	N	nc	NA	nc	NA
CMS-4105	0	1	Cadmium	12.6	MG/KG		39	N	nc	NA	nc	NA
CMS-4110	0	1	Cadmium	4.23	MG/KG		39	N	nc	NA	nc	NA
CMS-089	0	1	Carbon Tetrachloride	0.005	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-098	0	1	Carbon Tetrachloride	0.0097	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-118	0	1	Carbon Tetrachloride	0.0048	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-142	0	1	Carbon Tetrachloride	0.0095	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-159	0	1	Carbon Tetrachloride	0.021	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-164	0	1	Carbon Tetrachloride	0.015	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-173	0	1	Carbon Tetrachloride	0.024	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-407	0	1	Carbon Tetrachloride	0.005	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-408	0	1	Carbon Tetrachloride	0.0043	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-417	0	1	Carbon Tetrachloride	59	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-456	0	1	Carbon Tetrachloride	0.0075	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-702	0	1	Carbon Tetrachloride	0.0087	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-703	0	1	Carbon Tetrachloride	0.0061	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-142	0	1	Carbon Tetrachloride	0.011	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-060	0	1	Carbon Tetrachloride	2.7	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-065	0	10	Carbon Tetrachloride	0.79	MG/KG	U	1.5	NA	0.4	NA	nc	NA
MW05S	1	2	Carbon Tetrachloride	0.095	MG/KG	U	1.5	NA	0.4	NA	nc	NA
MW01S	1	2	Carbon Tetrachloride	0.34	MG/KG	U	1.5	NA	0.4	NA	nc	NA
MW05S	1	2	Carbon Tetrachloride	0.11	MG/KG	U	1.5	NA	0.4	NA	nc	NA
MW08S	1	2	Carbon Tetrachloride	0.26	MG/KG	U	1.5	NA	0.4	NA	nc	NA
MW14M	1	2	Carbon Tetrachloride	0.11	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-089	1	2	Carbon Tetrachloride	0.0048	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-118	1	2	Carbon Tetrachloride	0.006	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-173	1	2	Carbon Tetrachloride	0.0083	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-237	1	2	Carbon Tetrachloride	0.0069	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-407	1	2	Carbon Tetrachloride	0.0074	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-408	1	2	Carbon Tetrachloride	2.2	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-417	1	2	Carbon Tetrachloride	130	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-419	1	2	Carbon Tetrachloride	28	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-423	1	2	Carbon Tetrachloride	0.0062	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-427	1	2	Carbon Tetrachloride	0.0045	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-428	1	2	Carbon Tetrachloride	0.0054	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-456	1	2	Carbon Tetrachloride	0.0089	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-060	2	3	Carbon Tetrachloride	0.27	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-089	2	3	Carbon Tetrachloride	0.0047	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-118	2	3	Carbon Tetrachloride	0.0074	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-407	2	3	Carbon Tetrachloride	0.0087	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-408	2	3	Carbon Tetrachloride	6.6	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-417	2	3	Carbon Tetrachloride	17	MG/KG	U	1.5	NA	0.4	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-455	2	3	Carbon Tetrachloride	0.33	MG/KG	U	1.5	NA	0.4	NA	nc	NA
MW08S	2	4	Carbon Tetrachloride	0.21	MG/KG	U	1.5	NA	0.4	NA	nc	NA
MW01S	2	4	Carbon Tetrachloride	0.22	MG/KG	U	1.5	NA	0.4	NA	nc	NA
MW02S	2	4	Carbon Tetrachloride	0.2	MG/KG	U	1.5	NA	0.4	NA	nc	NA
MW04D	2	4	Carbon Tetrachloride	0.5	MG/KG	U	1.5	NA	0.4	NA	nc	NA
MW05S	2	4	Carbon Tetrachloride	0.1	MG/KG	U	1.5	NA	0.4	NA	nc	NA
MW06S	2	4	Carbon Tetrachloride	0.3	MG/KG	U	1.5	NA	0.4	NA	nc	NA
MW06S	2	4	Carbon Tetrachloride	0.3	MG/KG	U	1.5	NA	0.4	NA	nc	NA
MW08S	2	4	Carbon Tetrachloride	0.32	MG/KG	U	1.5	NA	0.4	NA	nc	NA
MW14M	2	4	Carbon Tetrachloride	0.14	MG/KG	U	1.5	NA	0.4	NA	nc	NA
MW15D	2	4	Carbon Tetrachloride	0.14	MG/KG	U	1.5	NA	0.4	NA	nc	NA
SB02	2	4	Carbon Tetrachloride	0.38	MG/KG	U	1.5	NA	0.4	NA	nc	NA
SB03	2	4	Carbon Tetrachloride	0.3	MG/KG	U	1.5	NA	0.4	NA	nc	NA
MW07S	3	4	Carbon Tetrachloride	0.5	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-060	3	4	Carbon Tetrachloride	0.0058	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-089	3	4	Carbon Tetrachloride	0.0041	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-118	3	4	Carbon Tetrachloride	0.0084	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-407	3	4	Carbon Tetrachloride	0.32	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-423	3	4	Carbon Tetrachloride	0.0045	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-427	3	4	Carbon Tetrachloride	0.0054	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-428	3	4	Carbon Tetrachloride	0.0057	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-423	3	4	Carbon Tetrachloride	0.0049	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-060	4	5	Carbon Tetrachloride	0.0048	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-118	4	5	Carbon Tetrachloride	0.0059	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-405	4	5	Carbon Tetrachloride	1	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-455	4	5	Carbon Tetrachloride	0.0072	MG/KG	U	1.5	NA	0.4	NA	nc	NA
MW15D	4	6	Carbon Tetrachloride	0.1	MG/KG	U	1.5	NA	0.4	NA	nc	NA
MW02S	4	6	Carbon Tetrachloride	0.55	MG/KG	U	1.5	NA	0.4	NA	nc	NA
SB03	4	6	Carbon Tetrachloride	0.2	MG/KG	U	1.5	NA	0.4	NA	nc	NA
MW01S	4	6	Carbon Tetrachloride	0.24	MG/KG	U	1.5	NA	0.4	NA	nc	NA
MW02S	4	6	Carbon Tetrachloride	0.42	MG/KG	U	1.5	NA	0.4	NA	nc	NA
MW03S	4	6	Carbon Tetrachloride	0.35	MG/KG	U	1.5	NA	0.4	NA	nc	NA
MW04D	4	6	Carbon Tetrachloride	0.18	MG/KG	U	1.5	NA	0.4	NA	nc	NA
MW06S	4	6	Carbon Tetrachloride	0.43	MG/KG	U	1.5	NA	0.4	NA	nc	NA
MW07S	4	6	Carbon Tetrachloride	0.26	MG/KG	U	1.5	NA	0.4	NA	nc	NA
MW08S	4	6	Carbon Tetrachloride	0.3	MG/KG	U	1.5	NA	0.4	NA	nc	NA
MW09S	4	6	Carbon Tetrachloride	0.26	MG/KG	U	1.5	NA	0.4	NA	nc	NA
MW15D	4	6	Carbon Tetrachloride	0.12	MG/KG	U	1.5	NA	0.4	NA	nc	NA
SB02	4	6	Carbon Tetrachloride	0.26	MG/KG	U	1.5	NA	0.4	NA	nc	NA
SB03	4	6	Carbon Tetrachloride	0.18	MG/KG	U	1.5	NA	0.4	NA	nc	NA
CMS-237	0	1	Carbon Tetrachloride	0.0059	MG/KG	UJ	1.5	NA	0.4	NA	nc	NA
MW14M	1	2	Carbon Tetrachloride	0.15	MG/KG	UJ	1.5	NA	0.4	NA	nc	NA
SB-14-271	1	2	Carbon Tetrachloride	0.12	MG/KG	UJ	1.5	NA	0.4	NA	nc	NA
CMS-060	1	2	Carbon Tetrachloride	5.1	MG/KG	UJ	1.5	NA	0.4	NA	nc	NA
CMS-405	1	2	Carbon Tetrachloride	4	MG/KG	UJ	1.5	NA	0.4	NA	nc	NA
CMS-405	1	2	Carbon Tetrachloride	2.9	MG/KG	UJ	1.5	NA	0.4	NA	nc	NA
SB-14-271	2	4	Carbon Tetrachloride	0.13	MG/KG	UJ	1.5	NA	0.4	NA	nc	NA
CMS-417	3	4	Carbon Tetrachloride	0.28	MG/KG	UJ	1.5	NA	0.4	NA	nc	NA
CMS-419	3	4	Carbon Tetrachloride	0.32	MG/KG	UJ	1.5	NA	0.4	NA	nc	NA
MW05S	4	6	Carbon Tetrachloride	0.11	MG/KG	UJ	1.5	NA	0.4	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
SB-14-271	4	6	Carbon Tetrachloride	0.11	MG/KG	UJ	1.5	NA	0.4	NA	nc	NA
CMS-098	0	1	Chlorobenzene	0.053	MG/KG	J	210	N	3.2	N	nc	NA
CMS-164	0	1	Chlorobenzene	0.01	MG/KG	J	210	N	3.2	N	nc	NA
CMS-408	0	1	Chlorobenzene	0.0027	MG/KG	J	210	N	3.2	N	nc	NA
CMS-456	0	1	Chlorobenzene	0.0031	MG/KG	J	210	N	3.2	N	nc	NA
MW14M	1	2	Chlorobenzene	0.13	MG/KG	J	210	N	3.2	N	nc	NA
MW08S	1	2	Chlorobenzene	0.13	MG/KG	J	210	N	3.2	N	nc	NA
MW14M	1	2	Chlorobenzene	0.094	MG/KG	J	210	N	3.2	N	nc	NA
CMS-173	1	2	Chlorobenzene	0.0036	MG/KG	J	210	N	3.2	N	nc	NA
CMS-237	1	2	Chlorobenzene	0.0032	MG/KG	J	210	N	3.2	N	nc	NA
CMS-407	1	2	Chlorobenzene	0.008	MG/KG	J	210	N	3.2	N	nc	NA
CMS-427	1	2	Chlorobenzene	0.0034	MG/KG	J	210	N	3.2	N	nc	NA
CMS-456	1	2	Chlorobenzene	0.0082	MG/KG	J	210	N	3.2	N	nc	NA
CMS-237	2	3	Chlorobenzene	0.0077	MG/KG	J	210	N	3.2	N	nc	NA
CMS-455	2	3	Chlorobenzene	0.25	MG/KG	J	210	N	3.2	N	nc	NA
MW05S	4	6	Chlorobenzene	0.13	MG/KG	J	210	N	3.2	N	nc	NA
MW08S	4	6	Chlorobenzene	0.2	MG/KG	J	210	N	3.2	N	nc	NA
CMS-089	0	1	Chlorobenzene	0.005	MG/KG	U	210	NA	3.2	NA	nc	NA
CMS-118	0	1	Chlorobenzene	0.0048	MG/KG	U	210	NA	3.2	NA	nc	NA
CMS-159	0	1	Chlorobenzene	0.021	MG/KG	U	210	NA	3.2	NA	nc	NA
CMS-407	0	1	Chlorobenzene	0.005	MG/KG	U	210	NA	3.2	NA	nc	NA
CMS-702	0	1	Chlorobenzene	0.0087	MG/KG	U	210	NA	3.2	NA	nc	NA
CMS-703	0	1	Chlorobenzene	0.0061	MG/KG	U	210	NA	3.2	NA	nc	NA
CMS-060	0	1	Chlorobenzene	2.7	MG/KG	U	210	NA	3.2	NA	nc	NA
CMS-065	0	10	Chlorobenzene	2.8	MG/KG	U	210	NA	3.2	NA	nc	NA
MW05S	1	2	Chlorobenzene	0.095	MG/KG	U	210	NA	3.2	NA	nc	NA
MW01S	1	2	Chlorobenzene	0.34	MG/KG	U	210	NA	3.2	NA	nc	NA
MW05S	1	2	Chlorobenzene	0.11	MG/KG	U	210	NA	3.2	NA	nc	NA
CMS-060	1	2	Chlorobenzene	5.1	MG/KG	U	210	NA	3.2	NA	nc	NA
CMS-089	1	2	Chlorobenzene	0.0048	MG/KG	U	210	NA	3.2	NA	nc	NA
CMS-118	1	2	Chlorobenzene	0.006	MG/KG	U	210	NA	3.2	NA	nc	NA
CMS-405	1	2	Chlorobenzene	4	MG/KG	U	210	NA	3.2	NA	nc	NA
CMS-423	1	2	Chlorobenzene	0.0062	MG/KG	U	210	NA	3.2	NA	nc	NA
CMS-428	1	2	Chlorobenzene	0.0054	MG/KG	U	210	NA	3.2	NA	nc	NA
CMS-060	2	3	Chlorobenzene	0.27	MG/KG	U	210	NA	3.2	NA	nc	NA
CMS-118	2	3	Chlorobenzene	0.0074	MG/KG	U	210	NA	3.2	NA	nc	NA
CMS-407	2	3	Chlorobenzene	0.0087	MG/KG	U	210	NA	3.2	NA	nc	NA
CMS-408	2	3	Chlorobenzene	6.6	MG/KG	U	210	NA	3.2	NA	nc	NA
MW08S	2	4	Chlorobenzene	0.21	MG/KG	U	210	NA	3.2	NA	nc	NA
MW01S	2	4	Chlorobenzene	0.22	MG/KG	U	210	NA	3.2	NA	nc	NA
MW02S	2	4	Chlorobenzene	0.2	MG/KG	U	210	NA	3.2	NA	nc	NA
MW04D	2	4	Chlorobenzene	0.5	MG/KG	U	210	NA	3.2	NA	nc	NA
MW05S	2	4	Chlorobenzene	0.1	MG/KG	U	210	NA	3.2	NA	nc	NA
MW06S	2	4	Chlorobenzene	0.3	MG/KG	U	210	NA	3.2	NA	nc	NA
MW06S	2	4	Chlorobenzene	0.3	MG/KG	U	210	NA	3.2	NA	nc	NA
MW08S	2	4	Chlorobenzene	0.32	MG/KG	U	210	NA	3.2	NA	nc	NA
MW14M	2	4	Chlorobenzene	0.14	MG/KG	U	210	NA	3.2	NA	nc	NA
MW15D	2	4	Chlorobenzene	0.14	MG/KG	U	210	NA	3.2	NA	nc	NA
SB03	2	4	Chlorobenzene	0.3	MG/KG	U	210	NA	3.2	NA	nc	NA
GEC-7	2.5	4.5	Chlorobenzene	0.1	MG/KG	U	210	NA	3.2	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW07S	3	4	Chlorobenzene	0.5	MG/KG	U	210	NA	3.2	NA	nc	NA
CMS-060	3	4	Chlorobenzene	0.0058	MG/KG	U	210	NA	3.2	NA	nc	NA
CMS-089	3	4	Chlorobenzene	0.0041	MG/KG	U	210	NA	3.2	NA	nc	NA
CMS-407	3	4	Chlorobenzene	0.32	MG/KG	U	210	NA	3.2	NA	nc	NA
CMS-423	3	4	Chlorobenzene	0.0045	MG/KG	U	210	NA	3.2	NA	nc	NA
CMS-428	3	4	Chlorobenzene	0.0057	MG/KG	U	210	NA	3.2	NA	nc	NA
CMS-423	3	4	Chlorobenzene	0.0049	MG/KG	U	210	NA	3.2	NA	nc	NA
CMS-060	4	5	Chlorobenzene	0.0048	MG/KG	U	210	NA	3.2	NA	nc	NA
CMS-118	4	5	Chlorobenzene	0.0059	MG/KG	U	210	NA	3.2	NA	nc	NA
CMS-405	4	5	Chlorobenzene	1	MG/KG	U	210	NA	3.2	NA	nc	NA
CMS-455	4	5	Chlorobenzene	0.0072	MG/KG	U	210	NA	3.2	NA	nc	NA
MW15D	4	6	Chlorobenzene	0.1	MG/KG	U	210	NA	3.2	NA	nc	NA
MW02S	4	6	Chlorobenzene	0.55	MG/KG	U	210	NA	3.2	NA	nc	NA
SB03	4	6	Chlorobenzene	0.2	MG/KG	U	210	NA	3.2	NA	nc	NA
MW01S	4	6	Chlorobenzene	0.24	MG/KG	U	210	NA	3.2	NA	nc	NA
MW02S	4	6	Chlorobenzene	0.42	MG/KG	U	210	NA	3.2	NA	nc	NA
MW03S	4	6	Chlorobenzene	0.35	MG/KG	U	210	NA	3.2	NA	nc	NA
MW04D	4	6	Chlorobenzene	0.18	MG/KG	U	210	NA	3.2	NA	nc	NA
MW07S	4	6	Chlorobenzene	0.26	MG/KG	U	210	NA	3.2	NA	nc	NA
MW09S	4	6	Chlorobenzene	0.26	MG/KG	U	210	NA	3.2	NA	nc	NA
MW15D	4	6	Chlorobenzene	0.12	MG/KG	U	210	NA	3.2	NA	nc	NA
SB03	4	6	Chlorobenzene	0.18	MG/KG	U	210	NA	3.2	NA	nc	NA
CMS-142	0	1	Chlorobenzene	0.0095	MG/KG	UJ	210	NA	3.2	NA	nc	NA
CMS-173	0	1	Chlorobenzene	0.024	MG/KG	UJ	210	NA	3.2	NA	nc	NA
CMS-237	0	1	Chlorobenzene	0.0059	MG/KG	UJ	210	NA	3.2	NA	nc	NA
CMS-142	0	1	Chlorobenzene	0.011	MG/KG	UJ	210	NA	3.2	NA	nc	NA
SB-14-271	1	2	Chlorobenzene	0.12	MG/KG	UJ	210	NA	3.2	NA	nc	NA
CMS-405	1	2	Chlorobenzene	2.9	MG/KG	UJ	210	NA	3.2	NA	nc	NA
CMS-089	2	3	Chlorobenzene	0.0047	MG/KG	UJ	210	NA	3.2	NA	nc	NA
SB-14-271	2	4	Chlorobenzene	0.13	MG/KG	UJ	210	NA	3.2	NA	nc	NA
CMS-118	3	4	Chlorobenzene	0.0084	MG/KG	UJ	210	NA	3.2	NA	nc	NA
SB-14-271	4	6	Chlorobenzene	0.11	MG/KG	UJ	210	NA	3.2	NA	nc	NA
CMS-417	0	1	Chlorobenzene	360	MG/KG		210	Y	3.2	Y	nc	NA
CMS-408	1	2	Chlorobenzene	6.2	MG/KG		210	N	3.2	Y	nc	NA
CMS-417	1	2	Chlorobenzene	1000	MG/KG		210	Y	3.2	Y	nc	NA
CMS-419	1	2	Chlorobenzene	300	MG/KG		210	Y	3.2	Y	nc	NA
CMS-417	2	3	Chlorobenzene	220	MG/KG		210	Y	3.2	Y	nc	NA
SB02	2	4	Chlorobenzene	0.63	MG/KG		210	N	3.2	N	nc	NA
GEC-6	2.5	4.5	Chlorobenzene	0.37	MG/KG		210	N	3.2	N	nc	NA
CMS-417	3	4	Chlorobenzene	10	MG/KG		210	N	3.2	Y	nc	NA
CMS-419	3	4	Chlorobenzene	0.95	MG/KG		210	N	3.2	N	nc	NA
CMS-427	3	4	Chlorobenzene	0.086	MG/KG		210	N	3.2	N	nc	NA
MW06S	4	6	Chlorobenzene	3.3	MG/KG		210	N	3.2	Y	nc	NA
SB02	4	6	Chlorobenzene	1	MG/KG		210	N	3.2	N	nc	NA
CMS-089	0	1	Chloroform	0.005	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-098	0	1	Chloroform	0.0097	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-118	0	1	Chloroform	0.0048	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-142	0	1	Chloroform	0.0095	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-159	0	1	Chloroform	0.021	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-164	0	1	Chloroform	0.015	MG/KG	U	1.2	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-173	0	1	Chloroform	0.024	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-407	0	1	Chloroform	0.005	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-408	0	1	Chloroform	0.0043	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-417	0	1	Chloroform	59	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-456	0	1	Chloroform	0.0075	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-702	0	1	Chloroform	0.0087	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-703	0	1	Chloroform	0.0061	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-142	0	1	Chloroform	0.011	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-060	0	1	Chloroform	2.7	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-065	0	10	Chloroform	1.2	MG/KG	U	1.2	NA	nc	NA	nc	NA
MW05S	1	2	Chloroform	0.095	MG/KG	U	1.2	NA	nc	NA	nc	NA
MW01S	1	2	Chloroform	0.34	MG/KG	U	1.2	NA	nc	NA	nc	NA
MW05S	1	2	Chloroform	0.11	MG/KG	U	1.2	NA	nc	NA	nc	NA
MW08S	1	2	Chloroform	0.26	MG/KG	U	1.2	NA	nc	NA	nc	NA
MW14M	1	2	Chloroform	0.11	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-089	1	2	Chloroform	0.0048	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-118	1	2	Chloroform	0.006	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-173	1	2	Chloroform	0.0083	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-237	1	2	Chloroform	0.0069	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-405	1	2	Chloroform	4	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-407	1	2	Chloroform	0.0074	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-408	1	2	Chloroform	2.2	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-417	1	2	Chloroform	130	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-428	1	2	Chloroform	0.0054	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-456	1	2	Chloroform	0.0089	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-060	2	3	Chloroform	0.27	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-089	2	3	Chloroform	0.0047	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-118	2	3	Chloroform	0.0074	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-407	2	3	Chloroform	0.0087	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-408	2	3	Chloroform	6.6	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-417	2	3	Chloroform	17	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-455	2	3	Chloroform	0.33	MG/KG	U	1.2	NA	nc	NA	nc	NA
MW08S	2	4	Chloroform	0.21	MG/KG	U	1.2	NA	nc	NA	nc	NA
MW01S	2	4	Chloroform	0.22	MG/KG	U	1.2	NA	nc	NA	nc	NA
MW02S	2	4	Chloroform	0.2	MG/KG	U	1.2	NA	nc	NA	nc	NA
MW04D	2	4	Chloroform	0.5	MG/KG	U	1.2	NA	nc	NA	nc	NA
MW05S	2	4	Chloroform	0.1	MG/KG	U	1.2	NA	nc	NA	nc	NA
MW06S	2	4	Chloroform	0.3	MG/KG	U	1.2	NA	nc	NA	nc	NA
MW06S	2	4	Chloroform	0.3	MG/KG	U	1.2	NA	nc	NA	nc	NA
MW08S	2	4	Chloroform	0.32	MG/KG	U	1.2	NA	nc	NA	nc	NA
MW14M	2	4	Chloroform	0.14	MG/KG	U	1.2	NA	nc	NA	nc	NA
MW15D	2	4	Chloroform	0.14	MG/KG	U	1.2	NA	nc	NA	nc	NA
SB02	2	4	Chloroform	0.38	MG/KG	U	1.2	NA	nc	NA	nc	NA
SB03	2	4	Chloroform	0.3	MG/KG	U	1.2	NA	nc	NA	nc	NA
GEC-7	2.5	4.5	Chloroform	0.045	MG/KG	U	1.2	NA	nc	NA	nc	NA
MW07S	3	4	Chloroform	0.5	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-060	3	4	Chloroform	0.0058	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-089	3	4	Chloroform	0.0041	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-118	3	4	Chloroform	0.0084	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-407	3	4	Chloroform	0.32	MG/KG	U	1.2	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-417	3	4	Chloroform	0.28	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-428	3	4	Chloroform	0.0057	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-060	4	5	Chloroform	0.0048	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-118	4	5	Chloroform	0.0059	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-405	4	5	Chloroform	1	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-455	4	5	Chloroform	0.0072	MG/KG	U	1.2	NA	nc	NA	nc	NA
MW15D	4	6	Chloroform	0.1	MG/KG	U	1.2	NA	nc	NA	nc	NA
MW02S	4	6	Chloroform	0.55	MG/KG	U	1.2	NA	nc	NA	nc	NA
SB03	4	6	Chloroform	0.2	MG/KG	U	1.2	NA	nc	NA	nc	NA
MW01S	4	6	Chloroform	0.24	MG/KG	U	1.2	NA	nc	NA	nc	NA
MW02S	4	6	Chloroform	0.42	MG/KG	U	1.2	NA	nc	NA	nc	NA
MW03S	4	6	Chloroform	0.35	MG/KG	U	1.2	NA	nc	NA	nc	NA
MW04D	4	6	Chloroform	0.18	MG/KG	U	1.2	NA	nc	NA	nc	NA
MW06S	4	6	Chloroform	0.43	MG/KG	U	1.2	NA	nc	NA	nc	NA
MW07S	4	6	Chloroform	0.26	MG/KG	U	1.2	NA	nc	NA	nc	NA
MW08S	4	6	Chloroform	0.3	MG/KG	U	1.2	NA	nc	NA	nc	NA
MW09S	4	6	Chloroform	0.26	MG/KG	U	1.2	NA	nc	NA	nc	NA
MW15D	4	6	Chloroform	0.12	MG/KG	U	1.2	NA	nc	NA	nc	NA
SB02	4	6	Chloroform	0.26	MG/KG	U	1.2	NA	nc	NA	nc	NA
SB03	4	6	Chloroform	0.18	MG/KG	U	1.2	NA	nc	NA	nc	NA
CMS-237	0	1	Chloroform	0.0059	MG/KG	UJ	1.2	NA	nc	NA	nc	NA
MW14M	1	2	Chloroform	0.15	MG/KG	UJ	1.2	NA	nc	NA	nc	NA
SB-14-271	1	2	Chloroform	0.12	MG/KG	UJ	1.2	NA	nc	NA	nc	NA
CMS-060	1	2	Chloroform	5.1	MG/KG	UJ	1.2	NA	nc	NA	nc	NA
CMS-419	1	2	Chloroform	28	MG/KG	UJ	1.2	NA	nc	NA	nc	NA
CMS-423	1	2	Chloroform	0.0062	MG/KG	UJ	1.2	NA	nc	NA	nc	NA
CMS-427	1	2	Chloroform	0.0045	MG/KG	UJ	1.2	NA	nc	NA	nc	NA
CMS-405	1	2	Chloroform	2.9	MG/KG	UJ	1.2	NA	nc	NA	nc	NA
SB-14-271	2	4	Chloroform	0.13	MG/KG	UJ	1.2	NA	nc	NA	nc	NA
CMS-419	3	4	Chloroform	0.32	MG/KG	UJ	1.2	NA	nc	NA	nc	NA
CMS-423	3	4	Chloroform	0.0045	MG/KG	UJ	1.2	NA	nc	NA	nc	NA
CMS-427	3	4	Chloroform	0.0054	MG/KG	UJ	1.2	NA	nc	NA	nc	NA
CMS-423	3	4	Chloroform	0.0049	MG/KG	UJ	1.2	NA	nc	NA	nc	NA
MW05S	4	6	Chloroform	0.11	MG/KG	UJ	1.2	NA	nc	NA	nc	NA
SB-14-271	4	6	Chloroform	0.11	MG/KG	UJ	1.2	NA	nc	NA	nc	NA
GEC-6	2.5	4.5	Chloroform	0.38	MG/KG		1.2	N	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Chromium	2.5	MG/KG	J	390	N	nc	NA	nc	NA
CMS-089	0	1	Chromium	11.8	MG/KG	J	390	N	nc	NA	nc	NA
CMS-098	0	1	Chromium	15.3	MG/KG	J	390	N	nc	NA	nc	NA
CMS-142	0	1	Chromium	33.3	MG/KG	J	390	N	nc	NA	nc	NA
CMS-164	0	1	Chromium	185	MG/KG	J	390	N	nc	NA	nc	NA
CMS-173	0	1	Chromium	196	MG/KG	J	390	N	nc	NA	nc	NA
CMS-237	0	1	Chromium	48.1	MG/KG	J	390	N	nc	NA	nc	NA
CMS-405	0	1	Chromium	3.5	MG/KG	J	390	N	nc	NA	nc	NA
CMS-407	0	1	Chromium	4.6	MG/KG	J	390	N	nc	NA	nc	NA
CMS-408	0	1	Chromium	5.2	MG/KG	J	390	N	nc	NA	nc	NA
CMS-417	0	1	Chromium	317	MG/KG	J	390	N	nc	NA	nc	NA
CMS-142	0	1	Chromium	22.1	MG/KG	J	390	N	nc	NA	nc	NA
RES-14-271-01	0	1	Chromium	40	MG/KG	J	390	N	nc	NA	nc	NA
RES-14-303-01	0	1	Chromium	212	MG/KG	J	390	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
RES-14-333-01	0	1	Chromium	51.7	MG/KG	J	390	N	nc	NA	nc	NA
RES-14-271-01	0	1	Chromium	39.7	MG/KG	J	390	N	nc	NA	nc	NA
CMS-703	0	2	Chromium	22.8	MG/KG	J	390	N	nc	NA	nc	NA
BV01COMP	0	4	Chromium	135	MG/KG	J	390	N	nc	NA	nc	NA
MW05S	1	2	Chromium	2.5	MG/KG	J	390	N	nc	NA	nc	NA
MW01S	1	2	Chromium	35.3	MG/KG	J	390	N	nc	NA	nc	NA
MW05S	1	2	Chromium	2.4	MG/KG	J	390	N	nc	NA	nc	NA
MW08S	1	2	Chromium	62.8	MG/KG	J	390	N	nc	NA	nc	NA
SB-14-271	1	2	Chromium	10.5	MG/KG	J	390	N	nc	NA	nc	NA
CMS-089	1	2	Chromium	20.2	MG/KG	J	390	N	nc	NA	nc	NA
CMS-173	1	2	Chromium	7.4	MG/KG	J	390	N	nc	NA	nc	NA
CMS-237	1	2	Chromium	220	MG/KG	J	390	N	nc	NA	nc	NA
CMS-405	1	2	Chromium	62.4	MG/KG	J	390	N	nc	NA	nc	NA
CMS-407	1	2	Chromium	6.3	MG/KG	J	390	N	nc	NA	nc	NA
CMS-408	1	2	Chromium	61.5	MG/KG	J	390	N	nc	NA	nc	NA
CMS-417	1	2	Chromium	350	MG/KG	J	390	N	nc	NA	nc	NA
CMS-419	1	2	Chromium	331	MG/KG	J	390	N	nc	NA	nc	NA
CMS-423	1	2	Chromium	17.1	MG/KG	J	390	N	nc	NA	nc	NA
CMS-427	1	2	Chromium	46.8	MG/KG	J	390	N	nc	NA	nc	NA
CMS-405	1	2	Chromium	51	MG/KG	J	390	N	nc	NA	nc	NA
CMS-089	2	3	Chromium	27.5	MG/KG	J	390	N	nc	NA	nc	NA
CMS-405	2	3	Chromium	24.6	MG/KG	J	390	N	nc	NA	nc	NA
CMS-407	2	3	Chromium	87.1	MG/KG	J	390	N	nc	NA	nc	NA
CMS-408	2	3	Chromium	31.1	MG/KG	J	390	N	nc	NA	nc	NA
CMS-417	2	3	Chromium	10.1	MG/KG	J	390	N	nc	NA	nc	NA
MW08S	2	4	Chromium	67.4	MG/KG	J	390	N	nc	NA	nc	NA
MW05S	2	4	Chromium	18.2	MG/KG	J	390	N	nc	NA	nc	NA
MW08S	2	4	Chromium	33.6	MG/KG	J	390	N	nc	NA	nc	NA
MW15D	2	4	Chromium	3.6	MG/KG	J	390	N	nc	NA	nc	NA
SB-14-271	2	4	Chromium	6.2	MG/KG	J	390	N	nc	NA	nc	NA
CMS-089	3	4	Chromium	23.8	MG/KG	J	390	N	nc	NA	nc	NA
CMS-405	3	4	Chromium	44.1	MG/KG	J	390	N	nc	NA	nc	NA
CMS-407	3	4	Chromium	18.5	MG/KG	J	390	N	nc	NA	nc	NA
CMS-417	3	4	Chromium	8.4	MG/KG	J	390	N	nc	NA	nc	NA
CMS-419	3	4	Chromium	11.7	MG/KG	J	390	N	nc	NA	nc	NA
CMS-423	3	4	Chromium	12.6	MG/KG	J	390	N	nc	NA	nc	NA
CMS-427	3	4	Chromium	15.6	MG/KG	J	390	N	nc	NA	nc	NA
CMS-423	3	4	Chromium	28.5	MG/KG	J	390	N	nc	NA	nc	NA
CMS-405	4	5	Chromium	20	MG/KG	J	390	N	nc	NA	nc	NA
MW15D	4	6	Chromium	5.6	MG/KG	J	390	N	nc	NA	nc	NA
MW01S	4	6	Chromium	8.3	MG/KG	J	390	N	nc	NA	nc	NA
MW03S	4	6	Chromium	7.5	MG/KG	J	390	N	nc	NA	nc	NA
MW04D	4	6	Chromium	4.9	MG/KG	J	390	N	nc	NA	nc	NA
MW08S	4	6	Chromium	10.4	MG/KG	J	390	N	nc	NA	nc	NA
MW15D	4	6	Chromium	5.8	MG/KG	J	390	N	nc	NA	nc	NA
SB-14-271	4	6	Chromium	8.7	MG/KG	J	390	N	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Chromium	10.7	MG/KG		390	N	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Chromium	16.4	MG/KG		390	N	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Chromium	98.4	MG/KG		390	N	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Chromium	51	MG/KG		390	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMW-SD-2021	0	0.5	Chromium	48.1	MG/KG		390	N	nc	NA	nc	NA
CMS-060	0	1	Chromium	11	MG/KG		390	N	nc	NA	nc	NA
CMS-118	0	1	Chromium	15.6	MG/KG		390	N	nc	NA	nc	NA
CMS-159	0	1	Chromium	133	MG/KG		390	N	nc	NA	nc	NA
CMS-456	0	1	Chromium	36.2	MG/KG		390	N	nc	NA	nc	NA
CMS-060	0	1	Chromium	12	MG/KG		390	N	nc	NA	nc	NA
RES-14-272-01	0	1	Chromium	30.3	MG/KG		390	N	nc	NA	nc	NA
RES-14-302-01	0	1	Chromium	27.3	MG/KG		390	N	nc	NA	nc	NA
RES-14-272-01	0	1	Chromium	41.3	MG/KG		390	N	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Chromium	57.1	MG/KG		390	N	nc	NA	nc	NA
MW14M	1	2	Chromium	9.3	MG/KG		390	N	nc	NA	nc	NA
MW14M	1	2	Chromium	12.3	MG/KG		390	N	nc	NA	nc	NA
CMS-060	1	2	Chromium	11	MG/KG		390	N	nc	NA	nc	NA
CMS-118	1	2	Chromium	36.1	MG/KG		390	N	nc	NA	nc	NA
CMS-428	1	2	Chromium	13.2	MG/KG		390	N	nc	NA	nc	NA
CMS-456	1	2	Chromium	180	MG/KG		390	N	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Chromium	11.3	MG/KG		390	N	nc	NA	nc	NA
CMS-060	2	3	Chromium	9.8	MG/KG		390	N	nc	NA	nc	NA
CMS-118	2	3	Chromium	32.5	MG/KG		390	N	nc	NA	nc	NA
CMS-237	2	3	Chromium	190	MG/KG		390	N	nc	NA	nc	NA
CMS-455	2	3	Chromium	10.4	MG/KG		390	N	nc	NA	nc	NA
SB02	2	4	Chromium	49.8	MG/KG		390	N	nc	NA	nc	NA
MW02S	2	4	Chromium	5.2	MG/KG		390	N	nc	NA	nc	NA
MW06S	2	4	Chromium	50.6	MG/KG		390	N	nc	NA	nc	NA
MW06S	2	4	Chromium	31.1	MG/KG		390	N	nc	NA	nc	NA
MW14M	2	4	Chromium	8.8	MG/KG		390	N	nc	NA	nc	NA
SB02	2	4	Chromium	49.3	MG/KG		390	N	nc	NA	nc	NA
SB03	2	4	Chromium	16.2	MG/KG		390	N	nc	NA	nc	NA
GEC-7	2.5	4.5	Chromium	5.4	MG/KG		390	N	nc	NA	nc	NA
MW07S	3	4	Chromium	46.3	MG/KG		390	N	nc	NA	nc	NA
CMS-060	3	4	Chromium	6.8	MG/KG		390	N	nc	NA	nc	NA
CMS-118	3	4	Chromium	25.4	MG/KG		390	N	nc	NA	nc	NA
CMS-428	3	4	Chromium	6.2	MG/KG		390	N	nc	NA	nc	NA
CMS-060	4	5	Chromium	7.6	MG/KG		390	N	nc	NA	nc	NA
CMS-118	4	5	Chromium	9.3	MG/KG		390	N	nc	NA	nc	NA
CMS-455	4	5	Chromium	10	MG/KG		390	N	nc	NA	nc	NA
SB03	4	6	Chromium	3.7	MG/KG		390	N	nc	NA	nc	NA
MW05S	4	6	Chromium	89.8	MG/KG		390	N	nc	NA	nc	NA
MW06S	4	6	Chromium	33	MG/KG		390	N	nc	NA	nc	NA
MW07S	4	6	Chromium	10.2	MG/KG		390	N	nc	NA	nc	NA
MW09S	4	6	Chromium	40.2	MG/KG		390	N	nc	NA	nc	NA
SB02	4	6	Chromium	37	MG/KG		390	N	nc	NA	nc	NA
SB03	4	6	Chromium	12.1	MG/KG		390	N	nc	NA	nc	NA
CMS-4105	0	1	Chromium	330	MG/KG		390	N	nc	NA	nc	NA
CMS-4110	0	1	Chromium	195	MG/KG		390	N	nc	NA	nc	NA
MW01S	1	2	Chrysene	0.9	MG/KG	EB	0.4	Y	nc	NA	nc	NA
MW01S	4	6	Chrysene	0.97	MG/KG	EB	0.4	Y	nc	NA	nc	NA
MW03S	4	6	Chrysene	1.1	MG/KG	EB	0.4	Y	nc	NA	nc	NA
CMS-4105	0	1	Chrysene	9.274741286	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-4110	0	1	Chrysene	4.664314689	MG/KG	J	0.4	Y	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
SS-01	0	0	Chrysene	0.42	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Chrysene	0.85	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Chrysene	0.38	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-060	0	1	Chrysene	0.79	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-098	0	1	Chrysene	0.25	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-142	0	1	Chrysene	0.29	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-164	0	1	Chrysene	0.42	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-173	0	1	Chrysene	0.49	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-237	0	1	Chrysene	1.2	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-408	0	1	Chrysene	0.12	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-142	0	1	Chrysene	0.15	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-060	0	1	Chrysene	1.4	MG/KG	J	0.4	Y	nc	NA	nc	NA
RES-14-271-01	0	1	Chrysene	0.48	MG/KG	J	0.4	Y	nc	NA	nc	NA
RES-14-302-01	0	1	Chrysene	0.83	MG/KG	J	0.4	Y	nc	NA	nc	NA
RES-14-303-01	0	1	Chrysene	1.8	MG/KG	J	0.4	Y	nc	NA	nc	NA
RES-14-333-01	0	1	Chrysene	3.4	MG/KG	J	0.4	Y	nc	NA	nc	NA
RES-14-271-01	0	1	Chrysene	1.2	MG/KG	J	0.4	Y	nc	NA	nc	NA
RES-14-272-01	0	1	Chrysene	0.99	MG/KG	J	0.4	Y	nc	NA	nc	NA
SS-02	0	1.3	Chrysene	0.45	MG/KG	J	0.4	Y	nc	NA	nc	NA
SS-06	0	2	Chrysene	0.71	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Chrysene	2.9	MG/KG	J	0.4	Y	nc	NA	nc	NA
SB-14-271	1	2	Chrysene	0.26	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-237	1	2	Chrysene	0.48	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-405	1	2	Chrysene	4.2	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-408	1	2	Chrysene	0.8	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-423	1	2	Chrysene	0.27	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-427	1	2	Chrysene	0.98	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-405	1	2	Chrysene	1.3	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-060	2	3	Chrysene	0.19	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-089	2	3	Chrysene	0.14	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-118	2	3	Chrysene	0.38	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-405	2	3	Chrysene	0.39	MG/KG	J	0.4	N	nc	NA	nc	NA
SB02	2	4	Chrysene	0.88	MG/KG	J	0.4	Y	nc	NA	nc	NA
MW02S	2	4	Chrysene	0.066	MG/KG	J	0.4	N	nc	NA	nc	NA
MW06S	2	4	Chrysene	0.31	MG/KG	J	0.4	N	nc	NA	nc	NA
MW06S	2	4	Chrysene	0.28	MG/KG	J	0.4	N	nc	NA	nc	NA
MW14M	2	4	Chrysene	0.2	MG/KG	J	0.4	N	nc	NA	nc	NA
MW15D	2	4	Chrysene	0.16	MG/KG	J	0.4	N	nc	NA	nc	NA
SB02	2	4	Chrysene	1	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-118	3	4	Chrysene	0.1	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-407	3	4	Chrysene	0.22	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-423	3	4	Chrysene	0.28	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-423	3	4	Chrysene	0.19	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-060	4	5	Chrysene	0.23	MG/KG	J	0.4	N	nc	NA	nc	NA
MW06S	4	6	Chrysene	0.16	MG/KG	J	0.4	N	nc	NA	nc	NA
MW07S	4	6	Chrysene	0.16	MG/KG	J	0.4	N	nc	NA	nc	NA
MW09S	4	6	Chrysene	0.5	MG/KG	J	0.4	Y	nc	NA	nc	NA
SB02	4	6	Chrysene	0.53	MG/KG	J	0.4	Y	nc	NA	nc	NA
MW05S	2	4	Chrysene	3.6	MG/KG	J*	0.4	Y	nc	NA	nc	NA
MW08S	1	2	Chrysene	0.22	MG/KG	JEB	0.4	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW08S	2	4	Chrysene	0.4	MG/KG	JEB	0.4	N	nc	NA	nc	NA
MW01S	2	4	Chrysene	0.93	MG/KG	JEB	0.4	Y	nc	NA	nc	NA
MW08S	2	4	Chrysene	0.28	MG/KG	JEB	0.4	N	nc	NA	nc	NA
CMS-417	0	1	Chrysene	35	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-703	0	2	Chrysene	6.2	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW05S	1	2	Chrysene	0.36	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW05S	1	2	Chrysene	0.36	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-173	1	2	Chrysene	0.52	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-417	1	2	Chrysene	35	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-419	1	2	Chrysene	74	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-428	1	2	Chrysene	0.35	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-417	2	3	Chrysene	9.8	MG/KG	U	0.4	NA	nc	NA	nc	NA
SB-14-271	2	4	Chrysene	0.45	MG/KG	U	0.4	NA	nc	NA	nc	NA
SS-03	2.5	3.5	Chrysene	0.4	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-060	3	4	Chrysene	0.45	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-417	3	4	Chrysene	1.9	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-419	3	4	Chrysene	0.42	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-427	3	4	Chrysene	0.41	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-428	3	4	Chrysene	0.37	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-118	4	5	Chrysene	0.43	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-405	4	5	Chrysene	0.46	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-455	4	5	Chrysene	0.48	MG/KG	U	0.4	NA	nc	NA	nc	NA
SB03	4	6	Chrysene	0.37	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW04D	4	6	Chrysene	0.42	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW05S	4	6	Chrysene	0.82	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW08S	4	6	Chrysene	0.45	MG/KG	U	0.4	NA	nc	NA	nc	NA
SB-14-271	4	6	Chrysene	0.4	MG/KG	U	0.4	NA	nc	NA	nc	NA
SB03	4	6	Chrysene	0.38	MG/KG	U	0.4	NA	nc	NA	nc	NA
GEC-6	2.5	4.5	Chrysene	0.15	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Chrysene	2.2	MG/KG		0.4	Y	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Chrysene	2.2	MG/KG		0.4	Y	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Chrysene	11	MG/KG		0.4	Y	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Chrysene	3.4	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-089	0	1	Chrysene	2.7	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-118	0	1	Chrysene	1.1	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-159	0	1	Chrysene	2.2	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-405	0	1	Chrysene	2	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-407	0	1	Chrysene	0.67	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-456	0	1	Chrysene	2.1	MG/KG		0.4	Y	nc	NA	nc	NA
RES-14-272-01	0	1	Chrysene	0.86	MG/KG		0.4	Y	nc	NA	nc	NA
BV01COMP	0	4	Chrysene	1.6	MG/KG		0.4	Y	nc	NA	nc	NA
MW14M	1	2	Chrysene	0.49	MG/KG		0.4	Y	nc	NA	nc	NA
MW14M	1	2	Chrysene	0.48	MG/KG		0.4	Y	nc	NA	nc	NA
MW14M	1	2	Chrysene	0.36	MG/KG		0.4	N	nc	NA	nc	NA
MW14M	1	2	Chrysene	0.41	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-060	1	2	Chrysene	0.46	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-089	1	2	Chrysene	0.66	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-118	1	2	Chrysene	1.3	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-407	1	2	Chrysene	1.3	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-456	1	2	Chrysene	2	MG/KG		0.4	Y	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMW-SD-2022	2	2.5	Chrysene	1.1	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-237	2	3	Chrysene	1.5	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-407	2	3	Chrysene	1.8	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-408	2	3	Chrysene	0.59	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-455	2	3	Chrysene	0.99	MG/KG		0.4	Y	nc	NA	nc	NA
SB03	2	4	Chrysene	3.5	MG/KG		0.4	Y	nc	NA	nc	NA
MW07S	3	4	Chrysene	0.82	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-089	3	4	Chrysene	3	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-405	3	4	Chrysene	1	MG/KG		0.4	Y	nc	NA	nc	NA
MW15D	4	6	Chrysene	1.3	MG/KG		0.4	Y	nc	NA	nc	NA
MW15D	4	6	Chrysene	0.82	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-159	0	1	Cis-1,2-dichloroethene	0.0073	MG/KG	J	630	N	1.7	N	nc	NA
MW14M	1	2	Cis-1,2-dichloroethene	0.97	MG/KG	J	630	N	1.7	N	nc	NA
CMS-118	1	2	Cis-1,2-dichloroethene	0.0016	MG/KG	J	630	N	1.7	N	nc	NA
CMS-173	1	2	Cis-1,2-dichloroethene	0.0066	MG/KG	J	630	N	1.7	N	nc	NA
CMS-237	1	2	Cis-1,2-dichloroethene	0.023	MG/KG	J	630	N	1.7	N	nc	NA
CMS-456	1	2	Cis-1,2-dichloroethene	0.093	MG/KG	J	630	N	1.7	N	nc	NA
CMS-237	2	3	Cis-1,2-dichloroethene	0.043	MG/KG	J	630	N	1.7	N	nc	NA
CMS-407	2	3	Cis-1,2-dichloroethene	0.012	MG/KG	J	630	N	1.7	N	nc	NA
MW01S	4	6	Cis-1,2-dichloroethene	0.05	MG/KG	J	630	N	1.7	N	nc	NA
MW05S	4	6	Cis-1,2-dichloroethene	3.1	MG/KG	J	630	N	1.7	Y	nc	NA
CMS-089	0	1	Cis-1,2-dichloroethene	0.005	MG/KG	U	630	NA	1.7	NA	nc	NA
CMS-098	0	1	Cis-1,2-dichloroethene	0.0097	MG/KG	U	630	NA	1.7	NA	nc	NA
CMS-118	0	1	Cis-1,2-dichloroethene	0.0048	MG/KG	U	630	NA	1.7	NA	nc	NA
CMS-142	0	1	Cis-1,2-dichloroethene	0.0095	MG/KG	U	630	NA	1.7	NA	nc	NA
CMS-164	0	1	Cis-1,2-dichloroethene	0.015	MG/KG	U	630	NA	1.7	NA	nc	NA
CMS-173	0	1	Cis-1,2-dichloroethene	0.024	MG/KG	U	630	NA	1.7	NA	nc	NA
CMS-407	0	1	Cis-1,2-dichloroethene	0.005	MG/KG	U	630	NA	1.7	NA	nc	NA
CMS-408	0	1	Cis-1,2-dichloroethene	0.0043	MG/KG	U	630	NA	1.7	NA	nc	NA
CMS-456	0	1	Cis-1,2-dichloroethene	0.0075	MG/KG	U	630	NA	1.7	NA	nc	NA
CMS-702	0	1	Cis-1,2-dichloroethene	0.0087	MG/KG	U	630	NA	1.7	NA	nc	NA
CMS-142	0	1	Cis-1,2-dichloroethene	0.011	MG/KG	U	630	NA	1.7	NA	nc	NA
CMS-060	0	1	Cis-1,2-dichloroethene	2.7	MG/KG	U	630	NA	1.7	NA	nc	NA
MW05S	1	2	Cis-1,2-dichloroethene	0.095	MG/KG	U	630	NA	1.7	NA	nc	NA
MW01S	1	2	Cis-1,2-dichloroethene	0.34	MG/KG	U	630	NA	1.7	NA	nc	NA
MW05S	1	2	Cis-1,2-dichloroethene	0.11	MG/KG	U	630	NA	1.7	NA	nc	NA
MW08S	1	2	Cis-1,2-dichloroethene	0.26	MG/KG	U	630	NA	1.7	NA	nc	NA
CMS-060	1	2	Cis-1,2-dichloroethene	5.1	MG/KG	U	630	NA	1.7	NA	nc	NA
CMS-089	1	2	Cis-1,2-dichloroethene	0.0048	MG/KG	U	630	NA	1.7	NA	nc	NA
CMS-405	1	2	Cis-1,2-dichloroethene	4	MG/KG	U	630	NA	1.7	NA	nc	NA
CMS-408	1	2	Cis-1,2-dichloroethene	2.2	MG/KG	U	630	NA	1.7	NA	nc	NA
CMS-423	1	2	Cis-1,2-dichloroethene	0.0062	MG/KG	U	630	NA	1.7	NA	nc	NA
CMS-427	1	2	Cis-1,2-dichloroethene	0.0045	MG/KG	U	630	NA	1.7	NA	nc	NA
CMS-428	1	2	Cis-1,2-dichloroethene	0.0054	MG/KG	U	630	NA	1.7	NA	nc	NA
CMS-089	2	3	Cis-1,2-dichloroethene	0.0047	MG/KG	U	630	NA	1.7	NA	nc	NA
CMS-408	2	3	Cis-1,2-dichloroethene	6.6	MG/KG	U	630	NA	1.7	NA	nc	NA
CMS-455	2	3	Cis-1,2-dichloroethene	0.33	MG/KG	U	630	NA	1.7	NA	nc	NA
MW08S	2	4	Cis-1,2-dichloroethene	0.21	MG/KG	U	630	NA	1.7	NA	nc	NA
MW01S	2	4	Cis-1,2-dichloroethene	0.22	MG/KG	U	630	NA	1.7	NA	nc	NA
MW02S	2	4	Cis-1,2-dichloroethene	0.2	MG/KG	U	630	NA	1.7	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW04D	2	4	Cis-1,2-dichloroethene	0.5	MG/KG	U	630	NA	1.7	NA	nc	NA
MW06S	2	4	Cis-1,2-dichloroethene	0.3	MG/KG	U	630	NA	1.7	NA	nc	NA
MW06S	2	4	Cis-1,2-dichloroethene	0.3	MG/KG	U	630	NA	1.7	NA	nc	NA
MW08S	2	4	Cis-1,2-dichloroethene	0.32	MG/KG	U	630	NA	1.7	NA	nc	NA
MW14M	2	4	Cis-1,2-dichloroethene	0.14	MG/KG	U	630	NA	1.7	NA	nc	NA
MW15D	2	4	Cis-1,2-dichloroethene	0.14	MG/KG	U	630	NA	1.7	NA	nc	NA
SB02	2	4	Cis-1,2-dichloroethene	0.38	MG/KG	U	630	NA	1.7	NA	nc	NA
MW07S	3	4	Cis-1,2-dichloroethene	0.5	MG/KG	U	630	NA	1.7	NA	nc	NA
CMS-089	3	4	Cis-1,2-dichloroethene	0.0041	MG/KG	U	630	NA	1.7	NA	nc	NA
CMS-118	3	4	Cis-1,2-dichloroethene	0.0084	MG/KG	U	630	NA	1.7	NA	nc	NA
CMS-407	3	4	Cis-1,2-dichloroethene	0.32	MG/KG	U	630	NA	1.7	NA	nc	NA
CMS-417	3	4	Cis-1,2-dichloroethene	0.28	MG/KG	U	630	NA	1.7	NA	nc	NA
CMS-419	3	4	Cis-1,2-dichloroethene	0.32	MG/KG	U	630	NA	1.7	NA	nc	NA
CMS-423	3	4	Cis-1,2-dichloroethene	0.0045	MG/KG	U	630	NA	1.7	NA	nc	NA
CMS-427	3	4	Cis-1,2-dichloroethene	0.0054	MG/KG	U	630	NA	1.7	NA	nc	NA
CMS-428	3	4	Cis-1,2-dichloroethene	0.0057	MG/KG	U	630	NA	1.7	NA	nc	NA
CMS-423	3	4	Cis-1,2-dichloroethene	0.0049	MG/KG	U	630	NA	1.7	NA	nc	NA
CMS-118	4	5	Cis-1,2-dichloroethene	0.0059	MG/KG	U	630	NA	1.7	NA	nc	NA
CMS-405	4	5	Cis-1,2-dichloroethene	1	MG/KG	U	630	NA	1.7	NA	nc	NA
CMS-455	4	5	Cis-1,2-dichloroethene	0.0072	MG/KG	U	630	NA	1.7	NA	nc	NA
MW15D	4	6	Cis-1,2-dichloroethene	0.1	MG/KG	U	630	NA	1.7	NA	nc	NA
MW02S	4	6	Cis-1,2-dichloroethene	0.55	MG/KG	U	630	NA	1.7	NA	nc	NA
SB03	4	6	Cis-1,2-dichloroethene	0.2	MG/KG	U	630	NA	1.7	NA	nc	NA
MW02S	4	6	Cis-1,2-dichloroethene	0.42	MG/KG	U	630	NA	1.7	NA	nc	NA
MW03S	4	6	Cis-1,2-dichloroethene	0.35	MG/KG	U	630	NA	1.7	NA	nc	NA
MW04D	4	6	Cis-1,2-dichloroethene	0.18	MG/KG	U	630	NA	1.7	NA	nc	NA
MW07S	4	6	Cis-1,2-dichloroethene	0.26	MG/KG	U	630	NA	1.7	NA	nc	NA
MW08S	4	6	Cis-1,2-dichloroethene	0.3	MG/KG	U	630	NA	1.7	NA	nc	NA
MW09S	4	6	Cis-1,2-dichloroethene	0.26	MG/KG	U	630	NA	1.7	NA	nc	NA
MW15D	4	6	Cis-1,2-dichloroethene	0.12	MG/KG	U	630	NA	1.7	NA	nc	NA
SB02	4	6	Cis-1,2-dichloroethene	0.26	MG/KG	U	630	NA	1.7	NA	nc	NA
SB03	4	6	Cis-1,2-dichloroethene	0.18	MG/KG	U	630	NA	1.7	NA	nc	NA
CMS-237	0	1	Cis-1,2-dichloroethene	0.0059	MG/KG	UJ	630	NA	1.7	NA	nc	NA
CMS-703	0	1	Cis-1,2-dichloroethene	0.0061	MG/KG	UJ	630	NA	1.7	NA	nc	NA
SB-14-271	1	2	Cis-1,2-dichloroethene	0.12	MG/KG	UJ	630	NA	1.7	NA	nc	NA
CMS-405	1	2	Cis-1,2-dichloroethene	2.9	MG/KG	UJ	630	NA	1.7	NA	nc	NA
CMS-060	2	3	Cis-1,2-dichloroethene	0.27	MG/KG	UJ	630	NA	1.7	NA	nc	NA
CMS-118	2	3	Cis-1,2-dichloroethene	0.0074	MG/KG	UJ	630	NA	1.7	NA	nc	NA
SB-14-271	2	4	Cis-1,2-dichloroethene	0.13	MG/KG	UJ	630	NA	1.7	NA	nc	NA
SB-14-271	4	6	Cis-1,2-dichloroethene	0.11	MG/KG	UJ	630	NA	1.7	NA	nc	NA
CMS-417	0	1	Cis-1,2-dichloroethene	180	MG/KG		630	N	1.7	Y	nc	NA
CMS-065	0	10	Cis-1,2-dichloroethene	22	MG/KG		630	N	1.7	Y	nc	NA
MW14M	1	2	Cis-1,2-dichloroethene	1.4	MG/KG		630	N	1.7	N	nc	NA
CMS-407	1	2	Cis-1,2-dichloroethene	0.018	MG/KG		630	N	1.7	N	nc	NA
CMS-417	1	2	Cis-1,2-dichloroethene	500	MG/KG		630	N	1.7	Y	nc	NA
CMS-419	1	2	Cis-1,2-dichloroethene	73	MG/KG		630	N	1.7	Y	nc	NA
CMS-417	2	3	Cis-1,2-dichloroethene	490	MG/KG		630	N	1.7	Y	nc	NA
MW05S	2	4	Cis-1,2-dichloroethene	0.69	MG/KG		630	N	1.7	N	nc	NA
SB03	2	4	Cis-1,2-dichloroethene	0.32	MG/KG		630	N	1.7	N	nc	NA
GEC-6	2.5	4.5	Cis-1,2-dichloroethene	2.1	MG/KG		630	N	1.7	Y	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
GEC-7	2.5	4.5	Cis-1,2-dichloroethene	0.04	MG/KG		630	N	1.7	N	nc	NA
CMS-060	3	4	Cis-1,2-dichloroethene	0.01	MG/KG		630	N	1.7	N	nc	NA
CMS-060	4	5	Cis-1,2-dichloroethene	0.011	MG/KG		630	N	1.7	N	nc	NA
MW06S	4	6	Cis-1,2-dichloroethene	7.2	MG/KG		630	N	1.7	Y	nc	NA
CMW-SD-2021	0	0.5	Copper	126	MG/KG	J	3100	N	nc	NA	nc	NA
CMS-060	0	1	Copper	28.4	MG/KG	J	3100	N	nc	NA	nc	NA
CMS-089	0	1	Copper	10.7	MG/KG	J	3100	N	nc	NA	nc	NA
CMS-098	0	1	Copper	12.9	MG/KG	J	3100	N	nc	NA	nc	NA
CMS-142	0	1	Copper	18.5	MG/KG	J	3100	N	nc	NA	nc	NA
CMS-173	0	1	Copper	105	MG/KG	J	3100	N	nc	NA	nc	NA
CMS-407	0	1	Copper	26.4	MG/KG	J	3100	N	nc	NA	nc	NA
CMS-408	0	1	Copper	10.7	MG/KG	J	3100	N	nc	NA	nc	NA
CMS-142	0	1	Copper	13.1	MG/KG	J	3100	N	nc	NA	nc	NA
CMS-060	0	1	Copper	85.7	MG/KG	J	3100	N	nc	NA	nc	NA
RES-14-333-01	0	1	Copper	283	MG/KG	J	3100	N	nc	NA	nc	NA
MW01S	1	2	Copper	42.3	MG/KG	J	3100	N	nc	NA	nc	NA
MW08S	1	2	Copper	166	MG/KG	J	3100	N	nc	NA	nc	NA
SB-14-271	1	2	Copper	22.1	MG/KG	J	3100	N	nc	NA	nc	NA
CMS-089	1	2	Copper	27.6	MG/KG	J	3100	N	nc	NA	nc	NA
CMS-173	1	2	Copper	3.4	MG/KG	J	3100	N	nc	NA	nc	NA
CMS-407	1	2	Copper	32.3	MG/KG	J	3100	N	nc	NA	nc	NA
CMS-408	1	2	Copper	287	MG/KG	J	3100	N	nc	NA	nc	NA
CMS-419	1	2	Copper	333	MG/KG	J	3100	N	nc	NA	nc	NA
CMS-423	1	2	Copper	26.9	MG/KG	J	3100	N	nc	NA	nc	NA
CMS-427	1	2	Copper	48	MG/KG	J	3100	N	nc	NA	nc	NA
CMS-089	2	3	Copper	31.7	MG/KG	J	3100	N	nc	NA	nc	NA
CMS-407	2	3	Copper	32.9	MG/KG	J	3100	N	nc	NA	nc	NA
CMS-408	2	3	Copper	120	MG/KG	J	3100	N	nc	NA	nc	NA
MW08S	2	4	Copper	56.3	MG/KG	J	3100	N	nc	NA	nc	NA
SB02	2	4	Copper	37	MG/KG	J	3100	N	nc	NA	nc	NA
MW02S	2	4	Copper	19.8	MG/KG	J	3100	N	nc	NA	nc	NA
MW05S	2	4	Copper	90.5	MG/KG	J	3100	N	nc	NA	nc	NA
MW06S	2	4	Copper	86.1	MG/KG	J	3100	N	nc	NA	nc	NA
MW06S	2	4	Copper	47.4	MG/KG	J	3100	N	nc	NA	nc	NA
MW08S	2	4	Copper	58.4	MG/KG	J	3100	N	nc	NA	nc	NA
SB02	2	4	Copper	28.5	MG/KG	J	3100	N	nc	NA	nc	NA
SB03	2	4	Copper	15.9	MG/KG	J	3100	N	nc	NA	nc	NA
MW07S	3	4	Copper	20.9	MG/KG	J	3100	N	nc	NA	nc	NA
CMS-089	3	4	Copper	19.9	MG/KG	J	3100	N	nc	NA	nc	NA
CMS-407	3	4	Copper	13.6	MG/KG	J	3100	N	nc	NA	nc	NA
CMS-419	3	4	Copper	13.7	MG/KG	J	3100	N	nc	NA	nc	NA
CMS-423	3	4	Copper	17.4	MG/KG	J	3100	N	nc	NA	nc	NA
CMS-427	3	4	Copper	42.4	MG/KG	J	3100	N	nc	NA	nc	NA
CMS-423	3	4	Copper	39.1	MG/KG	J	3100	N	nc	NA	nc	NA
CMS-455	4	5	Copper	2.8	MG/KG	J	3100	N	nc	NA	nc	NA
SB03	4	6	Copper	5.5	MG/KG	J	3100	N	nc	NA	nc	NA
MW01S	4	6	Copper	7.1	MG/KG	J	3100	N	nc	NA	nc	NA
MW03S	4	6	Copper	34.8	MG/KG	J	3100	N	nc	NA	nc	NA
MW06S	4	6	Copper	58.7	MG/KG	J	3100	N	nc	NA	nc	NA
MW07S	4	6	Copper	10.2	MG/KG	J	3100	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW08S	4	6	Copper	4.3	MG/KG	J	3100	N	nc	NA	nc	NA
MW09S	4	6	Copper	27.1	MG/KG	J	3100	N	nc	NA	nc	NA
SB02	4	6	Copper	15.1	MG/KG	J	3100	N	nc	NA	nc	NA
SB03	4	6	Copper	558	MG/KG	J	3100	N	nc	NA	nc	NA
MW05S	1	2	Copper	4	MG/KG	UJ	3100	NA	nc	NA	nc	NA
MW05S	1	2	Copper	5.6	MG/KG	UJ	3100	NA	nc	NA	nc	NA
SB-14-271	2	4	Copper	2.8	MG/KG	UJ	3100	NA	nc	NA	nc	NA
MW04D	4	6	Copper	2.5	MG/KG	UJ	3100	NA	nc	NA	nc	NA
SB-14-271	4	6	Copper	3.1	MG/KG	UJ	3100	NA	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Copper	9.4	MG/KG		3100	N	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Copper	21.7	MG/KG		3100	N	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Copper	5.5	MG/KG		3100	N	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Copper	167	MG/KG		3100	N	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Copper	35.8	MG/KG		3100	N	nc	NA	nc	NA
CMS-118	0	1	Copper	22.5	MG/KG		3100	N	nc	NA	nc	NA
CMS-159	0	1	Copper	260	MG/KG		3100	N	nc	NA	nc	NA
CMS-164	0	1	Copper	177	MG/KG		3100	N	nc	NA	nc	NA
CMS-237	0	1	Copper	126	MG/KG		3100	N	nc	NA	nc	NA
CMS-405	0	1	Copper	10.8	MG/KG		3100	N	nc	NA	nc	NA
CMS-417	0	1	Copper	288	MG/KG		3100	N	nc	NA	nc	NA
CMS-456	0	1	Copper	28.9	MG/KG		3100	N	nc	NA	nc	NA
RES-14-271-01	0	1	Copper	57.3	MG/KG		3100	N	nc	NA	nc	NA
RES-14-272-01	0	1	Copper	73.5	MG/KG		3100	N	nc	NA	nc	NA
RES-14-302-01	0	1	Copper	58.2	MG/KG		3100	N	nc	NA	nc	NA
RES-14-303-01	0	1	Copper	116	MG/KG		3100	N	nc	NA	nc	NA
RES-14-271-01	0	1	Copper	62.1	MG/KG		3100	N	nc	NA	nc	NA
RES-14-272-01	0	1	Copper	98.3	MG/KG		3100	N	nc	NA	nc	NA
CMS-703	0	2	Copper	25.9	MG/KG		3100	N	nc	NA	nc	NA
BV01COMP	0	4	Copper	8.1	MG/KG		3100	N	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Copper	31.2	MG/KG		3100	N	nc	NA	nc	NA
MW14M	1	2	Copper	44.5	MG/KG		3100	N	nc	NA	nc	NA
MW14M	1	2	Copper	53.7	MG/KG		3100	N	nc	NA	nc	NA
CMS-060	1	2	Copper	23.9	MG/KG		3100	N	nc	NA	nc	NA
CMS-118	1	2	Copper	31.3	MG/KG		3100	N	nc	NA	nc	NA
CMS-237	1	2	Copper	743	MG/KG		3100	N	nc	NA	nc	NA
CMS-405	1	2	Copper	147	MG/KG		3100	N	nc	NA	nc	NA
CMS-417	1	2	Copper	934	MG/KG		3100	N	nc	NA	nc	NA
CMS-428	1	2	Copper	50	MG/KG		3100	N	nc	NA	nc	NA
CMS-456	1	2	Copper	64.8	MG/KG		3100	N	nc	NA	nc	NA
CMS-405	1	2	Copper	206	MG/KG		3100	N	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Copper	10.9	MG/KG		3100	N	nc	NA	nc	NA
CMS-060	2	3	Copper	12.7	MG/KG		3100	N	nc	NA	nc	NA
CMS-118	2	3	Copper	93.7	MG/KG		3100	N	nc	NA	nc	NA
CMS-237	2	3	Copper	293	MG/KG		3100	N	nc	NA	nc	NA
CMS-405	2	3	Copper	167	MG/KG		3100	N	nc	NA	nc	NA
CMS-417	2	3	Copper	19.3	MG/KG		3100	N	nc	NA	nc	NA
CMS-455	2	3	Copper	158	MG/KG		3100	N	nc	NA	nc	NA
MW14M	2	4	Copper	15.5	MG/KG		3100	N	nc	NA	nc	NA
MW15D	2	4	Copper	6	MG/KG		3100	N	nc	NA	nc	NA
CMS-060	3	4	Copper	4.1	MG/KG		3100	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-118	3	4	Copper	45.9	MG/KG		3100	N	nc	NA	nc	NA
CMS-405	3	4	Copper	112	MG/KG		3100	N	nc	NA	nc	NA
CMS-417	3	4	Copper	58	MG/KG		3100	N	nc	NA	nc	NA
CMS-428	3	4	Copper	4.1	MG/KG		3100	N	nc	NA	nc	NA
CMS-060	4	5	Copper	18.2	MG/KG		3100	N	nc	NA	nc	NA
CMS-118	4	5	Copper	5.7	MG/KG		3100	N	nc	NA	nc	NA
CMS-405	4	5	Copper	15.3	MG/KG		3100	N	nc	NA	nc	NA
MW15D	4	6	Copper	9.6	MG/KG		3100	N	nc	NA	nc	NA
MW05S	4	6	Copper	25.3	MG/KG		3100	N	nc	NA	nc	NA
MW15D	4	6	Copper	12.7	MG/KG		3100	N	nc	NA	nc	NA
CMS-4105	0	1	Copper	106	MG/KG		3100	N	nc	NA	nc	NA
CMS-4110	0	1	Copper	103	MG/KG		3100	N	nc	NA	nc	NA
CMS-060	0	1	Cyanide	0.51	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-089	0	1	Cyanide	0.51	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-098	0	1	Cyanide	0.91	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-118	0	1	Cyanide	0.54	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-142	0	1	Cyanide	0.87	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-159	0	1	Cyanide	1.6	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-164	0	1	Cyanide	1.5	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-173	0	1	Cyanide	1.7	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-405	0	1	Cyanide	0.53	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-407	0	1	Cyanide	0.53	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-408	0	1	Cyanide	0.52	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-142	0	1	Cyanide	0.83	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-060	0	1	Cyanide	0.53	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-060	1	2	Cyanide	0.51	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-118	1	2	Cyanide	0.56	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-173	1	2	Cyanide	0.78	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-405	1	2	Cyanide	0.96	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-407	1	2	Cyanide	0.66	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-408	1	2	Cyanide	0.66	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-423	1	2	Cyanide	0.53	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-060	2	3	Cyanide	0.55	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-089	2	3	Cyanide	0.53	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-118	2	3	Cyanide	0.66	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-237	2	3	Cyanide	0.96	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-405	2	3	Cyanide	0.97	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-407	2	3	Cyanide	0.84	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-408	2	3	Cyanide	0.65	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-417	2	3	Cyanide	0.59	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-060	3	4	Cyanide	0.68	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-089	3	4	Cyanide	0.53	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-118	3	4	Cyanide	0.76	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-405	3	4	Cyanide	0.57	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-407	3	4	Cyanide	0.64	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-417	3	4	Cyanide	0.57	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-419	3	4	Cyanide	0.64	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-423	3	4	Cyanide	0.6	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-060	4	5	Cyanide	0.58	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-118	4	5	Cyanide	0.65	MG/KG	U	200	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-405	4	5	Cyanide	0.69	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-456	0	1	Cyanide	0.75	MG/KG	UJ	200	NA	nc	NA	nc	NA
CMS-703	0	2	Cyanide	0.62	MG/KG	UJ	200	NA	nc	NA	nc	NA
BV01COMP	0	4	Cyanide	0.57	MG/KG	UJ	200	NA	nc	NA	nc	NA
CMS-428	1	2	Cyanide	0.54	MG/KG	UJ	200	NA	nc	NA	nc	NA
CMS-456	1	2	Cyanide	0.89	MG/KG	UJ	200	NA	nc	NA	nc	NA
CMS-455	2	3	Cyanide	0.6	MG/KG	UJ	200	NA	nc	NA	nc	NA
CMS-428	3	4	Cyanide	0.57	MG/KG	UJ	200	NA	nc	NA	nc	NA
CMS-455	4	5	Cyanide	0.72	MG/KG	UJ	200	NA	nc	NA	nc	NA
CMS-237	0	1	Cyanide	1.4	MG/KG		200	N	nc	NA	nc	NA
CMS-417	0	1	Cyanide	8.2	MG/KG		200	N	nc	NA	nc	NA
CMS-089	1	2	Cyanide	0.89	MG/KG		200	N	nc	NA	nc	NA
CMS-237	1	2	Cyanide	1.2	MG/KG		200	N	nc	NA	nc	NA
CMS-417	1	2	Cyanide	4.3	MG/KG		200	N	nc	NA	nc	NA
CMS-419	1	2	Cyanide	1.2	MG/KG		200	N	nc	NA	nc	NA
CMS-427	1	2	Cyanide	2.7	MG/KG		200	N	nc	NA	nc	NA
CMS-405	1	2	Cyanide	4.4	MG/KG		200	N	nc	NA	nc	NA
CMS-423	3	4	Cyanide	1.5	MG/KG		200	N	nc	NA	nc	NA
CMS-427	3	4	Cyanide	1	MG/KG		200	N	nc	NA	nc	NA
CMS-4105	0	1	Dibenz[a,h]anthracene	1.501632875	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-4110	0	1	Dibenz[a,h]anthracene	0.672809518	MG/KG	J	0.4	Y	nc	NA	nc	NA
SS-01	0	0	Dibenzo(a,h)anthracene	0.099	MG/KG	J	0.4	N	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Dibenzo(a,h)anthracene	0.39	MG/KG	J	0.4	N	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Dibenzo(a,h)anthracene	0.54	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Dibenzo(a,h)anthracene	0.18	MG/KG	J	0.4	N	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Dibenzo(a,h)anthracene	0.07	MG/KG	J	0.4	N	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Dibenzo(a,h)anthracene	0.64	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-060	0	1	Dibenzo(a,h)anthracene	0.12	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-089	0	1	Dibenzo(a,h)anthracene	0.35	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-118	0	1	Dibenzo(a,h)anthracene	0.14	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-237	0	1	Dibenzo(a,h)anthracene	0.19	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-405	0	1	Dibenzo(a,h)anthracene	0.25	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-456	0	1	Dibenzo(a,h)anthracene	0.32	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-060	0	1	Dibenzo(a,h)anthracene	0.23	MG/KG	J	0.4	N	nc	NA	nc	NA
RES-14-271-01	0	1	Dibenzo(a,h)anthracene	0.16	MG/KG	J	0.4	N	nc	NA	nc	NA
RES-14-333-01	0	1	Dibenzo(a,h)anthracene	0.76	MG/KG	J	0.4	Y	nc	NA	nc	NA
RES-14-271-01	0	1	Dibenzo(a,h)anthracene	0.29	MG/KG	J	0.4	N	nc	NA	nc	NA
SS-02	0	1.3	Dibenzo(a,h)anthracene	0.062	MG/KG	J	0.4	N	nc	NA	nc	NA
SS-06	0	2	Dibenzo(a,h)anthracene	0.16	MG/KG	J	0.4	N	nc	NA	nc	NA
BV01COMP	0	4	Dibenzo(a,h)anthracene	0.24	MG/KG	J	0.4	N	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Dibenzo(a,h)anthracene	0.59	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-089	1	2	Dibenzo(a,h)anthracene	0.12	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-118	1	2	Dibenzo(a,h)anthracene	0.2	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-405	1	2	Dibenzo(a,h)anthracene	1	MG/KG	J	0.4	Y	nc	NA	nc	NA
CMS-407	1	2	Dibenzo(a,h)anthracene	0.17	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-456	1	2	Dibenzo(a,h)anthracene	0.36	MG/KG	J	0.4	N	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Dibenzo(a,h)anthracene	0.22	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-237	2	3	Dibenzo(a,h)anthracene	0.25	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-407	2	3	Dibenzo(a,h)anthracene	0.28	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-455	2	3	Dibenzo(a,h)anthracene	0.15	MG/KG	J	0.4	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW05S	2	4	Dibenzo(a,h)anthracene	0.36	MG/KG	J	0.4	N	nc	NA	nc	NA
SB03	2	4	Dibenzo(a,h)anthracene	0.64	MG/KG	J	0.4	Y	nc	NA	nc	NA
MW07S	3	4	Dibenzo(a,h)anthracene	0.17	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-405	3	4	Dibenzo(a,h)anthracene	0.14	MG/KG	J	0.4	N	nc	NA	nc	NA
MW15D	4	6	Dibenzo(a,h)anthracene	0.22	MG/KG	J	0.4	N	nc	NA	nc	NA
MW01S	4	6	Dibenzo(a,h)anthracene	0.14	MG/KG	J	0.4	N	nc	NA	nc	NA
MW03S	4	6	Dibenzo(a,h)anthracene	0.052	MG/KG	J	0.4	N	nc	NA	nc	NA
MW09S	4	6	Dibenzo(a,h)anthracene	0.11	MG/KG	J	0.4	N	nc	NA	nc	NA
MW15D	4	6	Dibenzo(a,h)anthracene	0.045	MG/KG	J	0.4	N	nc	NA	nc	NA
CMS-098	0	1	Dibenzo(a,h)anthracene	0.6	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-142	0	1	Dibenzo(a,h)anthracene	0.58	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-173	0	1	Dibenzo(a,h)anthracene	1.1	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-408	0	1	Dibenzo(a,h)anthracene	0.34	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-417	0	1	Dibenzo(a,h)anthracene	35	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-142	0	1	Dibenzo(a,h)anthracene	0.55	MG/KG	U	0.4	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Dibenzo(a,h)anthracene	0.62	MG/KG	U	0.4	NA	nc	NA	nc	NA
RES-14-302-01	0	1	Dibenzo(a,h)anthracene	5	MG/KG	U	0.4	NA	nc	NA	nc	NA
RES-14-303-01	0	1	Dibenzo(a,h)anthracene	4.8	MG/KG	U	0.4	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Dibenzo(a,h)anthracene	3.1	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-703	0	2	Dibenzo(a,h)anthracene	6.2	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW05S	1	2	Dibenzo(a,h)anthracene	0.36	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW14M	1	2	Dibenzo(a,h)anthracene	0.34	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW14M	1	2	Dibenzo(a,h)anthracene	0.34	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW01S	1	2	Dibenzo(a,h)anthracene	0.38	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW05S	1	2	Dibenzo(a,h)anthracene	0.36	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW08S	1	2	Dibenzo(a,h)anthracene	0.42	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW14M	1	2	Dibenzo(a,h)anthracene	0.33	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW14M	1	2	Dibenzo(a,h)anthracene	0.33	MG/KG	U	0.4	NA	nc	NA	nc	NA
SB-14-271	1	2	Dibenzo(a,h)anthracene	0.4	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-173	1	2	Dibenzo(a,h)anthracene	0.52	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-237	1	2	Dibenzo(a,h)anthracene	0.83	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-417	1	2	Dibenzo(a,h)anthracene	35	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-419	1	2	Dibenzo(a,h)anthracene	74	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-423	1	2	Dibenzo(a,h)anthracene	0.35	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-427	1	2	Dibenzo(a,h)anthracene	3.6	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-428	1	2	Dibenzo(a,h)anthracene	0.35	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-089	2	3	Dibenzo(a,h)anthracene	0.7	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-405	2	3	Dibenzo(a,h)anthracene	0.64	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-417	2	3	Dibenzo(a,h)anthracene	9.8	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW08S	2	4	Dibenzo(a,h)anthracene	0.45	MG/KG	U	0.4	NA	nc	NA	nc	NA
SB02	2	4	Dibenzo(a,h)anthracene	2.3	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW01S	2	4	Dibenzo(a,h)anthracene	1.6	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW02S	2	4	Dibenzo(a,h)anthracene	0.38	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW06S	2	4	Dibenzo(a,h)anthracene	0.36	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW06S	2	4	Dibenzo(a,h)anthracene	0.37	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW08S	2	4	Dibenzo(a,h)anthracene	0.41	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW14M	2	4	Dibenzo(a,h)anthracene	0.38	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW15D	2	4	Dibenzo(a,h)anthracene	0.37	MG/KG	U	0.4	NA	nc	NA	nc	NA
SB-14-271	2	4	Dibenzo(a,h)anthracene	0.45	MG/KG	U	0.4	NA	nc	NA	nc	NA
SB02	2	4	Dibenzo(a,h)anthracene	2.2	MG/KG	U	0.4	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
SS-03	2.5	3.5	Dibenzo(a,h)anthracene	0.4	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-407	3	4	Dibenzo(a,h)anthracene	0.42	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-417	3	4	Dibenzo(a,h)anthracene	1.9	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-419	3	4	Dibenzo(a,h)anthracene	0.42	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-423	3	4	Dibenzo(a,h)anthracene	0.37	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-427	3	4	Dibenzo(a,h)anthracene	0.41	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-428	3	4	Dibenzo(a,h)anthracene	0.37	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-423	3	4	Dibenzo(a,h)anthracene	0.39	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-405	4	5	Dibenzo(a,h)anthracene	0.46	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-455	4	5	Dibenzo(a,h)anthracene	0.48	MG/KG	U	0.4	NA	nc	NA	nc	NA
SB03	4	6	Dibenzo(a,h)anthracene	0.37	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW04D	4	6	Dibenzo(a,h)anthracene	0.42	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW05S	4	6	Dibenzo(a,h)anthracene	0.82	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW06S	4	6	Dibenzo(a,h)anthracene	0.46	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW07S	4	6	Dibenzo(a,h)anthracene	0.4	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW08S	4	6	Dibenzo(a,h)anthracene	0.45	MG/KG	U	0.4	NA	nc	NA	nc	NA
SB-14-271	4	6	Dibenzo(a,h)anthracene	0.4	MG/KG	U	0.4	NA	nc	NA	nc	NA
SB02	4	6	Dibenzo(a,h)anthracene	0.83	MG/KG	U	0.4	NA	nc	NA	nc	NA
SB03	4	6	Dibenzo(a,h)anthracene	0.38	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-159	0	1	Dibenzo(a,h)anthracene	2.2	MG/KG	UJ	0.4	NA	nc	NA	nc	NA
CMS-164	0	1	Dibenzo(a,h)anthracene	2	MG/KG	UJ	0.4	NA	nc	NA	nc	NA
CMS-407	0	1	Dibenzo(a,h)anthracene	0.35	MG/KG	UJ	0.4	NA	nc	NA	nc	NA
CMS-060	1	2	Dibenzo(a,h)anthracene	0.34	MG/KG	UJ	0.4	NA	nc	NA	nc	NA
CMS-408	1	2	Dibenzo(a,h)anthracene	8.7	MG/KG	UJ	0.4	NA	nc	NA	nc	NA
CMS-405	1	2	Dibenzo(a,h)anthracene	1.2	MG/KG	UJ	0.4	NA	nc	NA	nc	NA
CMS-060	2	3	Dibenzo(a,h)anthracene	0.36	MG/KG	UJ	0.4	NA	nc	NA	nc	NA
CMS-118	2	3	Dibenzo(a,h)anthracene	0.44	MG/KG	UJ	0.4	NA	nc	NA	nc	NA
CMS-408	2	3	Dibenzo(a,h)anthracene	0.43	MG/KG	UJ	0.4	NA	nc	NA	nc	NA
CMS-060	3	4	Dibenzo(a,h)anthracene	0.45	MG/KG	UJ	0.4	NA	nc	NA	nc	NA
CMS-089	3	4	Dibenzo(a,h)anthracene	1.8	MG/KG	UJ	0.4	NA	nc	NA	nc	NA
CMS-118	3	4	Dibenzo(a,h)anthracene	0.5	MG/KG	UJ	0.4	NA	nc	NA	nc	NA
CMS-060	4	5	Dibenzo(a,h)anthracene	0.38	MG/KG	UJ	0.4	NA	nc	NA	nc	NA
CMS-118	4	5	Dibenzo(a,h)anthracene	0.43	MG/KG	UJ	0.4	NA	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Dibenzo(a,h)anthracene	2.2	MG/KG		0.4	Y	nc	NA	nc	NA
CMS-089	0	1	Dibromochloromethane	0.005	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-098	0	1	Dibromochloromethane	0.0097	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-118	0	1	Dibromochloromethane	0.0048	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-142	0	1	Dibromochloromethane	0.0095	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-159	0	1	Dibromochloromethane	0.021	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-173	0	1	Dibromochloromethane	0.024	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-407	0	1	Dibromochloromethane	0.005	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-408	0	1	Dibromochloromethane	0.0043	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-417	0	1	Dibromochloromethane	59	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-456	0	1	Dibromochloromethane	0.0075	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-702	0	1	Dibromochloromethane	0.0087	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-703	0	1	Dibromochloromethane	0.0061	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-142	0	1	Dibromochloromethane	0.011	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-060	0	1	Dibromochloromethane	2.7	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-065	0	10	Dibromochloromethane	0.79	MG/KG	U	7.6	NA	nc	NA	nc	NA
MW05S	1	2	Dibromochloromethane	0.095	MG/KG	U	7.6	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW01S	1	2	Dibromochloromethane	0.34	MG/KG	U	7.6	NA	nc	NA	nc	NA
MW05S	1	2	Dibromochloromethane	0.11	MG/KG	U	7.6	NA	nc	NA	nc	NA
MW08S	1	2	Dibromochloromethane	0.26	MG/KG	U	7.6	NA	nc	NA	nc	NA
MW14M	1	2	Dibromochloromethane	0.11	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-089	1	2	Dibromochloromethane	0.0048	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-118	1	2	Dibromochloromethane	0.006	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-173	1	2	Dibromochloromethane	0.0083	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-407	1	2	Dibromochloromethane	0.0074	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-408	1	2	Dibromochloromethane	2.2	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-417	1	2	Dibromochloromethane	130	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-419	1	2	Dibromochloromethane	28	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-423	1	2	Dibromochloromethane	0.0062	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-427	1	2	Dibromochloromethane	0.0045	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-428	1	2	Dibromochloromethane	0.0054	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-456	1	2	Dibromochloromethane	0.0089	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-060	2	3	Dibromochloromethane	0.27	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-089	2	3	Dibromochloromethane	0.0047	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-118	2	3	Dibromochloromethane	0.0074	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-407	2	3	Dibromochloromethane	0.0087	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-408	2	3	Dibromochloromethane	6.6	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-417	2	3	Dibromochloromethane	17	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-455	2	3	Dibromochloromethane	0.33	MG/KG	U	7.6	NA	nc	NA	nc	NA
MW08S	2	4	Dibromochloromethane	0.21	MG/KG	U	7.6	NA	nc	NA	nc	NA
MW01S	2	4	Dibromochloromethane	0.22	MG/KG	U	7.6	NA	nc	NA	nc	NA
MW02S	2	4	Dibromochloromethane	0.2	MG/KG	U	7.6	NA	nc	NA	nc	NA
MW04D	2	4	Dibromochloromethane	0.5	MG/KG	U	7.6	NA	nc	NA	nc	NA
MW05S	2	4	Dibromochloromethane	0.1	MG/KG	U	7.6	NA	nc	NA	nc	NA
MW06S	2	4	Dibromochloromethane	0.3	MG/KG	U	7.6	NA	nc	NA	nc	NA
MW06S	2	4	Dibromochloromethane	0.3	MG/KG	U	7.6	NA	nc	NA	nc	NA
MW08S	2	4	Dibromochloromethane	0.32	MG/KG	U	7.6	NA	nc	NA	nc	NA
MW14M	2	4	Dibromochloromethane	0.14	MG/KG	U	7.6	NA	nc	NA	nc	NA
MW15D	2	4	Dibromochloromethane	0.14	MG/KG	U	7.6	NA	nc	NA	nc	NA
SB02	2	4	Dibromochloromethane	0.38	MG/KG	U	7.6	NA	nc	NA	nc	NA
SB03	2	4	Dibromochloromethane	0.3	MG/KG	U	7.6	NA	nc	NA	nc	NA
MW07S	3	4	Dibromochloromethane	0.5	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-060	3	4	Dibromochloromethane	0.0058	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-089	3	4	Dibromochloromethane	0.0041	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-407	3	4	Dibromochloromethane	0.32	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-419	3	4	Dibromochloromethane	0.32	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-423	3	4	Dibromochloromethane	0.0045	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-427	3	4	Dibromochloromethane	0.0054	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-428	3	4	Dibromochloromethane	0.0057	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-423	3	4	Dibromochloromethane	0.0049	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-060	4	5	Dibromochloromethane	0.0048	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-118	4	5	Dibromochloromethane	0.0059	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-405	4	5	Dibromochloromethane	1	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-455	4	5	Dibromochloromethane	0.0072	MG/KG	U	7.6	NA	nc	NA	nc	NA
MW15D	4	6	Dibromochloromethane	0.1	MG/KG	U	7.6	NA	nc	NA	nc	NA
MW02S	4	6	Dibromochloromethane	0.55	MG/KG	U	7.6	NA	nc	NA	nc	NA
SB03	4	6	Dibromochloromethane	0.2	MG/KG	U	7.6	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW01S	4	6	Dibromochloromethane	0.24	MG/KG	U	7.6	NA	nc	NA	nc	NA
MW02S	4	6	Dibromochloromethane	0.42	MG/KG	U	7.6	NA	nc	NA	nc	NA
MW03S	4	6	Dibromochloromethane	0.35	MG/KG	U	7.6	NA	nc	NA	nc	NA
MW04D	4	6	Dibromochloromethane	0.18	MG/KG	U	7.6	NA	nc	NA	nc	NA
MW06S	4	6	Dibromochloromethane	0.43	MG/KG	U	7.6	NA	nc	NA	nc	NA
MW07S	4	6	Dibromochloromethane	0.26	MG/KG	U	7.6	NA	nc	NA	nc	NA
MW08S	4	6	Dibromochloromethane	0.3	MG/KG	U	7.6	NA	nc	NA	nc	NA
MW09S	4	6	Dibromochloromethane	0.26	MG/KG	U	7.6	NA	nc	NA	nc	NA
MW15D	4	6	Dibromochloromethane	0.12	MG/KG	U	7.6	NA	nc	NA	nc	NA
SB02	4	6	Dibromochloromethane	0.26	MG/KG	U	7.6	NA	nc	NA	nc	NA
SB03	4	6	Dibromochloromethane	0.18	MG/KG	U	7.6	NA	nc	NA	nc	NA
CMS-164	0	1	Dibromochloromethane	0.015	MG/KG	UJ	7.6	NA	nc	NA	nc	NA
CMS-237	0	1	Dibromochloromethane	0.0059	MG/KG	UJ	7.6	NA	nc	NA	nc	NA
MW14M	1	2	Dibromochloromethane	0.15	MG/KG	UJ	7.6	NA	nc	NA	nc	NA
SB-14-271	1	2	Dibromochloromethane	0.12	MG/KG	UJ	7.6	NA	nc	NA	nc	NA
CMS-060	1	2	Dibromochloromethane	5.1	MG/KG	UJ	7.6	NA	nc	NA	nc	NA
CMS-237	1	2	Dibromochloromethane	0.0069	MG/KG	UJ	7.6	NA	nc	NA	nc	NA
CMS-405	1	2	Dibromochloromethane	4	MG/KG	UJ	7.6	NA	nc	NA	nc	NA
CMS-405	1	2	Dibromochloromethane	2.9	MG/KG	UJ	7.6	NA	nc	NA	nc	NA
SB-14-271	2	4	Dibromochloromethane	0.13	MG/KG	UJ	7.6	NA	nc	NA	nc	NA
CMS-118	3	4	Dibromochloromethane	0.0084	MG/KG	UJ	7.6	NA	nc	NA	nc	NA
CMS-417	3	4	Dibromochloromethane	0.28	MG/KG	UJ	7.6	NA	nc	NA	nc	NA
MW05S	4	6	Dibromochloromethane	0.11	MG/KG	UJ	7.6	NA	nc	NA	nc	NA
SB-14-271	4	6	Dibromochloromethane	0.11	MG/KG	UJ	7.6	NA	nc	NA	nc	NA
SB02	2	4	Dieldrin	0.2	MG/KG	*EB	0.04	Y	nc	NA	nc	NA
SB02	4	6	Dieldrin	0.096	MG/KG	*EB	0.04	Y	nc	NA	nc	NA
MW06S	2	4	Dieldrin	0.26	MG/KG	*J	0.04	Y	nc	NA	nc	NA
MW06S	2	4	Dieldrin	0.52	MG/KG	*J	0.04	Y	nc	NA	nc	NA
SS-02	0	1.3	Dieldrin	0.14	MG/KG	*J, E	0.04	Y	nc	NA	nc	NA
MW14M	1	2	Dieldrin	0.072	MG/KG	DP	0.04	Y	nc	NA	nc	NA
MW14M	1	2	Dieldrin	0.089	MG/KG	DP	0.04	Y	nc	NA	nc	NA
SB02	2	4	Dieldrin	0.089	MG/KG	EB	0.04	Y	nc	NA	nc	NA
CMS-060	0	1	Dieldrin	0.042	MG/KG	J	0.04	Y	nc	NA	nc	NA
CMS-089	0	1	Dieldrin	0.027	MG/KG	J	0.04	N	nc	NA	nc	NA
CMS-098	0	1	Dieldrin	0.013	MG/KG	J	0.04	N	nc	NA	nc	NA
CMS-118	0	1	Dieldrin	0.006	MG/KG	J	0.04	N	nc	NA	nc	NA
CMS-159	0	1	Dieldrin	0.0097	MG/KG	J	0.04	N	nc	NA	nc	NA
CMS-164	0	1	Dieldrin	0.32	MG/KG	J	0.04	Y	nc	NA	nc	NA
CMS-237	0	1	Dieldrin	0.14	MG/KG	J	0.04	Y	nc	NA	nc	NA
CMS-417	0	1	Dieldrin	1.9	MG/KG	J	0.04	Y	nc	NA	nc	NA
CMS-142	0	1	Dieldrin	0.081	MG/KG	J	0.04	Y	nc	NA	nc	NA
CMS-060	1	2	Dieldrin	0.0035	MG/KG	J	0.04	N	nc	NA	nc	NA
CMS-118	1	2	Dieldrin	0.022	MG/KG	J	0.04	N	nc	NA	nc	NA
CMS-237	1	2	Dieldrin	0.091	MG/KG	J	0.04	Y	nc	NA	nc	NA
CMS-417	1	2	Dieldrin	9.9	MG/KG	J	0.04	Y	nc	NA	nc	NA
CMS-419	1	2	Dieldrin	0.022	MG/KG	J	0.04	N	nc	NA	nc	NA
CMS-423	1	2	Dieldrin	0.0042	MG/KG	J	0.04	N	nc	NA	nc	NA
CMS-427	1	2	Dieldrin	0.059	MG/KG	J	0.04	Y	nc	NA	nc	NA
CMS-089	2	3	Dieldrin	0.031	MG/KG	J	0.04	N	nc	NA	nc	NA
CMS-118	2	3	Dieldrin	0.097	MG/KG	J	0.04	Y	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-417	2	3	Dieldrin	2.5	MG/KG	J	0.04	Y	nc	NA	nc	NA
MW08S	2	4	Dieldrin	0.0024	MG/KG	J	0.04	N	nc	NA	nc	NA
MW08S	2	4	Dieldrin	0.0019	MG/KG	J	0.04	N	nc	NA	nc	NA
MW14M	2	4	Dieldrin	0.00095	MG/KG	J	0.04	N	nc	NA	nc	NA
MW07S	3	4	Dieldrin	0.0029	MG/KG	J	0.04	N	nc	NA	nc	NA
CMS-089	3	4	Dieldrin	0.032	MG/KG	J	0.04	N	nc	NA	nc	NA
CMS-118	3	4	Dieldrin	0.027	MG/KG	J	0.04	N	nc	NA	nc	NA
CMS-423	3	4	Dieldrin	0.041	MG/KG	J	0.04	Y	nc	NA	nc	NA
CMS-427	3	4	Dieldrin	0.33	MG/KG	J	0.04	Y	nc	NA	nc	NA
CMS-423	3	4	Dieldrin	0.0056	MG/KG	J	0.04	N	nc	NA	nc	NA
CMS-118	4	5	Dieldrin	0.0015	MG/KG	J	0.04	N	nc	NA	nc	NA
MW03S	4	6	Dieldrin	0.0025	MG/KG	J	0.04	N	nc	NA	nc	NA
MW06S	4	6	Dieldrin	0.065	MG/KG	J	0.04	Y	nc	NA	nc	NA
CMS-4105	0	1	Dieldrin	0.151126711	MG/KG	J	0.04	Y	nc	NA	nc	NA
CMS-4110	0	1	Dieldrin	0.054304132	MG/KG	J	0.04	Y	nc	NA	nc	NA
SD-30	0	0.5	Dieldrin	0.027	MG/KG	J, EB	0.04	N	nc	NA	nc	NA
SS-03	2.5	3.5	Dieldrin	0.0024	MG/KG	J, EB	0.04	N	nc	NA	nc	NA
MW02S	2	4	Dieldrin	0.002	MG/KG	JEB	0.04	N	nc	NA	nc	NA
SB03	2	4	Dieldrin	0.0016	MG/KG	JEB	0.04	N	nc	NA	nc	NA
SB03	4	6	Dieldrin	0.00021	MG/KG	JEB	0.04	N	nc	NA	nc	NA
SB03	4	6	Dieldrin	0.00029	MG/KG	JEB	0.04	N	nc	NA	nc	NA
MW14M	1	2	Dieldrin	0.078	MG/KG	PE	0.04	Y	nc	NA	nc	NA
MW14M	1	2	Dieldrin	0.09	MG/KG	PE	0.04	Y	nc	NA	nc	NA
SS-01	0	0	Dieldrin	0.0043	MG/KG	U	0.04	NA	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Dieldrin	0.004	MG/KG	U	0.04	NA	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Dieldrin	0.0044	MG/KG	U	0.04	NA	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Dieldrin	0.0042	MG/KG	U	0.04	NA	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Dieldrin	0.0044	MG/KG	U	0.04	NA	nc	NA	nc	NA
SD-31	0	0.5	Dieldrin	0.0039	MG/KG	U	0.04	NA	nc	NA	nc	NA
CMS-173	0	1	Dieldrin	0.22	MG/KG	U	0.04	NA	nc	NA	nc	NA
CMS-405	0	1	Dieldrin	0.014	MG/KG	U	0.04	NA	nc	NA	nc	NA
CMS-407	0	1	Dieldrin	0.0036	MG/KG	U	0.04	NA	nc	NA	nc	NA
CMS-408	0	1	Dieldrin	0.035	MG/KG	U	0.04	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Dieldrin	0.0052	MG/KG	U	0.04	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Dieldrin	0.0062	MG/KG	U	0.04	NA	nc	NA	nc	NA
RES-14-303-01	0	1	Dieldrin	0.097	MG/KG	U	0.04	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Dieldrin	0.0051	MG/KG	U	0.04	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Dieldrin	0.0061	MG/KG	U	0.04	NA	nc	NA	nc	NA
CMS-703	0	2	Dieldrin	0.21	MG/KG	U	0.04	NA	nc	NA	nc	NA
BV01COMP	0	4	Dieldrin	0.019	MG/KG	U	0.04	NA	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Dieldrin	0.0046	MG/KG	U	0.04	NA	nc	NA	nc	NA
MW05S	1	2	Dieldrin	0.0036	MG/KG	U	0.04	NA	nc	NA	nc	NA
MW05S	1	2	Dieldrin	0.0036	MG/KG	U	0.04	NA	nc	NA	nc	NA
CMS-173	1	2	Dieldrin	0.0053	MG/KG	U	0.04	NA	nc	NA	nc	NA
CMS-405	1	2	Dieldrin	0.65	MG/KG	U	0.04	NA	nc	NA	nc	NA
CMS-407	1	2	Dieldrin	0.45	MG/KG	U	0.04	NA	nc	NA	nc	NA
CMS-408	1	2	Dieldrin	0.45	MG/KG	U	0.04	NA	nc	NA	nc	NA
CMS-428	1	2	Dieldrin	0.0018	MG/KG	U	0.04	NA	nc	NA	nc	NA
CMS-405	1	2	Dieldrin	0.64	MG/KG	U	0.04	NA	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Dieldrin	0.0043	MG/KG	U	0.04	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-060	2	3	Dieldrin	0.0019	MG/KG	U	0.04	NA	nc	NA	nc	NA
CMS-237	2	3	Dieldrin	0.65	MG/KG	U	0.04	NA	nc	NA	nc	NA
CMS-405	2	3	Dieldrin	0.066	MG/KG	U	0.04	NA	nc	NA	nc	NA
CMS-407	2	3	Dieldrin	0.57	MG/KG	U	0.04	NA	nc	NA	nc	NA
CMS-408	2	3	Dieldrin	0.44	MG/KG	U	0.04	NA	nc	NA	nc	NA
MW05S	2	4	Dieldrin	0.0038	MG/KG	U	0.04	NA	nc	NA	nc	NA
MW15D	2	4	Dieldrin	0.0037	MG/KG	U	0.04	NA	nc	NA	nc	NA
SB-14-271	2	4	Dieldrin	0.0044	MG/KG	U	0.04	NA	nc	NA	nc	NA
CMS-060	3	4	Dieldrin	0.0023	MG/KG	U	0.04	NA	nc	NA	nc	NA
CMS-405	3	4	Dieldrin	0.058	MG/KG	U	0.04	NA	nc	NA	nc	NA
CMS-407	3	4	Dieldrin	0.44	MG/KG	U	0.04	NA	nc	NA	nc	NA
CMS-417	3	4	Dieldrin	3.9	MG/KG	U	0.04	NA	nc	NA	nc	NA
CMS-428	3	4	Dieldrin	0.0019	MG/KG	U	0.04	NA	nc	NA	nc	NA
CMS-060	4	5	Dieldrin	0.002	MG/KG	U	0.04	NA	nc	NA	nc	NA
CMS-405	4	5	Dieldrin	0.47	MG/KG	U	0.04	NA	nc	NA	nc	NA
MW15D	4	6	Dieldrin	0.004	MG/KG	U	0.04	NA	nc	NA	nc	NA
MW05S	4	6	Dieldrin	0.41	MG/KG	U	0.04	NA	nc	NA	nc	NA
MW07S	4	6	Dieldrin	0.004	MG/KG	U	0.04	NA	nc	NA	nc	NA
MW08S	4	6	Dieldrin	0.0044	MG/KG	U	0.04	NA	nc	NA	nc	NA
MW15D	4	6	Dieldrin	0.0035	MG/KG	U	0.04	NA	nc	NA	nc	NA
SB-14-271	4	6	Dieldrin	0.0039	MG/KG	U	0.04	NA	nc	NA	nc	NA
CMS-455	4	5	Dieldrin	0.049	MG/KG	UJ	0.04	NA	nc	NA	nc	NA
MW04D	4	6	Dieldrin	0.0043	MG/KG	UJ	0.04	NA	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Dieldrin	0.016	MG/KG		0.04	N	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Dieldrin	0.0072	MG/KG		0.04	N	nc	NA	nc	NA
CMS-142	0	1	Dieldrin	0.071	MG/KG		0.04	Y	nc	NA	nc	NA
CMS-060	0	1	Dieldrin	0.16	MG/KG		0.04	Y	nc	NA	nc	NA
RES-14-302-01	0	1	Dieldrin	0.016	MG/KG		0.04	N	nc	NA	nc	NA
MW01S	1	2	Dieldrin	0.0048	MG/KG		0.04	N	nc	NA	nc	NA
MW08S	1	2	Dieldrin	0.02	MG/KG		0.04	N	nc	NA	nc	NA
SB-14-271	1	2	Dieldrin	0.0083	MG/KG		0.04	N	nc	NA	nc	NA
CMS-089	1	2	Dieldrin	0.4	MG/KG		0.04	Y	nc	NA	nc	NA
CMS-456	1	2	Dieldrin	0.11	MG/KG		0.04	Y	nc	NA	nc	NA
CMS-455	2	3	Dieldrin	0.02	MG/KG		0.04	N	nc	NA	nc	NA
MW01S	2	4	Dieldrin	0.016	MG/KG		0.04	N	nc	NA	nc	NA
MW01S	4	6	Dieldrin	0.0046	MG/KG		0.04	N	nc	NA	nc	NA
MW09S	4	6	Dieldrin	0.0088	MG/KG		0.04	N	nc	NA	nc	NA
CMS-118	0	1	Diethylphthalate	0.057	MG/KG	J	340	N	nc	NA	nc	NA
CMS-164	0	1	Diethylphthalate	0.17	MG/KG	J	340	N	nc	NA	nc	NA
CMS-237	0	1	Diethylphthalate	0.4	MG/KG	J	340	N	nc	NA	nc	NA
CMS-405	1	2	Diethylphthalate	0.14	MG/KG	J	340	N	nc	NA	nc	NA
CMS-405	1	2	Diethylphthalate	0.18	MG/KG	J	340	N	nc	NA	nc	NA
SS-01	0	0	Diethylphthalate	0.43	MG/KG	U	340	NA	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Diethylphthalate	0.8	MG/KG	U	340	NA	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Diethylphthalate	0.87	MG/KG	U	340	NA	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Diethylphthalate	2.1	MG/KG	U	340	NA	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Diethylphthalate	0.95	MG/KG	U	340	NA	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Diethylphthalate	0.46	MG/KG	U	340	NA	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Diethylphthalate	2.1	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-089	0	1	Diethylphthalate	0.67	MG/KG	U	340	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-098	0	1	Diethylphthalate	0.6	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-142	0	1	Diethylphthalate	0.58	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-173	0	1	Diethylphthalate	1.1	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-405	0	1	Diethylphthalate	0.35	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-407	0	1	Diethylphthalate	0.35	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-408	0	1	Diethylphthalate	0.34	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-417	0	1	Diethylphthalate	35	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-456	0	1	Diethylphthalate	0.49	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-142	0	1	Diethylphthalate	0.55	MG/KG	U	340	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Diethylphthalate	0.51	MG/KG	U	340	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Diethylphthalate	0.62	MG/KG	U	340	NA	nc	NA	nc	NA
RES-14-302-01	0	1	Diethylphthalate	5	MG/KG	U	340	NA	nc	NA	nc	NA
RES-14-303-01	0	1	Diethylphthalate	4.8	MG/KG	U	340	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Diethylphthalate	2.5	MG/KG	U	340	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Diethylphthalate	3.1	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-703	0	2	Diethylphthalate	6.2	MG/KG	U	340	NA	nc	NA	nc	NA
SS-06	0	2	Diethylphthalate	0.84	MG/KG	U	340	NA	nc	NA	nc	NA
BV01COMP	0	4	Diethylphthalate	0.38	MG/KG	U	340	NA	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Diethylphthalate	4.2	MG/KG	U	340	NA	nc	NA	nc	NA
MW05S	1	2	Diethylphthalate	0.36	MG/KG	U	340	NA	nc	NA	nc	NA
MW14M	1	2	Diethylphthalate	0.34	MG/KG	U	340	NA	nc	NA	nc	NA
MW14M	1	2	Diethylphthalate	0.34	MG/KG	U	340	NA	nc	NA	nc	NA
MW01S	1	2	Diethylphthalate	0.38	MG/KG	U	340	NA	nc	NA	nc	NA
MW05S	1	2	Diethylphthalate	0.36	MG/KG	U	340	NA	nc	NA	nc	NA
MW08S	1	2	Diethylphthalate	0.42	MG/KG	U	340	NA	nc	NA	nc	NA
MW14M	1	2	Diethylphthalate	0.33	MG/KG	U	340	NA	nc	NA	nc	NA
MW14M	1	2	Diethylphthalate	0.33	MG/KG	U	340	NA	nc	NA	nc	NA
SB-14-271	1	2	Diethylphthalate	0.4	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-060	1	2	Diethylphthalate	0.34	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-089	1	2	Diethylphthalate	0.35	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-118	1	2	Diethylphthalate	0.37	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-173	1	2	Diethylphthalate	0.52	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-237	1	2	Diethylphthalate	0.83	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-407	1	2	Diethylphthalate	0.44	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-408	1	2	Diethylphthalate	8.7	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-417	1	2	Diethylphthalate	35	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-419	1	2	Diethylphthalate	74	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-423	1	2	Diethylphthalate	0.35	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-427	1	2	Diethylphthalate	3.6	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-428	1	2	Diethylphthalate	0.35	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-456	1	2	Diethylphthalate	1.2	MG/KG	U	340	NA	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Diethylphthalate	0.86	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-060	2	3	Diethylphthalate	0.36	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-089	2	3	Diethylphthalate	0.7	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-118	2	3	Diethylphthalate	0.44	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-237	2	3	Diethylphthalate	0.63	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-405	2	3	Diethylphthalate	0.64	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-407	2	3	Diethylphthalate	1.1	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-408	2	3	Diethylphthalate	0.43	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-417	2	3	Diethylphthalate	9.8	MG/KG	U	340	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-455	2	3	Diethylphthalate	0.4	MG/KG	U	340	NA	nc	NA	nc	NA
MW08S	2	4	Diethylphthalate	0.45	MG/KG	U	340	NA	nc	NA	nc	NA
SB02	2	4	Diethylphthalate	2.3	MG/KG	U	340	NA	nc	NA	nc	NA
MW01S	2	4	Diethylphthalate	1.6	MG/KG	U	340	NA	nc	NA	nc	NA
MW02S	2	4	Diethylphthalate	0.38	MG/KG	U	340	NA	nc	NA	nc	NA
MW06S	2	4	Diethylphthalate	0.36	MG/KG	U	340	NA	nc	NA	nc	NA
MW06S	2	4	Diethylphthalate	0.37	MG/KG	U	340	NA	nc	NA	nc	NA
MW08S	2	4	Diethylphthalate	0.41	MG/KG	U	340	NA	nc	NA	nc	NA
MW14M	2	4	Diethylphthalate	0.38	MG/KG	U	340	NA	nc	NA	nc	NA
MW15D	2	4	Diethylphthalate	0.37	MG/KG	U	340	NA	nc	NA	nc	NA
SB-14-271	2	4	Diethylphthalate	0.45	MG/KG	U	340	NA	nc	NA	nc	NA
SB02	2	4	Diethylphthalate	2.2	MG/KG	U	340	NA	nc	NA	nc	NA
SB03	2	4	Diethylphthalate	0.99	MG/KG	U	340	NA	nc	NA	nc	NA
SS-03	2.5	3.5	Diethylphthalate	0.4	MG/KG	U	340	NA	nc	NA	nc	NA
MW07S	3	4	Diethylphthalate	0.38	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-060	3	4	Diethylphthalate	0.45	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-089	3	4	Diethylphthalate	1.8	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-118	3	4	Diethylphthalate	0.5	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-407	3	4	Diethylphthalate	0.42	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-417	3	4	Diethylphthalate	1.9	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-419	3	4	Diethylphthalate	0.42	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-423	3	4	Diethylphthalate	0.37	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-427	3	4	Diethylphthalate	0.41	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-428	3	4	Diethylphthalate	0.37	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-423	3	4	Diethylphthalate	0.39	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-118	4	5	Diethylphthalate	0.43	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-405	4	5	Diethylphthalate	0.46	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-455	4	5	Diethylphthalate	0.48	MG/KG	U	340	NA	nc	NA	nc	NA
SB03	4	6	Diethylphthalate	0.37	MG/KG	U	340	NA	nc	NA	nc	NA
MW15D	4	6	Diethylphthalate	0.4	MG/KG	U	340	NA	nc	NA	nc	NA
MW01S	4	6	Diethylphthalate	0.4	MG/KG	U	340	NA	nc	NA	nc	NA
MW03S	4	6	Diethylphthalate	0.4	MG/KG	U	340	NA	nc	NA	nc	NA
MW04D	4	6	Diethylphthalate	0.42	MG/KG	U	340	NA	nc	NA	nc	NA
MW05S	4	6	Diethylphthalate	0.82	MG/KG	U	340	NA	nc	NA	nc	NA
MW06S	4	6	Diethylphthalate	0.46	MG/KG	U	340	NA	nc	NA	nc	NA
MW07S	4	6	Diethylphthalate	0.4	MG/KG	U	340	NA	nc	NA	nc	NA
MW08S	4	6	Diethylphthalate	0.45	MG/KG	U	340	NA	nc	NA	nc	NA
MW09S	4	6	Diethylphthalate	0.85	MG/KG	U	340	NA	nc	NA	nc	NA
MW15D	4	6	Diethylphthalate	0.35	MG/KG	U	340	NA	nc	NA	nc	NA
SB-14-271	4	6	Diethylphthalate	0.4	MG/KG	U	340	NA	nc	NA	nc	NA
SB02	4	6	Diethylphthalate	0.83	MG/KG	U	340	NA	nc	NA	nc	NA
SB03	4	6	Diethylphthalate	0.38	MG/KG	U	340	NA	nc	NA	nc	NA
CMS-060	0	1	Diethylphthalate	0.34	MG/KG	UJ	340	NA	nc	NA	nc	NA
CMS-159	0	1	Diethylphthalate	2.2	MG/KG	UJ	340	NA	nc	NA	nc	NA
CMS-060	0	1	Diethylphthalate	0.35	MG/KG	UJ	340	NA	nc	NA	nc	NA
MW05S	2	4	Diethylphthalate	0.37	MG/KG	UJ	340	NA	nc	NA	nc	NA
CMS-060	4	5	Diethylphthalate	0.38	MG/KG	UJ	340	NA	nc	NA	nc	NA
SS-02	0	1.3	Diethylphthalate	1.8	MG/KG		340	N	nc	NA	nc	NA
CMS-405	3	4	Diethylphthalate	3.2	MG/KG		340	N	nc	NA	nc	NA
SS-01	0	0	Dimethylphthalate	0.43	MG/KG	U	1900	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMW-SD-2016	0	0.5	Dimethylphthalate	0.8	MG/KG	U	1900	NA	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Dimethylphthalate	0.87	MG/KG	U	1900	NA	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Dimethylphthalate	2.1	MG/KG	U	1900	NA	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Dimethylphthalate	0.95	MG/KG	U	1900	NA	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Dimethylphthalate	0.46	MG/KG	U	1900	NA	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Dimethylphthalate	2.1	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-089	0	1	Dimethylphthalate	0.67	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-098	0	1	Dimethylphthalate	0.6	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-142	0	1	Dimethylphthalate	0.58	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-164	0	1	Dimethylphthalate	2	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-173	0	1	Dimethylphthalate	1.1	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-237	0	1	Dimethylphthalate	1.3	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-405	0	1	Dimethylphthalate	0.35	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-407	0	1	Dimethylphthalate	0.35	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-408	0	1	Dimethylphthalate	0.34	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-417	0	1	Dimethylphthalate	35	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-456	0	1	Dimethylphthalate	0.49	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-142	0	1	Dimethylphthalate	0.55	MG/KG	U	1900	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Dimethylphthalate	0.51	MG/KG	U	1900	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Dimethylphthalate	0.62	MG/KG	U	1900	NA	nc	NA	nc	NA
RES-14-302-01	0	1	Dimethylphthalate	5	MG/KG	U	1900	NA	nc	NA	nc	NA
RES-14-303-01	0	1	Dimethylphthalate	4.8	MG/KG	U	1900	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Dimethylphthalate	2.5	MG/KG	U	1900	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Dimethylphthalate	3.1	MG/KG	U	1900	NA	nc	NA	nc	NA
SS-02	0	1.3	Dimethylphthalate	0.52	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-703	0	2	Dimethylphthalate	6.2	MG/KG	U	1900	NA	nc	NA	nc	NA
SS-06	0	2	Dimethylphthalate	0.84	MG/KG	U	1900	NA	nc	NA	nc	NA
BV01COMP	0	4	Dimethylphthalate	0.38	MG/KG	U	1900	NA	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Dimethylphthalate	4.2	MG/KG	U	1900	NA	nc	NA	nc	NA
MW05S	1	2	Dimethylphthalate	0.36	MG/KG	U	1900	NA	nc	NA	nc	NA
MW14M	1	2	Dimethylphthalate	0.34	MG/KG	U	1900	NA	nc	NA	nc	NA
MW14M	1	2	Dimethylphthalate	0.34	MG/KG	U	1900	NA	nc	NA	nc	NA
MW01S	1	2	Dimethylphthalate	0.38	MG/KG	U	1900	NA	nc	NA	nc	NA
MW05S	1	2	Dimethylphthalate	0.36	MG/KG	U	1900	NA	nc	NA	nc	NA
MW08S	1	2	Dimethylphthalate	0.42	MG/KG	U	1900	NA	nc	NA	nc	NA
MW14M	1	2	Dimethylphthalate	0.33	MG/KG	U	1900	NA	nc	NA	nc	NA
MW14M	1	2	Dimethylphthalate	0.33	MG/KG	U	1900	NA	nc	NA	nc	NA
SB-14-271	1	2	Dimethylphthalate	0.4	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-060	1	2	Dimethylphthalate	0.34	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-089	1	2	Dimethylphthalate	0.35	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-118	1	2	Dimethylphthalate	0.37	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-173	1	2	Dimethylphthalate	0.52	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-237	1	2	Dimethylphthalate	0.83	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-405	1	2	Dimethylphthalate	0.63	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-407	1	2	Dimethylphthalate	0.44	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-408	1	2	Dimethylphthalate	8.7	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-417	1	2	Dimethylphthalate	35	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-419	1	2	Dimethylphthalate	74	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-423	1	2	Dimethylphthalate	0.35	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-427	1	2	Dimethylphthalate	3.6	MG/KG	U	1900	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-428	1	2	Dimethylphthalate	0.35	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-456	1	2	Dimethylphthalate	1.2	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-405	1	2	Dimethylphthalate	1.2	MG/KG	U	1900	NA	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Dimethylphthalate	0.86	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-060	2	3	Dimethylphthalate	0.36	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-089	2	3	Dimethylphthalate	0.7	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-118	2	3	Dimethylphthalate	0.44	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-237	2	3	Dimethylphthalate	0.63	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-405	2	3	Dimethylphthalate	0.64	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-407	2	3	Dimethylphthalate	1.1	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-408	2	3	Dimethylphthalate	0.43	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-417	2	3	Dimethylphthalate	9.8	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-455	2	3	Dimethylphthalate	0.4	MG/KG	U	1900	NA	nc	NA	nc	NA
MW08S	2	4	Dimethylphthalate	0.45	MG/KG	U	1900	NA	nc	NA	nc	NA
SB02	2	4	Dimethylphthalate	2.3	MG/KG	U	1900	NA	nc	NA	nc	NA
MW01S	2	4	Dimethylphthalate	1.6	MG/KG	U	1900	NA	nc	NA	nc	NA
MW02S	2	4	Dimethylphthalate	0.38	MG/KG	U	1900	NA	nc	NA	nc	NA
MW06S	2	4	Dimethylphthalate	0.36	MG/KG	U	1900	NA	nc	NA	nc	NA
MW06S	2	4	Dimethylphthalate	0.37	MG/KG	U	1900	NA	nc	NA	nc	NA
MW08S	2	4	Dimethylphthalate	0.41	MG/KG	U	1900	NA	nc	NA	nc	NA
MW14M	2	4	Dimethylphthalate	0.38	MG/KG	U	1900	NA	nc	NA	nc	NA
MW15D	2	4	Dimethylphthalate	0.37	MG/KG	U	1900	NA	nc	NA	nc	NA
SB-14-271	2	4	Dimethylphthalate	0.45	MG/KG	U	1900	NA	nc	NA	nc	NA
SB02	2	4	Dimethylphthalate	2.2	MG/KG	U	1900	NA	nc	NA	nc	NA
SB03	2	4	Dimethylphthalate	0.99	MG/KG	U	1900	NA	nc	NA	nc	NA
SS-03	2.5	3.5	Dimethylphthalate	0.4	MG/KG	U	1900	NA	nc	NA	nc	NA
MW07S	3	4	Dimethylphthalate	0.38	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-060	3	4	Dimethylphthalate	0.45	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-089	3	4	Dimethylphthalate	1.8	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-118	3	4	Dimethylphthalate	0.5	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-405	3	4	Dimethylphthalate	0.38	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-407	3	4	Dimethylphthalate	0.42	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-417	3	4	Dimethylphthalate	1.9	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-419	3	4	Dimethylphthalate	0.42	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-423	3	4	Dimethylphthalate	0.37	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-427	3	4	Dimethylphthalate	0.41	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-428	3	4	Dimethylphthalate	0.37	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-423	3	4	Dimethylphthalate	0.39	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-118	4	5	Dimethylphthalate	0.43	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-405	4	5	Dimethylphthalate	0.46	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-455	4	5	Dimethylphthalate	0.48	MG/KG	U	1900	NA	nc	NA	nc	NA
SB03	4	6	Dimethylphthalate	0.37	MG/KG	U	1900	NA	nc	NA	nc	NA
MW15D	4	6	Dimethylphthalate	0.4	MG/KG	U	1900	NA	nc	NA	nc	NA
MW01S	4	6	Dimethylphthalate	0.4	MG/KG	U	1900	NA	nc	NA	nc	NA
MW03S	4	6	Dimethylphthalate	0.4	MG/KG	U	1900	NA	nc	NA	nc	NA
MW04D	4	6	Dimethylphthalate	0.42	MG/KG	U	1900	NA	nc	NA	nc	NA
MW05S	4	6	Dimethylphthalate	0.82	MG/KG	U	1900	NA	nc	NA	nc	NA
MW06S	4	6	Dimethylphthalate	0.46	MG/KG	U	1900	NA	nc	NA	nc	NA
MW07S	4	6	Dimethylphthalate	0.4	MG/KG	U	1900	NA	nc	NA	nc	NA
MW08S	4	6	Dimethylphthalate	0.45	MG/KG	U	1900	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW09S	4	6	Dimethylphthalate	0.85	MG/KG	U	1900	NA	nc	NA	nc	NA
MW15D	4	6	Dimethylphthalate	0.35	MG/KG	U	1900	NA	nc	NA	nc	NA
SB-14-271	4	6	Dimethylphthalate	0.4	MG/KG	U	1900	NA	nc	NA	nc	NA
SB02	4	6	Dimethylphthalate	0.83	MG/KG	U	1900	NA	nc	NA	nc	NA
SB03	4	6	Dimethylphthalate	0.38	MG/KG	U	1900	NA	nc	NA	nc	NA
CMS-060	0	1	Dimethylphthalate	0.34	MG/KG	UJ	1900	NA	nc	NA	nc	NA
CMS-118	0	1	Dimethylphthalate	0.36	MG/KG	UJ	1900	NA	nc	NA	nc	NA
CMS-159	0	1	Dimethylphthalate	2.2	MG/KG	UJ	1900	NA	nc	NA	nc	NA
CMS-060	0	1	Dimethylphthalate	0.35	MG/KG	UJ	1900	NA	nc	NA	nc	NA
MW05S	2	4	Dimethylphthalate	0.37	MG/KG	UJ	1900	NA	nc	NA	nc	NA
CMS-060	4	5	Dimethylphthalate	0.38	MG/KG	UJ	1900	NA	nc	NA	nc	NA
CMS-417	0	1	Ethylbenzene	35	MG/KG	J	71	N	27	Y	nc	NA
MW14M	1	2	Ethylbenzene	0.18	MG/KG	J	71	N	27	N	nc	NA
CMS-237	1	2	Ethylbenzene	0.0086	MG/KG	J	71	N	27	N	nc	NA
CMS-405	1	2	Ethylbenzene	11	MG/KG	J	71	N	27	N	nc	NA
CMS-407	1	2	Ethylbenzene	0.14	MG/KG	J	71	N	27	N	nc	NA
CMS-417	1	2	Ethylbenzene	81	MG/KG	J	71	Y	27	Y	nc	NA
CMS-427	1	2	Ethylbenzene	0.0028	MG/KG	J	71	N	27	N	nc	NA
CMS-456	1	2	Ethylbenzene	0.0029	MG/KG	J	71	N	27	N	nc	NA
CMS-405	1	2	Ethylbenzene	1.5	MG/KG	J	71	N	27	N	nc	NA
CMS-237	2	3	Ethylbenzene	0.0048	MG/KG	J	71	N	27	N	nc	NA
CMS-407	2	3	Ethylbenzene	0.029	MG/KG	J	71	N	27	N	nc	NA
CMS-417	2	3	Ethylbenzene	5.2	MG/KG	J	71	N	27	N	nc	NA
MW07S	3	4	Ethylbenzene	0.25	MG/KG	J	71	N	27	N	nc	NA
CMS-417	3	4	Ethylbenzene	0.21	MG/KG	J	71	N	27	N	nc	NA
CMS-419	3	4	Ethylbenzene	0.14	MG/KG	J	71	N	27	N	nc	NA
MW05S	4	6	Ethylbenzene	0.15	MG/KG	J	71	N	27	N	nc	NA
CMS-089	0	1	Ethylbenzene	0.005	MG/KG	U	71	NA	27	NA	nc	NA
CMS-118	0	1	Ethylbenzene	0.0048	MG/KG	U	71	NA	27	NA	nc	NA
CMS-159	0	1	Ethylbenzene	0.021	MG/KG	U	71	NA	27	NA	nc	NA
CMS-407	0	1	Ethylbenzene	0.005	MG/KG	U	71	NA	27	NA	nc	NA
CMS-408	0	1	Ethylbenzene	0.0043	MG/KG	U	71	NA	27	NA	nc	NA
CMS-456	0	1	Ethylbenzene	0.0075	MG/KG	U	71	NA	27	NA	nc	NA
CMS-702	0	1	Ethylbenzene	0.0087	MG/KG	U	71	NA	27	NA	nc	NA
CMS-703	0	1	Ethylbenzene	0.0061	MG/KG	U	71	NA	27	NA	nc	NA
CMS-060	0	1	Ethylbenzene	2.7	MG/KG	U	71	NA	27	NA	nc	NA
CMS-065	0	10	Ethylbenzene	0.79	MG/KG	U	71	NA	27	NA	nc	NA
MW05S	1	2	Ethylbenzene	0.095	MG/KG	U	71	NA	27	NA	nc	NA
MW01S	1	2	Ethylbenzene	0.34	MG/KG	U	71	NA	27	NA	nc	NA
MW05S	1	2	Ethylbenzene	0.11	MG/KG	U	71	NA	27	NA	nc	NA
CMS-089	1	2	Ethylbenzene	0.0048	MG/KG	U	71	NA	27	NA	nc	NA
CMS-118	1	2	Ethylbenzene	0.006	MG/KG	U	71	NA	27	NA	nc	NA
CMS-423	1	2	Ethylbenzene	0.0062	MG/KG	U	71	NA	27	NA	nc	NA
CMS-428	1	2	Ethylbenzene	0.0054	MG/KG	U	71	NA	27	NA	nc	NA
CMS-060	2	3	Ethylbenzene	0.27	MG/KG	U	71	NA	27	NA	nc	NA
CMS-118	2	3	Ethylbenzene	0.0074	MG/KG	U	71	NA	27	NA	nc	NA
CMS-455	2	3	Ethylbenzene	0.33	MG/KG	U	71	NA	27	NA	nc	NA
MW08S	2	4	Ethylbenzene	0.21	MG/KG	U	71	NA	27	NA	nc	NA
MW01S	2	4	Ethylbenzene	0.22	MG/KG	U	71	NA	27	NA	nc	NA
MW02S	2	4	Ethylbenzene	0.2	MG/KG	U	71	NA	27	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW04D	2	4	Ethylbenzene	0.5	MG/KG	U	71	NA	27	NA	nc	NA
MW05S	2	4	Ethylbenzene	0.1	MG/KG	U	71	NA	27	NA	nc	NA
MW06S	2	4	Ethylbenzene	0.3	MG/KG	U	71	NA	27	NA	nc	NA
MW06S	2	4	Ethylbenzene	0.3	MG/KG	U	71	NA	27	NA	nc	NA
MW08S	2	4	Ethylbenzene	0.32	MG/KG	U	71	NA	27	NA	nc	NA
MW14M	2	4	Ethylbenzene	0.14	MG/KG	U	71	NA	27	NA	nc	NA
MW15D	2	4	Ethylbenzene	0.14	MG/KG	U	71	NA	27	NA	nc	NA
SB02	2	4	Ethylbenzene	0.38	MG/KG	U	71	NA	27	NA	nc	NA
SB03	2	4	Ethylbenzene	0.3	MG/KG	U	71	NA	27	NA	nc	NA
GEC-7	2.5	4.5	Ethylbenzene	0.03	MG/KG	U	71	NA	27	NA	nc	NA
CMS-060	3	4	Ethylbenzene	0.0058	MG/KG	U	71	NA	27	NA	nc	NA
CMS-089	3	4	Ethylbenzene	0.0041	MG/KG	U	71	NA	27	NA	nc	NA
CMS-407	3	4	Ethylbenzene	0.32	MG/KG	U	71	NA	27	NA	nc	NA
CMS-423	3	4	Ethylbenzene	0.0045	MG/KG	U	71	NA	27	NA	nc	NA
CMS-428	3	4	Ethylbenzene	0.0057	MG/KG	U	71	NA	27	NA	nc	NA
CMS-423	3	4	Ethylbenzene	0.0049	MG/KG	U	71	NA	27	NA	nc	NA
CMS-060	4	5	Ethylbenzene	0.0048	MG/KG	U	71	NA	27	NA	nc	NA
CMS-118	4	5	Ethylbenzene	0.0059	MG/KG	U	71	NA	27	NA	nc	NA
CMS-405	4	5	Ethylbenzene	1	MG/KG	U	71	NA	27	NA	nc	NA
CMS-455	4	5	Ethylbenzene	0.0072	MG/KG	U	71	NA	27	NA	nc	NA
MW15D	4	6	Ethylbenzene	0.1	MG/KG	U	71	NA	27	NA	nc	NA
MW02S	4	6	Ethylbenzene	0.55	MG/KG	U	71	NA	27	NA	nc	NA
SB03	4	6	Ethylbenzene	0.2	MG/KG	U	71	NA	27	NA	nc	NA
MW01S	4	6	Ethylbenzene	0.24	MG/KG	U	71	NA	27	NA	nc	NA
MW02S	4	6	Ethylbenzene	0.42	MG/KG	U	71	NA	27	NA	nc	NA
MW03S	4	6	Ethylbenzene	0.35	MG/KG	U	71	NA	27	NA	nc	NA
MW04D	4	6	Ethylbenzene	0.18	MG/KG	U	71	NA	27	NA	nc	NA
MW07S	4	6	Ethylbenzene	0.26	MG/KG	U	71	NA	27	NA	nc	NA
MW08S	4	6	Ethylbenzene	0.3	MG/KG	U	71	NA	27	NA	nc	NA
MW09S	4	6	Ethylbenzene	0.26	MG/KG	U	71	NA	27	NA	nc	NA
MW15D	4	6	Ethylbenzene	0.12	MG/KG	U	71	NA	27	NA	nc	NA
SB02	4	6	Ethylbenzene	0.26	MG/KG	U	71	NA	27	NA	nc	NA
SB03	4	6	Ethylbenzene	0.18	MG/KG	U	71	NA	27	NA	nc	NA
CMS-098	0	1	Ethylbenzene	0.0097	MG/KG	UJ	71	NA	27	NA	nc	NA
CMS-142	0	1	Ethylbenzene	0.0095	MG/KG	UJ	71	NA	27	NA	nc	NA
CMS-164	0	1	Ethylbenzene	0.015	MG/KG	UJ	71	NA	27	NA	nc	NA
CMS-173	0	1	Ethylbenzene	0.024	MG/KG	UJ	71	NA	27	NA	nc	NA
CMS-237	0	1	Ethylbenzene	0.0059	MG/KG	UJ	71	NA	27	NA	nc	NA
CMS-142	0	1	Ethylbenzene	0.011	MG/KG	UJ	71	NA	27	NA	nc	NA
SB-14-271	1	2	Ethylbenzene	0.12	MG/KG	UJ	71	NA	27	NA	nc	NA
CMS-060	1	2	Ethylbenzene	5.1	MG/KG	UJ	71	NA	27	NA	nc	NA
CMS-173	1	2	Ethylbenzene	0.0083	MG/KG	UJ	71	NA	27	NA	nc	NA
CMS-089	2	3	Ethylbenzene	0.0047	MG/KG	UJ	71	NA	27	NA	nc	NA
SB-14-271	2	4	Ethylbenzene	0.13	MG/KG	UJ	71	NA	27	NA	nc	NA
CMS-118	3	4	Ethylbenzene	0.0084	MG/KG	UJ	71	NA	27	NA	nc	NA
SB-14-271	4	6	Ethylbenzene	0.11	MG/KG	UJ	71	NA	27	NA	nc	NA
MW08S	1	2	Ethylbenzene	1.3	MG/KG		71	N	27	N	nc	NA
MW14M	1	2	Ethylbenzene	0.12	MG/KG		71	N	27	N	nc	NA
CMS-408	1	2	Ethylbenzene	23	MG/KG		71	N	27	N	nc	NA
CMS-419	1	2	Ethylbenzene	68	MG/KG		71	N	27	Y	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-408	2	3	Ethylbenzene	9.5	MG/KG		71	N	27	N	nc	NA
GEC-6	2.5	4.5	Ethylbenzene	0.098	MG/KG		71	N	27	N	nc	NA
CMS-427	3	4	Ethylbenzene	0.24	MG/KG		71	N	27	N	nc	NA
MW06S	4	6	Ethylbenzene	2.3	MG/KG		71	N	27	N	nc	NA
CMW-SD-2018	0	0.5	Fluoranthene	24	MG/KG	*	20	Y	nc	NA	nc	NA
MW01S	1	2	Fluoranthene	2	MG/KG	EB	20	N	nc	NA	nc	NA
MW08S	2	4	Fluoranthene	0.63	MG/KG	EB	20	N	nc	NA	nc	NA
MW01S	2	4	Fluoranthene	1.6	MG/KG	EB	20	N	nc	NA	nc	NA
MW08S	2	4	Fluoranthene	0.47	MG/KG	EB	20	N	nc	NA	nc	NA
MW01S	4	6	Fluoranthene	1.9	MG/KG	EB	20	N	nc	NA	nc	NA
MW03S	4	6	Fluoranthene	2	MG/KG	EB	20	N	nc	NA	nc	NA
CMS-4105	0	1	Fluoranthene	17.91191093	MG/KG	J	20	N	nc	NA	nc	NA
CMS-4110	0	1	Fluoranthene	9.35954033	MG/KG	J	20	N	nc	NA	nc	NA
CMS-060	0	1	Fluoranthene	2.4	MG/KG	J	20	N	nc	NA	nc	NA
CMS-098	0	1	Fluoranthene	0.42	MG/KG	J	20	N	nc	NA	nc	NA
CMS-118	0	1	Fluoranthene	2.5	MG/KG	J	20	N	nc	NA	nc	NA
CMS-142	0	1	Fluoranthene	0.53	MG/KG	J	20	N	nc	NA	nc	NA
CMS-159	0	1	Fluoranthene	4.2	MG/KG	J	20	N	nc	NA	nc	NA
CMS-164	0	1	Fluoranthene	0.31	MG/KG	J	20	N	nc	NA	nc	NA
CMS-173	0	1	Fluoranthene	0.74	MG/KG	J	20	N	nc	NA	nc	NA
CMS-408	0	1	Fluoranthene	0.25	MG/KG	J	20	N	nc	NA	nc	NA
CMS-417	0	1	Fluoranthene	3.9	MG/KG	J	20	N	nc	NA	nc	NA
CMS-142	0	1	Fluoranthene	0.29	MG/KG	J	20	N	nc	NA	nc	NA
RES-14-271-01	0	1	Fluoranthene	0.75	MG/KG	J	20	N	nc	NA	nc	NA
RES-14-302-01	0	1	Fluoranthene	1.3	MG/KG	J	20	N	nc	NA	nc	NA
RES-14-303-01	0	1	Fluoranthene	3.4	MG/KG	J	20	N	nc	NA	nc	NA
RES-14-333-01	0	1	Fluoranthene	6.2	MG/KG	J	20	N	nc	NA	nc	NA
RES-14-271-01	0	1	Fluoranthene	1.9	MG/KG	J	20	N	nc	NA	nc	NA
RES-14-272-01	0	1	Fluoranthene	1.9	MG/KG	J	20	N	nc	NA	nc	NA
CMS-703	0	2	Fluoranthene	1.1	MG/KG	J	20	N	nc	NA	nc	NA
SB-14-271	1	2	Fluoranthene	0.33	MG/KG	J	20	N	nc	NA	nc	NA
CMS-237	1	2	Fluoranthene	0.76	MG/KG	J	20	N	nc	NA	nc	NA
CMS-405	1	2	Fluoranthene	5.4	MG/KG	J	20	N	nc	NA	nc	NA
CMS-408	1	2	Fluoranthene	1.5	MG/KG	J	20	N	nc	NA	nc	NA
CMS-419	1	2	Fluoranthene	14	MG/KG	J	20	N	nc	NA	nc	NA
CMS-427	1	2	Fluoranthene	2.1	MG/KG	J	20	N	nc	NA	nc	NA
CMS-405	1	2	Fluoranthene	2.4	MG/KG	J	20	N	nc	NA	nc	NA
CMS-060	2	3	Fluoranthene	0.23	MG/KG	J	20	N	nc	NA	nc	NA
CMS-089	2	3	Fluoranthene	0.09	MG/KG	J	20	N	nc	NA	nc	NA
SB02	2	4	Fluoranthene	1.4	MG/KG	J	20	N	nc	NA	nc	NA
MW02S	2	4	Fluoranthene	0.099	MG/KG	J	20	N	nc	NA	nc	NA
MW14M	2	4	Fluoranthene	0.32	MG/KG	J	20	N	nc	NA	nc	NA
MW15D	2	4	Fluoranthene	0.33	MG/KG	J	20	N	nc	NA	nc	NA
SB02	2	4	Fluoranthene	1.5	MG/KG	J	20	N	nc	NA	nc	NA
SS-03	2.5	3.5	Fluoranthene	0.036	MG/KG	J	20	N	nc	NA	nc	NA
CMS-118	3	4	Fluoranthene	0.15	MG/KG	J	20	N	nc	NA	nc	NA
CMS-407	3	4	Fluoranthene	0.41	MG/KG	J	20	N	nc	NA	nc	NA
CMS-419	3	4	Fluoranthene	0.069	MG/KG	J	20	N	nc	NA	nc	NA
CMS-423	3	4	Fluoranthene	0.35	MG/KG	J	20	N	nc	NA	nc	NA
CMS-060	4	5	Fluoranthene	0.58	MG/KG	J	20	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-118	4	5	Fluoranthene	0.14	MG/KG	J	20	N	nc	NA	nc	NA
CMS-405	4	5	Fluoranthene	0.072	MG/KG	J	20	N	nc	NA	nc	NA
MW15D	4	6	Fluoranthene	2.5	MG/KG	J	20	N	nc	NA	nc	NA
MW06S	4	6	Fluoranthene	0.21	MG/KG	J	20	N	nc	NA	nc	NA
MW07S	4	6	Fluoranthene	0.38	MG/KG	J	20	N	nc	NA	nc	NA
MW09S	4	6	Fluoranthene	0.78	MG/KG	J	20	N	nc	NA	nc	NA
MW15D	4	6	Fluoranthene	1.4	MG/KG	J	20	N	nc	NA	nc	NA
SB-14-271	4	6	Fluoranthene	0.042	MG/KG	J	20	N	nc	NA	nc	NA
SB02	4	6	Fluoranthene	0.78	MG/KG	J	20	N	nc	NA	nc	NA
MW05S	2	4	Fluoranthene	7.6	MG/KG	J*	20	N	nc	NA	nc	NA
MW08S	1	2	Fluoranthene	0.4	MG/KG	JEB	20	N	nc	NA	nc	NA
MW08S	4	6	Fluoranthene	0.076	MG/KG	JEB	20	N	nc	NA	nc	NA
MW05S	1	2	Fluoranthene	0.36	MG/KG	U	20	NA	nc	NA	nc	NA
MW05S	1	2	Fluoranthene	0.36	MG/KG	U	20	NA	nc	NA	nc	NA
CMS-173	1	2	Fluoranthene	0.52	MG/KG	U	20	NA	nc	NA	nc	NA
CMS-417	1	2	Fluoranthene	35	MG/KG	U	20	NA	nc	NA	nc	NA
CMS-428	1	2	Fluoranthene	0.35	MG/KG	U	20	NA	nc	NA	nc	NA
CMS-417	2	3	Fluoranthene	9.8	MG/KG	U	20	NA	nc	NA	nc	NA
SB-14-271	2	4	Fluoranthene	0.45	MG/KG	U	20	NA	nc	NA	nc	NA
CMS-060	3	4	Fluoranthene	0.45	MG/KG	U	20	NA	nc	NA	nc	NA
CMS-417	3	4	Fluoranthene	1.9	MG/KG	U	20	NA	nc	NA	nc	NA
CMS-427	3	4	Fluoranthene	0.41	MG/KG	U	20	NA	nc	NA	nc	NA
CMS-428	3	4	Fluoranthene	0.37	MG/KG	U	20	NA	nc	NA	nc	NA
SB03	4	6	Fluoranthene	0.37	MG/KG	U	20	NA	nc	NA	nc	NA
MW04D	4	6	Fluoranthene	0.42	MG/KG	U	20	NA	nc	NA	nc	NA
SB03	4	6	Fluoranthene	0.38	MG/KG	U	20	NA	nc	NA	nc	NA
GEC-6	2.5	4.5	Fluoranthene	0.15	MG/KG	U	20	NA	nc	NA	nc	NA
CMS-455	4	5	Fluoranthene	0.48	MG/KG	UJ	20	NA	nc	NA	nc	NA
SS-01	0	0	Fluoranthene	1	MG/KG		20	N	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Fluoranthene	4.5	MG/KG		20	N	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Fluoranthene	4.2	MG/KG		20	N	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Fluoranthene	1.6	MG/KG		20	N	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Fluoranthene	0.71	MG/KG		20	N	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Fluoranthene	5.5	MG/KG		20	N	nc	NA	nc	NA
CMS-089	0	1	Fluoranthene	4.7	MG/KG		20	N	nc	NA	nc	NA
CMS-237	0	1	Fluoranthene	2.3	MG/KG		20	N	nc	NA	nc	NA
CMS-405	0	1	Fluoranthene	4.6	MG/KG		20	N	nc	NA	nc	NA
CMS-407	0	1	Fluoranthene	1.9	MG/KG		20	N	nc	NA	nc	NA
CMS-456	0	1	Fluoranthene	4.1	MG/KG		20	N	nc	NA	nc	NA
CMS-060	0	1	Fluoranthene	3.7	MG/KG		20	N	nc	NA	nc	NA
RES-14-272-01	0	1	Fluoranthene	1.4	MG/KG		20	N	nc	NA	nc	NA
SS-02	0	1.3	Fluoranthene	0.64	MG/KG		20	N	nc	NA	nc	NA
SS-06	0	2	Fluoranthene	0.98	MG/KG		20	N	nc	NA	nc	NA
BV01COMP	0	4	Fluoranthene	2.8	MG/KG		20	N	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Fluoranthene	4.3	MG/KG		20	N	nc	NA	nc	NA
MW14M	1	2	Fluoranthene	0.85	MG/KG		20	N	nc	NA	nc	NA
MW14M	1	2	Fluoranthene	0.9	MG/KG		20	N	nc	NA	nc	NA
MW14M	1	2	Fluoranthene	0.58	MG/KG		20	N	nc	NA	nc	NA
MW14M	1	2	Fluoranthene	0.42	MG/KG		20	N	nc	NA	nc	NA
CMS-060	1	2	Fluoranthene	0.99	MG/KG		20	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-089	1	2	Fluoranthene	1.5	MG/KG		20	N	nc	NA	nc	NA
CMS-118	1	2	Fluoranthene	3.3	MG/KG		20	N	nc	NA	nc	NA
CMS-407	1	2	Fluoranthene	3.6	MG/KG		20	N	nc	NA	nc	NA
CMS-423	1	2	Fluoranthene	0.6	MG/KG		20	N	nc	NA	nc	NA
CMS-456	1	2	Fluoranthene	3.5	MG/KG		20	N	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Fluoranthene	1.5	MG/KG		20	N	nc	NA	nc	NA
CMS-118	2	3	Fluoranthene	0.82	MG/KG		20	N	nc	NA	nc	NA
CMS-237	2	3	Fluoranthene	2.6	MG/KG		20	N	nc	NA	nc	NA
CMS-405	2	3	Fluoranthene	1	MG/KG		20	N	nc	NA	nc	NA
CMS-407	2	3	Fluoranthene	3.6	MG/KG		20	N	nc	NA	nc	NA
CMS-408	2	3	Fluoranthene	1.3	MG/KG		20	N	nc	NA	nc	NA
CMS-455	2	3	Fluoranthene	1.5	MG/KG		20	N	nc	NA	nc	NA
MW06S	2	4	Fluoranthene	0.59	MG/KG		20	N	nc	NA	nc	NA
MW06S	2	4	Fluoranthene	0.49	MG/KG		20	N	nc	NA	nc	NA
SB03	2	4	Fluoranthene	5.2	MG/KG		20	N	nc	NA	nc	NA
MW07S	3	4	Fluoranthene	1.7	MG/KG		20	N	nc	NA	nc	NA
CMS-089	3	4	Fluoranthene	7.9	MG/KG		20	N	nc	NA	nc	NA
CMS-405	3	4	Fluoranthene	2.4	MG/KG		20	N	nc	NA	nc	NA
CMS-423	3	4	Fluoranthene	0.46	MG/KG		20	N	nc	NA	nc	NA
MW05S	4	6	Fluoranthene	0.96	MG/KG		20	N	nc	NA	nc	NA
CMS-4105	0	1	Fluorene	0.992139847	MG/KG	J	28	N	nc	NA	nc	NA
CMS-4110	0	1	Fluorene	0.621192571	MG/KG	J	28	N	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Fluorene	0.2	MG/KG	J	28	N	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Fluorene	1.3	MG/KG	J	28	N	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Fluorene	0.23	MG/KG	J	28	N	nc	NA	nc	NA
CMS-060	0	1	Fluorene	0.093	MG/KG	J	28	N	nc	NA	nc	NA
CMS-089	0	1	Fluorene	0.1	MG/KG	J	28	N	nc	NA	nc	NA
CMS-118	0	1	Fluorene	0.099	MG/KG	J	28	N	nc	NA	nc	NA
CMS-159	0	1	Fluorene	0.21	MG/KG	J	28	N	nc	NA	nc	NA
CMS-237	0	1	Fluorene	0.11	MG/KG	J	28	N	nc	NA	nc	NA
CMS-405	0	1	Fluorene	0.33	MG/KG	J	28	N	nc	NA	nc	NA
CMS-407	0	1	Fluorene	0.13	MG/KG	J	28	N	nc	NA	nc	NA
CMS-456	0	1	Fluorene	0.27	MG/KG	J	28	N	nc	NA	nc	NA
CMS-060	0	1	Fluorene	0.16	MG/KG	J	28	N	nc	NA	nc	NA
BV01COMP	0	4	Fluorene	0.09	MG/KG	J	28	N	nc	NA	nc	NA
MW14M	1	2	Fluorene	0.05	MG/KG	J	28	N	nc	NA	nc	NA
MW14M	1	2	Fluorene	0.046	MG/KG	J	28	N	nc	NA	nc	NA
MW01S	1	2	Fluorene	0.11	MG/KG	J	28	N	nc	NA	nc	NA
MW14M	1	2	Fluorene	0.036	MG/KG	J	28	N	nc	NA	nc	NA
MW14M	1	2	Fluorene	0.044	MG/KG	J	28	N	nc	NA	nc	NA
CMS-060	1	2	Fluorene	0.056	MG/KG	J	28	N	nc	NA	nc	NA
CMS-089	1	2	Fluorene	0.08	MG/KG	J	28	N	nc	NA	nc	NA
CMS-405	1	2	Fluorene	1.5	MG/KG	J	28	N	nc	NA	nc	NA
CMS-407	1	2	Fluorene	0.35	MG/KG	J	28	N	nc	NA	nc	NA
CMS-423	1	2	Fluorene	0.053	MG/KG	J	28	N	nc	NA	nc	NA
CMS-427	1	2	Fluorene	0.62	MG/KG	J	28	N	nc	NA	nc	NA
CMS-456	1	2	Fluorene	0.28	MG/KG	J	28	N	nc	NA	nc	NA
CMS-237	2	3	Fluorene	0.2	MG/KG	J	28	N	nc	NA	nc	NA
CMS-407	2	3	Fluorene	0.22	MG/KG	J	28	N	nc	NA	nc	NA
CMS-408	2	3	Fluorene	0.17	MG/KG	J	28	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-455	2	3	Fluorene	0.14	MG/KG	J	28	N	nc	NA	nc	NA
MW05S	2	4	Fluorene	1.2	MG/KG	J	28	N	nc	NA	nc	NA
MW06S	2	4	Fluorene	0.22	MG/KG	J	28	N	nc	NA	nc	NA
MW06S	2	4	Fluorene	0.17	MG/KG	J	28	N	nc	NA	nc	NA
SB03	2	4	Fluorene	0.48	MG/KG	J	28	N	nc	NA	nc	NA
MW07S	3	4	Fluorene	0.12	MG/KG	J	28	N	nc	NA	nc	NA
CMS-089	3	4	Fluorene	0.61	MG/KG	J	28	N	nc	NA	nc	NA
CMS-405	3	4	Fluorene	0.34	MG/KG	J	28	N	nc	NA	nc	NA
CMS-423	3	4	Fluorene	0.071	MG/KG	J	28	N	nc	NA	nc	NA
MW15D	4	6	Fluorene	0.13	MG/KG	J	28	N	nc	NA	nc	NA
MW01S	4	6	Fluorene	0.13	MG/KG	J	28	N	nc	NA	nc	NA
MW03S	4	6	Fluorene	0.18	MG/KG	J	28	N	nc	NA	nc	NA
MW06S	4	6	Fluorene	0.072	MG/KG	J	28	N	nc	NA	nc	NA
MW07S	4	6	Fluorene	0.079	MG/KG	J	28	N	nc	NA	nc	NA
MW15D	4	6	Fluorene	0.1	MG/KG	J	28	N	nc	NA	nc	NA
SB02	4	6	Fluorene	0.088	MG/KG	J	28	N	nc	NA	nc	NA
SS-01	0	0	Fluorene	0.43	MG/KG	U	28	NA	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Fluorene	0.87	MG/KG	U	28	NA	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Fluorene	0.95	MG/KG	U	28	NA	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Fluorene	0.46	MG/KG	U	28	NA	nc	NA	nc	NA
CMS-098	0	1	Fluorene	0.6	MG/KG	U	28	NA	nc	NA	nc	NA
CMS-142	0	1	Fluorene	0.58	MG/KG	U	28	NA	nc	NA	nc	NA
CMS-164	0	1	Fluorene	2	MG/KG	U	28	NA	nc	NA	nc	NA
CMS-173	0	1	Fluorene	1.1	MG/KG	U	28	NA	nc	NA	nc	NA
CMS-408	0	1	Fluorene	0.34	MG/KG	U	28	NA	nc	NA	nc	NA
CMS-417	0	1	Fluorene	35	MG/KG	U	28	NA	nc	NA	nc	NA
CMS-142	0	1	Fluorene	0.55	MG/KG	U	28	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Fluorene	0.51	MG/KG	U	28	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Fluorene	0.62	MG/KG	U	28	NA	nc	NA	nc	NA
RES-14-302-01	0	1	Fluorene	5	MG/KG	U	28	NA	nc	NA	nc	NA
RES-14-303-01	0	1	Fluorene	4.8	MG/KG	U	28	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Fluorene	2.5	MG/KG	U	28	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Fluorene	3.1	MG/KG	U	28	NA	nc	NA	nc	NA
SS-02	0	1.3	Fluorene	0.52	MG/KG	U	28	NA	nc	NA	nc	NA
CMS-703	0	2	Fluorene	6.2	MG/KG	U	28	NA	nc	NA	nc	NA
SS-06	0	2	Fluorene	0.84	MG/KG	U	28	NA	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Fluorene	4.2	MG/KG	U	28	NA	nc	NA	nc	NA
MW05S	1	2	Fluorene	0.36	MG/KG	U	28	NA	nc	NA	nc	NA
MW05S	1	2	Fluorene	0.36	MG/KG	U	28	NA	nc	NA	nc	NA
MW08S	1	2	Fluorene	0.42	MG/KG	U	28	NA	nc	NA	nc	NA
SB-14-271	1	2	Fluorene	0.4	MG/KG	U	28	NA	nc	NA	nc	NA
CMS-173	1	2	Fluorene	0.52	MG/KG	U	28	NA	nc	NA	nc	NA
CMS-237	1	2	Fluorene	0.83	MG/KG	U	28	NA	nc	NA	nc	NA
CMS-408	1	2	Fluorene	8.7	MG/KG	U	28	NA	nc	NA	nc	NA
CMS-417	1	2	Fluorene	35	MG/KG	U	28	NA	nc	NA	nc	NA
CMS-419	1	2	Fluorene	74	MG/KG	U	28	NA	nc	NA	nc	NA
CMS-428	1	2	Fluorene	0.35	MG/KG	U	28	NA	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Fluorene	0.86	MG/KG	U	28	NA	nc	NA	nc	NA
CMS-060	2	3	Fluorene	0.36	MG/KG	U	28	NA	nc	NA	nc	NA
CMS-089	2	3	Fluorene	0.7	MG/KG	U	28	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-118	2	3	Fluorene	0.44	MG/KG	U	28	NA	nc	NA	nc	NA
CMS-405	2	3	Fluorene	0.64	MG/KG	U	28	NA	nc	NA	nc	NA
CMS-417	2	3	Fluorene	9.8	MG/KG	U	28	NA	nc	NA	nc	NA
MW08S	2	4	Fluorene	0.45	MG/KG	U	28	NA	nc	NA	nc	NA
SB02	2	4	Fluorene	2.3	MG/KG	U	28	NA	nc	NA	nc	NA
MW01S	2	4	Fluorene	1.6	MG/KG	U	28	NA	nc	NA	nc	NA
MW02S	2	4	Fluorene	0.38	MG/KG	U	28	NA	nc	NA	nc	NA
MW08S	2	4	Fluorene	0.41	MG/KG	U	28	NA	nc	NA	nc	NA
MW14M	2	4	Fluorene	0.38	MG/KG	U	28	NA	nc	NA	nc	NA
MW15D	2	4	Fluorene	0.37	MG/KG	U	28	NA	nc	NA	nc	NA
SB-14-271	2	4	Fluorene	0.45	MG/KG	U	28	NA	nc	NA	nc	NA
SB02	2	4	Fluorene	2.2	MG/KG	U	28	NA	nc	NA	nc	NA
SS-03	2.5	3.5	Fluorene	0.4	MG/KG	U	28	NA	nc	NA	nc	NA
CMS-060	3	4	Fluorene	0.45	MG/KG	U	28	NA	nc	NA	nc	NA
CMS-118	3	4	Fluorene	0.5	MG/KG	U	28	NA	nc	NA	nc	NA
CMS-407	3	4	Fluorene	0.42	MG/KG	U	28	NA	nc	NA	nc	NA
CMS-417	3	4	Fluorene	1.9	MG/KG	U	28	NA	nc	NA	nc	NA
CMS-419	3	4	Fluorene	0.42	MG/KG	U	28	NA	nc	NA	nc	NA
CMS-427	3	4	Fluorene	0.41	MG/KG	U	28	NA	nc	NA	nc	NA
CMS-428	3	4	Fluorene	0.37	MG/KG	U	28	NA	nc	NA	nc	NA
CMS-423	3	4	Fluorene	0.39	MG/KG	U	28	NA	nc	NA	nc	NA
CMS-118	4	5	Fluorene	0.43	MG/KG	U	28	NA	nc	NA	nc	NA
CMS-405	4	5	Fluorene	0.46	MG/KG	U	28	NA	nc	NA	nc	NA
CMS-455	4	5	Fluorene	0.48	MG/KG	U	28	NA	nc	NA	nc	NA
SB03	4	6	Fluorene	0.37	MG/KG	U	28	NA	nc	NA	nc	NA
MW04D	4	6	Fluorene	0.42	MG/KG	U	28	NA	nc	NA	nc	NA
MW05S	4	6	Fluorene	0.82	MG/KG	U	28	NA	nc	NA	nc	NA
MW08S	4	6	Fluorene	0.45	MG/KG	U	28	NA	nc	NA	nc	NA
MW09S	4	6	Fluorene	0.85	MG/KG	U	28	NA	nc	NA	nc	NA
SB-14-271	4	6	Fluorene	0.4	MG/KG	U	28	NA	nc	NA	nc	NA
SB03	4	6	Fluorene	0.38	MG/KG	U	28	NA	nc	NA	nc	NA
GEC-6	2.5	4.5	Fluorene	0.15	MG/KG	U	28	NA	nc	NA	nc	NA
CMS-405	1	2	Fluorene	1.2	MG/KG	UJ	28	NA	nc	NA	nc	NA
CMS-060	4	5	Fluorene	0.38	MG/KG	UJ	28	NA	nc	NA	nc	NA
CMS-118	1	2	Fluorene	0.41	MG/KG		28	N	nc	NA	nc	NA
SS-01	0	0	Hexachlorobenzene	0.43	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Hexachlorobenzene	0.8	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Hexachlorobenzene	0.87	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Hexachlorobenzene	2.1	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Hexachlorobenzene	0.95	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Hexachlorobenzene	0.46	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Hexachlorobenzene	2.1	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-089	0	1	Hexachlorobenzene	0.67	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-098	0	1	Hexachlorobenzene	0.6	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-142	0	1	Hexachlorobenzene	0.58	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-164	0	1	Hexachlorobenzene	2	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-173	0	1	Hexachlorobenzene	1.1	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-237	0	1	Hexachlorobenzene	1.3	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-405	0	1	Hexachlorobenzene	0.35	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-407	0	1	Hexachlorobenzene	0.35	MG/KG	U	0.4	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-408	0	1	Hexachlorobenzene	0.34	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-417	0	1	Hexachlorobenzene	35	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-456	0	1	Hexachlorobenzene	0.49	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-142	0	1	Hexachlorobenzene	0.55	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-060	0	1	Hexachlorobenzene	0.35	MG/KG	U	0.4	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Hexachlorobenzene	0.51	MG/KG	U	0.4	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Hexachlorobenzene	0.62	MG/KG	U	0.4	NA	nc	NA	nc	NA
RES-14-303-01	0	1	Hexachlorobenzene	4.8	MG/KG	U	0.4	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Hexachlorobenzene	2.5	MG/KG	U	0.4	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Hexachlorobenzene	3.1	MG/KG	U	0.4	NA	nc	NA	nc	NA
SS-02	0	1.3	Hexachlorobenzene	0.52	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-703	0	2	Hexachlorobenzene	6.2	MG/KG	U	0.4	NA	nc	NA	nc	NA
SS-06	0	2	Hexachlorobenzene	0.84	MG/KG	U	0.4	NA	nc	NA	nc	NA
BV01COMP	0	4	Hexachlorobenzene	0.38	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Hexachlorobenzene	4.2	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW05S	1	2	Hexachlorobenzene	0.36	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW14M	1	2	Hexachlorobenzene	0.34	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW14M	1	2	Hexachlorobenzene	0.34	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW01S	1	2	Hexachlorobenzene	0.38	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW05S	1	2	Hexachlorobenzene	0.36	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW08S	1	2	Hexachlorobenzene	0.42	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW14M	1	2	Hexachlorobenzene	0.33	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW14M	1	2	Hexachlorobenzene	0.33	MG/KG	U	0.4	NA	nc	NA	nc	NA
SB-14-271	1	2	Hexachlorobenzene	0.4	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-060	1	2	Hexachlorobenzene	0.34	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-089	1	2	Hexachlorobenzene	0.35	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-118	1	2	Hexachlorobenzene	0.37	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-173	1	2	Hexachlorobenzene	0.52	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-237	1	2	Hexachlorobenzene	0.83	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-405	1	2	Hexachlorobenzene	0.63	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-407	1	2	Hexachlorobenzene	0.44	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-408	1	2	Hexachlorobenzene	8.7	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-417	1	2	Hexachlorobenzene	35	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-419	1	2	Hexachlorobenzene	74	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-423	1	2	Hexachlorobenzene	0.35	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-427	1	2	Hexachlorobenzene	3.6	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-428	1	2	Hexachlorobenzene	0.35	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-456	1	2	Hexachlorobenzene	1.2	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-405	1	2	Hexachlorobenzene	1.2	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Hexachlorobenzene	0.86	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-060	2	3	Hexachlorobenzene	0.36	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-089	2	3	Hexachlorobenzene	0.7	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-118	2	3	Hexachlorobenzene	0.44	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-237	2	3	Hexachlorobenzene	0.63	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-405	2	3	Hexachlorobenzene	0.64	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-407	2	3	Hexachlorobenzene	1.1	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-408	2	3	Hexachlorobenzene	0.43	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-417	2	3	Hexachlorobenzene	9.8	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-455	2	3	Hexachlorobenzene	0.4	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW08S	2	4	Hexachlorobenzene	0.45	MG/KG	U	0.4	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
SB02	2	4	Hexachlorobenzene	2.3	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW01S	2	4	Hexachlorobenzene	1.6	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW02S	2	4	Hexachlorobenzene	0.38	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW06S	2	4	Hexachlorobenzene	0.36	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW06S	2	4	Hexachlorobenzene	0.37	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW08S	2	4	Hexachlorobenzene	0.41	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW14M	2	4	Hexachlorobenzene	0.38	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW15D	2	4	Hexachlorobenzene	0.37	MG/KG	U	0.4	NA	nc	NA	nc	NA
SB-14-271	2	4	Hexachlorobenzene	0.45	MG/KG	U	0.4	NA	nc	NA	nc	NA
SB02	2	4	Hexachlorobenzene	2.2	MG/KG	U	0.4	NA	nc	NA	nc	NA
SB03	2	4	Hexachlorobenzene	0.99	MG/KG	U	0.4	NA	nc	NA	nc	NA
SS-03	2.5	3.5	Hexachlorobenzene	0.4	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW07S	3	4	Hexachlorobenzene	0.38	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-060	3	4	Hexachlorobenzene	0.45	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-089	3	4	Hexachlorobenzene	1.8	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-118	3	4	Hexachlorobenzene	0.5	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-405	3	4	Hexachlorobenzene	0.38	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-407	3	4	Hexachlorobenzene	0.42	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-417	3	4	Hexachlorobenzene	1.9	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-419	3	4	Hexachlorobenzene	0.42	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-423	3	4	Hexachlorobenzene	0.37	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-427	3	4	Hexachlorobenzene	0.41	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-428	3	4	Hexachlorobenzene	0.37	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-423	3	4	Hexachlorobenzene	0.39	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-118	4	5	Hexachlorobenzene	0.43	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-405	4	5	Hexachlorobenzene	0.46	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-455	4	5	Hexachlorobenzene	0.48	MG/KG	U	0.4	NA	nc	NA	nc	NA
SB03	4	6	Hexachlorobenzene	0.37	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW15D	4	6	Hexachlorobenzene	0.4	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW01S	4	6	Hexachlorobenzene	0.4	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW03S	4	6	Hexachlorobenzene	0.4	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW04D	4	6	Hexachlorobenzene	0.42	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW05S	4	6	Hexachlorobenzene	0.82	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW06S	4	6	Hexachlorobenzene	0.46	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW07S	4	6	Hexachlorobenzene	0.4	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW08S	4	6	Hexachlorobenzene	0.45	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW09S	4	6	Hexachlorobenzene	0.85	MG/KG	U	0.4	NA	nc	NA	nc	NA
MW15D	4	6	Hexachlorobenzene	0.35	MG/KG	U	0.4	NA	nc	NA	nc	NA
SB-14-271	4	6	Hexachlorobenzene	0.4	MG/KG	U	0.4	NA	nc	NA	nc	NA
SB02	4	6	Hexachlorobenzene	0.83	MG/KG	U	0.4	NA	nc	NA	nc	NA
SB03	4	6	Hexachlorobenzene	0.38	MG/KG	U	0.4	NA	nc	NA	nc	NA
CMS-060	0	1	Hexachlorobenzene	0.34	MG/KG	UJ	0.4	NA	nc	NA	nc	NA
CMS-118	0	1	Hexachlorobenzene	0.36	MG/KG	UJ	0.4	NA	nc	NA	nc	NA
CMS-159	0	1	Hexachlorobenzene	2.2	MG/KG	UJ	0.4	NA	nc	NA	nc	NA
RES-14-302-01	0	1	Hexachlorobenzene	5	MG/KG	UJ	0.4	NA	nc	NA	nc	NA
MW05S	2	4	Hexachlorobenzene	0.37	MG/KG	UJ	0.4	NA	nc	NA	nc	NA
CMS-060	4	5	Hexachlorobenzene	0.38	MG/KG	UJ	0.4	NA	nc	NA	nc	NA
SS-01	0	0	Hexachloroethane	0.43	MG/KG	U	46	NA	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Hexachloroethane	0.8	MG/KG	U	46	NA	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Hexachloroethane	0.87	MG/KG	U	46	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMW-SD-2018	0	0.5	Hexachloroethane	2.1	MG/KG	U	46	NA	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Hexachloroethane	0.95	MG/KG	U	46	NA	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Hexachloroethane	0.46	MG/KG	U	46	NA	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Hexachloroethane	2.1	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-164	0	1	Hexachloroethane	2	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-237	0	1	Hexachloroethane	1.3	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-405	0	1	Hexachloroethane	0.35	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-417	0	1	Hexachloroethane	35	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-456	0	1	Hexachloroethane	0.49	MG/KG	U	46	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Hexachloroethane	0.51	MG/KG	U	46	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Hexachloroethane	0.62	MG/KG	U	46	NA	nc	NA	nc	NA
RES-14-302-01	0	1	Hexachloroethane	5	MG/KG	U	46	NA	nc	NA	nc	NA
RES-14-303-01	0	1	Hexachloroethane	4.8	MG/KG	U	46	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Hexachloroethane	2.5	MG/KG	U	46	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Hexachloroethane	3.1	MG/KG	U	46	NA	nc	NA	nc	NA
SS-02	0	1.3	Hexachloroethane	0.52	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-703	0	2	Hexachloroethane	6.2	MG/KG	U	46	NA	nc	NA	nc	NA
SS-06	0	2	Hexachloroethane	0.84	MG/KG	U	46	NA	nc	NA	nc	NA
BV01COMP	0	4	Hexachloroethane	0.38	MG/KG	U	46	NA	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Hexachloroethane	4.2	MG/KG	U	46	NA	nc	NA	nc	NA
MW05S	1	2	Hexachloroethane	0.36	MG/KG	U	46	NA	nc	NA	nc	NA
MW14M	1	2	Hexachloroethane	0.34	MG/KG	U	46	NA	nc	NA	nc	NA
MW14M	1	2	Hexachloroethane	0.34	MG/KG	U	46	NA	nc	NA	nc	NA
MW01S	1	2	Hexachloroethane	0.38	MG/KG	U	46	NA	nc	NA	nc	NA
MW05S	1	2	Hexachloroethane	0.36	MG/KG	U	46	NA	nc	NA	nc	NA
MW08S	1	2	Hexachloroethane	0.42	MG/KG	U	46	NA	nc	NA	nc	NA
MW14M	1	2	Hexachloroethane	0.33	MG/KG	U	46	NA	nc	NA	nc	NA
MW14M	1	2	Hexachloroethane	0.33	MG/KG	U	46	NA	nc	NA	nc	NA
SB-14-271	1	2	Hexachloroethane	0.4	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-060	1	2	Hexachloroethane	0.34	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-118	1	2	Hexachloroethane	0.37	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-237	1	2	Hexachloroethane	0.83	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-405	1	2	Hexachloroethane	0.63	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-417	1	2	Hexachloroethane	35	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-419	1	2	Hexachloroethane	74	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-423	1	2	Hexachloroethane	0.35	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-427	1	2	Hexachloroethane	3.6	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-428	1	2	Hexachloroethane	0.35	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-456	1	2	Hexachloroethane	1.2	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-405	1	2	Hexachloroethane	1.2	MG/KG	U	46	NA	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Hexachloroethane	0.86	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-060	2	3	Hexachloroethane	0.36	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-118	2	3	Hexachloroethane	0.44	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-237	2	3	Hexachloroethane	0.63	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-405	2	3	Hexachloroethane	0.64	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-417	2	3	Hexachloroethane	9.8	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-455	2	3	Hexachloroethane	0.4	MG/KG	U	46	NA	nc	NA	nc	NA
MW08S	2	4	Hexachloroethane	0.45	MG/KG	U	46	NA	nc	NA	nc	NA
SB02	2	4	Hexachloroethane	2.3	MG/KG	U	46	NA	nc	NA	nc	NA
MW01S	2	4	Hexachloroethane	1.6	MG/KG	U	46	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW02S	2	4	Hexachloroethane	0.38	MG/KG	U	46	NA	nc	NA	nc	NA
MW06S	2	4	Hexachloroethane	0.36	MG/KG	U	46	NA	nc	NA	nc	NA
MW06S	2	4	Hexachloroethane	0.37	MG/KG	U	46	NA	nc	NA	nc	NA
MW08S	2	4	Hexachloroethane	0.41	MG/KG	U	46	NA	nc	NA	nc	NA
MW14M	2	4	Hexachloroethane	0.38	MG/KG	U	46	NA	nc	NA	nc	NA
MW15D	2	4	Hexachloroethane	0.37	MG/KG	U	46	NA	nc	NA	nc	NA
SB-14-271	2	4	Hexachloroethane	0.45	MG/KG	U	46	NA	nc	NA	nc	NA
SB02	2	4	Hexachloroethane	2.2	MG/KG	U	46	NA	nc	NA	nc	NA
SB03	2	4	Hexachloroethane	0.99	MG/KG	U	46	NA	nc	NA	nc	NA
SS-03	2.5	3.5	Hexachloroethane	0.4	MG/KG	U	46	NA	nc	NA	nc	NA
MW07S	3	4	Hexachloroethane	0.38	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-060	3	4	Hexachloroethane	0.45	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-118	3	4	Hexachloroethane	0.5	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-405	3	4	Hexachloroethane	0.38	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-417	3	4	Hexachloroethane	1.9	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-419	3	4	Hexachloroethane	0.42	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-423	3	4	Hexachloroethane	0.37	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-427	3	4	Hexachloroethane	0.41	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-428	3	4	Hexachloroethane	0.37	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-423	3	4	Hexachloroethane	0.39	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-118	4	5	Hexachloroethane	0.43	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-405	4	5	Hexachloroethane	0.46	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-455	4	5	Hexachloroethane	0.48	MG/KG	U	46	NA	nc	NA	nc	NA
SB03	4	6	Hexachloroethane	0.37	MG/KG	U	46	NA	nc	NA	nc	NA
MW15D	4	6	Hexachloroethane	0.4	MG/KG	U	46	NA	nc	NA	nc	NA
MW01S	4	6	Hexachloroethane	0.4	MG/KG	U	46	NA	nc	NA	nc	NA
MW03S	4	6	Hexachloroethane	0.4	MG/KG	U	46	NA	nc	NA	nc	NA
MW04D	4	6	Hexachloroethane	0.42	MG/KG	U	46	NA	nc	NA	nc	NA
MW05S	4	6	Hexachloroethane	0.82	MG/KG	U	46	NA	nc	NA	nc	NA
MW06S	4	6	Hexachloroethane	0.46	MG/KG	U	46	NA	nc	NA	nc	NA
MW07S	4	6	Hexachloroethane	0.4	MG/KG	U	46	NA	nc	NA	nc	NA
MW08S	4	6	Hexachloroethane	0.45	MG/KG	U	46	NA	nc	NA	nc	NA
MW09S	4	6	Hexachloroethane	0.85	MG/KG	U	46	NA	nc	NA	nc	NA
MW15D	4	6	Hexachloroethane	0.35	MG/KG	U	46	NA	nc	NA	nc	NA
SB-14-271	4	6	Hexachloroethane	0.4	MG/KG	U	46	NA	nc	NA	nc	NA
SB02	4	6	Hexachloroethane	0.83	MG/KG	U	46	NA	nc	NA	nc	NA
SB03	4	6	Hexachloroethane	0.38	MG/KG	U	46	NA	nc	NA	nc	NA
CMS-060	0	1	Hexachloroethane	0.34	MG/KG	UJ	46	NA	nc	NA	nc	NA
CMS-089	0	1	Hexachloroethane	0.67	MG/KG	UJ	46	NA	nc	NA	nc	NA
CMS-098	0	1	Hexachloroethane	0.6	MG/KG	UJ	46	NA	nc	NA	nc	NA
CMS-118	0	1	Hexachloroethane	0.36	MG/KG	UJ	46	NA	nc	NA	nc	NA
CMS-142	0	1	Hexachloroethane	0.58	MG/KG	UJ	46	NA	nc	NA	nc	NA
CMS-159	0	1	Hexachloroethane	2.2	MG/KG	UJ	46	NA	nc	NA	nc	NA
CMS-173	0	1	Hexachloroethane	1.1	MG/KG	UJ	46	NA	nc	NA	nc	NA
CMS-407	0	1	Hexachloroethane	0.35	MG/KG	UJ	46	NA	nc	NA	nc	NA
CMS-408	0	1	Hexachloroethane	0.34	MG/KG	UJ	46	NA	nc	NA	nc	NA
CMS-142	0	1	Hexachloroethane	0.55	MG/KG	UJ	46	NA	nc	NA	nc	NA
CMS-060	0	1	Hexachloroethane	0.35	MG/KG	UJ	46	NA	nc	NA	nc	NA
CMS-089	1	2	Hexachloroethane	0.35	MG/KG	UJ	46	NA	nc	NA	nc	NA
CMS-173	1	2	Hexachloroethane	0.52	MG/KG	UJ	46	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-407	1	2	Hexachloroethane	0.44	MG/KG	UJ	46	NA	nc	NA	nc	NA
CMS-408	1	2	Hexachloroethane	8.7	MG/KG	UJ	46	NA	nc	NA	nc	NA
CMS-089	2	3	Hexachloroethane	0.7	MG/KG	UJ	46	NA	nc	NA	nc	NA
CMS-407	2	3	Hexachloroethane	1.1	MG/KG	UJ	46	NA	nc	NA	nc	NA
CMS-408	2	3	Hexachloroethane	0.43	MG/KG	UJ	46	NA	nc	NA	nc	NA
MW05S	2	4	Hexachloroethane	0.37	MG/KG	UJ	46	NA	nc	NA	nc	NA
CMS-089	3	4	Hexachloroethane	1.8	MG/KG	UJ	46	NA	nc	NA	nc	NA
CMS-407	3	4	Hexachloroethane	0.42	MG/KG	UJ	46	NA	nc	NA	nc	NA
CMS-060	4	5	Hexachloroethane	0.38	MG/KG	UJ	46	NA	nc	NA	nc	NA
SS-01	0	0	Indeno(1,2,3-cd)pyrene	0.3	MG/KG	J	0.9	N	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Indeno(1,2,3-cd)pyrene	0.46	MG/KG	J	0.9	N	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Indeno(1,2,3-cd)pyrene	0.16	MG/KG	J	0.9	N	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Indeno(1,2,3-cd)pyrene	1.6	MG/KG	J	0.9	Y	nc	NA	nc	NA
CMS-060	0	1	Indeno(1,2,3-cd)pyrene	0.31	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-118	0	1	Indeno(1,2,3-cd)pyrene	0.39	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-159	0	1	Indeno(1,2,3-cd)pyrene	1.1	MG/KG	J	0.9	Y	nc	NA	nc	NA
CMS-237	0	1	Indeno(1,2,3-cd)pyrene	0.53	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-407	0	1	Indeno(1,2,3-cd)pyrene	0.32	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-060	0	1	Indeno(1,2,3-cd)pyrene	0.55	MG/KG	J	0.9	N	nc	NA	nc	NA
RES-14-271-01	0	1	Indeno(1,2,3-cd)pyrene	0.38	MG/KG	J	0.9	N	nc	NA	nc	NA
RES-14-272-01	0	1	Indeno(1,2,3-cd)pyrene	0.21	MG/KG	J	0.9	N	nc	NA	nc	NA
RES-14-303-01	0	1	Indeno(1,2,3-cd)pyrene	0.96	MG/KG	J	0.9	Y	nc	NA	nc	NA
RES-14-333-01	0	1	Indeno(1,2,3-cd)pyrene	2.4	MG/KG	J	0.9	Y	nc	NA	nc	NA
RES-14-271-01	0	1	Indeno(1,2,3-cd)pyrene	0.94	MG/KG	J	0.9	Y	nc	NA	nc	NA
SS-02	0	1.3	Indeno(1,2,3-cd)pyrene	0.25	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-703	0	2	Indeno(1,2,3-cd)pyrene	0.49	MG/KG	J	0.9	N	nc	NA	nc	NA
SS-06	0	2	Indeno(1,2,3-cd)pyrene	0.46	MG/KG	J	0.9	N	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Indeno(1,2,3-cd)pyrene	1.3	MG/KG	J	0.9	Y	nc	NA	nc	NA
MW14M	1	2	Indeno(1,2,3-cd)pyrene	0.053	MG/KG	J	0.9	N	nc	NA	nc	NA
MW14M	1	2	Indeno(1,2,3-cd)pyrene	0.041	MG/KG	J	0.9	N	nc	NA	nc	NA
MW01S	1	2	Indeno(1,2,3-cd)pyrene	0.26	MG/KG	J	0.9	N	nc	NA	nc	NA
MW08S	1	2	Indeno(1,2,3-cd)pyrene	0.091	MG/KG	J	0.9	N	nc	NA	nc	NA
MW14M	1	2	Indeno(1,2,3-cd)pyrene	0.053	MG/KG	J	0.9	N	nc	NA	nc	NA
MW14M	1	2	Indeno(1,2,3-cd)pyrene	0.19	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-060	1	2	Indeno(1,2,3-cd)pyrene	0.19	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-089	1	2	Indeno(1,2,3-cd)pyrene	0.34	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-118	1	2	Indeno(1,2,3-cd)pyrene	0.59	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-237	1	2	Indeno(1,2,3-cd)pyrene	0.18	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-405	1	2	Indeno(1,2,3-cd)pyrene	3.3	MG/KG	J	0.9	Y	nc	NA	nc	NA
CMS-407	1	2	Indeno(1,2,3-cd)pyrene	0.53	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-423	1	2	Indeno(1,2,3-cd)pyrene	0.12	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-456	1	2	Indeno(1,2,3-cd)pyrene	0.9	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-405	1	2	Indeno(1,2,3-cd)pyrene	0.38	MG/KG	J	0.9	N	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Indeno(1,2,3-cd)pyrene	0.55	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-118	2	3	Indeno(1,2,3-cd)pyrene	0.18	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-407	2	3	Indeno(1,2,3-cd)pyrene	0.77	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-408	2	3	Indeno(1,2,3-cd)pyrene	0.22	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-455	2	3	Indeno(1,2,3-cd)pyrene	0.38	MG/KG	J	0.9	N	nc	NA	nc	NA
MW08S	2	4	Indeno(1,2,3-cd)pyrene	0.25	MG/KG	J	0.9	N	nc	NA	nc	NA
MW01S	2	4	Indeno(1,2,3-cd)pyrene	0.34	MG/KG	J	0.9	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW05S	2	4	Indeno(1,2,3-cd)pyrene	1.5	MG/KG	J	0.9	Y	nc	NA	nc	NA
MW06S	2	4	Indeno(1,2,3-cd)pyrene	0.17	MG/KG	J	0.9	N	nc	NA	nc	NA
MW06S	2	4	Indeno(1,2,3-cd)pyrene	0.14	MG/KG	J	0.9	N	nc	NA	nc	NA
MW08S	2	4	Indeno(1,2,3-cd)pyrene	0.19	MG/KG	J	0.9	N	nc	NA	nc	NA
MW15D	2	4	Indeno(1,2,3-cd)pyrene	0.094	MG/KG	J	0.9	N	nc	NA	nc	NA
SB02	2	4	Indeno(1,2,3-cd)pyrene	0.26	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-089	3	4	Indeno(1,2,3-cd)pyrene	1.6	MG/KG	J	0.9	Y	nc	NA	nc	NA
CMS-405	3	4	Indeno(1,2,3-cd)pyrene	0.33	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-423	3	4	Indeno(1,2,3-cd)pyrene	0.14	MG/KG	J	0.9	N	nc	NA	nc	NA
MW03S	4	6	Indeno(1,2,3-cd)pyrene	0.28	MG/KG	J	0.9	N	nc	NA	nc	NA
MW06S	4	6	Indeno(1,2,3-cd)pyrene	0.068	MG/KG	J	0.9	N	nc	NA	nc	NA
MW07S	4	6	Indeno(1,2,3-cd)pyrene	0.11	MG/KG	J	0.9	N	nc	NA	nc	NA
MW09S	4	6	Indeno(1,2,3-cd)pyrene	0.38	MG/KG	J	0.9	N	nc	NA	nc	NA
SB02	4	6	Indeno(1,2,3-cd)pyrene	0.089	MG/KG	J	0.9	N	nc	NA	nc	NA
CMS-098	0	1	Indeno(1,2,3-cd)pyrene	0.6	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-142	0	1	Indeno(1,2,3-cd)pyrene	0.58	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-173	0	1	Indeno(1,2,3-cd)pyrene	1.1	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-408	0	1	Indeno(1,2,3-cd)pyrene	0.34	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-417	0	1	Indeno(1,2,3-cd)pyrene	35	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-142	0	1	Indeno(1,2,3-cd)pyrene	0.55	MG/KG	U	0.9	NA	nc	NA	nc	NA
RES-14-302-01	0	1	Indeno(1,2,3-cd)pyrene	5	MG/KG	U	0.9	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Indeno(1,2,3-cd)pyrene	3.1	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW05S	1	2	Indeno(1,2,3-cd)pyrene	0.36	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW05S	1	2	Indeno(1,2,3-cd)pyrene	0.36	MG/KG	U	0.9	NA	nc	NA	nc	NA
SB-14-271	1	2	Indeno(1,2,3-cd)pyrene	0.4	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-173	1	2	Indeno(1,2,3-cd)pyrene	0.52	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-417	1	2	Indeno(1,2,3-cd)pyrene	35	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-419	1	2	Indeno(1,2,3-cd)pyrene	74	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-427	1	2	Indeno(1,2,3-cd)pyrene	3.6	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-428	1	2	Indeno(1,2,3-cd)pyrene	0.35	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-089	2	3	Indeno(1,2,3-cd)pyrene	0.7	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-405	2	3	Indeno(1,2,3-cd)pyrene	0.64	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-417	2	3	Indeno(1,2,3-cd)pyrene	9.8	MG/KG	U	0.9	NA	nc	NA	nc	NA
SB02	2	4	Indeno(1,2,3-cd)pyrene	2.3	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW02S	2	4	Indeno(1,2,3-cd)pyrene	0.38	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW14M	2	4	Indeno(1,2,3-cd)pyrene	0.38	MG/KG	U	0.9	NA	nc	NA	nc	NA
SB-14-271	2	4	Indeno(1,2,3-cd)pyrene	0.45	MG/KG	U	0.9	NA	nc	NA	nc	NA
SS-03	2.5	3.5	Indeno(1,2,3-cd)pyrene	0.4	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-407	3	4	Indeno(1,2,3-cd)pyrene	0.42	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-417	3	4	Indeno(1,2,3-cd)pyrene	1.9	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-419	3	4	Indeno(1,2,3-cd)pyrene	0.42	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-427	3	4	Indeno(1,2,3-cd)pyrene	0.41	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-428	3	4	Indeno(1,2,3-cd)pyrene	0.37	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-423	3	4	Indeno(1,2,3-cd)pyrene	0.39	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-405	4	5	Indeno(1,2,3-cd)pyrene	0.46	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-455	4	5	Indeno(1,2,3-cd)pyrene	0.48	MG/KG	U	0.9	NA	nc	NA	nc	NA
SB03	4	6	Indeno(1,2,3-cd)pyrene	0.37	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW04D	4	6	Indeno(1,2,3-cd)pyrene	0.42	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW05S	4	6	Indeno(1,2,3-cd)pyrene	0.82	MG/KG	U	0.9	NA	nc	NA	nc	NA
MW08S	4	6	Indeno(1,2,3-cd)pyrene	0.45	MG/KG	U	0.9	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
SB-14-271	4	6	Indeno(1,2,3-cd)pyrene	0.4	MG/KG	U	0.9	NA	nc	NA	nc	NA
SB03	4	6	Indeno(1,2,3-cd)pyrene	0.38	MG/KG	U	0.9	NA	nc	NA	nc	NA
GEC-6	2.5	4.5	Indeno(1,2,3-cd)pyrene	0.15	MG/KG	U	0.9	NA	nc	NA	nc	NA
CMS-164	0	1	Indeno(1,2,3-cd)pyrene	2	MG/KG	UJ	0.9	NA	nc	NA	nc	NA
CMS-408	1	2	Indeno(1,2,3-cd)pyrene	8.7	MG/KG	UJ	0.9	NA	nc	NA	nc	NA
CMS-060	2	3	Indeno(1,2,3-cd)pyrene	0.36	MG/KG	UJ	0.9	NA	nc	NA	nc	NA
CMS-060	3	4	Indeno(1,2,3-cd)pyrene	0.45	MG/KG	UJ	0.9	NA	nc	NA	nc	NA
CMS-118	3	4	Indeno(1,2,3-cd)pyrene	0.5	MG/KG	UJ	0.9	NA	nc	NA	nc	NA
CMS-060	4	5	Indeno(1,2,3-cd)pyrene	0.38	MG/KG	UJ	0.9	NA	nc	NA	nc	NA
CMS-118	4	5	Indeno(1,2,3-cd)pyrene	0.43	MG/KG	UJ	0.9	NA	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Indeno(1,2,3-cd)pyrene	1	MG/KG		0.9	Y	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Indeno(1,2,3-cd)pyrene	1.4	MG/KG		0.9	Y	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Indeno(1,2,3-cd)pyrene	5.3	MG/KG		0.9	Y	nc	NA	nc	NA
CMS-089	0	1	Indeno(1,2,3-cd)pyrene	1.1	MG/KG		0.9	Y	nc	NA	nc	NA
CMS-405	0	1	Indeno(1,2,3-cd)pyrene	0.81	MG/KG		0.9	N	nc	NA	nc	NA
CMS-456	0	1	Indeno(1,2,3-cd)pyrene	0.91	MG/KG		0.9	Y	nc	NA	nc	NA
BV01COMP	0	4	Indeno(1,2,3-cd)pyrene	0.9	MG/KG		0.9	N	nc	NA	nc	NA
CMS-237	2	3	Indeno(1,2,3-cd)pyrene	0.64	MG/KG		0.9	N	nc	NA	nc	NA
SB03	2	4	Indeno(1,2,3-cd)pyrene	1.4	MG/KG		0.9	Y	nc	NA	nc	NA
MW07S	3	4	Indeno(1,2,3-cd)pyrene	0.61	MG/KG		0.9	N	nc	NA	nc	NA
MW15D	4	6	Indeno(1,2,3-cd)pyrene	0.7	MG/KG		0.9	N	nc	NA	nc	NA
MW01S	4	6	Indeno(1,2,3-cd)pyrene	0.48	MG/KG		0.9	N	nc	NA	nc	NA
MW15D	4	6	Indeno(1,2,3-cd)pyrene	0.62	MG/KG		0.9	N	nc	NA	nc	NA
CMS-4105	0	1	Indeno[1,2,3-c,d]pyrene	4.190029709	MG/KG	J	0.9	Y	nc	NA	nc	NA
CMS-4110	0	1	Indeno[1,2,3-c,d]pyrene	1.559231383	MG/KG	J	0.9	Y	nc	NA	nc	NA
CMS-407	1	2	Isopropylbenzene	0.04	MG/KG	J	27	N	nc	NA	nc	NA
CMS-419	1	2	Isopropylbenzene	5.4	MG/KG	J	27	N	nc	NA	nc	NA
CMS-237	2	3	Isopropylbenzene	0.005	MG/KG	J	27	N	nc	NA	nc	NA
CMS-407	2	3	Isopropylbenzene	0.011	MG/KG	J	27	N	nc	NA	nc	NA
CMS-455	2	3	Isopropylbenzene	0.077	MG/KG	J	27	N	nc	NA	nc	NA
CMS-419	3	4	Isopropylbenzene	0.084	MG/KG	J	27	N	nc	NA	nc	NA
MW05S	4	6	Isopropylbenzene	0.12	MG/KG	J	27	N	nc	NA	nc	NA
CMS-089	0	1	Isopropylbenzene	0.005	MG/KG	U	27	NA	nc	NA	nc	NA
CMS-118	0	1	Isopropylbenzene	0.0048	MG/KG	U	27	NA	nc	NA	nc	NA
CMS-159	0	1	Isopropylbenzene	0.021	MG/KG	U	27	NA	nc	NA	nc	NA
CMS-407	0	1	Isopropylbenzene	0.005	MG/KG	U	27	NA	nc	NA	nc	NA
CMS-408	0	1	Isopropylbenzene	0.0043	MG/KG	U	27	NA	nc	NA	nc	NA
CMS-417	0	1	Isopropylbenzene	59	MG/KG	U	27	NA	nc	NA	nc	NA
CMS-456	0	1	Isopropylbenzene	0.0075	MG/KG	U	27	NA	nc	NA	nc	NA
CMS-702	0	1	Isopropylbenzene	0.0087	MG/KG	U	27	NA	nc	NA	nc	NA
CMS-703	0	1	Isopropylbenzene	0.0061	MG/KG	U	27	NA	nc	NA	nc	NA
CMS-060	0	1	Isopropylbenzene	2.7	MG/KG	U	27	NA	nc	NA	nc	NA
CMS-065	0	10	Isopropylbenzene	3.9	MG/KG	U	27	NA	nc	NA	nc	NA
MW05S	1	2	Isopropylbenzene	0.095	MG/KG	U	27	NA	nc	NA	nc	NA
MW01S	1	2	Isopropylbenzene	0.34	MG/KG	U	27	NA	nc	NA	nc	NA
MW05S	1	2	Isopropylbenzene	0.11	MG/KG	U	27	NA	nc	NA	nc	NA
MW14M	1	2	Isopropylbenzene	0.11	MG/KG	U	27	NA	nc	NA	nc	NA
CMS-060	1	2	Isopropylbenzene	5.1	MG/KG	U	27	NA	nc	NA	nc	NA
CMS-089	1	2	Isopropylbenzene	0.0048	MG/KG	U	27	NA	nc	NA	nc	NA
CMS-405	1	2	Isopropylbenzene	4	MG/KG	U	27	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-408	1	2	Isopropylbenzene	2.2	MG/KG	U	27	NA	nc	NA	nc	NA
CMS-417	1	2	Isopropylbenzene	130	MG/KG	U	27	NA	nc	NA	nc	NA
CMS-423	1	2	Isopropylbenzene	0.0062	MG/KG	U	27	NA	nc	NA	nc	NA
CMS-427	1	2	Isopropylbenzene	0.0045	MG/KG	U	27	NA	nc	NA	nc	NA
CMS-428	1	2	Isopropylbenzene	0.0054	MG/KG	U	27	NA	nc	NA	nc	NA
CMS-408	2	3	Isopropylbenzene	6.6	MG/KG	U	27	NA	nc	NA	nc	NA
CMS-417	2	3	Isopropylbenzene	17	MG/KG	U	27	NA	nc	NA	nc	NA
MW08S	2	4	Isopropylbenzene	0.21	MG/KG	U	27	NA	nc	NA	nc	NA
MW01S	2	4	Isopropylbenzene	0.22	MG/KG	U	27	NA	nc	NA	nc	NA
MW02S	2	4	Isopropylbenzene	0.2	MG/KG	U	27	NA	nc	NA	nc	NA
MW04D	2	4	Isopropylbenzene	0.5	MG/KG	U	27	NA	nc	NA	nc	NA
MW05S	2	4	Isopropylbenzene	0.1	MG/KG	U	27	NA	nc	NA	nc	NA
MW06S	2	4	Isopropylbenzene	0.3	MG/KG	U	27	NA	nc	NA	nc	NA
MW06S	2	4	Isopropylbenzene	0.3	MG/KG	U	27	NA	nc	NA	nc	NA
MW08S	2	4	Isopropylbenzene	0.32	MG/KG	U	27	NA	nc	NA	nc	NA
MW14M	2	4	Isopropylbenzene	0.14	MG/KG	U	27	NA	nc	NA	nc	NA
MW15D	2	4	Isopropylbenzene	0.14	MG/KG	U	27	NA	nc	NA	nc	NA
SB02	2	4	Isopropylbenzene	0.38	MG/KG	U	27	NA	nc	NA	nc	NA
SB03	2	4	Isopropylbenzene	0.3	MG/KG	U	27	NA	nc	NA	nc	NA
MW07S	3	4	Isopropylbenzene	0.5	MG/KG	U	27	NA	nc	NA	nc	NA
CMS-060	3	4	Isopropylbenzene	0.0058	MG/KG	U	27	NA	nc	NA	nc	NA
CMS-089	3	4	Isopropylbenzene	0.0041	MG/KG	U	27	NA	nc	NA	nc	NA
CMS-118	3	4	Isopropylbenzene	0.0084	MG/KG	U	27	NA	nc	NA	nc	NA
CMS-407	3	4	Isopropylbenzene	0.32	MG/KG	U	27	NA	nc	NA	nc	NA
CMS-417	3	4	Isopropylbenzene	0.28	MG/KG	U	27	NA	nc	NA	nc	NA
CMS-423	3	4	Isopropylbenzene	0.0045	MG/KG	U	27	NA	nc	NA	nc	NA
CMS-428	3	4	Isopropylbenzene	0.0057	MG/KG	U	27	NA	nc	NA	nc	NA
CMS-423	3	4	Isopropylbenzene	0.0049	MG/KG	U	27	NA	nc	NA	nc	NA
CMS-060	4	5	Isopropylbenzene	0.0048	MG/KG	U	27	NA	nc	NA	nc	NA
CMS-118	4	5	Isopropylbenzene	0.0059	MG/KG	U	27	NA	nc	NA	nc	NA
CMS-405	4	5	Isopropylbenzene	1	MG/KG	U	27	NA	nc	NA	nc	NA
CMS-455	4	5	Isopropylbenzene	0.0072	MG/KG	U	27	NA	nc	NA	nc	NA
MW15D	4	6	Isopropylbenzene	0.1	MG/KG	U	27	NA	nc	NA	nc	NA
MW02S	4	6	Isopropylbenzene	0.55	MG/KG	U	27	NA	nc	NA	nc	NA
SB03	4	6	Isopropylbenzene	0.2	MG/KG	U	27	NA	nc	NA	nc	NA
MW01S	4	6	Isopropylbenzene	0.24	MG/KG	U	27	NA	nc	NA	nc	NA
MW02S	4	6	Isopropylbenzene	0.42	MG/KG	U	27	NA	nc	NA	nc	NA
MW03S	4	6	Isopropylbenzene	0.35	MG/KG	U	27	NA	nc	NA	nc	NA
MW04D	4	6	Isopropylbenzene	0.18	MG/KG	U	27	NA	nc	NA	nc	NA
MW06S	4	6	Isopropylbenzene	0.43	MG/KG	U	27	NA	nc	NA	nc	NA
MW07S	4	6	Isopropylbenzene	0.26	MG/KG	U	27	NA	nc	NA	nc	NA
MW08S	4	6	Isopropylbenzene	0.3	MG/KG	U	27	NA	nc	NA	nc	NA
MW09S	4	6	Isopropylbenzene	0.26	MG/KG	U	27	NA	nc	NA	nc	NA
MW15D	4	6	Isopropylbenzene	0.12	MG/KG	U	27	NA	nc	NA	nc	NA
SB02	4	6	Isopropylbenzene	0.26	MG/KG	U	27	NA	nc	NA	nc	NA
SB03	4	6	Isopropylbenzene	0.18	MG/KG	U	27	NA	nc	NA	nc	NA
CMS-098	0	1	Isopropylbenzene	0.0097	MG/KG	UJ	27	NA	nc	NA	nc	NA
CMS-142	0	1	Isopropylbenzene	0.0095	MG/KG	UJ	27	NA	nc	NA	nc	NA
CMS-164	0	1	Isopropylbenzene	0.015	MG/KG	UJ	27	NA	nc	NA	nc	NA
CMS-173	0	1	Isopropylbenzene	0.024	MG/KG	UJ	27	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-237	0	1	Isopropylbenzene	0.0059	MG/KG	UJ	27	NA	nc	NA	nc	NA
CMS-142	0	1	Isopropylbenzene	0.011	MG/KG	UJ	27	NA	nc	NA	nc	NA
MW14M	1	2	Isopropylbenzene	0.15	MG/KG	UJ	27	NA	nc	NA	nc	NA
SB-14-271	1	2	Isopropylbenzene	0.12	MG/KG	UJ	27	NA	nc	NA	nc	NA
CMS-118	1	2	Isopropylbenzene	0.006	MG/KG	UJ	27	NA	nc	NA	nc	NA
CMS-173	1	2	Isopropylbenzene	0.0083	MG/KG	UJ	27	NA	nc	NA	nc	NA
CMS-237	1	2	Isopropylbenzene	0.0069	MG/KG	UJ	27	NA	nc	NA	nc	NA
CMS-456	1	2	Isopropylbenzene	0.0089	MG/KG	UJ	27	NA	nc	NA	nc	NA
CMS-405	1	2	Isopropylbenzene	2.9	MG/KG	UJ	27	NA	nc	NA	nc	NA
CMS-060	2	3	Isopropylbenzene	0.27	MG/KG	UJ	27	NA	nc	NA	nc	NA
CMS-089	2	3	Isopropylbenzene	0.0047	MG/KG	UJ	27	NA	nc	NA	nc	NA
CMS-118	2	3	Isopropylbenzene	0.0074	MG/KG	UJ	27	NA	nc	NA	nc	NA
SB-14-271	2	4	Isopropylbenzene	0.13	MG/KG	UJ	27	NA	nc	NA	nc	NA
SB-14-271	4	6	Isopropylbenzene	0.11	MG/KG	UJ	27	NA	nc	NA	nc	NA
MW08S	1	2	Isopropylbenzene	0.36	MG/KG		27	N	nc	NA	nc	NA
CMS-427	3	4	Isopropylbenzene	0.007	MG/KG		27	N	nc	NA	nc	NA
CMS-089	0	1	Lead	48.5	MG/KG	J	150	N	nc	NA	nc	NA
CMS-098	0	1	Lead	59.7	MG/KG	J	150	N	nc	NA	nc	NA
CMS-142	0	1	Lead	95.8	MG/KG	J	150	N	nc	NA	nc	NA
CMS-164	0	1	Lead	323	MG/KG	J	150	Y	nc	NA	nc	NA
CMS-173	0	1	Lead	243	MG/KG	J	150	Y	nc	NA	nc	NA
CMS-237	0	1	Lead	228	MG/KG	J	150	Y	nc	NA	nc	NA
CMS-405	0	1	Lead	4.7	MG/KG	J	150	N	nc	NA	nc	NA
CMS-407	0	1	Lead	2.8	MG/KG	J	150	N	nc	NA	nc	NA
CMS-408	0	1	Lead	4.1	MG/KG	J	150	N	nc	NA	nc	NA
CMS-417	0	1	Lead	805	MG/KG	J	150	Y	nc	NA	nc	NA
CMS-142	0	1	Lead	66.7	MG/KG	J	150	N	nc	NA	nc	NA
CMS-060	0	1	Lead	65.3	MG/KG	J	150	N	nc	NA	nc	NA
RES-14-333-01	0	1	Lead	590	MG/KG	J	150	Y	nc	NA	nc	NA
MW05S	1	2	Lead	3.5	MG/KG	J	150	N	nc	NA	nc	NA
MW05S	1	2	Lead	3.9	MG/KG	J	150	N	nc	NA	nc	NA
SB-14-271	1	2	Lead	303	MG/KG	J	150	Y	nc	NA	nc	NA
CMS-089	1	2	Lead	93	MG/KG	J	150	N	nc	NA	nc	NA
CMS-173	1	2	Lead	11.9	MG/KG	J	150	N	nc	NA	nc	NA
CMS-237	1	2	Lead	1450	MG/KG	J	150	Y	nc	NA	nc	NA
CMS-405	1	2	Lead	306	MG/KG	J	150	Y	nc	NA	nc	NA
CMS-407	1	2	Lead	14.4	MG/KG	J	150	N	nc	NA	nc	NA
CMS-408	1	2	Lead	716	MG/KG	J	150	Y	nc	NA	nc	NA
CMS-417	1	2	Lead	444	MG/KG	J	150	Y	nc	NA	nc	NA
CMS-419	1	2	Lead	2010	MG/KG	J	150	Y	nc	NA	nc	NA
CMS-423	1	2	Lead	24.1	MG/KG	J	150	N	nc	NA	nc	NA
CMS-427	1	2	Lead	169	MG/KG	J	150	Y	nc	NA	nc	NA
CMS-428	1	2	Lead	6.8	MG/KG	J	150	N	nc	NA	nc	NA
CMS-405	1	2	Lead	450	MG/KG	J	150	Y	nc	NA	nc	NA
CMS-089	2	3	Lead	59.4	MG/KG	J	150	N	nc	NA	nc	NA
CMS-237	2	3	Lead	494	MG/KG	J	150	Y	nc	NA	nc	NA
CMS-405	2	3	Lead	1080	MG/KG	J	150	Y	nc	NA	nc	NA
CMS-407	2	3	Lead	184	MG/KG	J	150	Y	nc	NA	nc	NA
CMS-408	2	3	Lead	861	MG/KG	J	150	Y	nc	NA	nc	NA
CMS-417	2	3	Lead	374	MG/KG	J	150	Y	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW05S	2	4	Lead	99	MG/KG	J	150	N	nc	NA	nc	NA
MW06S	2	4	Lead	204	MG/KG	J	150	Y	nc	NA	nc	NA
MW06S	2	4	Lead	103	MG/KG	J	150	N	nc	NA	nc	NA
MW15D	2	4	Lead	15.2	MG/KG	J	150	N	nc	NA	nc	NA
SB-14-271	2	4	Lead	14.7	MG/KG	J	150	N	nc	NA	nc	NA
MW07S	3	4	Lead	44.1	MG/KG	J	150	N	nc	NA	nc	NA
CMS-089	3	4	Lead	73.7	MG/KG	J	150	N	nc	NA	nc	NA
CMS-405	3	4	Lead	3160	MG/KG	J	150	Y	nc	NA	nc	NA
CMS-407	3	4	Lead	321	MG/KG	J	150	Y	nc	NA	nc	NA
CMS-417	3	4	Lead	66.7	MG/KG	J	150	N	nc	NA	nc	NA
CMS-419	3	4	Lead	27.1	MG/KG	J	150	N	nc	NA	nc	NA
CMS-423	3	4	Lead	55.3	MG/KG	J	150	N	nc	NA	nc	NA
CMS-427	3	4	Lead	13.8	MG/KG	J	150	N	nc	NA	nc	NA
CMS-428	3	4	Lead	5.6	MG/KG	J	150	N	nc	NA	nc	NA
CMS-423	3	4	Lead	101	MG/KG	J	150	N	nc	NA	nc	NA
CMS-405	4	5	Lead	38.5	MG/KG	J	150	N	nc	NA	nc	NA
CMS-455	4	5	Lead	8.8	MG/KG	J	150	N	nc	NA	nc	NA
MW15D	4	6	Lead	43.7	MG/KG	J	150	N	nc	NA	nc	NA
MW04D	4	6	Lead	4.6	MG/KG	J	150	N	nc	NA	nc	NA
MW06S	4	6	Lead	177	MG/KG	J	150	Y	nc	NA	nc	NA
MW07S	4	6	Lead	35.6	MG/KG	J	150	N	nc	NA	nc	NA
MW09S	4	6	Lead	110	MG/KG	J	150	N	nc	NA	nc	NA
MW15D	4	6	Lead	66	MG/KG	J	150	N	nc	NA	nc	NA
SB-14-271	4	6	Lead	10.8	MG/KG	J	150	N	nc	NA	nc	NA
CMS-4105	0	1	Lead	1110	MG/KG	J	150	Y	nc	NA	nc	NA
CMS-4110	0	1	Lead	761	MG/KG	J	150	Y	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Lead	91.9	MG/KG		150	N	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Lead	146	MG/KG		150	N	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Lead	41.9	MG/KG		150	N	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Lead	561	MG/KG		150	Y	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Lead	287	MG/KG		150	Y	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Lead	558	MG/KG		150	Y	nc	NA	nc	NA
CMS-060	0	1	Lead	35.7	MG/KG		150	N	nc	NA	nc	NA
CMS-118	0	1	Lead	69.8	MG/KG		150	N	nc	NA	nc	NA
CMS-159	0	1	Lead	620	MG/KG		150	Y	nc	NA	nc	NA
CMS-456	0	1	Lead	175	MG/KG		150	Y	nc	NA	nc	NA
RES-14-271-01	0	1	Lead	61	MG/KG		150	N	nc	NA	nc	NA
RES-14-272-01	0	1	Lead	269	MG/KG		150	Y	nc	NA	nc	NA
RES-14-302-01	0	1	Lead	299	MG/KG		150	Y	nc	NA	nc	NA
RES-14-303-01	0	1	Lead	946	MG/KG		150	Y	nc	NA	nc	NA
RES-14-271-01	0	1	Lead	71.2	MG/KG		150	N	nc	NA	nc	NA
RES-14-272-01	0	1	Lead	359	MG/KG		150	Y	nc	NA	nc	NA
CMS-703	0	2	Lead	84.9	MG/KG		150	N	nc	NA	nc	NA
BV01COMP	0	4	Lead	523	MG/KG		150	Y	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Lead	138	MG/KG		150	N	nc	NA	nc	NA
MW14M	1	2	Lead	97.5	MG/KG		150	N	nc	NA	nc	NA
MW01S	1	2	Lead	118	MG/KG		150	N	nc	NA	nc	NA
MW08S	1	2	Lead	380	MG/KG		150	Y	nc	NA	nc	NA
MW14M	1	2	Lead	100	MG/KG		150	N	nc	NA	nc	NA
CMS-060	1	2	Lead	66.9	MG/KG		150	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-118	1	2	Lead	88.2	MG/KG		150	N	nc	NA	nc	NA
CMS-456	1	2	Lead	448	MG/KG		150	Y	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Lead	32.6	MG/KG		150	N	nc	NA	nc	NA
CMS-060	2	3	Lead	45.9	MG/KG		150	N	nc	NA	nc	NA
CMS-118	2	3	Lead	204	MG/KG		150	Y	nc	NA	nc	NA
CMS-455	2	3	Lead	62.3	MG/KG		150	N	nc	NA	nc	NA
MW08S	2	4	Lead	387	MG/KG		150	Y	nc	NA	nc	NA
SB02	2	4	Lead	211	MG/KG		150	Y	nc	NA	nc	NA
MW02S	2	4	Lead	13.8	MG/KG		150	N	nc	NA	nc	NA
MW08S	2	4	Lead	298	MG/KG		150	Y	nc	NA	nc	NA
MW14M	2	4	Lead	138	MG/KG		150	N	nc	NA	nc	NA
SB02	2	4	Lead	150	MG/KG		150	N	nc	NA	nc	NA
SB03	2	4	Lead	55.6	MG/KG		150	N	nc	NA	nc	NA
GEC-7	2.5	4.5	Lead	95	MG/KG		150	N	nc	NA	nc	NA
CMS-060	3	4	Lead	15.7	MG/KG		150	N	nc	NA	nc	NA
CMS-118	3	4	Lead	182	MG/KG		150	Y	nc	NA	nc	NA
CMS-060	4	5	Lead	35.8	MG/KG		150	N	nc	NA	nc	NA
CMS-118	4	5	Lead	22.5	MG/KG		150	N	nc	NA	nc	NA
SB03	4	6	Lead	7.4	MG/KG		150	N	nc	NA	nc	NA
MW01S	4	6	Lead	38.2	MG/KG		150	N	nc	NA	nc	NA
MW03S	4	6	Lead	204	MG/KG		150	Y	nc	NA	nc	NA
MW05S	4	6	Lead	115	MG/KG		150	N	nc	NA	nc	NA
MW08S	4	6	Lead	13.7	MG/KG		150	N	nc	NA	nc	NA
SB02	4	6	Lead	88	MG/KG		150	N	nc	NA	nc	NA
SB03	4	6	Lead	10	MG/KG		150	N	nc	NA	nc	NA
CMS-164	0	1	Manganese	489	MG/KG	J	390	Y	nc	NA	nc	NA
CMS-237	0	1	Manganese	153	MG/KG	J	390	N	nc	NA	nc	NA
CMS-405	0	1	Manganese	211	MG/KG	J	390	N	nc	NA	nc	NA
CMS-417	0	1	Manganese	123	MG/KG	J	390	N	nc	NA	nc	NA
CMS-456	0	1	Manganese	1700	MG/KG	J	390	Y	nc	NA	nc	NA
RES-14-333-01	0	1	Manganese	1250	MG/KG	J	390	Y	nc	NA	nc	NA
MW05S	1	2	Manganese	122	MG/KG	J	390	N	nc	NA	nc	NA
MW01S	1	2	Manganese	197	MG/KG	J	390	N	nc	NA	nc	NA
MW05S	1	2	Manganese	161	MG/KG	J	390	N	nc	NA	nc	NA
MW08S	1	2	Manganese	334	MG/KG	J	390	N	nc	NA	nc	NA
SB-14-271	1	2	Manganese	179	MG/KG	J	390	N	nc	NA	nc	NA
CMS-237	1	2	Manganese	404	MG/KG	J	390	Y	nc	NA	nc	NA
CMS-405	1	2	Manganese	453	MG/KG	J	390	Y	nc	NA	nc	NA
CMS-417	1	2	Manganese	220	MG/KG	J	390	N	nc	NA	nc	NA
CMS-428	1	2	Manganese	567	MG/KG	J	390	Y	nc	NA	nc	NA
CMS-456	1	2	Manganese	244	MG/KG	J	390	N	nc	NA	nc	NA
CMS-405	1	2	Manganese	336	MG/KG	J	390	N	nc	NA	nc	NA
CMS-237	2	3	Manganese	396	MG/KG	J	390	Y	nc	NA	nc	NA
CMS-405	2	3	Manganese	526	MG/KG	J	390	Y	nc	NA	nc	NA
CMS-417	2	3	Manganese	158	MG/KG	J	390	N	nc	NA	nc	NA
CMS-455	2	3	Manganese	184	MG/KG	J	390	N	nc	NA	nc	NA
MW08S	2	4	Manganese	485	MG/KG	J	390	Y	nc	NA	nc	NA
MW05S	2	4	Manganese	225	MG/KG	J	390	N	nc	NA	nc	NA
MW06S	2	4	Manganese	121	MG/KG	J	390	N	nc	NA	nc	NA
MW06S	2	4	Manganese	176	MG/KG	J	390	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW08S	2	4	Manganese	327	MG/KG	J	390	N	nc	NA	nc	NA
SB-14-271	2	4	Manganese	41.4	MG/KG	J	390	N	nc	NA	nc	NA
MW07S	3	4	Manganese	571	MG/KG	J	390	Y	nc	NA	nc	NA
CMS-405	3	4	Manganese	1060	MG/KG	J	390	Y	nc	NA	nc	NA
CMS-417	3	4	Manganese	150	MG/KG	J	390	N	nc	NA	nc	NA
CMS-428	3	4	Manganese	258	MG/KG	J	390	N	nc	NA	nc	NA
CMS-405	4	5	Manganese	81.7	MG/KG	J	390	N	nc	NA	nc	NA
CMS-455	4	5	Manganese	179	MG/KG	J	390	N	nc	NA	nc	NA
MW01S	4	6	Manganese	76.9	MG/KG	J	390	N	nc	NA	nc	NA
MW03S	4	6	Manganese	57.1	MG/KG	J	390	N	nc	NA	nc	NA
MW04D	4	6	Manganese	226	MG/KG	J	390	N	nc	NA	nc	NA
MW06S	4	6	Manganese	162	MG/KG	J	390	N	nc	NA	nc	NA
MW07S	4	6	Manganese	140	MG/KG	J	390	N	nc	NA	nc	NA
MW08S	4	6	Manganese	168	MG/KG	J	390	N	nc	NA	nc	NA
MW09S	4	6	Manganese	232	MG/KG	J	390	N	nc	NA	nc	NA
SB-14-271	4	6	Manganese	55.1	MG/KG	J	390	N	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Manganese	128	MG/KG		390	N	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Manganese	376	MG/KG		390	N	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Manganese	39.1	MG/KG		390	N	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Manganese	381	MG/KG		390	N	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Manganese	214	MG/KG		390	N	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Manganese	269	MG/KG		390	N	nc	NA	nc	NA
CMS-060	0	1	Manganese	271	MG/KG		390	N	nc	NA	nc	NA
CMS-089	0	1	Manganese	132	MG/KG		390	N	nc	NA	nc	NA
CMS-098	0	1	Manganese	353	MG/KG		390	N	nc	NA	nc	NA
CMS-118	0	1	Manganese	172	MG/KG		390	N	nc	NA	nc	NA
CMS-142	0	1	Manganese	82.9	MG/KG		390	N	nc	NA	nc	NA
CMS-159	0	1	Manganese	362	MG/KG		390	N	nc	NA	nc	NA
CMS-173	0	1	Manganese	186	MG/KG		390	N	nc	NA	nc	NA
CMS-407	0	1	Manganese	237	MG/KG		390	N	nc	NA	nc	NA
CMS-408	0	1	Manganese	233	MG/KG		390	N	nc	NA	nc	NA
CMS-142	0	1	Manganese	69.8	MG/KG		390	N	nc	NA	nc	NA
CMS-060	0	1	Manganese	214	MG/KG		390	N	nc	NA	nc	NA
RES-14-271-01	0	1	Manganese	510	MG/KG		390	Y	nc	NA	nc	NA
RES-14-272-01	0	1	Manganese	315	MG/KG		390	N	nc	NA	nc	NA
RES-14-302-01	0	1	Manganese	386	MG/KG		390	N	nc	NA	nc	NA
RES-14-303-01	0	1	Manganese	228	MG/KG		390	N	nc	NA	nc	NA
RES-14-271-01	0	1	Manganese	598	MG/KG		390	Y	nc	NA	nc	NA
RES-14-272-01	0	1	Manganese	327	MG/KG		390	N	nc	NA	nc	NA
CMS-703	0	2	Manganese	255	MG/KG		390	N	nc	NA	nc	NA
BV01COMP	0	4	Manganese	138	MG/KG		390	N	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Manganese	52.1	MG/KG		390	N	nc	NA	nc	NA
MW14M	1	2	Manganese	147	MG/KG		390	N	nc	NA	nc	NA
MW14M	1	2	Manganese	175	MG/KG		390	N	nc	NA	nc	NA
CMS-060	1	2	Manganese	170	MG/KG		390	N	nc	NA	nc	NA
CMS-089	1	2	Manganese	185	MG/KG		390	N	nc	NA	nc	NA
CMS-118	1	2	Manganese	197	MG/KG		390	N	nc	NA	nc	NA
CMS-173	1	2	Manganese	108	MG/KG		390	N	nc	NA	nc	NA
CMS-407	1	2	Manganese	316	MG/KG		390	N	nc	NA	nc	NA
CMS-408	1	2	Manganese	353	MG/KG		390	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-419	1	2	Manganese	351	MG/KG		390	N	nc	NA	nc	NA
CMS-423	1	2	Manganese	209	MG/KG		390	N	nc	NA	nc	NA
CMS-427	1	2	Manganese	251	MG/KG		390	N	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Manganese	35.7	MG/KG		390	N	nc	NA	nc	NA
CMS-060	2	3	Manganese	370	MG/KG		390	N	nc	NA	nc	NA
CMS-089	2	3	Manganese	78.3	MG/KG		390	N	nc	NA	nc	NA
CMS-118	2	3	Manganese	543	MG/KG		390	Y	nc	NA	nc	NA
CMS-407	2	3	Manganese	356	MG/KG		390	N	nc	NA	nc	NA
CMS-408	2	3	Manganese	195	MG/KG		390	N	nc	NA	nc	NA
SB02	2	4	Manganese	128	MG/KG		390	N	nc	NA	nc	NA
MW02S	2	4	Manganese	101	MG/KG		390	N	nc	NA	nc	NA
MW14M	2	4	Manganese	279	MG/KG		390	N	nc	NA	nc	NA
MW15D	2	4	Manganese	75.9	MG/KG		390	N	nc	NA	nc	NA
SB02	2	4	Manganese	168	MG/KG		390	N	nc	NA	nc	NA
SB03	2	4	Manganese	65.2	MG/KG		390	N	nc	NA	nc	NA
CMS-060	3	4	Manganese	267	MG/KG		390	N	nc	NA	nc	NA
CMS-089	3	4	Manganese	146	MG/KG		390	N	nc	NA	nc	NA
CMS-118	3	4	Manganese	596	MG/KG		390	Y	nc	NA	nc	NA
CMS-407	3	4	Manganese	201	MG/KG		390	N	nc	NA	nc	NA
CMS-419	3	4	Manganese	348	MG/KG		390	N	nc	NA	nc	NA
CMS-423	3	4	Manganese	274	MG/KG		390	N	nc	NA	nc	NA
CMS-427	3	4	Manganese	204	MG/KG		390	N	nc	NA	nc	NA
CMS-423	3	4	Manganese	225	MG/KG		390	N	nc	NA	nc	NA
CMS-060	4	5	Manganese	244	MG/KG		390	N	nc	NA	nc	NA
CMS-118	4	5	Manganese	195	MG/KG		390	N	nc	NA	nc	NA
SB03	4	6	Manganese	92.3	MG/KG		390	N	nc	NA	nc	NA
MW15D	4	6	Manganese	142	MG/KG		390	N	nc	NA	nc	NA
MW05S	4	6	Manganese	259	MG/KG		390	N	nc	NA	nc	NA
MW15D	4	6	Manganese	160	MG/KG		390	N	nc	NA	nc	NA
SB02	4	6	Manganese	129	MG/KG		390	N	nc	NA	nc	NA
SB03	4	6	Manganese	102	MG/KG		390	N	nc	NA	nc	NA
CMS-4105	0	1	Manganese	480	MG/KG		390	Y	nc	NA	nc	NA
CMS-4110	0	1	Manganese	423	MG/KG		390	Y	nc	NA	nc	NA
CMS-060	0	1	Mercury	0.037	MG/KG	J	23	N	nc	NA	nc	NA
CMS-089	0	1	Mercury	0.082	MG/KG	J	23	N	nc	NA	nc	NA
CMS-098	0	1	Mercury	0.14	MG/KG	J	23	N	nc	NA	nc	NA
CMS-118	0	1	Mercury	0.14	MG/KG	J	23	N	nc	NA	nc	NA
CMS-142	0	1	Mercury	0.3	MG/KG	J	23	N	nc	NA	nc	NA
CMS-159	0	1	Mercury	2	MG/KG	J	23	N	nc	NA	nc	NA
CMS-173	0	1	Mercury	0.97	MG/KG	J	23	N	nc	NA	nc	NA
CMS-456	0	1	Mercury	0.31	MG/KG	J	23	N	nc	NA	nc	NA
CMS-142	0	1	Mercury	0.31	MG/KG	J	23	N	nc	NA	nc	NA
CMS-060	0	1	Mercury	0.067	MG/KG	J	23	N	nc	NA	nc	NA
RES-14-302-01	0	1	Mercury	0.27	MG/KG	J	23	N	nc	NA	nc	NA
BV01COMP	0	4	Mercury	0.021	MG/KG	J	23	N	nc	NA	nc	NA
SB-14-271	1	2	Mercury	0.095	MG/KG	J	23	N	nc	NA	nc	NA
CMS-060	1	2	Mercury	0.07	MG/KG	J	23	N	nc	NA	nc	NA
CMS-089	1	2	Mercury	0.25	MG/KG	J	23	N	nc	NA	nc	NA
CMS-118	1	2	Mercury	0.14	MG/KG	J	23	N	nc	NA	nc	NA
CMS-173	1	2	Mercury	0.034	MG/KG	J	23	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-407	1	2	Mercury	0.12	MG/KG	J	23	N	nc	NA	nc	NA
CMS-408	1	2	Mercury	1.8	MG/KG	J	23	N	nc	NA	nc	NA
CMS-419	1	2	Mercury	5.1	MG/KG	J	23	N	nc	NA	nc	NA
CMS-423	1	2	Mercury	0.24	MG/KG	J	23	N	nc	NA	nc	NA
CMS-427	1	2	Mercury	0.77	MG/KG	J	23	N	nc	NA	nc	NA
CMS-456	1	2	Mercury	0.88	MG/KG	J	23	N	nc	NA	nc	NA
CMS-060	2	3	Mercury	0.06	MG/KG	J	23	N	nc	NA	nc	NA
CMS-089	2	3	Mercury	0.28	MG/KG	J	23	N	nc	NA	nc	NA
CMS-118	2	3	Mercury	0.65	MG/KG	J	23	N	nc	NA	nc	NA
CMS-407	2	3	Mercury	0.25	MG/KG	J	23	N	nc	NA	nc	NA
CMS-408	2	3	Mercury	0.96	MG/KG	J	23	N	nc	NA	nc	NA
CMS-455	2	3	Mercury	0.75	MG/KG	J	23	N	nc	NA	nc	NA
MW05S	2	4	Mercury	0.1	MG/KG	J	23	N	nc	NA	nc	NA
MW14M	2	4	Mercury	0.17	MG/KG	J	23	N	nc	NA	nc	NA
CMS-060	3	4	Mercury	0.03	MG/KG	J	23	N	nc	NA	nc	NA
CMS-089	3	4	Mercury	0.18	MG/KG	J	23	N	nc	NA	nc	NA
CMS-118	3	4	Mercury	0.43	MG/KG	J	23	N	nc	NA	nc	NA
CMS-407	3	4	Mercury	0.14	MG/KG	J	23	N	nc	NA	nc	NA
CMS-419	3	4	Mercury	0.12	MG/KG	J	23	N	nc	NA	nc	NA
CMS-423	3	4	Mercury	0.094	MG/KG	J	23	N	nc	NA	nc	NA
CMS-427	3	4	Mercury	0.17	MG/KG	J	23	N	nc	NA	nc	NA
CMS-428	3	4	Mercury	0.023	MG/KG	J	23	N	nc	NA	nc	NA
CMS-423	3	4	Mercury	0.18	MG/KG	J	23	N	nc	NA	nc	NA
CMS-060	4	5	Mercury	0.031	MG/KG	J	23	N	nc	NA	nc	NA
MW15D	4	6	Mercury	0.094	MG/KG	J	23	N	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Mercury	0.02	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-405	0	1	Mercury	0.042	MG/KG	U	23	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Mercury	0.16	MG/KG	U	23	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Mercury	0.15	MG/KG	U	23	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Mercury	0.17	MG/KG	U	23	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Mercury	0.2	MG/KG	U	23	NA	nc	NA	nc	NA
MW05S	1	2	Mercury	0.05	MG/KG	U	23	NA	nc	NA	nc	NA
MW05S	1	2	Mercury	0.051	MG/KG	U	23	NA	nc	NA	nc	NA
MW02S	2	4	Mercury	0.05	MG/KG	U	23	NA	nc	NA	nc	NA
MW15D	2	4	Mercury	0.056	MG/KG	U	23	NA	nc	NA	nc	NA
SB-14-271	2	4	Mercury	0.065	MG/KG	U	23	NA	nc	NA	nc	NA
MW07S	3	4	Mercury	0.05	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-118	4	5	Mercury	0.052	MG/KG	U	23	NA	nc	NA	nc	NA
SB03	4	6	Mercury	0.049	MG/KG	U	23	NA	nc	NA	nc	NA
MW01S	4	6	Mercury	0.06	MG/KG	U	23	NA	nc	NA	nc	NA
MW03S	4	6	Mercury	0.06	MG/KG	U	23	NA	nc	NA	nc	NA
MW04D	4	6	Mercury	0.06	MG/KG	U	23	NA	nc	NA	nc	NA
MW07S	4	6	Mercury	0.06	MG/KG	U	23	NA	nc	NA	nc	NA
MW08S	4	6	Mercury	0.06	MG/KG	U	23	NA	nc	NA	nc	NA
MW15D	4	6	Mercury	0.049	MG/KG	U	23	NA	nc	NA	nc	NA
SB-14-271	4	6	Mercury	0.051	MG/KG	U	23	NA	nc	NA	nc	NA
SB03	4	6	Mercury	0.055	MG/KG	U	23	NA	nc	NA	nc	NA
CMS-407	0	1	Mercury	0.043	MG/KG	UJ	23	NA	nc	NA	nc	NA
CMS-408	0	1	Mercury	0.041	MG/KG	UJ	23	NA	nc	NA	nc	NA
MW14M	1	2	Mercury	0.1	MG/KG	UJ	23	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW14M	1	2	Mercury	0.1	MG/KG	UJ	23	NA	nc	NA	nc	NA
CMS-428	1	2	Mercury	0.043	MG/KG	UJ	23	NA	nc	NA	nc	NA
CMS-455	4	5	Mercury	0.058	MG/KG	UJ	23	NA	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Mercury	0.23	MG/KG		23	N	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Mercury	0.03	MG/KG		23	N	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Mercury	0.59	MG/KG		23	N	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Mercury	0.57	MG/KG		23	N	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Mercury	0.27	MG/KG		23	N	nc	NA	nc	NA
CMS-164	0	1	Mercury	1.1	MG/KG		23	N	nc	NA	nc	NA
CMS-237	0	1	Mercury	0.31	MG/KG		23	N	nc	NA	nc	NA
CMS-417	0	1	Mercury	7.4	MG/KG		23	N	nc	NA	nc	NA
RES-14-303-01	0	1	Mercury	0.62	MG/KG		23	N	nc	NA	nc	NA
CMS-703	0	2	Mercury	0.1	MG/KG		23	N	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Mercury	0.93	MG/KG		23	N	nc	NA	nc	NA
MW01S	1	2	Mercury	0.15	MG/KG		23	N	nc	NA	nc	NA
MW08S	1	2	Mercury	0.23	MG/KG		23	N	nc	NA	nc	NA
CMS-237	1	2	Mercury	0.83	MG/KG		23	N	nc	NA	nc	NA
CMS-405	1	2	Mercury	0.15	MG/KG		23	N	nc	NA	nc	NA
CMS-417	1	2	Mercury	1.5	MG/KG		23	N	nc	NA	nc	NA
CMS-405	1	2	Mercury	0.38	MG/KG		23	N	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Mercury	0.55	MG/KG		23	N	nc	NA	nc	NA
CMS-237	2	3	Mercury	0.7	MG/KG		23	N	nc	NA	nc	NA
CMS-405	2	3	Mercury	0.097	MG/KG		23	N	nc	NA	nc	NA
CMS-417	2	3	Mercury	0.24	MG/KG		23	N	nc	NA	nc	NA
MW08S	2	4	Mercury	0.95	MG/KG		23	N	nc	NA	nc	NA
SB02	2	4	Mercury	0.66	MG/KG		23	N	nc	NA	nc	NA
MW06S	2	4	Mercury	0.2	MG/KG		23	N	nc	NA	nc	NA
MW06S	2	4	Mercury	0.16	MG/KG		23	N	nc	NA	nc	NA
MW08S	2	4	Mercury	0.5	MG/KG		23	N	nc	NA	nc	NA
SB02	2	4	Mercury	0.49	MG/KG		23	N	nc	NA	nc	NA
SB03	2	4	Mercury	0.52	MG/KG		23	N	nc	NA	nc	NA
CMS-405	3	4	Mercury	0.95	MG/KG		23	N	nc	NA	nc	NA
CMS-417	3	4	Mercury	0.22	MG/KG		23	N	nc	NA	nc	NA
CMS-405	4	5	Mercury	0.29	MG/KG		23	N	nc	NA	nc	NA
MW05S	4	6	Mercury	0.82	MG/KG		23	N	nc	NA	nc	NA
MW06S	4	6	Mercury	0.14	MG/KG		23	N	nc	NA	nc	NA
MW09S	4	6	Mercury	0.15	MG/KG		23	N	nc	NA	nc	NA
SB02	4	6	Mercury	0.21	MG/KG		23	N	nc	NA	nc	NA
CMS-4105	0	1	Mercury	2.98	MG/KG		23	N	nc	NA	nc	NA
CMS-4110	0	1	Mercury	5.91	MG/KG		23	N	nc	NA	nc	NA
CMS-065	0	10	Methyl Tert-butyl Ether	7.9	MG/KG	U	390	NA	0.9	NA	nc	NA
MW05S	1	2	Methyl Tert-butyl Ether	0.095	MG/KG	U	390	NA	0.9	NA	nc	NA
MW01S	1	2	Methyl Tert-butyl Ether	0.34	MG/KG	U	390	NA	0.9	NA	nc	NA
MW05S	1	2	Methyl Tert-butyl Ether	0.11	MG/KG	U	390	NA	0.9	NA	nc	NA
MW08S	1	2	Methyl Tert-butyl Ether	0.26	MG/KG	U	390	NA	0.9	NA	nc	NA
MW14M	1	2	Methyl Tert-butyl Ether	0.11	MG/KG	U	390	NA	0.9	NA	nc	NA
MW08S	2	4	Methyl Tert-butyl Ether	0.21	MG/KG	U	390	NA	0.9	NA	nc	NA
MW01S	2	4	Methyl Tert-butyl Ether	0.22	MG/KG	U	390	NA	0.9	NA	nc	NA
MW02S	2	4	Methyl Tert-butyl Ether	0.2	MG/KG	U	390	NA	0.9	NA	nc	NA
MW04D	2	4	Methyl Tert-butyl Ether	0.5	MG/KG	U	390	NA	0.9	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW05S	2	4	Methyl Tert-butyl Ether	0.1	MG/KG	U	390	NA	0.9	NA	nc	NA
MW06S	2	4	Methyl Tert-butyl Ether	0.3	MG/KG	U	390	NA	0.9	NA	nc	NA
MW06S	2	4	Methyl Tert-butyl Ether	0.3	MG/KG	U	390	NA	0.9	NA	nc	NA
MW08S	2	4	Methyl Tert-butyl Ether	0.32	MG/KG	U	390	NA	0.9	NA	nc	NA
MW14M	2	4	Methyl Tert-butyl Ether	0.14	MG/KG	U	390	NA	0.9	NA	nc	NA
MW15D	2	4	Methyl Tert-butyl Ether	0.14	MG/KG	U	390	NA	0.9	NA	nc	NA
SB02	2	4	Methyl Tert-butyl Ether	0.38	MG/KG	U	390	NA	0.9	NA	nc	NA
SB03	2	4	Methyl Tert-butyl Ether	0.3	MG/KG	U	390	NA	0.9	NA	nc	NA
MW07S	3	4	Methyl Tert-butyl Ether	0.5	MG/KG	U	390	NA	0.9	NA	nc	NA
MW15D	4	6	Methyl Tert-butyl Ether	0.1	MG/KG	U	390	NA	0.9	NA	nc	NA
MW02S	4	6	Methyl Tert-butyl Ether	0.55	MG/KG	U	390	NA	0.9	NA	nc	NA
SB03	4	6	Methyl Tert-butyl Ether	0.2	MG/KG	U	390	NA	0.9	NA	nc	NA
MW01S	4	6	Methyl Tert-butyl Ether	0.24	MG/KG	U	390	NA	0.9	NA	nc	NA
MW02S	4	6	Methyl Tert-butyl Ether	0.42	MG/KG	U	390	NA	0.9	NA	nc	NA
MW03S	4	6	Methyl Tert-butyl Ether	0.35	MG/KG	U	390	NA	0.9	NA	nc	NA
MW04D	4	6	Methyl Tert-butyl Ether	0.18	MG/KG	U	390	NA	0.9	NA	nc	NA
MW06S	4	6	Methyl Tert-butyl Ether	0.43	MG/KG	U	390	NA	0.9	NA	nc	NA
MW07S	4	6	Methyl Tert-butyl Ether	0.26	MG/KG	U	390	NA	0.9	NA	nc	NA
MW08S	4	6	Methyl Tert-butyl Ether	0.3	MG/KG	U	390	NA	0.9	NA	nc	NA
MW09S	4	6	Methyl Tert-butyl Ether	0.26	MG/KG	U	390	NA	0.9	NA	nc	NA
MW15D	4	6	Methyl Tert-butyl Ether	0.12	MG/KG	U	390	NA	0.9	NA	nc	NA
SB02	4	6	Methyl Tert-butyl Ether	0.26	MG/KG	U	390	NA	0.9	NA	nc	NA
SB03	4	6	Methyl Tert-butyl Ether	0.18	MG/KG	U	390	NA	0.9	NA	nc	NA
MW14M	1	2	Methyl Tert-butyl Ether	0.15	MG/KG	UJ	390	NA	0.9	NA	nc	NA
SB-14-271	1	2	Methyl Tert-butyl Ether	0.12	MG/KG	UJ	390	NA	0.9	NA	nc	NA
SB-14-271	2	4	Methyl Tert-butyl Ether	0.13	MG/KG	UJ	390	NA	0.9	NA	nc	NA
MW05S	4	6	Methyl Tert-butyl Ether	0.11	MG/KG	UJ	390	NA	0.9	NA	nc	NA
SB-14-271	4	6	Methyl Tert-butyl Ether	0.11	MG/KG	UJ	390	NA	0.9	NA	nc	NA
MW01S	1	2	Methylene Chloride	0.09	MG/KG	JTB	45	N	nc	NA	nc	NA
MW03S	4	6	Methylene Chloride	0.078	MG/KG	JTB	45	N	nc	NA	nc	NA
CMS-089	0	1	Methylene Chloride	0.005	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-098	0	1	Methylene Chloride	0.0097	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-118	0	1	Methylene Chloride	0.0097	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-142	0	1	Methylene Chloride	0.0095	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-159	0	1	Methylene Chloride	0.041	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-164	0	1	Methylene Chloride	0.015	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-173	0	1	Methylene Chloride	0.024	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-407	0	1	Methylene Chloride	0.005	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-408	0	1	Methylene Chloride	0.0043	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-417	0	1	Methylene Chloride	59	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-456	0	1	Methylene Chloride	0.015	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-702	0	1	Methylene Chloride	0.017	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-703	0	1	Methylene Chloride	0.012	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-142	0	1	Methylene Chloride	0.011	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-060	0	1	Methylene Chloride	5.3	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-065	0	10	Methylene Chloride	3.9	MG/KG	U	45	NA	nc	NA	nc	NA
MW05S	1	2	Methylene Chloride	0.095	MG/KG	U	45	NA	nc	NA	nc	NA
MW05S	1	2	Methylene Chloride	0.11	MG/KG	U	45	NA	nc	NA	nc	NA
MW08S	1	2	Methylene Chloride	0.26	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-060	1	2	Methylene Chloride	10	MG/KG	U	45	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-089	1	2	Methylene Chloride	0.0048	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-118	1	2	Methylene Chloride	0.012	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-173	1	2	Methylene Chloride	0.0083	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-237	1	2	Methylene Chloride	0.0069	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-405	1	2	Methylene Chloride	4	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-407	1	2	Methylene Chloride	0.0074	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-408	1	2	Methylene Chloride	2.2	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-417	1	2	Methylene Chloride	130	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-419	1	2	Methylene Chloride	56	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-423	1	2	Methylene Chloride	0.012	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-427	1	2	Methylene Chloride	0.0091	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-428	1	2	Methylene Chloride	0.011	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-456	1	2	Methylene Chloride	0.018	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-060	2	3	Methylene Chloride	0.55	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-089	2	3	Methylene Chloride	0.0047	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-118	2	3	Methylene Chloride	0.015	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-407	2	3	Methylene Chloride	0.0087	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-408	2	3	Methylene Chloride	6.6	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-417	2	3	Methylene Chloride	17	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-455	2	3	Methylene Chloride	0.67	MG/KG	U	45	NA	nc	NA	nc	NA
MW08S	2	4	Methylene Chloride	0.21	MG/KG	U	45	NA	nc	NA	nc	NA
MW01S	2	4	Methylene Chloride	0.22	MG/KG	U	45	NA	nc	NA	nc	NA
MW02S	2	4	Methylene Chloride	0.2	MG/KG	U	45	NA	nc	NA	nc	NA
MW04D	2	4	Methylene Chloride	0.5	MG/KG	U	45	NA	nc	NA	nc	NA
MW05S	2	4	Methylene Chloride	0.1	MG/KG	U	45	NA	nc	NA	nc	NA
MW06S	2	4	Methylene Chloride	0.3	MG/KG	U	45	NA	nc	NA	nc	NA
MW06S	2	4	Methylene Chloride	0.3	MG/KG	U	45	NA	nc	NA	nc	NA
MW08S	2	4	Methylene Chloride	0.32	MG/KG	U	45	NA	nc	NA	nc	NA
MW14M	2	4	Methylene Chloride	0.14	MG/KG	U	45	NA	nc	NA	nc	NA
MW15D	2	4	Methylene Chloride	0.14	MG/KG	U	45	NA	nc	NA	nc	NA
SB02	2	4	Methylene Chloride	0.38	MG/KG	U	45	NA	nc	NA	nc	NA
SB03	2	4	Methylene Chloride	0.3	MG/KG	U	45	NA	nc	NA	nc	NA
MW07S	3	4	Methylene Chloride	0.5	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-060	3	4	Methylene Chloride	0.012	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-089	3	4	Methylene Chloride	0.0041	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-118	3	4	Methylene Chloride	0.017	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-407	3	4	Methylene Chloride	0.32	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-417	3	4	Methylene Chloride	0.28	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-419	3	4	Methylene Chloride	0.64	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-423	3	4	Methylene Chloride	0.009	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-427	3	4	Methylene Chloride	0.011	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-428	3	4	Methylene Chloride	0.011	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-423	3	4	Methylene Chloride	0.0099	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-060	4	5	Methylene Chloride	0.0095	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-118	4	5	Methylene Chloride	0.012	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-405	4	5	Methylene Chloride	1	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-455	4	5	Methylene Chloride	0.014	MG/KG	U	45	NA	nc	NA	nc	NA
MW15D	4	6	Methylene Chloride	0.1	MG/KG	U	45	NA	nc	NA	nc	NA
MW02S	4	6	Methylene Chloride	0.55	MG/KG	U	45	NA	nc	NA	nc	NA
SB03	4	6	Methylene Chloride	0.2	MG/KG	U	45	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW01S	4	6	Methylene Chloride	0.24	MG/KG	U	45	NA	nc	NA	nc	NA
MW02S	4	6	Methylene Chloride	0.42	MG/KG	U	45	NA	nc	NA	nc	NA
MW04D	4	6	Methylene Chloride	0.18	MG/KG	U	45	NA	nc	NA	nc	NA
MW06S	4	6	Methylene Chloride	0.43	MG/KG	U	45	NA	nc	NA	nc	NA
MW07S	4	6	Methylene Chloride	0.26	MG/KG	U	45	NA	nc	NA	nc	NA
MW08S	4	6	Methylene Chloride	0.3	MG/KG	U	45	NA	nc	NA	nc	NA
MW09S	4	6	Methylene Chloride	0.26	MG/KG	U	45	NA	nc	NA	nc	NA
MW15D	4	6	Methylene Chloride	0.12	MG/KG	U	45	NA	nc	NA	nc	NA
SB02	4	6	Methylene Chloride	0.26	MG/KG	U	45	NA	nc	NA	nc	NA
SB03	4	6	Methylene Chloride	0.18	MG/KG	U	45	NA	nc	NA	nc	NA
CMS-237	0	1	Methylene Chloride	0.0059	MG/KG	UJ	45	NA	nc	NA	nc	NA
MW14M	1	2	Methylene Chloride	0.15	MG/KG	UJ	45	NA	nc	NA	nc	NA
MW14M	1	2	Methylene Chloride	0.15	MG/KG	UJ	45	NA	nc	NA	nc	NA
SB-14-271	1	2	Methylene Chloride	0.12	MG/KG	UJ	45	NA	nc	NA	nc	NA
CMS-405	1	2	Methylene Chloride	2.9	MG/KG	UJ	45	NA	nc	NA	nc	NA
SB-14-271	2	4	Methylene Chloride	0.13	MG/KG	UJ	45	NA	nc	NA	nc	NA
MW05S	4	6	Methylene Chloride	0.11	MG/KG	UJ	45	NA	nc	NA	nc	NA
SB-14-271	4	6	Methylene Chloride	0.11	MG/KG	UJ	45	NA	nc	NA	nc	NA
CMS-4105	0	1	Naphthalene	0.471124612	MG/KG	J	54	N	0.8	N	nc	NA
CMS-4110	0	1	Naphthalene	0.449129764	MG/KG	J	54	N	0.8	N	nc	NA
CMS-237	0	1	Naphthalene	0.1	MG/KG	J	54	N	0.8	N	nc	NA
CMS-417	0	1	Naphthalene	3.9	MG/KG	J	54	N	0.8	Y	nc	NA
SS-02	0	1.3	Naphthalene	0.13	MG/KG	J	54	N	0.8	N	nc	NA
MW14M	1	2	Naphthalene	0.093	MG/KG	J	54	N	0.8	N	nc	NA
MW14M	1	2	Naphthalene	0.091	MG/KG	J	54	N	0.8	N	nc	NA
MW08S	1	2	Naphthalene	0.13	MG/KG	J	54	N	0.8	N	nc	NA
MW14M	1	2	Naphthalene	0.065	MG/KG	J	54	N	0.8	N	nc	NA
MW14M	1	2	Naphthalene	0.083	MG/KG	J	54	N	0.8	N	nc	NA
CMS-118	1	2	Naphthalene	0.12	MG/KG	J	54	N	0.8	N	nc	NA
CMS-407	1	2	Naphthalene	0.067	MG/KG	J	54	N	0.8	N	nc	NA
CMS-417	1	2	Naphthalene	7.9	MG/KG	J	54	N	0.8	Y	nc	NA
CMS-456	1	2	Naphthalene	0.1	MG/KG	J	54	N	0.8	N	nc	NA
CMS-408	2	3	Naphthalene	0.16	MG/KG	J	54	N	0.8	N	nc	NA
CMS-417	2	3	Naphthalene	4.3	MG/KG	J	54	N	0.8	Y	nc	NA
MW08S	2	4	Naphthalene	0.046	MG/KG	J	54	N	0.8	N	nc	NA
MW06S	2	4	Naphthalene	0.11	MG/KG	J	54	N	0.8	N	nc	NA
MW06S	2	4	Naphthalene	0.096	MG/KG	J	54	N	0.8	N	nc	NA
SB03	2	4	Naphthalene	0.14	MG/KG	J	54	N	0.8	N	nc	NA
CMS-417	3	4	Naphthalene	0.34	MG/KG	J	54	N	0.8	N	nc	NA
CMS-423	3	4	Naphthalene	0.058	MG/KG	J	54	N	0.8	N	nc	NA
MW15D	4	6	Naphthalene	0.23	MG/KG	J	54	N	0.8	N	nc	NA
MW05S	4	6	Naphthalene	0.91	MG/KG	J	54	N	0.8	Y	nc	NA
MW06S	4	6	Naphthalene	0.16	MG/KG	J	54	N	0.8	N	nc	NA
MW07S	4	6	Naphthalene	0.052	MG/KG	J	54	N	0.8	N	nc	NA
MW15D	4	6	Naphthalene	0.19	MG/KG	J	54	N	0.8	N	nc	NA
CMS-408	0	1	Naphthalene	0.0033	MG/KG	J	54	N	0.8	N	nc	NA
CMS-417	0	1	Naphthalene	47	MG/KG	J	54	N	0.8	Y	nc	NA
CMS-703	0	1	Naphthalene	0.066	MG/KG	J	54	N	0.8	N	nc	NA
CMS-060	1	2	Naphthalene	1.8	MG/KG	J	54	N	0.8	Y	nc	NA
CMS-089	1	2	Naphthalene	0.0033	MG/KG	J	54	N	0.8	N	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-237	1	2	Naphthalene	0.0039	MG/KG	J	54	N	0.8	N	nc	NA
CMS-407	1	2	Naphthalene	0.0037	MG/KG	J	54	N	0.8	N	nc	NA
CMS-417	1	2	Naphthalene	84	MG/KG	J	54	Y	0.8	Y	nc	NA
CMS-407	3	4	Naphthalene	0.13	MG/KG	J	54	N	0.8	N	nc	NA
CMS-419	3	4	Naphthalene	0.31	MG/KG	J	54	N	0.8	N	nc	NA
SS-01	0	0	Naphthalene	0.43	MG/KG	U	54	NA	0.8	NA	nc	NA
CMW-SD-2016	0	0.5	Naphthalene	0.8	MG/KG	U	54	NA	0.8	NA	nc	NA
CMW-SD-2017	0	0.5	Naphthalene	0.87	MG/KG	U	54	NA	0.8	NA	nc	NA
CMW-SD-2018	0	0.5	Naphthalene	2.1	MG/KG	U	54	NA	0.8	NA	nc	NA
CMW-SD-2019	0	0.5	Naphthalene	0.95	MG/KG	U	54	NA	0.8	NA	nc	NA
CMW-SD-2020	0	0.5	Naphthalene	0.46	MG/KG	U	54	NA	0.8	NA	nc	NA
CMW-SD-2021	0	0.5	Naphthalene	2.1	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-089	0	1	Naphthalene	0.67	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-098	0	1	Naphthalene	0.6	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-142	0	1	Naphthalene	0.58	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-164	0	1	Naphthalene	2	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-173	0	1	Naphthalene	1.1	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-405	0	1	Naphthalene	0.35	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-407	0	1	Naphthalene	0.35	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-408	0	1	Naphthalene	0.34	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-456	0	1	Naphthalene	0.49	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-142	0	1	Naphthalene	0.55	MG/KG	U	54	NA	0.8	NA	nc	NA
RES-14-271-01	0	1	Naphthalene	0.51	MG/KG	U	54	NA	0.8	NA	nc	NA
RES-14-272-01	0	1	Naphthalene	0.62	MG/KG	U	54	NA	0.8	NA	nc	NA
RES-14-302-01	0	1	Naphthalene	5	MG/KG	U	54	NA	0.8	NA	nc	NA
RES-14-303-01	0	1	Naphthalene	4.8	MG/KG	U	54	NA	0.8	NA	nc	NA
RES-14-271-01	0	1	Naphthalene	2.5	MG/KG	U	54	NA	0.8	NA	nc	NA
RES-14-272-01	0	1	Naphthalene	3.1	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-703	0	2	Naphthalene	6.2	MG/KG	U	54	NA	0.8	NA	nc	NA
SS-06	0	2	Naphthalene	0.84	MG/KG	U	54	NA	0.8	NA	nc	NA
BV01COMP	0	4	Naphthalene	0.38	MG/KG	U	54	NA	0.8	NA	nc	NA
CMW-SD-2022	0.5	2	Naphthalene	4.2	MG/KG	U	54	NA	0.8	NA	nc	NA
MW05S	1	2	Naphthalene	0.36	MG/KG	U	54	NA	0.8	NA	nc	NA
MW01S	1	2	Naphthalene	0.38	MG/KG	U	54	NA	0.8	NA	nc	NA
MW05S	1	2	Naphthalene	0.36	MG/KG	U	54	NA	0.8	NA	nc	NA
SB-14-271	1	2	Naphthalene	0.4	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-060	1	2	Naphthalene	0.34	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-089	1	2	Naphthalene	0.35	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-173	1	2	Naphthalene	0.52	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-237	1	2	Naphthalene	0.83	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-408	1	2	Naphthalene	8.7	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-419	1	2	Naphthalene	74	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-423	1	2	Naphthalene	0.35	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-427	1	2	Naphthalene	3.6	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-428	1	2	Naphthalene	0.35	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-405	1	2	Naphthalene	1.2	MG/KG	U	54	NA	0.8	NA	nc	NA
CMW-SD-2022	2	2.5	Naphthalene	0.86	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-060	2	3	Naphthalene	0.36	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-089	2	3	Naphthalene	0.7	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-118	2	3	Naphthalene	0.44	MG/KG	U	54	NA	0.8	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-237	2	3	Naphthalene	0.63	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-405	2	3	Naphthalene	0.64	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-407	2	3	Naphthalene	1.1	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-455	2	3	Naphthalene	0.4	MG/KG	U	54	NA	0.8	NA	nc	NA
SB02	2	4	Naphthalene	2.3	MG/KG	U	54	NA	0.8	NA	nc	NA
MW01S	2	4	Naphthalene	1.6	MG/KG	U	54	NA	0.8	NA	nc	NA
MW02S	2	4	Naphthalene	0.38	MG/KG	U	54	NA	0.8	NA	nc	NA
MW08S	2	4	Naphthalene	0.41	MG/KG	U	54	NA	0.8	NA	nc	NA
MW14M	2	4	Naphthalene	0.38	MG/KG	U	54	NA	0.8	NA	nc	NA
MW15D	2	4	Naphthalene	0.37	MG/KG	U	54	NA	0.8	NA	nc	NA
SB-14-271	2	4	Naphthalene	0.45	MG/KG	U	54	NA	0.8	NA	nc	NA
SB02	2	4	Naphthalene	2.2	MG/KG	U	54	NA	0.8	NA	nc	NA
SS-03	2.5	3.5	Naphthalene	0.4	MG/KG	U	54	NA	0.8	NA	nc	NA
MW07S	3	4	Naphthalene	0.38	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-060	3	4	Naphthalene	0.45	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-089	3	4	Naphthalene	1.8	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-118	3	4	Naphthalene	0.5	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-407	3	4	Naphthalene	0.42	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-419	3	4	Naphthalene	0.42	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-427	3	4	Naphthalene	0.41	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-428	3	4	Naphthalene	0.37	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-423	3	4	Naphthalene	0.39	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-118	4	5	Naphthalene	0.43	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-405	4	5	Naphthalene	0.46	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-455	4	5	Naphthalene	0.48	MG/KG	U	54	NA	0.8	NA	nc	NA
SB03	4	6	Naphthalene	0.37	MG/KG	U	54	NA	0.8	NA	nc	NA
MW01S	4	6	Naphthalene	0.4	MG/KG	U	54	NA	0.8	NA	nc	NA
MW03S	4	6	Naphthalene	0.4	MG/KG	U	54	NA	0.8	NA	nc	NA
MW04D	4	6	Naphthalene	0.42	MG/KG	U	54	NA	0.8	NA	nc	NA
MW08S	4	6	Naphthalene	0.45	MG/KG	U	54	NA	0.8	NA	nc	NA
MW09S	4	6	Naphthalene	0.85	MG/KG	U	54	NA	0.8	NA	nc	NA
SB-14-271	4	6	Naphthalene	0.4	MG/KG	U	54	NA	0.8	NA	nc	NA
SB02	4	6	Naphthalene	0.83	MG/KG	U	54	NA	0.8	NA	nc	NA
SB03	4	6	Naphthalene	0.38	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-089	0	1	Naphthalene	0.005	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-118	0	1	Naphthalene	0.0048	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-159	0	1	Naphthalene	0.021	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-407	0	1	Naphthalene	0.005	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-456	0	1	Naphthalene	0.0075	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-702	0	1	Naphthalene	0.0087	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-065	0	10	Naphthalene	3.9	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-408	1	2	Naphthalene	2.2	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-423	1	2	Naphthalene	0.0062	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-427	1	2	Naphthalene	0.0045	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-428	1	2	Naphthalene	0.0054	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-407	2	3	Naphthalene	0.0087	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-408	2	3	Naphthalene	6.6	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-417	2	3	Naphthalene	17	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-455	2	3	Naphthalene	0.33	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-060	3	4	Naphthalene	0.0058	MG/KG	U	54	NA	0.8	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-089	3	4	Naphthalene	0.0041	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-118	3	4	Naphthalene	0.0084	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-423	3	4	Naphthalene	0.0045	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-428	3	4	Naphthalene	0.0057	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-423	3	4	Naphthalene	0.0049	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-060	4	5	Naphthalene	0.0048	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-118	4	5	Naphthalene	0.0059	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-405	4	5	Naphthalene	1	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-455	4	5	Naphthalene	0.0072	MG/KG	U	54	NA	0.8	NA	nc	NA
GEC-6	2.5	4.5	Naphthalene	0.15	MG/KG	U	54	NA	0.8	NA	nc	NA
CMS-060	0	1	Naphthalene	0.34	MG/KG	UJ	54	NA	0.8	NA	nc	NA
CMS-118	0	1	Naphthalene	0.36	MG/KG	UJ	54	NA	0.8	NA	nc	NA
CMS-159	0	1	Naphthalene	2.2	MG/KG	UJ	54	NA	0.8	NA	nc	NA
CMS-060	0	1	Naphthalene	0.35	MG/KG	UJ	54	NA	0.8	NA	nc	NA
CMS-060	4	5	Naphthalene	0.38	MG/KG	UJ	54	NA	0.8	NA	nc	NA
CMS-098	0	1	Naphthalene	0.0097	MG/KG	UJ	54	NA	0.8	NA	nc	NA
CMS-142	0	1	Naphthalene	0.0095	MG/KG	UJ	54	NA	0.8	NA	nc	NA
CMS-164	0	1	Naphthalene	0.015	MG/KG	UJ	54	NA	0.8	NA	nc	NA
CMS-173	0	1	Naphthalene	0.024	MG/KG	UJ	54	NA	0.8	NA	nc	NA
CMS-237	0	1	Naphthalene	0.0059	MG/KG	UJ	54	NA	0.8	NA	nc	NA
CMS-142	0	1	Naphthalene	0.011	MG/KG	UJ	54	NA	0.8	NA	nc	NA
CMS-060	0	1	Naphthalene	2.7	MG/KG	UJ	54	NA	0.8	NA	nc	NA
CMS-118	1	2	Naphthalene	0.006	MG/KG	UJ	54	NA	0.8	NA	nc	NA
CMS-173	1	2	Naphthalene	0.0083	MG/KG	UJ	54	NA	0.8	NA	nc	NA
CMS-405	1	2	Naphthalene	4	MG/KG	UJ	54	NA	0.8	NA	nc	NA
CMS-456	1	2	Naphthalene	0.0089	MG/KG	UJ	54	NA	0.8	NA	nc	NA
CMS-405	1	2	Naphthalene	2.9	MG/KG	UJ	54	NA	0.8	NA	nc	NA
CMS-060	2	3	Naphthalene	0.27	MG/KG	UJ	54	NA	0.8	NA	nc	NA
CMS-089	2	3	Naphthalene	0.0047	MG/KG	UJ	54	NA	0.8	NA	nc	NA
CMS-118	2	3	Naphthalene	0.0074	MG/KG	UJ	54	NA	0.8	NA	nc	NA
CMS-417	3	4	Naphthalene	0.28	MG/KG	UJ	54	NA	0.8	NA	nc	NA
CMS-405	1	2	Naphthalene	0.87	MG/KG		54	N	0.8	Y	nc	NA
MW05S	2	4	Naphthalene	0.43	MG/KG		54	N	0.8	N	nc	NA
CMS-405	3	4	Naphthalene	0.39	MG/KG		54	N	0.8	N	nc	NA
CMS-419	1	2	Naphthalene	39	MG/KG		54	N	0.8	Y	nc	NA
CMS-427	3	4	Naphthalene	0.069	MG/KG		54	N	0.8	N	nc	NA
CMW-SD-2018	0	0.5	Nickel	2	MG/KG	J	1000	N	nc	NA	nc	NA
CMS-089	0	1	Nickel	5	MG/KG	J	1000	N	nc	NA	nc	NA
CMS-098	0	1	Nickel	5.5	MG/KG	J	1000	N	nc	NA	nc	NA
CMS-142	0	1	Nickel	5.1	MG/KG	J	1000	N	nc	NA	nc	NA
CMS-173	0	1	Nickel	20.7	MG/KG	J	1000	N	nc	NA	nc	NA
CMS-407	0	1	Nickel	29.5	MG/KG	J	1000	N	nc	NA	nc	NA
CMS-408	0	1	Nickel	13.8	MG/KG	J	1000	N	nc	NA	nc	NA
CMS-142	0	1	Nickel	4	MG/KG	J	1000	N	nc	NA	nc	NA
RES-14-333-01	0	1	Nickel	21.8	MG/KG	J	1000	N	nc	NA	nc	NA
MW08S	1	2	Nickel	28.8	MG/KG	J	1000	N	nc	NA	nc	NA
CMS-089	1	2	Nickel	13	MG/KG	J	1000	N	nc	NA	nc	NA
CMS-173	1	2	Nickel	5.1	MG/KG	J	1000	N	nc	NA	nc	NA
CMS-407	1	2	Nickel	27	MG/KG	J	1000	N	nc	NA	nc	NA
CMS-408	1	2	Nickel	36.9	MG/KG	J	1000	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-089	2	3	Nickel	6.2	MG/KG	J	1000	N	nc	NA	nc	NA
CMS-407	2	3	Nickel	33.8	MG/KG	J	1000	N	nc	NA	nc	NA
CMS-408	2	3	Nickel	17.2	MG/KG	J	1000	N	nc	NA	nc	NA
MW08S	2	4	Nickel	13.1	MG/KG	J	1000	N	nc	NA	nc	NA
MW08S	2	4	Nickel	11.8	MG/KG	J	1000	N	nc	NA	nc	NA
CMS-060	3	4	Nickel	3.7	MG/KG	J	1000	N	nc	NA	nc	NA
CMS-089	3	4	Nickel	8.6	MG/KG	J	1000	N	nc	NA	nc	NA
CMS-407	3	4	Nickel	3.9	MG/KG	J	1000	N	nc	NA	nc	NA
CMS-118	4	5	Nickel	5	MG/KG	J	1000	N	nc	NA	nc	NA
CMS-405	4	5	Nickel	3.2	MG/KG	J	1000	N	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Nickel	1.3	MG/KG	U	1000	NA	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Nickel	5.1	MG/KG		1000	N	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Nickel	6.3	MG/KG		1000	N	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Nickel	33.8	MG/KG		1000	N	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Nickel	10.6	MG/KG		1000	N	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Nickel	32.9	MG/KG		1000	N	nc	NA	nc	NA
CMS-060	0	1	Nickel	8.8	MG/KG		1000	N	nc	NA	nc	NA
CMS-118	0	1	Nickel	7.2	MG/KG		1000	N	nc	NA	nc	NA
CMS-159	0	1	Nickel	45.3	MG/KG		1000	N	nc	NA	nc	NA
CMS-164	0	1	Nickel	18.4	MG/KG		1000	N	nc	NA	nc	NA
CMS-237	0	1	Nickel	11.4	MG/KG		1000	N	nc	NA	nc	NA
CMS-405	0	1	Nickel	11	MG/KG		1000	N	nc	NA	nc	NA
CMS-417	0	1	Nickel	31.3	MG/KG		1000	N	nc	NA	nc	NA
CMS-456	0	1	Nickel	9.1	MG/KG		1000	N	nc	NA	nc	NA
CMS-060	0	1	Nickel	9.6	MG/KG		1000	N	nc	NA	nc	NA
RES-14-271-01	0	1	Nickel	32.2	MG/KG		1000	N	nc	NA	nc	NA
RES-14-272-01	0	1	Nickel	11.5	MG/KG		1000	N	nc	NA	nc	NA
RES-14-302-01	0	1	Nickel	16.3	MG/KG		1000	N	nc	NA	nc	NA
RES-14-303-01	0	1	Nickel	38.3	MG/KG		1000	N	nc	NA	nc	NA
RES-14-271-01	0	1	Nickel	33.8	MG/KG		1000	N	nc	NA	nc	NA
RES-14-272-01	0	1	Nickel	13.3	MG/KG		1000	N	nc	NA	nc	NA
CMS-703	0	2	Nickel	8.9	MG/KG		1000	N	nc	NA	nc	NA
BV01COMP	0	4	Nickel	6.7	MG/KG		1000	N	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Nickel	3.7	MG/KG		1000	N	nc	NA	nc	NA
MW05S	1	2	Nickel	2.2	MG/KG		1000	N	nc	NA	nc	NA
MW14M	1	2	Nickel	7.2	MG/KG		1000	N	nc	NA	nc	NA
MW01S	1	2	Nickel	19.6	MG/KG		1000	N	nc	NA	nc	NA
MW05S	1	2	Nickel	3	MG/KG		1000	N	nc	NA	nc	NA
MW14M	1	2	Nickel	11.8	MG/KG		1000	N	nc	NA	nc	NA
SB-14-271	1	2	Nickel	8.1	MG/KG		1000	N	nc	NA	nc	NA
CMS-060	1	2	Nickel	7	MG/KG		1000	N	nc	NA	nc	NA
CMS-118	1	2	Nickel	20	MG/KG		1000	N	nc	NA	nc	NA
CMS-237	1	2	Nickel	43.4	MG/KG		1000	N	nc	NA	nc	NA
CMS-405	1	2	Nickel	32.2	MG/KG		1000	N	nc	NA	nc	NA
CMS-417	1	2	Nickel	30	MG/KG		1000	N	nc	NA	nc	NA
CMS-419	1	2	Nickel	28.6	MG/KG		1000	N	nc	NA	nc	NA
CMS-423	1	2	Nickel	15.1	MG/KG		1000	N	nc	NA	nc	NA
CMS-427	1	2	Nickel	22.4	MG/KG		1000	N	nc	NA	nc	NA
CMS-428	1	2	Nickel	12.9	MG/KG		1000	N	nc	NA	nc	NA
CMS-456	1	2	Nickel	74.3	MG/KG		1000	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-405	1	2	Nickel	41.2	MG/KG		1000	N	nc	NA	nc	NA
CMS-060	2	3	Nickel	6.5	MG/KG		1000	N	nc	NA	nc	NA
CMS-118	2	3	Nickel	28.7	MG/KG		1000	N	nc	NA	nc	NA
CMS-237	2	3	Nickel	37.6	MG/KG		1000	N	nc	NA	nc	NA
CMS-405	2	3	Nickel	35	MG/KG		1000	N	nc	NA	nc	NA
CMS-417	2	3	Nickel	6	MG/KG		1000	N	nc	NA	nc	NA
CMS-455	2	3	Nickel	14.3	MG/KG		1000	N	nc	NA	nc	NA
SB02	2	4	Nickel	6.2	MG/KG		1000	N	nc	NA	nc	NA
MW02S	2	4	Nickel	6.2	MG/KG		1000	N	nc	NA	nc	NA
MW05S	2	4	Nickel	9.7	MG/KG		1000	N	nc	NA	nc	NA
MW06S	2	4	Nickel	8.8	MG/KG		1000	N	nc	NA	nc	NA
MW06S	2	4	Nickel	11.5	MG/KG		1000	N	nc	NA	nc	NA
MW14M	2	4	Nickel	5.7	MG/KG		1000	N	nc	NA	nc	NA
MW15D	2	4	Nickel	9.4	MG/KG		1000	N	nc	NA	nc	NA
SB-14-271	2	4	Nickel	3	MG/KG		1000	N	nc	NA	nc	NA
SB02	2	4	Nickel	6.4	MG/KG		1000	N	nc	NA	nc	NA
SB03	2	4	Nickel	3	MG/KG		1000	N	nc	NA	nc	NA
MW07S	3	4	Nickel	8.3	MG/KG		1000	N	nc	NA	nc	NA
CMS-118	3	4	Nickel	10	MG/KG		1000	N	nc	NA	nc	NA
CMS-405	3	4	Nickel	53.6	MG/KG		1000	N	nc	NA	nc	NA
CMS-417	3	4	Nickel	10.4	MG/KG		1000	N	nc	NA	nc	NA
CMS-419	3	4	Nickel	8.3	MG/KG		1000	N	nc	NA	nc	NA
CMS-423	3	4	Nickel	5.8	MG/KG		1000	N	nc	NA	nc	NA
CMS-427	3	4	Nickel	25.4	MG/KG		1000	N	nc	NA	nc	NA
CMS-428	3	4	Nickel	5.7	MG/KG		1000	N	nc	NA	nc	NA
CMS-423	3	4	Nickel	9.5	MG/KG		1000	N	nc	NA	nc	NA
CMS-060	4	5	Nickel	7.8	MG/KG		1000	N	nc	NA	nc	NA
CMS-455	4	5	Nickel	5.7	MG/KG		1000	N	nc	NA	nc	NA
SB03	4	6	Nickel	2.9	MG/KG		1000	N	nc	NA	nc	NA
MW15D	4	6	Nickel	4.1	MG/KG		1000	N	nc	NA	nc	NA
MW01S	4	6	Nickel	2.1	MG/KG		1000	N	nc	NA	nc	NA
MW03S	4	6	Nickel	8.4	MG/KG		1000	N	nc	NA	nc	NA
MW04D	4	6	Nickel	1.6	MG/KG		1000	N	nc	NA	nc	NA
MW05S	4	6	Nickel	24.2	MG/KG		1000	N	nc	NA	nc	NA
MW06S	4	6	Nickel	21.4	MG/KG		1000	N	nc	NA	nc	NA
MW07S	4	6	Nickel	5.1	MG/KG		1000	N	nc	NA	nc	NA
MW08S	4	6	Nickel	4.3	MG/KG		1000	N	nc	NA	nc	NA
MW09S	4	6	Nickel	6.4	MG/KG		1000	N	nc	NA	nc	NA
MW15D	4	6	Nickel	6.7	MG/KG		1000	N	nc	NA	nc	NA
SB-14-271	4	6	Nickel	3.4	MG/KG		1000	N	nc	NA	nc	NA
SB02	4	6	Nickel	5.8	MG/KG		1000	N	nc	NA	nc	NA
SB03	4	6	Nickel	4.8	MG/KG		1000	N	nc	NA	nc	NA
CMS-4105	0	1	Nickel	24.6	MG/KG		1000	N	nc	NA	nc	NA
CMS-4110	0	1	Nickel	31.1	MG/KG		1000	N	nc	NA	nc	NA
RES-14-333-01	0	1	Pentachlorophenol	18	MG/KG	J	5.3	Y	7.1	Y	nc	NA
SB02	2	4	Pentachlorophenol	0.65	MG/KG	J	5.3	N	7.1	N	nc	NA
CMS-089	0	1	Pentachlorophenol	3.3	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-098	0	1	Pentachlorophenol	2.9	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-142	0	1	Pentachlorophenol	2.8	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-164	0	1	Pentachlorophenol	9.8	MG/KG	U	5.3	NA	7.1	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-173	0	1	Pentachlorophenol	5.3	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-237	0	1	Pentachlorophenol	6.2	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-405	0	1	Pentachlorophenol	1.7	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-407	0	1	Pentachlorophenol	1.7	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-408	0	1	Pentachlorophenol	1.7	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-417	0	1	Pentachlorophenol	170	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-456	0	1	Pentachlorophenol	2.4	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-142	0	1	Pentachlorophenol	2.7	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-060	0	1	Pentachlorophenol	1.7	MG/KG	U	5.3	NA	7.1	NA	nc	NA
RES-14-271-01	0	1	Pentachlorophenol	1.3	MG/KG	U	5.3	NA	7.1	NA	nc	NA
RES-14-272-01	0	1	Pentachlorophenol	1.6	MG/KG	U	5.3	NA	7.1	NA	nc	NA
RES-14-303-01	0	1	Pentachlorophenol	12	MG/KG	U	5.3	NA	7.1	NA	nc	NA
RES-14-271-01	0	1	Pentachlorophenol	6.3	MG/KG	U	5.3	NA	7.1	NA	nc	NA
RES-14-272-01	0	1	Pentachlorophenol	7.7	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-703	0	2	Pentachlorophenol	30	MG/KG	U	5.3	NA	7.1	NA	nc	NA
SS-06	0	2	Pentachlorophenol	2.1	MG/KG	U	5.3	NA	7.1	NA	nc	NA
BV01COMP	0	4	Pentachlorophenol	1.8	MG/KG	U	5.3	NA	7.1	NA	nc	NA
MW05S	1	2	Pentachlorophenol	0.9	MG/KG	U	5.3	NA	7.1	NA	nc	NA
MW14M	1	2	Pentachlorophenol	0.86	MG/KG	U	5.3	NA	7.1	NA	nc	NA
MW14M	1	2	Pentachlorophenol	0.86	MG/KG	U	5.3	NA	7.1	NA	nc	NA
MW01S	1	2	Pentachlorophenol	0.95	MG/KG	U	5.3	NA	7.1	NA	nc	NA
MW05S	1	2	Pentachlorophenol	0.89	MG/KG	U	5.3	NA	7.1	NA	nc	NA
MW08S	1	2	Pentachlorophenol	1.1	MG/KG	U	5.3	NA	7.1	NA	nc	NA
MW14M	1	2	Pentachlorophenol	0.84	MG/KG	U	5.3	NA	7.1	NA	nc	NA
MW14M	1	2	Pentachlorophenol	0.84	MG/KG	U	5.3	NA	7.1	NA	nc	NA
SB-14-271	1	2	Pentachlorophenol	1	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-060	1	2	Pentachlorophenol	1.6	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-089	1	2	Pentachlorophenol	1.7	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-118	1	2	Pentachlorophenol	1.8	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-173	1	2	Pentachlorophenol	2.5	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-237	1	2	Pentachlorophenol	4	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-405	1	2	Pentachlorophenol	3.1	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-407	1	2	Pentachlorophenol	2.1	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-408	1	2	Pentachlorophenol	42	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-417	1	2	Pentachlorophenol	170	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-419	1	2	Pentachlorophenol	360	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-423	1	2	Pentachlorophenol	1.7	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-427	1	2	Pentachlorophenol	17	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-428	1	2	Pentachlorophenol	1.7	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-456	1	2	Pentachlorophenol	5.7	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-405	1	2	Pentachlorophenol	6	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-060	2	3	Pentachlorophenol	1.7	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-089	2	3	Pentachlorophenol	3.4	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-118	2	3	Pentachlorophenol	2.1	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-237	2	3	Pentachlorophenol	3.1	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-405	2	3	Pentachlorophenol	3.1	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-407	2	3	Pentachlorophenol	5.3	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-408	2	3	Pentachlorophenol	2.1	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-417	2	3	Pentachlorophenol	47	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-455	2	3	Pentachlorophenol	1.9	MG/KG	U	5.3	NA	7.1	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW08S	2	4	Pentachlorophenol	1.1	MG/KG	U	5.3	NA	7.1	NA	nc	NA
MW01S	2	4	Pentachlorophenol	4	MG/KG	U	5.3	NA	7.1	NA	nc	NA
MW02S	2	4	Pentachlorophenol	0.97	MG/KG	U	5.3	NA	7.1	NA	nc	NA
MW06S	2	4	Pentachlorophenol	0.91	MG/KG	U	5.3	NA	7.1	NA	nc	NA
MW06S	2	4	Pentachlorophenol	0.92	MG/KG	U	5.3	NA	7.1	NA	nc	NA
MW08S	2	4	Pentachlorophenol	1	MG/KG	U	5.3	NA	7.1	NA	nc	NA
MW14M	2	4	Pentachlorophenol	0.94	MG/KG	U	5.3	NA	7.1	NA	nc	NA
MW15D	2	4	Pentachlorophenol	0.93	MG/KG	U	5.3	NA	7.1	NA	nc	NA
SB-14-271	2	4	Pentachlorophenol	1.1	MG/KG	U	5.3	NA	7.1	NA	nc	NA
SB02	2	4	Pentachlorophenol	5.5	MG/KG	U	5.3	NA	7.1	NA	nc	NA
SB03	2	4	Pentachlorophenol	2.5	MG/KG	U	5.3	NA	7.1	NA	nc	NA
MW07S	3	4	Pentachlorophenol	0.97	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-060	3	4	Pentachlorophenol	2.2	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-089	3	4	Pentachlorophenol	8.5	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-118	3	4	Pentachlorophenol	2.4	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-405	3	4	Pentachlorophenol	1.8	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-407	3	4	Pentachlorophenol	2.1	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-417	3	4	Pentachlorophenol	9.2	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-419	3	4	Pentachlorophenol	2	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-423	3	4	Pentachlorophenol	1.8	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-427	3	4	Pentachlorophenol	2	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-428	3	4	Pentachlorophenol	1.8	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-423	3	4	Pentachlorophenol	1.9	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-118	4	5	Pentachlorophenol	2.1	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-405	4	5	Pentachlorophenol	2.2	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-455	4	5	Pentachlorophenol	2.3	MG/KG	U	5.3	NA	7.1	NA	nc	NA
SB03	4	6	Pentachlorophenol	0.93	MG/KG	U	5.3	NA	7.1	NA	nc	NA
MW15D	4	6	Pentachlorophenol	1	MG/KG	U	5.3	NA	7.1	NA	nc	NA
MW01S	4	6	Pentachlorophenol	1	MG/KG	U	5.3	NA	7.1	NA	nc	NA
MW03S	4	6	Pentachlorophenol	1	MG/KG	U	5.3	NA	7.1	NA	nc	NA
MW04D	4	6	Pentachlorophenol	1.1	MG/KG	U	5.3	NA	7.1	NA	nc	NA
MW05S	4	6	Pentachlorophenol	2.1	MG/KG	U	5.3	NA	7.1	NA	nc	NA
MW06S	4	6	Pentachlorophenol	1.2	MG/KG	U	5.3	NA	7.1	NA	nc	NA
MW07S	4	6	Pentachlorophenol	1	MG/KG	U	5.3	NA	7.1	NA	nc	NA
MW08S	4	6	Pentachlorophenol	1.1	MG/KG	U	5.3	NA	7.1	NA	nc	NA
MW09S	4	6	Pentachlorophenol	2.1	MG/KG	U	5.3	NA	7.1	NA	nc	NA
MW15D	4	6	Pentachlorophenol	0.89	MG/KG	U	5.3	NA	7.1	NA	nc	NA
SB-14-271	4	6	Pentachlorophenol	1	MG/KG	U	5.3	NA	7.1	NA	nc	NA
SB02	4	6	Pentachlorophenol	2.1	MG/KG	U	5.3	NA	7.1	NA	nc	NA
SB03	4	6	Pentachlorophenol	0.94	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-4105	0	1	Pentachlorophenol	13	MG/KG	U	5.3	NA	7.1	NA	nc	NA
CMS-4110	0	1	Pentachlorophenol	16	MG/KG	U	5.3	NA	7.1	NA	nc	NA
SS-01	0	0	Pentachlorophenol	1.1	MG/KG	UJ	5.3	NA	7.1	NA	nc	NA
CMW-SD-2016	0	0.5	Pentachlorophenol	2	MG/KG	UJ	5.3	NA	7.1	NA	nc	NA
CMW-SD-2017	0	0.5	Pentachlorophenol	2.2	MG/KG	UJ	5.3	NA	7.1	NA	nc	NA
CMW-SD-2018	0	0.5	Pentachlorophenol	5.3	MG/KG	UJ	5.3	NA	7.1	NA	nc	NA
CMW-SD-2019	0	0.5	Pentachlorophenol	2.4	MG/KG	UJ	5.3	NA	7.1	NA	nc	NA
CMW-SD-2020	0	0.5	Pentachlorophenol	1.2	MG/KG	UJ	5.3	NA	7.1	NA	nc	NA
CMW-SD-2021	0	0.5	Pentachlorophenol	5.2	MG/KG	UJ	5.3	NA	7.1	NA	nc	NA
CMS-060	0	1	Pentachlorophenol	1.6	MG/KG	UJ	5.3	NA	7.1	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-118	0	1	Pentachlorophenol	1.7	MG/KG	UJ	5.3	NA	7.1	NA	nc	NA
CMS-159	0	1	Pentachlorophenol	11	MG/KG	UJ	5.3	NA	7.1	NA	nc	NA
RES-14-302-01	0	1	Pentachlorophenol	12	MG/KG	UJ	5.3	NA	7.1	NA	nc	NA
SS-02	0	1.3	Pentachlorophenol	1.3	MG/KG	UJ	5.3	NA	7.1	NA	nc	NA
CMW-SD-2022	0.5	2	Pentachlorophenol	11	MG/KG	UJ	5.3	NA	7.1	NA	nc	NA
CMW-SD-2022	2	2.5	Pentachlorophenol	2.2	MG/KG	UJ	5.3	NA	7.1	NA	nc	NA
MW05S	2	4	Pentachlorophenol	0.94	MG/KG	UJ	5.3	NA	7.1	NA	nc	NA
SS-03	2.5	3.5	Pentachlorophenol	1	MG/KG	UJ	5.3	NA	7.1	NA	nc	NA
CMS-060	4	5	Pentachlorophenol	1.9	MG/KG	UJ	5.3	NA	7.1	NA	nc	NA
MW01S	1	2	Phenanthrene	1.2	MG/KG	EB	40	N	nc	NA	nc	NA
MW01S	4	6	Phenanthrene	1.3	MG/KG	EB	40	N	nc	NA	nc	NA
MW03S	4	6	Phenanthrene	1.2	MG/KG	EB	40	N	nc	NA	nc	NA
CMS-4105	0	1	Phenanthrene	5.241935479	MG/KG	J	40	N	nc	NA	nc	NA
CMS-4110	0	1	Phenanthrene	3.539125075	MG/KG	J	40	N	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Phenanthrene	0.57	MG/KG	J	40	N	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Phenanthrene	0.37	MG/KG	J	40	N	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Phenanthrene	1.8	MG/KG	J	40	N	nc	NA	nc	NA
CMS-060	0	1	Phenanthrene	1.6	MG/KG	J	40	N	nc	NA	nc	NA
CMS-098	0	1	Phenanthrene	0.23	MG/KG	J	40	N	nc	NA	nc	NA
CMS-118	0	1	Phenanthrene	1.4	MG/KG	J	40	N	nc	NA	nc	NA
CMS-142	0	1	Phenanthrene	0.3	MG/KG	J	40	N	nc	NA	nc	NA
CMS-159	0	1	Phenanthrene	1.5	MG/KG	J	40	N	nc	NA	nc	NA
CMS-164	0	1	Phenanthrene	0.22	MG/KG	J	40	N	nc	NA	nc	NA
CMS-173	0	1	Phenanthrene	0.37	MG/KG	J	40	N	nc	NA	nc	NA
CMS-408	0	1	Phenanthrene	0.26	MG/KG	J	40	N	nc	NA	nc	NA
CMS-417	0	1	Phenanthrene	3.1	MG/KG	J	40	N	nc	NA	nc	NA
CMS-142	0	1	Phenanthrene	0.16	MG/KG	J	40	N	nc	NA	nc	NA
RES-14-271-01	0	1	Phenanthrene	0.32	MG/KG	J	40	N	nc	NA	nc	NA
RES-14-272-01	0	1	Phenanthrene	0.62	MG/KG	J	40	N	nc	NA	nc	NA
RES-14-302-01	0	1	Phenanthrene	0.68	MG/KG	J	40	N	nc	NA	nc	NA
RES-14-303-01	0	1	Phenanthrene	2.1	MG/KG	J	40	N	nc	NA	nc	NA
RES-14-333-01	0	1	Phenanthrene	2.8	MG/KG	J	40	N	nc	NA	nc	NA
RES-14-271-01	0	1	Phenanthrene	0.74	MG/KG	J	40	N	nc	NA	nc	NA
RES-14-272-01	0	1	Phenanthrene	0.84	MG/KG	J	40	N	nc	NA	nc	NA
SS-06	0	2	Phenanthrene	0.59	MG/KG	J	40	N	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Phenanthrene	1.4	MG/KG	J	40	N	nc	NA	nc	NA
SB-14-271	1	2	Phenanthrene	0.13	MG/KG	J	40	N	nc	NA	nc	NA
CMS-237	1	2	Phenanthrene	0.52	MG/KG	J	40	N	nc	NA	nc	NA
CMS-405	1	2	Phenanthrene	5.9	MG/KG	J	40	N	nc	NA	nc	NA
CMS-408	1	2	Phenanthrene	0.98	MG/KG	J	40	N	nc	NA	nc	NA
CMS-419	1	2	Phenanthrene	22	MG/KG	J	40	N	nc	NA	nc	NA
CMS-427	1	2	Phenanthrene	2.6	MG/KG	J	40	N	nc	NA	nc	NA
CMS-405	1	2	Phenanthrene	1.6	MG/KG	J	40	N	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Phenanthrene	0.31	MG/KG	J	40	N	nc	NA	nc	NA
CMS-060	2	3	Phenanthrene	0.13	MG/KG	J	40	N	nc	NA	nc	NA
CMS-089	2	3	Phenanthrene	0.054	MG/KG	J	40	N	nc	NA	nc	NA
CMS-118	2	3	Phenanthrene	0.42	MG/KG	J	40	N	nc	NA	nc	NA
SB02	2	4	Phenanthrene	0.49	MG/KG	J	40	N	nc	NA	nc	NA
MW14M	2	4	Phenanthrene	0.26	MG/KG	J	40	N	nc	NA	nc	NA
MW15D	2	4	Phenanthrene	0.18	MG/KG	J	40	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
SB02	2	4	Phenanthrene	0.52	MG/KG	J	40	N	nc	NA	nc	NA
CMS-118	3	4	Phenanthrene	0.11	MG/KG	J	40	N	nc	NA	nc	NA
CMS-407	3	4	Phenanthrene	0.36	MG/KG	J	40	N	nc	NA	nc	NA
CMS-419	3	4	Phenanthrene	0.071	MG/KG	J	40	N	nc	NA	nc	NA
CMS-423	3	4	Phenanthrene	0.33	MG/KG	J	40	N	nc	NA	nc	NA
CMS-060	4	5	Phenanthrene	0.36	MG/KG	J	40	N	nc	NA	nc	NA
CMS-118	4	5	Phenanthrene	0.094	MG/KG	J	40	N	nc	NA	nc	NA
MW06S	4	6	Phenanthrene	0.28	MG/KG	J	40	N	nc	NA	nc	NA
MW09S	4	6	Phenanthrene	0.39	MG/KG	J	40	N	nc	NA	nc	NA
SB02	4	6	Phenanthrene	0.34	MG/KG	J	40	N	nc	NA	nc	NA
MW05S	2	4	Phenanthrene	7.1	MG/KG	J*	40	N	nc	NA	nc	NA
MW08S	1	2	Phenanthrene	0.32	MG/KG	JEB	40	N	nc	NA	nc	NA
MW08S	2	4	Phenanthrene	0.26	MG/KG	JEB	40	N	nc	NA	nc	NA
MW01S	2	4	Phenanthrene	1.2	MG/KG	JEB	40	N	nc	NA	nc	NA
MW08S	2	4	Phenanthrene	0.26	MG/KG	JEB	40	N	nc	NA	nc	NA
CMS-703	0	2	Phenanthrene	6.2	MG/KG	U	40	NA	nc	NA	nc	NA
MW05S	1	2	Phenanthrene	0.36	MG/KG	U	40	NA	nc	NA	nc	NA
MW05S	1	2	Phenanthrene	0.36	MG/KG	U	40	NA	nc	NA	nc	NA
CMS-173	1	2	Phenanthrene	0.52	MG/KG	U	40	NA	nc	NA	nc	NA
CMS-417	1	2	Phenanthrene	35	MG/KG	U	40	NA	nc	NA	nc	NA
CMS-428	1	2	Phenanthrene	0.35	MG/KG	U	40	NA	nc	NA	nc	NA
CMS-417	2	3	Phenanthrene	9.8	MG/KG	U	40	NA	nc	NA	nc	NA
MW02S	2	4	Phenanthrene	0.38	MG/KG	U	40	NA	nc	NA	nc	NA
SB-14-271	2	4	Phenanthrene	0.45	MG/KG	U	40	NA	nc	NA	nc	NA
SS-03	2.5	3.5	Phenanthrene	0.4	MG/KG	U	40	NA	nc	NA	nc	NA
CMS-060	3	4	Phenanthrene	0.45	MG/KG	U	40	NA	nc	NA	nc	NA
CMS-417	3	4	Phenanthrene	1.9	MG/KG	U	40	NA	nc	NA	nc	NA
CMS-427	3	4	Phenanthrene	0.41	MG/KG	U	40	NA	nc	NA	nc	NA
CMS-428	3	4	Phenanthrene	0.37	MG/KG	U	40	NA	nc	NA	nc	NA
CMS-405	4	5	Phenanthrene	0.46	MG/KG	U	40	NA	nc	NA	nc	NA
SB03	4	6	Phenanthrene	0.37	MG/KG	U	40	NA	nc	NA	nc	NA
MW04D	4	6	Phenanthrene	0.42	MG/KG	U	40	NA	nc	NA	nc	NA
MW08S	4	6	Phenanthrene	0.45	MG/KG	U	40	NA	nc	NA	nc	NA
SB-14-271	4	6	Phenanthrene	0.4	MG/KG	U	40	NA	nc	NA	nc	NA
SB03	4	6	Phenanthrene	0.38	MG/KG	U	40	NA	nc	NA	nc	NA
GEC-6	2.5	4.5	Phenanthrene	0.15	MG/KG	U	40	NA	nc	NA	nc	NA
CMS-455	4	5	Phenanthrene	0.48	MG/KG	UJ	40	NA	nc	NA	nc	NA
SS-01	0	0	Phenanthrene	0.58	MG/KG		40	N	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Phenanthrene	2.7	MG/KG		40	N	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Phenanthrene	1.8	MG/KG		40	N	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Phenanthrene	14	MG/KG		40	N	nc	NA	nc	NA
CMS-089	0	1	Phenanthrene	2.3	MG/KG		40	N	nc	NA	nc	NA
CMS-237	0	1	Phenanthrene	1.4	MG/KG		40	N	nc	NA	nc	NA
CMS-405	0	1	Phenanthrene	3.5	MG/KG		40	N	nc	NA	nc	NA
CMS-407	0	1	Phenanthrene	1.5	MG/KG		40	N	nc	NA	nc	NA
CMS-456	0	1	Phenanthrene	2.9	MG/KG		40	N	nc	NA	nc	NA
CMS-060	0	1	Phenanthrene	2.9	MG/KG		40	N	nc	NA	nc	NA
SS-02	0	1.3	Phenanthrene	0.56	MG/KG		40	N	nc	NA	nc	NA
BV01COMP	0	4	Phenanthrene	1.5	MG/KG		40	N	nc	NA	nc	NA
MW14M	1	2	Phenanthrene	0.66	MG/KG		40	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW14M	1	2	Phenanthrene	0.64	MG/KG		40	N	nc	NA	nc	NA
MW14M	1	2	Phenanthrene	0.41	MG/KG		40	N	nc	NA	nc	NA
MW14M	1	2	Phenanthrene	0.49	MG/KG		40	N	nc	NA	nc	NA
CMS-060	1	2	Phenanthrene	1	MG/KG		40	N	nc	NA	nc	NA
CMS-089	1	2	Phenanthrene	0.77	MG/KG		40	N	nc	NA	nc	NA
CMS-118	1	2	Phenanthrene	3.2	MG/KG		40	N	nc	NA	nc	NA
CMS-407	1	2	Phenanthrene	3.1	MG/KG		40	N	nc	NA	nc	NA
CMS-423	1	2	Phenanthrene	0.52	MG/KG		40	N	nc	NA	nc	NA
CMS-456	1	2	Phenanthrene	2	MG/KG		40	N	nc	NA	nc	NA
CMS-237	2	3	Phenanthrene	1.5	MG/KG		40	N	nc	NA	nc	NA
CMS-405	2	3	Phenanthrene	0.67	MG/KG		40	N	nc	NA	nc	NA
CMS-407	2	3	Phenanthrene	2.2	MG/KG		40	N	nc	NA	nc	NA
CMS-408	2	3	Phenanthrene	1.2	MG/KG		40	N	nc	NA	nc	NA
CMS-455	2	3	Phenanthrene	1.4	MG/KG		40	N	nc	NA	nc	NA
MW06S	2	4	Phenanthrene	0.46	MG/KG		40	N	nc	NA	nc	NA
MW06S	2	4	Phenanthrene	0.4	MG/KG		40	N	nc	NA	nc	NA
SB03	2	4	Phenanthrene	3.6	MG/KG		40	N	nc	NA	nc	NA
MW07S	3	4	Phenanthrene	1.2	MG/KG		40	N	nc	NA	nc	NA
CMS-089	3	4	Phenanthrene	4.4	MG/KG		40	N	nc	NA	nc	NA
CMS-405	3	4	Phenanthrene	2.1	MG/KG		40	N	nc	NA	nc	NA
CMS-423	3	4	Phenanthrene	0.43	MG/KG		40	N	nc	NA	nc	NA
MW15D	4	6	Phenanthrene	1	MG/KG		40	N	nc	NA	nc	NA
MW05S	4	6	Phenanthrene	1.1	MG/KG		40	N	nc	NA	nc	NA
MW07S	4	6	Phenanthrene	0.49	MG/KG		40	N	nc	NA	nc	NA
MW15D	4	6	Phenanthrene	0.76	MG/KG		40	N	nc	NA	nc	NA
SS-02	0	1.3	Phenol	2.2	MG/KG	EB	6000	N	nc	NA	nc	NA
MW08S	1	2	Phenol	0.22	MG/KG	J	6000	N	nc	NA	nc	NA
CMS-405	1	2	Phenol	0.16	MG/KG	J	6000	N	nc	NA	nc	NA
MW06S	2	4	Phenol	0.052	MG/KG	J	6000	N	nc	NA	nc	NA
MW06S	2	4	Phenol	0.046	MG/KG	J	6000	N	nc	NA	nc	NA
MW06S	4	6	Phenol	0.12	MG/KG	J	6000	N	nc	NA	nc	NA
SS-03	2.5	3.5	Phenol	0.051	MG/KG	J,EB	6000	N	nc	NA	nc	NA
SS-01	0	0	Phenol	0.43	MG/KG	U	6000	NA	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Phenol	0.8	MG/KG	U	6000	NA	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Phenol	0.87	MG/KG	U	6000	NA	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Phenol	2.1	MG/KG	U	6000	NA	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Phenol	0.95	MG/KG	U	6000	NA	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Phenol	0.46	MG/KG	U	6000	NA	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Phenol	2.1	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-089	0	1	Phenol	0.67	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-098	0	1	Phenol	0.6	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-142	0	1	Phenol	0.58	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-164	0	1	Phenol	2	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-173	0	1	Phenol	1.1	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-237	0	1	Phenol	1.3	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-405	0	1	Phenol	0.35	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-407	0	1	Phenol	0.35	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-408	0	1	Phenol	0.34	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-417	0	1	Phenol	35	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-456	0	1	Phenol	0.49	MG/KG	U	6000	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-142	0	1	Phenol	0.55	MG/KG	U	6000	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Phenol	0.51	MG/KG	U	6000	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Phenol	0.62	MG/KG	U	6000	NA	nc	NA	nc	NA
RES-14-302-01	0	1	Phenol	5	MG/KG	U	6000	NA	nc	NA	nc	NA
RES-14-303-01	0	1	Phenol	4.8	MG/KG	U	6000	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Phenol	2.5	MG/KG	U	6000	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Phenol	3.1	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-703	0	2	Phenol	6.2	MG/KG	U	6000	NA	nc	NA	nc	NA
SS-06	0	2	Phenol	0.84	MG/KG	U	6000	NA	nc	NA	nc	NA
BV01COMP	0	4	Phenol	0.38	MG/KG	U	6000	NA	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Phenol	4.2	MG/KG	U	6000	NA	nc	NA	nc	NA
MW05S	1	2	Phenol	0.36	MG/KG	U	6000	NA	nc	NA	nc	NA
MW14M	1	2	Phenol	0.34	MG/KG	U	6000	NA	nc	NA	nc	NA
MW14M	1	2	Phenol	0.34	MG/KG	U	6000	NA	nc	NA	nc	NA
MW01S	1	2	Phenol	0.38	MG/KG	U	6000	NA	nc	NA	nc	NA
MW05S	1	2	Phenol	0.36	MG/KG	U	6000	NA	nc	NA	nc	NA
MW14M	1	2	Phenol	0.33	MG/KG	U	6000	NA	nc	NA	nc	NA
MW14M	1	2	Phenol	0.33	MG/KG	U	6000	NA	nc	NA	nc	NA
SB-14-271	1	2	Phenol	0.4	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-060	1	2	Phenol	0.34	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-089	1	2	Phenol	0.35	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-118	1	2	Phenol	0.37	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-173	1	2	Phenol	0.52	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-237	1	2	Phenol	0.83	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-407	1	2	Phenol	0.44	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-408	1	2	Phenol	8.7	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-417	1	2	Phenol	35	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-419	1	2	Phenol	74	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-423	1	2	Phenol	0.35	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-427	1	2	Phenol	3.6	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-428	1	2	Phenol	0.35	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-456	1	2	Phenol	1.2	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-405	1	2	Phenol	1.2	MG/KG	U	6000	NA	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Phenol	0.86	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-060	2	3	Phenol	0.36	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-089	2	3	Phenol	0.7	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-118	2	3	Phenol	0.44	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-237	2	3	Phenol	0.63	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-405	2	3	Phenol	0.64	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-407	2	3	Phenol	1.1	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-417	2	3	Phenol	9.8	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-455	2	3	Phenol	0.4	MG/KG	U	6000	NA	nc	NA	nc	NA
MW08S	2	4	Phenol	0.45	MG/KG	U	6000	NA	nc	NA	nc	NA
SB02	2	4	Phenol	2.3	MG/KG	U	6000	NA	nc	NA	nc	NA
MW01S	2	4	Phenol	1.6	MG/KG	U	6000	NA	nc	NA	nc	NA
MW02S	2	4	Phenol	0.38	MG/KG	U	6000	NA	nc	NA	nc	NA
MW08S	2	4	Phenol	0.41	MG/KG	U	6000	NA	nc	NA	nc	NA
MW14M	2	4	Phenol	0.38	MG/KG	U	6000	NA	nc	NA	nc	NA
MW15D	2	4	Phenol	0.37	MG/KG	U	6000	NA	nc	NA	nc	NA
SB-14-271	2	4	Phenol	0.45	MG/KG	U	6000	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
SB02	2	4	Phenol	2.2	MG/KG	U	6000	NA	nc	NA	nc	NA
SB03	2	4	Phenol	0.99	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-060	3	4	Phenol	0.45	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-089	3	4	Phenol	1.8	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-118	3	4	Phenol	0.5	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-405	3	4	Phenol	0.38	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-407	3	4	Phenol	0.42	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-417	3	4	Phenol	1.9	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-419	3	4	Phenol	0.42	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-423	3	4	Phenol	0.37	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-427	3	4	Phenol	0.41	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-428	3	4	Phenol	0.37	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-423	3	4	Phenol	0.39	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-118	4	5	Phenol	0.43	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-405	4	5	Phenol	0.46	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-455	4	5	Phenol	0.48	MG/KG	U	6000	NA	nc	NA	nc	NA
SB03	4	6	Phenol	0.37	MG/KG	U	6000	NA	nc	NA	nc	NA
MW15D	4	6	Phenol	0.4	MG/KG	U	6000	NA	nc	NA	nc	NA
MW01S	4	6	Phenol	0.4	MG/KG	U	6000	NA	nc	NA	nc	NA
MW03S	4	6	Phenol	0.4	MG/KG	U	6000	NA	nc	NA	nc	NA
MW04D	4	6	Phenol	0.42	MG/KG	U	6000	NA	nc	NA	nc	NA
MW05S	4	6	Phenol	0.82	MG/KG	U	6000	NA	nc	NA	nc	NA
MW08S	4	6	Phenol	0.45	MG/KG	U	6000	NA	nc	NA	nc	NA
MW15D	4	6	Phenol	0.35	MG/KG	U	6000	NA	nc	NA	nc	NA
SB-14-271	4	6	Phenol	0.4	MG/KG	U	6000	NA	nc	NA	nc	NA
SB02	4	6	Phenol	0.83	MG/KG	U	6000	NA	nc	NA	nc	NA
SB03	4	6	Phenol	0.38	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-4105	0	1	Phenol	2.7	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-4110	0	1	Phenol	3.2	MG/KG	U	6000	NA	nc	NA	nc	NA
CMS-060	0	1	Phenol	0.34	MG/KG	UJ	6000	NA	nc	NA	nc	NA
CMS-118	0	1	Phenol	0.36	MG/KG	UJ	6000	NA	nc	NA	nc	NA
CMS-159	0	1	Phenol	2.2	MG/KG	UJ	6000	NA	nc	NA	nc	NA
CMS-060	0	1	Phenol	0.35	MG/KG	UJ	6000	NA	nc	NA	nc	NA
MW05S	2	4	Phenol	0.37	MG/KG	UJ	6000	NA	nc	NA	nc	NA
CMS-060	4	5	Phenol	0.38	MG/KG	UJ	6000	NA	nc	NA	nc	NA
CMS-408	2	3	Phenol	0.51	MG/KG		6000	N	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Pyrene	23	MG/KG	*	13	Y	nc	NA	nc	NA
MW01S	1	2	Pyrene	1.5	MG/KG	EB	13	N	nc	NA	nc	NA
MW08S	2	4	Pyrene	0.59	MG/KG	EB	13	N	nc	NA	nc	NA
MW08S	2	4	Pyrene	0.44	MG/KG	EB	13	N	nc	NA	nc	NA
MW01S	4	6	Pyrene	1.7	MG/KG	EB	13	N	nc	NA	nc	NA
MW03S	4	6	Pyrene	1.6	MG/KG	EB	13	N	nc	NA	nc	NA
CMS-4105	0	1	Pyrene	16.7283087	MG/KG	J	13	Y	nc	NA	nc	NA
CMS-4110	0	1	Pyrene	8.67502144	MG/KG	J	13	N	nc	NA	nc	NA
CMS-060	0	1	Pyrene	2.1	MG/KG	J	13	N	nc	NA	nc	NA
CMS-098	0	1	Pyrene	0.42	MG/KG	J	13	N	nc	NA	nc	NA
CMS-164	0	1	Pyrene	0.45	MG/KG	J	13	N	nc	NA	nc	NA
CMS-173	0	1	Pyrene	0.89	MG/KG	J	13	N	nc	NA	nc	NA
CMS-405	0	1	Pyrene	5.2	MG/KG	J	13	N	nc	NA	nc	NA
CMS-408	0	1	Pyrene	0.25	MG/KG	J	13	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-417	0	1	Pyrene	16	MG/KG	J	13	Y	nc	NA	nc	NA
CMS-142	0	1	Pyrene	0.3	MG/KG	J	13	N	nc	NA	nc	NA
CMS-060	0	1	Pyrene	4	MG/KG	J	13	N	nc	NA	nc	NA
RES-14-271-01	0	1	Pyrene	0.74	MG/KG	J	13	N	nc	NA	nc	NA
RES-14-302-01	0	1	Pyrene	1.1	MG/KG	J	13	N	nc	NA	nc	NA
RES-14-303-01	0	1	Pyrene	3.4	MG/KG	J	13	N	nc	NA	nc	NA
RES-14-333-01	0	1	Pyrene	5.6	MG/KG	J	13	N	nc	NA	nc	NA
RES-14-271-01	0	1	Pyrene	2	MG/KG	J	13	N	nc	NA	nc	NA
RES-14-272-01	0	1	Pyrene	1.4	MG/KG	J	13	N	nc	NA	nc	NA
CMS-703	0	2	Pyrene	1.3	MG/KG	J	13	N	nc	NA	nc	NA
CMS-405	1	2	Pyrene	8.1	MG/KG	J	13	N	nc	NA	nc	NA
CMS-408	1	2	Pyrene	1.4	MG/KG	J	13	N	nc	NA	nc	NA
CMS-427	1	2	Pyrene	2.3	MG/KG	J	13	N	nc	NA	nc	NA
CMS-405	1	2	Pyrene	2.7	MG/KG	J	13	N	nc	NA	nc	NA
CMS-060	2	3	Pyrene	0.28	MG/KG	J	13	N	nc	NA	nc	NA
CMS-089	2	3	Pyrene	0.19	MG/KG	J	13	N	nc	NA	nc	NA
SB02	2	4	Pyrene	1.6	MG/KG	J	13	N	nc	NA	nc	NA
MW02S	2	4	Pyrene	0.12	MG/KG	J	13	N	nc	NA	nc	NA
MW14M	2	4	Pyrene	0.28	MG/KG	J	13	N	nc	NA	nc	NA
MW15D	2	4	Pyrene	0.23	MG/KG	J	13	N	nc	NA	nc	NA
SB02	2	4	Pyrene	1.9	MG/KG	J	13	N	nc	NA	nc	NA
CMS-118	3	4	Pyrene	0.15	MG/KG	J	13	N	nc	NA	nc	NA
CMS-060	4	5	Pyrene	0.48	MG/KG	J	13	N	nc	NA	nc	NA
MW06S	4	6	Pyrene	0.21	MG/KG	J	13	N	nc	NA	nc	NA
MW07S	4	6	Pyrene	0.32	MG/KG	J	13	N	nc	NA	nc	NA
MW09S	4	6	Pyrene	0.65	MG/KG	J	13	N	nc	NA	nc	NA
SB-14-271	4	6	Pyrene	0.044	MG/KG	J	13	N	nc	NA	nc	NA
MW05S	2	4	Pyrene	6.6	MG/KG	J*	13	N	nc	NA	nc	NA
MW08S	1	2	Pyrene	0.33	MG/KG	JEB	13	N	nc	NA	nc	NA
MW01S	2	4	Pyrene	1.4	MG/KG	JEB	13	N	nc	NA	nc	NA
MW08S	4	6	Pyrene	0.069	MG/KG	JEB	13	N	nc	NA	nc	NA
MW05S	1	2	Pyrene	0.36	MG/KG	U	13	NA	nc	NA	nc	NA
MW05S	1	2	Pyrene	0.36	MG/KG	U	13	NA	nc	NA	nc	NA
CMS-173	1	2	Pyrene	0.52	MG/KG	U	13	NA	nc	NA	nc	NA
CMS-417	1	2	Pyrene	35	MG/KG	U	13	NA	nc	NA	nc	NA
CMS-419	1	2	Pyrene	74	MG/KG	U	13	NA	nc	NA	nc	NA
CMS-428	1	2	Pyrene	0.35	MG/KG	U	13	NA	nc	NA	nc	NA
CMS-417	2	3	Pyrene	9.8	MG/KG	U	13	NA	nc	NA	nc	NA
SB-14-271	2	4	Pyrene	0.45	MG/KG	U	13	NA	nc	NA	nc	NA
SS-03	2.5	3.5	Pyrene	0.4	MG/KG	U	13	NA	nc	NA	nc	NA
CMS-060	3	4	Pyrene	0.45	MG/KG	U	13	NA	nc	NA	nc	NA
CMS-417	3	4	Pyrene	1.9	MG/KG	U	13	NA	nc	NA	nc	NA
CMS-419	3	4	Pyrene	0.42	MG/KG	U	13	NA	nc	NA	nc	NA
CMS-427	3	4	Pyrene	0.41	MG/KG	U	13	NA	nc	NA	nc	NA
CMS-428	3	4	Pyrene	0.37	MG/KG	U	13	NA	nc	NA	nc	NA
CMS-118	4	5	Pyrene	0.43	MG/KG	U	13	NA	nc	NA	nc	NA
CMS-405	4	5	Pyrene	0.46	MG/KG	U	13	NA	nc	NA	nc	NA
SB03	4	6	Pyrene	0.37	MG/KG	U	13	NA	nc	NA	nc	NA
MW04D	4	6	Pyrene	0.42	MG/KG	U	13	NA	nc	NA	nc	NA
SB03	4	6	Pyrene	0.38	MG/KG	U	13	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
GEC-6	2.5	4.5	Pyrene	0.15	MG/KG	U	13	NA	nc	NA	nc	NA
CMS-455	4	5	Pyrene	0.48	MG/KG	UJ	13	NA	nc	NA	nc	NA
SS-01	0	0	Pyrene	0.72	MG/KG		13	N	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Pyrene	4	MG/KG		13	N	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Pyrene	3.2	MG/KG		13	N	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Pyrene	1.4	MG/KG		13	N	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Pyrene	0.57	MG/KG		13	N	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Pyrene	4.8	MG/KG		13	N	nc	NA	nc	NA
CMS-089	0	1	Pyrene	4.5	MG/KG		13	N	nc	NA	nc	NA
CMS-118	0	1	Pyrene	2.1	MG/KG		13	N	nc	NA	nc	NA
CMS-142	0	1	Pyrene	0.58	MG/KG		13	N	nc	NA	nc	NA
CMS-159	0	1	Pyrene	3.6	MG/KG		13	N	nc	NA	nc	NA
CMS-237	0	1	Pyrene	2.4	MG/KG		13	N	nc	NA	nc	NA
CMS-407	0	1	Pyrene	1.5	MG/KG		13	N	nc	NA	nc	NA
CMS-456	0	1	Pyrene	4.6	MG/KG		13	N	nc	NA	nc	NA
RES-14-272-01	0	1	Pyrene	1	MG/KG		13	N	nc	NA	nc	NA
SS-02	0	1.3	Pyrene	0.56	MG/KG		13	N	nc	NA	nc	NA
SS-06	0	2	Pyrene	0.86	MG/KG		13	N	nc	NA	nc	NA
BV01COMP	0	4	Pyrene	3.2	MG/KG		13	N	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Pyrene	5	MG/KG		13	N	nc	NA	nc	NA
MW14M	1	2	Pyrene	0.54	MG/KG		13	N	nc	NA	nc	NA
MW14M	1	2	Pyrene	0.67	MG/KG		13	N	nc	NA	nc	NA
MW14M	1	2	Pyrene	0.35	MG/KG		13	N	nc	NA	nc	NA
MW14M	1	2	Pyrene	0.53	MG/KG		13	N	nc	NA	nc	NA
SB-14-271	1	2	Pyrene	0.43	MG/KG		13	N	nc	NA	nc	NA
CMS-060	1	2	Pyrene	1	MG/KG		13	N	nc	NA	nc	NA
CMS-089	1	2	Pyrene	1.2	MG/KG		13	N	nc	NA	nc	NA
CMS-118	1	2	Pyrene	3.1	MG/KG		13	N	nc	NA	nc	NA
CMS-237	1	2	Pyrene	0.96	MG/KG		13	N	nc	NA	nc	NA
CMS-407	1	2	Pyrene	2.8	MG/KG		13	N	nc	NA	nc	NA
CMS-423	1	2	Pyrene	0.57	MG/KG		13	N	nc	NA	nc	NA
CMS-456	1	2	Pyrene	4.5	MG/KG		13	N	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Pyrene	2.5	MG/KG		13	N	nc	NA	nc	NA
CMS-118	2	3	Pyrene	0.66	MG/KG		13	N	nc	NA	nc	NA
CMS-237	2	3	Pyrene	3.6	MG/KG		13	N	nc	NA	nc	NA
CMS-405	2	3	Pyrene	0.85	MG/KG		13	N	nc	NA	nc	NA
CMS-407	2	3	Pyrene	3	MG/KG		13	N	nc	NA	nc	NA
CMS-408	2	3	Pyrene	1.1	MG/KG		13	N	nc	NA	nc	NA
CMS-455	2	3	Pyrene	2.3	MG/KG		13	N	nc	NA	nc	NA
MW06S	2	4	Pyrene	0.59	MG/KG		13	N	nc	NA	nc	NA
MW06S	2	4	Pyrene	0.49	MG/KG		13	N	nc	NA	nc	NA
SB03	2	4	Pyrene	6.3	MG/KG		13	N	nc	NA	nc	NA
MW07S	3	4	Pyrene	1.4	MG/KG		13	N	nc	NA	nc	NA
CMS-089	3	4	Pyrene	5.2	MG/KG		13	N	nc	NA	nc	NA
CMS-405	3	4	Pyrene	2.7	MG/KG		13	N	nc	NA	nc	NA
CMS-407	3	4	Pyrene	0.45	MG/KG		13	N	nc	NA	nc	NA
CMS-423	3	4	Pyrene	0.52	MG/KG		13	N	nc	NA	nc	NA
CMS-423	3	4	Pyrene	0.45	MG/KG		13	N	nc	NA	nc	NA
MW15D	4	6	Pyrene	1.8	MG/KG		13	N	nc	NA	nc	NA
MW05S	4	6	Pyrene	0.83	MG/KG		13	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW15D	4	6	Pyrene	1.1	MG/KG		13	N	nc	NA	nc	NA
SB02	4	6	Pyrene	1.1	MG/KG		13	N	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Selenium	1.4	MG/KG	J	390	N	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Selenium	1.5	MG/KG	J	390	N	nc	NA	nc	NA
CMS-060	0	1	Selenium	0.67	MG/KG	J	390	N	nc	NA	nc	NA
CMS-089	0	1	Selenium	0.64	MG/KG	J	390	N	nc	NA	nc	NA
CMS-098	0	1	Selenium	1.4	MG/KG	J	390	N	nc	NA	nc	NA
CMS-118	0	1	Selenium	0.77	MG/KG	J	390	N	nc	NA	nc	NA
CMS-142	0	1	Selenium	1.5	MG/KG	J	390	N	nc	NA	nc	NA
CMS-159	0	1	Selenium	4.9	MG/KG	J	390	N	nc	NA	nc	NA
CMS-164	0	1	Selenium	2.7	MG/KG	J	390	N	nc	NA	nc	NA
CMS-173	0	1	Selenium	3.9	MG/KG	J	390	N	nc	NA	nc	NA
CMS-237	0	1	Selenium	0.99	MG/KG	J	390	N	nc	NA	nc	NA
CMS-407	0	1	Selenium	0.59	MG/KG	J	390	N	nc	NA	nc	NA
CMS-408	0	1	Selenium	0.48	MG/KG	J	390	N	nc	NA	nc	NA
CMS-417	0	1	Selenium	2.9	MG/KG	J	390	N	nc	NA	nc	NA
CMS-142	0	1	Selenium	1	MG/KG	J	390	N	nc	NA	nc	NA
CMS-060	0	1	Selenium	0.55	MG/KG	J	390	N	nc	NA	nc	NA
RES-14-302-01	0	1	Selenium	1.5	MG/KG	J	390	N	nc	NA	nc	NA
RES-14-303-01	0	1	Selenium	3.1	MG/KG	J	390	N	nc	NA	nc	NA
MW01S	1	2	Selenium	0.54	MG/KG	J	390	N	nc	NA	nc	NA
CMS-060	1	2	Selenium	0.57	MG/KG	J	390	N	nc	NA	nc	NA
CMS-089	1	2	Selenium	0.59	MG/KG	J	390	N	nc	NA	nc	NA
CMS-118	1	2	Selenium	0.85	MG/KG	J	390	N	nc	NA	nc	NA
CMS-173	1	2	Selenium	0.81	MG/KG	J	390	N	nc	NA	nc	NA
CMS-237	1	2	Selenium	2	MG/KG	J	390	N	nc	NA	nc	NA
CMS-405	1	2	Selenium	2.3	MG/KG	J	390	N	nc	NA	nc	NA
CMS-408	1	2	Selenium	1.8	MG/KG	J	390	N	nc	NA	nc	NA
CMS-417	1	2	Selenium	10.1	MG/KG	J	390	N	nc	NA	nc	NA
CMS-419	1	2	Selenium	3.8	MG/KG	J	390	N	nc	NA	nc	NA
CMS-423	1	2	Selenium	1	MG/KG	J	390	N	nc	NA	nc	NA
CMS-427	1	2	Selenium	0.52	MG/KG	J	390	N	nc	NA	nc	NA
CMS-428	1	2	Selenium	0.7	MG/KG	J	390	N	nc	NA	nc	NA
CMS-456	1	2	Selenium	0.77	MG/KG	J	390	N	nc	NA	nc	NA
CMS-405	1	2	Selenium	3.2	MG/KG	J	390	N	nc	NA	nc	NA
CMS-060	2	3	Selenium	1.1	MG/KG	J	390	N	nc	NA	nc	NA
CMS-089	2	3	Selenium	0.95	MG/KG	J	390	N	nc	NA	nc	NA
CMS-118	2	3	Selenium	15.1	MG/KG	J	390	N	nc	NA	nc	NA
CMS-237	2	3	Selenium	3.1	MG/KG	J	390	N	nc	NA	nc	NA
CMS-405	2	3	Selenium	2.8	MG/KG	J	390	N	nc	NA	nc	NA
CMS-407	2	3	Selenium	0.68	MG/KG	J	390	N	nc	NA	nc	NA
CMS-408	2	3	Selenium	2.4	MG/KG	J	390	N	nc	NA	nc	NA
CMS-417	2	3	Selenium	1.2	MG/KG	J	390	N	nc	NA	nc	NA
CMS-455	2	3	Selenium	1.6	MG/KG	J	390	N	nc	NA	nc	NA
MW06S	2	4	Selenium	0.58	MG/KG	J	390	N	nc	NA	nc	NA
CMS-060	3	4	Selenium	1.3	MG/KG	J	390	N	nc	NA	nc	NA
CMS-089	3	4	Selenium	0.7	MG/KG	J	390	N	nc	NA	nc	NA
CMS-118	3	4	Selenium	2.3	MG/KG	J	390	N	nc	NA	nc	NA
CMS-405	3	4	Selenium	1.5	MG/KG	J	390	N	nc	NA	nc	NA
CMS-417	3	4	Selenium	1.3	MG/KG	J	390	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-419	3	4	Selenium	0.65	MG/KG	J	390	N	nc	NA	nc	NA
CMS-423	3	4	Selenium	1.9	MG/KG	J	390	N	nc	NA	nc	NA
CMS-428	3	4	Selenium	0.47	MG/KG	J	390	N	nc	NA	nc	NA
CMS-423	3	4	Selenium	1	MG/KG	J	390	N	nc	NA	nc	NA
CMS-060	4	5	Selenium	0.53	MG/KG	J	390	N	nc	NA	nc	NA
CMS-405	4	5	Selenium	0.59	MG/KG	J	390	N	nc	NA	nc	NA
CMS-455	4	5	Selenium	0.74	MG/KG	J	390	N	nc	NA	nc	NA
MW03S	4	6	Selenium	0.67	MG/KG	J	390	N	nc	NA	nc	NA
MW06S	4	6	Selenium	1	MG/KG	J	390	N	nc	NA	nc	NA
MW07S	4	6	Selenium	1.1	MG/KG	J	390	N	nc	NA	nc	NA
MW15D	4	6	Selenium	0.92	MG/KG	J	390	N	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Selenium	0.79	MG/KG	U	390	NA	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Selenium	1.1	MG/KG	U	390	NA	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Selenium	0.88	MG/KG	U	390	NA	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Selenium	0.95	MG/KG	U	390	NA	nc	NA	nc	NA
CMS-405	0	1	Selenium	26.6	MG/KG	U	390	NA	nc	NA	nc	NA
CMS-456	0	1	Selenium	37.4	MG/KG	U	390	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Selenium	1.6	MG/KG	U	390	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Selenium	1.6	MG/KG	U	390	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Selenium	1.6	MG/KG	U	390	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Selenium	2	MG/KG	U	390	NA	nc	NA	nc	NA
CMS-703	0	2	Selenium	31.1	MG/KG	U	390	NA	nc	NA	nc	NA
BV01COMP	0	4	Selenium	28.5	MG/KG	U	390	NA	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Selenium	1.3	MG/KG	U	390	NA	nc	NA	nc	NA
CMS-407	1	2	Selenium	33	MG/KG	U	390	NA	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Selenium	0.96	MG/KG	U	390	NA	nc	NA	nc	NA
SB02	2	4	Selenium	1.3	MG/KG	U	390	NA	nc	NA	nc	NA
SB03	2	4	Selenium	0.99	MG/KG	U	390	NA	nc	NA	nc	NA
MW07S	3	4	Selenium	0.52	MG/KG	U	390	NA	nc	NA	nc	NA
CMS-407	3	4	Selenium	32.2	MG/KG	U	390	NA	nc	NA	nc	NA
CMS-427	3	4	Selenium	30.8	MG/KG	U	390	NA	nc	NA	nc	NA
CMS-118	4	5	Selenium	32.3	MG/KG	U	390	NA	nc	NA	nc	NA
SB03	4	6	Selenium	1	MG/KG	U	390	NA	nc	NA	nc	NA
MW01S	4	6	Selenium	0.5	MG/KG	U	390	NA	nc	NA	nc	NA
MW04D	4	6	Selenium	4.1	MG/KG	U	390	NA	nc	NA	nc	NA
MW05S	4	6	Selenium	0.58	MG/KG	U	390	NA	nc	NA	nc	NA
MW08S	4	6	Selenium	0.48	MG/KG	U	390	NA	nc	NA	nc	NA
MW09S	4	6	Selenium	0.69	MG/KG	U	390	NA	nc	NA	nc	NA
SB02	4	6	Selenium	1.2	MG/KG	U	390	NA	nc	NA	nc	NA
SB03	4	6	Selenium	0.97	MG/KG	U	390	NA	nc	NA	nc	NA
CMS-4105	0	1	Selenium	2.49	MG/KG	U	390	NA	nc	NA	nc	NA
CMS-4110	0	1	Selenium	1.38	MG/KG	U	390	NA	nc	NA	nc	NA
MW05S	1	2	Selenium	1.9	MG/KG	UJ	390	NA	nc	NA	nc	NA
MW14M	1	2	Selenium	0.34	MG/KG	UJ	390	NA	nc	NA	nc	NA
MW05S	1	2	Selenium	1.8	MG/KG	UJ	390	NA	nc	NA	nc	NA
MW14M	1	2	Selenium	0.35	MG/KG	UJ	390	NA	nc	NA	nc	NA
SB-14-271	1	2	Selenium	2.8	MG/KG	UJ	390	NA	nc	NA	nc	NA
MW02S	2	4	Selenium	1	MG/KG	UJ	390	NA	nc	NA	nc	NA
MW05S	2	4	Selenium	3	MG/KG	UJ	390	NA	nc	NA	nc	NA
MW14M	2	4	Selenium	0.47	MG/KG	UJ	390	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW15D	2	4	Selenium	0.62	MG/KG	UJ	390	NA	nc	NA	nc	NA
SB-14-271	2	4	Selenium	1	MG/KG	UJ	390	NA	nc	NA	nc	NA
SB02	2	4	Selenium	1.3	MG/KG	UJ	390	NA	nc	NA	nc	NA
MW15D	4	6	Selenium	0.6	MG/KG	UJ	390	NA	nc	NA	nc	NA
SB-14-271	4	6	Selenium	1.5	MG/KG	UJ	390	NA	nc	NA	nc	NA
MW08S	1	2	Selenium	2.2	MG/KG		390	N	nc	NA	nc	NA
MW08S	2	4	Selenium	2.3	MG/KG		390	N	nc	NA	nc	NA
MW06S	2	4	Selenium	1.2	MG/KG		390	N	nc	NA	nc	NA
MW08S	2	4	Selenium	1.3	MG/KG		390	N	nc	NA	nc	NA
CMS-142	0	1	Silver	0.33	MG/KG	J	200	N	nc	NA	nc	NA
CMS-159	0	1	Silver	0.6	MG/KG	J	200	N	nc	NA	nc	NA
CMS-164	0	1	Silver	1.2	MG/KG	J	200	N	nc	NA	nc	NA
CMS-173	0	1	Silver	0.57	MG/KG	J	200	N	nc	NA	nc	NA
CMS-237	0	1	Silver	1.3	MG/KG	J	200	N	nc	NA	nc	NA
RES-14-271-01	0	1	Silver	0.53	MG/KG	J	200	N	nc	NA	nc	NA
RES-14-303-01	0	1	Silver	0.98	MG/KG	J	200	N	nc	NA	nc	NA
RES-14-333-01	0	1	Silver	1.6	MG/KG	J	200	N	nc	NA	nc	NA
RES-14-271-01	0	1	Silver	0.5	MG/KG	J	200	N	nc	NA	nc	NA
MW14M	1	2	Silver	0.43	MG/KG	J	200	N	nc	NA	nc	NA
CMS-456	1	2	Silver	0.74	MG/KG	J	200	N	nc	NA	nc	NA
CMS-089	2	3	Silver	0.16	MG/KG	J	200	N	nc	NA	nc	NA
CMS-408	2	3	Silver	0.57	MG/KG	J	200	N	nc	NA	nc	NA
SB02	2	4	Silver	0.19	MG/KG	J	200	N	nc	NA	nc	NA
MW07S	3	4	Silver	0.54	MG/KG	J	200	N	nc	NA	nc	NA
CMS-423	3	4	Silver	0.2	MG/KG	J	200	N	nc	NA	nc	NA
MW06S	4	6	Silver	0.61	MG/KG	J	200	N	nc	NA	nc	NA
MW07S	4	6	Silver	0.38	MG/KG	J	200	N	nc	NA	nc	NA
MW09S	4	6	Silver	0.48	MG/KG	J	200	N	nc	NA	nc	NA
CMS-4105	0	1	Silver	1.75	MG/KG	J	200	N	nc	NA	nc	NA
CMS-4110	0	1	Silver	2.05	MG/KG	J	200	N	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Silver	0.91	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-060	0	1	Silver	1	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-089	0	1	Silver	1	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-098	0	1	Silver	1.8	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-118	0	1	Silver	1.1	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-405	0	1	Silver	1.1	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-407	0	1	Silver	1.1	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-408	0	1	Silver	1	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-456	0	1	Silver	1.5	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-142	0	1	Silver	1.7	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-060	0	1	Silver	1.1	MG/KG	U	200	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Silver	0.77	MG/KG	U	200	NA	nc	NA	nc	NA
RES-14-302-01	0	1	Silver	0.83	MG/KG	U	200	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Silver	0.8	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-703	0	2	Silver	1.2	MG/KG	U	200	NA	nc	NA	nc	NA
BV01COMP	0	4	Silver	1.1	MG/KG	U	200	NA	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Silver	2	MG/KG	U	200	NA	nc	NA	nc	NA
MW14M	1	2	Silver	0.36	MG/KG	U	200	NA	nc	NA	nc	NA
MW01S	1	2	Silver	0.32	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-060	1	2	Silver	1	MG/KG	U	200	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-089	1	2	Silver	1.1	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-118	1	2	Silver	1.1	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-173	1	2	Silver	1.6	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-407	1	2	Silver	1.3	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-428	1	2	Silver	1.1	MG/KG	U	200	NA	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Silver	0.96	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-060	2	3	Silver	1.1	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-118	2	3	Silver	1.3	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-407	2	3	Silver	1.7	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-417	2	3	Silver	1.2	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-455	2	3	Silver	1.2	MG/KG	U	200	NA	nc	NA	nc	NA
MW02S	2	4	Silver	0.088	MG/KG	U	200	NA	nc	NA	nc	NA
MW14M	2	4	Silver	0.42	MG/KG	U	200	NA	nc	NA	nc	NA
SB02	2	4	Silver	0.1	MG/KG	U	200	NA	nc	NA	nc	NA
SB03	2	4	Silver	0.092	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-060	3	4	Silver	1.4	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-089	3	4	Silver	1.1	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-118	3	4	Silver	1.5	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-407	3	4	Silver	1.3	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-417	3	4	Silver	1.1	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-419	3	4	Silver	1.3	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-423	3	4	Silver	1.1	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-428	3	4	Silver	1.1	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-060	4	5	Silver	1.2	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-118	4	5	Silver	1.3	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-405	4	5	Silver	1.4	MG/KG	U	200	NA	nc	NA	nc	NA
CMS-455	4	5	Silver	1.4	MG/KG	U	200	NA	nc	NA	nc	NA
SB03	4	6	Silver	0.093	MG/KG	U	200	NA	nc	NA	nc	NA
MW01S	4	6	Silver	0.35	MG/KG	U	200	NA	nc	NA	nc	NA
MW03S	4	6	Silver	0.33	MG/KG	U	200	NA	nc	NA	nc	NA
MW05S	4	6	Silver	0.2	MG/KG	U	200	NA	nc	NA	nc	NA
MW08S	4	6	Silver	0.33	MG/KG	U	200	NA	nc	NA	nc	NA
SB02	4	6	Silver	0.11	MG/KG	U	200	NA	nc	NA	nc	NA
SB03	4	6	Silver	0.09	MG/KG	U	200	NA	nc	NA	nc	NA
MW05S	1	2	Silver	0.16	MG/KG	UJ	200	NA	nc	NA	nc	NA
MW05S	1	2	Silver	0.65	MG/KG	UJ	200	NA	nc	NA	nc	NA
SB-14-271	1	2	Silver	0.22	MG/KG	UJ	200	NA	nc	NA	nc	NA
MW05S	2	4	Silver	0.8	MG/KG	UJ	200	NA	nc	NA	nc	NA
MW15D	2	4	Silver	0.11	MG/KG	UJ	200	NA	nc	NA	nc	NA
SB-14-271	2	4	Silver	0.29	MG/KG	UJ	200	NA	nc	NA	nc	NA
MW15D	4	6	Silver	0.11	MG/KG	UJ	200	NA	nc	NA	nc	NA
MW04D	4	6	Silver	0.8	MG/KG	UJ	200	NA	nc	NA	nc	NA
MW15D	4	6	Silver	0.1	MG/KG	UJ	200	NA	nc	NA	nc	NA
SB-14-271	4	6	Silver	0.19	MG/KG	UJ	200	NA	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Silver	2.7	MG/KG		200	N	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Silver	2.6	MG/KG		200	N	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Silver	7.2	MG/KG		200	N	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Silver	2.6	MG/KG		200	N	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Silver	7.5	MG/KG		200	N	nc	NA	nc	NA
CMS-417	0	1	Silver	6.2	MG/KG		200	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW08S	1	2	Silver	0.68	MG/KG		200	N	nc	NA	nc	NA
CMS-237	1	2	Silver	35.5	MG/KG		200	N	nc	NA	nc	NA
CMS-405	1	2	Silver	3.8	MG/KG		200	N	nc	NA	nc	NA
CMS-408	1	2	Silver	2.6	MG/KG		200	N	nc	NA	nc	NA
CMS-417	1	2	Silver	5	MG/KG		200	N	nc	NA	nc	NA
CMS-419	1	2	Silver	3.2	MG/KG		200	N	nc	NA	nc	NA
CMS-423	1	2	Silver	1.4	MG/KG		200	N	nc	NA	nc	NA
CMS-427	1	2	Silver	1.3	MG/KG		200	N	nc	NA	nc	NA
CMS-405	1	2	Silver	17.7	MG/KG		200	N	nc	NA	nc	NA
CMS-237	2	3	Silver	2.6	MG/KG		200	N	nc	NA	nc	NA
CMS-405	2	3	Silver	3.1	MG/KG		200	N	nc	NA	nc	NA
MW08S	2	4	Silver	4.9	MG/KG		200	N	nc	NA	nc	NA
MW06S	2	4	Silver	3.7	MG/KG		200	N	nc	NA	nc	NA
MW06S	2	4	Silver	1.1	MG/KG		200	N	nc	NA	nc	NA
MW08S	2	4	Silver	0.82	MG/KG		200	N	nc	NA	nc	NA
CMS-405	3	4	Silver	1.4	MG/KG		200	N	nc	NA	nc	NA
CMS-427	3	4	Silver	2.3	MG/KG		200	N	nc	NA	nc	NA
CMS-419	1	2	Styrene	10	MG/KG	J	13	N	2.9	Y	nc	NA
CMS-417	2	3	Styrene	10	MG/KG	J	13	N	2.9	Y	nc	NA
CMS-427	3	4	Styrene	0.0025	MG/KG	J	13	N	2.9	N	nc	NA
CMS-089	0	1	Styrene	0.005	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-118	0	1	Styrene	0.0048	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-159	0	1	Styrene	0.021	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-407	0	1	Styrene	0.005	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-408	0	1	Styrene	0.0043	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-417	0	1	Styrene	59	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-456	0	1	Styrene	0.0075	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-702	0	1	Styrene	0.0087	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-703	0	1	Styrene	0.0061	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-060	0	1	Styrene	2.7	MG/KG	U	13	NA	2.9	NA	nc	NA
MW05S	1	2	Styrene	0.095	MG/KG	U	13	NA	2.9	NA	nc	NA
MW01S	1	2	Styrene	0.34	MG/KG	U	13	NA	2.9	NA	nc	NA
MW05S	1	2	Styrene	0.11	MG/KG	U	13	NA	2.9	NA	nc	NA
MW08S	1	2	Styrene	0.26	MG/KG	U	13	NA	2.9	NA	nc	NA
MW14M	1	2	Styrene	0.11	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-060	1	2	Styrene	5.1	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-089	1	2	Styrene	0.0048	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-118	1	2	Styrene	0.006	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-405	1	2	Styrene	4	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-408	1	2	Styrene	2.2	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-417	1	2	Styrene	130	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-423	1	2	Styrene	0.0062	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-427	1	2	Styrene	0.0045	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-428	1	2	Styrene	0.0054	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-456	1	2	Styrene	0.0089	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-060	2	3	Styrene	0.27	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-118	2	3	Styrene	0.0074	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-407	2	3	Styrene	0.0087	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-408	2	3	Styrene	6.6	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-455	2	3	Styrene	0.33	MG/KG	U	13	NA	2.9	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW08S	2	4	Styrene	0.21	MG/KG	U	13	NA	2.9	NA	nc	NA
MW01S	2	4	Styrene	0.22	MG/KG	U	13	NA	2.9	NA	nc	NA
MW02S	2	4	Styrene	0.2	MG/KG	U	13	NA	2.9	NA	nc	NA
MW04D	2	4	Styrene	0.5	MG/KG	U	13	NA	2.9	NA	nc	NA
MW05S	2	4	Styrene	0.1	MG/KG	U	13	NA	2.9	NA	nc	NA
MW06S	2	4	Styrene	0.3	MG/KG	U	13	NA	2.9	NA	nc	NA
MW06S	2	4	Styrene	0.3	MG/KG	U	13	NA	2.9	NA	nc	NA
MW08S	2	4	Styrene	0.32	MG/KG	U	13	NA	2.9	NA	nc	NA
MW14M	2	4	Styrene	0.14	MG/KG	U	13	NA	2.9	NA	nc	NA
MW15D	2	4	Styrene	0.14	MG/KG	U	13	NA	2.9	NA	nc	NA
SB02	2	4	Styrene	0.38	MG/KG	U	13	NA	2.9	NA	nc	NA
SB03	2	4	Styrene	0.3	MG/KG	U	13	NA	2.9	NA	nc	NA
MW07S	3	4	Styrene	0.5	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-060	3	4	Styrene	0.0058	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-089	3	4	Styrene	0.0041	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-407	3	4	Styrene	0.32	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-417	3	4	Styrene	0.28	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-419	3	4	Styrene	0.32	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-423	3	4	Styrene	0.0045	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-428	3	4	Styrene	0.0057	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-423	3	4	Styrene	0.0049	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-060	4	5	Styrene	0.0048	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-118	4	5	Styrene	0.0059	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-405	4	5	Styrene	1	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-455	4	5	Styrene	0.0072	MG/KG	U	13	NA	2.9	NA	nc	NA
MW15D	4	6	Styrene	0.1	MG/KG	U	13	NA	2.9	NA	nc	NA
MW02S	4	6	Styrene	0.55	MG/KG	U	13	NA	2.9	NA	nc	NA
SB03	4	6	Styrene	0.2	MG/KG	U	13	NA	2.9	NA	nc	NA
MW01S	4	6	Styrene	0.24	MG/KG	U	13	NA	2.9	NA	nc	NA
MW02S	4	6	Styrene	0.42	MG/KG	U	13	NA	2.9	NA	nc	NA
MW03S	4	6	Styrene	0.35	MG/KG	U	13	NA	2.9	NA	nc	NA
MW04D	4	6	Styrene	0.18	MG/KG	U	13	NA	2.9	NA	nc	NA
MW06S	4	6	Styrene	0.43	MG/KG	U	13	NA	2.9	NA	nc	NA
MW07S	4	6	Styrene	0.26	MG/KG	U	13	NA	2.9	NA	nc	NA
MW08S	4	6	Styrene	0.3	MG/KG	U	13	NA	2.9	NA	nc	NA
MW09S	4	6	Styrene	0.26	MG/KG	U	13	NA	2.9	NA	nc	NA
MW15D	4	6	Styrene	0.12	MG/KG	U	13	NA	2.9	NA	nc	NA
SB02	4	6	Styrene	0.26	MG/KG	U	13	NA	2.9	NA	nc	NA
SB03	4	6	Styrene	0.18	MG/KG	U	13	NA	2.9	NA	nc	NA
CMS-098	0	1	Styrene	0.0097	MG/KG	UJ	13	NA	2.9	NA	nc	NA
CMS-142	0	1	Styrene	0.0095	MG/KG	UJ	13	NA	2.9	NA	nc	NA
CMS-164	0	1	Styrene	0.015	MG/KG	UJ	13	NA	2.9	NA	nc	NA
CMS-173	0	1	Styrene	0.024	MG/KG	UJ	13	NA	2.9	NA	nc	NA
CMS-237	0	1	Styrene	0.0059	MG/KG	UJ	13	NA	2.9	NA	nc	NA
CMS-142	0	1	Styrene	0.011	MG/KG	UJ	13	NA	2.9	NA	nc	NA
MW14M	1	2	Styrene	0.15	MG/KG	UJ	13	NA	2.9	NA	nc	NA
SB-14-271	1	2	Styrene	0.12	MG/KG	UJ	13	NA	2.9	NA	nc	NA
CMS-173	1	2	Styrene	0.0083	MG/KG	UJ	13	NA	2.9	NA	nc	NA
CMS-237	1	2	Styrene	0.0069	MG/KG	UJ	13	NA	2.9	NA	nc	NA
CMS-407	1	2	Styrene	0.0074	MG/KG	UJ	13	NA	2.9	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-405	1	2	Styrene	2.9	MG/KG	UJ	13	NA	2.9	NA	nc	NA
CMS-089	2	3	Styrene	0.0047	MG/KG	UJ	13	NA	2.9	NA	nc	NA
SB-14-271	2	4	Styrene	0.13	MG/KG	UJ	13	NA	2.9	NA	nc	NA
CMS-118	3	4	Styrene	0.0084	MG/KG	UJ	13	NA	2.9	NA	nc	NA
MW05S	4	6	Styrene	0.11	MG/KG	UJ	13	NA	2.9	NA	nc	NA
SB-14-271	4	6	Styrene	0.11	MG/KG	UJ	13	NA	2.9	NA	nc	NA
CMS-065	0	10	Styrene	1.4	MG/KG		13	N	2.9	N	nc	NA
CMS-089	0	1	Technical Chlordane	0.0061	MG/KG	J	0.5	N	1.4	N	nc	NA
CMS-164	0	1	Technical Chlordane	0.35	MG/KG	J	0.5	N	1.4	N	nc	NA
CMS-089	2	3	Technical Chlordane	0.0022	MG/KG	J	0.5	N	1.4	N	nc	NA
CMS-089	3	4	Technical Chlordane	0.0076	MG/KG	J	0.5	N	1.4	N	nc	NA
CMS-455	4	5	Technical Chlordane	0.27	MG/KG	J	0.5	N	1.4	N	nc	NA
CMS-4105	0	1	Technical Chlordane	10.60052478	MG/KG	J	0.5	Y	1.4	Y	nc	NA
CMS-4110	0	1	Technical Chlordane	6.359699501	MG/KG	J	0.5	Y	1.4	Y	nc	NA
CMS-098	0	1	Technical Chlordane	0.031	MG/KG	U	0.5	NA	1.4	NA	nc	NA
CMS-142	0	1	Technical Chlordane	0.03	MG/KG	U	0.5	NA	1.4	NA	nc	NA
CMS-173	0	1	Technical Chlordane	0.11	MG/KG	U	0.5	NA	1.4	NA	nc	NA
CMS-405	0	1	Technical Chlordane	0.0072	MG/KG	U	0.5	NA	1.4	NA	nc	NA
CMS-407	0	1	Technical Chlordane	0.0018	MG/KG	U	0.5	NA	1.4	NA	nc	NA
CMS-408	0	1	Technical Chlordane	0.018	MG/KG	U	0.5	NA	1.4	NA	nc	NA
CMS-417	0	1	Technical Chlordane	1.8	MG/KG	U	0.5	NA	1.4	NA	nc	NA
CMS-142	0	1	Technical Chlordane	0.057	MG/KG	U	0.5	NA	1.4	NA	nc	NA
CMS-173	1	2	Technical Chlordane	0.0027	MG/KG	U	0.5	NA	1.4	NA	nc	NA
CMS-237	1	2	Technical Chlordane	0.21	MG/KG	U	0.5	NA	1.4	NA	nc	NA
CMS-405	1	2	Technical Chlordane	0.33	MG/KG	U	0.5	NA	1.4	NA	nc	NA
CMS-407	1	2	Technical Chlordane	0.22	MG/KG	U	0.5	NA	1.4	NA	nc	NA
CMS-408	1	2	Technical Chlordane	0.22	MG/KG	U	0.5	NA	1.4	NA	nc	NA
CMS-417	1	2	Technical Chlordane	1.8	MG/KG	U	0.5	NA	1.4	NA	nc	NA
CMS-419	1	2	Technical Chlordane	0.38	MG/KG	U	0.5	NA	1.4	NA	nc	NA
CMS-423	1	2	Technical Chlordane	0.09	MG/KG	U	0.5	NA	1.4	NA	nc	NA
CMS-427	1	2	Technical Chlordane	0.092	MG/KG	U	0.5	NA	1.4	NA	nc	NA
CMS-405	1	2	Technical Chlordane	0.32	MG/KG	U	0.5	NA	1.4	NA	nc	NA
CMS-237	2	3	Technical Chlordane	0.33	MG/KG	U	0.5	NA	1.4	NA	nc	NA
CMS-405	2	3	Technical Chlordane	0.033	MG/KG	U	0.5	NA	1.4	NA	nc	NA
CMS-407	2	3	Technical Chlordane	0.28	MG/KG	U	0.5	NA	1.4	NA	nc	NA
CMS-408	2	3	Technical Chlordane	0.22	MG/KG	U	0.5	NA	1.4	NA	nc	NA
CMS-417	2	3	Technical Chlordane	2	MG/KG	U	0.5	NA	1.4	NA	nc	NA
CMS-405	3	4	Technical Chlordane	0.029	MG/KG	U	0.5	NA	1.4	NA	nc	NA
CMS-407	3	4	Technical Chlordane	0.22	MG/KG	U	0.5	NA	1.4	NA	nc	NA
CMS-417	3	4	Technical Chlordane	2	MG/KG	U	0.5	NA	1.4	NA	nc	NA
CMS-423	3	4	Technical Chlordane	0.095	MG/KG	U	0.5	NA	1.4	NA	nc	NA
CMS-427	3	4	Technical Chlordane	0.42	MG/KG	U	0.5	NA	1.4	NA	nc	NA
CMS-423	3	4	Technical Chlordane	0.1	MG/KG	U	0.5	NA	1.4	NA	nc	NA
CMS-405	4	5	Technical Chlordane	0.24	MG/KG	U	0.5	NA	1.4	NA	nc	NA
CMS-060	0	1	Technical Chlordane	0.017	MG/KG	UJ	0.5	NA	1.4	NA	nc	NA
CMS-118	0	1	Technical Chlordane	0.092	MG/KG	UJ	0.5	NA	1.4	NA	nc	NA
CMS-060	0	1	Technical Chlordane	0.09	MG/KG	UJ	0.5	NA	1.4	NA	nc	NA
CMS-060	1	2	Technical Chlordane	0.017	MG/KG	UJ	0.5	NA	1.4	NA	nc	NA
CMS-118	1	2	Technical Chlordane	0.095	MG/KG	UJ	0.5	NA	1.4	NA	nc	NA
CMS-060	2	3	Technical Chlordane	0.019	MG/KG	UJ	0.5	NA	1.4	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-118	2	3	Technical Chlordane	0.11	MG/KG	UJ	0.5	NA	1.4	NA	nc	NA
CMS-060	3	4	Technical Chlordane	0.023	MG/KG	UJ	0.5	NA	1.4	NA	nc	NA
CMS-118	3	4	Technical Chlordane	0.026	MG/KG	UJ	0.5	NA	1.4	NA	nc	NA
CMS-060	4	5	Technical Chlordane	0.02	MG/KG	UJ	0.5	NA	1.4	NA	nc	NA
CMS-118	4	5	Technical Chlordane	0.022	MG/KG	UJ	0.5	NA	1.4	NA	nc	NA
CMS-237	0	1	Technical Chlordane	0.25	MG/KG		0.5	N	1.4	N	nc	NA
CMS-089	1	2	Technical Chlordane	0.1	MG/KG		0.5	N	1.4	N	nc	NA
MW05S	4	6	Tetrachloroethene	300	MG/KG	*J	12	Y	0.1	Y	nc	NA
CMS-060	0	1	Tetrachloroethene	0.088	MG/KG	J	12	N	0.1	N	nc	NA
CMS-164	0	1	Tetrachloroethene	0.0088	MG/KG	J	12	N	0.1	N	nc	NA
CMS-173	0	1	Tetrachloroethene	0.17	MG/KG	J	12	N	0.1	Y	nc	NA
CMS-237	0	1	Tetrachloroethene	0.0075	MG/KG	J	12	N	0.1	N	nc	NA
CMS-702	0	1	Tetrachloroethene	0.0027	MG/KG	J	12	N	0.1	N	nc	NA
CMS-060	0	1	Tetrachloroethene	63	MG/KG	J	12	Y	0.1	Y	nc	NA
MW14M	1	2	Tetrachloroethene	0.14	MG/KG	J	12	N	0.1	Y	nc	NA
CMS-060	1	2	Tetrachloroethene	25	MG/KG	J	12	Y	0.1	Y	nc	NA
CMS-173	1	2	Tetrachloroethene	0.19	MG/KG	J	12	N	0.1	Y	nc	NA
CMS-237	1	2	Tetrachloroethene	0.21	MG/KG	J	12	N	0.1	Y	nc	NA
CMS-237	2	3	Tetrachloroethene	0.11	MG/KG	J	12	N	0.1	Y	nc	NA
CMS-417	2	3	Tetrachloroethene	9.4	MG/KG	J	12	N	0.1	Y	nc	NA
CMS-455	2	3	Tetrachloroethene	0.26	MG/KG	J	12	N	0.1	Y	nc	NA
CMS-417	3	4	Tetrachloroethene	0.12	MG/KG	J	12	N	0.1	Y	nc	NA
MW06S	4	6	Tetrachloroethene	0.16	MG/KG	J	12	N	0.1	Y	nc	NA
CMS-089	0	1	Tetrachloroethene	0.005	MG/KG	U	12	NA	0.1	NA	nc	NA
CMS-118	0	1	Tetrachloroethene	0.0048	MG/KG	U	12	NA	0.1	NA	nc	NA
CMS-407	0	1	Tetrachloroethene	0.005	MG/KG	U	12	NA	0.1	NA	nc	NA
CMS-408	0	1	Tetrachloroethene	0.0043	MG/KG	U	12	NA	0.1	NA	nc	NA
CMS-456	0	1	Tetrachloroethene	0.0075	MG/KG	U	12	NA	0.1	NA	nc	NA
MW05S	1	2	Tetrachloroethene	0.095	MG/KG	U	12	NA	0.1	NA	nc	NA
MW01S	1	2	Tetrachloroethene	0.34	MG/KG	U	12	NA	0.1	NA	nc	NA
MW05S	1	2	Tetrachloroethene	0.11	MG/KG	U	12	NA	0.1	NA	nc	NA
MW08S	1	2	Tetrachloroethene	0.26	MG/KG	U	12	NA	0.1	NA	nc	NA
CMS-089	1	2	Tetrachloroethene	0.0048	MG/KG	U	12	NA	0.1	NA	nc	NA
CMS-118	1	2	Tetrachloroethene	0.006	MG/KG	U	12	NA	0.1	NA	nc	NA
CMS-408	1	2	Tetrachloroethene	2.2	MG/KG	U	12	NA	0.1	NA	nc	NA
CMS-423	1	2	Tetrachloroethene	0.0062	MG/KG	U	12	NA	0.1	NA	nc	NA
CMS-427	1	2	Tetrachloroethene	0.0045	MG/KG	U	12	NA	0.1	NA	nc	NA
CMS-428	1	2	Tetrachloroethene	0.0054	MG/KG	U	12	NA	0.1	NA	nc	NA
CMS-118	2	3	Tetrachloroethene	0.0074	MG/KG	U	12	NA	0.1	NA	nc	NA
CMS-407	2	3	Tetrachloroethene	0.0087	MG/KG	U	12	NA	0.1	NA	nc	NA
CMS-408	2	3	Tetrachloroethene	6.6	MG/KG	U	12	NA	0.1	NA	nc	NA
MW08S	2	4	Tetrachloroethene	0.21	MG/KG	U	12	NA	0.1	NA	nc	NA
MW01S	2	4	Tetrachloroethene	0.22	MG/KG	U	12	NA	0.1	NA	nc	NA
MW02S	2	4	Tetrachloroethene	0.2	MG/KG	U	12	NA	0.1	NA	nc	NA
MW04D	2	4	Tetrachloroethene	0.5	MG/KG	U	12	NA	0.1	NA	nc	NA
MW06S	2	4	Tetrachloroethene	0.3	MG/KG	U	12	NA	0.1	NA	nc	NA
MW06S	2	4	Tetrachloroethene	0.3	MG/KG	U	12	NA	0.1	NA	nc	NA
MW08S	2	4	Tetrachloroethene	0.32	MG/KG	U	12	NA	0.1	NA	nc	NA
MW14M	2	4	Tetrachloroethene	0.14	MG/KG	U	12	NA	0.1	NA	nc	NA
MW15D	2	4	Tetrachloroethene	0.14	MG/KG	U	12	NA	0.1	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
SB02	2	4	Tetrachloroethene	0.38	MG/KG	U	12	NA	0.1	NA	nc	NA
GEC-7	2.5	4.5	Tetrachloroethene	0.045	MG/KG	U	12	NA	0.1	NA	nc	NA
MW07S	3	4	Tetrachloroethene	0.5	MG/KG	U	12	NA	0.1	NA	nc	NA
CMS-089	3	4	Tetrachloroethene	0.0041	MG/KG	U	12	NA	0.1	NA	nc	NA
CMS-407	3	4	Tetrachloroethene	0.32	MG/KG	U	12	NA	0.1	NA	nc	NA
CMS-419	3	4	Tetrachloroethene	0.32	MG/KG	U	12	NA	0.1	NA	nc	NA
CMS-423	3	4	Tetrachloroethene	0.0045	MG/KG	U	12	NA	0.1	NA	nc	NA
CMS-428	3	4	Tetrachloroethene	0.0057	MG/KG	U	12	NA	0.1	NA	nc	NA
CMS-423	3	4	Tetrachloroethene	0.0049	MG/KG	U	12	NA	0.1	NA	nc	NA
CMS-118	4	5	Tetrachloroethene	0.0059	MG/KG	U	12	NA	0.1	NA	nc	NA
CMS-455	4	5	Tetrachloroethene	0.0072	MG/KG	U	12	NA	0.1	NA	nc	NA
MW15D	4	6	Tetrachloroethene	0.1	MG/KG	U	12	NA	0.1	NA	nc	NA
MW02S	4	6	Tetrachloroethene	0.55	MG/KG	U	12	NA	0.1	NA	nc	NA
SB03	4	6	Tetrachloroethene	0.2	MG/KG	U	12	NA	0.1	NA	nc	NA
MW02S	4	6	Tetrachloroethene	0.42	MG/KG	U	12	NA	0.1	NA	nc	NA
MW04D	4	6	Tetrachloroethene	0.18	MG/KG	U	12	NA	0.1	NA	nc	NA
MW07S	4	6	Tetrachloroethene	0.26	MG/KG	U	12	NA	0.1	NA	nc	NA
MW08S	4	6	Tetrachloroethene	0.3	MG/KG	U	12	NA	0.1	NA	nc	NA
MW09S	4	6	Tetrachloroethene	0.26	MG/KG	U	12	NA	0.1	NA	nc	NA
MW15D	4	6	Tetrachloroethene	0.12	MG/KG	U	12	NA	0.1	NA	nc	NA
SB02	4	6	Tetrachloroethene	0.26	MG/KG	U	12	NA	0.1	NA	nc	NA
SB03	4	6	Tetrachloroethene	0.18	MG/KG	U	12	NA	0.1	NA	nc	NA
CMS-098	0	1	Tetrachloroethene	0.0097	MG/KG	UJ	12	NA	0.1	NA	nc	NA
CMS-142	0	1	Tetrachloroethene	0.0095	MG/KG	UJ	12	NA	0.1	NA	nc	NA
CMS-142	0	1	Tetrachloroethene	0.011	MG/KG	UJ	12	NA	0.1	NA	nc	NA
SB-14-271	1	2	Tetrachloroethene	0.12	MG/KG	UJ	12	NA	0.1	NA	nc	NA
CMS-405	1	2	Tetrachloroethene	4	MG/KG	UJ	12	NA	0.1	NA	nc	NA
CMS-407	1	2	Tetrachloroethene	0.0074	MG/KG	UJ	12	NA	0.1	NA	nc	NA
CMS-405	1	2	Tetrachloroethene	2.9	MG/KG	UJ	12	NA	0.1	NA	nc	NA
CMS-089	2	3	Tetrachloroethene	0.0047	MG/KG	UJ	12	NA	0.1	NA	nc	NA
SB-14-271	2	4	Tetrachloroethene	0.13	MG/KG	UJ	12	NA	0.1	NA	nc	NA
CMS-118	3	4	Tetrachloroethene	0.0084	MG/KG	UJ	12	NA	0.1	NA	nc	NA
CMS-405	4	5	Tetrachloroethene	1	MG/KG	UJ	12	NA	0.1	NA	nc	NA
SB-14-271	4	6	Tetrachloroethene	0.11	MG/KG	UJ	12	NA	0.1	NA	nc	NA
CMS-159	0	1	Tetrachloroethene	0.1	MG/KG		12	N	0.1	N	nc	NA
CMS-417	0	1	Tetrachloroethene	820	MG/KG		12	Y	0.1	Y	nc	NA
CMS-703	0	1	Tetrachloroethene	0.028	MG/KG		12	N	0.1	N	nc	NA
CMS-065	0	10	Tetrachloroethene	3.7	MG/KG		12	N	0.1	Y	nc	NA
MW14M	1	2	Tetrachloroethene	0.17	MG/KG		12	N	0.1	Y	nc	NA
CMS-417	1	2	Tetrachloroethene	1700	MG/KG		12	Y	0.1	Y	nc	NA
CMS-419	1	2	Tetrachloroethene	40	MG/KG		12	Y	0.1	Y	nc	NA
CMS-456	1	2	Tetrachloroethene	0.12	MG/KG		12	N	0.1	Y	nc	NA
CMS-060	2	3	Tetrachloroethene	0.86	MG/KG		12	N	0.1	Y	nc	NA
MW05S	2	4	Tetrachloroethene	0.23	MG/KG		12	N	0.1	Y	nc	NA
SB03	2	4	Tetrachloroethene	0.43	MG/KG		12	N	0.1	Y	nc	NA
GEC-6	2.5	4.5	Tetrachloroethene	0.3	MG/KG		12	N	0.1	Y	nc	NA
CMS-060	3	4	Tetrachloroethene	0.11	MG/KG		12	N	0.1	Y	nc	NA
CMS-427	3	4	Tetrachloroethene	0.012	MG/KG		12	N	0.1	N	nc	NA
CMS-060	4	5	Tetrachloroethene	0.11	MG/KG		12	N	0.1	Y	nc	NA
MW01S	4	6	Tetrachloroethene	0.52	MG/KG		12	N	0.1	Y	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW03S	4	6	Tetrachloroethene	0.49	MG/KG		12	N	0.1	Y	nc	NA
RES-14-333-01	0	1	Thallium	6.8	MG/KG	J	5.5	Y	nc	NA	nc	NA
CMS-118	1	2	Thallium	0.58	MG/KG	J	5.5	N	nc	NA	nc	NA
CMS-118	2	3	Thallium	2.6	MG/KG	J	5.5	N	nc	NA	nc	NA
MW08S	2	4	Thallium	1.5	MG/KG	J	5.5	N	nc	NA	nc	NA
SB03	2	4	Thallium	5.1	MG/KG	J	5.5	N	nc	NA	nc	NA
SB03	4	6	Thallium	5.3	MG/KG	J	5.5	N	nc	NA	nc	NA
SB03	4	6	Thallium	5.9	MG/KG	J	5.5	Y	nc	NA	nc	NA
CMS-4105	0	1	Thallium	0.215	MG/KG	J	5.5	N	nc	NA	nc	NA
CMS-4110	0	1	Thallium	0.2	MG/KG	J	5.5	N	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Thallium	0.36	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Thallium	0.5	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Thallium	0.47	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-060	0	1	Thallium	205	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-089	0	1	Thallium	204	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-098	0	1	Thallium	362	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-118	0	1	Thallium	217	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-142	0	1	Thallium	349	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-159	0	1	Thallium	658	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-164	0	1	Thallium	612	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-173	0	1	Thallium	660	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-237	0	1	Thallium	258	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-405	0	1	Thallium	212	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-407	0	1	Thallium	213	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-408	0	1	Thallium	207	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-417	0	1	Thallium	213	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-456	0	1	Thallium	299	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-142	0	1	Thallium	334	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-060	0	1	Thallium	212	MG/KG	U	5.5	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Thallium	2.2	MG/KG	U	5.5	NA	nc	NA	nc	NA
RES-14-302-01	0	1	Thallium	1.2	MG/KG	U	5.5	NA	nc	NA	nc	NA
RES-14-303-01	0	1	Thallium	4	MG/KG	U	5.5	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Thallium	2.3	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-703	0	2	Thallium	249	MG/KG	U	5.5	NA	nc	NA	nc	NA
BV01COMP	0	4	Thallium	228	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Thallium	0.61	MG/KG	U	5.5	NA	nc	NA	nc	NA
MW01S	1	2	Thallium	0.84	MG/KG	U	5.5	NA	nc	NA	nc	NA
MW05S	1	2	Thallium	0.32	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-060	1	2	Thallium	206	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-089	1	2	Thallium	213	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-173	1	2	Thallium	313	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-237	1	2	Thallium	252	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-405	1	2	Thallium	383	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-407	1	2	Thallium	264	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-408	1	2	Thallium	263	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-417	1	2	Thallium	214	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-419	1	2	Thallium	224	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-423	1	2	Thallium	212	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-427	1	2	Thallium	217	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-428	1	2	Thallium	215	MG/KG	U	5.5	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-456	1	2	Thallium	358	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-405	1	2	Thallium	375	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Thallium	0.44	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-060	2	3	Thallium	219	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-089	2	3	Thallium	213	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-237	2	3	Thallium	384	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-405	2	3	Thallium	390	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-407	2	3	Thallium	334	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-408	2	3	Thallium	259	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-417	2	3	Thallium	236	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-455	2	3	Thallium	240	MG/KG	U	5.5	NA	nc	NA	nc	NA
MW05S	2	4	Thallium	0.4	MG/KG	U	5.5	NA	nc	NA	nc	NA
MW06S	2	4	Thallium	0.89	MG/KG	U	5.5	NA	nc	NA	nc	NA
MW06S	2	4	Thallium	0.9	MG/KG	U	5.5	NA	nc	NA	nc	NA
MW07S	3	4	Thallium	0.92	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-060	3	4	Thallium	270	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-089	3	4	Thallium	212	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-118	3	4	Thallium	303	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-405	3	4	Thallium	227	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-407	3	4	Thallium	257	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-417	3	4	Thallium	230	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-419	3	4	Thallium	255	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-423	3	4	Thallium	224	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-427	3	4	Thallium	247	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-428	3	4	Thallium	226	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-423	3	4	Thallium	239	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-060	4	5	Thallium	233	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-118	4	5	Thallium	259	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-405	4	5	Thallium	278	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMS-455	4	5	Thallium	289	MG/KG	U	5.5	NA	nc	NA	nc	NA
MW01S	4	6	Thallium	0.92	MG/KG	U	5.5	NA	nc	NA	nc	NA
MW03S	4	6	Thallium	0.89	MG/KG	U	5.5	NA	nc	NA	nc	NA
MW04D	4	6	Thallium	0.4	MG/KG	U	5.5	NA	nc	NA	nc	NA
MW05S	4	6	Thallium	0.9	MG/KG	U	5.5	NA	nc	NA	nc	NA
MW06S	4	6	Thallium	1.1	MG/KG	U	5.5	NA	nc	NA	nc	NA
MW07S	4	6	Thallium	0.99	MG/KG	U	5.5	NA	nc	NA	nc	NA
MW08S	4	6	Thallium	0.88	MG/KG	U	5.5	NA	nc	NA	nc	NA
MW09S	4	6	Thallium	1.2	MG/KG	U	5.5	NA	nc	NA	nc	NA
SB-14-271	4	6	Thallium	0.38	MG/KG	U	5.5	NA	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Thallium	0.43	MG/KG	UJ	5.5	NA	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Thallium	0.46	MG/KG	UJ	5.5	NA	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Thallium	0.43	MG/KG	UJ	5.5	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Thallium	2.2	MG/KG	UJ	5.5	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Thallium	2.8	MG/KG	UJ	5.5	NA	nc	NA	nc	NA
MW05S	1	2	Thallium	0.48	MG/KG	UJ	5.5	NA	nc	NA	nc	NA
MW14M	1	2	Thallium	0.91	MG/KG	UJ	5.5	NA	nc	NA	nc	NA
MW14M	1	2	Thallium	0.94	MG/KG	UJ	5.5	NA	nc	NA	nc	NA
SB-14-271	1	2	Thallium	0.6	MG/KG	UJ	5.5	NA	nc	NA	nc	NA
MW14M	2	4	Thallium	1.1	MG/KG	UJ	5.5	NA	nc	NA	nc	NA
MW15D	2	4	Thallium	0.91	MG/KG	UJ	5.5	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
SB-14-271	2	4	Thallium	0.71	MG/KG	UJ	5.5	NA	nc	NA	nc	NA
MW15D	4	6	Thallium	0.88	MG/KG	UJ	5.5	NA	nc	NA	nc	NA
MW15D	4	6	Thallium	0.85	MG/KG	UJ	5.5	NA	nc	NA	nc	NA
MW08S	1	2	Thallium	3.5	MG/KG		5.5	N	nc	NA	nc	NA
MW08S	2	4	Thallium	2.9	MG/KG		5.5	N	nc	NA	nc	NA
SB02	2	4	Thallium	11.3	MG/KG		5.5	Y	nc	NA	nc	NA
MW02S	2	4	Thallium	8.4	MG/KG		5.5	Y	nc	NA	nc	NA
SB02	2	4	Thallium	11.7	MG/KG		5.5	Y	nc	NA	nc	NA
SB02	4	6	Thallium	13.4	MG/KG		5.5	Y	nc	NA	nc	NA
CMS-456	0	1	Toluene	0.0022	MG/KG	J	190	N	32	N	nc	NA
MW14M	1	2	Toluene	0.093	MG/KG	J	190	N	32	N	nc	NA
MW05S	1	2	Toluene	0.044	MG/KG	J	190	N	32	N	nc	NA
MW14M	1	2	Toluene	0.097	MG/KG	J	190	N	32	N	nc	NA
CMS-237	1	2	Toluene	0.015	MG/KG	J	190	N	32	N	nc	NA
CMS-405	1	2	Toluene	3.5	MG/KG	J	190	N	32	N	nc	NA
CMS-407	1	2	Toluene	0.041	MG/KG	J	190	N	32	N	nc	NA
CMS-456	1	2	Toluene	0.0042	MG/KG	J	190	N	32	N	nc	NA
CMS-237	2	3	Toluene	0.0085	MG/KG	J	190	N	32	N	nc	NA
CMS-407	2	3	Toluene	0.011	MG/KG	J	190	N	32	N	nc	NA
MW04D	2	4	Toluene	0.43	MG/KG	J	190	N	32	N	nc	NA
CMS-405	4	5	Toluene	0.21	MG/KG	J	190	N	32	N	nc	NA
MW15D	4	6	Toluene	0.042	MG/KG	J	190	N	32	N	nc	NA
MW05S	4	6	Toluene	0.13	MG/KG	J	190	N	32	N	nc	NA
MW15D	4	6	Toluene	0.035	MG/KG	J	190	N	32	N	nc	NA
CMS-089	0	1	Toluene	0.005	MG/KG	U	190	NA	32	NA	nc	NA
CMS-118	0	1	Toluene	0.0048	MG/KG	U	190	NA	32	NA	nc	NA
CMS-159	0	1	Toluene	0.021	MG/KG	U	190	NA	32	NA	nc	NA
CMS-407	0	1	Toluene	0.005	MG/KG	U	190	NA	32	NA	nc	NA
CMS-408	0	1	Toluene	0.0043	MG/KG	U	190	NA	32	NA	nc	NA
CMS-702	0	1	Toluene	0.0087	MG/KG	U	190	NA	32	NA	nc	NA
CMS-703	0	1	Toluene	0.0061	MG/KG	U	190	NA	32	NA	nc	NA
CMS-060	0	1	Toluene	2.7	MG/KG	U	190	NA	32	NA	nc	NA
CMS-065	0	10	Toluene	1.2	MG/KG	U	190	NA	32	NA	nc	NA
MW05S	1	2	Toluene	0.095	MG/KG	U	190	NA	32	NA	nc	NA
MW01S	1	2	Toluene	0.34	MG/KG	U	190	NA	32	NA	nc	NA
CMS-060	1	2	Toluene	5.1	MG/KG	U	190	NA	32	NA	nc	NA
CMS-089	1	2	Toluene	0.0048	MG/KG	U	190	NA	32	NA	nc	NA
CMS-118	1	2	Toluene	0.006	MG/KG	U	190	NA	32	NA	nc	NA
CMS-408	1	2	Toluene	2.2	MG/KG	U	190	NA	32	NA	nc	NA
CMS-423	1	2	Toluene	0.0062	MG/KG	U	190	NA	32	NA	nc	NA
CMS-427	1	2	Toluene	0.0045	MG/KG	U	190	NA	32	NA	nc	NA
CMS-428	1	2	Toluene	0.0054	MG/KG	U	190	NA	32	NA	nc	NA
CMS-060	2	3	Toluene	0.27	MG/KG	U	190	NA	32	NA	nc	NA
CMS-118	2	3	Toluene	0.0074	MG/KG	U	190	NA	32	NA	nc	NA
CMS-408	2	3	Toluene	6.6	MG/KG	U	190	NA	32	NA	nc	NA
CMS-455	2	3	Toluene	0.33	MG/KG	U	190	NA	32	NA	nc	NA
MW08S	2	4	Toluene	0.21	MG/KG	U	190	NA	32	NA	nc	NA
MW01S	2	4	Toluene	0.22	MG/KG	U	190	NA	32	NA	nc	NA
MW02S	2	4	Toluene	0.2	MG/KG	U	190	NA	32	NA	nc	NA
MW05S	2	4	Toluene	0.1	MG/KG	U	190	NA	32	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW08S	2	4	Toluene	0.32	MG/KG	U	190	NA	32	NA	nc	NA
MW14M	2	4	Toluene	0.14	MG/KG	U	190	NA	32	NA	nc	NA
MW15D	2	4	Toluene	0.14	MG/KG	U	190	NA	32	NA	nc	NA
SB02	2	4	Toluene	0.38	MG/KG	U	190	NA	32	NA	nc	NA
SB03	2	4	Toluene	0.3	MG/KG	U	190	NA	32	NA	nc	NA
CMS-060	3	4	Toluene	0.0058	MG/KG	U	190	NA	32	NA	nc	NA
CMS-089	3	4	Toluene	0.0041	MG/KG	U	190	NA	32	NA	nc	NA
CMS-118	3	4	Toluene	0.0084	MG/KG	U	190	NA	32	NA	nc	NA
CMS-407	3	4	Toluene	0.32	MG/KG	U	190	NA	32	NA	nc	NA
CMS-419	3	4	Toluene	0.32	MG/KG	U	190	NA	32	NA	nc	NA
CMS-423	3	4	Toluene	0.0045	MG/KG	U	190	NA	32	NA	nc	NA
CMS-428	3	4	Toluene	0.0057	MG/KG	U	190	NA	32	NA	nc	NA
CMS-423	3	4	Toluene	0.0049	MG/KG	U	190	NA	32	NA	nc	NA
CMS-060	4	5	Toluene	0.0048	MG/KG	U	190	NA	32	NA	nc	NA
CMS-118	4	5	Toluene	0.0059	MG/KG	U	190	NA	32	NA	nc	NA
CMS-455	4	5	Toluene	0.0072	MG/KG	U	190	NA	32	NA	nc	NA
MW02S	4	6	Toluene	0.55	MG/KG	U	190	NA	32	NA	nc	NA
SB03	4	6	Toluene	0.2	MG/KG	U	190	NA	32	NA	nc	NA
MW01S	4	6	Toluene	0.24	MG/KG	U	190	NA	32	NA	nc	NA
MW02S	4	6	Toluene	0.42	MG/KG	U	190	NA	32	NA	nc	NA
MW03S	4	6	Toluene	0.35	MG/KG	U	190	NA	32	NA	nc	NA
MW04D	4	6	Toluene	0.18	MG/KG	U	190	NA	32	NA	nc	NA
MW07S	4	6	Toluene	0.26	MG/KG	U	190	NA	32	NA	nc	NA
MW08S	4	6	Toluene	0.3	MG/KG	U	190	NA	32	NA	nc	NA
MW09S	4	6	Toluene	0.26	MG/KG	U	190	NA	32	NA	nc	NA
SB02	4	6	Toluene	0.26	MG/KG	U	190	NA	32	NA	nc	NA
SB03	4	6	Toluene	0.18	MG/KG	U	190	NA	32	NA	nc	NA
CMS-098	0	1	Toluene	0.0097	MG/KG	UJ	190	NA	32	NA	nc	NA
CMS-142	0	1	Toluene	0.0095	MG/KG	UJ	190	NA	32	NA	nc	NA
CMS-164	0	1	Toluene	0.015	MG/KG	UJ	190	NA	32	NA	nc	NA
CMS-173	0	1	Toluene	0.024	MG/KG	UJ	190	NA	32	NA	nc	NA
CMS-237	0	1	Toluene	0.0059	MG/KG	UJ	190	NA	32	NA	nc	NA
CMS-142	0	1	Toluene	0.011	MG/KG	UJ	190	NA	32	NA	nc	NA
SB-14-271	1	2	Toluene	0.12	MG/KG	UJ	190	NA	32	NA	nc	NA
CMS-173	1	2	Toluene	0.0083	MG/KG	UJ	190	NA	32	NA	nc	NA
CMS-405	1	2	Toluene	2.9	MG/KG	UJ	190	NA	32	NA	nc	NA
CMS-089	2	3	Toluene	0.0047	MG/KG	UJ	190	NA	32	NA	nc	NA
SB-14-271	2	4	Toluene	0.13	MG/KG	UJ	190	NA	32	NA	nc	NA
SB-14-271	4	6	Toluene	0.11	MG/KG	UJ	190	NA	32	NA	nc	NA
CMS-417	0	1	Toluene	140	MG/KG		190	N	32	Y	nc	NA
MW08S	1	2	Toluene	0.58	MG/KG		190	N	32	N	nc	NA
CMS-417	1	2	Toluene	430	MG/KG		190	Y	32	Y	nc	NA
CMS-419	1	2	Toluene	75	MG/KG		190	N	32	Y	nc	NA
CMS-417	2	3	Toluene	110	MG/KG		190	N	32	Y	nc	NA
MW06S	2	4	Toluene	0.59	MG/KG		190	N	32	N	nc	NA
MW06S	2	4	Toluene	0.59	MG/KG		190	N	32	N	nc	NA
GEC-6	2.5	4.5	Toluene	0.18	MG/KG		190	N	32	N	nc	NA
GEC-7	2.5	4.5	Toluene	0.046	MG/KG		190	N	32	N	nc	NA
MW07S	3	4	Toluene	6.2	MG/KG		190	N	32	N	nc	NA
CMS-417	3	4	Toluene	0.43	MG/KG		190	N	32	N	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-427	3	4	Toluene	0.13	MG/KG		190	N	32	N	nc	NA
MW06S	4	6	Toluene	2.5	MG/KG		190	N	32	N	nc	NA
CMS-173	0	1	Total Xylenes	0.019	MG/KG	J	110	N	540	N	nc	NA
CMS-417	0	1	Total Xylenes	160	MG/KG	J	110	Y	540	N	nc	NA
MW14M	1	2	Total Xylenes	0.95	MG/KG	J	110	N	540	N	nc	NA
MW14M	1	2	Total Xylenes	0.66	MG/KG	J	110	N	540	N	nc	NA
CMS-237	1	2	Total Xylenes	0.028	MG/KG	J	110	N	540	N	nc	NA
CMS-417	1	2	Total Xylenes	380	MG/KG	J	110	Y	540	N	nc	NA
CMS-456	1	2	Total Xylenes	0.0045	MG/KG	J	110	N	540	N	nc	NA
CMS-237	2	3	Total Xylenes	0.024	MG/KG	J	110	N	540	N	nc	NA
CMS-417	2	3	Total Xylenes	19	MG/KG	J	110	N	540	N	nc	NA
MW08S	2	4	Total Xylenes	0.32	MG/KG	J	110	N	540	N	nc	NA
CMS-417	3	4	Total Xylenes	2.3	MG/KG	J	110	N	540	N	nc	NA
CMS-405	4	5	Total Xylenes	28	MG/KG	J	110	N	540	N	nc	NA
MW05S	4	6	Total Xylenes	2.5	MG/KG	J	110	N	540	N	nc	NA
CMS-089	0	1	Total Xylenes	0.005	MG/KG	U	110	NA	540	NA	nc	NA
CMS-098	0	1	Total Xylenes	0.0097	MG/KG	U	110	NA	540	NA	nc	NA
CMS-118	0	1	Total Xylenes	0.0048	MG/KG	U	110	NA	540	NA	nc	NA
CMS-142	0	1	Total Xylenes	0.0095	MG/KG	U	110	NA	540	NA	nc	NA
CMS-159	0	1	Total Xylenes	0.021	MG/KG	U	110	NA	540	NA	nc	NA
CMS-164	0	1	Total Xylenes	0.015	MG/KG	U	110	NA	540	NA	nc	NA
CMS-407	0	1	Total Xylenes	0.005	MG/KG	U	110	NA	540	NA	nc	NA
CMS-408	0	1	Total Xylenes	0.0043	MG/KG	U	110	NA	540	NA	nc	NA
CMS-456	0	1	Total Xylenes	0.0075	MG/KG	U	110	NA	540	NA	nc	NA
CMS-142	0	1	Total Xylenes	0.011	MG/KG	U	110	NA	540	NA	nc	NA
CMS-060	0	1	Total Xylenes	2.7	MG/KG	U	110	NA	540	NA	nc	NA
MW05S	1	2	Total Xylenes	0.095	MG/KG	U	110	NA	540	NA	nc	NA
MW01S	1	2	Total Xylenes	0.34	MG/KG	U	110	NA	540	NA	nc	NA
MW05S	1	2	Total Xylenes	0.11	MG/KG	U	110	NA	540	NA	nc	NA
CMS-060	1	2	Total Xylenes	5.1	MG/KG	U	110	NA	540	NA	nc	NA
CMS-089	1	2	Total Xylenes	0.0048	MG/KG	U	110	NA	540	NA	nc	NA
CMS-118	1	2	Total Xylenes	0.006	MG/KG	U	110	NA	540	NA	nc	NA
CMS-173	1	2	Total Xylenes	0.0083	MG/KG	U	110	NA	540	NA	nc	NA
CMS-428	1	2	Total Xylenes	0.0054	MG/KG	U	110	NA	540	NA	nc	NA
CMS-060	2	3	Total Xylenes	0.27	MG/KG	U	110	NA	540	NA	nc	NA
CMS-089	2	3	Total Xylenes	0.0047	MG/KG	U	110	NA	540	NA	nc	NA
CMS-118	2	3	Total Xylenes	0.0074	MG/KG	U	110	NA	540	NA	nc	NA
CMS-455	2	3	Total Xylenes	0.33	MG/KG	U	110	NA	540	NA	nc	NA
MW01S	2	4	Total Xylenes	0.22	MG/KG	U	110	NA	540	NA	nc	NA
MW02S	2	4	Total Xylenes	0.2	MG/KG	U	110	NA	540	NA	nc	NA
MW04D	2	4	Total Xylenes	0.5	MG/KG	U	110	NA	540	NA	nc	NA
MW05S	2	4	Total Xylenes	0.1	MG/KG	U	110	NA	540	NA	nc	NA
MW06S	2	4	Total Xylenes	0.3	MG/KG	U	110	NA	540	NA	nc	NA
MW06S	2	4	Total Xylenes	0.3	MG/KG	U	110	NA	540	NA	nc	NA
MW14M	2	4	Total Xylenes	0.14	MG/KG	U	110	NA	540	NA	nc	NA
MW15D	2	4	Total Xylenes	0.14	MG/KG	U	110	NA	540	NA	nc	NA
SB02	2	4	Total Xylenes	0.38	MG/KG	U	110	NA	540	NA	nc	NA
SB03	2	4	Total Xylenes	0.3	MG/KG	U	110	NA	540	NA	nc	NA
MW07S	3	4	Total Xylenes	0.5	MG/KG	U	110	NA	540	NA	nc	NA
CMS-060	3	4	Total Xylenes	0.0058	MG/KG	U	110	NA	540	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-089	3	4	Total Xylenes	0.0041	MG/KG	U	110	NA	540	NA	nc	NA
CMS-118	3	4	Total Xylenes	0.0084	MG/KG	U	110	NA	540	NA	nc	NA
CMS-407	3	4	Total Xylenes	0.32	MG/KG	U	110	NA	540	NA	nc	NA
CMS-428	3	4	Total Xylenes	0.0057	MG/KG	U	110	NA	540	NA	nc	NA
CMS-060	4	5	Total Xylenes	0.0048	MG/KG	U	110	NA	540	NA	nc	NA
CMS-118	4	5	Total Xylenes	0.0059	MG/KG	U	110	NA	540	NA	nc	NA
CMS-455	4	5	Total Xylenes	0.0072	MG/KG	U	110	NA	540	NA	nc	NA
MW15D	4	6	Total Xylenes	0.1	MG/KG	U	110	NA	540	NA	nc	NA
MW02S	4	6	Total Xylenes	0.55	MG/KG	U	110	NA	540	NA	nc	NA
SB03	4	6	Total Xylenes	0.2	MG/KG	U	110	NA	540	NA	nc	NA
MW01S	4	6	Total Xylenes	0.24	MG/KG	U	110	NA	540	NA	nc	NA
MW02S	4	6	Total Xylenes	0.42	MG/KG	U	110	NA	540	NA	nc	NA
MW03S	4	6	Total Xylenes	0.35	MG/KG	U	110	NA	540	NA	nc	NA
MW04D	4	6	Total Xylenes	0.18	MG/KG	U	110	NA	540	NA	nc	NA
MW07S	4	6	Total Xylenes	0.26	MG/KG	U	110	NA	540	NA	nc	NA
MW09S	4	6	Total Xylenes	0.26	MG/KG	U	110	NA	540	NA	nc	NA
MW15D	4	6	Total Xylenes	0.12	MG/KG	U	110	NA	540	NA	nc	NA
SB02	4	6	Total Xylenes	0.26	MG/KG	U	110	NA	540	NA	nc	NA
SB03	4	6	Total Xylenes	0.18	MG/KG	U	110	NA	540	NA	nc	NA
CMS-237	0	1	Total Xylenes	0.0059	MG/KG	UJ	110	NA	540	NA	nc	NA
SB-14-271	1	2	Total Xylenes	0.12	MG/KG	UJ	110	NA	540	NA	nc	NA
CMS-405	1	2	Total Xylenes	2.9	MG/KG	UJ	110	NA	540	NA	nc	NA
SB-14-271	2	4	Total Xylenes	0.13	MG/KG	UJ	110	NA	540	NA	nc	NA
SB-14-271	4	6	Total Xylenes	0.11	MG/KG	UJ	110	NA	540	NA	nc	NA
MW08S	1	2	Total Xylenes	7.8	MG/KG		110	N	540	N	nc	NA
CMS-405	1	2	Total Xylenes	23	MG/KG		110	N	540	N	nc	NA
CMS-407	1	2	Total Xylenes	0.82	MG/KG		110	N	540	N	nc	NA
CMS-408	1	2	Total Xylenes	110	MG/KG		110	N	540	N	nc	NA
CMS-419	1	2	Total Xylenes	250	MG/KG		110	Y	540	N	nc	NA
CMS-423	1	2	Total Xylenes	0.0062	MG/KG		110	N	540	N	nc	NA
CMS-427	1	2	Total Xylenes	0.0045	MG/KG		110	N	540	N	nc	NA
CMS-407	2	3	Total Xylenes	0.19	MG/KG		110	N	540	N	nc	NA
CMS-408	2	3	Total Xylenes	39	MG/KG		110	N	540	N	nc	NA
MW08S	2	4	Total Xylenes	0.23	MG/KG		110	N	540	N	nc	NA
CMS-419	3	4	Total Xylenes	0.51	MG/KG		110	N	540	N	nc	NA
CMS-423	3	4	Total Xylenes	0.0045	MG/KG		110	N	540	N	nc	NA
CMS-427	3	4	Total Xylenes	0.38	MG/KG		110	N	540	N	nc	NA
CMS-423	3	4	Total Xylenes	0.0049	MG/KG		110	N	540	N	nc	NA
MW06S	4	6	Total Xylenes	9.8	MG/KG		110	N	540	N	nc	NA
MW08S	4	6	Total Xylenes	0.5	MG/KG		110	N	540	N	nc	NA
MW14M	1	2	Trans-1,2-dichloroethene	0.15	MG/KG	J	1100	N	3.3	N	nc	NA
CMS-237	2	3	Trans-1,2-dichloroethene	0.0045	MG/KG	J	1100	N	3.3	N	nc	NA
CMS-417	2	3	Trans-1,2-dichloroethene	8.4	MG/KG	J	1100	N	3.3	Y	nc	NA
MW05S	2	4	Trans-1,2-dichloroethene	0.084	MG/KG	J	1100	N	3.3	N	nc	NA
MW05S	4	6	Trans-1,2-dichloroethene	0.062	MG/KG	J	1100	N	3.3	N	nc	NA
CMS-089	0	1	Trans-1,2-dichloroethene	0.005	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-098	0	1	Trans-1,2-dichloroethene	0.0097	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-118	0	1	Trans-1,2-dichloroethene	0.0048	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-142	0	1	Trans-1,2-dichloroethene	0.0095	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-159	0	1	Trans-1,2-dichloroethene	0.021	MG/KG	U	1100	NA	3.3	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-164	0	1	Trans-1,2-dichloroethene	0.015	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-173	0	1	Trans-1,2-dichloroethene	0.024	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-407	0	1	Trans-1,2-dichloroethene	0.005	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-408	0	1	Trans-1,2-dichloroethene	0.0043	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-417	0	1	Trans-1,2-dichloroethene	59	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-456	0	1	Trans-1,2-dichloroethene	0.0075	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-702	0	1	Trans-1,2-dichloroethene	0.0087	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-703	0	1	Trans-1,2-dichloroethene	0.0061	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-142	0	1	Trans-1,2-dichloroethene	0.011	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-060	0	1	Trans-1,2-dichloroethene	2.7	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-065	0	10	Trans-1,2-dichloroethene	1.2	MG/KG	U	1100	NA	3.3	NA	nc	NA
MW05S	1	2	Trans-1,2-dichloroethene	0.095	MG/KG	U	1100	NA	3.3	NA	nc	NA
MW01S	1	2	Trans-1,2-dichloroethene	0.34	MG/KG	U	1100	NA	3.3	NA	nc	NA
MW05S	1	2	Trans-1,2-dichloroethene	0.11	MG/KG	U	1100	NA	3.3	NA	nc	NA
MW08S	1	2	Trans-1,2-dichloroethene	0.26	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-089	1	2	Trans-1,2-dichloroethene	0.0048	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-118	1	2	Trans-1,2-dichloroethene	0.006	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-173	1	2	Trans-1,2-dichloroethene	0.0083	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-237	1	2	Trans-1,2-dichloroethene	0.0069	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-405	1	2	Trans-1,2-dichloroethene	4	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-407	1	2	Trans-1,2-dichloroethene	0.0074	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-408	1	2	Trans-1,2-dichloroethene	2.2	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-417	1	2	Trans-1,2-dichloroethene	130	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-419	1	2	Trans-1,2-dichloroethene	28	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-423	1	2	Trans-1,2-dichloroethene	0.0062	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-427	1	2	Trans-1,2-dichloroethene	0.0045	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-428	1	2	Trans-1,2-dichloroethene	0.0054	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-456	1	2	Trans-1,2-dichloroethene	0.0089	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-060	2	3	Trans-1,2-dichloroethene	0.27	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-089	2	3	Trans-1,2-dichloroethene	0.0047	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-118	2	3	Trans-1,2-dichloroethene	0.0074	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-407	2	3	Trans-1,2-dichloroethene	0.0087	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-408	2	3	Trans-1,2-dichloroethene	6.6	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-455	2	3	Trans-1,2-dichloroethene	0.33	MG/KG	U	1100	NA	3.3	NA	nc	NA
MW08S	2	4	Trans-1,2-dichloroethene	0.21	MG/KG	U	1100	NA	3.3	NA	nc	NA
MW01S	2	4	Trans-1,2-dichloroethene	0.22	MG/KG	U	1100	NA	3.3	NA	nc	NA
MW02S	2	4	Trans-1,2-dichloroethene	0.2	MG/KG	U	1100	NA	3.3	NA	nc	NA
MW04D	2	4	Trans-1,2-dichloroethene	0.5	MG/KG	U	1100	NA	3.3	NA	nc	NA
MW06S	2	4	Trans-1,2-dichloroethene	0.3	MG/KG	U	1100	NA	3.3	NA	nc	NA
MW06S	2	4	Trans-1,2-dichloroethene	0.3	MG/KG	U	1100	NA	3.3	NA	nc	NA
MW08S	2	4	Trans-1,2-dichloroethene	0.32	MG/KG	U	1100	NA	3.3	NA	nc	NA
MW14M	2	4	Trans-1,2-dichloroethene	0.14	MG/KG	U	1100	NA	3.3	NA	nc	NA
MW15D	2	4	Trans-1,2-dichloroethene	0.14	MG/KG	U	1100	NA	3.3	NA	nc	NA
SB02	2	4	Trans-1,2-dichloroethene	0.38	MG/KG	U	1100	NA	3.3	NA	nc	NA
SB03	2	4	Trans-1,2-dichloroethene	0.3	MG/KG	U	1100	NA	3.3	NA	nc	NA
GEC-7	2.5	4.5	Trans-1,2-dichloroethene	0.045	MG/KG	U	1100	NA	3.3	NA	nc	NA
MW07S	3	4	Trans-1,2-dichloroethene	0.5	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-060	3	4	Trans-1,2-dichloroethene	0.0058	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-089	3	4	Trans-1,2-dichloroethene	0.0041	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-118	3	4	Trans-1,2-dichloroethene	0.0084	MG/KG	U	1100	NA	3.3	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-407	3	4	Trans-1,2-dichloroethene	0.32	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-417	3	4	Trans-1,2-dichloroethene	0.28	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-419	3	4	Trans-1,2-dichloroethene	0.32	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-423	3	4	Trans-1,2-dichloroethene	0.0045	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-427	3	4	Trans-1,2-dichloroethene	0.0054	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-428	3	4	Trans-1,2-dichloroethene	0.0057	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-423	3	4	Trans-1,2-dichloroethene	0.0049	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-060	4	5	Trans-1,2-dichloroethene	0.0048	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-118	4	5	Trans-1,2-dichloroethene	0.0059	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-405	4	5	Trans-1,2-dichloroethene	1	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-455	4	5	Trans-1,2-dichloroethene	0.0072	MG/KG	U	1100	NA	3.3	NA	nc	NA
MW15D	4	6	Trans-1,2-dichloroethene	0.1	MG/KG	U	1100	NA	3.3	NA	nc	NA
MW02S	4	6	Trans-1,2-dichloroethene	0.55	MG/KG	U	1100	NA	3.3	NA	nc	NA
SB03	4	6	Trans-1,2-dichloroethene	0.2	MG/KG	U	1100	NA	3.3	NA	nc	NA
MW01S	4	6	Trans-1,2-dichloroethene	0.24	MG/KG	U	1100	NA	3.3	NA	nc	NA
MW02S	4	6	Trans-1,2-dichloroethene	0.42	MG/KG	U	1100	NA	3.3	NA	nc	NA
MW03S	4	6	Trans-1,2-dichloroethene	0.35	MG/KG	U	1100	NA	3.3	NA	nc	NA
MW04D	4	6	Trans-1,2-dichloroethene	0.18	MG/KG	U	1100	NA	3.3	NA	nc	NA
MW07S	4	6	Trans-1,2-dichloroethene	0.26	MG/KG	U	1100	NA	3.3	NA	nc	NA
MW08S	4	6	Trans-1,2-dichloroethene	0.3	MG/KG	U	1100	NA	3.3	NA	nc	NA
MW09S	4	6	Trans-1,2-dichloroethene	0.26	MG/KG	U	1100	NA	3.3	NA	nc	NA
MW15D	4	6	Trans-1,2-dichloroethene	0.12	MG/KG	U	1100	NA	3.3	NA	nc	NA
SB02	4	6	Trans-1,2-dichloroethene	0.26	MG/KG	U	1100	NA	3.3	NA	nc	NA
SB03	4	6	Trans-1,2-dichloroethene	0.18	MG/KG	U	1100	NA	3.3	NA	nc	NA
CMS-237	0	1	Trans-1,2-dichloroethene	0.0059	MG/KG	UJ	1100	NA	3.3	NA	nc	NA
SB-14-271	1	2	Trans-1,2-dichloroethene	0.12	MG/KG	UJ	1100	NA	3.3	NA	nc	NA
CMS-060	1	2	Trans-1,2-dichloroethene	5.1	MG/KG	UJ	1100	NA	3.3	NA	nc	NA
CMS-405	1	2	Trans-1,2-dichloroethene	2.9	MG/KG	UJ	1100	NA	3.3	NA	nc	NA
SB-14-271	2	4	Trans-1,2-dichloroethene	0.13	MG/KG	UJ	1100	NA	3.3	NA	nc	NA
SB-14-271	4	6	Trans-1,2-dichloroethene	0.11	MG/KG	UJ	1100	NA	3.3	NA	nc	NA
MW14M	1	2	Trans-1,2-dichloroethene	0.18	MG/KG		1100	N	3.3	N	nc	NA
GEC-6	2.5	4.5	Trans-1,2-dichloroethene	0.21	MG/KG		1100	N	3.3	N	nc	NA
MW06S	4	6	Trans-1,2-dichloroethene	1.2	MG/KG		1100	N	3.3	N	nc	NA
MW05S	4	6	Trichloroethene	26	MG/KG	*J	13	Y	0.2	Y	nc	NA
CMS-159	0	1	Trichloroethene	0.0077	MG/KG	J	13	N	0.2	N	nc	NA
CMS-164	0	1	Trichloroethene	0.033	MG/KG	J	13	N	0.2	N	nc	NA
CMS-173	0	1	Trichloroethene	0.028	MG/KG	J	13	N	0.2	N	nc	NA
CMS-237	0	1	Trichloroethene	0.0027	MG/KG	J	13	N	0.2	N	nc	NA
CMS-060	0	1	Trichloroethene	1.7	MG/KG	J	13	N	0.2	Y	nc	NA
MW14M	1	2	Trichloroethene	0.97	MG/KG	J	13	N	0.2	Y	nc	NA
MW14M	1	2	Trichloroethene	2	MG/KG	J	13	N	0.2	Y	nc	NA
CMS-060	1	2	Trichloroethene	1	MG/KG	J	13	N	0.2	Y	nc	NA
CMS-118	1	2	Trichloroethene	0.0038	MG/KG	J	13	N	0.2	N	nc	NA
CMS-173	1	2	Trichloroethene	0.066	MG/KG	J	13	N	0.2	N	nc	NA
CMS-237	1	2	Trichloroethene	0.041	MG/KG	J	13	N	0.2	N	nc	NA
CMS-419	1	2	Trichloroethene	16	MG/KG	J	13	Y	0.2	Y	nc	NA
CMS-237	2	3	Trichloroethene	0.035	MG/KG	J	13	N	0.2	N	nc	NA
CMS-455	2	3	Trichloroethene	0.094	MG/KG	J	13	N	0.2	N	nc	NA
SB03	2	4	Trichloroethene	0.16	MG/KG	J	13	N	0.2	N	nc	NA
CMS-427	3	4	Trichloroethene	0.0021	MG/KG	J	13	N	0.2	N	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW03S	4	6	Trichloroethene	0.13	MG/KG	J	13	N	0.2	N	nc	NA
CMS-089	0	1	Trichloroethene	0.005	MG/KG	U	13	NA	0.2	NA	nc	NA
CMS-098	0	1	Trichloroethene	0.0097	MG/KG	U	13	NA	0.2	NA	nc	NA
CMS-118	0	1	Trichloroethene	0.0048	MG/KG	U	13	NA	0.2	NA	nc	NA
CMS-142	0	1	Trichloroethene	0.0095	MG/KG	U	13	NA	0.2	NA	nc	NA
CMS-407	0	1	Trichloroethene	0.005	MG/KG	U	13	NA	0.2	NA	nc	NA
CMS-408	0	1	Trichloroethene	0.0043	MG/KG	U	13	NA	0.2	NA	nc	NA
CMS-456	0	1	Trichloroethene	0.0075	MG/KG	U	13	NA	0.2	NA	nc	NA
CMS-702	0	1	Trichloroethene	0.0087	MG/KG	U	13	NA	0.2	NA	nc	NA
CMS-703	0	1	Trichloroethene	0.0061	MG/KG	U	13	NA	0.2	NA	nc	NA
CMS-142	0	1	Trichloroethene	0.011	MG/KG	U	13	NA	0.2	NA	nc	NA
MW05S	1	2	Trichloroethene	0.095	MG/KG	U	13	NA	0.2	NA	nc	NA
MW01S	1	2	Trichloroethene	0.34	MG/KG	U	13	NA	0.2	NA	nc	NA
MW05S	1	2	Trichloroethene	0.11	MG/KG	U	13	NA	0.2	NA	nc	NA
MW08S	1	2	Trichloroethene	0.26	MG/KG	U	13	NA	0.2	NA	nc	NA
CMS-089	1	2	Trichloroethene	0.0048	MG/KG	U	13	NA	0.2	NA	nc	NA
CMS-405	1	2	Trichloroethene	4	MG/KG	U	13	NA	0.2	NA	nc	NA
CMS-407	1	2	Trichloroethene	0.0074	MG/KG	U	13	NA	0.2	NA	nc	NA
CMS-408	1	2	Trichloroethene	2.2	MG/KG	U	13	NA	0.2	NA	nc	NA
CMS-423	1	2	Trichloroethene	0.0062	MG/KG	U	13	NA	0.2	NA	nc	NA
CMS-427	1	2	Trichloroethene	0.0045	MG/KG	U	13	NA	0.2	NA	nc	NA
CMS-428	1	2	Trichloroethene	0.0054	MG/KG	U	13	NA	0.2	NA	nc	NA
CMS-060	2	3	Trichloroethene	0.27	MG/KG	U	13	NA	0.2	NA	nc	NA
CMS-089	2	3	Trichloroethene	0.0047	MG/KG	U	13	NA	0.2	NA	nc	NA
CMS-118	2	3	Trichloroethene	0.0074	MG/KG	U	13	NA	0.2	NA	nc	NA
CMS-407	2	3	Trichloroethene	0.0087	MG/KG	U	13	NA	0.2	NA	nc	NA
CMS-408	2	3	Trichloroethene	6.6	MG/KG	U	13	NA	0.2	NA	nc	NA
MW08S	2	4	Trichloroethene	0.21	MG/KG	U	13	NA	0.2	NA	nc	NA
MW01S	2	4	Trichloroethene	0.22	MG/KG	U	13	NA	0.2	NA	nc	NA
MW02S	2	4	Trichloroethene	0.2	MG/KG	U	13	NA	0.2	NA	nc	NA
MW04D	2	4	Trichloroethene	0.5	MG/KG	U	13	NA	0.2	NA	nc	NA
MW06S	2	4	Trichloroethene	0.3	MG/KG	U	13	NA	0.2	NA	nc	NA
MW06S	2	4	Trichloroethene	0.3	MG/KG	U	13	NA	0.2	NA	nc	NA
MW08S	2	4	Trichloroethene	0.32	MG/KG	U	13	NA	0.2	NA	nc	NA
MW14M	2	4	Trichloroethene	0.14	MG/KG	U	13	NA	0.2	NA	nc	NA
MW15D	2	4	Trichloroethene	0.14	MG/KG	U	13	NA	0.2	NA	nc	NA
SB02	2	4	Trichloroethene	0.38	MG/KG	U	13	NA	0.2	NA	nc	NA
MW07S	3	4	Trichloroethene	0.5	MG/KG	U	13	NA	0.2	NA	nc	NA
CMS-089	3	4	Trichloroethene	0.0041	MG/KG	U	13	NA	0.2	NA	nc	NA
CMS-118	3	4	Trichloroethene	0.0084	MG/KG	U	13	NA	0.2	NA	nc	NA
CMS-407	3	4	Trichloroethene	0.32	MG/KG	U	13	NA	0.2	NA	nc	NA
CMS-419	3	4	Trichloroethene	0.32	MG/KG	U	13	NA	0.2	NA	nc	NA
CMS-423	3	4	Trichloroethene	0.0045	MG/KG	U	13	NA	0.2	NA	nc	NA
CMS-428	3	4	Trichloroethene	0.0057	MG/KG	U	13	NA	0.2	NA	nc	NA
CMS-423	3	4	Trichloroethene	0.0049	MG/KG	U	13	NA	0.2	NA	nc	NA
CMS-118	4	5	Trichloroethene	0.0059	MG/KG	U	13	NA	0.2	NA	nc	NA
CMS-405	4	5	Trichloroethene	1	MG/KG	U	13	NA	0.2	NA	nc	NA
CMS-455	4	5	Trichloroethene	0.0072	MG/KG	U	13	NA	0.2	NA	nc	NA
MW15D	4	6	Trichloroethene	0.1	MG/KG	U	13	NA	0.2	NA	nc	NA
MW02S	4	6	Trichloroethene	0.55	MG/KG	U	13	NA	0.2	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
SB03	4	6	Trichloroethene	0.2	MG/KG	U	13	NA	0.2	NA	nc	NA
MW02S	4	6	Trichloroethene	0.42	MG/KG	U	13	NA	0.2	NA	nc	NA
MW04D	4	6	Trichloroethene	0.18	MG/KG	U	13	NA	0.2	NA	nc	NA
MW07S	4	6	Trichloroethene	0.26	MG/KG	U	13	NA	0.2	NA	nc	NA
MW08S	4	6	Trichloroethene	0.3	MG/KG	U	13	NA	0.2	NA	nc	NA
MW09S	4	6	Trichloroethene	0.26	MG/KG	U	13	NA	0.2	NA	nc	NA
MW15D	4	6	Trichloroethene	0.12	MG/KG	U	13	NA	0.2	NA	nc	NA
SB02	4	6	Trichloroethene	0.26	MG/KG	U	13	NA	0.2	NA	nc	NA
SB03	4	6	Trichloroethene	0.18	MG/KG	U	13	NA	0.2	NA	nc	NA
SB-14-271	1	2	Trichloroethene	0.12	MG/KG	UJ	13	NA	0.2	NA	nc	NA
CMS-405	1	2	Trichloroethene	2.9	MG/KG	UJ	13	NA	0.2	NA	nc	NA
SB-14-271	2	4	Trichloroethene	0.13	MG/KG	UJ	13	NA	0.2	NA	nc	NA
SB-14-271	4	6	Trichloroethene	0.11	MG/KG	UJ	13	NA	0.2	NA	nc	NA
CMS-417	0	1	Trichloroethene	630	MG/KG		13	Y	0.2	Y	nc	NA
CMS-065	0	10	Trichloroethene	1.9	MG/KG		13	N	0.2	Y	nc	NA
CMS-417	1	2	Trichloroethene	2400	MG/KG		13	Y	0.2	Y	nc	NA
CMS-456	1	2	Trichloroethene	0.039	MG/KG		13	N	0.2	N	nc	NA
CMS-417	2	3	Trichloroethene	34	MG/KG		13	Y	0.2	Y	nc	NA
MW05S	2	4	Trichloroethene	0.97	MG/KG		13	N	0.2	Y	nc	NA
GEC-6	2.5	4.5	Trichloroethene	1.2	MG/KG		13	N	0.2	Y	nc	NA
GEC-7	2.5	4.5	Trichloroethene	0.049	MG/KG		13	N	0.2	N	nc	NA
CMS-060	3	4	Trichloroethene	0.0083	MG/KG		13	N	0.2	N	nc	NA
CMS-417	3	4	Trichloroethene	0.58	MG/KG		13	N	0.2	Y	nc	NA
CMS-060	4	5	Trichloroethene	0.013	MG/KG		13	N	0.2	N	nc	NA
MW01S	4	6	Trichloroethene	0.26	MG/KG		13	N	0.2	Y	nc	NA
MW06S	4	6	Trichloroethene	3.6	MG/KG		13	N	0.2	Y	nc	NA
CMW-SD-2019	0	0.5	Vanadium	83.8	MG/KG	J	550	N	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Vanadium	49.7	MG/KG	J	550	N	nc	NA	nc	NA
CMS-089	0	1	Vanadium	14.8	MG/KG	J	550	N	nc	NA	nc	NA
CMS-098	0	1	Vanadium	15.5	MG/KG	J	550	N	nc	NA	nc	NA
CMS-142	0	1	Vanadium	22.6	MG/KG	J	550	N	nc	NA	nc	NA
CMS-173	0	1	Vanadium	45	MG/KG	J	550	N	nc	NA	nc	NA
CMS-407	0	1	Vanadium	34.6	MG/KG	J	550	N	nc	NA	nc	NA
CMS-408	0	1	Vanadium	14.9	MG/KG	J	550	N	nc	NA	nc	NA
CMS-142	0	1	Vanadium	15.7	MG/KG	J	550	N	nc	NA	nc	NA
RES-14-333-01	0	1	Vanadium	57.3	MG/KG	J	550	N	nc	NA	nc	NA
CMS-703	0	2	Vanadium	18.9	MG/KG	J	550	N	nc	NA	nc	NA
BV01COMP	0	4	Vanadium	19.7	MG/KG	J	550	N	nc	NA	nc	NA
MW08S	1	2	Vanadium	18.8	MG/KG	J	550	N	nc	NA	nc	NA
CMS-089	1	2	Vanadium	12.9	MG/KG	J	550	N	nc	NA	nc	NA
CMS-173	1	2	Vanadium	9.9	MG/KG	J	550	N	nc	NA	nc	NA
CMS-407	1	2	Vanadium	28.2	MG/KG	J	550	N	nc	NA	nc	NA
CMS-408	1	2	Vanadium	43.1	MG/KG	J	550	N	nc	NA	nc	NA
CMS-089	2	3	Vanadium	12	MG/KG	J	550	N	nc	NA	nc	NA
CMS-407	2	3	Vanadium	14.2	MG/KG	J	550	N	nc	NA	nc	NA
CMS-408	2	3	Vanadium	31.4	MG/KG	J	550	N	nc	NA	nc	NA
MW08S	2	4	Vanadium	14.4	MG/KG	J	550	N	nc	NA	nc	NA
MW08S	2	4	Vanadium	11	MG/KG	J	550	N	nc	NA	nc	NA
MW15D	2	4	Vanadium	210	MG/KG	J	550	N	nc	NA	nc	NA
CMS-089	3	4	Vanadium	18.6	MG/KG	J	550	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-407	3	4	Vanadium	8.9	MG/KG	J	550	N	nc	NA	nc	NA
MW15D	4	6	Vanadium	13.1	MG/KG	J	550	N	nc	NA	nc	NA
MW15D	4	6	Vanadium	11.8	MG/KG	J	550	N	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Vanadium	2.5	MG/KG	U	550	NA	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Vanadium	5.1	MG/KG		550	N	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Vanadium	11.3	MG/KG		550	N	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Vanadium	30.9	MG/KG		550	N	nc	NA	nc	NA
CMS-060	0	1	Vanadium	15.6	MG/KG		550	N	nc	NA	nc	NA
CMS-118	0	1	Vanadium	13.7	MG/KG		550	N	nc	NA	nc	NA
CMS-159	0	1	Vanadium	54	MG/KG		550	N	nc	NA	nc	NA
CMS-164	0	1	Vanadium	61.9	MG/KG		550	N	nc	NA	nc	NA
CMS-237	0	1	Vanadium	19.8	MG/KG		550	N	nc	NA	nc	NA
CMS-405	0	1	Vanadium	16.4	MG/KG		550	N	nc	NA	nc	NA
CMS-417	0	1	Vanadium	16.7	MG/KG		550	N	nc	NA	nc	NA
CMS-456	0	1	Vanadium	15.5	MG/KG		550	N	nc	NA	nc	NA
CMS-060	0	1	Vanadium	20.2	MG/KG		550	N	nc	NA	nc	NA
RES-14-271-01	0	1	Vanadium	48.8	MG/KG		550	N	nc	NA	nc	NA
RES-14-272-01	0	1	Vanadium	24.3	MG/KG		550	N	nc	NA	nc	NA
RES-14-302-01	0	1	Vanadium	26.7	MG/KG		550	N	nc	NA	nc	NA
RES-14-303-01	0	1	Vanadium	58.7	MG/KG		550	N	nc	NA	nc	NA
RES-14-271-01	0	1	Vanadium	55	MG/KG		550	N	nc	NA	nc	NA
RES-14-272-01	0	1	Vanadium	31.9	MG/KG		550	N	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Vanadium	10.3	MG/KG		550	N	nc	NA	nc	NA
MW05S	1	2	Vanadium	5.2	MG/KG		550	N	nc	NA	nc	NA
MW14M	1	2	Vanadium	11.3	MG/KG		550	N	nc	NA	nc	NA
MW01S	1	2	Vanadium	29.1	MG/KG		550	N	nc	NA	nc	NA
MW05S	1	2	Vanadium	6.2	MG/KG		550	N	nc	NA	nc	NA
MW14M	1	2	Vanadium	12.7	MG/KG		550	N	nc	NA	nc	NA
SB-14-271	1	2	Vanadium	19.6	MG/KG		550	N	nc	NA	nc	NA
CMS-060	1	2	Vanadium	13.9	MG/KG		550	N	nc	NA	nc	NA
CMS-118	1	2	Vanadium	16.1	MG/KG		550	N	nc	NA	nc	NA
CMS-237	1	2	Vanadium	36.5	MG/KG		550	N	nc	NA	nc	NA
CMS-405	1	2	Vanadium	21.5	MG/KG		550	N	nc	NA	nc	NA
CMS-417	1	2	Vanadium	22.3	MG/KG		550	N	nc	NA	nc	NA
CMS-419	1	2	Vanadium	18.1	MG/KG		550	N	nc	NA	nc	NA
CMS-423	1	2	Vanadium	20.5	MG/KG		550	N	nc	NA	nc	NA
CMS-427	1	2	Vanadium	18.5	MG/KG		550	N	nc	NA	nc	NA
CMS-428	1	2	Vanadium	11.7	MG/KG		550	N	nc	NA	nc	NA
CMS-456	1	2	Vanadium	72.5	MG/KG		550	N	nc	NA	nc	NA
CMS-405	1	2	Vanadium	15	MG/KG		550	N	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Vanadium	6.3	MG/KG		550	N	nc	NA	nc	NA
CMS-060	2	3	Vanadium	15.4	MG/KG		550	N	nc	NA	nc	NA
CMS-118	2	3	Vanadium	33.4	MG/KG		550	N	nc	NA	nc	NA
CMS-237	2	3	Vanadium	42.1	MG/KG		550	N	nc	NA	nc	NA
CMS-405	2	3	Vanadium	31.8	MG/KG		550	N	nc	NA	nc	NA
CMS-417	2	3	Vanadium	13.2	MG/KG		550	N	nc	NA	nc	NA
CMS-455	2	3	Vanadium	16.5	MG/KG		550	N	nc	NA	nc	NA
SB02	2	4	Vanadium	16.3	MG/KG		550	N	nc	NA	nc	NA
MW02S	2	4	Vanadium	5.6	MG/KG		550	N	nc	NA	nc	NA
MW05S	2	4	Vanadium	16	MG/KG		550	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW06S	2	4	Vanadium	12	MG/KG		550	N	nc	NA	nc	NA
MW06S	2	4	Vanadium	10.9	MG/KG		550	N	nc	NA	nc	NA
MW14M	2	4	Vanadium	14.2	MG/KG		550	N	nc	NA	nc	NA
SB-14-271	2	4	Vanadium	11.6	MG/KG		550	N	nc	NA	nc	NA
SB02	2	4	Vanadium	15	MG/KG		550	N	nc	NA	nc	NA
SB03	2	4	Vanadium	7.3	MG/KG		550	N	nc	NA	nc	NA
MW07S	3	4	Vanadium	17	MG/KG		550	N	nc	NA	nc	NA
CMS-060	3	4	Vanadium	17.8	MG/KG		550	N	nc	NA	nc	NA
CMS-118	3	4	Vanadium	15.7	MG/KG		550	N	nc	NA	nc	NA
CMS-405	3	4	Vanadium	41.7	MG/KG		550	N	nc	NA	nc	NA
CMS-417	3	4	Vanadium	15.7	MG/KG		550	N	nc	NA	nc	NA
CMS-419	3	4	Vanadium	15.8	MG/KG		550	N	nc	NA	nc	NA
CMS-423	3	4	Vanadium	14.7	MG/KG		550	N	nc	NA	nc	NA
CMS-427	3	4	Vanadium	12.1	MG/KG		550	N	nc	NA	nc	NA
CMS-428	3	4	Vanadium	7.9	MG/KG		550	N	nc	NA	nc	NA
CMS-423	3	4	Vanadium	17.1	MG/KG		550	N	nc	NA	nc	NA
CMS-060	4	5	Vanadium	12	MG/KG		550	N	nc	NA	nc	NA
CMS-118	4	5	Vanadium	11.1	MG/KG		550	N	nc	NA	nc	NA
CMS-405	4	5	Vanadium	9.6	MG/KG		550	N	nc	NA	nc	NA
CMS-455	4	5	Vanadium	21.2	MG/KG		550	N	nc	NA	nc	NA
SB03	4	6	Vanadium	6.1	MG/KG		550	N	nc	NA	nc	NA
MW01S	4	6	Vanadium	5.3	MG/KG		550	N	nc	NA	nc	NA
MW03S	4	6	Vanadium	36.1	MG/KG		550	N	nc	NA	nc	NA
MW04D	4	6	Vanadium	6.7	MG/KG		550	N	nc	NA	nc	NA
MW05S	4	6	Vanadium	14.6	MG/KG		550	N	nc	NA	nc	NA
MW06S	4	6	Vanadium	26.6	MG/KG		550	N	nc	NA	nc	NA
MW07S	4	6	Vanadium	10	MG/KG		550	N	nc	NA	nc	NA
MW08S	4	6	Vanadium	13.8	MG/KG		550	N	nc	NA	nc	NA
MW09S	4	6	Vanadium	12.5	MG/KG		550	N	nc	NA	nc	NA
SB-14-271	4	6	Vanadium	6.1	MG/KG		550	N	nc	NA	nc	NA
SB02	4	6	Vanadium	16.5	MG/KG		550	N	nc	NA	nc	NA
SB03	4	6	Vanadium	4.6	MG/KG		550	N	nc	NA	nc	NA
CMS-4105	0	1	Vanadium	77.2	MG/KG		550	N	nc	NA	nc	NA
CMS-4110	0	1	Vanadium	56.9	MG/KG		550	N	nc	NA	nc	NA
SB03	2	4	Vinyl Chloride	0.076	MG/KG	J	0.02	Y	0.3	N	nc	NA
MW05S	4	6	Vinyl Chloride	0.55	MG/KG	J	0.02	Y	0.3	Y	nc	NA
MW06S	4	6	Vinyl Chloride	0.37	MG/KG	J	0.02	Y	0.3	Y	nc	NA
CMS-089	0	1	Vinyl Chloride	0.01	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-098	0	1	Vinyl Chloride	0.019	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-118	0	1	Vinyl Chloride	0.0048	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-142	0	1	Vinyl Chloride	0.019	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-159	0	1	Vinyl Chloride	0.021	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-164	0	1	Vinyl Chloride	0.031	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-173	0	1	Vinyl Chloride	0.047	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-407	0	1	Vinyl Chloride	0.0099	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-408	0	1	Vinyl Chloride	0.0086	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-417	0	1	Vinyl Chloride	120	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-456	0	1	Vinyl Chloride	0.0075	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-702	0	1	Vinyl Chloride	0.0087	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-703	0	1	Vinyl Chloride	0.0061	MG/KG	U	0.02	NA	0.3	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-142	0	1	Vinyl Chloride	0.022	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-060	0	1	Vinyl Chloride	2.7	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-065	0	10	Vinyl Chloride	1.6	MG/KG	U	0.02	NA	0.3	NA	nc	NA
MW05S	1	2	Vinyl Chloride	0.095	MG/KG	U	0.02	NA	0.3	NA	nc	NA
MW01S	1	2	Vinyl Chloride	0.34	MG/KG	U	0.02	NA	0.3	NA	nc	NA
MW05S	1	2	Vinyl Chloride	0.11	MG/KG	U	0.02	NA	0.3	NA	nc	NA
MW08S	1	2	Vinyl Chloride	0.26	MG/KG	U	0.02	NA	0.3	NA	nc	NA
MW14M	1	2	Vinyl Chloride	0.11	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-060	1	2	Vinyl Chloride	5.1	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-089	1	2	Vinyl Chloride	0.0096	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-118	1	2	Vinyl Chloride	0.006	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-173	1	2	Vinyl Chloride	0.017	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-237	1	2	Vinyl Chloride	0.014	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-405	1	2	Vinyl Chloride	8	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-407	1	2	Vinyl Chloride	0.015	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-408	1	2	Vinyl Chloride	4.4	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-417	1	2	Vinyl Chloride	270	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-419	1	2	Vinyl Chloride	28	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-423	1	2	Vinyl Chloride	0.0062	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-427	1	2	Vinyl Chloride	0.0045	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-428	1	2	Vinyl Chloride	0.0054	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-060	2	3	Vinyl Chloride	0.27	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-089	2	3	Vinyl Chloride	0.0094	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-118	2	3	Vinyl Chloride	0.0074	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-407	2	3	Vinyl Chloride	0.017	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-408	2	3	Vinyl Chloride	13	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-417	2	3	Vinyl Chloride	33	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-455	2	3	Vinyl Chloride	0.33	MG/KG	U	0.02	NA	0.3	NA	nc	NA
MW08S	2	4	Vinyl Chloride	0.21	MG/KG	U	0.02	NA	0.3	NA	nc	NA
MW01S	2	4	Vinyl Chloride	0.22	MG/KG	U	0.02	NA	0.3	NA	nc	NA
MW02S	2	4	Vinyl Chloride	0.2	MG/KG	U	0.02	NA	0.3	NA	nc	NA
MW04D	2	4	Vinyl Chloride	0.5	MG/KG	U	0.02	NA	0.3	NA	nc	NA
MW08S	2	4	Vinyl Chloride	0.32	MG/KG	U	0.02	NA	0.3	NA	nc	NA
MW14M	2	4	Vinyl Chloride	0.14	MG/KG	U	0.02	NA	0.3	NA	nc	NA
MW15D	2	4	Vinyl Chloride	0.14	MG/KG	U	0.02	NA	0.3	NA	nc	NA
SB02	2	4	Vinyl Chloride	0.38	MG/KG	U	0.02	NA	0.3	NA	nc	NA
GEC-7	2.5	4.5	Vinyl Chloride	0.06	MG/KG	U	0.02	NA	0.3	NA	nc	NA
MW07S	3	4	Vinyl Chloride	0.5	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-060	3	4	Vinyl Chloride	0.0058	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-089	3	4	Vinyl Chloride	0.0082	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-118	3	4	Vinyl Chloride	0.0084	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-407	3	4	Vinyl Chloride	0.65	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-417	3	4	Vinyl Chloride	0.57	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-419	3	4	Vinyl Chloride	0.32	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-423	3	4	Vinyl Chloride	0.0045	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-427	3	4	Vinyl Chloride	0.0054	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-428	3	4	Vinyl Chloride	0.0057	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-423	3	4	Vinyl Chloride	0.0049	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-060	4	5	Vinyl Chloride	0.0048	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-118	4	5	Vinyl Chloride	0.0059	MG/KG	U	0.02	NA	0.3	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-405	4	5	Vinyl Chloride	2.1	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-455	4	5	Vinyl Chloride	0.0072	MG/KG	U	0.02	NA	0.3	NA	nc	NA
MW15D	4	6	Vinyl Chloride	0.1	MG/KG	U	0.02	NA	0.3	NA	nc	NA
MW02S	4	6	Vinyl Chloride	0.55	MG/KG	U	0.02	NA	0.3	NA	nc	NA
SB03	4	6	Vinyl Chloride	0.2	MG/KG	U	0.02	NA	0.3	NA	nc	NA
MW01S	4	6	Vinyl Chloride	0.24	MG/KG	U	0.02	NA	0.3	NA	nc	NA
MW02S	4	6	Vinyl Chloride	0.42	MG/KG	U	0.02	NA	0.3	NA	nc	NA
MW03S	4	6	Vinyl Chloride	0.35	MG/KG	U	0.02	NA	0.3	NA	nc	NA
MW04D	4	6	Vinyl Chloride	0.18	MG/KG	U	0.02	NA	0.3	NA	nc	NA
MW07S	4	6	Vinyl Chloride	0.26	MG/KG	U	0.02	NA	0.3	NA	nc	NA
MW08S	4	6	Vinyl Chloride	0.3	MG/KG	U	0.02	NA	0.3	NA	nc	NA
MW15D	4	6	Vinyl Chloride	0.12	MG/KG	U	0.02	NA	0.3	NA	nc	NA
SB02	4	6	Vinyl Chloride	0.26	MG/KG	U	0.02	NA	0.3	NA	nc	NA
SB03	4	6	Vinyl Chloride	0.18	MG/KG	U	0.02	NA	0.3	NA	nc	NA
CMS-237	0	1	Vinyl Chloride	0.012	MG/KG	UJ	0.02	NA	0.3	NA	nc	NA
MW14M	1	2	Vinyl Chloride	0.15	MG/KG	UJ	0.02	NA	0.3	NA	nc	NA
SB-14-271	1	2	Vinyl Chloride	0.12	MG/KG	UJ	0.02	NA	0.3	NA	nc	NA
CMS-405	1	2	Vinyl Chloride	5.7	MG/KG	UJ	0.02	NA	0.3	NA	nc	NA
MW06S	2	4	Vinyl Chloride	0.3	MG/KG	UJ	0.02	NA	0.3	NA	nc	NA
MW06S	2	4	Vinyl Chloride	0.3	MG/KG	UJ	0.02	NA	0.3	NA	nc	NA
SB-14-271	2	4	Vinyl Chloride	0.13	MG/KG	UJ	0.02	NA	0.3	NA	nc	NA
MW09S	4	6	Vinyl Chloride	0.26	MG/KG	UJ	0.02	NA	0.3	NA	nc	NA
SB-14-271	4	6	Vinyl Chloride	0.11	MG/KG	UJ	0.02	NA	0.3	NA	nc	NA
CMS-456	1	2	Vinyl Chloride	0.07	MG/KG		0.02	Y	0.3	N	nc	NA
MW05S	2	4	Vinyl Chloride	0.29	MG/KG		0.02	Y	0.3	N	nc	NA
GEC-6	2.5	4.5	Vinyl Chloride	2.3	MG/KG		0.02	Y	0.3	Y	nc	NA
CMW-SD-2016	0	0.5	Zinc	77.7	MG/KG	J	6000	N	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Zinc	160	MG/KG	J	6000	N	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Zinc	93.8	MG/KG	J	6000	N	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Zinc	635	MG/KG	J	6000	N	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Zinc	268	MG/KG	J	6000	N	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Zinc	587	MG/KG	J	6000	N	nc	NA	nc	NA
CMS-089	0	1	Zinc	63.5	MG/KG	J	6000	N	nc	NA	nc	NA
CMS-098	0	1	Zinc	64	MG/KG	J	6000	N	nc	NA	nc	NA
CMS-142	0	1	Zinc	55.3	MG/KG	J	6000	N	nc	NA	nc	NA
CMS-173	0	1	Zinc	183	MG/KG	J	6000	N	nc	NA	nc	NA
CMS-407	0	1	Zinc	42.4	MG/KG	J	6000	N	nc	NA	nc	NA
CMS-408	0	1	Zinc	39.2	MG/KG	J	6000	N	nc	NA	nc	NA
CMS-456	0	1	Zinc	189	MG/KG	J	6000	N	nc	NA	nc	NA
CMS-142	0	1	Zinc	59.4	MG/KG	J	6000	N	nc	NA	nc	NA
RES-14-333-01	0	1	Zinc	337	MG/KG	J	6000	N	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Zinc	227	MG/KG	J	6000	N	nc	NA	nc	NA
CMS-089	1	2	Zinc	138	MG/KG	J	6000	N	nc	NA	nc	NA
CMS-173	1	2	Zinc	128	MG/KG	J	6000	N	nc	NA	nc	NA
CMS-407	1	2	Zinc	71.7	MG/KG	J	6000	N	nc	NA	nc	NA
CMS-408	1	2	Zinc	851	MG/KG	J	6000	N	nc	NA	nc	NA
CMS-428	1	2	Zinc	39.3	MG/KG	J	6000	N	nc	NA	nc	NA
CMS-456	1	2	Zinc	288	MG/KG	J	6000	N	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Zinc	39.4	MG/KG	J	6000	N	nc	NA	nc	NA
CMS-089	2	3	Zinc	64.2	MG/KG	J	6000	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-407	2	3	Zinc	295	MG/KG	J	6000	N	nc	NA	nc	NA
CMS-408	2	3	Zinc	226	MG/KG	J	6000	N	nc	NA	nc	NA
CMS-455	2	3	Zinc	166	MG/KG	J	6000	N	nc	NA	nc	NA
SB02	2	4	Zinc	329	MG/KG	J	6000	N	nc	NA	nc	NA
MW02S	2	4	Zinc	26.8	MG/KG	J	6000	N	nc	NA	nc	NA
MW06S	2	4	Zinc	454	MG/KG	J	6000	N	nc	NA	nc	NA
MW06S	2	4	Zinc	377	MG/KG	J	6000	N	nc	NA	nc	NA
SB02	2	4	Zinc	223	MG/KG	J	6000	N	nc	NA	nc	NA
SB03	2	4	Zinc	41.1	MG/KG	J	6000	N	nc	NA	nc	NA
MW07S	3	4	Zinc	54.1	MG/KG	J	6000	N	nc	NA	nc	NA
CMS-089	3	4	Zinc	104	MG/KG	J	6000	N	nc	NA	nc	NA
CMS-407	3	4	Zinc	30.9	MG/KG	J	6000	N	nc	NA	nc	NA
CMS-428	3	4	Zinc	27.6	MG/KG	J	6000	N	nc	NA	nc	NA
CMS-455	4	5	Zinc	30.2	MG/KG	J	6000	N	nc	NA	nc	NA
SB03	4	6	Zinc	17.3	MG/KG	J	6000	N	nc	NA	nc	NA
MW06S	4	6	Zinc	438	MG/KG	J	6000	N	nc	NA	nc	NA
MW07S	4	6	Zinc	52	MG/KG	J	6000	N	nc	NA	nc	NA
MW09S	4	6	Zinc	151	MG/KG	J	6000	N	nc	NA	nc	NA
SB02	4	6	Zinc	72.4	MG/KG	J	6000	N	nc	NA	nc	NA
SB03	4	6	Zinc	53.2	MG/KG	J	6000	N	nc	NA	nc	NA
CMS-060	0	1	Zinc	53.2	MG/KG		6000	N	nc	NA	nc	NA
CMS-118	0	1	Zinc	77.6	MG/KG		6000	N	nc	NA	nc	NA
CMS-159	0	1	Zinc	828	MG/KG		6000	N	nc	NA	nc	NA
CMS-164	0	1	Zinc	281	MG/KG		6000	N	nc	NA	nc	NA
CMS-237	0	1	Zinc	652	MG/KG		6000	N	nc	NA	nc	NA
CMS-405	0	1	Zinc	39.1	MG/KG		6000	N	nc	NA	nc	NA
CMS-417	0	1	Zinc	352	MG/KG		6000	N	nc	NA	nc	NA
CMS-060	0	1	Zinc	72.9	MG/KG		6000	N	nc	NA	nc	NA
RES-14-271-01	0	1	Zinc	105	MG/KG		6000	N	nc	NA	nc	NA
RES-14-272-01	0	1	Zinc	236	MG/KG		6000	N	nc	NA	nc	NA
RES-14-302-01	0	1	Zinc	413	MG/KG		6000	N	nc	NA	nc	NA
RES-14-303-01	0	1	Zinc	581	MG/KG		6000	N	nc	NA	nc	NA
RES-14-271-01	0	1	Zinc	119	MG/KG		6000	N	nc	NA	nc	NA
RES-14-272-01	0	1	Zinc	324	MG/KG		6000	N	nc	NA	nc	NA
CMS-703	0	2	Zinc	60.4	MG/KG		6000	N	nc	NA	nc	NA
BV01COMP	0	4	Zinc	38.6	MG/KG		6000	N	nc	NA	nc	NA
MW05S	1	2	Zinc	42.1	MG/KG		6000	N	nc	NA	nc	NA
MW14M	1	2	Zinc	115	MG/KG		6000	N	nc	NA	nc	NA
MW01S	1	2	Zinc	112	MG/KG		6000	N	nc	NA	nc	NA
MW05S	1	2	Zinc	56.3	MG/KG		6000	N	nc	NA	nc	NA
MW08S	1	2	Zinc	556	MG/KG		6000	N	nc	NA	nc	NA
MW14M	1	2	Zinc	131	MG/KG		6000	N	nc	NA	nc	NA
SB-14-271	1	2	Zinc	162	MG/KG		6000	N	nc	NA	nc	NA
CMS-060	1	2	Zinc	55.8	MG/KG		6000	N	nc	NA	nc	NA
CMS-118	1	2	Zinc	106	MG/KG		6000	N	nc	NA	nc	NA
CMS-237	1	2	Zinc	3330	MG/KG		6000	N	nc	NA	nc	NA
CMS-405	1	2	Zinc	3270	MG/KG		6000	N	nc	NA	nc	NA
CMS-417	1	2	Zinc	2460	MG/KG		6000	N	nc	NA	nc	NA
CMS-419	1	2	Zinc	2150	MG/KG		6000	N	nc	NA	nc	NA
CMS-423	1	2	Zinc	72.3	MG/KG		6000	N	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-427	1	2	Zinc	232	MG/KG		6000	N	nc	NA	nc	NA
CMS-405	1	2	Zinc	1770	MG/KG		6000	N	nc	NA	nc	NA
CMS-060	2	3	Zinc	44.5	MG/KG		6000	N	nc	NA	nc	NA
CMS-118	2	3	Zinc	213	MG/KG		6000	N	nc	NA	nc	NA
CMS-237	2	3	Zinc	3080	MG/KG		6000	N	nc	NA	nc	NA
CMS-405	2	3	Zinc	2830	MG/KG		6000	N	nc	NA	nc	NA
CMS-417	2	3	Zinc	94.4	MG/KG		6000	N	nc	NA	nc	NA
MW08S	2	4	Zinc	254	MG/KG		6000	N	nc	NA	nc	NA
MW05S	2	4	Zinc	97.1	MG/KG		6000	N	nc	NA	nc	NA
MW08S	2	4	Zinc	308	MG/KG		6000	N	nc	NA	nc	NA
MW14M	2	4	Zinc	77	MG/KG		6000	N	nc	NA	nc	NA
MW15D	2	4	Zinc	20.1	MG/KG		6000	N	nc	NA	nc	NA
SB-14-271	2	4	Zinc	35.1	MG/KG		6000	N	nc	NA	nc	NA
CMS-060	3	4	Zinc	20.4	MG/KG		6000	N	nc	NA	nc	NA
CMS-118	3	4	Zinc	79.1	MG/KG		6000	N	nc	NA	nc	NA
CMS-405	3	4	Zinc	1820	MG/KG		6000	N	nc	NA	nc	NA
CMS-417	3	4	Zinc	129	MG/KG		6000	N	nc	NA	nc	NA
CMS-419	3	4	Zinc	65.8	MG/KG		6000	N	nc	NA	nc	NA
CMS-423	3	4	Zinc	131	MG/KG		6000	N	nc	NA	nc	NA
CMS-427	3	4	Zinc	50.9	MG/KG		6000	N	nc	NA	nc	NA
CMS-423	3	4	Zinc	189	MG/KG		6000	N	nc	NA	nc	NA
CMS-060	4	5	Zinc	46.5	MG/KG		6000	N	nc	NA	nc	NA
CMS-118	4	5	Zinc	25.6	MG/KG		6000	N	nc	NA	nc	NA
CMS-405	4	5	Zinc	26.4	MG/KG		6000	N	nc	NA	nc	NA
MW15D	4	6	Zinc	125	MG/KG		6000	N	nc	NA	nc	NA
MW01S	4	6	Zinc	21.5	MG/KG		6000	N	nc	NA	nc	NA
MW03S	4	6	Zinc	55.8	MG/KG		6000	N	nc	NA	nc	NA
MW04D	4	6	Zinc	53.7	MG/KG		6000	N	nc	NA	nc	NA
MW05S	4	6	Zinc	80.1	MG/KG		6000	N	nc	NA	nc	NA
MW08S	4	6	Zinc	22	MG/KG		6000	N	nc	NA	nc	NA
MW15D	4	6	Zinc	119	MG/KG		6000	N	nc	NA	nc	NA
SB-14-271	4	6	Zinc	25.5	MG/KG		6000	N	nc	NA	nc	NA
CMS-4105	0	1	Zinc	731	MG/KG		6000	N	nc	NA	nc	NA
CMS-4110	0	1	Zinc	417	MG/KG		6000	N	nc	NA	nc	NA
AP-DEL-03	0	1	TEQ	22.854	PG/G_DRYWT		nc	NA	nc	NA	1000	N
AP-DEL-03	1	2	TEQ	78.5	PG/G_DRYWT		nc	NA	nc	NA	1000	N
AP-DEL-02	0	1	TEQ	155.305	PG/G_DRYWT		nc	NA	nc	NA	1000	N
AP-DEL-02	1	2	TEQ	0	PG/G_DRYWT		nc	NA	nc	NA	1000	N
AP-DEL-01	0	1	TEQ	50.895	PG/G_DRYWT		nc	NA	nc	NA	1000	N
AP-DEL-01	1	2	TEQ	78.9	PG/G_DRYWT		nc	NA	nc	NA	1000	N
CMS-026	0	0.25	TEQ	15.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-027	0	0.25	TEQ	63.9	NG/KG		nc	NA	nc	NA	1000	N
CMS-028	0	0.25	TEQ	58	NG/KG		nc	NA	nc	NA	1000	N
CMS-029	0	0.25	TEQ	40.5	NG/KG		nc	NA	nc	NA	1000	N

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-030	0	0.25	TEQ	101	NG/KG		nc	NA	nc	NA	1000	N
CMS-031	0	0.25	TEQ	107	NG/KG		nc	NA	nc	NA	1000	N
CMS-033	0	0.25	TEQ	185	NG/KG		nc	NA	nc	NA	1000	N
CMS-034	0	0.25	TEQ	2.6	NG/KG		nc	NA	nc	NA	1000	N
CMS-035	0	0.25	TEQ	10.3	NG/KG		nc	NA	nc	NA	1000	N
CMS-037	0	0.25	TEQ	7.6	NG/KG		nc	NA	nc	NA	1000	N
CMS-038	0	0.25	TEQ	5.3	NG/KG		nc	NA	nc	NA	1000	N
CMS-041	0	0.25	TEQ	2.1	NG/KG		nc	NA	nc	NA	1000	N
CMS-044	0	0.25	TEQ	2.3	NG/KG		nc	NA	nc	NA	1000	N
CMS-047	0	0.25	TEQ	5.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-048	0	0.25	TEQ	2.7	NG/KG		nc	NA	nc	NA	1000	N
CMS-050	0	0.25	TEQ	54.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-051	0	0.25	TEQ	1480	NG/KG		nc	NA	nc	NA	1000	Y
CMS-052	0	0.25	TEQ	44.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-052	0	0.25	TEQ	2.3	NG/KG		nc	NA	nc	NA	1000	N
CMS-053	0	0.25	TEQ	3.1	NG/KG		nc	NA	nc	NA	1000	N
CMS-054	0	0.25	TEQ	1.4	NG/KG		nc	NA	nc	NA	1000	N
CMS-055	0	0.25	TEQ	232	NG/KG		nc	NA	nc	NA	1000	N
CMS-056	0	0.25	TEQ	249	NG/KG		nc	NA	nc	NA	1000	N
CMS-057	0	0.25	TEQ	16300	NG/KG		nc	NA	nc	NA	1000	Y
CMS-058	0	0.25	TEQ	185	NG/KG		nc	NA	nc	NA	1000	N
CMS-059	0	0.25	TEQ	42.1	NG/KG		nc	NA	nc	NA	1000	N
CMS-060	0	0.25	TEQ	116000	NG/KG		nc	NA	nc	NA	1000	Y
CMS-061	0	0.25	TEQ	195	NG/KG		nc	NA	nc	NA	1000	N
CMS-061	0	0.25	TEQ	222	NG/KG		nc	NA	nc	NA	1000	N
CMS-062	0	0.25	TEQ	12	NG/KG		nc	NA	nc	NA	1000	N
CMS-063	0	0.25	TEQ	4460	NG/KG		nc	NA	nc	NA	1000	Y
CMS-064	0	0.25	TEQ	699	NG/KG		nc	NA	nc	NA	1000	N
CMS-065	0	0.25	TEQ	1.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-066	0	0.25	TEQ	76.3	NG/KG		nc	NA	nc	NA	1000	N
CMS-067	0	0.25	TEQ	118	NG/KG		nc	NA	nc	NA	1000	N
CMS-068	0	0.25	TEQ	8.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-068	0	0.25	TEQ	8.4	NG/KG		nc	NA	nc	NA	1000	N
CMS-069	0	0.25	TEQ	2430	NG/KG		nc	NA	nc	NA	1000	Y
CMS-070	0	0.25	TEQ	0.71	NG/KG		nc	NA	nc	NA	1000	N
CMS-071	0	0.25	TEQ	1.8	NG/KG		nc	NA	nc	NA	1000	N
CMS-071	0	0.25	TEQ	1	NG/KG		nc	NA	nc	NA	1000	N
CMS-072	0	0.25	TEQ	4	NG/KG		nc	NA	nc	NA	1000	N
CMS-073	0	0.25	TEQ	28	NG/KG		nc	NA	nc	NA	1000	N
CMS-074	0	0.25	TEQ	1750	NG/KG		nc	NA	nc	NA	1000	Y
CMS-075	0	0.25	TEQ	8750	NG/KG		nc	NA	nc	NA	1000	Y
CMS-076	0	0.25	TEQ	2030	NG/KG		nc	NA	nc	NA	1000	Y
CMS-078	0	0.25	TEQ	6.1	NG/KG		nc	NA	nc	NA	1000	N
CMS-078	0	0.25	TEQ	9.2	NG/KG		nc	NA	nc	NA	1000	N
CMS-079	0	0.25	TEQ	35.8	NG/KG		nc	NA	nc	NA	1000	N
CMS-080	0	0.25	TEQ	394	NG/KG		nc	NA	nc	NA	1000	N
CMS-081	0	0.25	TEQ	1020	NG/KG		nc	NA	nc	NA	1000	Y
CMS-082	0	0.25	TEQ	1250	NG/KG		nc	NA	nc	NA	1000	Y
CMS-084	0	0.25	TEQ	746	NG/KG		nc	NA	nc	NA	1000	N
CMS-084	0	0.25	TEQ	156	NG/KG		nc	NA	nc	NA	1000	N

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-085	0	0.25	TEQ	329	NG/KG		nc	NA	nc	NA	1000	N
CMS-086	0	0.25	TEQ	240	NG/KG		nc	NA	nc	NA	1000	N
CMS-087	0	0.25	TEQ	684	NG/KG		nc	NA	nc	NA	1000	N
CMS-088	0	0.25	TEQ	134	NG/KG		nc	NA	nc	NA	1000	N
CMS-089	0	0.25	TEQ	4470	NG/KG		nc	NA	nc	NA	1000	Y
CMS-090	0	0.25	TEQ	13.3	NG/KG		nc	NA	nc	NA	1000	N
CMS-091	0	0.25	TEQ	225	NG/KG		nc	NA	nc	NA	1000	N
CMS-092	0	0.25	TEQ	153	NG/KG		nc	NA	nc	NA	1000	N
CMS-093	0	0.25	TEQ	111	NG/KG		nc	NA	nc	NA	1000	N
CMS-093	0	0.25	TEQ	1830	NG/KG		nc	NA	nc	NA	1000	Y
CMS-094	0	0.25	TEQ	2620	NG/KG		nc	NA	nc	NA	1000	Y
CMS-095	0	0.25	TEQ	115	NG/KG		nc	NA	nc	NA	1000	N
CMS-096	0	0.25	TEQ	38.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-096	0	0.25	TEQ	24	NG/KG		nc	NA	nc	NA	1000	N
CMS-098	0	0.25	TEQ	28100	NG/KG		nc	NA	nc	NA	1000	Y
CMS-099	0	0.25	TEQ	767	NG/KG		nc	NA	nc	NA	1000	N
CMS-100	0	0.25	TEQ	12.4	NG/KG		nc	NA	nc	NA	1000	N
CMS-101	0	0.25	TEQ	118	NG/KG		nc	NA	nc	NA	1000	N
CMS-102	0	0.25	TEQ	2760	NG/KG		nc	NA	nc	NA	1000	Y
CMS-103	0	0.25	TEQ	129	NG/KG		nc	NA	nc	NA	1000	N
CMS-103	0	0.25	TEQ	164	NG/KG		nc	NA	nc	NA	1000	N
CMS-104	0	0.25	TEQ	53.1	NG/KG		nc	NA	nc	NA	1000	N
CMS-107	0	0.25	TEQ	1810	NG/KG		nc	NA	nc	NA	1000	Y
CMS-108	0	0.25	TEQ	95	NG/KG		nc	NA	nc	NA	1000	N
CMS-109	0	0.25	TEQ	1090	NG/KG		nc	NA	nc	NA	1000	Y
CMS-110	0	0.25	TEQ	605	NG/KG		nc	NA	nc	NA	1000	N
CMS-111	0	0.25	TEQ	112	NG/KG		nc	NA	nc	NA	1000	N
CMS-112	0	0.25	TEQ	220	NG/KG		nc	NA	nc	NA	1000	N
CMS-114	0	0.25	TEQ	23.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-114	0	0.25	TEQ	23.2	NG/KG		nc	NA	nc	NA	1000	N
CMS-115	0	0.25	TEQ	463	NG/KG		nc	NA	nc	NA	1000	N
CMS-116	0	0.25	TEQ	132	NG/KG		nc	NA	nc	NA	1000	N
CMS-117	0	0.25	TEQ	6550	NG/KG		nc	NA	nc	NA	1000	Y
CMS-118	0	0.25	TEQ	2530	NG/KG		nc	NA	nc	NA	1000	Y
CMS-119	0	0.25	TEQ	22.9	NG/KG		nc	NA	nc	NA	1000	N
CMS-121	0	0.25	TEQ	280	NG/KG		nc	NA	nc	NA	1000	N
CMS-124	0	0.25	TEQ	213	NG/KG		nc	NA	nc	NA	1000	N
CMS-125	0	0.25	TEQ	31.9	NG/KG		nc	NA	nc	NA	1000	N
CMS-126	0	0.25	TEQ	44.3	NG/KG		nc	NA	nc	NA	1000	N
CMS-126	0	0.25	TEQ	44.4	NG/KG		nc	NA	nc	NA	1000	N
CMS-127	0	0.25	TEQ	39	NG/KG		nc	NA	nc	NA	1000	N
CMS-128	0	0.25	TEQ	17.8	NG/KG		nc	NA	nc	NA	1000	N
CMS-130	0	0.25	TEQ	71.9	NG/KG		nc	NA	nc	NA	1000	N
CMS-131	0	0.25	TEQ	3320	NG/KG		nc	NA	nc	NA	1000	Y
CMS-132	0	0.25	TEQ	19.4	NG/KG		nc	NA	nc	NA	1000	N
CMS-133	0	0.25	TEQ	729	NG/KG		nc	NA	nc	NA	1000	N
CMS-134	0	0.25	TEQ	15600	NG/KG		nc	NA	nc	NA	1000	Y
CMS-135	0	0.25	TEQ	20600	NG/KG		nc	NA	nc	NA	1000	Y
CMS-136	0	0.25	TEQ	14.2	NG/KG		nc	NA	nc	NA	1000	N
CMS-137	0	0.25	TEQ	4.1	NG/KG		nc	NA	nc	NA	1000	N

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-138	0	0.25	TEQ	98.8	NG/KG		nc	NA	nc	NA	1000	N
CMS-139	0	0.25	TEQ	158	NG/KG		nc	NA	nc	NA	1000	N
CMS-140	0	0.25	TEQ	117000	NG/KG		nc	NA	nc	NA	1000	Y
CMS-141	0	0.25	TEQ	35500	NG/KG		nc	NA	nc	NA	1000	Y
CMS-142	0	0.25	TEQ	8070	NG/KG		nc	NA	nc	NA	1000	Y
CMS-143	0	0.25	TEQ	186	NG/KG		nc	NA	nc	NA	1000	N
CMS-144	0	0.25	TEQ	75.2	NG/KG		nc	NA	nc	NA	1000	N
CMS-145	0	0.25	TEQ	2750	NG/KG		nc	NA	nc	NA	1000	Y
CMS-147	0	0.25	TEQ	6470	NG/KG		nc	NA	nc	NA	1000	Y
CMS-148	0	0.25	TEQ	15300	NG/KG		nc	NA	nc	NA	1000	Y
CMS-149	0	0.25	TEQ	22700	NG/KG		nc	NA	nc	NA	1000	Y
CMS-150	0	0.25	TEQ	22100	NG/KG		nc	NA	nc	NA	1000	Y
CMS-151	0	0.25	TEQ	22.4	NG/KG		nc	NA	nc	NA	1000	N
CMS-152	0	0.25	TEQ	1400	NG/KG		nc	NA	nc	NA	1000	Y
CMS-153	0	0.25	TEQ	40.8	NG/KG		nc	NA	nc	NA	1000	N
CMS-154	0	0.25	TEQ	1300	NG/KG		nc	NA	nc	NA	1000	Y
CMS-155	0	0.25	TEQ	6810	NG/KG		nc	NA	nc	NA	1000	Y
CMS-156	0	0.25	TEQ	52900	NG/KG		nc	NA	nc	NA	1000	Y
CMS-157	0	0.25	TEQ	12600	NG/KG		nc	NA	nc	NA	1000	Y
CMS-158	0	0.25	TEQ	10200	NG/KG		nc	NA	nc	NA	1000	Y
CMS-158	0	0.25	TEQ	8430	NG/KG		nc	NA	nc	NA	1000	Y
CMS-159	0	0.25	TEQ	3380	NG/KG		nc	NA	nc	NA	1000	Y
CMS-160	0	0.25	TEQ	12600	NG/KG		nc	NA	nc	NA	1000	Y
CMS-160	0	0.25	TEQ	11300	NG/KG		nc	NA	nc	NA	1000	Y
CMS-161	0	0.25	TEQ	2550	NG/KG		nc	NA	nc	NA	1000	Y
CMS-162	0	0.25	TEQ	311	NG/KG		nc	NA	nc	NA	1000	N
CMS-163	0	0.25	TEQ	253	NG/KG		nc	NA	nc	NA	1000	N
CMS-164	0	0.25	TEQ	16700	NG/KG		nc	NA	nc	NA	1000	Y
CMS-164	0	0.25	TEQ	17500	NG/KG		nc	NA	nc	NA	1000	Y
CMS-165	0	0.25	TEQ	8580	NG/KG		nc	NA	nc	NA	1000	Y
CMS-166	0	0.25	TEQ	9620	NG/KG		nc	NA	nc	NA	1000	Y
CMS-167	0	0.25	TEQ	2140	NG/KG		nc	NA	nc	NA	1000	Y
CMS-168	0	0.25	TEQ	11600	NG/KG		nc	NA	nc	NA	1000	Y
CMS-169	0	0.25	TEQ	35100	NG/KG		nc	NA	nc	NA	1000	Y
CMS-170	0	0.25	TEQ	8590	NG/KG		nc	NA	nc	NA	1000	Y
CMS-171	0	0.25	TEQ	5290	NG/KG		nc	NA	nc	NA	1000	Y
CMS-172	0	0.25	TEQ	9990	NG/KG		nc	NA	nc	NA	1000	Y
CMS-173	0	0.25	TEQ	17500	NG/KG		nc	NA	nc	NA	1000	Y
CMS-175	0	0.25	TEQ	12900	NG/KG		nc	NA	nc	NA	1000	Y
CMS-220	0	0.25	TEQ	2.9	NG/KG		nc	NA	nc	NA	1000	N
CMS-222	0	0.25	TEQ	98.7	NG/KG		nc	NA	nc	NA	1000	N
CMS-223	0	0.25	TEQ	120	NG/KG		nc	NA	nc	NA	1000	N
CMS-225	0	0.25	TEQ	133	NG/KG		nc	NA	nc	NA	1000	N
CMS-226	0	0.25	TEQ	9680	NG/KG		nc	NA	nc	NA	1000	Y
CMS-227	0	0.25	TEQ	1910	NG/KG		nc	NA	nc	NA	1000	Y
CMS-228	0	0.25	TEQ	2360	NG/KG		nc	NA	nc	NA	1000	Y
CMS-229	0	0.25	TEQ	0.99	NG/KG		nc	NA	nc	NA	1000	N
CMS-230	0	0.25	TEQ	5.3	NG/KG		nc	NA	nc	NA	1000	N
CMS-231	0	0.25	TEQ	193	NG/KG		nc	NA	nc	NA	1000	N
CMS-232	0	0.25	TEQ	2200	NG/KG		nc	NA	nc	NA	1000	Y

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-233	0	0.25	TEQ	841	NG/KG		nc	NA	nc	NA	1000	N
CMS-234	0	0.25	TEQ	278	NG/KG		nc	NA	nc	NA	1000	N
CMS-235	0	0.25	TEQ	781	NG/KG		nc	NA	nc	NA	1000	N
CMS-236	0	0.25	TEQ	830	NG/KG		nc	NA	nc	NA	1000	N
CMS-237	0	0.25	TEQ	2620	NG/KG		nc	NA	nc	NA	1000	Y
CMS-238	0	0.25	TEQ	13500	NG/KG		nc	NA	nc	NA	1000	Y
CMS-239	0	0.25	TEQ	3490	NG/KG		nc	NA	nc	NA	1000	Y
CMS-240	0	0.25	TEQ	5110	NG/KG		nc	NA	nc	NA	1000	Y
CMS-241	0	0.25	TEQ	6640	NG/KG		nc	NA	nc	NA	1000	Y
CMS-242	0	0.25	TEQ	20300	NG/KG		nc	NA	nc	NA	1000	Y
SS-99-00	0	0.25	TEQ	198	NG/KG		nc	NA	nc	NA	1000	N
SS-99-01	0	0.25	TEQ	188	NG/KG		nc	NA	nc	NA	1000	N
SS-99-02	0	0.25	TEQ	189	NG/KG		nc	NA	nc	NA	1000	N
SS-99-03	0	0.25	TEQ	4200	NG/KG		nc	NA	nc	NA	1000	Y
SS-99-04	0	0.25	TEQ	6640	NG/KG		nc	NA	nc	NA	1000	Y
SS-99-05	0	0.25	TEQ	26300	NG/KG		nc	NA	nc	NA	1000	Y
SS-99-06	0	0.25	TEQ	188	NG/KG		nc	NA	nc	NA	1000	N
CMW-SD-2016	0	0.5	TEQ	4.6	NG/KG		nc	NA	nc	NA	1000	N
CMW-SD-2017	0	0.5	TEQ	24.3	NG/KG		nc	NA	nc	NA	1000	N
CMW-SD-2018	0	0.5	TEQ	28.7	NG/KG		nc	NA	nc	NA	1000	N
CMW-SD-2019	0	0.5	TEQ	8410	NG/KG		nc	NA	nc	NA	1000	Y
CMW-SD-2020	0	0.5	TEQ	4740	NG/KG		nc	NA	nc	NA	1000	Y
CMW-SD-2021	0	0.5	TEQ	2090	NG/KG		nc	NA	nc	NA	1000	Y
SD-30	0	0.5	TEQ	15900	NG/KG		nc	NA	nc	NA	1000	Y
SD-31	0	0.5	TEQ	3.3	NG/KG		nc	NA	nc	NA	1000	N
CMS-051	0	1	TEQ	550	NG/KG		nc	NA	nc	NA	1000	N
CMS-057	0	1	TEQ	16000	NG/KG		nc	NA	nc	NA	1000	Y
CMS-060	0	1	TEQ	820	NG/KG		nc	NA	nc	NA	1000	N
CMS-060	0	1	TEQ	491	NG/KG		nc	NA	nc	NA	1000	N
CMS-060	0	1	TEQ	23.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-063	0	1	TEQ	9800	NG/KG		nc	NA	nc	NA	1000	Y
CMS-069	0	1	TEQ	520	NG/KG		nc	NA	nc	NA	1000	N
CMS-074	0	1	TEQ	190	NG/KG		nc	NA	nc	NA	1000	N
CMS-075	0	1	TEQ	170	NG/KG		nc	NA	nc	NA	1000	N
CMS-076	0	1	TEQ	7	NG/KG		nc	NA	nc	NA	1000	N
CMS-081	0	1	TEQ	3.1	NG/KG		nc	NA	nc	NA	1000	N
CMS-082	0	1	TEQ	1.2	NG/KG		nc	NA	nc	NA	1000	N
CMS-089	0	1	TEQ	100	NG/KG		nc	NA	nc	NA	1000	N
CMS-093	0	1	TEQ	850	NG/KG		nc	NA	nc	NA	1000	N
CMS-094	0	1	TEQ	71	NG/KG		nc	NA	nc	NA	1000	N
CMS-098	0	1	TEQ	2500	NG/KG		nc	NA	nc	NA	1000	Y
CMS-102	0	1	TEQ	220	NG/KG		nc	NA	nc	NA	1000	N
CMS-109	0	1	TEQ	1200	NG/KG		nc	NA	nc	NA	1000	Y
CMS-117	0	1	TEQ	130	NG/KG		nc	NA	nc	NA	1000	N
CMS-118	0	1	TEQ	1700	NG/KG		nc	NA	nc	NA	1000	Y
CMS-131	0	1	TEQ	12000	NG/KG		nc	NA	nc	NA	1000	Y
CMS-134	0	1	TEQ	3200	NG/KG		nc	NA	nc	NA	1000	Y
CMS-135	0	1	TEQ	690	NG/KG		nc	NA	nc	NA	1000	N
CMS-140	0	1	TEQ	420	NG/KG		nc	NA	nc	NA	1000	N
CMS-141	0	1	TEQ	270	NG/KG		nc	NA	nc	NA	1000	N

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-142	0	1	TEQ	690	NG/KG		nc	NA	nc	NA	1000	N
CMS-142	0	1	TEQ	2050	NG/KG		nc	NA	nc	NA	1000	Y
CMS-142	0	1	TEQ	1500	NG/KG		nc	NA	nc	NA	1000	Y
CMS-147	0	1	TEQ	380	NG/KG		nc	NA	nc	NA	1000	N
CMS-148	0	1	TEQ	640	NG/KG		nc	NA	nc	NA	1000	N
CMS-149	0	1	TEQ	310	NG/KG		nc	NA	nc	NA	1000	N
CMS-150	0	1	TEQ	210	NG/KG		nc	NA	nc	NA	1000	N
CMS-150	0	1	TEQ	611	NG/KG		nc	NA	nc	NA	1000	N
CMS-150	0	1	TEQ	320	NG/KG		nc	NA	nc	NA	1000	N
CMS-152	0	1	TEQ	640	NG/KG		nc	NA	nc	NA	1000	N
CMS-153	0	1	TEQ	300	NG/KG		nc	NA	nc	NA	1000	N
CMS-154	0	1	TEQ	420	NG/KG		nc	NA	nc	NA	1000	N
CMS-155	0	1	TEQ	1500	NG/KG		nc	NA	nc	NA	1000	Y
CMS-156	0	1	TEQ	5900	NG/KG		nc	NA	nc	NA	1000	Y
CMS-157	0	1	TEQ	420	NG/KG		nc	NA	nc	NA	1000	N
CMS-158	0	1	TEQ	470	NG/KG		nc	NA	nc	NA	1000	N
CMS-159	0	1	TEQ	3000	NG/KG		nc	NA	nc	NA	1000	Y
CMS-160	0	1	TEQ	1100	NG/KG		nc	NA	nc	NA	1000	Y
CMS-161	0	1	TEQ	240	NG/KG		nc	NA	nc	NA	1000	N
CMS-162	0	1	TEQ	540	NG/KG		nc	NA	nc	NA	1000	N
CMS-162	0	1	TEQ	980	NG/KG		nc	NA	nc	NA	1000	N
CMS-164	0	1	TEQ	52000	NG/KG		nc	NA	nc	NA	1000	Y
CMS-165	0	1	TEQ	120	NG/KG		nc	NA	nc	NA	1000	N
CMS-166	0	1	TEQ	10000	NG/KG		nc	NA	nc	NA	1000	Y
CMS-167	0	1	TEQ	3000	NG/KG		nc	NA	nc	NA	1000	Y
CMS-168	0	1	TEQ	31000	NG/KG		nc	NA	nc	NA	1000	Y
CMS-169	0	1	TEQ	2000	NG/KG		nc	NA	nc	NA	1000	Y
CMS-170	0	1	TEQ	26000	NG/KG		nc	NA	nc	NA	1000	Y
CMS-171	0	1	TEQ	5800	NG/KG		nc	NA	nc	NA	1000	Y
CMS-172	0	1	TEQ	460	NG/KG		nc	NA	nc	NA	1000	N
CMS-173	0	1	TEQ	1200	NG/KG		nc	NA	nc	NA	1000	Y
CMS-175	0	1	TEQ	1900	NG/KG		nc	NA	nc	NA	1000	Y
CMS-232	0	1	TEQ	4.3	NG/KG		nc	NA	nc	NA	1000	N
CMS-237	0	1	TEQ	7100	NG/KG		nc	NA	nc	NA	1000	Y
CMS-238	0	1	TEQ	4200	NG/KG		nc	NA	nc	NA	1000	Y
CMS-239	0	1	TEQ	6600	NG/KG		nc	NA	nc	NA	1000	Y
CMS-240	0	1	TEQ	140000	NG/KG		nc	NA	nc	NA	1000	Y
CMS-241	0	1	TEQ	27000	NG/KG		nc	NA	nc	NA	1000	Y
CMS-242	0	1	TEQ	6300	NG/KG		nc	NA	nc	NA	1000	Y
CMS-400	0	1	TEQ	650	NG/KG		nc	NA	nc	NA	1000	N
CMS-401	0	1	TEQ	6	NG/KG		nc	NA	nc	NA	1000	N
CMS-402	0	1	TEQ	8.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-403	0	1	TEQ	150	NG/KG		nc	NA	nc	NA	1000	N
CMS-404	0	1	TEQ	83	NG/KG		nc	NA	nc	NA	1000	N
CMS-404	0	1	TEQ	219	NG/KG		nc	NA	nc	NA	1000	N
CMS-404	0	1	TEQ	300	NG/KG		nc	NA	nc	NA	1000	N
CMS-405	0	1	TEQ	0.85	NG/KG		nc	NA	nc	NA	1000	N
CMS-406	0	1	TEQ	2.8	NG/KG		nc	NA	nc	NA	1000	N
CMS-407	0	1	TEQ	5.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-408	0	1	TEQ	7.5	NG/KG		nc	NA	nc	NA	1000	N

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-409	0	1	TEQ	2400	NG/KG		nc	NA	nc	NA	1000	Y
CMS-410	0	1	TEQ	600	NG/KG		nc	NA	nc	NA	1000	N
CMS-411	0	1	TEQ	5.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-412	0	1	TEQ	39	NG/KG		nc	NA	nc	NA	1000	N
CMS-413	0	1	TEQ	54	NG/KG		nc	NA	nc	NA	1000	N
CMS-414	0	1	TEQ	740	NG/KG		nc	NA	nc	NA	1000	N
CMS-415	0	1	TEQ	260	NG/KG		nc	NA	nc	NA	1000	N
CMS-416	0	1	TEQ	200	NG/KG		nc	NA	nc	NA	1000	N
CMS-417	0	1	TEQ	2700	NG/KG		nc	NA	nc	NA	1000	Y
CMS-419	0	1	TEQ	95	NG/KG		nc	NA	nc	NA	1000	N
CMS-420	0	1	TEQ	15.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-421	0	1	TEQ	2.4	NG/KG		nc	NA	nc	NA	1000	N
CMS-422	0	1	TEQ	30.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-423	0	1	TEQ	6	NG/KG		nc	NA	nc	NA	1000	N
CMS-424	0	1	TEQ	4.1	NG/KG		nc	NA	nc	NA	1000	N
CMS-425	0	1	TEQ	370	NG/KG		nc	NA	nc	NA	1000	N
CMS-426	0	1	TEQ	94	NG/KG		nc	NA	nc	NA	1000	N
CMS-427	0	1	TEQ	380	NG/KG		nc	NA	nc	NA	1000	N
CMS-428	0	1	TEQ	48.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-429	0	1	TEQ	2	NG/KG		nc	NA	nc	NA	1000	N
CMS-430	0	1	TEQ	170	NG/KG		nc	NA	nc	NA	1000	N
CMS-431	0	1	TEQ	350	NG/KG		nc	NA	nc	NA	1000	N
CMS-432	0	1	TEQ	720	NG/KG		nc	NA	nc	NA	1000	N
CMS-433	0	1	TEQ	135	NG/KG		nc	NA	nc	NA	1000	N
CMS-434	0	1	TEQ	4	NG/KG		nc	NA	nc	NA	1000	N
CMS-435	0	1	TEQ	42	NG/KG		nc	NA	nc	NA	1000	N
CMS-435	0	1	TEQ	56.6	NG/KG		nc	NA	nc	NA	1000	N
CMS-435	0	1	TEQ	13.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-436	0	1	TEQ	40	NG/KG		nc	NA	nc	NA	1000	N
CMS-437	0	1	TEQ	37	NG/KG		nc	NA	nc	NA	1000	N
CMS-438	0	1	TEQ	57	NG/KG		nc	NA	nc	NA	1000	N
CMS-439	0	1	TEQ	6	NG/KG		nc	NA	nc	NA	1000	N
CMS-440	0	1	TEQ	23	NG/KG		nc	NA	nc	NA	1000	N
CMS-441	0	1	TEQ	640	NG/KG		nc	NA	nc	NA	1000	N
CMS-442	0	1	TEQ	10.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-443	0	1	TEQ	83	NG/KG		nc	NA	nc	NA	1000	N
CMS-444	0	1	TEQ	44	NG/KG		nc	NA	nc	NA	1000	N
CMS-445	0	1	TEQ	96	NG/KG		nc	NA	nc	NA	1000	N
CMS-456	0	1	TEQ	480	NG/KG		nc	NA	nc	NA	1000	N
CMS-464	0	1	TEQ	15.4	NG/KG		nc	NA	nc	NA	1000	N
CMS-481	0	1	TEQ	98.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-482	0	1	TEQ	11.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-500	0	1	TEQ	26.3	NG/KG		nc	NA	nc	NA	1000	N
CMS-500	0	1	TEQ	38	NG/KG		nc	NA	nc	NA	1000	N
CMS-501	0	1	TEQ	23.6	NG/KG		nc	NA	nc	NA	1000	N
CMS-502	0	1	TEQ	70.2	NG/KG		nc	NA	nc	NA	1000	N
CMS-503	0	1	TEQ	26.8	NG/KG		nc	NA	nc	NA	1000	N
CMS-504	0	1	TEQ	33.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-504	0	1	TEQ	35.7	NG/KG		nc	NA	nc	NA	1000	N
CMS-505	0	1	TEQ	13.4	NG/KG		nc	NA	nc	NA	1000	N

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-506	0	1	TEQ	25.7	NG/KG		nc	NA	nc	NA	1000	N
CMS-507	0	1	TEQ	47.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-508	0	1	TEQ	18.8	NG/KG		nc	NA	nc	NA	1000	N
CMS-700	0	1	TEQ	76	NG/KG		nc	NA	nc	NA	1000	N
CMS-701	0	1	TEQ	370	NG/KG		nc	NA	nc	NA	1000	N
CMS-701	0	1	TEQ	410	NG/KG		nc	NA	nc	NA	1000	N
CMS-702	0	1	TEQ	20	NG/KG		nc	NA	nc	NA	1000	N
CMS-703	0	1	TEQ	3200	NG/KG		nc	NA	nc	NA	1000	Y
RES-14-271-01A	0	1	TEQ	237	NG/KG		nc	NA	nc	NA	1000	N
RES-14-303-01	0	1	TEQ	4250	NG/KG		nc	NA	nc	NA	1000	Y
RES-14-303-02	0	1	TEQ	10600	NG/KG		nc	NA	nc	NA	1000	Y
RES-14-333-01	0	1	TEQ	1380	NG/KG		nc	NA	nc	NA	1000	Y
RES-14-333-02	0	1	TEQ	103	NG/KG		nc	NA	nc	NA	1000	N
RES-14-333-03	0	1	TEQ	2380	NG/KG		nc	NA	nc	NA	1000	Y
CMW-SD-2022	0.5	2	TEQ	218	NG/KG		nc	NA	nc	NA	1000	N
CMS-051	1	2	TEQ	52	NG/KG		nc	NA	nc	NA	1000	N
CMS-057	1	2	TEQ	6300	NG/KG		nc	NA	nc	NA	1000	Y
CMS-060	1	2	TEQ	1400	NG/KG		nc	NA	nc	NA	1000	Y
CMS-063	1	2	TEQ	57000	NG/KG		nc	NA	nc	NA	1000	Y
CMS-069	1	2	TEQ	170	NG/KG		nc	NA	nc	NA	1000	N
CMS-069	1	2	TEQ	271	NG/KG		nc	NA	nc	NA	1000	N
CMS-069	1	2	TEQ	180	NG/KG		nc	NA	nc	NA	1000	N
CMS-074	1	2	TEQ	83	NG/KG		nc	NA	nc	NA	1000	N
CMS-075	1	2	TEQ	290	NG/KG		nc	NA	nc	NA	1000	N
CMS-076	1	2	TEQ	3.6	NG/KG		nc	NA	nc	NA	1000	N
CMS-081	1	2	TEQ	5.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-082	1	2	TEQ	6	NG/KG		nc	NA	nc	NA	1000	N
CMS-089	1	2	TEQ	1300	NG/KG		nc	NA	nc	NA	1000	Y
CMS-118	1	2	TEQ	1800	NG/KG		nc	NA	nc	NA	1000	Y
CMS-131	1	2	TEQ	54000	NG/KG		nc	NA	nc	NA	1000	Y
CMS-147	1	2	TEQ	115	NG/KG		nc	NA	nc	NA	1000	N
CMS-150	1	2	TEQ	17	NG/KG		nc	NA	nc	NA	1000	N
CMS-152	1	2	TEQ	4.9	NG/KG		nc	NA	nc	NA	1000	N
CMS-153	1	2	TEQ	100	NG/KG		nc	NA	nc	NA	1000	N
CMS-153	1	2	TEQ	12.4	NG/KG		nc	NA	nc	NA	1000	N
CMS-153	1	2	TEQ	550	NG/KG		nc	NA	nc	NA	1000	N
CMS-154	1	2	TEQ	345	NG/KG		nc	NA	nc	NA	1000	N
CMS-155	1	2	TEQ	360	NG/KG		nc	NA	nc	NA	1000	N
CMS-160	1	2	TEQ	62	NG/KG		nc	NA	nc	NA	1000	N
CMS-161	1	2	TEQ	71	NG/KG		nc	NA	nc	NA	1000	N
CMS-161	1	2	TEQ	124	NG/KG		nc	NA	nc	NA	1000	N
CMS-162	1	2	TEQ	220	NG/KG		nc	NA	nc	NA	1000	N
CMS-168	1	2	TEQ	10000	NG/KG		nc	NA	nc	NA	1000	Y
CMS-170	1	2	TEQ	2000	NG/KG		nc	NA	nc	NA	1000	Y
CMS-170	1	2	TEQ	7200	NG/KG		nc	NA	nc	NA	1000	Y
CMS-173	1	2	TEQ	720	NG/KG		nc	NA	nc	NA	1000	N
CMS-175	1	2	TEQ	930	NG/KG		nc	NA	nc	NA	1000	N
CMS-232	1	2	TEQ	5.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-237	1	2	TEQ	1200	NG/KG		nc	NA	nc	NA	1000	Y
CMS-238	1	2	TEQ	130	NG/KG		nc	NA	nc	NA	1000	N

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-238	1	2	TEQ	165	NG/KG		nc	NA	nc	NA	1000	N
CMS-239	1	2	TEQ	1150	NG/KG		nc	NA	nc	NA	1000	Y
CMS-241	1	2	TEQ	1500	NG/KG		nc	NA	nc	NA	1000	Y
CMS-242	1	2	TEQ	270	NG/KG		nc	NA	nc	NA	1000	N
CMS-400	1	2	TEQ	65	NG/KG		nc	NA	nc	NA	1000	N
CMS-401	1	2	TEQ	46	NG/KG		nc	NA	nc	NA	1000	N
CMS-402	1	2	TEQ	5	NG/KG		nc	NA	nc	NA	1000	N
CMS-403	1	2	TEQ	4.4	NG/KG		nc	NA	nc	NA	1000	N
CMS-404	1	2	TEQ	8	NG/KG		nc	NA	nc	NA	1000	N
CMS-405	1	2	TEQ	20	NG/KG		nc	NA	nc	NA	1000	N
CMS-405	1	2	TEQ	46.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-406	1	2	TEQ	12.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-406	1	2	TEQ	14.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-407	1	2	TEQ	8.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-408	1	2	TEQ	65	NG/KG		nc	NA	nc	NA	1000	N
CMS-409	1	2	TEQ	46.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-410	1	2	TEQ	920	NG/KG		nc	NA	nc	NA	1000	N
CMS-411	1	2	TEQ	5	NG/KG		nc	NA	nc	NA	1000	N
CMS-412	1	2	TEQ	51	NG/KG		nc	NA	nc	NA	1000	N
CMS-413	1	2	TEQ	300	NG/KG		nc	NA	nc	NA	1000	N
CMS-414	1	2	TEQ	7	NG/KG		nc	NA	nc	NA	1000	N
CMS-415	1	2	TEQ	15	NG/KG		nc	NA	nc	NA	1000	N
CMS-416	1	2	TEQ	220	NG/KG		nc	NA	nc	NA	1000	N
CMS-416	1	2	TEQ	1600	NG/KG		nc	NA	nc	NA	1000	Y
CMS-417	1	2	TEQ	1400	NG/KG		nc	NA	nc	NA	1000	Y
CMS-419	1	2	TEQ	60	NG/KG		nc	NA	nc	NA	1000	N
CMS-419	1	2	TEQ	77	NG/KG		nc	NA	nc	NA	1000	N
CMS-420	1	2	TEQ	9.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-420	1	2	TEQ	4.3	NG/KG		nc	NA	nc	NA	1000	N
CMS-421	1	2	TEQ	105	NG/KG		nc	NA	nc	NA	1000	N
CMS-421	1	2	TEQ	79	NG/KG		nc	NA	nc	NA	1000	N
CMS-422	1	2	TEQ	410	NG/KG		nc	NA	nc	NA	1000	N
CMS-423	1	2	TEQ	39	NG/KG		nc	NA	nc	NA	1000	N
CMS-424	1	2	TEQ	12	NG/KG		nc	NA	nc	NA	1000	N
CMS-425	1	2	TEQ	860	NG/KG		nc	NA	nc	NA	1000	N
CMS-426	1	2	TEQ	3300	NG/KG		nc	NA	nc	NA	1000	Y
CMS-426	1	2	TEQ	8400	NG/KG		nc	NA	nc	NA	1000	Y
CMS-427	1	2	TEQ	600	NG/KG		nc	NA	nc	NA	1000	N
CMS-428	1	2	TEQ	9	NG/KG		nc	NA	nc	NA	1000	N
CMS-429	1	2	TEQ	9	NG/KG		nc	NA	nc	NA	1000	N
CMS-430	1	2	TEQ	265	NG/KG		nc	NA	nc	NA	1000	N
CMS-431	1	2	TEQ	230	NG/KG		nc	NA	nc	NA	1000	N
CMS-432	1	2	TEQ	43.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-432	1	2	TEQ	87	NG/KG		nc	NA	nc	NA	1000	N
CMS-433	1	2	TEQ	17	NG/KG		nc	NA	nc	NA	1000	N
CMS-436	1	2	TEQ	13.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-437	1	2	TEQ	13.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-438	1	2	TEQ	16.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-439	1	2	TEQ	6	NG/KG		nc	NA	nc	NA	1000	N
CMS-441	1	2	TEQ	240	NG/KG		nc	NA	nc	NA	1000	N

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-454	1	2	TEQ	870	NG/KG		nc	NA	nc	NA	1000	N
CMS-456	1	2	TEQ	2100	NG/KG		nc	NA	nc	NA	1000	Y
CMS-700	1	2	TEQ	82	NG/KG		nc	NA	nc	NA	1000	N
CMS-701	1	2	TEQ	340	NG/KG		nc	NA	nc	NA	1000	N
CMS-702	1	2	TEQ	4000	NG/KG		nc	NA	nc	NA	1000	Y
CMS-703	1	2	TEQ	1300	NG/KG		nc	NA	nc	NA	1000	Y
MW01S	1	2	TEQ	8.9	ng/kg	J	nc	NA	nc	NA	1000	N
MW05S	1	2	TEQ	4	ng/Kg	J	nc	NA	nc	NA	1000	N
MW05S	1	2	TEQ	2.9	ng/Kg	J	nc	NA	nc	NA	1000	N
MW08S	1	2	TEQ	180.8851	NG/KG		nc	NA	nc	NA	1000	N
MW14M	1	2	TEQ	18.2	ng/Kg	J	nc	NA	nc	NA	1000	N
MW14M	1	2	TEQ	14.1	ng/Kg	J	nc	NA	nc	NA	1000	N
SB-14-271	1	2	TEQ	47	ng/Kg	J	nc	NA	nc	NA	1000	N
CMW-SD-2022	2	2.5	TEQ	12.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-051	2	3	TEQ	20.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-057	2	3	TEQ	960	NG/KG		nc	NA	nc	NA	1000	N
CMS-060	2	3	TEQ	500	NG/KG		nc	NA	nc	NA	1000	N
CMS-069	2	3	TEQ	390	NG/KG		nc	NA	nc	NA	1000	N
CMS-074	2	3	TEQ	33	NG/KG		nc	NA	nc	NA	1000	N
CMS-075	2	3	TEQ	290	NG/KG		nc	NA	nc	NA	1000	N
CMS-076	2	3	TEQ	17	NG/KG		nc	NA	nc	NA	1000	N
CMS-089	2	3	TEQ	210	NG/KG		nc	NA	nc	NA	1000	N
CMS-118	2	3	TEQ	6300	NG/KG		nc	NA	nc	NA	1000	Y
CMS-131	2	3	TEQ	11000	NG/KG		nc	NA	nc	NA	1000	Y
CMS-147	2	3	TEQ	3000	NG/KG		nc	NA	nc	NA	1000	Y
CMS-147	2	3	TEQ	336	NG/KG		nc	NA	nc	NA	1000	N
CMS-152	2	3	TEQ	18.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-153	2	3	TEQ	140	NG/KG		nc	NA	nc	NA	1000	N
CMS-154	2	3	TEQ	24.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-160	2	3	TEQ	79	NG/KG		nc	NA	nc	NA	1000	N
CMS-162	2	3	TEQ	340	NG/KG		nc	NA	nc	NA	1000	N
CMS-168	2	3	TEQ	6100	NG/KG		nc	NA	nc	NA	1000	Y
CMS-175	2	3	TEQ	3000	NG/KG		nc	NA	nc	NA	1000	Y
CMS-237	2	3	TEQ	350	NG/KG		nc	NA	nc	NA	1000	N
CMS-400	2	3	TEQ	280	NG/KG		nc	NA	nc	NA	1000	N
CMS-401	2	3	TEQ	235	NG/KG		nc	NA	nc	NA	1000	N
CMS-402	2	3	TEQ	2400	NG/KG		nc	NA	nc	NA	1000	Y
CMS-403	2	3	TEQ	3.9	NG/KG		nc	NA	nc	NA	1000	N
CMS-404	2	3	TEQ	3.3	NG/KG		nc	NA	nc	NA	1000	N
CMS-405	2	3	TEQ	50	NG/KG		nc	NA	nc	NA	1000	N
CMS-405	2	3	TEQ	27.1	NG/KG		nc	NA	nc	NA	1000	N
CMS-406	2	3	TEQ	2.7	NG/KG		nc	NA	nc	NA	1000	N
CMS-406	2	3	TEQ	40.7	NG/KG		nc	NA	nc	NA	1000	N
CMS-407	2	3	TEQ	8	NG/KG		nc	NA	nc	NA	1000	N
CMS-408	2	3	TEQ	9.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-409	2	3	TEQ	20	NG/KG		nc	NA	nc	NA	1000	N
CMS-410	2	3	TEQ	1350	NG/KG		nc	NA	nc	NA	1000	Y
CMS-411	2	3	TEQ	70	NG/KG		nc	NA	nc	NA	1000	N
CMS-412	2	3	TEQ	4.6	NG/KG		nc	NA	nc	NA	1000	N
CMS-413	2	3	TEQ	11.5	NG/KG		nc	NA	nc	NA	1000	N

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-414	2	3	TEQ	9.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-415	2	3	TEQ	7.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-416	2	3	TEQ	59	NG/KG		nc	NA	nc	NA	1000	N
CMS-417	2	3	TEQ	1900	NG/KG		nc	NA	nc	NA	1000	Y
CMS-419	2	3	TEQ	80	NG/KG		nc	NA	nc	NA	1000	N
CMS-420	2	3	TEQ	1450	NG/KG		nc	NA	nc	NA	1000	Y
CMS-420	2	3	TEQ	321	NG/KG		nc	NA	nc	NA	1000	N
CMS-421	2	3	TEQ	160	NG/KG		nc	NA	nc	NA	1000	N
CMS-421	2	3	TEQ	24.6	NG/KG		nc	NA	nc	NA	1000	N
CMS-422	2	3	TEQ	3.4	NG/KG		nc	NA	nc	NA	1000	N
CMS-423	2	3	TEQ	2.6	NG/KG		nc	NA	nc	NA	1000	N
CMS-424	2	3	TEQ	10	NG/KG		nc	NA	nc	NA	1000	N
CMS-425	2	3	TEQ	65	NG/KG		nc	NA	nc	NA	1000	N
CMS-426	2	3	TEQ	8200	NG/KG		nc	NA	nc	NA	1000	Y
CMS-426	2	3	TEQ	4310	NG/KG		nc	NA	nc	NA	1000	Y
CMS-427	2	3	TEQ	2.4	NG/KG		nc	NA	nc	NA	1000	N
CMS-428	2	3	TEQ	18.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-428	2	3	TEQ	11.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-429	2	3	TEQ	6	NG/KG		nc	NA	nc	NA	1000	N
CMS-430	2	3	TEQ	15.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-431	2	3	TEQ	90	NG/KG		nc	NA	nc	NA	1000	N
CMS-432	2	3	TEQ	18	NG/KG		nc	NA	nc	NA	1000	N
CMS-432	2	3	TEQ	28.1	NG/KG		nc	NA	nc	NA	1000	N
CMS-433	2	3	TEQ	1800	NG/KG		nc	NA	nc	NA	1000	Y
CMS-437	2	3	TEQ	880	NG/KG		nc	NA	nc	NA	1000	N
CMS-454	2	3	TEQ	18.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-455	2	3	TEQ	48.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-701	2	3	TEQ	450	NG/KG		nc	NA	nc	NA	1000	N
MW01S	2	4	TEQ	1100	ng/kg	J	nc	NA	nc	NA	1000	Y
MW02S	2	4	TEQ	12.33	ng/kg	J	nc	NA	nc	NA	1000	N
MW04D	2	4	TEQ	790	ng/Kg	J	nc	NA	nc	NA	1000	N
MW05S	2	4	TEQ	700	ng/Kg	J	nc	NA	nc	NA	1000	N
MW06S	2	4	TEQ	284	NG/KG	J	nc	NA	nc	NA	1000	N
MW06S	2	4	TEQ	253	NG/KG	J	nc	NA	nc	NA	1000	N
MW08S	2	4	TEQ	11.11222	NG/KG		nc	NA	nc	NA	1000	N
MW08S	2	4	TEQ	8.33663	NG/KG		nc	NA	nc	NA	1000	N
MW14M	2	4	TEQ	3.09	ng/Kg	J	nc	NA	nc	NA	1000	N
MW15D	2	4	TEQ	80.3	ng/Kg	J	nc	NA	nc	NA	1000	N
SB02	2	4	TEQ	957.76	ng/kg	J	nc	NA	nc	NA	1000	N
SB03	2	4	TEQ	16	ng/kg	J	nc	NA	nc	NA	1000	N
SB-14-271	2	4	TEQ	0.00035	ng/Kg	J	nc	NA	nc	NA	1000	N
CMS-057	3	4	TEQ	230	NG/KG		nc	NA	nc	NA	1000	N
CMS-060	3	4	TEQ	18.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-069	3	4	TEQ	10.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-075	3	4	TEQ	8.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-089	3	4	TEQ	280	NG/KG		nc	NA	nc	NA	1000	N
CMS-118	3	4	TEQ	470	NG/KG		nc	NA	nc	NA	1000	N
CMS-131	3	4	TEQ	7600	NG/KG		nc	NA	nc	NA	1000	Y
CMS-153	3	4	TEQ	41	NG/KG		nc	NA	nc	NA	1000	N
CMS-155	3	4	TEQ	1800	NG/KG		nc	NA	nc	NA	1000	Y

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-162	3	4	TEQ	860	NG/KG		nc	NA	nc	NA	1000	N
CMS-162	3	4	TEQ	624	NG/KG		nc	NA	nc	NA	1000	N
CMS-162	3	4	TEQ	305	NG/KG		nc	NA	nc	NA	1000	N
CMS-175	3	4	TEQ	910	NG/KG		nc	NA	nc	NA	1000	N
CMS-400	3	4	TEQ	32.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-401	3	4	TEQ	32.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-402	3	4	TEQ	110	NG/KG		nc	NA	nc	NA	1000	N
CMS-403	3	4	TEQ	4.2	NG/KG		nc	NA	nc	NA	1000	N
CMS-404	3	4	TEQ	10	NG/KG		nc	NA	nc	NA	1000	N
CMS-405	3	4	TEQ	2.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-406	3	4	TEQ	9.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-407	3	4	TEQ	90	NG/KG		nc	NA	nc	NA	1000	N
CMS-409	3	4	TEQ	2.4	NG/KG		nc	NA	nc	NA	1000	N
CMS-410	3	4	TEQ	180	NG/KG		nc	NA	nc	NA	1000	N
CMS-411	3	4	TEQ	7.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-412	3	4	TEQ	5.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-414	3	4	TEQ	19	NG/KG		nc	NA	nc	NA	1000	N
CMS-415	3	4	TEQ	20	NG/KG		nc	NA	nc	NA	1000	N
CMS-416	3	4	TEQ	2.8	NG/KG		nc	NA	nc	NA	1000	N
CMS-416	3	4	TEQ	3	NG/KG		nc	NA	nc	NA	1000	N
CMS-417	3	4	TEQ	1600	NG/KG		nc	NA	nc	NA	1000	Y
CMS-419	3	4	TEQ	15	NG/KG		nc	NA	nc	NA	1000	N
CMS-420	3	4	TEQ	3400	NG/KG		nc	NA	nc	NA	1000	Y
CMS-421	3	4	TEQ	4.4	NG/KG		nc	NA	nc	NA	1000	N
CMS-422	3	4	TEQ	16.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-423	3	4	TEQ	120	NG/KG		nc	NA	nc	NA	1000	N
CMS-423	3	4	TEQ	10.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-424	3	4	TEQ	3.4	NG/KG		nc	NA	nc	NA	1000	N
CMS-425	3	4	TEQ	27.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-426	3	4	TEQ	190	NG/KG		nc	NA	nc	NA	1000	N
CMS-427	3	4	TEQ	470	NG/KG		nc	NA	nc	NA	1000	N
CMS-428	3	4	TEQ	22.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-429	3	4	TEQ	7.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-432	3	4	TEQ	400	NG/KG		nc	NA	nc	NA	1000	N
CMS-433	3	4	TEQ	150	NG/KG		nc	NA	nc	NA	1000	N
CMS-437	3	4	TEQ	100	NG/KG		nc	NA	nc	NA	1000	N
CMS-448	3	4	TEQ	12	NG/KG		nc	NA	nc	NA	1000	N
CMS-450	3	4	TEQ	390	NG/KG		nc	NA	nc	NA	1000	N
CMS-453	3	4	TEQ	11000	NG/KG		nc	NA	nc	NA	1000	Y
CMS-453	3	4	TEQ	42900	NG/KG		nc	NA	nc	NA	1000	Y
CMS-453	3	4	TEQ	2200	NG/KG		nc	NA	nc	NA	1000	Y
CMS-454	3	4	TEQ	81	NG/KG		nc	NA	nc	NA	1000	N
CMS-455	3	4	TEQ	14	NG/KG		nc	NA	nc	NA	1000	N
MW07S	3	4	TEQ	423	NG/KG	J	nc	NA	nc	NA	1000	N
CMS-060	4	5	TEQ	140	NG/KG		nc	NA	nc	NA	1000	N
CMS-069	4	5	TEQ	670	NG/KG		nc	NA	nc	NA	1000	N
CMS-118	4	5	TEQ	340	NG/KG		nc	NA	nc	NA	1000	N
CMS-153	4	5	TEQ	2.2	NG/KG		nc	NA	nc	NA	1000	N
CMS-155	4	5	TEQ	205	NG/KG		nc	NA	nc	NA	1000	N
CMS-400	4	5	TEQ	15	NG/KG		nc	NA	nc	NA	1000	N

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-402	4	5	TEQ	4.2	NG/KG		nc	NA	nc	NA	1000	N
CMS-403	4	5	TEQ	2.9	NG/KG		nc	NA	nc	NA	1000	N
CMS-404	4	5	TEQ	3.9	NG/KG		nc	NA	nc	NA	1000	N
CMS-405	4	5	TEQ	1.2	NG/KG		nc	NA	nc	NA	1000	N
CMS-409	4	5	TEQ	4.2	NG/KG		nc	NA	nc	NA	1000	N
CMS-409	4	5	TEQ	2.4	NG/KG		nc	NA	nc	NA	1000	N
CMS-410	4	5	TEQ	145	NG/KG		nc	NA	nc	NA	1000	N
CMS-410	4	5	TEQ	449	NG/KG		nc	NA	nc	NA	1000	N
CMS-410	4	5	TEQ	75	NG/KG		nc	NA	nc	NA	1000	N
CMS-411	4	5	TEQ	7	NG/KG		nc	NA	nc	NA	1000	N
CMS-419	4	5	TEQ	6.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-421	4	5	TEQ	1.7	NG/KG		nc	NA	nc	NA	1000	N
CMS-423	4	5	TEQ	3.8	NG/KG		nc	NA	nc	NA	1000	N
CMS-424	4	5	TEQ	4	NG/KG		nc	NA	nc	NA	1000	N
CMS-425	4	5	TEQ	22	NG/KG		nc	NA	nc	NA	1000	N
CMS-425	4	5	TEQ	16300	NG/KG		nc	NA	nc	NA	1000	Y
CMS-426	4	5	TEQ	37	NG/KG		nc	NA	nc	NA	1000	N
CMS-427	4	5	TEQ	215	NG/KG		nc	NA	nc	NA	1000	N
CMS-428	4	5	TEQ	13.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-428	4	5	TEQ	8.3	NG/KG		nc	NA	nc	NA	1000	N
CMS-429	4	5	TEQ	4.8	NG/KG		nc	NA	nc	NA	1000	N
CMS-432	4	5	TEQ	7	NG/KG		nc	NA	nc	NA	1000	N
CMS-448	4	5	TEQ	16.5	NG/KG		nc	NA	nc	NA	1000	N
CMS-449	4	5	TEQ	110	NG/KG		nc	NA	nc	NA	1000	N
CMS-450	4	5	TEQ	84	NG/KG		nc	NA	nc	NA	1000	N
CMS-451	4	5	TEQ	1650	NG/KG		nc	NA	nc	NA	1000	Y
CMS-452	4	5	TEQ	750	NG/KG		nc	NA	nc	NA	1000	N
CMS-452	4	5	TEQ	570	NG/KG		nc	NA	nc	NA	1000	N
CMS-453	4	5	TEQ	1000	NG/KG		nc	NA	nc	NA	1000	N
CMS-454	4	5	TEQ	130	NG/KG		nc	NA	nc	NA	1000	N
CMS-455	4	5	TEQ	60	NG/KG		nc	NA	nc	NA	1000	N
MW01S	4	6	TEQ	5.79	ng/kg	J	nc	NA	nc	NA	1000	N
MW02S	4	6	TEQ	88	ng/kg	J	nc	NA	nc	NA	1000	N
MW02S	4	6	TEQ	71	ng/kg	J	nc	NA	nc	NA	1000	N
MW03S	4	6	TEQ	190	ng/kg	J	nc	NA	nc	NA	1000	N
MW04D	4	6	TEQ	0.0039	ng/Kg	J	nc	NA	nc	NA	1000	N
MW05S	4	6	TEQ	20500	ng/Kg	J	nc	NA	nc	NA	1000	Y
MW06S	4	6	TEQ	27.5	NG/KG	J	nc	NA	nc	NA	1000	N
MW07S	4	6	TEQ	41.36566	NG/KG		nc	NA	nc	NA	1000	N
MW08S	4	6	TEQ	1.96651	NG/KG		nc	NA	nc	NA	1000	N
MW09S	4	6	TEQ	7160	NG/KG	J	nc	NA	nc	NA	1000	Y
MW15D	4	6	TEQ	1500	ng/Kg	J	nc	NA	nc	NA	1000	Y
MW15D	4	6	TEQ	2600	ng/Kg	J	nc	NA	nc	NA	1000	Y
SB02	4	6	TEQ	985.62	ng/kg	J	nc	NA	nc	NA	1000	N
SB03	4	6	TEQ	0.24	ng/kg	J	nc	NA	nc	NA	1000	N
SB03	4	6	TEQ	0.517	ng/kg	J	nc	NA	nc	NA	1000	N
SB-14-271	4	6	TEQ	12	ng/Kg	J	nc	NA	nc	NA	1000	N
01-DEL-100	0	2	TEQ	40130	pg/g		nc	NA	nc	NA	1000	Y
01-DEL-201	0	2	TEQ	9612	pg/g		nc	NA	nc	NA	1000	Y
01-DEL-202	0	2	TEQ	944	pg/g		nc	NA	nc	NA	1000	N

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
01-DEL-203	0	2	TEQ	9201	pg/g		nc	NA	nc	NA	1000	Y
01-DEL-300	0	2	TEQ	9046	pg/g		nc	NA	nc	NA	1000	Y
02-DEL-100	0	2	TEQ	15	pg/g		nc	NA	nc	NA	1000	N
02-DEL-100	0	2	TEQ	11	pg/g		nc	NA	nc	NA	1000	N
02-DEL-201	0	2	TEQ	54	pg/g		nc	NA	nc	NA	1000	N
02-DEL-202	0	2	TEQ	29	pg/g		nc	NA	nc	NA	1000	N
02-DEL-203	0	2	TEQ	41	pg/g		nc	NA	nc	NA	1000	N
02-DEL-300	0	2	TEQ	14	pg/g		nc	NA	nc	NA	1000	N
03-DEL-101	0	2	TEQ	131	pg/g		nc	NA	nc	NA	1000	N
03-DEL-102	0	2	TEQ	5	pg/g		nc	NA	nc	NA	1000	N
03-DEL-103	0	2	TEQ	645	pg/g		nc	NA	nc	NA	1000	N
03-DEL-201	0	2	TEQ	385	pg/g		nc	NA	nc	NA	1000	N
03-DEL-202	0	2	TEQ	24	pg/g		nc	NA	nc	NA	1000	N
03-DEL-203	0	2	TEQ	5	pg/g		nc	NA	nc	NA	1000	N
CMS-4102	0	0.8	TEQ	76.255807	PG/G_DRYWT		nc	NA	nc	NA	1000	N
CMS-4111	0	0.9	TEQ	311.359956	PG/G_DRYWT		nc	NA	nc	NA	1000	N
CMS-4103	0	1	TEQ	160.517816	PG/G_DRYWT		nc	NA	nc	NA	1000	N
CMS-4104	0	1	TEQ	3071.591177	PG/G_DRYWT		nc	NA	nc	NA	1000	Y
CMS-4104	0	1	TEQ	5780.362246	PG/G_DRYWT		nc	NA	nc	NA	1000	Y
CMS-4106	0	1	TEQ	968.985016	PG/G_DRYWT		nc	NA	nc	NA	1000	N
CMS-4106	0	1	TEQ	542.781843	PG/G_DRYWT		nc	NA	nc	NA	1000	N
CMS-4108	0	1	TEQ	68.450673	PG/G_DRYWT		nc	NA	nc	NA	1000	N
CMS-4109	0	1	TEQ	2296.79956	PG/G_DRYWT		nc	NA	nc	NA	1000	Y
CMS-4110	0	1	TEQ	4159.687423	PG/G_DRYWT		nc	NA	nc	NA	1000	Y
CMS-4109	1	1.4	TEQ	90.424471	PG/G_DRYWT		nc	NA	nc	NA	1000	N
CMS-4105	1	1.5	TEQ	42.949872	PG/G_DRYWT		nc	NA	nc	NA	1000	N
CMS-4110	1	1.5	TEQ	798.135267	PG/G_DRYWT		nc	NA	nc	NA	1000	N
CMS-4106	1	1.6	TEQ	2406.779073	PG/G_DRYWT		nc	NA	nc	NA	1000	Y
CMS-4101	1	1.9	TEQ	10.651983	PG/G_DRYWT		nc	NA	nc	NA	1000	N
CMS-4102	1	1.9	TEQ	61.05292	PG/G_DRYWT		nc	NA	nc	NA	1000	N
CMS-4111	1	2.8	TEQ	3992.057625	PG/G_DRYWT		nc	NA	nc	NA	1000	Y
CMS-4107	1	3	TEQ	76.977172	PG/G_DRYWT		nc	NA	nc	NA	1000	N
CMS-4108	1	3	TEQ	114.117739	PG/G_DRYWT		nc	NA	nc	NA	1000	N
CMS-4106	3	3.6	TEQ	350.720523	PG/G_DRYWT		nc	NA	nc	NA	1000	N
CMS-4102	3	3.8	TEQ	67.425392	PG/G_DRYWT		nc	NA	nc	NA	1000	N
CMS-4109	3	3.8	TEQ	146.3667	PG/G_DRYWT		nc	NA	nc	NA	1000	N
CMS-4105	3	4	TEQ	229.01511	PG/G_DRYWT		nc	NA	nc	NA	1000	N
CMS-4107	3	4	TEQ	19.988046	PG/G_DRYWT		nc	NA	nc	NA	1000	N
CMS-4108	3	4	TEQ	23.55425	PG/G_DRYWT		nc	NA	nc	NA	1000	N
CMS-4101	3	4.2	TEQ	60.26004	PG/G_DRYWT		nc	NA	nc	NA	1000	N
CMS-4111	3	4.5	TEQ	21.748097	PG/G_DRYWT		nc	NA	nc	NA	1000	N
CMS-4110	3.7	3.9	TEQ	16.596716	PG/G_DRYWT		nc	NA	nc	NA	1000	N
SS-01	0	0	1,2,4-trichlorobenzene	0.43	MG/KG	U	96	NA	140	NA	nc	NA
CMW-SD-2016	0	0.5	1,2,4-trichlorobenzene	0.8	MG/KG	U	96	NA	140	NA	nc	NA
CMW-SD-2017	0	0.5	1,2,4-trichlorobenzene	0.87	MG/KG	U	96	NA	140	NA	nc	NA
CMW-SD-2018	0	0.5	1,2,4-trichlorobenzene	2.1	MG/KG	U	96	NA	140	NA	nc	NA
CMW-SD-2019	0	0.5	1,2,4-trichlorobenzene	0.95	MG/KG	U	96	NA	140	NA	nc	NA
CMW-SD-2020	0	0.5	1,2,4-trichlorobenzene	0.46	MG/KG	U	96	NA	140	NA	nc	NA
CMW-SD-2021	0	0.5	1,2,4-trichlorobenzene	2.1	MG/KG	U	96	NA	140	NA	nc	NA
CMS-060	0	1	1,2,4-trichlorobenzene	0.34	MG/KG	UJ	96	NA	140	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-060	0	1	1,2,4-trichlorobenzene	0.35	MG/KG	UJ	96	NA	140	NA	nc	NA
CMS-060	0	1	1,2,4-trichlorobenzene	2.7	MG/KG	U	96	NA	140	NA	nc	NA
CMS-089	0	1	1,2,4-trichlorobenzene	0.67	MG/KG	U	96	NA	140	NA	nc	NA
CMS-089	0	1	1,2,4-trichlorobenzene	0.005	MG/KG	U	96	NA	140	NA	nc	NA
CMS-098	0	1	1,2,4-trichlorobenzene	0.6	MG/KG	U	96	NA	140	NA	nc	NA
CMS-098	0	1	1,2,4-trichlorobenzene	0.0097	MG/KG	UJ	96	NA	140	NA	nc	NA
CMS-118	0	1	1,2,4-trichlorobenzene	0.36	MG/KG	UJ	96	NA	140	NA	nc	NA
CMS-118	0	1	1,2,4-trichlorobenzene	0.0048	MG/KG	U	96	NA	140	NA	nc	NA
CMS-142	0	1	1,2,4-trichlorobenzene	0.58	MG/KG	U	96	NA	140	NA	nc	NA
CMS-142	0	1	1,2,4-trichlorobenzene	0.0095	MG/KG	UJ	96	NA	140	NA	nc	NA
CMS-142	0	1	1,2,4-trichlorobenzene	0.55	MG/KG	U	96	NA	140	NA	nc	NA
CMS-142	0	1	1,2,4-trichlorobenzene	0.011	MG/KG	UJ	96	NA	140	NA	nc	NA
CMS-159	0	1	1,2,4-trichlorobenzene	2.2	MG/KG	UJ	96	NA	140	NA	nc	NA
CMS-159	0	1	1,2,4-trichlorobenzene	0.021	MG/KG	U	96	NA	140	NA	nc	NA
CMS-164	0	1	1,2,4-trichlorobenzene	2	MG/KG	U	96	NA	140	NA	nc	NA
CMS-164	0	1	1,2,4-trichlorobenzene	0.015	MG/KG	UJ	96	NA	140	NA	nc	NA
CMS-173	0	1	1,2,4-trichlorobenzene	1.1	MG/KG	U	96	NA	140	NA	nc	NA
CMS-173	0	1	1,2,4-trichlorobenzene	0.024	MG/KG	UJ	96	NA	140	NA	nc	NA
CMS-237	0	1	1,2,4-trichlorobenzene	0.16	MG/KG	J	96	N	140	N	nc	NA
CMS-237	0	1	1,2,4-trichlorobenzene	0.0059	MG/KG	UJ	96	NA	140	NA	nc	NA
CMS-405	0	1	1,2,4-trichlorobenzene	0.35	MG/KG	U	96	NA	140	NA	nc	NA
CMS-407	0	1	1,2,4-trichlorobenzene	0.35	MG/KG	U	96	NA	140	NA	nc	NA
CMS-407	0	1	1,2,4-trichlorobenzene	0.005	MG/KG	U	96	NA	140	NA	nc	NA
CMS-408	0	1	1,2,4-trichlorobenzene	0.34	MG/KG	U	96	NA	140	NA	nc	NA
CMS-408	0	1	1,2,4-trichlorobenzene	0.0043	MG/KG	U	96	NA	140	NA	nc	NA
CMS-417	0	1	1,2,4-trichlorobenzene	69	MG/KG		96	N	140	N	nc	NA
CMS-417	0	1	1,2,4-trichlorobenzene	340	MG/KG		96	Y	140	Y	nc	NA
CMS-456	0	1	1,2,4-trichlorobenzene	0.49	MG/KG	U	96	NA	140	NA	nc	NA
CMS-456	0	1	1,2,4-trichlorobenzene	0.0018	MG/KG	J	96	N	140	N	nc	NA
CMS-702	0	1	1,2,4-trichlorobenzene	0.0087	MG/KG	U	96	NA	140	NA	nc	NA
CMS-703	0	1	1,2,4-trichlorobenzene	0.0061	MG/KG	UJ	96	NA	140	NA	nc	NA
SS-02	0	1.3	1,2,4-trichlorobenzene	0.52	MG/KG	U	96	NA	140	NA	nc	NA
CMS-703	0	2	1,2,4-trichlorobenzene	6.2	MG/KG	U	96	NA	140	NA	nc	NA
SS-06	0	2	1,2,4-trichlorobenzene	0.84	MG/KG	U	96	NA	140	NA	nc	NA
BV01COMP	0	4	1,2,4-trichlorobenzene	0.38	MG/KG	U	96	NA	140	NA	nc	NA
CMS-065	0	10	1,2,4-trichlorobenzene	24	MG/KG		96	N	140	N	nc	NA
CMW-SD-2022	0.5	2	1,2,4-trichlorobenzene	4.2	MG/KG	U	96	NA	140	NA	nc	NA
CMS-060	1	2	1,2,4-trichlorobenzene	0.34	MG/KG	U	96	NA	140	NA	nc	NA
CMS-060	1	2	1,2,4-trichlorobenzene	5.1	MG/KG	UJ	96	NA	140	NA	nc	NA
CMS-089	1	2	1,2,4-trichlorobenzene	0.35	MG/KG	U	96	NA	140	NA	nc	NA
CMS-089	1	2	1,2,4-trichlorobenzene	0.0048	MG/KG	U	96	NA	140	NA	nc	NA
CMS-118	1	2	1,2,4-trichlorobenzene	0.37	MG/KG	U	96	NA	140	NA	nc	NA
CMS-118	1	2	1,2,4-trichlorobenzene	0.006	MG/KG	UJ	96	NA	140	NA	nc	NA
CMS-173	1	2	1,2,4-trichlorobenzene	0.52	MG/KG	U	96	NA	140	NA	nc	NA
CMS-173	1	2	1,2,4-trichlorobenzene	0.0083	MG/KG	UJ	96	NA	140	NA	nc	NA
CMS-237	1	2	1,2,4-trichlorobenzene	0.21	MG/KG	J	96	N	140	N	nc	NA
CMS-237	1	2	1,2,4-trichlorobenzene	0.019	MG/KG	J	96	N	140	N	nc	NA
CMS-405	1	2	1,2,4-trichlorobenzene	0.63	MG/KG	U	96	NA	140	NA	nc	NA
CMS-405	1	2	1,2,4-trichlorobenzene	4	MG/KG	UJ	96	NA	140	NA	nc	NA
CMS-405	1	2	1,2,4-trichlorobenzene	1.2	MG/KG	U	96	NA	140	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-405	1	2	1,2,4-trichlorobenzene	2.9	MG/KG	UJ	96	NA	140	NA	nc	NA
CMS-407	1	2	1,2,4-trichlorobenzene	0.44	MG/KG	U	96	NA	140	NA	nc	NA
CMS-407	1	2	1,2,4-trichlorobenzene	0.0048	MG/KG	J	96	N	140	N	nc	NA
CMS-408	1	2	1,2,4-trichlorobenzene	8.7	MG/KG	U	96	NA	140	NA	nc	NA
CMS-408	1	2	1,2,4-trichlorobenzene	2.2	MG/KG	U	96	NA	140	NA	nc	NA
CMS-417	1	2	1,2,4-trichlorobenzene	21	MG/KG	J	96	N	140	N	nc	NA
CMS-417	1	2	1,2,4-trichlorobenzene	270	MG/KG		96	Y	140	Y	nc	NA
CMS-419	1	2	1,2,4-trichlorobenzene	74	MG/KG	U	96	NA	140	NA	nc	NA
CMS-419	1	2	1,2,4-trichlorobenzene	62	MG/KG		96	N	140	N	nc	NA
CMS-423	1	2	1,2,4-trichlorobenzene	0.35	MG/KG	U	96	NA	140	NA	nc	NA
CMS-423	1	2	1,2,4-trichlorobenzene	0.0062	MG/KG	U	96	NA	140	NA	nc	NA
CMS-427	1	2	1,2,4-trichlorobenzene	3.6	MG/KG	U	96	NA	140	NA	nc	NA
CMS-427	1	2	1,2,4-trichlorobenzene	0.0045	MG/KG	U	96	NA	140	NA	nc	NA
CMS-428	1	2	1,2,4-trichlorobenzene	0.35	MG/KG	U	96	NA	140	NA	nc	NA
CMS-428	1	2	1,2,4-trichlorobenzene	0.0054	MG/KG	U	96	NA	140	NA	nc	NA
CMS-456	1	2	1,2,4-trichlorobenzene	0.11	MG/KG	J	96	N	140	N	nc	NA
CMS-456	1	2	1,2,4-trichlorobenzene	0.0089	MG/KG	UJ	96	NA	140	NA	nc	NA
MW01S	1	2	1,2,4-trichlorobenzene	0.34	MG/KG	U	96	NA	140	NA	nc	NA
MW05S	1	2	1,2,4-trichlorobenzene	0.095	MG/KG	U	96	NA	140	NA	nc	NA
MW05S	1	2	1,2,4-trichlorobenzene	0.11	MG/KG	U	96	NA	140	NA	nc	NA
MW08S	1	2	1,2,4-trichlorobenzene	0.26	MG/KG	U	96	NA	140	NA	nc	NA
MW14M	1	2	1,2,4-trichlorobenzene	0.15	MG/KG	UJ	96	NA	140	NA	nc	NA
MW14M	1	2	1,2,4-trichlorobenzene	0.11	MG/KG	U	96	NA	140	NA	nc	NA
SB-14-271	1	2	1,2,4-trichlorobenzene	0.12	MG/KG	UJ	96	NA	140	NA	nc	NA
CMW-SD-2022	2	2.5	1,2,4-trichlorobenzene	0.86	MG/KG	U	96	NA	140	NA	nc	NA
CMS-060	2	3	1,2,4-trichlorobenzene	0.36	MG/KG	U	96	NA	140	NA	nc	NA
CMS-060	2	3	1,2,4-trichlorobenzene	0.27	MG/KG	UJ	96	NA	140	NA	nc	NA
CMS-089	2	3	1,2,4-trichlorobenzene	0.7	MG/KG	U	96	NA	140	NA	nc	NA
CMS-089	2	3	1,2,4-trichlorobenzene	0.0047	MG/KG	UJ	96	NA	140	NA	nc	NA
CMS-118	2	3	1,2,4-trichlorobenzene	0.44	MG/KG	U	96	NA	140	NA	nc	NA
CMS-118	2	3	1,2,4-trichlorobenzene	0.0074	MG/KG	UJ	96	NA	140	NA	nc	NA
CMS-237	2	3	1,2,4-trichlorobenzene	0.63	MG/KG	U	96	NA	140	NA	nc	NA
CMS-405	2	3	1,2,4-trichlorobenzene	0.64	MG/KG	U	96	NA	140	NA	nc	NA
CMS-407	2	3	1,2,4-trichlorobenzene	1.1	MG/KG	U	96	NA	140	NA	nc	NA
CMS-407	2	3	1,2,4-trichlorobenzene	0.0089	MG/KG	J	96	N	140	N	nc	NA
CMS-408	2	3	1,2,4-trichlorobenzene	0.43	MG/KG	U	96	NA	140	NA	nc	NA
CMS-408	2	3	1,2,4-trichlorobenzene	6.6	MG/KG	U	96	NA	140	NA	nc	NA
CMS-417	2	3	1,2,4-trichlorobenzene	6.3	MG/KG	J	96	N	140	N	nc	NA
CMS-417	2	3	1,2,4-trichlorobenzene	17	MG/KG	UJ	96	NA	140	NA	nc	NA
CMS-455	2	3	1,2,4-trichlorobenzene	0.4	MG/KG	U	96	NA	140	NA	nc	NA
CMS-455	2	3	1,2,4-trichlorobenzene	0.33	MG/KG	U	96	NA	140	NA	nc	NA
MW01S	2	4	1,2,4-trichlorobenzene	0.22	MG/KG	U	96	NA	140	NA	nc	NA
MW02S	2	4	1,2,4-trichlorobenzene	0.2	MG/KG	U	96	NA	140	NA	nc	NA
MW04D	2	4	1,2,4-trichlorobenzene	0.5	MG/KG	U	96	NA	140	NA	nc	NA
MW05S	2	4	1,2,4-trichlorobenzene	0.1	MG/KG	U	96	NA	140	NA	nc	NA
MW06S	2	4	1,2,4-trichlorobenzene	0.3	MG/KG	U	96	NA	140	NA	nc	NA
MW06S	2	4	1,2,4-trichlorobenzene	0.3	MG/KG	U	96	NA	140	NA	nc	NA
MW08S	2	4	1,2,4-trichlorobenzene	0.21	MG/KG	U	96	NA	140	NA	nc	NA
MW08S	2	4	1,2,4-trichlorobenzene	0.32	MG/KG	U	96	NA	140	NA	nc	NA
MW14M	2	4	1,2,4-trichlorobenzene	0.14	MG/KG	U	96	NA	140	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW15D	2	4	1,2,4-trichlorobenzene	0.14	MG/KG	U	96	NA	140	NA	nc	NA
SB02	2	4	1,2,4-trichlorobenzene	0.38	MG/KG	UJ	96	NA	140	NA	nc	NA
SB03	2	4	1,2,4-trichlorobenzene	0.3	MG/KG	U	96	NA	140	NA	nc	NA
SB-14-271	2	4	1,2,4-trichlorobenzene	0.13	MG/KG	UJ	96	NA	140	NA	nc	NA
SS-03	2.5	3.5	1,2,4-trichlorobenzene	0.4	MG/KG	U	96	NA	140	NA	nc	NA
CMS-060	3	4	1,2,4-trichlorobenzene	0.45	MG/KG	U	96	NA	140	NA	nc	NA
CMS-060	3	4	1,2,4-trichlorobenzene	0.0058	MG/KG	U	96	NA	140	NA	nc	NA
CMS-089	3	4	1,2,4-trichlorobenzene	1.8	MG/KG	U	96	NA	140	NA	nc	NA
CMS-089	3	4	1,2,4-trichlorobenzene	0.0041	MG/KG	U	96	NA	140	NA	nc	NA
CMS-118	3	4	1,2,4-trichlorobenzene	0.5	MG/KG	U	96	NA	140	NA	nc	NA
CMS-118	3	4	1,2,4-trichlorobenzene	0.0084	MG/KG	UJ	96	NA	140	NA	nc	NA
CMS-405	3	4	1,2,4-trichlorobenzene	0.38	MG/KG	U	96	NA	140	NA	nc	NA
CMS-407	3	4	1,2,4-trichlorobenzene	0.42	MG/KG	U	96	NA	140	NA	nc	NA
CMS-407	3	4	1,2,4-trichlorobenzene	0.32	MG/KG	U	96	NA	140	NA	nc	NA
CMS-417	3	4	1,2,4-trichlorobenzene	1.9	MG/KG	U	96	NA	140	NA	nc	NA
CMS-417	3	4	1,2,4-trichlorobenzene	0.28	MG/KG	UJ	96	NA	140	NA	nc	NA
CMS-419	3	4	1,2,4-trichlorobenzene	0.42	MG/KG	U	96	NA	140	NA	nc	NA
CMS-419	3	4	1,2,4-trichlorobenzene	0.16	MG/KG	J	96	N	140	N	nc	NA
CMS-423	3	4	1,2,4-trichlorobenzene	0.15	MG/KG	J	96	N	140	N	nc	NA
CMS-423	3	4	1,2,4-trichlorobenzene	0.0045	MG/KG	U	96	NA	140	NA	nc	NA
CMS-423	3	4	1,2,4-trichlorobenzene	0.081	MG/KG	J	96	N	140	N	nc	NA
CMS-423	3	4	1,2,4-trichlorobenzene	0.0049	MG/KG	U	96	NA	140	NA	nc	NA
CMS-427	3	4	1,2,4-trichlorobenzene	0.41	MG/KG	U	96	NA	140	NA	nc	NA
CMS-427	3	4	1,2,4-trichlorobenzene	0.092	MG/KG		96	N	140	N	nc	NA
CMS-428	3	4	1,2,4-trichlorobenzene	0.37	MG/KG	U	96	NA	140	NA	nc	NA
CMS-428	3	4	1,2,4-trichlorobenzene	0.0057	MG/KG	U	96	NA	140	NA	nc	NA
MW07S	3	4	1,2,4-trichlorobenzene	0.5	MG/KG	U	96	NA	140	NA	nc	NA
CMS-060	4	5	1,2,4-trichlorobenzene	0.38	MG/KG	UJ	96	NA	140	NA	nc	NA
CMS-060	4	5	1,2,4-trichlorobenzene	0.0048	MG/KG	U	96	NA	140	NA	nc	NA
CMS-118	4	5	1,2,4-trichlorobenzene	0.43	MG/KG	U	96	NA	140	NA	nc	NA
CMS-118	4	5	1,2,4-trichlorobenzene	0.0059	MG/KG	U	96	NA	140	NA	nc	NA
CMS-405	4	5	1,2,4-trichlorobenzene	0.46	MG/KG	U	96	NA	140	NA	nc	NA
CMS-405	4	5	1,2,4-trichlorobenzene	1	MG/KG	UJ	96	NA	140	NA	nc	NA
CMS-455	4	5	1,2,4-trichlorobenzene	0.48	MG/KG	U	96	NA	140	NA	nc	NA
CMS-455	4	5	1,2,4-trichlorobenzene	0.0072	MG/KG	U	96	NA	140	NA	nc	NA
MW01S	4	6	1,2,4-trichlorobenzene	0.24	MG/KG	U	96	NA	140	NA	nc	NA
MW02S	4	6	1,2,4-trichlorobenzene	0.55	MG/KG	U	96	NA	140	NA	nc	NA
MW02S	4	6	1,2,4-trichlorobenzene	0.42	MG/KG	U	96	NA	140	NA	nc	NA
MW03S	4	6	1,2,4-trichlorobenzene	0.35	MG/KG	U	96	NA	140	NA	nc	NA
MW04D	4	6	1,2,4-trichlorobenzene	0.18	MG/KG	U	96	NA	140	NA	nc	NA
MW05S	4	6	1,2,4-trichlorobenzene	0.16	MG/KG	UJ	96	NA	140	NA	nc	NA
MW06S	4	6	1,2,4-trichlorobenzene	0.43	MG/KG	U	96	NA	140	NA	nc	NA
MW07S	4	6	1,2,4-trichlorobenzene	0.26	MG/KG	U	96	NA	140	NA	nc	NA
MW08S	4	6	1,2,4-trichlorobenzene	0.3	MG/KG	U	96	NA	140	NA	nc	NA
MW09S	4	6	1,2,4-trichlorobenzene	0.26	MG/KG	U	96	NA	140	NA	nc	NA
MW15D	4	6	1,2,4-trichlorobenzene	0.1	MG/KG	U	96	NA	140	NA	nc	NA
MW15D	4	6	1,2,4-trichlorobenzene	0.12	MG/KG	U	96	NA	140	NA	nc	NA
SB02	4	6	1,2,4-trichlorobenzene	0.26	MG/KG	UJ	96	NA	140	NA	nc	NA
SB03	4	6	1,2,4-trichlorobenzene	0.2	MG/KG	U	96	NA	140	NA	nc	NA
SB03	4	6	1,2,4-trichlorobenzene	0.18	MG/KG	U	96	NA	140	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
SB-14-271	4	6	1,2,4-trichlorobenzene	0.11	MG/KG	UJ	96	NA	140	NA	nc	NA
CMS-060	0	1	1,2-dibromoethane	5.3	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-089	0	1	1,2-dibromoethane	0.005	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-098	0	1	1,2-dibromoethane	0.0097	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-118	0	1	1,2-dibromoethane	0.0097	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-142	0	1	1,2-dibromoethane	0.0095	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-142	0	1	1,2-dibromoethane	0.011	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-159	0	1	1,2-dibromoethane	0.041	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-164	0	1	1,2-dibromoethane	0.015	MG/KG	UJ	0.01	NA	0.0005	NA	nc	NA
CMS-173	0	1	1,2-dibromoethane	0.024	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-237	0	1	1,2-dibromoethane	0.0059	MG/KG	UJ	0.01	NA	0.0005	NA	nc	NA
CMS-407	0	1	1,2-dibromoethane	0.005	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-408	0	1	1,2-dibromoethane	0.0043	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-417	0	1	1,2-dibromoethane	59	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-456	0	1	1,2-dibromoethane	0.015	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-702	0	1	1,2-dibromoethane	0.017	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-703	0	1	1,2-dibromoethane	0.012	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-065	0	10	1,2-dibromoethane	3.9	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-060	1	2	1,2-dibromoethane	10	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-089	1	2	1,2-dibromoethane	0.0048	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-118	1	2	1,2-dibromoethane	0.012	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-173	1	2	1,2-dibromoethane	0.0083	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-237	1	2	1,2-dibromoethane	0.0069	MG/KG	UJ	0.01	NA	0.0005	NA	nc	NA
CMS-405	1	2	1,2-dibromoethane	4	MG/KG	UJ	0.01	NA	0.0005	NA	nc	NA
CMS-405	1	2	1,2-dibromoethane	2.9	MG/KG	UJ	0.01	NA	0.0005	NA	nc	NA
CMS-407	1	2	1,2-dibromoethane	0.0074	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-408	1	2	1,2-dibromoethane	2.2	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-417	1	2	1,2-dibromoethane	130	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-419	1	2	1,2-dibromoethane	56	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-423	1	2	1,2-dibromoethane	0.012	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-427	1	2	1,2-dibromoethane	0.0091	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-428	1	2	1,2-dibromoethane	0.011	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-456	1	2	1,2-dibromoethane	0.018	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
MW01S	1	2	1,2-dibromoethane	0.34	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
MW05S	1	2	1,2-dibromoethane	0.095	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
MW05S	1	2	1,2-dibromoethane	0.11	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
MW08S	1	2	1,2-dibromoethane	0.26	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
MW14M	1	2	1,2-dibromoethane	0.15	MG/KG	UJ	0.01	NA	0.0005	NA	nc	NA
MW14M	1	2	1,2-dibromoethane	0.11	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
SB-14-271	1	2	1,2-dibromoethane	0.12	MG/KG	UJ	0.01	NA	0.0005	NA	nc	NA
CMS-060	2	3	1,2-dibromoethane	0.55	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-089	2	3	1,2-dibromoethane	0.0047	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-118	2	3	1,2-dibromoethane	0.015	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-407	2	3	1,2-dibromoethane	0.0087	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-408	2	3	1,2-dibromoethane	6.6	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-417	2	3	1,2-dibromoethane	17	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-455	2	3	1,2-dibromoethane	0.67	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
MW01S	2	4	1,2-dibromoethane	0.22	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
MW02S	2	4	1,2-dibromoethane	0.2	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
MW04D	2	4	1,2-dibromoethane	0.5	MG/KG	U	0.01	NA	0.0005	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW05S	2	4	1,2-dibromoethane	0.1	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
MW06S	2	4	1,2-dibromoethane	0.3	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
MW06S	2	4	1,2-dibromoethane	0.3	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
MW08S	2	4	1,2-dibromoethane	0.21	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
MW08S	2	4	1,2-dibromoethane	0.32	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
MW14M	2	4	1,2-dibromoethane	0.14	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
MW15D	2	4	1,2-dibromoethane	0.14	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
SB02	2	4	1,2-dibromoethane	0.38	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
SB03	2	4	1,2-dibromoethane	0.3	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
SB-14-271	2	4	1,2-dibromoethane	0.13	MG/KG	UJ	0.01	NA	0.0005	NA	nc	NA
CMS-060	3	4	1,2-dibromoethane	0.012	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-089	3	4	1,2-dibromoethane	0.0041	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-118	3	4	1,2-dibromoethane	0.017	MG/KG	UJ	0.01	NA	0.0005	NA	nc	NA
CMS-407	3	4	1,2-dibromoethane	0.32	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-417	3	4	1,2-dibromoethane	0.28	MG/KG	UJ	0.01	NA	0.0005	NA	nc	NA
CMS-419	3	4	1,2-dibromoethane	0.64	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-423	3	4	1,2-dibromoethane	0.009	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-423	3	4	1,2-dibromoethane	0.0099	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-427	3	4	1,2-dibromoethane	0.011	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-428	3	4	1,2-dibromoethane	0.011	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
MW07S	3	4	1,2-dibromoethane	0.5	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-060	4	5	1,2-dibromoethane	0.0095	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-118	4	5	1,2-dibromoethane	0.012	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-405	4	5	1,2-dibromoethane	1	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
CMS-455	4	5	1,2-dibromoethane	0.014	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
MW01S	4	6	1,2-dibromoethane	0.24	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
MW02S	4	6	1,2-dibromoethane	0.55	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
MW02S	4	6	1,2-dibromoethane	0.42	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
MW03S	4	6	1,2-dibromoethane	0.35	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
MW04D	4	6	1,2-dibromoethane	0.18	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
MW05S	4	6	1,2-dibromoethane	0.11	MG/KG	UJ	0.01	NA	0.0005	NA	nc	NA
MW06S	4	6	1,2-dibromoethane	0.43	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
MW07S	4	6	1,2-dibromoethane	0.26	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
MW08S	4	6	1,2-dibromoethane	0.3	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
MW09S	4	6	1,2-dibromoethane	0.26	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
MW15D	4	6	1,2-dibromoethane	0.1	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
MW15D	4	6	1,2-dibromoethane	0.12	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
SB02	4	6	1,2-dibromoethane	0.26	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
SB03	4	6	1,2-dibromoethane	0.2	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
SB03	4	6	1,2-dibromoethane	0.18	MG/KG	U	0.01	NA	0.0005	NA	nc	NA
SB-14-271	4	6	1,2-dibromoethane	0.11	MG/KG	UJ	0.01	NA	0.0005	NA	nc	NA
SS-01	0	0	1,2-dichlorobenzene	0.43	MG/KG	U	510	NA	41	NA	nc	NA
CMW-SD-2016	0	0.5	1,2-dichlorobenzene	0.8	MG/KG	U	510	NA	41	NA	nc	NA
CMW-SD-2017	0	0.5	1,2-dichlorobenzene	0.87	MG/KG	U	510	NA	41	NA	nc	NA
CMW-SD-2018	0	0.5	1,2-dichlorobenzene	2.1	MG/KG	U	510	NA	41	NA	nc	NA
CMW-SD-2019	0	0.5	1,2-dichlorobenzene	0.95	MG/KG	U	510	NA	41	NA	nc	NA
CMW-SD-2020	0	0.5	1,2-dichlorobenzene	0.46	MG/KG	U	510	NA	41	NA	nc	NA
CMW-SD-2021	0	0.5	1,2-dichlorobenzene	2.1	MG/KG	U	510	NA	41	NA	nc	NA
CMS-060	0	1	1,2-dichlorobenzene	0.34	MG/KG	UJ	510	NA	41	NA	nc	NA
CMS-060	0	1	1,2-dichlorobenzene	0.35	MG/KG	UJ	510	NA	41	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-060	0	1	1,2-dichlorobenzene	2.7	MG/KG	U	510	NA	41	NA	nc	NA
CMS-089	0	1	1,2-dichlorobenzene	0.67	MG/KG	U	510	NA	41	NA	nc	NA
CMS-089	0	1	1,2-dichlorobenzene	0.005	MG/KG	U	510	NA	41	NA	nc	NA
CMS-098	0	1	1,2-dichlorobenzene	0.6	MG/KG	U	510	NA	41	NA	nc	NA
CMS-098	0	1	1,2-dichlorobenzene	0.0097	MG/KG	UJ	510	NA	41	NA	nc	NA
CMS-118	0	1	1,2-dichlorobenzene	0.36	MG/KG	UJ	510	NA	41	NA	nc	NA
CMS-118	0	1	1,2-dichlorobenzene	0.0048	MG/KG	U	510	NA	41	NA	nc	NA
CMS-142	0	1	1,2-dichlorobenzene	0.58	MG/KG	U	510	NA	41	NA	nc	NA
CMS-142	0	1	1,2-dichlorobenzene	0.0095	MG/KG	UJ	510	NA	41	NA	nc	NA
CMS-142	0	1	1,2-dichlorobenzene	0.55	MG/KG	U	510	NA	41	NA	nc	NA
CMS-142	0	1	1,2-dichlorobenzene	0.011	MG/KG	UJ	510	NA	41	NA	nc	NA
CMS-159	0	1	1,2-dichlorobenzene	2.2	MG/KG	UJ	510	NA	41	NA	nc	NA
CMS-159	0	1	1,2-dichlorobenzene	0.021	MG/KG	U	510	NA	41	NA	nc	NA
CMS-164	0	1	1,2-dichlorobenzene	2	MG/KG	U	510	NA	41	NA	nc	NA
CMS-164	0	1	1,2-dichlorobenzene	0.015	MG/KG	UJ	510	NA	41	NA	nc	NA
CMS-173	0	1	1,2-dichlorobenzene	1.1	MG/KG	U	510	NA	41	NA	nc	NA
CMS-173	0	1	1,2-dichlorobenzene	0.024	MG/KG	UJ	510	NA	41	NA	nc	NA
CMS-237	0	1	1,2-dichlorobenzene	1.3	MG/KG	U	510	NA	41	NA	nc	NA
CMS-237	0	1	1,2-dichlorobenzene	0.0059	MG/KG	UJ	510	NA	41	NA	nc	NA
CMS-405	0	1	1,2-dichlorobenzene	0.35	MG/KG	U	510	NA	41	NA	nc	NA
CMS-407	0	1	1,2-dichlorobenzene	0.35	MG/KG	U	510	NA	41	NA	nc	NA
CMS-407	0	1	1,2-dichlorobenzene	0.005	MG/KG	U	510	NA	41	NA	nc	NA
CMS-408	0	1	1,2-dichlorobenzene	0.34	MG/KG	U	510	NA	41	NA	nc	NA
CMS-408	0	1	1,2-dichlorobenzene	0.0043	MG/KG	U	510	NA	41	NA	nc	NA
CMS-417	0	1	1,2-dichlorobenzene	150	MG/KG		510	N	41	Y	nc	NA
CMS-417	0	1	1,2-dichlorobenzene	1500	MG/KG		510	Y	41	Y	nc	NA
CMS-456	0	1	1,2-dichlorobenzene	0.49	MG/KG	U	510	NA	41	NA	nc	NA
CMS-456	0	1	1,2-dichlorobenzene	0.0075	MG/KG	U	510	NA	41	NA	nc	NA
CMS-702	0	1	1,2-dichlorobenzene	0.0087	MG/KG	U	510	NA	41	NA	nc	NA
CMS-703	0	1	1,2-dichlorobenzene	0.0061	MG/KG	UJ	510	NA	41	NA	nc	NA
SS-02	0	1.3	1,2-dichlorobenzene	0.52	MG/KG	U	510	NA	41	NA	nc	NA
CMS-703	0	2	1,2-dichlorobenzene	6.2	MG/KG	U	510	NA	41	NA	nc	NA
SS-06	0	2	1,2-dichlorobenzene	0.84	MG/KG	U	510	NA	41	NA	nc	NA
BV01COMP	0	4	1,2-dichlorobenzene	0.38	MG/KG	U	510	NA	41	NA	nc	NA
CMS-065	0	10	1,2-dichlorobenzene	9.4	MG/KG		510	N	41	N	nc	NA
CMW-SD-2022	0.5	2	1,2-dichlorobenzene	4.2	MG/KG	U	510	NA	41	NA	nc	NA
CMS-060	1	2	1,2-dichlorobenzene	0.34	MG/KG	UJ	510	NA	41	NA	nc	NA
CMS-060	1	2	1,2-dichlorobenzene	5.1	MG/KG	UJ	510	NA	41	NA	nc	NA
CMS-089	1	2	1,2-dichlorobenzene	0.35	MG/KG	U	510	NA	41	NA	nc	NA
CMS-089	1	2	1,2-dichlorobenzene	0.0048	MG/KG	U	510	NA	41	NA	nc	NA
CMS-118	1	2	1,2-dichlorobenzene	0.37	MG/KG	UJ	510	NA	41	NA	nc	NA
CMS-118	1	2	1,2-dichlorobenzene	0.006	MG/KG	UJ	510	NA	41	NA	nc	NA
CMS-173	1	2	1,2-dichlorobenzene	0.52	MG/KG	U	510	NA	41	NA	nc	NA
CMS-173	1	2	1,2-dichlorobenzene	0.0083	MG/KG	UJ	510	NA	41	NA	nc	NA
CMS-237	1	2	1,2-dichlorobenzene	0.83	MG/KG	U	510	NA	41	NA	nc	NA
CMS-237	1	2	1,2-dichlorobenzene	0.0051	MG/KG	J	510	N	41	N	nc	NA
CMS-405	1	2	1,2-dichlorobenzene	0.25	MG/KG	J	510	N	41	N	nc	NA
CMS-405	1	2	1,2-dichlorobenzene	3.5	MG/KG	J	510	N	41	N	nc	NA
CMS-405	1	2	1,2-dichlorobenzene	0.62	MG/KG	J	510	N	41	N	nc	NA
CMS-405	1	2	1,2-dichlorobenzene	2.9	MG/KG	UJ	510	NA	41	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-407	1	2	1,2-dichlorobenzene	0.44	MG/KG	U	510	NA	41	NA	nc	NA
CMS-407	1	2	1,2-dichlorobenzene	0.03	MG/KG	J	510	N	41	N	nc	NA
CMS-408	1	2	1,2-dichlorobenzene	8.7	MG/KG	U	510	NA	41	NA	nc	NA
CMS-408	1	2	1,2-dichlorobenzene	2.2	MG/KG	U	510	NA	41	NA	nc	NA
CMS-417	1	2	1,2-dichlorobenzene	440	MG/KG		510	N	41	Y	nc	NA
CMS-417	1	2	1,2-dichlorobenzene	2800	MG/KG		510	Y	41	Y	nc	NA
CMS-419	1	2	1,2-dichlorobenzene	74	MG/KG	U	510	NA	41	NA	nc	NA
CMS-419	1	2	1,2-dichlorobenzene	84	MG/KG		510	N	41	Y	nc	NA
CMS-423	1	2	1,2-dichlorobenzene	0.35	MG/KG	U	510	NA	41	NA	nc	NA
CMS-423	1	2	1,2-dichlorobenzene	0.0062	MG/KG	U	510	NA	41	NA	nc	NA
CMS-427	1	2	1,2-dichlorobenzene	3.6	MG/KG	U	510	NA	41	NA	nc	NA
CMS-427	1	2	1,2-dichlorobenzene	0.0021	MG/KG	J	510	N	41	N	nc	NA
CMS-428	1	2	1,2-dichlorobenzene	0.35	MG/KG	U	510	NA	41	NA	nc	NA
CMS-428	1	2	1,2-dichlorobenzene	0.0054	MG/KG	U	510	NA	41	NA	nc	NA
CMS-456	1	2	1,2-dichlorobenzene	0.16	MG/KG	J	510	N	41	N	nc	NA
CMS-456	1	2	1,2-dichlorobenzene	0.0089	MG/KG	UJ	510	NA	41	NA	nc	NA
MW01S	1	2	1,2-dichlorobenzene	0.34	MG/KG	U	510	NA	41	NA	nc	NA
MW05S	1	2	1,2-dichlorobenzene	0.095	MG/KG	U	510	NA	41	NA	nc	NA
MW05S	1	2	1,2-dichlorobenzene	0.11	MG/KG	U	510	NA	41	NA	nc	NA
MW08S	1	2	1,2-dichlorobenzene	1	MG/KG		510	N	41	N	nc	NA
MW14M	1	2	1,2-dichlorobenzene	4.2	MG/KG	J	510	N	41	N	nc	NA
MW14M	1	2	1,2-dichlorobenzene	1.4	MG/KG	J	510	N	41	N	nc	NA
SB-14-271	1	2	1,2-dichlorobenzene	0.12	MG/KG	UJ	510	NA	41	NA	nc	NA
CMW-SD-2022	2	2.5	1,2-dichlorobenzene	0.86	MG/KG	U	510	NA	41	NA	nc	NA
CMS-060	2	3	1,2-dichlorobenzene	0.36	MG/KG	UJ	510	NA	41	NA	nc	NA
CMS-060	2	3	1,2-dichlorobenzene	0.27	MG/KG	UJ	510	NA	41	NA	nc	NA
CMS-089	2	3	1,2-dichlorobenzene	0.7	MG/KG	U	510	NA	41	NA	nc	NA
CMS-089	2	3	1,2-dichlorobenzene	0.0047	MG/KG	UJ	510	NA	41	NA	nc	NA
CMS-118	2	3	1,2-dichlorobenzene	0.44	MG/KG	UJ	510	NA	41	NA	nc	NA
CMS-118	2	3	1,2-dichlorobenzene	0.0074	MG/KG	UJ	510	NA	41	NA	nc	NA
CMS-237	2	3	1,2-dichlorobenzene	0.63	MG/KG	U	510	NA	41	NA	nc	NA
CMS-237	2	3	1,2-dichlorobenzene	0.015	MG/KG	J	510	N	41	N	nc	NA
CMS-405	2	3	1,2-dichlorobenzene	0.64	MG/KG	U	510	NA	41	NA	nc	NA
CMS-407	2	3	1,2-dichlorobenzene	1.1	MG/KG	U	510	NA	41	NA	nc	NA
CMS-407	2	3	1,2-dichlorobenzene	0.0041	MG/KG	J	510	N	41	N	nc	NA
CMS-408	2	3	1,2-dichlorobenzene	0.43	MG/KG	U	510	NA	41	NA	nc	NA
CMS-408	2	3	1,2-dichlorobenzene	6.6	MG/KG	U	510	NA	41	NA	nc	NA
CMS-417	2	3	1,2-dichlorobenzene	150	MG/KG		510	N	41	Y	nc	NA
CMS-417	2	3	1,2-dichlorobenzene	59	MG/KG		510	N	41	Y	nc	NA
CMS-455	2	3	1,2-dichlorobenzene	0.4	MG/KG	U	510	NA	41	NA	nc	NA
CMS-455	2	3	1,2-dichlorobenzene	0.33	MG/KG	U	510	NA	41	NA	nc	NA
MW01S	2	4	1,2-dichlorobenzene	0.22	MG/KG	U	510	NA	41	NA	nc	NA
MW02S	2	4	1,2-dichlorobenzene	0.2	MG/KG	U	510	NA	41	NA	nc	NA
MW04D	2	4	1,2-dichlorobenzene	0.5	MG/KG	U	510	NA	41	NA	nc	NA
MW05S	2	4	1,2-dichlorobenzene	0.1	MG/KG	U	510	NA	41	NA	nc	NA
MW06S	2	4	1,2-dichlorobenzene	0.3	MG/KG	U	510	NA	41	NA	nc	NA
MW06S	2	4	1,2-dichlorobenzene	0.3	MG/KG	U	510	NA	41	NA	nc	NA
MW08S	2	4	1,2-dichlorobenzene	0.065	MG/KG	J	510	N	41	N	nc	NA
MW08S	2	4	1,2-dichlorobenzene	0.098	MG/KG	J	510	N	41	N	nc	NA
MW14M	2	4	1,2-dichlorobenzene	0.069	MG/KG	J	510	N	41	N	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW15D	2	4	1,2-dichlorobenzene	0.14	MG/KG	U	510	NA	41	NA	nc	NA
SB02	2	4	1,2-dichlorobenzene	0.38	MG/KG	U	510	NA	41	NA	nc	NA
SB03	2	4	1,2-dichlorobenzene	0.3	MG/KG	U	510	NA	41	NA	nc	NA
SB-14-271	2	4	1,2-dichlorobenzene	0.13	MG/KG	UJ	510	NA	41	NA	nc	NA
SS-03	2.5	3.5	1,2-dichlorobenzene	0.4	MG/KG	U	510	NA	41	NA	nc	NA
CMS-060	3	4	1,2-dichlorobenzene	0.45	MG/KG	UJ	510	NA	41	NA	nc	NA
CMS-060	3	4	1,2-dichlorobenzene	0.0058	MG/KG	U	510	NA	41	NA	nc	NA
CMS-089	3	4	1,2-dichlorobenzene	1.8	MG/KG	U	510	NA	41	NA	nc	NA
CMS-089	3	4	1,2-dichlorobenzene	0.0041	MG/KG	U	510	NA	41	NA	nc	NA
CMS-118	3	4	1,2-dichlorobenzene	0.5	MG/KG	UJ	510	NA	41	NA	nc	NA
CMS-118	3	4	1,2-dichlorobenzene	0.0084	MG/KG	UJ	510	NA	41	NA	nc	NA
CMS-405	3	4	1,2-dichlorobenzene	0.38	MG/KG	U	510	NA	41	NA	nc	NA
CMS-407	3	4	1,2-dichlorobenzene	0.42	MG/KG	U	510	NA	41	NA	nc	NA
CMS-407	3	4	1,2-dichlorobenzene	0.32	MG/KG	U	510	NA	41	NA	nc	NA
CMS-417	3	4	1,2-dichlorobenzene	18	MG/KG		510	N	41	N	nc	NA
CMS-417	3	4	1,2-dichlorobenzene	4	MG/KG		510	N	41	N	nc	NA
CMS-419	3	4	1,2-dichlorobenzene	0.42	MG/KG	U	510	NA	41	NA	nc	NA
CMS-419	3	4	1,2-dichlorobenzene	0.16	MG/KG	J	510	N	41	N	nc	NA
CMS-423	3	4	1,2-dichlorobenzene	0.057	MG/KG	J	510	N	41	N	nc	NA
CMS-423	3	4	1,2-dichlorobenzene	0.0045	MG/KG	U	510	NA	41	NA	nc	NA
CMS-423	3	4	1,2-dichlorobenzene	0.39	MG/KG	U	510	NA	41	NA	nc	NA
CMS-423	3	4	1,2-dichlorobenzene	0.0049	MG/KG	U	510	NA	41	NA	nc	NA
CMS-427	3	4	1,2-dichlorobenzene	0.41	MG/KG	U	510	NA	41	NA	nc	NA
CMS-427	3	4	1,2-dichlorobenzene	0.062	MG/KG		510	N	41	N	nc	NA
CMS-428	3	4	1,2-dichlorobenzene	0.37	MG/KG	U	510	NA	41	NA	nc	NA
CMS-428	3	4	1,2-dichlorobenzene	0.0057	MG/KG	U	510	NA	41	NA	nc	NA
MW07S	3	4	1,2-dichlorobenzene	0.5	MG/KG	U	510	NA	41	NA	nc	NA
CMS-060	4	5	1,2-dichlorobenzene	0.38	MG/KG	UJ	510	NA	41	NA	nc	NA
CMS-060	4	5	1,2-dichlorobenzene	0.0071	MG/KG		510	N	41	N	nc	NA
CMS-118	4	5	1,2-dichlorobenzene	0.43	MG/KG	UJ	510	NA	41	NA	nc	NA
CMS-118	4	5	1,2-dichlorobenzene	0.0059	MG/KG	U	510	NA	41	NA	nc	NA
CMS-405	4	5	1,2-dichlorobenzene	0.46	MG/KG	U	510	NA	41	NA	nc	NA
CMS-405	4	5	1,2-dichlorobenzene	0.74	MG/KG	J	510	N	41	N	nc	NA
CMS-455	4	5	1,2-dichlorobenzene	0.48	MG/KG	U	510	NA	41	NA	nc	NA
CMS-455	4	5	1,2-dichlorobenzene	0.0072	MG/KG	U	510	NA	41	NA	nc	NA
MW01S	4	6	1,2-dichlorobenzene	0.24	MG/KG	U	510	NA	41	NA	nc	NA
MW02S	4	6	1,2-dichlorobenzene	0.55	MG/KG	U	510	NA	41	NA	nc	NA
MW02S	4	6	1,2-dichlorobenzene	0.42	MG/KG	U	510	NA	41	NA	nc	NA
MW03S	4	6	1,2-dichlorobenzene	0.35	MG/KG	U	510	NA	41	NA	nc	NA
MW04D	4	6	1,2-dichlorobenzene	0.18	MG/KG	U	510	NA	41	NA	nc	NA
MW05S	4	6	1,2-dichlorobenzene	3.4	MG/KG	J	510	N	41	N	nc	NA
MW06S	4	6	1,2-dichlorobenzene	6.5	MG/KG		510	N	41	N	nc	NA
MW07S	4	6	1,2-dichlorobenzene	0.26	MG/KG	U	510	NA	41	NA	nc	NA
MW08S	4	6	1,2-dichlorobenzene	0.3	MG/KG	U	510	NA	41	NA	nc	NA
MW09S	4	6	1,2-dichlorobenzene	0.26	MG/KG	U	510	NA	41	NA	nc	NA
MW15D	4	6	1,2-dichlorobenzene	0.1	MG/KG	U	510	NA	41	NA	nc	NA
MW15D	4	6	1,2-dichlorobenzene	0.12	MG/KG	U	510	NA	41	NA	nc	NA
SB02	4	6	1,2-dichlorobenzene	0.26	MG/KG	U	510	NA	41	NA	nc	NA
SB03	4	6	1,2-dichlorobenzene	0.2	MG/KG	U	510	NA	41	NA	nc	NA
SB03	4	6	1,2-dichlorobenzene	0.18	MG/KG	U	510	NA	41	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
SB-14-271	4	6	1,2-dichlorobenzene	0.11	MG/KG	UJ	510	NA	41	NA	nc	NA
SS-01	0	0	1,3-dichlorobenzene	0.43	MG/KG	U	430	NA	41	NA	nc	NA
CMW-SD-2016	0	0.5	1,3-dichlorobenzene	0.8	MG/KG	U	430	NA	41	NA	nc	NA
CMW-SD-2017	0	0.5	1,3-dichlorobenzene	0.87	MG/KG	U	430	NA	41	NA	nc	NA
CMW-SD-2018	0	0.5	1,3-dichlorobenzene	2.1	MG/KG	U	430	NA	41	NA	nc	NA
CMW-SD-2019	0	0.5	1,3-dichlorobenzene	0.95	MG/KG	U	430	NA	41	NA	nc	NA
CMW-SD-2020	0	0.5	1,3-dichlorobenzene	0.46	MG/KG	U	430	NA	41	NA	nc	NA
CMW-SD-2021	0	0.5	1,3-dichlorobenzene	2.1	MG/KG	U	430	NA	41	NA	nc	NA
CMS-060	0	1	1,3-dichlorobenzene	0.34	MG/KG	UJ	430	NA	41	NA	nc	NA
CMS-060	0	1	1,3-dichlorobenzene	0.35	MG/KG	UJ	430	NA	41	NA	nc	NA
CMS-060	0	1	1,3-dichlorobenzene	2.7	MG/KG	U	430	NA	41	NA	nc	NA
CMS-089	0	1	1,3-dichlorobenzene	0.67	MG/KG	U	430	NA	41	NA	nc	NA
CMS-089	0	1	1,3-dichlorobenzene	0.005	MG/KG	U	430	NA	41	NA	nc	NA
CMS-098	0	1	1,3-dichlorobenzene	0.6	MG/KG	U	430	NA	41	NA	nc	NA
CMS-098	0	1	1,3-dichlorobenzene	0.0097	MG/KG	UJ	430	NA	41	NA	nc	NA
CMS-118	0	1	1,3-dichlorobenzene	0.36	MG/KG	UJ	430	NA	41	NA	nc	NA
CMS-118	0	1	1,3-dichlorobenzene	0.0048	MG/KG	U	430	NA	41	NA	nc	NA
CMS-142	0	1	1,3-dichlorobenzene	0.58	MG/KG	U	430	NA	41	NA	nc	NA
CMS-142	0	1	1,3-dichlorobenzene	0.0095	MG/KG	UJ	430	NA	41	NA	nc	NA
CMS-142	0	1	1,3-dichlorobenzene	0.55	MG/KG	U	430	NA	41	NA	nc	NA
CMS-142	0	1	1,3-dichlorobenzene	0.011	MG/KG	UJ	430	NA	41	NA	nc	NA
CMS-159	0	1	1,3-dichlorobenzene	2.2	MG/KG	UJ	430	NA	41	NA	nc	NA
CMS-159	0	1	1,3-dichlorobenzene	0.021	MG/KG	U	430	NA	41	NA	nc	NA
CMS-164	0	1	1,3-dichlorobenzene	2	MG/KG	U	430	NA	41	NA	nc	NA
CMS-164	0	1	1,3-dichlorobenzene	0.015	MG/KG	UJ	430	NA	41	NA	nc	NA
CMS-173	0	1	1,3-dichlorobenzene	1.1	MG/KG	U	430	NA	41	NA	nc	NA
CMS-173	0	1	1,3-dichlorobenzene	0.024	MG/KG	UJ	430	NA	41	NA	nc	NA
CMS-237	0	1	1,3-dichlorobenzene	1.3	MG/KG	U	430	NA	41	NA	nc	NA
CMS-237	0	1	1,3-dichlorobenzene	0.0059	MG/KG	UJ	430	NA	41	NA	nc	NA
CMS-405	0	1	1,3-dichlorobenzene	0.35	MG/KG	U	430	NA	41	NA	nc	NA
CMS-407	0	1	1,3-dichlorobenzene	0.35	MG/KG	U	430	NA	41	NA	nc	NA
CMS-407	0	1	1,3-dichlorobenzene	0.005	MG/KG	U	430	NA	41	NA	nc	NA
CMS-408	0	1	1,3-dichlorobenzene	0.34	MG/KG	U	430	NA	41	NA	nc	NA
CMS-408	0	1	1,3-dichlorobenzene	0.0043	MG/KG	U	430	NA	41	NA	nc	NA
CMS-417	0	1	1,3-dichlorobenzene	35	MG/KG	U	430	NA	41	NA	nc	NA
CMS-417	0	1	1,3-dichlorobenzene	59	MG/KG	U	430	NA	41	NA	nc	NA
CMS-456	0	1	1,3-dichlorobenzene	0.49	MG/KG	U	430	NA	41	NA	nc	NA
CMS-456	0	1	1,3-dichlorobenzene	0.0075	MG/KG	U	430	NA	41	NA	nc	NA
CMS-702	0	1	1,3-dichlorobenzene	0.0087	MG/KG	U	430	NA	41	NA	nc	NA
CMS-703	0	1	1,3-dichlorobenzene	0.0061	MG/KG	UJ	430	NA	41	NA	nc	NA
SS-02	0	1.3	1,3-dichlorobenzene	0.52	MG/KG	U	430	NA	41	NA	nc	NA
CMS-703	0	2	1,3-dichlorobenzene	6.2	MG/KG	U	430	NA	41	NA	nc	NA
SS-06	0	2	1,3-dichlorobenzene	0.84	MG/KG	U	430	NA	41	NA	nc	NA
BV01COMP	0	4	1,3-dichlorobenzene	0.38	MG/KG	U	430	NA	41	NA	nc	NA
CMS-065	0	10	1,3-dichlorobenzene	7.9	MG/KG	U	430	NA	41	NA	nc	NA
CMW-SD-2022	0.5	2	1,3-dichlorobenzene	4.2	MG/KG	U	430	NA	41	NA	nc	NA
CMS-060	1	2	1,3-dichlorobenzene	0.34	MG/KG	U	430	NA	41	NA	nc	NA
CMS-060	1	2	1,3-dichlorobenzene	5.1	MG/KG	U	430	NA	41	NA	nc	NA
CMS-089	1	2	1,3-dichlorobenzene	0.35	MG/KG	U	430	NA	41	NA	nc	NA
CMS-089	1	2	1,3-dichlorobenzene	0.0048	MG/KG	U	430	NA	41	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-118	1	2	1,3-dichlorobenzene	0.37	MG/KG	U	430	NA	41	NA	nc	NA
CMS-118	1	2	1,3-dichlorobenzene	0.006	MG/KG	UJ	430	NA	41	NA	nc	NA
CMS-173	1	2	1,3-dichlorobenzene	0.52	MG/KG	U	430	NA	41	NA	nc	NA
CMS-173	1	2	1,3-dichlorobenzene	0.0083	MG/KG	UJ	430	NA	41	NA	nc	NA
CMS-237	1	2	1,3-dichlorobenzene	0.83	MG/KG	U	430	NA	41	NA	nc	NA
CMS-237	1	2	1,3-dichlorobenzene	0.0034	MG/KG	J	430	N	41	N	nc	NA
CMS-405	1	2	1,3-dichlorobenzene	0.63	MG/KG	U	430	NA	41	NA	nc	NA
CMS-405	1	2	1,3-dichlorobenzene	4	MG/KG	U	430	NA	41	NA	nc	NA
CMS-405	1	2	1,3-dichlorobenzene	1.2	MG/KG	U	430	NA	41	NA	nc	NA
CMS-405	1	2	1,3-dichlorobenzene	2.9	MG/KG	UJ	430	NA	41	NA	nc	NA
CMS-407	1	2	1,3-dichlorobenzene	0.44	MG/KG	U	430	NA	41	NA	nc	NA
CMS-407	1	2	1,3-dichlorobenzene	0.0074	MG/KG	UJ	430	NA	41	NA	nc	NA
CMS-408	1	2	1,3-dichlorobenzene	8.7	MG/KG	U	430	NA	41	NA	nc	NA
CMS-408	1	2	1,3-dichlorobenzene	2.2	MG/KG	U	430	NA	41	NA	nc	NA
CMS-417	1	2	1,3-dichlorobenzene	35	MG/KG	U	430	NA	41	NA	nc	NA
CMS-417	1	2	1,3-dichlorobenzene	130	MG/KG	U	430	NA	41	NA	nc	NA
CMS-419	1	2	1,3-dichlorobenzene	74	MG/KG	U	430	NA	41	NA	nc	NA
CMS-419	1	2	1,3-dichlorobenzene	13	MG/KG	J	430	N	41	N	nc	NA
CMS-423	1	2	1,3-dichlorobenzene	0.35	MG/KG	U	430	NA	41	NA	nc	NA
CMS-423	1	2	1,3-dichlorobenzene	0.0062	MG/KG	U	430	NA	41	NA	nc	NA
CMS-427	1	2	1,3-dichlorobenzene	3.6	MG/KG	U	430	NA	41	NA	nc	NA
CMS-427	1	2	1,3-dichlorobenzene	0.0013	MG/KG	J	430	N	41	N	nc	NA
CMS-428	1	2	1,3-dichlorobenzene	0.35	MG/KG	U	430	NA	41	NA	nc	NA
CMS-428	1	2	1,3-dichlorobenzene	0.0054	MG/KG	U	430	NA	41	NA	nc	NA
CMS-456	1	2	1,3-dichlorobenzene	1.2	MG/KG	U	430	NA	41	NA	nc	NA
CMS-456	1	2	1,3-dichlorobenzene	0.0089	MG/KG	UJ	430	NA	41	NA	nc	NA
MW01S	1	2	1,3-dichlorobenzene	0.34	MG/KG	U	430	NA	41	NA	nc	NA
MW05S	1	2	1,3-dichlorobenzene	0.095	MG/KG	U	430	NA	41	NA	nc	NA
MW05S	1	2	1,3-dichlorobenzene	0.11	MG/KG	U	430	NA	41	NA	nc	NA
MW08S	1	2	1,3-dichlorobenzene	0.26	MG/KG	U	430	NA	41	NA	nc	NA
MW14M	1	2	1,3-dichlorobenzene	0.15	MG/KG	UJ	430	NA	41	NA	nc	NA
MW14M	1	2	1,3-dichlorobenzene	0.39	MG/KG	J	430	N	41	N	nc	NA
SB-14-271	1	2	1,3-dichlorobenzene	0.12	MG/KG	UJ	430	NA	41	NA	nc	NA
CMW-SD-2022	2	2.5	1,3-dichlorobenzene	0.86	MG/KG	U	430	NA	41	NA	nc	NA
CMS-060	2	3	1,3-dichlorobenzene	0.36	MG/KG	U	430	NA	41	NA	nc	NA
CMS-060	2	3	1,3-dichlorobenzene	0.27	MG/KG	UJ	430	NA	41	NA	nc	NA
CMS-089	2	3	1,3-dichlorobenzene	0.7	MG/KG	U	430	NA	41	NA	nc	NA
CMS-089	2	3	1,3-dichlorobenzene	0.0047	MG/KG	UJ	430	NA	41	NA	nc	NA
CMS-118	2	3	1,3-dichlorobenzene	0.44	MG/KG	U	430	NA	41	NA	nc	NA
CMS-118	2	3	1,3-dichlorobenzene	0.0074	MG/KG	UJ	430	NA	41	NA	nc	NA
CMS-237	2	3	1,3-dichlorobenzene	0.63	MG/KG	U	430	NA	41	NA	nc	NA
CMS-405	2	3	1,3-dichlorobenzene	0.64	MG/KG	U	430	NA	41	NA	nc	NA
CMS-407	2	3	1,3-dichlorobenzene	1.1	MG/KG	U	430	NA	41	NA	nc	NA
CMS-407	2	3	1,3-dichlorobenzene	0.0087	MG/KG	U	430	NA	41	NA	nc	NA
CMS-408	2	3	1,3-dichlorobenzene	0.43	MG/KG	U	430	NA	41	NA	nc	NA
CMS-408	2	3	1,3-dichlorobenzene	6.6	MG/KG	U	430	NA	41	NA	nc	NA
CMS-417	2	3	1,3-dichlorobenzene	9.8	MG/KG	U	430	NA	41	NA	nc	NA
CMS-417	2	3	1,3-dichlorobenzene	17	MG/KG	U	430	NA	41	NA	nc	NA
CMS-455	2	3	1,3-dichlorobenzene	0.4	MG/KG	U	430	NA	41	NA	nc	NA
CMS-455	2	3	1,3-dichlorobenzene	0.33	MG/KG	U	430	NA	41	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW01S	2	4	1,3-dichlorobenzene	0.22	MG/KG	U	430	NA	41	NA	nc	NA
MW02S	2	4	1,3-dichlorobenzene	0.2	MG/KG	U	430	NA	41	NA	nc	NA
MW04D	2	4	1,3-dichlorobenzene	0.5	MG/KG	U	430	NA	41	NA	nc	NA
MW05S	2	4	1,3-dichlorobenzene	0.1	MG/KG	U	430	NA	41	NA	nc	NA
MW06S	2	4	1,3-dichlorobenzene	0.3	MG/KG	U	430	NA	41	NA	nc	NA
MW06S	2	4	1,3-dichlorobenzene	0.3	MG/KG	U	430	NA	41	NA	nc	NA
MW08S	2	4	1,3-dichlorobenzene	0.21	MG/KG	U	430	NA	41	NA	nc	NA
MW08S	2	4	1,3-dichlorobenzene	0.32	MG/KG	U	430	NA	41	NA	nc	NA
MW14M	2	4	1,3-dichlorobenzene	0.14	MG/KG	U	430	NA	41	NA	nc	NA
MW15D	2	4	1,3-dichlorobenzene	0.14	MG/KG	U	430	NA	41	NA	nc	NA
SB02	2	4	1,3-dichlorobenzene	0.38	MG/KG	U	430	NA	41	NA	nc	NA
SB03	2	4	1,3-dichlorobenzene	0.3	MG/KG	U	430	NA	41	NA	nc	NA
SB-14-271	2	4	1,3-dichlorobenzene	0.13	MG/KG	UJ	430	NA	41	NA	nc	NA
SS-03	2.5	3.5	1,3-dichlorobenzene	0.4	MG/KG	U	430	NA	41	NA	nc	NA
CMS-060	3	4	1,3-dichlorobenzene	0.45	MG/KG	U	430	NA	41	NA	nc	NA
CMS-060	3	4	1,3-dichlorobenzene	0.0058	MG/KG	U	430	NA	41	NA	nc	NA
CMS-089	3	4	1,3-dichlorobenzene	1.8	MG/KG	U	430	NA	41	NA	nc	NA
CMS-089	3	4	1,3-dichlorobenzene	0.0041	MG/KG	U	430	NA	41	NA	nc	NA
CMS-118	3	4	1,3-dichlorobenzene	0.5	MG/KG	U	430	NA	41	NA	nc	NA
CMS-118	3	4	1,3-dichlorobenzene	0.0084	MG/KG	UJ	430	NA	41	NA	nc	NA
CMS-405	3	4	1,3-dichlorobenzene	0.38	MG/KG	U	430	NA	41	NA	nc	NA
CMS-407	3	4	1,3-dichlorobenzene	0.42	MG/KG	U	430	NA	41	NA	nc	NA
CMS-407	3	4	1,3-dichlorobenzene	0.32	MG/KG	U	430	NA	41	NA	nc	NA
CMS-417	3	4	1,3-dichlorobenzene	1.9	MG/KG	U	430	NA	41	NA	nc	NA
CMS-417	3	4	1,3-dichlorobenzene	0.28	MG/KG	U	430	NA	41	NA	nc	NA
CMS-419	3	4	1,3-dichlorobenzene	0.42	MG/KG	U	430	NA	41	NA	nc	NA
CMS-419	3	4	1,3-dichlorobenzene	0.32	MG/KG	U	430	NA	41	NA	nc	NA
CMS-423	3	4	1,3-dichlorobenzene	0.37	MG/KG	U	430	NA	41	NA	nc	NA
CMS-423	3	4	1,3-dichlorobenzene	0.0045	MG/KG	U	430	NA	41	NA	nc	NA
CMS-423	3	4	1,3-dichlorobenzene	0.39	MG/KG	U	430	NA	41	NA	nc	NA
CMS-423	3	4	1,3-dichlorobenzene	0.0049	MG/KG	U	430	NA	41	NA	nc	NA
CMS-427	3	4	1,3-dichlorobenzene	0.41	MG/KG	U	430	NA	41	NA	nc	NA
CMS-427	3	4	1,3-dichlorobenzene	0.0036	MG/KG	J	430	N	41	N	nc	NA
CMS-428	3	4	1,3-dichlorobenzene	0.37	MG/KG	U	430	NA	41	NA	nc	NA
CMS-428	3	4	1,3-dichlorobenzene	0.0057	MG/KG	U	430	NA	41	NA	nc	NA
MW07S	3	4	1,3-dichlorobenzene	0.5	MG/KG	U	430	NA	41	NA	nc	NA
CMS-060	4	5	1,3-dichlorobenzene	0.38	MG/KG	UJ	430	NA	41	NA	nc	NA
CMS-060	4	5	1,3-dichlorobenzene	0.0048	MG/KG	U	430	NA	41	NA	nc	NA
CMS-118	4	5	1,3-dichlorobenzene	0.43	MG/KG	U	430	NA	41	NA	nc	NA
CMS-118	4	5	1,3-dichlorobenzene	0.0059	MG/KG	U	430	NA	41	NA	nc	NA
CMS-405	4	5	1,3-dichlorobenzene	0.46	MG/KG	U	430	NA	41	NA	nc	NA
CMS-405	4	5	1,3-dichlorobenzene	1	MG/KG	U	430	NA	41	NA	nc	NA
CMS-455	4	5	1,3-dichlorobenzene	0.48	MG/KG	U	430	NA	41	NA	nc	NA
CMS-455	4	5	1,3-dichlorobenzene	0.0072	MG/KG	U	430	NA	41	NA	nc	NA
MW01S	4	6	1,3-dichlorobenzene	0.24	MG/KG	U	430	NA	41	NA	nc	NA
MW02S	4	6	1,3-dichlorobenzene	0.55	MG/KG	U	430	NA	41	NA	nc	NA
MW02S	4	6	1,3-dichlorobenzene	0.42	MG/KG	U	430	NA	41	NA	nc	NA
MW03S	4	6	1,3-dichlorobenzene	0.35	MG/KG	U	430	NA	41	NA	nc	NA
MW04D	4	6	1,3-dichlorobenzene	0.18	MG/KG	U	430	NA	41	NA	nc	NA
MW05S	4	6	1,3-dichlorobenzene	1	MG/KG	J	430	N	41	N	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
MW06S	4	6	1,3-dichlorobenzene	0.43	MG/KG	U	430	NA	41	NA	nc	NA
MW07S	4	6	1,3-dichlorobenzene	0.26	MG/KG	U	430	NA	41	NA	nc	NA
MW08S	4	6	1,3-dichlorobenzene	0.3	MG/KG	U	430	NA	41	NA	nc	NA
MW09S	4	6	1,3-dichlorobenzene	0.26	MG/KG	U	430	NA	41	NA	nc	NA
MW15D	4	6	1,3-dichlorobenzene	0.1	MG/KG	U	430	NA	41	NA	nc	NA
MW15D	4	6	1,3-dichlorobenzene	0.12	MG/KG	U	430	NA	41	NA	nc	NA
SB02	4	6	1,3-dichlorobenzene	0.26	MG/KG	U	430	NA	41	NA	nc	NA
SB03	4	6	1,3-dichlorobenzene	0.2	MG/KG	U	430	NA	41	NA	nc	NA
SB03	4	6	1,3-dichlorobenzene	0.18	MG/KG	U	430	NA	41	NA	nc	NA
SB-14-271	4	6	1,3-dichlorobenzene	0.11	MG/KG	UJ	430	NA	41	NA	nc	NA
SS-01	0	0	1,4-dichlorobenzene	0.43	MG/KG	U	27	NA	41	NA	nc	NA
CMW-SD-2016	0	0.5	1,4-dichlorobenzene	0.8	MG/KG	U	27	NA	41	NA	nc	NA
CMW-SD-2017	0	0.5	1,4-dichlorobenzene	0.87	MG/KG	U	27	NA	41	NA	nc	NA
CMW-SD-2018	0	0.5	1,4-dichlorobenzene	2.1	MG/KG	U	27	NA	41	NA	nc	NA
CMW-SD-2019	0	0.5	1,4-dichlorobenzene	0.95	MG/KG	U	27	NA	41	NA	nc	NA
CMW-SD-2020	0	0.5	1,4-dichlorobenzene	0.46	MG/KG	U	27	NA	41	NA	nc	NA
CMW-SD-2021	0	0.5	1,4-dichlorobenzene	2.1	MG/KG	U	27	NA	41	NA	nc	NA
CMS-060	0	1	1,4-dichlorobenzene	0.34	MG/KG	UJ	27	NA	41	NA	nc	NA
CMS-060	0	1	1,4-dichlorobenzene	0.35	MG/KG	UJ	27	NA	41	NA	nc	NA
CMS-060	0	1	1,4-dichlorobenzene	2.7	MG/KG	U	27	NA	41	NA	nc	NA
CMS-089	0	1	1,4-dichlorobenzene	0.67	MG/KG	U	27	NA	41	NA	nc	NA
CMS-089	0	1	1,4-dichlorobenzene	0.005	MG/KG	U	27	NA	41	NA	nc	NA
CMS-098	0	1	1,4-dichlorobenzene	0.6	MG/KG	U	27	NA	41	NA	nc	NA
CMS-098	0	1	1,4-dichlorobenzene	0.0041	MG/KG	J	27	N	41	N	nc	NA
CMS-118	0	1	1,4-dichlorobenzene	0.36	MG/KG	UJ	27	NA	41	NA	nc	NA
CMS-118	0	1	1,4-dichlorobenzene	0.0048	MG/KG	U	27	NA	41	NA	nc	NA
CMS-142	0	1	1,4-dichlorobenzene	0.58	MG/KG	UJ	27	NA	41	NA	nc	NA
CMS-142	0	1	1,4-dichlorobenzene	0.0095	MG/KG	UJ	27	NA	41	NA	nc	NA
CMS-142	0	1	1,4-dichlorobenzene	0.55	MG/KG	U	27	NA	41	NA	nc	NA
CMS-142	0	1	1,4-dichlorobenzene	0.011	MG/KG	UJ	27	NA	41	NA	nc	NA
CMS-159	0	1	1,4-dichlorobenzene	2.2	MG/KG	UJ	27	NA	41	NA	nc	NA
CMS-159	0	1	1,4-dichlorobenzene	0.021	MG/KG	U	27	NA	41	NA	nc	NA
CMS-164	0	1	1,4-dichlorobenzene	2	MG/KG	U	27	NA	41	NA	nc	NA
CMS-164	0	1	1,4-dichlorobenzene	0.015	MG/KG	UJ	27	NA	41	NA	nc	NA
CMS-173	0	1	1,4-dichlorobenzene	1.1	MG/KG	U	27	NA	41	NA	nc	NA
CMS-173	0	1	1,4-dichlorobenzene	0.024	MG/KG	UJ	27	NA	41	NA	nc	NA
CMS-237	0	1	1,4-dichlorobenzene	1.3	MG/KG	U	27	NA	41	NA	nc	NA
CMS-237	0	1	1,4-dichlorobenzene	0.0059	MG/KG	UJ	27	NA	41	NA	nc	NA
CMS-405	0	1	1,4-dichlorobenzene	0.35	MG/KG	U	27	NA	41	NA	nc	NA
CMS-407	0	1	1,4-dichlorobenzene	0.35	MG/KG	U	27	NA	41	NA	nc	NA
CMS-407	0	1	1,4-dichlorobenzene	0.005	MG/KG	U	27	NA	41	NA	nc	NA
CMS-408	0	1	1,4-dichlorobenzene	0.34	MG/KG	U	27	NA	41	NA	nc	NA
CMS-408	0	1	1,4-dichlorobenzene	0.0043	MG/KG	U	27	NA	41	NA	nc	NA
CMS-417	0	1	1,4-dichlorobenzene	2.9	MG/KG	J	27	N	41	N	nc	NA
CMS-417	0	1	1,4-dichlorobenzene	31	MG/KG	J	27	Y	41	N	nc	NA
CMS-456	0	1	1,4-dichlorobenzene	0.49	MG/KG	U	27	NA	41	NA	nc	NA
CMS-456	0	1	1,4-dichlorobenzene	0.0075	MG/KG	U	27	NA	41	NA	nc	NA
CMS-702	0	1	1,4-dichlorobenzene	0.0087	MG/KG	U	27	NA	41	NA	nc	NA
CMS-703	0	1	1,4-dichlorobenzene	0.0061	MG/KG	UJ	27	NA	41	NA	nc	NA
SS-02	0	1.3	1,4-dichlorobenzene	0.52	MG/KG	U	27	NA	41	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-703	0	2	1,4-dichlorobenzene	6.2	MG/KG	U	27	NA	41	NA	nc	NA
SS-06	0	2	1,4-dichlorobenzene	0.84	MG/KG	U	27	NA	41	NA	nc	NA
BV01COMP	0	4	1,4-dichlorobenzene	0.38	MG/KG	U	27	NA	41	NA	nc	NA
CMS-065	0	10	1,4-dichlorobenzene	7.9	MG/KG	U	27	NA	41	NA	nc	NA
CMW-SD-2022	0.5	2	1,4-dichlorobenzene	4.2	MG/KG	U	27	NA	41	NA	nc	NA
CMS-060	1	2	1,4-dichlorobenzene	0.34	MG/KG	UJ	27	NA	41	NA	nc	NA
CMS-060	1	2	1,4-dichlorobenzene	5.1	MG/KG	U	27	NA	41	NA	nc	NA
CMS-089	1	2	1,4-dichlorobenzene	0.35	MG/KG	U	27	NA	41	NA	nc	NA
CMS-089	1	2	1,4-dichlorobenzene	0.0048	MG/KG	U	27	NA	41	NA	nc	NA
CMS-118	1	2	1,4-dichlorobenzene	0.37	MG/KG	UJ	27	NA	41	NA	nc	NA
CMS-118	1	2	1,4-dichlorobenzene	0.006	MG/KG	UJ	27	NA	41	NA	nc	NA
CMS-173	1	2	1,4-dichlorobenzene	0.52	MG/KG	U	27	NA	41	NA	nc	NA
CMS-173	1	2	1,4-dichlorobenzene	0.0083	MG/KG	UJ	27	NA	41	NA	nc	NA
CMS-237	1	2	1,4-dichlorobenzene	0.83	MG/KG	U	27	NA	41	NA	nc	NA
CMS-237	1	2	1,4-dichlorobenzene	0.0074	MG/KG	J	27	N	41	N	nc	NA
CMS-405	1	2	1,4-dichlorobenzene	0.63	MG/KG	U	27	NA	41	NA	nc	NA
CMS-405	1	2	1,4-dichlorobenzene	4	MG/KG	U	27	NA	41	NA	nc	NA
CMS-405	1	2	1,4-dichlorobenzene	0.19	MG/KG	J	27	N	41	N	nc	NA
CMS-405	1	2	1,4-dichlorobenzene	2.9	MG/KG	UJ	27	NA	41	NA	nc	NA
CMS-407	1	2	1,4-dichlorobenzene	0.44	MG/KG	U	27	NA	41	NA	nc	NA
CMS-407	1	2	1,4-dichlorobenzene	0.0074	MG/KG	UJ	27	NA	41	NA	nc	NA
CMS-408	1	2	1,4-dichlorobenzene	8.7	MG/KG	U	27	NA	41	NA	nc	NA
CMS-408	1	2	1,4-dichlorobenzene	2.2	MG/KG	U	27	NA	41	NA	nc	NA
CMS-417	1	2	1,4-dichlorobenzene	6.6	MG/KG	J	27	N	41	N	nc	NA
CMS-417	1	2	1,4-dichlorobenzene	40	MG/KG	J	27	Y	41	N	nc	NA
CMS-419	1	2	1,4-dichlorobenzene	74	MG/KG	U	27	NA	41	NA	nc	NA
CMS-419	1	2	1,4-dichlorobenzene	32	MG/KG		27	Y	41	N	nc	NA
CMS-423	1	2	1,4-dichlorobenzene	0.35	MG/KG	U	27	NA	41	NA	nc	NA
CMS-423	1	2	1,4-dichlorobenzene	0.0062	MG/KG	U	27	NA	41	NA	nc	NA
CMS-427	1	2	1,4-dichlorobenzene	3.6	MG/KG	UJ	27	NA	41	NA	nc	NA
CMS-427	1	2	1,4-dichlorobenzene	0.0077	MG/KG		27	N	41	N	nc	NA
CMS-428	1	2	1,4-dichlorobenzene	0.35	MG/KG	U	27	NA	41	NA	nc	NA
CMS-428	1	2	1,4-dichlorobenzene	0.0054	MG/KG	U	27	NA	41	NA	nc	NA
CMS-456	1	2	1,4-dichlorobenzene	1.2	MG/KG	U	27	NA	41	NA	nc	NA
CMS-456	1	2	1,4-dichlorobenzene	0.0089	MG/KG	UJ	27	NA	41	NA	nc	NA
MW01S	1	2	1,4-dichlorobenzene	0.34	MG/KG	U	27	NA	41	NA	nc	NA
MW05S	1	2	1,4-dichlorobenzene	0.095	MG/KG	U	27	NA	41	NA	nc	NA
MW05S	1	2	1,4-dichlorobenzene	0.11	MG/KG	U	27	NA	41	NA	nc	NA
MW08S	1	2	1,4-dichlorobenzene	0.1	MG/KG	J	27	N	41	N	nc	NA
MW14M	1	2	1,4-dichlorobenzene	1.1	MG/KG	J	27	N	41	N	nc	NA
MW14M	1	2	1,4-dichlorobenzene	0.39	MG/KG	J	27	N	41	N	nc	NA
SB-14-271	1	2	1,4-dichlorobenzene	0.12	MG/KG	UJ	27	NA	41	NA	nc	NA
CMW-SD-2022	2	2.5	1,4-dichlorobenzene	0.86	MG/KG	U	27	NA	41	NA	nc	NA
CMS-060	2	3	1,4-dichlorobenzene	0.36	MG/KG	UJ	27	NA	41	NA	nc	NA
CMS-060	2	3	1,4-dichlorobenzene	0.27	MG/KG	UJ	27	NA	41	NA	nc	NA
CMS-089	2	3	1,4-dichlorobenzene	0.7	MG/KG	U	27	NA	41	NA	nc	NA
CMS-089	2	3	1,4-dichlorobenzene	0.0047	MG/KG	UJ	27	NA	41	NA	nc	NA
CMS-118	2	3	1,4-dichlorobenzene	0.44	MG/KG	UJ	27	NA	41	NA	nc	NA
CMS-118	2	3	1,4-dichlorobenzene	0.0074	MG/KG	UJ	27	NA	41	NA	nc	NA
CMS-237	2	3	1,4-dichlorobenzene	0.63	MG/KG	U	27	NA	41	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-237	2	3	1,4-dichlorobenzene	0.013	MG/KG	J	27	N	41	N	nc	NA
CMS-405	2	3	1,4-dichlorobenzene	0.64	MG/KG	U	27	NA	41	NA	nc	NA
CMS-407	2	3	1,4-dichlorobenzene	1.1	MG/KG	U	27	NA	41	NA	nc	NA
CMS-407	2	3	1,4-dichlorobenzene	0.0087	MG/KG	U	27	NA	41	NA	nc	NA
CMS-408	2	3	1,4-dichlorobenzene	0.43	MG/KG	U	27	NA	41	NA	nc	NA
CMS-408	2	3	1,4-dichlorobenzene	6.6	MG/KG	U	27	NA	41	NA	nc	NA
CMS-417	2	3	1,4-dichlorobenzene	3	MG/KG	J	27	N	41	N	nc	NA
CMS-417	2	3	1,4-dichlorobenzene	17	MG/KG	U	27	NA	41	NA	nc	NA
CMS-455	2	3	1,4-dichlorobenzene	0.4	MG/KG	U	27	NA	41	NA	nc	NA
CMS-455	2	3	1,4-dichlorobenzene	0.33	MG/KG	U	27	NA	41	NA	nc	NA
MW01S	2	4	1,4-dichlorobenzene	0.22	MG/KG	U	27	NA	41	NA	nc	NA
MW02S	2	4	1,4-dichlorobenzene	0.2	MG/KG	U	27	NA	41	NA	nc	NA
MW04D	2	4	1,4-dichlorobenzene	0.5	MG/KG	U	27	NA	41	NA	nc	NA
MW05S	2	4	1,4-dichlorobenzene	0.1	MG/KG	U	27	NA	41	NA	nc	NA
MW06S	2	4	1,4-dichlorobenzene	0.3	MG/KG	U	27	NA	41	NA	nc	NA
MW06S	2	4	1,4-dichlorobenzene	0.3	MG/KG	U	27	NA	41	NA	nc	NA
MW08S	2	4	1,4-dichlorobenzene	0.21	MG/KG	U	27	NA	41	NA	nc	NA
MW08S	2	4	1,4-dichlorobenzene	0.32	MG/KG	U	27	NA	41	NA	nc	NA
MW14M	2	4	1,4-dichlorobenzene	0.14	MG/KG	U	27	NA	41	NA	nc	NA
MW15D	2	4	1,4-dichlorobenzene	0.14	MG/KG	U	27	NA	41	NA	nc	NA
SB02	2	4	1,4-dichlorobenzene	0.38	MG/KG	U	27	NA	41	NA	nc	NA
SB03	2	4	1,4-dichlorobenzene	0.3	MG/KG	U	27	NA	41	NA	nc	NA
SB-14-271	2	4	1,4-dichlorobenzene	0.13	MG/KG	UJ	27	NA	41	NA	nc	NA
SS-03	2.5	3.5	1,4-dichlorobenzene	0.4	MG/KG	U	27	NA	41	NA	nc	NA
CMS-060	3	4	1,4-dichlorobenzene	0.45	MG/KG	UJ	27	NA	41	NA	nc	NA
CMS-060	3	4	1,4-dichlorobenzene	0.0058	MG/KG	U	27	NA	41	NA	nc	NA
CMS-089	3	4	1,4-dichlorobenzene	1.8	MG/KG	U	27	NA	41	NA	nc	NA
CMS-089	3	4	1,4-dichlorobenzene	0.0041	MG/KG	U	27	NA	41	NA	nc	NA
CMS-118	3	4	1,4-dichlorobenzene	0.5	MG/KG	UJ	27	NA	41	NA	nc	NA
CMS-118	3	4	1,4-dichlorobenzene	0.0084	MG/KG	UJ	27	NA	41	NA	nc	NA
CMS-405	3	4	1,4-dichlorobenzene	0.38	MG/KG	U	27	NA	41	NA	nc	NA
CMS-407	3	4	1,4-dichlorobenzene	0.42	MG/KG	U	27	NA	41	NA	nc	NA
CMS-407	3	4	1,4-dichlorobenzene	0.32	MG/KG	U	27	NA	41	NA	nc	NA
CMS-417	3	4	1,4-dichlorobenzene	0.14	MG/KG	J	27	N	41	N	nc	NA
CMS-417	3	4	1,4-dichlorobenzene	0.28	MG/KG	U	27	NA	41	NA	nc	NA
CMS-419	3	4	1,4-dichlorobenzene	0.42	MG/KG	U	27	NA	41	NA	nc	NA
CMS-419	3	4	1,4-dichlorobenzene	0.1	MG/KG	J	27	N	41	N	nc	NA
CMS-423	3	4	1,4-dichlorobenzene	0.37	MG/KG	U	27	NA	41	NA	nc	NA
CMS-423	3	4	1,4-dichlorobenzene	0.0045	MG/KG	U	27	NA	41	NA	nc	NA
CMS-423	3	4	1,4-dichlorobenzene	0.39	MG/KG	U	27	NA	41	NA	nc	NA
CMS-423	3	4	1,4-dichlorobenzene	0.0049	MG/KG	U	27	NA	41	NA	nc	NA
CMS-427	3	4	1,4-dichlorobenzene	0.41	MG/KG	U	27	NA	41	NA	nc	NA
CMS-427	3	4	1,4-dichlorobenzene	0.011	MG/KG		27	N	41	N	nc	NA
CMS-428	3	4	1,4-dichlorobenzene	0.37	MG/KG	U	27	NA	41	NA	nc	NA
CMS-428	3	4	1,4-dichlorobenzene	0.0057	MG/KG	U	27	NA	41	NA	nc	NA
MW07S	3	4	1,4-dichlorobenzene	0.5	MG/KG	U	27	NA	41	NA	nc	NA
CMS-060	4	5	1,4-dichlorobenzene	0.38	MG/KG	UJ	27	NA	41	NA	nc	NA
CMS-060	4	5	1,4-dichlorobenzene	0.0065	MG/KG		27	N	41	N	nc	NA
CMS-118	4	5	1,4-dichlorobenzene	0.43	MG/KG	UJ	27	NA	41	NA	nc	NA
CMS-118	4	5	1,4-dichlorobenzene	0.0059	MG/KG	U	27	NA	41	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-405	4	5	1,4-dichlorobenzene	0.46	MG/KG	U	27	NA	41	NA	nc	NA
CMS-405	4	5	1,4-dichlorobenzene	1	MG/KG	U	27	NA	41	NA	nc	NA
CMS-455	4	5	1,4-dichlorobenzene	0.48	MG/KG	U	27	NA	41	NA	nc	NA
CMS-455	4	5	1,4-dichlorobenzene	0.0072	MG/KG	U	27	NA	41	NA	nc	NA
MW01S	4	6	1,4-dichlorobenzene	0.24	MG/KG	U	27	NA	41	NA	nc	NA
MW02S	4	6	1,4-dichlorobenzene	0.55	MG/KG	U	27	NA	41	NA	nc	NA
MW02S	4	6	1,4-dichlorobenzene	0.42	MG/KG	U	27	NA	41	NA	nc	NA
MW03S	4	6	1,4-dichlorobenzene	0.35	MG/KG	U	27	NA	41	NA	nc	NA
MW04D	4	6	1,4-dichlorobenzene	0.18	MG/KG	U	27	NA	41	NA	nc	NA
MW05S	4	6	1,4-dichlorobenzene	0.8	MG/KG	J	27	N	41	N	nc	NA
MW06S	4	6	1,4-dichlorobenzene	0.58	MG/KG		27	N	41	N	nc	NA
MW07S	4	6	1,4-dichlorobenzene	0.26	MG/KG	U	27	NA	41	NA	nc	NA
MW08S	4	6	1,4-dichlorobenzene	0.3	MG/KG	U	27	NA	41	NA	nc	NA
MW09S	4	6	1,4-dichlorobenzene	0.26	MG/KG	U	27	NA	41	NA	nc	NA
MW15D	4	6	1,4-dichlorobenzene	0.1	MG/KG	U	27	NA	41	NA	nc	NA
MW15D	4	6	1,4-dichlorobenzene	0.12	MG/KG	U	27	NA	41	NA	nc	NA
SB02	4	6	1,4-dichlorobenzene	0.26	MG/KG	U	27	NA	41	NA	nc	NA
SB03	4	6	1,4-dichlorobenzene	0.2	MG/KG	U	27	NA	41	NA	nc	NA
SB03	4	6	1,4-dichlorobenzene	0.18	MG/KG	U	27	NA	41	NA	nc	NA
SB-14-271	4	6	1,4-dichlorobenzene	0.11	MG/KG	UJ	27	NA	41	NA	nc	NA
SS-01	0	0	Hexachlorobutadiene	0.43	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMW-SD-2016	0	0.5	Hexachlorobutadiene	0.8	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
CMW-SD-2017	0	0.5	Hexachlorobutadiene	0.87	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
CMW-SD-2018	0	0.5	Hexachlorobutadiene	2.1	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
CMW-SD-2019	0	0.5	Hexachlorobutadiene	0.95	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
CMW-SD-2020	0	0.5	Hexachlorobutadiene	0.46	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
CMW-SD-2021	0	0.5	Hexachlorobutadiene	2.1	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
CMS-060	0	1	Hexachlorobutadiene	0.34	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
CMS-060	0	1	Hexachlorobutadiene	0.35	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
CMS-060	0	1	Hexachlorobutadiene	2.7	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-089	0	1	Hexachlorobutadiene	0.67	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-089	0	1	Hexachlorobutadiene	0.005	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-098	0	1	Hexachlorobutadiene	0.6	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-098	0	1	Hexachlorobutadiene	0.0097	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
CMS-118	0	1	Hexachlorobutadiene	0.36	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
CMS-118	0	1	Hexachlorobutadiene	0.0048	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-142	0	1	Hexachlorobutadiene	0.58	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-142	0	1	Hexachlorobutadiene	0.0095	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
CMS-142	0	1	Hexachlorobutadiene	0.55	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-142	0	1	Hexachlorobutadiene	0.011	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
CMS-159	0	1	Hexachlorobutadiene	2.2	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
CMS-159	0	1	Hexachlorobutadiene	0.021	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-164	0	1	Hexachlorobutadiene	2	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-164	0	1	Hexachlorobutadiene	0.015	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
CMS-173	0	1	Hexachlorobutadiene	1.1	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-173	0	1	Hexachlorobutadiene	0.024	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
CMS-237	0	1	Hexachlorobutadiene	1.3	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-237	0	1	Hexachlorobutadiene	0.0059	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
CMS-405	0	1	Hexachlorobutadiene	0.35	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-407	0	1	Hexachlorobutadiene	0.35	MG/KG	U	8.2	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-407	0	1	Hexachlorobutadiene	0.005	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-408	0	1	Hexachlorobutadiene	0.34	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-408	0	1	Hexachlorobutadiene	0.0043	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
CMS-417	0	1	Hexachlorobutadiene	35	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-417	0	1	Hexachlorobutadiene	59	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-456	0	1	Hexachlorobutadiene	0.49	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-456	0	1	Hexachlorobutadiene	0.0075	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-702	0	1	Hexachlorobutadiene	0.0087	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-703	0	1	Hexachlorobutadiene	0.0061	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Hexachlorobutadiene	0.51	MG/KG	U	8.2	NA	nc	NA	nc	NA
RES-14-271-01	0	1	Hexachlorobutadiene	2.5	MG/KG	U	8.2	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Hexachlorobutadiene	0.62	MG/KG	U	8.2	NA	nc	NA	nc	NA
RES-14-272-01	0	1	Hexachlorobutadiene	3.1	MG/KG	U	8.2	NA	nc	NA	nc	NA
RES-14-302-01	0	1	Hexachlorobutadiene	5	MG/KG	U	8.2	NA	nc	NA	nc	NA
RES-14-303-01	0	1	Hexachlorobutadiene	4.8	MG/KG	U	8.2	NA	nc	NA	nc	NA
SS-02	0	1.3	Hexachlorobutadiene	0.52	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-703	0	2	Hexachlorobutadiene	6.2	MG/KG	U	8.2	NA	nc	NA	nc	NA
SS-06	0	2	Hexachlorobutadiene	0.84	MG/KG	U	8.2	NA	nc	NA	nc	NA
BV01COMP	0	4	Hexachlorobutadiene	0.38	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-065	0	10	Hexachlorobutadiene	3.9	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMW-SD-2022	0.5	2	Hexachlorobutadiene	4.2	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-060	1	2	Hexachlorobutadiene	0.34	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-060	1	2	Hexachlorobutadiene	5.1	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
CMS-089	1	2	Hexachlorobutadiene	0.35	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-089	1	2	Hexachlorobutadiene	0.0048	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-118	1	2	Hexachlorobutadiene	0.37	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-118	1	2	Hexachlorobutadiene	0.006	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
CMS-173	1	2	Hexachlorobutadiene	0.52	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-173	1	2	Hexachlorobutadiene	0.0083	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
CMS-237	1	2	Hexachlorobutadiene	0.83	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-237	1	2	Hexachlorobutadiene	0.0069	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
CMS-405	1	2	Hexachlorobutadiene	0.63	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-405	1	2	Hexachlorobutadiene	4	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
CMS-405	1	2	Hexachlorobutadiene	1.2	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-405	1	2	Hexachlorobutadiene	2.9	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
CMS-407	1	2	Hexachlorobutadiene	0.44	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-407	1	2	Hexachlorobutadiene	0.0074	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
CMS-408	1	2	Hexachlorobutadiene	8.7	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-408	1	2	Hexachlorobutadiene	1	MG/KG	J	8.2	N	nc	NA	nc	NA
CMS-417	1	2	Hexachlorobutadiene	35	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-417	1	2	Hexachlorobutadiene	130	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-419	1	2	Hexachlorobutadiene	74	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-419	1	2	Hexachlorobutadiene	28	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-423	1	2	Hexachlorobutadiene	0.35	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-423	1	2	Hexachlorobutadiene	0.0062	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-427	1	2	Hexachlorobutadiene	3.6	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-427	1	2	Hexachlorobutadiene	0.0045	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
CMS-428	1	2	Hexachlorobutadiene	0.35	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-428	1	2	Hexachlorobutadiene	0.0054	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-456	1	2	Hexachlorobutadiene	1.2	MG/KG	U	8.2	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-456	1	2	Hexachlorobutadiene	0.0089	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
MW01S	1	2	Hexachlorobutadiene	0.38	MG/KG	U	8.2	NA	nc	NA	nc	NA
MW05S	1	2	Hexachlorobutadiene	0.36	MG/KG	U	8.2	NA	nc	NA	nc	NA
MW05S	1	2	Hexachlorobutadiene	0.36	MG/KG	U	8.2	NA	nc	NA	nc	NA
MW08S	1	2	Hexachlorobutadiene	0.42	MG/KG	U	8.2	NA	nc	NA	nc	NA
MW14M	1	2	Hexachlorobutadiene	0.34	MG/KG	U	8.2	NA	nc	NA	nc	NA
MW14M	1	2	Hexachlorobutadiene	0.34	MG/KG	U	8.2	NA	nc	NA	nc	NA
MW14M	1	2	Hexachlorobutadiene	0.33	MG/KG	U	8.2	NA	nc	NA	nc	NA
MW14M	1	2	Hexachlorobutadiene	0.33	MG/KG	U	8.2	NA	nc	NA	nc	NA
SB-14-271	1	2	Hexachlorobutadiene	0.4	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMW-SD-2022	2	2.5	Hexachlorobutadiene	0.86	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-060	2	3	Hexachlorobutadiene	0.36	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-060	2	3	Hexachlorobutadiene	0.27	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
CMS-089	2	3	Hexachlorobutadiene	0.7	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-089	2	3	Hexachlorobutadiene	0.0047	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
CMS-118	2	3	Hexachlorobutadiene	0.44	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-118	2	3	Hexachlorobutadiene	0.0074	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
CMS-237	2	3	Hexachlorobutadiene	0.63	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-405	2	3	Hexachlorobutadiene	0.64	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-407	2	3	Hexachlorobutadiene	1.1	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-407	2	3	Hexachlorobutadiene	0.0087	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
CMS-408	2	3	Hexachlorobutadiene	0.43	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-408	2	3	Hexachlorobutadiene	6.6	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-417	2	3	Hexachlorobutadiene	9.8	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-417	2	3	Hexachlorobutadiene	17	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
CMS-455	2	3	Hexachlorobutadiene	0.4	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-455	2	3	Hexachlorobutadiene	0.33	MG/KG	U	8.2	NA	nc	NA	nc	NA
MW01S	2	4	Hexachlorobutadiene	1.6	MG/KG	U	8.2	NA	nc	NA	nc	NA
MW02S	2	4	Hexachlorobutadiene	0.38	MG/KG	U	8.2	NA	nc	NA	nc	NA
MW05S	2	4	Hexachlorobutadiene	0.37	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
MW06S	2	4	Hexachlorobutadiene	0.36	MG/KG	U	8.2	NA	nc	NA	nc	NA
MW06S	2	4	Hexachlorobutadiene	0.37	MG/KG	U	8.2	NA	nc	NA	nc	NA
MW08S	2	4	Hexachlorobutadiene	0.45	MG/KG	U	8.2	NA	nc	NA	nc	NA
MW08S	2	4	Hexachlorobutadiene	0.41	MG/KG	U	8.2	NA	nc	NA	nc	NA
MW14M	2	4	Hexachlorobutadiene	0.38	MG/KG	U	8.2	NA	nc	NA	nc	NA
MW15D	2	4	Hexachlorobutadiene	0.37	MG/KG	U	8.2	NA	nc	NA	nc	NA
SB02	2	4	Hexachlorobutadiene	2.3	MG/KG	U	8.2	NA	nc	NA	nc	NA
SB02	2	4	Hexachlorobutadiene	2.2	MG/KG	U	8.2	NA	nc	NA	nc	NA
SB03	2	4	Hexachlorobutadiene	0.99	MG/KG	U	8.2	NA	nc	NA	nc	NA
SB-14-271	2	4	Hexachlorobutadiene	0.45	MG/KG	U	8.2	NA	nc	NA	nc	NA
SS-03	2.5	3.5	Hexachlorobutadiene	0.4	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-060	3	4	Hexachlorobutadiene	0.45	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-060	3	4	Hexachlorobutadiene	0.0058	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-089	3	4	Hexachlorobutadiene	1.8	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-089	3	4	Hexachlorobutadiene	0.0041	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-118	3	4	Hexachlorobutadiene	0.5	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-118	3	4	Hexachlorobutadiene	0.0084	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-405	3	4	Hexachlorobutadiene	0.38	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-407	3	4	Hexachlorobutadiene	0.42	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-407	3	4	Hexachlorobutadiene	0.32	MG/KG	U	8.2	NA	nc	NA	nc	NA

Table F-4b. Comparison of Source Area Soil Data to Potential ARARs and TBCs

							Potential ARARs and TBCs[1]					
BORING	TOP_OF_SAMPLE (ft)	BOTTOM_OF_SAMPLE (ft)	PARAMETER	LAB_RESULT	UNITS	QUAL	RIDEM Residential Direct Exposure Criteria (MG/KG)	Exceed Criteria (Y/N)	RIDEM GA Leachability Criteria (MG/KG)	Exceed Criteria (Y/N)	EPA's Recommended Residential Level for Dioxin (NG/KG) and PCB (MG/KG)	Exceed Criteria (Y/N)
CMS-417	3	4	Hexachlorobutadiene	1.9	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-417	3	4	Hexachlorobutadiene	0.28	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
CMS-419	3	4	Hexachlorobutadiene	0.42	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-419	3	4	Hexachlorobutadiene	0.32	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-423	3	4	Hexachlorobutadiene	0.37	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-423	3	4	Hexachlorobutadiene	0.0045	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-423	3	4	Hexachlorobutadiene	0.39	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-423	3	4	Hexachlorobutadiene	0.0049	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-427	3	4	Hexachlorobutadiene	0.41	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-427	3	4	Hexachlorobutadiene	0.0054	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-428	3	4	Hexachlorobutadiene	0.37	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-428	3	4	Hexachlorobutadiene	0.0057	MG/KG	U	8.2	NA	nc	NA	nc	NA
MW07S	3	4	Hexachlorobutadiene	0.38	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-060	4	5	Hexachlorobutadiene	0.38	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
CMS-060	4	5	Hexachlorobutadiene	0.0048	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-118	4	5	Hexachlorobutadiene	0.43	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-118	4	5	Hexachlorobutadiene	0.0059	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-405	4	5	Hexachlorobutadiene	0.46	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-405	4	5	Hexachlorobutadiene	1	MG/KG	UJ	8.2	NA	nc	NA	nc	NA
CMS-455	4	5	Hexachlorobutadiene	0.48	MG/KG	U	8.2	NA	nc	NA	nc	NA
CMS-455	4	5	Hexachlorobutadiene	0.0072	MG/KG	U	8.2	NA	nc	NA	nc	NA
MW01S	4	6	Hexachlorobutadiene	0.4	MG/KG	U	8.2	NA	nc	NA	nc	NA
MW03S	4	6	Hexachlorobutadiene	0.4	MG/KG	U	8.2	NA	nc	NA	nc	NA
MW04D	4	6	Hexachlorobutadiene	0.42	MG/KG	U	8.2	NA	nc	NA	nc	NA
MW05S	4	6	Hexachlorobutadiene	0.82	MG/KG	U	8.2	NA	nc	NA	nc	NA
MW06S	4	6	Hexachlorobutadiene	0.46	MG/KG	U	8.2	NA	nc	NA	nc	NA
MW07S	4	6	Hexachlorobutadiene	0.4	MG/KG	U	8.2	NA	nc	NA	nc	NA
MW08S	4	6	Hexachlorobutadiene	0.45	MG/KG	U	8.2	NA	nc	NA	nc	NA
MW09S	4	6	Hexachlorobutadiene	0.85	MG/KG	U	8.2	NA	nc	NA	nc	NA
MW15D	4	6	Hexachlorobutadiene	0.4	MG/KG	U	8.2	NA	nc	NA	nc	NA
MW15D	4	6	Hexachlorobutadiene	0.35	MG/KG	U	8.2	NA	nc	NA	nc	NA
SB02	4	6	Hexachlorobutadiene	0.83	MG/KG	U	8.2	NA	nc	NA	nc	NA
SB03	4	6	Hexachlorobutadiene	0.37	MG/KG	U	8.2	NA	nc	NA	nc	NA
SB03	4	6	Hexachlorobutadiene	0.38	MG/KG	U	8.2	NA	nc	NA	nc	NA
SB-14-271	4	6	Hexachlorobutadiene	0.4	MG/KG	U	8.2	NA	nc	NA	nc	NA

Notes:

[1] ARARs include RIDEM residential direct exposure and GA leachability criteria (RIDEM, 2004) and TBCs include EPA's recommended residential level for dioxin (EPA, 1998) and PCB (EPA, 1990) in soil.

NA - Undetected contaminants (where qualifier = U or UJ) were not compared to potential ARAR/TBCs. Nor were cleanup goals developed for undetected contaminants where the laboratory detection limits (reported in the LAB_RESULT field) are in excess of ARAR/TBCs.

Key
ARAR - Applicable or Relevant and Appropriate Requirement; TBC - To Be Considered; nc - no criteria; NA - not applicable; N - no; Y - yes; MG/KG - milligram per kilogram; NG/KG - nanogram per kilogram; pg/g - picograms per gram.

Table F-5a. Proposed Cleanup Goals for Groundwater within the Source Area

Contaminant[(a)]	Proposed Cleanup Goal	Basis[(b)]
Volatile Organics (mg/L)		
Benzene	0.005	ARAR[MCL]
Chlorobenzene	0.1	ARAR[MCL]
Dibromochloropropane (DBCP)	0.0002	ARAR[MCL]
Dichloroethene (cis-1,2-)	0.07	ARAR[MCL]
Tetrachloroethene (PCE)	0.005	ARAR[MCL]
Trichloroethene (TCE)	0.005	ARAR[MCL]
Vinyl chloride	0.002	ARAR[MCL]
Ethylene dibromide	0.00005	ARAR[MCL]
Dioxin (pg/L)		
2,3,7,8-TCDD	30	ARAR[MCL]
Inorganics (mg/L)		
Arsenic	0.01	ARAR[MCL]
Chromium	0.1	ARAR[MCL]
Lead	0.015	ARAR[MCL]
Thallium	0.0005	ARAR[MCLG]

Notes
(a) Cleanup goals were developed for contaminants detected in groundwater within the Source Area at concentrations in excess of the potential ARARs (Federal Maximum Contaminant Levels for drinking water (EPA, 2009).
Companion cleanup goals for Source Area soil are presented in Table F-4a, and are based on RIDEM's GA soil leachability criteria for the protection of the underlying groundwater classification.

Cleanup goals were not developed for contaminants that were undetected (e.g., results are 'U' or 'UJ' qualified) or detected at concentrations below ARARs, or for rejected data (e.g., 'R' qualifier). Nor were cleanup goals developed for undetected contaminants where the laboratory detection limits are in excess of ARARs.

In addition, all numeric criteria included in ARARs identified for the CMRP site are cleanup goals regardless of whether or not they are identified above in this Appendix F (except where background is an issue).

(b) The basis of the Cleanup Goal is:
ARAR

Key
ARAR - applicable or relevant and appropriate requirement; MCL - maximum contaminant level; MCLG - maximum contaminant level goal; mg/L - milligrams per liter; pg/L - picograms per liter.

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW12B	(carbethoxyethylidine)triphenylphosphora	0.003	NJ	MG/L	nc	NA
MW-LEA-01	1,1,1,2-Tetrachloroethane	20	Uw	MG/L	nc	NA
MW-LEA-01	1,1,1,2-Tetrachloroethane	2	Uw	MG/L	nc	NA
MW-LEA-02	1,1,1,2-Tetrachloroethane	2	Uw	MG/L	nc	NA
MW-05S	1,1,1,2-Tetrachloroethane	2	Uw	MG/L	nc	NA
MW-LEA-02	1,1,1,2-Tetrachloroethane	2	Uw	MG/L	nc	NA
MW-LEA-02	1,1,1,2-Tetrachloroethane	0.2	Uw	MG/L	nc	NA
MW-LEA-03	1,1,1,2-Tetrachloroethane	0.2	Uw	MG/L	nc	NA
MW-LEA-03	1,1,1,2-Tetrachloroethane	0.004	Uw	MG/L	nc	NA
MW05S	1,1,1,2-TETRACHLOROETHANE	1	U	MG/L	nc	NA
MW05S	1,1,1,2-TETRACHLOROETHANE	1	U	MG/L	nc	NA
MW05S	1,1,1,2-tetrachloroethane	1	U	MG/L	nc	NA
MW05S	1,1,1,2-tetrachloroethane	1	U	MG/L	nc	NA
MW14M	1,1,1,2-tetrachloroethane	0.1	U	MG/L	nc	NA
MW06S	1,1,1,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW13D	1,1,1,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW06S	1,1,1,2-tetrachloroethane	0.006	U	MG/L	nc	NA
MW02M	1,1,1,2-tetrachloroethane	0.005	U	MG/L	nc	NA
MW02D	1,1,1,2-tetrachloroethane	0.004	U	MG/L	nc	NA
MW13B	1,1,1,2-tetrachloroethane	0.004	U	MG/L	nc	NA
MW03S	1,1,1,2-tetrachloroethane	0.001	U	MG/L	nc	NA
GEC3	1,1,1,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW01S	1,1,1,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW11S	1,1,1,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW12B	1,1,1,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW12D	1,1,1,2-tetrachloroethane	0.001	U	MG/L	nc	NA
GEC1	1,1,1,2-tetrachloroethane	0.001	U	MG/L	nc	NA
GEC2	1,1,1,2-tetrachloroethane	0.001	U	MG/L	nc	NA
GEC4	1,1,1,2-tetrachloroethane	0.001	U	MG/L	nc	NA
GEC5	1,1,1,2-tetrachloroethane	0.001	U	MG/L	nc	NA
GEC6	1,1,1,2-tetrachloroethane	0.001	U	MG/L	nc	NA
GEC7	1,1,1,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW07D	1,1,1,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW07S	1,1,1,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW11B	1,1,1,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW11M	1,1,1,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW15D	1,1,1,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW02S	1,1,1,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW04B	1,1,1,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW04D	1,1,1,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW04S	1,1,1,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW08S	1,1,1,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW09S	1,1,1,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW10B	1,1,1,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW10D	1,1,1,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW13S	1,1,1,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW-LEA-01	1,1,1-Trichloroethane	20	Uw	MG/L	0.2	NA
MW-LEA-01	1,1,1-Trichloroethane	2	Uw	MG/L	0.2	NA
MW-LEA-02	1,1,1-Trichloroethane	2	Uw	MG/L	0.2	NA
MW-05S	1,1,1-Trichloroethane	2	Uw	MG/L	0.2	NA
MW-LEA-02	1,1,1-Trichloroethane	2	Uw	MG/L	0.2	NA
MW-LEA-02	1,1,1-Trichloroethane	0.2	Uw	MG/L	0.2	NA
MW-LEA-03	1,1,1-Trichloroethane	0.2	Uw	MG/L	0.2	NA
MW-LEA-03	1,1,1-Trichloroethane	0.004	Uw	MG/L	0.2	NA
MW05S	1,1,1-trichloroethane	1.7	U	MG/L	0.2	NA
MW05S	1,1,1-TRICHLOROETHANE	1	U	MG/L	0.2	NA
MW05S	1,1,1-TRICHLOROETHANE	1	U	MG/L	0.2	NA
MW05S	1,1,1-trichloroethane	1	U	MG/L	0.2	NA
MW05S	1,1,1-trichloroethane	1	U	MG/L	0.2	NA
MW14M	1,1,1-trichloroethane	0.1	U	MG/L	0.2	NA
MW06S	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW13D	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW10D	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW10B	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW10D	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW13B	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW13D	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW13S	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
TMW3	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW12B	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW11B	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW11M	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW11S	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW12B	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW12D	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
GEC2	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
GEC6	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW14M	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW15D	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW01S	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW01S	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW03S	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW06S	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW07D	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW07S	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW08S	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW09S	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW04S	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW04B	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW04D	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW04S	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW02D	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW02M	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW02S	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW02S	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW06S	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW07S	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW01S	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW01S	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW03S	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW08S	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW09S	1,1,1-trichloroethane	0.01	U	MG/L	0.2	NA
MW06S	1,1,1-trichloroethane	0.006	U	MG/L	0.2	NA
MW02M	1,1,1-trichloroethane	0.005	U	MG/L	0.2	NA
MW02D	1,1,1-trichloroethane	0.004	U	MG/L	0.2	NA
MW13B	1,1,1-trichloroethane	0.004	U	MG/L	0.2	NA
MW03S	1,1,1-trichloroethane	0.001	U	MG/L	0.2	NA
GEC3	1,1,1-trichloroethane	0.001	U	MG/L	0.2	NA
MW01S	1,1,1-trichloroethane	0.001	U	MG/L	0.2	NA
MW11S	1,1,1-trichloroethane	0.001	U	MG/L	0.2	NA
MW12B	1,1,1-trichloroethane	0.001	U	MG/L	0.2	NA
MW12D	1,1,1-trichloroethane	0.001	U	MG/L	0.2	NA
GEC1	1,1,1-trichloroethane	0.001	U	MG/L	0.2	NA
GEC2	1,1,1-trichloroethane	0.001	U	MG/L	0.2	NA
GEC4	1,1,1-trichloroethane	0.001	U	MG/L	0.2	NA
GEC5	1,1,1-trichloroethane	0.001	U	MG/L	0.2	NA
GEC6	1,1,1-trichloroethane	0.001	U	MG/L	0.2	NA
GEC7	1,1,1-trichloroethane	0.001	U	MG/L	0.2	NA
MW07D	1,1,1-trichloroethane	0.001	U	MG/L	0.2	NA
MW07S	1,1,1-trichloroethane	0.001	U	MG/L	0.2	NA
MW11B	1,1,1-trichloroethane	0.001	U	MG/L	0.2	NA
MW11M	1,1,1-trichloroethane	0.001	U	MG/L	0.2	NA
MW15D	1,1,1-trichloroethane	0.001	U	MG/L	0.2	NA
MW02S	1,1,1-trichloroethane	0.001	U	MG/L	0.2	NA
MW04B	1,1,1-trichloroethane	0.001	U	MG/L	0.2	NA
MW04D	1,1,1-trichloroethane	0.001	U	MG/L	0.2	NA
MW04S	1,1,1-trichloroethane	0.001	U	MG/L	0.2	NA
MW08S	1,1,1-trichloroethane	0.001	U	MG/L	0.2	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW09S	1,1,1-trichloroethane	0.001	U	MG/L	0.2	NA
MW10B	1,1,1-trichloroethane	0.001	U	MG/L	0.2	NA
MW10D	1,1,1-trichloroethane	0.001	U	MG/L	0.2	NA
MW13S	1,1,1-trichloroethane	0.001	U	MG/L	0.2	NA
MW-LEA-01	1,1,2,2-Tetrachloroethane	20	Uw	MG/L	nc	NA
MW-LEA-01	1,1,2,2-Tetrachloroethane	2	Uw	MG/L	nc	NA
MW-LEA-02	1,1,2,2-Tetrachloroethane	2	Uw	MG/L	nc	NA
MW-05S	1,1,2,2-Tetrachloroethane	2	Uw	MG/L	nc	NA
MW-LEA-02	1,1,2,2-Tetrachloroethane	2	Uw	MG/L	nc	NA
MW-LEA-02	1,1,2,2-Tetrachloroethane	0.2	Uw	MG/L	nc	NA
MW-LEA-03	1,1,2,2-Tetrachloroethane	0.2	Uw	MG/L	nc	NA
MW-LEA-03	1,1,2,2-Tetrachloroethane	0.004	Uw	MG/L	nc	NA
MW07S	1,1,2,2-tetrachloroethane	0.004	J	MG/L	nc	NA
MW05S	1,1,2,2-tetrachloroethane	1.7	U	MG/L	nc	NA
MW05S	1,1,2,2-TETRACHLOROETHANE	1	U	MG/L	nc	NA
MW05S	1,1,2,2-TETRACHLOROETHANE	1	U	MG/L	nc	NA
MW05S	1,1,2,2-tetrachloroethane	1	U	MG/L	nc	NA
MW05S	1,1,2,2-tetrachloroethane	1	U	MG/L	nc	NA
MW14M	1,1,2,2-tetrachloroethane	0.1	U	MG/L	nc	NA
MW06S	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW13D	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW10D	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW10B	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW10D	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW13B	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW13D	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW13S	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
TMW3	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW12B	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW11B	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW11M	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW11S	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW12B	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW12D	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
GEC2	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
GEC6	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW14M	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW15D	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW01S	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW01S	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW03S	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW06S	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW07D	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW08S	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW09S	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW04S	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW04B	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW04D	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW04S	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW02D	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW02M	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW02S	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW02S	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW06S	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW07S	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW01S	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW01S	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW03S	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW08S	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW09S	1,1,2,2-tetrachloroethane	0.01	U	MG/L	nc	NA
MW06S	1,1,2,2-tetrachloroethane	0.006	U	MG/L	nc	NA
MW02M	1,1,2,2-tetrachloroethane	0.005	U	MG/L	nc	NA
MW02D	1,1,2,2-tetrachloroethane	0.004	U	MG/L	nc	NA
MW13B	1,1,2,2-tetrachloroethane	0.004	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW03S	1,1,2,2-tetrachloroethane	0.001	U	MG/L	nc	NA
GEC3	1,1,2,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW01S	1,1,2,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW11S	1,1,2,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW12B	1,1,2,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW12D	1,1,2,2-tetrachloroethane	0.001	U	MG/L	nc	NA
GEC1	1,1,2,2-tetrachloroethane	0.001	U	MG/L	nc	NA
GEC2	1,1,2,2-tetrachloroethane	0.001	U	MG/L	nc	NA
GEC4	1,1,2,2-tetrachloroethane	0.001	U	MG/L	nc	NA
GEC5	1,1,2,2-tetrachloroethane	0.001	U	MG/L	nc	NA
GEC6	1,1,2,2-tetrachloroethane	0.001	U	MG/L	nc	NA
GEC7	1,1,2,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW07D	1,1,2,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW07S	1,1,2,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW11B	1,1,2,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW11M	1,1,2,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW15D	1,1,2,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW02S	1,1,2,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW04B	1,1,2,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW04D	1,1,2,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW04S	1,1,2,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW08S	1,1,2,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW09S	1,1,2,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW10B	1,1,2,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW10D	1,1,2,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW13S	1,1,2,2-tetrachloroethane	0.001	U	MG/L	nc	NA
MW05S	1,1,2-trichloro-1,2,2-trifluoroethane	1.7	U	MG/L	nc	NA
MW10D	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
MW10B	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
MW10D	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
MW13B	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
MW13D	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
MW13S	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
TMW3	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
MW12B	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
MW11B	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
MW11M	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
MW11S	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
MW12B	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
MW12D	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
GEC2	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
GEC6	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
MW14M	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
MW15D	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
MW01S	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
MW06S	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
MW07D	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
MW07S	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
MW08S	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
MW09S	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
MW04S	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
MW04B	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
MW04D	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
MW04S	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
MW02D	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
MW02M	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
MW02S	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
MW02S	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
MW06S	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
MW07S	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
MW01S	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
MW01S	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
MW03S	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
MW08S	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW09S	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	U	MG/L	nc	NA
MW01S	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	UJ	MG/L	nc	NA
MW03S	1,1,2-trichloro-1,2,2-trifluoroethane	0.01	UJ	MG/L	nc	NA
MW-LEA-01	1,1,2-Trichloroethane	20	Uw	MG/L	0.003	NA
MW-LEA-01	1,1,2-Trichloroethane	2	Uw	MG/L	0.003	NA
MW-LEA-02	1,1,2-Trichloroethane	2	Uw	MG/L	0.003	NA
MW-05S	1,1,2-Trichloroethane	2	Uw	MG/L	0.003	NA
MW-LEA-02	1,1,2-Trichloroethane	2	Uw	MG/L	0.003	NA
MW-LEA-02	1,1,2-Trichloroethane	0.2	Uw	MG/L	0.003	NA
MW-LEA-03	1,1,2-Trichloroethane	0.2	Uw	MG/L	0.003	NA
MW-LEA-03	1,1,2-Trichloroethane	0.004	Uw	MG/L	0.003	NA
MW05S	1,1,2-trichloroethane	1.7	U	MG/L	0.003	NA
MW05S	1,1,2-TRICHLOROETHANE	1	U	MG/L	0.003	NA
MW05S	1,1,2-TRICHLOROETHANE	1	U	MG/L	0.003	NA
MW05S	1,1,2-trichloroethane	1	U	MG/L	0.003	NA
MW05S	1,1,2-trichloroethane	1	U	MG/L	0.003	NA
MW14M	1,1,2-trichloroethane	0.1	U	MG/L	0.003	NA
MW06S	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW13D	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW10D	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW10B	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW10D	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW13B	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW13D	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW13S	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
TMW3	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW12B	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW11B	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW11M	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW11S	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW12B	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW12D	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
GEC2	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
GEC6	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW14M	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW15D	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW01S	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW01S	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW03S	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW06S	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW07D	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW07S	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW08S	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW09S	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW04S	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW04B	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW04D	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW04S	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW02D	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW02M	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW02S	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW02S	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW06S	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW07S	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW01S	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW01S	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW03S	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW08S	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW09S	1,1,2-trichloroethane	0.01	U	MG/L	0.003	NA
MW06S	1,1,2-trichloroethane	0.006	U	MG/L	0.003	NA
MW02M	1,1,2-trichloroethane	0.005	U	MG/L	0.003	NA
MW02D	1,1,2-trichloroethane	0.004	U	MG/L	0.003	NA
MW13B	1,1,2-trichloroethane	0.004	U	MG/L	0.003	NA
MW03S	1,1,2-trichloroethane	0.001	U	MG/L	0.003	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
GEC3	1,1,2-trichloroethane	0.001	U	MG/L	0.003	NA
MW01S	1,1,2-trichloroethane	0.001	U	MG/L	0.003	NA
MW11S	1,1,2-trichloroethane	0.001	U	MG/L	0.003	NA
MW12B	1,1,2-trichloroethane	0.001	U	MG/L	0.003	NA
MW12D	1,1,2-trichloroethane	0.001	U	MG/L	0.003	NA
GEC1	1,1,2-trichloroethane	0.001	U	MG/L	0.003	NA
GEC2	1,1,2-trichloroethane	0.001	U	MG/L	0.003	NA
GEC4	1,1,2-trichloroethane	0.001	U	MG/L	0.003	NA
GEC5	1,1,2-trichloroethane	0.001	U	MG/L	0.003	NA
GEC6	1,1,2-trichloroethane	0.001	U	MG/L	0.003	NA
GEC7	1,1,2-trichloroethane	0.001	U	MG/L	0.003	NA
MW07D	1,1,2-trichloroethane	0.001	U	MG/L	0.003	NA
MW07S	1,1,2-trichloroethane	0.001	U	MG/L	0.003	NA
MW11B	1,1,2-trichloroethane	0.001	U	MG/L	0.003	NA
MW11M	1,1,2-trichloroethane	0.001	U	MG/L	0.003	NA
MW15D	1,1,2-trichloroethane	0.001	U	MG/L	0.003	NA
MW02S	1,1,2-trichloroethane	0.001	U	MG/L	0.003	NA
MW04B	1,1,2-trichloroethane	0.001	U	MG/L	0.003	NA
MW04D	1,1,2-trichloroethane	0.001	U	MG/L	0.003	NA
MW04S	1,1,2-trichloroethane	0.001	U	MG/L	0.003	NA
MW08S	1,1,2-trichloroethane	0.001	U	MG/L	0.003	NA
MW09S	1,1,2-trichloroethane	0.001	U	MG/L	0.003	NA
MW10B	1,1,2-trichloroethane	0.001	U	MG/L	0.003	NA
MW10D	1,1,2-trichloroethane	0.001	U	MG/L	0.003	NA
MW13S	1,1,2-trichloroethane	0.001	U	MG/L	0.003	NA
MW15D	1,1'-biphenyl	0.014	U	MG/L	nc	NA
MW10D	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW10B	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW10D	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW13B	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW13D	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW13S	1,1'-biphenyl	0.01	U	MG/L	nc	NA
TMW3	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW12B	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW11B	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW11M	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW11S	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW12B	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW12D	1,1'-biphenyl	0.01	U	MG/L	nc	NA
GEC2	1,1'-biphenyl	0.01	U	MG/L	nc	NA
GEC6	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW14M	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW01S	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW01S	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW03S	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW05S	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW06S	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW07D	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW07S	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW08S	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW09S	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW04S	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW04B	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW04D	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW04S	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW02D	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW02M	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW02S	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW02S	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW06S	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW07S	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW01S	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW01S	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW03S	1,1'-biphenyl	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW08S	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW09S	1,1'-biphenyl	0.01	U	MG/L	nc	NA
MW-LEA-01	1,1-Dichloroethane	20	Uw	MG/L	nc	NA
MW-LEA-01	1,1-Dichloroethane	2	Uw	MG/L	nc	NA
MW-LEA-02	1,1-Dichloroethane	2	Uw	MG/L	nc	NA
MW-05S	1,1-Dichloroethane	2	Uw	MG/L	nc	NA
MW-LEA-02	1,1-Dichloroethane	2	Uw	MG/L	nc	NA
MW-LEA-02	1,1-Dichloroethane	0.2	Uw	MG/L	nc	NA
MW-LEA-03	1,1-Dichloroethane	0.2	Uw	MG/L	nc	NA
MW-LEA-03	1,1-Dichloroethane	0.004	Uw	MG/L	nc	NA
MW05S	1,1-dichloroethane	1.7	U	MG/L	nc	NA
MW05S	1,1-DICHLOROETHANE	1	U	MG/L	nc	NA
MW05S	1,1-DICHLOROETHANE	1	U	MG/L	nc	NA
MW05S	1,1-dichloroethane	1	U	MG/L	nc	NA
MW05S	1,1-dichloroethane	1	U	MG/L	nc	NA
MW14M	1,1-dichloroethane	0.1	U	MG/L	nc	NA
MW06S	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW13D	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW10D	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW10B	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW10D	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW13B	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW13D	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW13S	1,1-dichloroethane	0.01	U	MG/L	nc	NA
TMW3	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW12B	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW11B	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW11M	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW11S	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW12B	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW12D	1,1-dichloroethane	0.01	U	MG/L	nc	NA
GEC2	1,1-dichloroethane	0.01	U	MG/L	nc	NA
GEC6	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW14M	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW15D	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW01S	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW01S	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW03S	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW06S	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW07D	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW07S	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW08S	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW09S	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW04S	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW04B	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW04D	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW04S	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW02D	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW02M	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW02S	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW02S	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW06S	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW07S	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW01S	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW01S	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW03S	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW08S	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW09S	1,1-dichloroethane	0.01	U	MG/L	nc	NA
MW06S	1,1-dichloroethane	0.006	U	MG/L	nc	NA
MW02M	1,1-dichloroethane	0.005	U	MG/L	nc	NA
MW02D	1,1-dichloroethane	0.004	U	MG/L	nc	NA
MW13B	1,1-dichloroethane	0.004	U	MG/L	nc	NA
MW03S	1,1-dichloroethane	0.001	U	MG/L	nc	NA
MW12D	1,1-dichloroethane	0.001	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
GEC5	1,1-dichloroethane	0.001	U	MG/L	nc	NA
GEC6	1,1-dichloroethane	0.001	U	MG/L	nc	NA
GEC7	1,1-dichloroethane	0.001	U	MG/L	nc	NA
MW07D	1,1-dichloroethane	0.001	U	MG/L	nc	NA
MW15D	1,1-dichloroethane	0.001	U	MG/L	nc	NA
MW02S	1,1-dichloroethane	0.001	U	MG/L	nc	NA
MW04B	1,1-dichloroethane	0.001	U	MG/L	nc	NA
MW04D	1,1-dichloroethane	0.001	U	MG/L	nc	NA
MW04S	1,1-dichloroethane	0.001	U	MG/L	nc	NA
MW08S	1,1-dichloroethane	0.001	U	MG/L	nc	NA
MW09S	1,1-dichloroethane	0.001	U	MG/L	nc	NA
MW10B	1,1-dichloroethane	0.001	U	MG/L	nc	NA
MW10D	1,1-dichloroethane	0.001	U	MG/L	nc	NA
MW13S	1,1-dichloroethane	0.001	U	MG/L	nc	NA
GEC3	1,1-dichloroethane	0.001	UJ	MG/L	nc	NA
MW01S	1,1-dichloroethane	0.001	UJ	MG/L	nc	NA
MW11S	1,1-dichloroethane	0.001	UJ	MG/L	nc	NA
MW12B	1,1-dichloroethane	0.001	UJ	MG/L	nc	NA
GEC1	1,1-dichloroethane	0.001	UJ	MG/L	nc	NA
GEC2	1,1-dichloroethane	0.001	UJ	MG/L	nc	NA
GEC4	1,1-dichloroethane	0.001	UJ	MG/L	nc	NA
MW07S	1,1-dichloroethane	0.001	UJ	MG/L	nc	NA
MW11B	1,1-dichloroethane	0.001	UJ	MG/L	nc	NA
MW11M	1,1-dichloroethane	0.001	UJ	MG/L	nc	NA
MW05S	1,1-DICHLOROETHENE	1	U	MG/L	0.007	NA
MW05S	1,1-DICHLOROETHENE	1	U	MG/L	0.007	NA
MW05S	1,1-dichloroethene	1	U	MG/L	0.007	NA
MW05S	1,1-dichloroethene	1	U	MG/L	0.007	NA
MW14M	1,1-dichloroethene	0.1	U	MG/L	0.007	NA
MW06S	1,1-dichloroethene	0.01	U	MG/L	0.007	NA
MW13D	1,1-dichloroethene	0.01	U	MG/L	0.007	NA
MW10D	1,1-dichloroethene	0.01	U	MG/L	0.007	NA
MW10B	1,1-dichloroethene	0.01	U	MG/L	0.007	NA
MW10D	1,1-dichloroethene	0.01	U	MG/L	0.007	NA
MW13B	1,1-dichloroethene	0.01	U	MG/L	0.007	NA
MW13D	1,1-dichloroethene	0.01	U	MG/L	0.007	NA
MW13S	1,1-dichloroethene	0.01	U	MG/L	0.007	NA
TMW3	1,1-dichloroethene	0.01	U	MG/L	0.007	NA
MW12B	1,1-dichloroethene	0.01	U	MG/L	0.007	NA
MW11B	1,1-dichloroethene	0.01	U	MG/L	0.007	NA
MW11M	1,1-dichloroethene	0.01	U	MG/L	0.007	NA
MW11S	1,1-dichloroethene	0.01	U	MG/L	0.007	NA
MW12B	1,1-dichloroethene	0.01	U	MG/L	0.007	NA
MW12D	1,1-dichloroethene	0.01	U	MG/L	0.007	NA
GEC2	1,1-dichloroethene	0.01	U	MG/L	0.007	NA
GEC6	1,1-dichloroethene	0.01	U	MG/L	0.007	NA
MW14M	1,1-dichloroethene	0.01	U	MG/L	0.007	NA
MW15D	1,1-dichloroethene	0.01	U	MG/L	0.007	NA
MW07D	1,1-dichloroethene	0.01	U	MG/L	0.007	NA
MW04S	1,1-dichloroethene	0.01	U	MG/L	0.007	NA
MW04B	1,1-dichloroethene	0.01	U	MG/L	0.007	NA
MW04D	1,1-dichloroethene	0.01	U	MG/L	0.007	NA
MW04S	1,1-dichloroethene	0.01	U	MG/L	0.007	NA
MW02D	1,1-dichloroethene	0.01	U	MG/L	0.007	NA
MW02M	1,1-dichloroethene	0.01	U	MG/L	0.007	NA
MW02S	1,1-dichloroethene	0.01	U	MG/L	0.007	NA
MW02S	1,1-dichloroethene	0.01	U	MG/L	0.007	NA
MW06S	1,1-dichloroethene	0.01	U	MG/L	0.007	NA
MW07S	1,1-dichloroethene	0.01	U	MG/L	0.007	NA
MW01S	1,1-dichloroethene	0.01	U	MG/L	0.007	NA
MW01S	1,1-dichloroethene	0.01	U	MG/L	0.007	NA
MW03S	1,1-dichloroethene	0.01	U	MG/L	0.007	NA
MW08S	1,1-dichloroethene	0.01	U	MG/L	0.007	NA
MW09S	1,1-dichloroethene	0.01	U	MG/L	0.007	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW06S	1,1-dichloroethene	0.006	U	MG/L	0.007	NA
MW02M	1,1-dichloroethene	0.005	U	MG/L	0.007	NA
MW02D	1,1-dichloroethene	0.004	U	MG/L	0.007	NA
MW13B	1,1-dichloroethene	0.004	U	MG/L	0.007	NA
MW03S	1,1-dichloroethene	0.001	U	MG/L	0.007	NA
GEC3	1,1-dichloroethene	0.001	U	MG/L	0.007	NA
MW01S	1,1-dichloroethene	0.001	U	MG/L	0.007	NA
MW11S	1,1-dichloroethene	0.001	U	MG/L	0.007	NA
MW12B	1,1-dichloroethene	0.001	U	MG/L	0.007	NA
MW12D	1,1-dichloroethene	0.001	U	MG/L	0.007	NA
GEC1	1,1-dichloroethene	0.001	U	MG/L	0.007	NA
GEC2	1,1-dichloroethene	0.001	U	MG/L	0.007	NA
GEC4	1,1-dichloroethene	0.001	U	MG/L	0.007	NA
GEC5	1,1-dichloroethene	0.001	U	MG/L	0.007	NA
GEC6	1,1-dichloroethene	0.001	U	MG/L	0.007	NA
GEC7	1,1-dichloroethene	0.001	U	MG/L	0.007	NA
MW07D	1,1-dichloroethene	0.001	U	MG/L	0.007	NA
MW07S	1,1-dichloroethene	0.001	U	MG/L	0.007	NA
MW11B	1,1-dichloroethene	0.001	U	MG/L	0.007	NA
MW11M	1,1-dichloroethene	0.001	U	MG/L	0.007	NA
MW15D	1,1-dichloroethene	0.001	U	MG/L	0.007	NA
MW02S	1,1-dichloroethene	0.001	U	MG/L	0.007	NA
MW04B	1,1-dichloroethene	0.001	U	MG/L	0.007	NA
MW04D	1,1-dichloroethene	0.001	U	MG/L	0.007	NA
MW04S	1,1-dichloroethene	0.001	U	MG/L	0.007	NA
MW08S	1,1-dichloroethene	0.001	U	MG/L	0.007	NA
MW09S	1,1-dichloroethene	0.001	U	MG/L	0.007	NA
MW10B	1,1-dichloroethene	0.001	U	MG/L	0.007	NA
MW10D	1,1-dichloroethene	0.001	U	MG/L	0.007	NA
MW13S	1,1-dichloroethene	0.001	U	MG/L	0.007	NA
MW05S	1,1-dichloroethene	1.7	UJ	MG/L	0.007	NA
MW01S	1,1-dichloroethene	0.01	UJ	MG/L	0.007	NA
MW01S	1,1-dichloroethene	0.01	UJ	MG/L	0.007	NA
MW03S	1,1-dichloroethene	0.01	UJ	MG/L	0.007	NA
MW06S	1,1-dichloroethene	0.01	UJ	MG/L	0.007	NA
MW07S	1,1-dichloroethene	0.01	UJ	MG/L	0.007	NA
MW08S	1,1-dichloroethene	0.01	UJ	MG/L	0.007	NA
MW09S	1,1-dichloroethene	0.01	UJ	MG/L	0.007	NA
MW-LEA-01	1,1-Dichloroethylene	20	Uw	MG/L	0.007	NA
MW-LEA-01	1,1-Dichloroethylene	2	Uw	MG/L	0.007	NA
MW-LEA-02	1,1-Dichloroethylene	2	Uw	MG/L	0.007	NA
MW-05S	1,1-Dichloroethylene	2	Uw	MG/L	0.007	NA
MW-LEA-02	1,1-Dichloroethylene	2	Uw	MG/L	0.007	NA
MW-LEA-02	1,1-Dichloroethylene	0.2	Uw	MG/L	0.007	NA
MW-LEA-03	1,1-Dichloroethylene	0.2	Uw	MG/L	0.007	NA
MW-LEA-03	1,1-Dichloroethylene	0.004	Uw	MG/L	0.007	NA
MW-LEA-01	1,1-Dichloropropene	20	Uw	MG/L	nc	NA
MW-LEA-01	1,1-Dichloropropene	2	Uw	MG/L	nc	NA
MW-LEA-02	1,1-Dichloropropene	2	Uw	MG/L	nc	NA
MW-05S	1,1-Dichloropropene	2	Uw	MG/L	nc	NA
MW-LEA-02	1,1-Dichloropropene	2	Uw	MG/L	nc	NA
MW-LEA-02	1,1-Dichloropropene	0.2	Uw	MG/L	nc	NA
MW-LEA-03	1,1-Dichloropropene	0.2	Uw	MG/L	nc	NA
MW-LEA-03	1,1-Dichloropropene	0.004	Uw	MG/L	nc	NA
MW05S	1,1-DICHLOROPROPENE	1	U	MG/L	nc	NA
MW05S	1,1-DICHLOROPROPENE	1	U	MG/L	nc	NA
MW05S	1,1-dichloropropene	1	U	MG/L	nc	NA
MW05S	1,1-dichloropropene	1	U	MG/L	nc	NA
MW14M	1,1-dichloropropene	0.1	U	MG/L	nc	NA
MW06S	1,1-dichloropropene	0.01	U	MG/L	nc	NA
MW13D	1,1-dichloropropene	0.01	U	MG/L	nc	NA
MW06S	1,1-dichloropropene	0.006	U	MG/L	nc	NA
MW02M	1,1-dichloropropene	0.005	U	MG/L	nc	NA
MW02D	1,1-dichloropropene	0.004	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW13B	1,1-dichloropropene	0.004	U	MG/L	nc	NA
MW03S	1,1-dichloropropene	0.001	U	MG/L	nc	NA
GEC3	1,1-dichloropropene	0.001	U	MG/L	nc	NA
MW01S	1,1-dichloropropene	0.001	U	MG/L	nc	NA
MW11S	1,1-dichloropropene	0.001	U	MG/L	nc	NA
MW12B	1,1-dichloropropene	0.001	U	MG/L	nc	NA
MW12D	1,1-dichloropropene	0.001	U	MG/L	nc	NA
GEC1	1,1-dichloropropene	0.001	U	MG/L	nc	NA
GEC2	1,1-dichloropropene	0.001	U	MG/L	nc	NA
GEC4	1,1-dichloropropene	0.001	U	MG/L	nc	NA
GEC5	1,1-dichloropropene	0.001	U	MG/L	nc	NA
GEC6	1,1-dichloropropene	0.001	U	MG/L	nc	NA
GEC7	1,1-dichloropropene	0.001	U	MG/L	nc	NA
MW07D	1,1-dichloropropene	0.001	U	MG/L	nc	NA
MW07S	1,1-dichloropropene	0.001	U	MG/L	nc	NA
MW11B	1,1-dichloropropene	0.001	U	MG/L	nc	NA
MW11M	1,1-dichloropropene	0.001	U	MG/L	nc	NA
MW15D	1,1-dichloropropene	0.001	U	MG/L	nc	NA
MW02S	1,1-dichloropropene	0.001	U	MG/L	nc	NA
MW04B	1,1-dichloropropene	0.001	U	MG/L	nc	NA
MW04D	1,1-dichloropropene	0.001	U	MG/L	nc	NA
MW04S	1,1-dichloropropene	0.001	U	MG/L	nc	NA
MW08S	1,1-dichloropropene	0.001	U	MG/L	nc	NA
MW09S	1,1-dichloropropene	0.001	U	MG/L	nc	NA
MW10B	1,1-dichloropropene	0.001	U	MG/L	nc	NA
MW10D	1,1-dichloropropene	0.001	U	MG/L	nc	NA
MW13S	1,1-dichloropropene	0.001	U	MG/L	nc	NA
MW-LEA-01	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-Dioxin (filtered)	4.14E-08	U	MG/L	nc	NA
MW-LEA-02	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-Dioxin (filtered)	2.507E-08	U	MG/L	nc	NA
MW-LEA-02	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-Dioxin (filtered)	1.042E-08	U	MG/L	nc	NA
MW-05S	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-Dioxin (filtered)	4.465E-09	U	MG/L	nc	NA
MW-LEA-03	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-Dioxin (filtered)	2.814E-09	U	MG/L	nc	NA
MW-LEA-02	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-Dioxin (unfiltered)	9.51E-09	J	MG/L	nc	NA
MW-LEA-01	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-Dioxin (unfiltered)	2.1823E-08	U	MG/L	nc	NA
MW-05S	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-Dioxin (unfiltered)	9.02E-10	U	MG/L	nc	NA
MW-LEA-03	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-Dioxin (unfiltered)	6.6E-10	U	MG/L	nc	NA
MW-LEA-02	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-Dioxin (unfiltered)	3.65E-10	U	MG/L	nc	NA
MW-LEA-01	1,2,3,4,6,7,8-Heptachlorodibenzofuran (filtered)	2.034E-08	U	MG/L	nc	NA
MW-LEA-02	1,2,3,4,6,7,8-Heptachlorodibenzofuran (filtered)	1.325E-08	U	MG/L	nc	NA
MW-LEA-02	1,2,3,4,6,7,8-Heptachlorodibenzofuran (filtered)	4.901E-09	U	MG/L	nc	NA
MW-05S	1,2,3,4,6,7,8-Heptachlorodibenzofuran (filtered)	3.457E-09	U	MG/L	nc	NA
MW-LEA-03	1,2,3,4,6,7,8-Heptachlorodibenzofuran (filtered)	2.469E-09	U	MG/L	nc	NA
MW-LEA-01	1,2,3,4,6,7,8-Heptachlorodibenzofuran (unfiltered)	1.1148E-08	U	MG/L	nc	NA
MW-LEA-03	1,2,3,4,6,7,8-Heptachlorodibenzofuran (unfiltered)	4.021E-09	U	MG/L	nc	NA
MW-LEA-02	1,2,3,4,6,7,8-Heptachlorodibenzofuran (unfiltered)	3.214E-09	U	MG/L	nc	NA
MW-05S	1,2,3,4,6,7,8-Heptachlorodibenzofuran (unfiltered)	6.07E-10	U	MG/L	nc	NA
MW-LEA-02	1,2,3,4,6,7,8-Heptachlorodibenzofuran (unfiltered)	1.82E-10	U	MG/L	nc	NA
MW-LEA-01	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin (filtered)	2.929E-08	U	MG/L	nc	NA
MW-LEA-02	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin (filtered)	1.71E-08	U	MG/L	nc	NA
MW-LEA-02	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin (filtered)	7.331E-09	U	MG/L	nc	NA
MW-05S	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin (filtered)	4.253E-09	U	MG/L	nc	NA
MW-LEA-03	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin (filtered)	2.27E-09	U	MG/L	nc	NA
MW-LEA-01	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin (unfiltered)	9.02E-09	U	MG/L	nc	NA
MW-LEA-02	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin (unfiltered)	2.237E-09	U	MG/L	nc	NA
MW-05S	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin (unfiltered)	8.03E-10	U	MG/L	nc	NA
MW-LEA-03	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin (unfiltered)	6.41E-10	U	MG/L	nc	NA
MW-LEA-02	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin (unfiltered)	4.36E-10	U	MG/L	nc	NA
MW05S	1,2,3,4,6,7,8-HpCDD	2.88E-09		MG/L	nc	NA
MW01S	1,2,3,4,6,7,8-HpCDD	1.02E-08	EMPC	MG/L	nc	NA
MW02S	1,2,3,4,6,7,8-HpCDD	5.3E-09	EMPC	MG/L	nc	NA
MW07D	1,2,3,4,6,7,8-HpCDD	3.7E-09	EMPC	MG/L	nc	NA
MW10D	1,2,3,4,6,7,8-HpCDD	2.9E-09	EMPC	MG/L	nc	NA
MW12B	1,2,3,4,6,7,8-HpCDD	2.8E-09	EMPC	MG/L	nc	NA
MW15D	1,2,3,4,6,7,8-HpCDD	0.00000001	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW03S	1,2,3,4,6,7,8-HpCDD	8.4E-09	U	MG/L	nc	NA
MW06S	1,2,3,4,6,7,8-HpCDD	6.7E-09	U	MG/L	nc	NA
MW10D	1,2,3,4,6,7,8-HpCDD	6.5E-09	U	MG/L	nc	NA
MW07S	1,2,3,4,6,7,8-HpCDD	6.5E-09	U	MG/L	nc	NA
GEC6	1,2,3,4,6,7,8-HpCDD	6.3E-09	U	MG/L	nc	NA
MW01S	1,2,3,4,6,7,8-HpCDD	6.3E-09	U	MG/L	nc	NA
MW05S	1,2,3,4,6,7,8-HpCDD	6.2E-09	U	MG/L	nc	NA
MW04S	1,2,3,4,6,7,8-HpCDD	0.000000006	U	MG/L	nc	NA
MW03S	1,2,3,4,6,7,8-HpCDD	0.000000006	U	MG/L	nc	NA
MW09S	1,2,3,4,6,7,8-HpCDD	0.000000006	U	MG/L	nc	NA
MW04S	1,2,3,4,6,7,8-HpCDD	5.8E-09	U	MG/L	nc	NA
MW01S	1,2,3,4,6,7,8-HpCDD	5.6E-09	U	MG/L	nc	NA
MW13S	1,2,3,4,6,7,8-HpCDD	5.5E-09	U	MG/L	nc	NA
MW01S	1,2,3,4,6,7,8-HpCDD	0.000000005	U	MG/L	nc	NA
TMW3	1,2,3,4,6,7,8-HpCDD	4.8E-09	U	MG/L	nc	NA
MW08S	1,2,3,4,6,7,8-HpCDD	4.6E-09	U	MG/L	nc	NA
MW06S	1,2,3,4,6,7,8-HpCDD	4.4E-09	U	MG/L	nc	NA
MW08S	1,2,3,4,6,7,8-HpCDD	4.4E-09	U	MG/L	nc	NA
MW09S	1,2,3,4,6,7,8-HpCDD	4.3E-09	U	MG/L	nc	NA
MW12B	1,2,3,4,6,7,8-HpCDD	4.2E-09	U	MG/L	nc	NA
MW02S	1,2,3,4,6,7,8-HpCDD	4.2E-09	U	MG/L	nc	NA
MW04B	1,2,3,4,6,7,8-HpCDD	0.000000004	U	MG/L	nc	NA
MW12D	1,2,3,4,6,7,8-HpCDD	3.9E-09	U	MG/L	nc	NA
GEC2	1,2,3,4,6,7,8-HpCDD	3.9E-09	U	MG/L	nc	NA
MW07S	1,2,3,4,6,7,8-HpCDD	3.9E-09	U	MG/L	nc	NA
MW13D	1,2,3,4,6,7,8-HpCDD	3.8E-09	U	MG/L	nc	NA
MW11M	1,2,3,4,6,7,8-HpCDD	3.8E-09	U	MG/L	nc	NA
MW11S	1,2,3,4,6,7,8-HpCDD	3.7E-09	U	MG/L	nc	NA
MW13B	1,2,3,4,6,7,8-HpCDD	3.6E-09	U	MG/L	nc	NA
MW11B	1,2,3,4,6,7,8-HpCDD	3.6E-09	U	MG/L	nc	NA
MW02M	1,2,3,4,6,7,8-HpCDD	3.2E-09	U	MG/L	nc	NA
MW14M	1,2,3,4,6,7,8-HpCDD	2.6E-09	U	MG/L	nc	NA
MW02D	1,2,3,4,6,7,8-HpCDD	2.3E-09	U	MG/L	nc	NA
MW10B	1,2,3,4,6,7,8-HpCDD	2.2E-09	U	MG/L	nc	NA
MW04D	1,2,3,4,6,7,8-HpCDD	0.000000002	U	MG/L	nc	NA
MW05S	1,2,3,4,6,7,8-HpCDD	1.2E-09	U	MG/L	nc	NA
MW05S	1,2,3,4,6,7,8-HpCDD	5.9E-10	U	MG/L	nc	NA
MW05S	1,2,3,4,6,7,8-HpCDF	1.41E-09		MG/L	nc	NA
MW04S	1,2,3,4,6,7,8-HpCDF	3.4E-09	EMPC	MG/L	nc	NA
MW10D	1,2,3,4,6,7,8-HpCDF	0.000000003	EMPC	MG/L	nc	NA
MW04S	1,2,3,4,6,7,8-HpCDF	1.6E-09	EMPC	MG/L	nc	NA
MW13D	1,2,3,4,6,7,8-HpCDF	8.2E-09	U	MG/L	nc	NA
GEC2	1,2,3,4,6,7,8-HpCDF	5.9E-09	U	MG/L	nc	NA
MW12B	1,2,3,4,6,7,8-HpCDF	5.6E-09	U	MG/L	nc	NA
MW15D	1,2,3,4,6,7,8-HpCDF	4.8E-09	U	MG/L	nc	NA
MW01S	1,2,3,4,6,7,8-HpCDF	4.7E-09	U	MG/L	nc	NA
MW06S	1,2,3,4,6,7,8-HpCDF	4.4E-09	U	MG/L	nc	NA
MW07D	1,2,3,4,6,7,8-HpCDF	0.000000004	U	MG/L	nc	NA
MW10D	1,2,3,4,6,7,8-HpCDF	3.9E-09	U	MG/L	nc	NA
MW03S	1,2,3,4,6,7,8-HpCDF	3.9E-09	U	MG/L	nc	NA
MW03S	1,2,3,4,6,7,8-HpCDF	3.9E-09	U	MG/L	nc	NA
MW01S	1,2,3,4,6,7,8-HpCDF	3.8E-09	U	MG/L	nc	NA
MW09S	1,2,3,4,6,7,8-HpCDF	3.7E-09	U	MG/L	nc	NA
MW07S	1,2,3,4,6,7,8-HpCDF	3.6E-09	U	MG/L	nc	NA
MW05S	1,2,3,4,6,7,8-HpCDF	3.4E-09	U	MG/L	nc	NA
MW01S	1,2,3,4,6,7,8-HpCDF	3.3E-09	U	MG/L	nc	NA
GEC6	1,2,3,4,6,7,8-HpCDF	3.1E-09	U	MG/L	nc	NA
MW13S	1,2,3,4,6,7,8-HpCDF	0.000000003	U	MG/L	nc	NA
TMW3	1,2,3,4,6,7,8-HpCDF	0.000000003	U	MG/L	nc	NA
MW01S	1,2,3,4,6,7,8-HpCDF	2.6E-09	U	MG/L	nc	NA
MW08S	1,2,3,4,6,7,8-HpCDF	2.5E-09	U	MG/L	nc	NA
MW13B	1,2,3,4,6,7,8-HpCDF	2.4E-09	U	MG/L	nc	NA
MW12D	1,2,3,4,6,7,8-HpCDF	2.4E-09	U	MG/L	nc	NA
MW08S	1,2,3,4,6,7,8-HpCDF	2.3E-09	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW04B	1,2,3,4,6,7,8-HpCDF	2.3E-09	U	MG/L	nc	NA
MW10B	1,2,3,4,6,7,8-HpCDF	2.2E-09	U	MG/L	nc	NA
MW06S	1,2,3,4,6,7,8-HpCDF	2.2E-09	U	MG/L	nc	NA
MW02S	1,2,3,4,6,7,8-HpCDF	2.2E-09	U	MG/L	nc	NA
MW11S	1,2,3,4,6,7,8-HpCDF	2.1E-09	U	MG/L	nc	NA
MW07S	1,2,3,4,6,7,8-HpCDF	2.1E-09	U	MG/L	nc	NA
MW09S	1,2,3,4,6,7,8-HpCDF	2.1E-09	U	MG/L	nc	NA
MW11B	1,2,3,4,6,7,8-HpCDF	1.8E-09	U	MG/L	nc	NA
MW02S	1,2,3,4,6,7,8-HpCDF	1.8E-09	U	MG/L	nc	NA
MW11M	1,2,3,4,6,7,8-HpCDF	1.7E-09	U	MG/L	nc	NA
MW12B	1,2,3,4,6,7,8-HpCDF	1.6E-09	U	MG/L	nc	NA
MW02M	1,2,3,4,6,7,8-HpCDF	1.4E-09	U	MG/L	nc	NA
MW14M	1,2,3,4,6,7,8-HpCDF	1.3E-09	U	MG/L	nc	NA
MW05S	1,2,3,4,6,7,8-HpCDF	1.26E-09	U	MG/L	nc	NA
MW02D	1,2,3,4,6,7,8-HpCDF	1.1E-09	U	MG/L	nc	NA
MW04D	1,2,3,4,6,7,8-HpCDF	0.000000001	U	MG/L	nc	NA
MW05S	1,2,3,4,6,7,8-HpCDF	4.5E-10	U	MG/L	nc	NA
MW-LEA-01	1,2,3,4,7,8,9-Heptachlorodibenzofuran (filtered)	2.559E-08	U	MG/L	nc	NA
MW-LEA-02	1,2,3,4,7,8,9-Heptachlorodibenzofuran (filtered)	1.667E-08	U	MG/L	nc	NA
MW-LEA-02	1,2,3,4,7,8,9-Heptachlorodibenzofuran (filtered)	6.165E-09	UJ	MG/L	nc	NA
MW-05S	1,2,3,4,7,8,9-Heptachlorodibenzofuran (filtered)	4.348E-09	UJ	MG/L	nc	NA
MW-LEA-03	1,2,3,4,7,8,9-Heptachlorodibenzofuran (filtered)	3.105E-09	UJ	MG/L	nc	NA
MW-05S	1,2,3,4,7,8,9-Heptachlorodibenzofuran (unfiltered)	7.09E-10	U	MG/L	nc	NA
MW-LEA-03	1,2,3,4,7,8,9-Heptachlorodibenzofuran (unfiltered)	6.96E-10	U	MG/L	nc	NA
MW-LEA-01	1,2,3,4,7,8,9-Heptachlorodibenzofuran (unfiltered)	4.72E-10	U	MG/L	nc	NA
MW-LEA-02	1,2,3,4,7,8,9-Heptachlorodibenzofuran (unfiltered)	4.57E-10	U	MG/L	nc	NA
MW-LEA-02	1,2,3,4,7,8,9-Heptachlorodibenzofuran (unfiltered)	2.12E-10	U	MG/L	nc	NA
MW07D	1,2,3,4,7,8,9-HpCDF	3.6E-09	EMPC	MG/L	nc	NA
MW04D	1,2,3,4,7,8,9-HpCDF	0.000000002	EMPC	MG/L	nc	NA
MW01S	1,2,3,4,7,8,9-HpCDF	5.5E-09	U	MG/L	nc	NA
MW06S	1,2,3,4,7,8,9-HpCDF	5.2E-09	U	MG/L	nc	NA
MW03S	1,2,3,4,7,8,9-HpCDF	4.9E-09	U	MG/L	nc	NA
MW01S	1,2,3,4,7,8,9-HpCDF	4.6E-09	U	MG/L	nc	NA
MW03S	1,2,3,4,7,8,9-HpCDF	4.6E-09	U	MG/L	nc	NA
MW09S	1,2,3,4,7,8,9-HpCDF	4.4E-09	U	MG/L	nc	NA
MW07S	1,2,3,4,7,8,9-HpCDF	4.3E-09	U	MG/L	nc	NA
MW05S	1,2,3,4,7,8,9-HpCDF	4.1E-09	U	MG/L	nc	NA
MW01S	1,2,3,4,7,8,9-HpCDF	3.9E-09	U	MG/L	nc	NA
MW04S	1,2,3,4,7,8,9-HpCDF	3.5E-09	U	MG/L	nc	NA
MW01S	1,2,3,4,7,8,9-HpCDF	3.1E-09	U	MG/L	nc	NA
MW08S	1,2,3,4,7,8,9-HpCDF	0.000000003	U	MG/L	nc	NA
MW04B	1,2,3,4,7,8,9-HpCDF	2.8E-09	U	MG/L	nc	NA
MW02S	1,2,3,4,7,8,9-HpCDF	2.8E-09	U	MG/L	nc	NA
MW08S	1,2,3,4,7,8,9-HpCDF	2.7E-09	U	MG/L	nc	NA
MW06S	1,2,3,4,7,8,9-HpCDF	2.6E-09	U	MG/L	nc	NA
MW09S	1,2,3,4,7,8,9-HpCDF	2.6E-09	U	MG/L	nc	NA
MW07S	1,2,3,4,7,8,9-HpCDF	2.5E-09	U	MG/L	nc	NA
MW02S	1,2,3,4,7,8,9-HpCDF	2.1E-09	U	MG/L	nc	NA
MW04S	1,2,3,4,7,8,9-HpCDF	1.7E-09	U	MG/L	nc	NA
MW05S	1,2,3,4,7,8,9-HpCDF	1.65E-09	U	MG/L	nc	NA
MW02M	1,2,3,4,7,8,9-HpCDF	1.6E-09	U	MG/L	nc	NA
MW05S	1,2,3,4,7,8,9-HpCDF	1.49E-09	U	MG/L	nc	NA
MW02D	1,2,3,4,7,8,9-HpCDF	1.2E-09	U	MG/L	nc	NA
MW05S	1,2,3,4,7,8,9-HpCDF	5.6E-10	U	MG/L	nc	NA
MW15D	1,2,3,4,7,8,9-HpCDF	5.7E-09	UJ	MG/L	nc	NA
MW10D	1,2,3,4,7,8,9-HpCDF	4.8E-09	UJ	MG/L	nc	NA
MW10D	1,2,3,4,7,8,9-HpCDF	4.2E-09	UJ	MG/L	nc	NA
TMW3	1,2,3,4,7,8,9-HpCDF	3.7E-09	UJ	MG/L	nc	NA
GEC6	1,2,3,4,7,8,9-HpCDF	3.7E-09	UJ	MG/L	nc	NA
MW13S	1,2,3,4,7,8,9-HpCDF	3.4E-09	UJ	MG/L	nc	NA
MW13B	1,2,3,4,7,8,9-HpCDF	2.9E-09	UJ	MG/L	nc	NA
MW12D	1,2,3,4,7,8,9-HpCDF	2.7E-09	UJ	MG/L	nc	NA
MW10B	1,2,3,4,7,8,9-HpCDF	2.5E-09	UJ	MG/L	nc	NA
MW12B	1,2,3,4,7,8,9-HpCDF	2.5E-09	UJ	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW11M	1,2,3,4,7,8,9-HpCDF	2.4E-09	UJ	MG/L	nc	NA
MW11S	1,2,3,4,7,8,9-HpCDF	2.4E-09	UJ	MG/L	nc	NA
GEC2	1,2,3,4,7,8,9-HpCDF	2.4E-09	UJ	MG/L	nc	NA
MW13D	1,2,3,4,7,8,9-HpCDF	2.3E-09	UJ	MG/L	nc	NA
MW11B	1,2,3,4,7,8,9-HpCDF	2.2E-09	UJ	MG/L	nc	NA
MW12B	1,2,3,4,7,8,9-HpCDF	1.9E-09	UJ	MG/L	nc	NA
MW14M	1,2,3,4,7,8,9-HpCDF	1.6E-09	UJ	MG/L	nc	NA
MW-LEA-01	1,2,3,4,7,8-Hexachlorodibenzofuran (filtered)	2.354E-08	U	MG/L	nc	NA
MW-LEA-02	1,2,3,4,7,8-Hexachlorodibenzofuran (filtered)	1.762E-08	U	MG/L	nc	NA
MW-LEA-02	1,2,3,4,7,8-Hexachlorodibenzofuran (filtered)	9.158E-09	U	MG/L	nc	NA
MW-05S	1,2,3,4,7,8-Hexachlorodibenzofuran (filtered)	5.467E-09	U	MG/L	nc	NA
MW-LEA-03	1,2,3,4,7,8-Hexachlorodibenzofuran (filtered)	4.717E-09	U	MG/L	nc	NA
MW-LEA-01	1,2,3,4,7,8-Hexachlorodibenzofuran (unfiltered)	2.192E-08	U	MG/L	nc	NA
MW-05S	1,2,3,4,7,8-Hexachlorodibenzofuran (unfiltered)	1.124E-08	U	MG/L	nc	NA
MW-LEA-03	1,2,3,4,7,8-Hexachlorodibenzofuran (unfiltered)	5.454E-09	U	MG/L	nc	NA
MW-LEA-02	1,2,3,4,7,8-Hexachlorodibenzofuran (unfiltered)	1.586E-09	U	MG/L	nc	NA
MW-LEA-02	1,2,3,4,7,8-Hexachlorodibenzofuran (unfiltered)	7.71E-10	U	MG/L	nc	NA
MW-LEA-01	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin (filtered)	2.833E-08	U	MG/L	nc	NA
MW-LEA-02	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin (filtered)	1.856E-08	U	MG/L	nc	NA
MW-LEA-02	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin (filtered)	7.7E-09	UJ	MG/L	nc	NA
MW-05S	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin (filtered)	5.734E-09	UJ	MG/L	nc	NA
MW-LEA-03	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin (filtered)	3.283E-09	UJ	MG/L	nc	NA
MW-LEA-01	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin (unfiltered)	1.811E-08	U	MG/L	nc	NA
MW-05S	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin (unfiltered)	5.474E-09	U	MG/L	nc	NA
MW-LEA-03	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin (unfiltered)	7.43E-10	U	MG/L	nc	NA
MW-LEA-02	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin (unfiltered)	4.81E-10	U	MG/L	nc	NA
MW-LEA-02	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin (unfiltered)	4.46E-10	U	MG/L	nc	NA
MW04S	1,2,3,4,7,8-HxCDD	5.8E-09	EMPC	MG/L	nc	NA
GEC2	1,2,3,4,7,8-HxCDD	1.8E-09	EMPC	MG/L	nc	NA
MW10D	1,2,3,4,7,8-HxCDD	1.7E-09	EMPC	MG/L	nc	NA
MW07D	1,2,3,4,7,8-HxCDD	4.2E-09	J	MG/L	nc	NA
MW15D	1,2,3,4,7,8-HxCDD	0.000000006	U	MG/L	nc	NA
MW03S	1,2,3,4,7,8-HxCDD	5.3E-09	U	MG/L	nc	NA
MW06S	1,2,3,4,7,8-HxCDD	5.1E-09	U	MG/L	nc	NA
MW01S	1,2,3,4,7,8-HxCDD	4.5E-09	U	MG/L	nc	NA
MW10D	1,2,3,4,7,8-HxCDD	4.3E-09	U	MG/L	nc	NA
MW01S	1,2,3,4,7,8-HxCDD	4.1E-09	U	MG/L	nc	NA
MW01S	1,2,3,4,7,8-HxCDD	0.000000004	U	MG/L	nc	NA
MW07S	1,2,3,4,7,8-HxCDD	0.000000004	U	MG/L	nc	NA
MW03S	1,2,3,4,7,8-HxCDD	3.9E-09	U	MG/L	nc	NA
MW09S	1,2,3,4,7,8-HxCDD	3.8E-09	U	MG/L	nc	NA
GEC6	1,2,3,4,7,8-HxCDD	3.7E-09	U	MG/L	nc	NA
MW05S	1,2,3,4,7,8-HxCDD	3.7E-09	U	MG/L	nc	NA
MW13S	1,2,3,4,7,8-HxCDD	3.6E-09	U	MG/L	nc	NA
MW04S	1,2,3,4,7,8-HxCDD	3.1E-09	U	MG/L	nc	NA
TMW3	1,2,3,4,7,8-HxCDD	0.000000003	U	MG/L	nc	NA
MW01S	1,2,3,4,7,8-HxCDD	0.000000003	U	MG/L	nc	NA
MW08S	1,2,3,4,7,8-HxCDD	2.9E-09	U	MG/L	nc	NA
MW09S	1,2,3,4,7,8-HxCDD	2.8E-09	U	MG/L	nc	NA
MW12D	1,2,3,4,7,8-HxCDD	2.7E-09	U	MG/L	nc	NA
MW10B	1,2,3,4,7,8-HxCDD	2.6E-09	U	MG/L	nc	NA
MW12B	1,2,3,4,7,8-HxCDD	2.6E-09	U	MG/L	nc	NA
MW06S	1,2,3,4,7,8-HxCDD	2.6E-09	U	MG/L	nc	NA
MW13D	1,2,3,4,7,8-HxCDD	2.5E-09	U	MG/L	nc	NA
MW11S	1,2,3,4,7,8-HxCDD	2.5E-09	U	MG/L	nc	NA
MW04B	1,2,3,4,7,8-HxCDD	2.5E-09	U	MG/L	nc	NA
MW02S	1,2,3,4,7,8-HxCDD	2.5E-09	U	MG/L	nc	NA
MW13B	1,2,3,4,7,8-HxCDD	2.4E-09	U	MG/L	nc	NA
MW07S	1,2,3,4,7,8-HxCDD	2.4E-09	U	MG/L	nc	NA
MW08S	1,2,3,4,7,8-HxCDD	2.4E-09	U	MG/L	nc	NA
MW05S	1,2,3,4,7,8-HxCDD	2.38E-09	U	MG/L	nc	NA
MW11B	1,2,3,4,7,8-HxCDD	2.3E-09	U	MG/L	nc	NA
MW11M	1,2,3,4,7,8-HxCDD	2.3E-09	U	MG/L	nc	NA
MW12B	1,2,3,4,7,8-HxCDD	2.1E-09	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW02S	1,2,3,4,7,8-HxCDD	1.8E-09	U	MG/L	nc	NA
MW05S	1,2,3,4,7,8-HxCDD	1.61E-09	U	MG/L	nc	NA
MW14M	1,2,3,4,7,8-HxCDD	1.6E-09	U	MG/L	nc	NA
MW02M	1,2,3,4,7,8-HxCDD	1.6E-09	U	MG/L	nc	NA
MW02D	1,2,3,4,7,8-HxCDD	1.3E-09	U	MG/L	nc	NA
MW04D	1,2,3,4,7,8-HxCDD	1.2E-09	U	MG/L	nc	NA
MW05S	1,2,3,4,7,8-HxCDD	8.4E-10	U	MG/L	nc	NA
MW13D	1,2,3,4,7,8-HxCDF	3.4E-09	EMPC	MG/L	nc	NA
MW11B	1,2,3,4,7,8-HxCDF	2.9E-09	EMPC	MG/L	nc	NA
MW10D	1,2,3,4,7,8-HxCDF	2.8E-09	EMPC	MG/L	nc	NA
MW12B	1,2,3,4,7,8-HxCDF	2.8E-09	EMPC	MG/L	nc	NA
MW04D	1,2,3,4,7,8-HxCDF	2.5E-09	EMPC	MG/L	nc	NA
MW10B	1,2,3,4,7,8-HxCDF	1.3E-09	EMPC	MG/L	nc	NA
MW02M	1,2,3,4,7,8-HxCDF	6.7E-10	EMPC	MG/L	nc	NA
MW07D	1,2,3,4,7,8-HxCDF	4.5E-09	U	MG/L	nc	NA
GEC2	1,2,3,4,7,8-HxCDF	3.9E-09	U	MG/L	nc	NA
MW04S	1,2,3,4,7,8-HxCDF	3.7E-09	U	MG/L	nc	NA
MW15D	1,2,3,4,7,8-HxCDF	3.6E-09	U	MG/L	nc	NA
MW05S	1,2,3,4,7,8-HxCDF	3.51E-09	U	MG/L	nc	NA
MW13S	1,2,3,4,7,8-HxCDF	3.3E-09	U	MG/L	nc	NA
MW03S	1,2,3,4,7,8-HxCDF	3.3E-09	U	MG/L	nc	NA
MW12B	1,2,3,4,7,8-HxCDF	3.1E-09	U	MG/L	nc	NA
MW06S	1,2,3,4,7,8-HxCDF	3.1E-09	U	MG/L	nc	NA
MW10D	1,2,3,4,7,8-HxCDF	0.000000003	U	MG/L	nc	NA
MW05S	1,2,3,4,7,8-HxCDF	2.9E-09	U	MG/L	nc	NA
MW01S	1,2,3,4,7,8-HxCDF	2.9E-09	U	MG/L	nc	NA
MW03S	1,2,3,4,7,8-HxCDF	2.7E-09	U	MG/L	nc	NA
MW01S	1,2,3,4,7,8-HxCDF	2.6E-09	U	MG/L	nc	NA
MW07S	1,2,3,4,7,8-HxCDF	2.6E-09	U	MG/L	nc	NA
MW01S	1,2,3,4,7,8-HxCDF	2.6E-09	U	MG/L	nc	NA
MW09S	1,2,3,4,7,8-HxCDF	2.5E-09	U	MG/L	nc	NA
TMW3	1,2,3,4,7,8-HxCDF	2.2E-09	U	MG/L	nc	NA
GEC6	1,2,3,4,7,8-HxCDF	2.2E-09	U	MG/L	nc	NA
MW04S	1,2,3,4,7,8-HxCDF	2.2E-09	U	MG/L	nc	NA
MW07S	1,2,3,4,7,8-HxCDF	2.1E-09	U	MG/L	nc	NA
MW08S	1,2,3,4,7,8-HxCDF	1.9E-09	U	MG/L	nc	NA
MW13B	1,2,3,4,7,8-HxCDF	1.8E-09	U	MG/L	nc	NA
MW02S	1,2,3,4,7,8-HxCDF	1.8E-09	U	MG/L	nc	NA
MW01S	1,2,3,4,7,8-HxCDF	1.7E-09	U	MG/L	nc	NA
MW04B	1,2,3,4,7,8-HxCDF	1.7E-09	U	MG/L	nc	NA
MW08S	1,2,3,4,7,8-HxCDF	1.6E-09	U	MG/L	nc	NA
MW09S	1,2,3,4,7,8-HxCDF	1.6E-09	U	MG/L	nc	NA
MW11M	1,2,3,4,7,8-HxCDF	1.5E-09	U	MG/L	nc	NA
MW11S	1,2,3,4,7,8-HxCDF	1.5E-09	U	MG/L	nc	NA
MW06S	1,2,3,4,7,8-HxCDF	1.5E-09	U	MG/L	nc	NA
MW12D	1,2,3,4,7,8-HxCDF	1.3E-09	U	MG/L	nc	NA
MW02S	1,2,3,4,7,8-HxCDF	1.2E-09	U	MG/L	nc	NA
MW05S	1,2,3,4,7,8-HxCDF	1.02E-09	U	MG/L	nc	NA
MW14M	1,2,3,4,7,8-HxCDF	0.000000001	U	MG/L	nc	NA
MW05S	1,2,3,4,7,8-HxCDF	8.7E-10	U	MG/L	nc	NA
MW02D	1,2,3,4,7,8-HxCDF	5.7E-10	U	MG/L	nc	NA
MW-LEA-01	1,2,3,6,7,8-Hexachlorodibenzofuran (filtered)	1.961E-08	U	MG/L	nc	NA
MW-LEA-02	1,2,3,6,7,8-Hexachlorodibenzofuran (filtered)	1.468E-08	U	MG/L	nc	NA
MW-LEA-02	1,2,3,6,7,8-Hexachlorodibenzofuran (filtered)	7.629E-09	U	MG/L	nc	NA
MW-05S	1,2,3,6,7,8-Hexachlorodibenzofuran (filtered)	4.554E-09	U	MG/L	nc	NA
MW-LEA-03	1,2,3,6,7,8-Hexachlorodibenzofuran (filtered)	3.929E-09	U	MG/L	nc	NA
MW-LEA-01	1,2,3,6,7,8-Hexachlorodibenzofuran (unfiltered)	1.976E-08	U	MG/L	nc	NA
MW-05S	1,2,3,6,7,8-Hexachlorodibenzofuran (unfiltered)	1.013E-08	U	MG/L	nc	NA
MW-LEA-03	1,2,3,6,7,8-Hexachlorodibenzofuran (unfiltered)	4.915E-09	U	MG/L	nc	NA
MW-LEA-02	1,2,3,6,7,8-Hexachlorodibenzofuran (unfiltered)	1.429E-09	U	MG/L	nc	NA
MW-LEA-02	1,2,3,6,7,8-Hexachlorodibenzofuran (unfiltered)	6.94E-10	U	MG/L	nc	NA
MW-LEA-01	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin (filtered)	2.415E-08	U	MG/L	nc	NA
MW-LEA-02	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin (filtered)	1.582E-08	U	MG/L	nc	NA
MW-LEA-02	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin (filtered)	6.565E-09	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW-05S	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin (filtered)	4.889E-09	U	MG/L	nc	NA
MW-LEA-03	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin (filtered)	2.799E-09	U	MG/L	nc	NA
MW-LEA-01	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin (unfiltered)	1.729E-08	U	MG/L	nc	NA
MW-05S	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin (unfiltered)	5.223E-09	U	MG/L	nc	NA
MW-LEA-03	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin (unfiltered)	7.09E-10	U	MG/L	nc	NA
MW-LEA-02	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin (unfiltered)	4.59E-10	U	MG/L	nc	NA
MW-LEA-02	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin (unfiltered)	4.26E-10	U	MG/L	nc	NA
MW04S	1,2,3,6,7,8-HxCDD	6.6E-09	EMPC	MG/L	nc	NA
GEC2	1,2,3,6,7,8-HxCDD	1.8E-09	EMPC	MG/L	nc	NA
MW12B	1,2,3,6,7,8-HxCDD	1.4E-09	EMPC	MG/L	nc	NA
MW07D	1,2,3,6,7,8-HxCDD	0.000000004	J	MG/L	nc	NA
MW15D	1,2,3,6,7,8-HxCDD	6.1E-09	U	MG/L	nc	NA
MW03S	1,2,3,6,7,8-HxCDD	5.4E-09	U	MG/L	nc	NA
MW06S	1,2,3,6,7,8-HxCDD	5.1E-09	U	MG/L	nc	NA
MW10D	1,2,3,6,7,8-HxCDD	4.5E-09	U	MG/L	nc	NA
MW01S	1,2,3,6,7,8-HxCDD	4.5E-09	U	MG/L	nc	NA
MW01S	1,2,3,6,7,8-HxCDD	4.1E-09	U	MG/L	nc	NA
MW01S	1,2,3,6,7,8-HxCDD	4.1E-09	U	MG/L	nc	NA
MW07S	1,2,3,6,7,8-HxCDD	0.000000004	U	MG/L	nc	NA
MW03S	1,2,3,6,7,8-HxCDD	0.000000004	U	MG/L	nc	NA
MW13S	1,2,3,6,7,8-HxCDD	3.8E-09	U	MG/L	nc	NA
GEC6	1,2,3,6,7,8-HxCDD	3.8E-09	U	MG/L	nc	NA
MW05S	1,2,3,6,7,8-HxCDD	3.8E-09	U	MG/L	nc	NA
MW09S	1,2,3,6,7,8-HxCDD	3.8E-09	U	MG/L	nc	NA
MW10D	1,2,3,6,7,8-HxCDD	3.3E-09	U	MG/L	nc	NA
MW04S	1,2,3,6,7,8-HxCDD	3.2E-09	U	MG/L	nc	NA
TMW3	1,2,3,6,7,8-HxCDD	3.1E-09	U	MG/L	nc	NA
MW01S	1,2,3,6,7,8-HxCDD	0.000000003	U	MG/L	nc	NA
MW09S	1,2,3,6,7,8-HxCDD	2.9E-09	U	MG/L	nc	NA
MW08S	1,2,3,6,7,8-HxCDD	2.9E-09	U	MG/L	nc	NA
MW12D	1,2,3,6,7,8-HxCDD	2.8E-09	U	MG/L	nc	NA
MW10B	1,2,3,6,7,8-HxCDD	2.7E-09	U	MG/L	nc	NA
MW12B	1,2,3,6,7,8-HxCDD	2.7E-09	U	MG/L	nc	NA
MW13D	1,2,3,6,7,8-HxCDD	2.6E-09	U	MG/L	nc	NA
MW11S	1,2,3,6,7,8-HxCDD	2.6E-09	U	MG/L	nc	NA
MW06S	1,2,3,6,7,8-HxCDD	2.6E-09	U	MG/L	nc	NA
MW04B	1,2,3,6,7,8-HxCDD	2.6E-09	U	MG/L	nc	NA
MW02S	1,2,3,6,7,8-HxCDD	2.6E-09	U	MG/L	nc	NA
MW13B	1,2,3,6,7,8-HxCDD	2.5E-09	U	MG/L	nc	NA
MW11B	1,2,3,6,7,8-HxCDD	2.4E-09	U	MG/L	nc	NA
MW11M	1,2,3,6,7,8-HxCDD	2.4E-09	U	MG/L	nc	NA
MW07S	1,2,3,6,7,8-HxCDD	2.4E-09	U	MG/L	nc	NA
MW08S	1,2,3,6,7,8-HxCDD	2.4E-09	U	MG/L	nc	NA
MW05S	1,2,3,6,7,8-HxCDD	2.32E-09	U	MG/L	nc	NA
MW02S	1,2,3,6,7,8-HxCDD	1.8E-09	U	MG/L	nc	NA
MW05S	1,2,3,6,7,8-HxCDD	1.71E-09	U	MG/L	nc	NA
MW02M	1,2,3,6,7,8-HxCDD	1.7E-09	U	MG/L	nc	NA
MW14M	1,2,3,6,7,8-HxCDD	1.6E-09	U	MG/L	nc	NA
MW02D	1,2,3,6,7,8-HxCDD	1.3E-09	U	MG/L	nc	NA
MW04D	1,2,3,6,7,8-HxCDD	1.2E-09	U	MG/L	nc	NA
MW05S	1,2,3,6,7,8-HxCDD	9E-10	U	MG/L	nc	NA
MW10D	1,2,3,6,7,8-HxCDF	2.5E-09	EMPC	MG/L	nc	NA
MW04S	1,2,3,6,7,8-HxCDF	2.5E-09	EMPC	MG/L	nc	NA
MW05S	1,2,3,6,7,8-HxCDF	1.6E-09	EMPC	MG/L	nc	NA
MW07D	1,2,3,6,7,8-HxCDF	4.4E-09	J	MG/L	nc	NA
MW15D	1,2,3,6,7,8-HxCDF	3.7E-09	U	MG/L	nc	NA
MW03S	1,2,3,6,7,8-HxCDF	3.4E-09	U	MG/L	nc	NA
MW05S	1,2,3,6,7,8-HxCDF	3.38E-09	U	MG/L	nc	NA
MW10D	1,2,3,6,7,8-HxCDF	3.1E-09	U	MG/L	nc	NA
MW12B	1,2,3,6,7,8-HxCDF	0.000000003	U	MG/L	nc	NA
GEC2	1,2,3,6,7,8-HxCDF	0.000000003	U	MG/L	nc	NA
MW06S	1,2,3,6,7,8-HxCDF	0.000000003	U	MG/L	nc	NA
MW11B	1,2,3,6,7,8-HxCDF	2.8E-09	U	MG/L	nc	NA
MW01S	1,2,3,6,7,8-HxCDF	2.8E-09	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW01S	1,2,3,6,7,8-HxCDF	2.7E-09	U	MG/L	nc	NA
MW01S	1,2,3,6,7,8-HxCDF	2.6E-09	U	MG/L	nc	NA
MW03S	1,2,3,6,7,8-HxCDF	2.6E-09	U	MG/L	nc	NA
MW07S	1,2,3,6,7,8-HxCDF	2.5E-09	U	MG/L	nc	NA
MW04D	1,2,3,6,7,8-HxCDF	2.4E-09	U	MG/L	nc	NA
MW09S	1,2,3,6,7,8-HxCDF	2.4E-09	U	MG/L	nc	NA
MW13S	1,2,3,6,7,8-HxCDF	2.3E-09	U	MG/L	nc	NA
GEC6	1,2,3,6,7,8-HxCDF	2.3E-09	U	MG/L	nc	NA
TMW3	1,2,3,6,7,8-HxCDF	2.2E-09	U	MG/L	nc	NA
MW04S	1,2,3,6,7,8-HxCDF	2.2E-09	U	MG/L	nc	NA
MW13B	1,2,3,6,7,8-HxCDF	1.8E-09	U	MG/L	nc	NA
MW12D	1,2,3,6,7,8-HxCDF	1.8E-09	U	MG/L	nc	NA
MW01S	1,2,3,6,7,8-HxCDF	1.8E-09	U	MG/L	nc	NA
MW02S	1,2,3,6,7,8-HxCDF	1.8E-09	U	MG/L	nc	NA
MW08S	1,2,3,6,7,8-HxCDF	1.8E-09	U	MG/L	nc	NA
MW10B	1,2,3,6,7,8-HxCDF	1.7E-09	U	MG/L	nc	NA
MW08S	1,2,3,6,7,8-HxCDF	1.7E-09	U	MG/L	nc	NA
MW04B	1,2,3,6,7,8-HxCDF	1.7E-09	U	MG/L	nc	NA
MW13D	1,2,3,6,7,8-HxCDF	1.6E-09	U	MG/L	nc	NA
MW12B	1,2,3,6,7,8-HxCDF	1.6E-09	U	MG/L	nc	NA
MW06S	1,2,3,6,7,8-HxCDF	1.6E-09	U	MG/L	nc	NA
MW09S	1,2,3,6,7,8-HxCDF	1.6E-09	U	MG/L	nc	NA
MW11M	1,2,3,6,7,8-HxCDF	1.5E-09	U	MG/L	nc	NA
MW11S	1,2,3,6,7,8-HxCDF	1.5E-09	U	MG/L	nc	NA
MW07S	1,2,3,6,7,8-HxCDF	1.5E-09	U	MG/L	nc	NA
MW02S	1,2,3,6,7,8-HxCDF	1.2E-09	U	MG/L	nc	NA
MW02M	1,2,3,6,7,8-HxCDF	1.1E-09	U	MG/L	nc	NA
MW14M	1,2,3,6,7,8-HxCDF	0.000000001	U	MG/L	nc	NA
MW05S	1,2,3,6,7,8-HxCDF	8.4E-10	U	MG/L	nc	NA
MW02D	1,2,3,6,7,8-HxCDF	8E-10	U	MG/L	nc	NA
MW05S	1,2,3,6,7,8-HxCDF	6.1E-10	U	MG/L	nc	NA
MW-LEA-01	1,2,3,7,8,9-Hexachlorodibenzofuran (filtered)	2.708E-08	U	MG/L	nc	NA
MW-LEA-02	1,2,3,7,8,9-Hexachlorodibenzofuran (filtered)	2.028E-08	U	MG/L	nc	NA
MW-LEA-02	1,2,3,7,8,9-Hexachlorodibenzofuran (filtered)	1.053E-08	U	MG/L	nc	NA
MW-05S	1,2,3,7,8,9-Hexachlorodibenzofuran (filtered)	6.291E-09	U	MG/L	nc	NA
MW-LEA-03	1,2,3,7,8,9-Hexachlorodibenzofuran (filtered)	5.427E-09	U	MG/L	nc	NA
MW-LEA-01	1,2,3,7,8,9-Hexachlorodibenzofuran (unfiltered)	2.644E-08	U	MG/L	nc	NA
MW-05S	1,2,3,7,8,9-Hexachlorodibenzofuran (unfiltered)	1.356E-08	U	MG/L	nc	NA
MW-LEA-03	1,2,3,7,8,9-Hexachlorodibenzofuran (unfiltered)	6.577E-09	U	MG/L	nc	NA
MW-LEA-02	1,2,3,7,8,9-Hexachlorodibenzofuran (unfiltered)	1.912E-09	U	MG/L	nc	NA
MW-LEA-02	1,2,3,7,8,9-Hexachlorodibenzofuran (unfiltered)	9.29E-10	U	MG/L	nc	NA
MW-LEA-01	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin (filtered)	2.396E-08	U	MG/L	nc	NA
MW-LEA-02	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin (filtered)	1.57E-08	U	MG/L	nc	NA
MW-LEA-02	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin (filtered)	6.514E-09	U	MG/L	nc	NA
MW-05S	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin (filtered)	4.851E-09	U	MG/L	nc	NA
MW-LEA-03	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin (filtered)	2.778E-09	U	MG/L	nc	NA
MW-LEA-01	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin (unfiltered)	1.721E-08	U	MG/L	nc	NA
MW-05S	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin (unfiltered)	5.2E-09	U	MG/L	nc	NA
MW-LEA-03	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin (unfiltered)	7.06E-10	U	MG/L	nc	NA
MW-LEA-02	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin (unfiltered)	4.57E-10	U	MG/L	nc	NA
MW-LEA-02	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin (unfiltered)	4.24E-10	U	MG/L	nc	NA
MW07D	1,2,3,7,8,9-HxCDD	4.2E-09	EMPC	MG/L	nc	NA
MW10D	1,2,3,7,8,9-HxCDD	4.1E-09	EMPC	MG/L	nc	NA
MW04D	1,2,3,7,8,9-HxCDD	3.8E-09	EMPC	MG/L	nc	NA
MW04S	1,2,3,7,8,9-HxCDD	5.1E-09	J	MG/L	nc	NA
MW15D	1,2,3,7,8,9-HxCDD	0.000000006	U	MG/L	nc	NA
MW03S	1,2,3,7,8,9-HxCDD	5.3E-09	U	MG/L	nc	NA
MW06S	1,2,3,7,8,9-HxCDD	4.9E-09	U	MG/L	nc	NA
MW10D	1,2,3,7,8,9-HxCDD	4.4E-09	U	MG/L	nc	NA
MW01S	1,2,3,7,8,9-HxCDD	4.3E-09	U	MG/L	nc	NA
MW01S	1,2,3,7,8,9-HxCDD	0.000000004	U	MG/L	nc	NA
MW07S	1,2,3,7,8,9-HxCDD	3.9E-09	U	MG/L	nc	NA
MW01S	1,2,3,7,8,9-HxCDD	3.9E-09	U	MG/L	nc	NA
MW03S	1,2,3,7,8,9-HxCDD	3.8E-09	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
GEC6	1,2,3,7,8,9-HxCDD	3.7E-09	U	MG/L	nc	NA
MW05S	1,2,3,7,8,9-HxCDD	3.7E-09	U	MG/L	nc	NA
MW13S	1,2,3,7,8,9-HxCDD	3.6E-09	U	MG/L	nc	NA
MW09S	1,2,3,7,8,9-HxCDD	3.6E-09	U	MG/L	nc	NA
MW04S	1,2,3,7,8,9-HxCDD	3.1E-09	U	MG/L	nc	NA
TMW3	1,2,3,7,8,9-HxCDD	0.000000003	U	MG/L	nc	NA
MW01S	1,2,3,7,8,9-HxCDD	0.000000003	U	MG/L	nc	NA
MW09S	1,2,3,7,8,9-HxCDD	2.8E-09	U	MG/L	nc	NA
MW08S	1,2,3,7,8,9-HxCDD	2.8E-09	U	MG/L	nc	NA
MW12D	1,2,3,7,8,9-HxCDD	2.7E-09	U	MG/L	nc	NA
MW10B	1,2,3,7,8,9-HxCDD	2.6E-09	U	MG/L	nc	NA
MW12B	1,2,3,7,8,9-HxCDD	2.6E-09	U	MG/L	nc	NA
MW06S	1,2,3,7,8,9-HxCDD	2.6E-09	U	MG/L	nc	NA
MW04B	1,2,3,7,8,9-HxCDD	2.5E-09	U	MG/L	nc	NA
MW02S	1,2,3,7,8,9-HxCDD	2.5E-09	U	MG/L	nc	NA
MW13B	1,2,3,7,8,9-HxCDD	2.4E-09	U	MG/L	nc	NA
MW13D	1,2,3,7,8,9-HxCDD	2.4E-09	U	MG/L	nc	NA
MW11B	1,2,3,7,8,9-HxCDD	2.4E-09	U	MG/L	nc	NA
MW11S	1,2,3,7,8,9-HxCDD	2.4E-09	U	MG/L	nc	NA
MW07S	1,2,3,7,8,9-HxCDD	2.4E-09	U	MG/L	nc	NA
MW08S	1,2,3,7,8,9-HxCDD	2.4E-09	U	MG/L	nc	NA
MW11M	1,2,3,7,8,9-HxCDD	2.3E-09	U	MG/L	nc	NA
GEC2	1,2,3,7,8,9-HxCDD	2.3E-09	U	MG/L	nc	NA
MW05S	1,2,3,7,8,9-HxCDD	2.12E-09	U	MG/L	nc	NA
MW12B	1,2,3,7,8,9-HxCDD	2.1E-09	U	MG/L	nc	NA
MW02S	1,2,3,7,8,9-HxCDD	1.7E-09	U	MG/L	nc	NA
MW14M	1,2,3,7,8,9-HxCDD	1.6E-09	U	MG/L	nc	NA
MW02M	1,2,3,7,8,9-HxCDD	1.6E-09	U	MG/L	nc	NA
MW05S	1,2,3,7,8,9-HxCDD	1.52E-09	U	MG/L	nc	NA
MW02D	1,2,3,7,8,9-HxCDD	1.2E-09	U	MG/L	nc	NA
MW05S	1,2,3,7,8,9-HxCDD	8E-10	U	MG/L	nc	NA
MW07D	1,2,3,7,8,9-HxCDF	5.1E-09	EMPC	MG/L	nc	NA
MW10D	1,2,3,7,8,9-HxCDF	0.000000004	EMPC	MG/L	nc	NA
MW05S	1,2,3,7,8,9-HxCDF	0.000000003	EMPC	MG/L	nc	NA
MW04D	1,2,3,7,8,9-HxCDF	0.000000004	J	MG/L	nc	NA
MW04S	1,2,3,7,8,9-HxCDF	2.5E-09	J	MG/L	nc	NA
MW10D	1,2,3,7,8,9-HxCDF	7.5E-09	U	MG/L	nc	NA
MW15D	1,2,3,7,8,9-HxCDF	4.6E-09	U	MG/L	nc	NA
MW03S	1,2,3,7,8,9-HxCDF	4.2E-09	U	MG/L	nc	NA
MW05S	1,2,3,7,8,9-HxCDF	3.92E-09	U	MG/L	nc	NA
MW06S	1,2,3,7,8,9-HxCDF	3.5E-09	U	MG/L	nc	NA
MW01S	1,2,3,7,8,9-HxCDF	3.3E-09	U	MG/L	nc	NA
MW01S	1,2,3,7,8,9-HxCDF	3.2E-09	U	MG/L	nc	NA
MW01S	1,2,3,7,8,9-HxCDF	0.000000003	U	MG/L	nc	NA
MW03S	1,2,3,7,8,9-HxCDF	0.000000003	U	MG/L	nc	NA
MW07S	1,2,3,7,8,9-HxCDF	2.9E-09	U	MG/L	nc	NA
GEC6	1,2,3,7,8,9-HxCDF	2.8E-09	U	MG/L	nc	NA
MW09S	1,2,3,7,8,9-HxCDF	2.8E-09	U	MG/L	nc	NA
MW13S	1,2,3,7,8,9-HxCDF	2.7E-09	U	MG/L	nc	NA
MW04S	1,2,3,7,8,9-HxCDF	2.7E-09	U	MG/L	nc	NA
TMW3	1,2,3,7,8,9-HxCDF	2.6E-09	U	MG/L	nc	NA
MW01S	1,2,3,7,8,9-HxCDF	2.2E-09	U	MG/L	nc	NA
MW02S	1,2,3,7,8,9-HxCDF	2.2E-09	U	MG/L	nc	NA
MW13B	1,2,3,7,8,9-HxCDF	2.1E-09	U	MG/L	nc	NA
MW12D	1,2,3,7,8,9-HxCDF	2.1E-09	U	MG/L	nc	NA
MW08S	1,2,3,7,8,9-HxCDF	2.1E-09	U	MG/L	nc	NA
MW04B	1,2,3,7,8,9-HxCDF	2.1E-09	U	MG/L	nc	NA
MW08S	1,2,3,7,8,9-HxCDF	2.1E-09	U	MG/L	nc	NA
MW12B	1,2,3,7,8,9-HxCDF	0.000000002	U	MG/L	nc	NA
MW06S	1,2,3,7,8,9-HxCDF	0.000000002	U	MG/L	nc	NA
MW09S	1,2,3,7,8,9-HxCDF	0.000000002	U	MG/L	nc	NA
MW10B	1,2,3,7,8,9-HxCDF	1.9E-09	U	MG/L	nc	NA
MW11M	1,2,3,7,8,9-HxCDF	1.9E-09	U	MG/L	nc	NA
GEC2	1,2,3,7,8,9-HxCDF	1.9E-09	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW07S	1,2,3,7,8,9-HxCDF	1.9E-09	U	MG/L	nc	NA
MW13D	1,2,3,7,8,9-HxCDF	1.8E-09	U	MG/L	nc	NA
MW11B	1,2,3,7,8,9-HxCDF	1.8E-09	U	MG/L	nc	NA
MW11S	1,2,3,7,8,9-HxCDF	1.8E-09	U	MG/L	nc	NA
MW12B	1,2,3,7,8,9-HxCDF	1.5E-09	U	MG/L	nc	NA
MW02S	1,2,3,7,8,9-HxCDF	1.4E-09	U	MG/L	nc	NA
MW02M	1,2,3,7,8,9-HxCDF	1.3E-09	U	MG/L	nc	NA
MW14M	1,2,3,7,8,9-HxCDF	1.2E-09	U	MG/L	nc	NA
MW05S	1,2,3,7,8,9-HxCDF	9.6E-10	U	MG/L	nc	NA
MW02D	1,2,3,7,8,9-HxCDF	9E-10	U	MG/L	nc	NA
MW05S	1,2,3,7,8,9-HxCDF	4.5E-10	U	MG/L	nc	NA
MW05S	1,2,3,7,8-PeCDD	0.000000202		MG/L	nc	NA
MW05S	1,2,3,7,8-PeCDD	6.19E-09		MG/L	nc	NA
MW07D	1,2,3,7,8-PeCDD	3.3E-09	EMPC	MG/L	nc	NA
MW11S	1,2,3,7,8-PeCDD	1.5E-09	EMPC	MG/L	nc	NA
MW04S	1,2,3,7,8-PeCDD	3.2E-09	J	MG/L	nc	NA
MW04D	1,2,3,7,8-PeCDD	3.2E-09	J	MG/L	nc	NA
MW15D	1,2,3,7,8-PeCDD	6.1E-09	U	MG/L	nc	NA
MW05S	1,2,3,7,8-PeCDD	5.57E-09	U	MG/L	nc	NA
MW05S	1,2,3,7,8-PeCDD	5.42E-09	U	MG/L	nc	NA
MW03S	1,2,3,7,8-PeCDD	4.9E-09	U	MG/L	nc	NA
MW06S	1,2,3,7,8-PeCDD	4.5E-09	U	MG/L	nc	NA
MW01S	1,2,3,7,8-PeCDD	3.7E-09	U	MG/L	nc	NA
MW10D	1,2,3,7,8-PeCDD	3.5E-09	U	MG/L	nc	NA
GEC6	1,2,3,7,8-PeCDD	3.5E-09	U	MG/L	nc	NA
MW07S	1,2,3,7,8-PeCDD	3.5E-09	U	MG/L	nc	NA
MW03S	1,2,3,7,8-PeCDD	3.5E-09	U	MG/L	nc	NA
MW01S	1,2,3,7,8-PeCDD	3.4E-09	U	MG/L	nc	NA
MW01S	1,2,3,7,8-PeCDD	3.3E-09	U	MG/L	nc	NA
MW09S	1,2,3,7,8-PeCDD	3.2E-09	U	MG/L	nc	NA
MW13S	1,2,3,7,8-PeCDD	0.000000003	U	MG/L	nc	NA
MW10D	1,2,3,7,8-PeCDD	2.8E-09	U	MG/L	nc	NA
MW12B	1,2,3,7,8-PeCDD	2.8E-09	U	MG/L	nc	NA
MW12D	1,2,3,7,8-PeCDD	2.7E-09	U	MG/L	nc	NA
MW01S	1,2,3,7,8-PeCDD	2.7E-09	U	MG/L	nc	NA
TMW3	1,2,3,7,8-PeCDD	2.6E-09	U	MG/L	nc	NA
MW10B	1,2,3,7,8-PeCDD	2.5E-09	U	MG/L	nc	NA
MW11B	1,2,3,7,8-PeCDD	2.5E-09	U	MG/L	nc	NA
MW08S	1,2,3,7,8-PeCDD	2.5E-09	U	MG/L	nc	NA
MW13D	1,2,3,7,8-PeCDD	2.4E-09	U	MG/L	nc	NA
MW09S	1,2,3,7,8-PeCDD	2.4E-09	U	MG/L	nc	NA
MW11M	1,2,3,7,8-PeCDD	2.3E-09	U	MG/L	nc	NA
MW04S	1,2,3,7,8-PeCDD	2.3E-09	U	MG/L	nc	NA
GEC2	1,2,3,7,8-PeCDD	2.2E-09	U	MG/L	nc	NA
MW06S	1,2,3,7,8-PeCDD	2.2E-09	U	MG/L	nc	NA
MW08S	1,2,3,7,8-PeCDD	2.1E-09	U	MG/L	nc	NA
MW14M	1,2,3,7,8-PeCDD	0.000000002	U	MG/L	nc	NA
MW07S	1,2,3,7,8-PeCDD	0.000000002	U	MG/L	nc	NA
MW13B	1,2,3,7,8-PeCDD	1.9E-09	U	MG/L	nc	NA
MW12B	1,2,3,7,8-PeCDD	1.9E-09	U	MG/L	nc	NA
MW02S	1,2,3,7,8-PeCDD	1.9E-09	U	MG/L	nc	NA
MW04B	1,2,3,7,8-PeCDD	1.6E-09	U	MG/L	nc	NA
MW02S	1,2,3,7,8-PeCDD	1.6E-09	U	MG/L	nc	NA
MW02M	1,2,3,7,8-PeCDD	1.2E-09	U	MG/L	nc	NA
MW02D	1,2,3,7,8-PeCDD	8E-10	U	MG/L	nc	NA
MW04D	1,2,3,7,8-PeCDF	3.6E-09	EMPC	MG/L	nc	NA
MW04S	1,2,3,7,8-PeCDF	3.9E-09	J	MG/L	nc	NA
MW07D	1,2,3,7,8-PeCDF	3.8E-09	J	MG/L	nc	NA
MW07S	1,2,3,7,8-PeCDF	2.7E-09	J	MG/L	nc	NA
MW06S	1,2,3,7,8-PeCDF	2.3E-09	J	MG/L	nc	NA
MW10D	1,2,3,7,8-PeCDF	5.1E-09	U	MG/L	nc	NA
MW15D	1,2,3,7,8-PeCDF	4.8E-09	U	MG/L	nc	NA
GEC2	1,2,3,7,8-PeCDF	4.7E-09	U	MG/L	nc	NA
MW12B	1,2,3,7,8-PeCDF	3.9E-09	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW03S	1,2,3,7,8-PeCDF	3.9E-09	U	MG/L	nc	NA
MW12B	1,2,3,7,8-PeCDF	3.7E-09	U	MG/L	nc	NA
MW01S	1,2,3,7,8-PeCDF	2.9E-09	U	MG/L	nc	NA
MW06S	1,2,3,7,8-PeCDF	2.9E-09	U	MG/L	nc	NA
MW10D	1,2,3,7,8-PeCDF	2.8E-09	U	MG/L	nc	NA
MW13S	1,2,3,7,8-PeCDF	2.8E-09	U	MG/L	nc	NA
GEC6	1,2,3,7,8-PeCDF	2.5E-09	U	MG/L	nc	NA
MW07S	1,2,3,7,8-PeCDF	2.4E-09	U	MG/L	nc	NA
MW03S	1,2,3,7,8-PeCDF	2.4E-09	U	MG/L	nc	NA
MW12D	1,2,3,7,8-PeCDF	2.3E-09	U	MG/L	nc	NA
MW05S	1,2,3,7,8-PeCDF	2.3E-09	U	MG/L	nc	NA
MW01S	1,2,3,7,8-PeCDF	2.3E-09	U	MG/L	nc	NA
MW01S	1,2,3,7,8-PeCDF	2.2E-09	U	MG/L	nc	NA
MW09S	1,2,3,7,8-PeCDF	2.2E-09	U	MG/L	nc	NA
MW10B	1,2,3,7,8-PeCDF	2.1E-09	U	MG/L	nc	NA
MW13D	1,2,3,7,8-PeCDF	0.000000002	U	MG/L	nc	NA
MW01S	1,2,3,7,8-PeCDF	0.000000002	U	MG/L	nc	NA
TMW3	1,2,3,7,8-PeCDF	1.9E-09	U	MG/L	nc	NA
MW11B	1,2,3,7,8-PeCDF	1.9E-09	U	MG/L	nc	NA
MW11S	1,2,3,7,8-PeCDF	1.9E-09	U	MG/L	nc	NA
MW08S	1,2,3,7,8-PeCDF	1.9E-09	U	MG/L	nc	NA
MW04S	1,2,3,7,8-PeCDF	1.8E-09	U	MG/L	nc	NA
MW05S	1,2,3,7,8-PeCDF	1.72E-09	U	MG/L	nc	NA
MW11M	1,2,3,7,8-PeCDF	1.7E-09	U	MG/L	nc	NA
MW09S	1,2,3,7,8-PeCDF	1.7E-09	U	MG/L	nc	NA
MW05S	1,2,3,7,8-PeCDF	1.67E-09	U	MG/L	nc	NA
MW13B	1,2,3,7,8-PeCDF	1.6E-09	U	MG/L	nc	NA
MW02S	1,2,3,7,8-PeCDF	1.6E-09	U	MG/L	nc	NA
MW08S	1,2,3,7,8-PeCDF	1.5E-09	U	MG/L	nc	NA
MW04B	1,2,3,7,8-PeCDF	1.4E-09	U	MG/L	nc	NA
MW14M	1,2,3,7,8-PeCDF	1.3E-09	U	MG/L	nc	NA
MW02S	1,2,3,7,8-PeCDF	1.1E-09	U	MG/L	nc	NA
MW02M	1,2,3,7,8-PeCDF	0.000000001	U	MG/L	nc	NA
MW02D	1,2,3,7,8-PeCDF	7E-10	U	MG/L	nc	NA
MW05S	1,2,3,7,8-PeCDF	8.02E-09	UJ	MG/L	nc	NA
MW-LEA-01	1,2,3,7,8-Pentachlorodibenzofuran (filtered)	1.376E-08	U	MG/L	nc	NA
MW-LEA-02	1,2,3,7,8-Pentachlorodibenzofuran (filtered)	8.613E-09	U	MG/L	nc	NA
MW-LEA-02	1,2,3,7,8-Pentachlorodibenzofuran (filtered)	3.062E-09	U	MG/L	nc	NA
MW-05S	1,2,3,7,8-Pentachlorodibenzofuran (filtered)	2.769E-09	U	MG/L	nc	NA
MW-LEA-03	1,2,3,7,8-Pentachlorodibenzofuran (filtered)	1.953E-09	U	MG/L	nc	NA
MW-LEA-01	1,2,3,7,8-Pentachlorodibenzofuran (unfiltered)	2.74E-09	U	MG/L	nc	NA
MW-05S	1,2,3,7,8-Pentachlorodibenzofuran (unfiltered)	2.053E-09	U	MG/L	nc	NA
MW-LEA-03	1,2,3,7,8-Pentachlorodibenzofuran (unfiltered)	1.52E-09	U	MG/L	nc	NA
MW-LEA-02	1,2,3,7,8-Pentachlorodibenzofuran (unfiltered)	9.5E-10	U	MG/L	nc	NA
MW-LEA-02	1,2,3,7,8-Pentachlorodibenzofuran (unfiltered)	6.64E-10	U	MG/L	nc	NA
MW-LEA-01	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin (filtered)	1.715E-08	U	MG/L	nc	NA
MW-LEA-02	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin (filtered)	1.618E-08	U	MG/L	nc	NA
MW-LEA-02	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin (filtered)	4.36E-09	U	MG/L	nc	NA
MW-05S	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin (filtered)	3.625E-09	U	MG/L	nc	NA
MW-LEA-03	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin (filtered)	2.443E-09	U	MG/L	nc	NA
MW-05S	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin (unfiltered)	4.24418E-07		MG/L	nc	NA
MW-LEA-03	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin (unfiltered)	1.02306E-07		MG/L	nc	NA
MW-LEA-01	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin (unfiltered)	3.641E-09	U	MG/L	nc	NA
MW-LEA-02	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin (unfiltered)	1.065E-09	U	MG/L	nc	NA
MW-LEA-02	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin (unfiltered)	9.73E-10	U	MG/L	nc	NA
MW-LEA-01	1,2,3-Trichlorobenzene	20	Uw	MG/L	nc	NA
MW-LEA-01	1,2,3-Trichlorobenzene	2	Uw	MG/L	nc	NA
MW-LEA-02	1,2,3-Trichlorobenzene	2	Uw	MG/L	nc	NA
MW-05S	1,2,3-Trichlorobenzene	2	Uw	MG/L	nc	NA
MW-LEA-02	1,2,3-Trichlorobenzene	2	Uw	MG/L	nc	NA
MW-LEA-02	1,2,3-Trichlorobenzene	0.2	Uw	MG/L	nc	NA
MW-LEA-03	1,2,3-Trichlorobenzene	0.2	Uw	MG/L	nc	NA
MW-LEA-03	1,2,3-Trichlorobenzene	0.004	Uw	MG/L	nc	NA
MW05S	1,2,3-TRICHLOROBENZENE	1	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW05S	1,2,3-TRICHLOROBENZENE	1	U	MG/L	nc	NA
MW05S	1,2,3-trichlorobenzene	1	U	MG/L	nc	NA
MW05S	1,2,3-trichlorobenzene	1	U	MG/L	nc	NA
MW14M	1,2,3-trichlorobenzene	0.1	U	MG/L	nc	NA
MW06S	1,2,3-trichlorobenzene	0.01	U	MG/L	nc	NA
MW13D	1,2,3-trichlorobenzene	0.01	U	MG/L	nc	NA
MW06S	1,2,3-trichlorobenzene	0.006	U	MG/L	nc	NA
MW02M	1,2,3-trichlorobenzene	0.005	U	MG/L	nc	NA
MW02D	1,2,3-trichlorobenzene	0.004	U	MG/L	nc	NA
MW13B	1,2,3-trichlorobenzene	0.004	U	MG/L	nc	NA
MW03S	1,2,3-trichlorobenzene	0.001	U	MG/L	nc	NA
GEC3	1,2,3-trichlorobenzene	0.001	U	MG/L	nc	NA
MW01S	1,2,3-trichlorobenzene	0.001	U	MG/L	nc	NA
MW11S	1,2,3-trichlorobenzene	0.001	U	MG/L	nc	NA
MW12B	1,2,3-trichlorobenzene	0.001	U	MG/L	nc	NA
MW12D	1,2,3-trichlorobenzene	0.001	U	MG/L	nc	NA
GEC1	1,2,3-trichlorobenzene	0.001	U	MG/L	nc	NA
GEC2	1,2,3-trichlorobenzene	0.001	U	MG/L	nc	NA
GEC4	1,2,3-trichlorobenzene	0.001	U	MG/L	nc	NA
GEC5	1,2,3-trichlorobenzene	0.001	U	MG/L	nc	NA
GEC6	1,2,3-trichlorobenzene	0.001	U	MG/L	nc	NA
GEC7	1,2,3-trichlorobenzene	0.001	U	MG/L	nc	NA
MW07D	1,2,3-trichlorobenzene	0.001	U	MG/L	nc	NA
MW07S	1,2,3-trichlorobenzene	0.001	U	MG/L	nc	NA
MW11B	1,2,3-trichlorobenzene	0.001	U	MG/L	nc	NA
MW11M	1,2,3-trichlorobenzene	0.001	U	MG/L	nc	NA
MW15D	1,2,3-trichlorobenzene	0.001	U	MG/L	nc	NA
MW02S	1,2,3-trichlorobenzene	0.001	U	MG/L	nc	NA
MW04B	1,2,3-trichlorobenzene	0.001	U	MG/L	nc	NA
MW04D	1,2,3-trichlorobenzene	0.001	U	MG/L	nc	NA
MW04S	1,2,3-trichlorobenzene	0.001	U	MG/L	nc	NA
MW08S	1,2,3-trichlorobenzene	0.001	U	MG/L	nc	NA
MW09S	1,2,3-trichlorobenzene	0.001	U	MG/L	nc	NA
MW10B	1,2,3-trichlorobenzene	0.001	U	MG/L	nc	NA
MW10D	1,2,3-trichlorobenzene	0.001	U	MG/L	nc	NA
MW13S	1,2,3-trichlorobenzene	0.001	U	MG/L	nc	NA
MW-LEA-01	1,2,3-Trichloropropane		Rw	MG/L	nc	NA
MW-LEA-02	1,2,3-Trichloropropane		Rw	MG/L	nc	NA
MW-05S	1,2,3-Trichloropropane		Rw	MG/L	nc	NA
MW-LEA-01	1,2,3-Trichloropropane	20	Uw	MG/L	nc	NA
MW-LEA-02	1,2,3-Trichloropropane	2	Uw	MG/L	nc	NA
MW-LEA-02	1,2,3-Trichloropropane	0.2	Uw	MG/L	nc	NA
MW-LEA-03	1,2,3-Trichloropropane	0.2	Uw	MG/L	nc	NA
MW-LEA-03	1,2,3-Trichloropropane	0.004	Uw	MG/L	nc	NA
MW05S	1,2,3-TRICHLOROPROPANE	1	U	MG/L	nc	NA
MW05S	1,2,3-TRICHLOROPROPANE	1	U	MG/L	nc	NA
MW05S	1,2,3-trichloropropane	1	U	MG/L	nc	NA
MW05S	1,2,3-trichloropropane	1	U	MG/L	nc	NA
MW14M	1,2,3-trichloropropane	0.1	U	MG/L	nc	NA
MW06S	1,2,3-trichloropropane	0.01	U	MG/L	nc	NA
MW13D	1,2,3-trichloropropane	0.01	U	MG/L	nc	NA
MW06S	1,2,3-trichloropropane	0.006	U	MG/L	nc	NA
MW02M	1,2,3-trichloropropane	0.005	U	MG/L	nc	NA
MW02D	1,2,3-trichloropropane	0.004	U	MG/L	nc	NA
MW13B	1,2,3-trichloropropane	0.004	U	MG/L	nc	NA
MW03S	1,2,3-trichloropropane	0.001	U	MG/L	nc	NA
GEC3	1,2,3-trichloropropane	0.001	U	MG/L	nc	NA
MW01S	1,2,3-trichloropropane	0.001	U	MG/L	nc	NA
MW11S	1,2,3-trichloropropane	0.001	U	MG/L	nc	NA
MW12B	1,2,3-trichloropropane	0.001	U	MG/L	nc	NA
MW12D	1,2,3-trichloropropane	0.001	U	MG/L	nc	NA
GEC1	1,2,3-trichloropropane	0.001	U	MG/L	nc	NA
GEC2	1,2,3-trichloropropane	0.001	U	MG/L	nc	NA
GEC4	1,2,3-trichloropropane	0.001	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
GEC5	1,2,3-trichloropropane	0.001	U	MG/L	nc	NA
GEC6	1,2,3-trichloropropane	0.001	U	MG/L	nc	NA
GEC7	1,2,3-trichloropropane	0.001	U	MG/L	nc	NA
MW07D	1,2,3-trichloropropane	0.001	U	MG/L	nc	NA
MW07S	1,2,3-trichloropropane	0.001	U	MG/L	nc	NA
MW11B	1,2,3-trichloropropane	0.001	U	MG/L	nc	NA
MW11M	1,2,3-trichloropropane	0.001	U	MG/L	nc	NA
MW15D	1,2,3-trichloropropane	0.001	U	MG/L	nc	NA
MW02S	1,2,3-trichloropropane	0.001	U	MG/L	nc	NA
MW04B	1,2,3-trichloropropane	0.001	U	MG/L	nc	NA
MW04D	1,2,3-trichloropropane	0.001	U	MG/L	nc	NA
MW04S	1,2,3-trichloropropane	0.001	U	MG/L	nc	NA
MW08S	1,2,3-trichloropropane	0.001	U	MG/L	nc	NA
MW09S	1,2,3-trichloropropane	0.001	U	MG/L	nc	NA
MW10B	1,2,3-trichloropropane	0.001	U	MG/L	nc	NA
MW10D	1,2,3-trichloropropane	0.001	U	MG/L	nc	NA
MW13S	1,2,3-trichloropropane	0.001	U	MG/L	nc	NA
MW05S	1,2,4,5,7,8-hexachloro(9h)xanthene	0.00000027	J	MG/L	nc	NA
MW05S	1,2,4,7,8-pentachlorodibenzo-p-dioxin	0.004	NJ	MG/L	nc	NA
MW-LEA-01	1,2,4-Trichlorobenzene	20	Uw	MG/L	0.07	NA
MW-LEA-01	1,2,4-Trichlorobenzene	2	Uw	MG/L	0.07	NA
MW-LEA-02	1,2,4-Trichlorobenzene	2	Uw	MG/L	0.07	NA
MW-05S	1,2,4-Trichlorobenzene	2	Uw	MG/L	0.07	NA
MW-LEA-02	1,2,4-Trichlorobenzene	2	Uw	MG/L	0.07	NA
MW-LEA-02	1,2,4-Trichlorobenzene	0.2	Uw	MG/L	0.07	NA
MW-LEA-03	1,2,4-Trichlorobenzene	0.2	Uw	MG/L	0.07	NA
MW-LEA-03	1,2,4-Trichlorobenzene	0.004	Uw	MG/L	0.07	NA
MW05S	1,2,4-trichlorobenzene	1.7	U	MG/L	0.07	NA
MW05S	1,2,4-TRICHLOROBENZENE	1	U	MG/L	0.07	NA
MW05S	1,2,4-TRICHLOROBENZENE	1	U	MG/L	0.07	NA
MW05S	1,2,4-trichlorobenzene	1	U	MG/L	0.07	NA
MW05S	1,2,4-trichlorobenzene	1	U	MG/L	0.07	NA
MW14M	1,2,4-trichlorobenzene	0.1	U	MG/L	0.07	NA
MW06S	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW13D	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW10D	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW10B	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW10D	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW13B	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW13D	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW13S	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
TMW3	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW12B	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW11B	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW11M	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW11S	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW12B	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW12D	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
GEC2	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
GEC6	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW14M	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW15D	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW01S	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW01S	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW03S	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW06S	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW07D	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW07S	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW08S	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW09S	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW04S	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW04B	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW04D	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW04S	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW02D	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW02M	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW02S	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW02S	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW07S	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW01S	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW01S	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW03S	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW08S	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW09S	1,2,4-trichlorobenzene	0.01	U	MG/L	0.07	NA
MW06S	1,2,4-trichlorobenzene	0.006	U	MG/L	0.07	NA
MW02M	1,2,4-trichlorobenzene	0.005	U	MG/L	0.07	NA
MW02D	1,2,4-trichlorobenzene	0.004	U	MG/L	0.07	NA
MW13B	1,2,4-trichlorobenzene	0.004	U	MG/L	0.07	NA
MW03S	1,2,4-trichlorobenzene	0.001	U	MG/L	0.07	NA
GEC3	1,2,4-trichlorobenzene	0.001	U	MG/L	0.07	NA
MW01S	1,2,4-trichlorobenzene	0.001	U	MG/L	0.07	NA
MW11S	1,2,4-trichlorobenzene	0.001	U	MG/L	0.07	NA
MW12B	1,2,4-trichlorobenzene	0.001	U	MG/L	0.07	NA
MW12D	1,2,4-trichlorobenzene	0.001	U	MG/L	0.07	NA
GEC1	1,2,4-trichlorobenzene	0.001	U	MG/L	0.07	NA
GEC2	1,2,4-trichlorobenzene	0.001	U	MG/L	0.07	NA
GEC4	1,2,4-trichlorobenzene	0.001	U	MG/L	0.07	NA
GEC5	1,2,4-trichlorobenzene	0.001	U	MG/L	0.07	NA
GEC6	1,2,4-trichlorobenzene	0.001	U	MG/L	0.07	NA
GEC7	1,2,4-trichlorobenzene	0.001	U	MG/L	0.07	NA
MW07D	1,2,4-trichlorobenzene	0.001	U	MG/L	0.07	NA
MW07S	1,2,4-trichlorobenzene	0.001	U	MG/L	0.07	NA
MW11B	1,2,4-trichlorobenzene	0.001	U	MG/L	0.07	NA
MW11M	1,2,4-trichlorobenzene	0.001	U	MG/L	0.07	NA
MW15D	1,2,4-trichlorobenzene	0.001	U	MG/L	0.07	NA
MW02S	1,2,4-trichlorobenzene	0.001	U	MG/L	0.07	NA
MW04B	1,2,4-trichlorobenzene	0.001	U	MG/L	0.07	NA
MW04D	1,2,4-trichlorobenzene	0.001	U	MG/L	0.07	NA
MW04S	1,2,4-trichlorobenzene	0.001	U	MG/L	0.07	NA
MW08S	1,2,4-trichlorobenzene	0.001	U	MG/L	0.07	NA
MW09S	1,2,4-trichlorobenzene	0.001	U	MG/L	0.07	NA
MW10B	1,2,4-trichlorobenzene	0.001	U	MG/L	0.07	NA
MW10D	1,2,4-trichlorobenzene	0.001	U	MG/L	0.07	NA
MW13S	1,2,4-trichlorobenzene	0.001	U	MG/L	0.07	NA
MW06S	1,2,4-trichlorobenzene	0.01	UJ	MG/L	0.07	NA
MW-LEA-01	1,2,4-Trimethylbenzene	20	Uw	MG/L	nc	NA
MW-LEA-01	1,2,4-Trimethylbenzene	2	Uw	MG/L	nc	NA
MW-LEA-02	1,2,4-Trimethylbenzene	2	Uw	MG/L	nc	NA
MW-05S	1,2,4-Trimethylbenzene	2	Uw	MG/L	nc	NA
MW-LEA-02	1,2,4-Trimethylbenzene	2	Uw	MG/L	nc	NA
MW-LEA-02	1,2,4-Trimethylbenzene	0.2	Uw	MG/L	nc	NA
MW-LEA-03	1,2,4-Trimethylbenzene	0.2	Uw	MG/L	nc	NA
MW-LEA-03	1,2,4-Trimethylbenzene	0.004	Uw	MG/L	nc	NA
MW08S	1,2,4-trimethylbenzene	0.011	NJ	MG/L	nc	NA
MW08S	1,2,4-trimethylbenzene	0.093	J	MG/L	nc	NA
MW06S	1,2,4-trimethylbenzene	0.0021	J	MG/L	nc	NA
MW05S	1,2,4-TRIMETHYLBENZENE	1	U	MG/L	nc	NA
MW05S	1,2,4-TRIMETHYLBENZENE	1	U	MG/L	nc	NA
MW05S	1,2,4-trimethylbenzene	1	U	MG/L	nc	NA
MW05S	1,2,4-trimethylbenzene	1	U	MG/L	nc	NA
MW14M	1,2,4-trimethylbenzene	0.1	U	MG/L	nc	NA
MW06S	1,2,4-trimethylbenzene	0.01	U	MG/L	nc	NA
MW13D	1,2,4-trimethylbenzene	0.01	U	MG/L	nc	NA
MW02M	1,2,4-trimethylbenzene	0.005	U	MG/L	nc	NA
MW02D	1,2,4-trimethylbenzene	0.004	U	MG/L	nc	NA
MW13B	1,2,4-trimethylbenzene	0.004	U	MG/L	nc	NA
MW03S	1,2,4-trimethylbenzene	0.001	U	MG/L	nc	NA
GEC3	1,2,4-trimethylbenzene	0.001	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW01S	1,2,4-trimethylbenzene	0.001	U	MG/L	nc	NA
MW11S	1,2,4-trimethylbenzene	0.001	U	MG/L	nc	NA
MW12B	1,2,4-trimethylbenzene	0.001	U	MG/L	nc	NA
MW12D	1,2,4-trimethylbenzene	0.001	U	MG/L	nc	NA
GEC1	1,2,4-trimethylbenzene	0.001	U	MG/L	nc	NA
GEC2	1,2,4-trimethylbenzene	0.001	U	MG/L	nc	NA
GEC4	1,2,4-trimethylbenzene	0.001	U	MG/L	nc	NA
GEC5	1,2,4-trimethylbenzene	0.001	U	MG/L	nc	NA
GEC6	1,2,4-trimethylbenzene	0.001	U	MG/L	nc	NA
GEC7	1,2,4-trimethylbenzene	0.001	U	MG/L	nc	NA
MW07D	1,2,4-trimethylbenzene	0.001	U	MG/L	nc	NA
MW07S	1,2,4-trimethylbenzene	0.001	U	MG/L	nc	NA
MW11B	1,2,4-trimethylbenzene	0.001	U	MG/L	nc	NA
MW11M	1,2,4-trimethylbenzene	0.001	U	MG/L	nc	NA
MW15D	1,2,4-trimethylbenzene	0.001	U	MG/L	nc	NA
MW02S	1,2,4-trimethylbenzene	0.001	U	MG/L	nc	NA
MW04B	1,2,4-trimethylbenzene	0.001	U	MG/L	nc	NA
MW04D	1,2,4-trimethylbenzene	0.001	U	MG/L	nc	NA
MW04S	1,2,4-trimethylbenzene	0.001	U	MG/L	nc	NA
MW09S	1,2,4-trimethylbenzene	0.001	U	MG/L	nc	NA
MW10B	1,2,4-trimethylbenzene	0.001	U	MG/L	nc	NA
MW10D	1,2,4-trimethylbenzene	0.001	U	MG/L	nc	NA
MW13S	1,2,4-trimethylbenzene	0.001	U	MG/L	nc	NA
MW-LEA-01	1,2-Dibromo-3-Chloropropane	20	Uw	MG/L	0.0002	NA
MW-LEA-01	1,2-Dibromo-3-Chloropropane	2	Uw	MG/L	0.0002	NA
MW-LEA-02	1,2-Dibromo-3-Chloropropane	2	Uw	MG/L	0.0002	NA
MW-05S	1,2-Dibromo-3-Chloropropane	2	Uw	MG/L	0.0002	NA
MW-LEA-02	1,2-Dibromo-3-Chloropropane	2	Uw	MG/L	0.0002	NA
MW-LEA-02	1,2-Dibromo-3-Chloropropane	0.2	Uw	MG/L	0.0002	NA
MW-LEA-03	1,2-Dibromo-3-Chloropropane	0.2	Uw	MG/L	0.0002	NA
MW-LEA-03	1,2-Dibromo-3-Chloropropane	0.004	Uw	MG/L	0.0002	NA
MW07S	1,2-dibromo-3-chloropropane	0.007	J	MG/L	0.0002	Y
MW05S	1,2-dibromo-3-chloropropane	1.7	U	MG/L	0.0002	NA
MW05S	1,2-dibromo-3-chloropropane	1	U	MG/L	0.0002	NA
MW05S	1,2-dibromo-3-chloropropane	1	U	MG/L	0.0002	NA
MW14M	1,2-dibromo-3-chloropropane	0.1	U	MG/L	0.0002	NA
MW06S	1,2-dibromo-3-chloropropane	0.01	U	MG/L	0.0002	NA
MW13D	1,2-dibromo-3-chloropropane	0.01	U	MG/L	0.0002	NA
MW10D	1,2-dibromo-3-chloropropane	0.01	U	MG/L	0.0002	NA
MW10B	1,2-dibromo-3-chloropropane	0.01	U	MG/L	0.0002	NA
MW10D	1,2-dibromo-3-chloropropane	0.01	U	MG/L	0.0002	NA
MW13B	1,2-dibromo-3-chloropropane	0.01	U	MG/L	0.0002	NA
TMW3	1,2-dibromo-3-chloropropane	0.01	U	MG/L	0.0002	NA
MW11S	1,2-dibromo-3-chloropropane	0.01	U	MG/L	0.0002	NA
MW12D	1,2-dibromo-3-chloropropane	0.01	U	MG/L	0.0002	NA
MW01S	1,2-dibromo-3-chloropropane	0.01	U	MG/L	0.0002	NA
MW01S	1,2-dibromo-3-chloropropane	0.01	U	MG/L	0.0002	NA
MW03S	1,2-dibromo-3-chloropropane	0.01	U	MG/L	0.0002	NA
MW06S	1,2-dibromo-3-chloropropane	0.01	U	MG/L	0.0002	NA
MW08S	1,2-dibromo-3-chloropropane	0.01	U	MG/L	0.0002	NA
MW09S	1,2-dibromo-3-chloropropane	0.01	U	MG/L	0.0002	NA
MW02S	1,2-dibromo-3-chloropropane	0.01	U	MG/L	0.0002	NA
MW06S	1,2-dibromo-3-chloropropane	0.01	U	MG/L	0.0002	NA
MW07S	1,2-dibromo-3-chloropropane	0.01	U	MG/L	0.0002	NA
MW01S	1,2-dibromo-3-chloropropane	0.01	U	MG/L	0.0002	NA
MW01S	1,2-dibromo-3-chloropropane	0.01	U	MG/L	0.0002	NA
MW03S	1,2-dibromo-3-chloropropane	0.01	U	MG/L	0.0002	NA
MW08S	1,2-dibromo-3-chloropropane	0.01	U	MG/L	0.0002	NA
MW09S	1,2-dibromo-3-chloropropane	0.01	U	MG/L	0.0002	NA
MW06S	1,2-dibromo-3-chloropropane	0.006	U	MG/L	0.0002	NA
MW02M	1,2-dibromo-3-chloropropane	0.005	U	MG/L	0.0002	NA
MW02D	1,2-dibromo-3-chloropropane	0.004	U	MG/L	0.0002	NA
MW13B	1,2-dibromo-3-chloropropane	0.004	U	MG/L	0.0002	NA
MW03S	1,2-dibromo-3-chloropropane	0.001	U	MG/L	0.0002	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
GEC3	1,2-dibromo-3-chloropropane	0.001	U	MG/L	0.0002	NA
MW01S	1,2-dibromo-3-chloropropane	0.001	U	MG/L	0.0002	NA
MW11S	1,2-dibromo-3-chloropropane	0.001	U	MG/L	0.0002	NA
MW12B	1,2-dibromo-3-chloropropane	0.001	U	MG/L	0.0002	NA
MW12D	1,2-dibromo-3-chloropropane	0.001	U	MG/L	0.0002	NA
GEC1	1,2-dibromo-3-chloropropane	0.001	U	MG/L	0.0002	NA
GEC2	1,2-dibromo-3-chloropropane	0.001	U	MG/L	0.0002	NA
GEC4	1,2-dibromo-3-chloropropane	0.001	U	MG/L	0.0002	NA
GEC5	1,2-dibromo-3-chloropropane	0.001	U	MG/L	0.0002	NA
GEC6	1,2-dibromo-3-chloropropane	0.001	U	MG/L	0.0002	NA
GEC7	1,2-dibromo-3-chloropropane	0.001	U	MG/L	0.0002	NA
MW07D	1,2-dibromo-3-chloropropane	0.001	U	MG/L	0.0002	NA
MW07S	1,2-dibromo-3-chloropropane	0.001	U	MG/L	0.0002	NA
MW11B	1,2-dibromo-3-chloropropane	0.001	U	MG/L	0.0002	NA
MW11M	1,2-dibromo-3-chloropropane	0.001	U	MG/L	0.0002	NA
MW15D	1,2-dibromo-3-chloropropane	0.001	U	MG/L	0.0002	NA
MW02S	1,2-dibromo-3-chloropropane	0.001	U	MG/L	0.0002	NA
MW04B	1,2-dibromo-3-chloropropane	0.001	U	MG/L	0.0002	NA
MW04D	1,2-dibromo-3-chloropropane	0.001	U	MG/L	0.0002	NA
MW04S	1,2-dibromo-3-chloropropane	0.001	U	MG/L	0.0002	NA
MW08S	1,2-dibromo-3-chloropropane	0.001	U	MG/L	0.0002	NA
MW09S	1,2-dibromo-3-chloropropane	0.001	U	MG/L	0.0002	NA
MW10B	1,2-dibromo-3-chloropropane	0.001	U	MG/L	0.0002	NA
MW10D	1,2-dibromo-3-chloropropane	0.001	U	MG/L	0.0002	NA
MW13S	1,2-dibromo-3-chloropropane	0.001	U	MG/L	0.0002	NA
MW05S	1,2-DIBROMO-3-CHLOROPROPANE	1	UJ	MG/L	0.0002	NA
MW05S	1,2-DIBROMO-3-CHLOROPROPANE	1	UJ	MG/L	0.0002	NA
MW12B	1,2-dibromo-3-chloropropane	0.01	UJ	MG/L	0.0002	NA
MW11B	1,2-dibromo-3-chloropropane	0.01	UJ	MG/L	0.0002	NA
MW11M	1,2-dibromo-3-chloropropane	0.01	UJ	MG/L	0.0002	NA
MW12B	1,2-dibromo-3-chloropropane	0.01	UJ	MG/L	0.0002	NA
GEC2	1,2-dibromo-3-chloropropane	0.01	UJ	MG/L	0.0002	NA
GEC6	1,2-dibromo-3-chloropropane	0.01	UJ	MG/L	0.0002	NA
MW14M	1,2-dibromo-3-chloropropane	0.01	UJ	MG/L	0.0002	NA
MW15D	1,2-dibromo-3-chloropropane	0.01	UJ	MG/L	0.0002	NA
MW07S	1,2-dibromoethane	0.001	J	MG/L	0.00005	Y
MW05S	1,2-dibromoethane	1.7	U	MG/L	0.00005	NA
MW05S	1,2-DIBROMOETHANE	1	U	MG/L	0.00005	NA
MW05S	1,2-DIBROMOETHANE	1	U	MG/L	0.00005	NA
MW05S	1,2-dibromoethane	1	U	MG/L	0.00005	NA
MW05S	1,2-dibromoethane	1	U	MG/L	0.00005	NA
MW14M	1,2-dibromoethane	0.1	U	MG/L	0.00005	NA
MW06S	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW13D	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW10D	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW10B	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW10D	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW13B	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW13D	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW13S	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
TMW3	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW12B	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW11B	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW11M	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW11S	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW12B	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW12D	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
GEC2	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
GEC6	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW14M	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW15D	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW01S	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW01S	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW03S	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW06S	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW07D	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW08S	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW09S	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW04S	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW04B	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW04D	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW04S	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW02D	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW02M	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW02S	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW02S	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW06S	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW07S	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW01S	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW01S	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW03S	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW08S	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW09S	1,2-dibromoethane	0.01	U	MG/L	0.00005	NA
MW06S	1,2-dibromoethane	0.006	U	MG/L	0.00005	NA
MW02M	1,2-dibromoethane	0.005	U	MG/L	0.00005	NA
MW02D	1,2-dibromoethane	0.004	U	MG/L	0.00005	NA
MW13B	1,2-dibromoethane	0.004	U	MG/L	0.00005	NA
MW03S	1,2-dibromoethane	0.001	U	MG/L	0.00005	NA
GEC3	1,2-dibromoethane	0.001	U	MG/L	0.00005	NA
MW01S	1,2-dibromoethane	0.001	U	MG/L	0.00005	NA
MW11S	1,2-dibromoethane	0.001	U	MG/L	0.00005	NA
MW12B	1,2-dibromoethane	0.001	U	MG/L	0.00005	NA
MW12D	1,2-dibromoethane	0.001	U	MG/L	0.00005	NA
GEC1	1,2-dibromoethane	0.001	U	MG/L	0.00005	NA
GEC2	1,2-dibromoethane	0.001	U	MG/L	0.00005	NA
GEC4	1,2-dibromoethane	0.001	U	MG/L	0.00005	NA
GEC5	1,2-dibromoethane	0.001	U	MG/L	0.00005	NA
GEC6	1,2-dibromoethane	0.001	U	MG/L	0.00005	NA
GEC7	1,2-dibromoethane	0.001	U	MG/L	0.00005	NA
MW07D	1,2-dibromoethane	0.001	U	MG/L	0.00005	NA
MW07S	1,2-dibromoethane	0.001	U	MG/L	0.00005	NA
MW11B	1,2-dibromoethane	0.001	U	MG/L	0.00005	NA
MW11M	1,2-dibromoethane	0.001	U	MG/L	0.00005	NA
MW15D	1,2-dibromoethane	0.001	U	MG/L	0.00005	NA
MW02S	1,2-dibromoethane	0.001	U	MG/L	0.00005	NA
MW04B	1,2-dibromoethane	0.001	U	MG/L	0.00005	NA
MW04D	1,2-dibromoethane	0.001	U	MG/L	0.00005	NA
MW04S	1,2-dibromoethane	0.001	U	MG/L	0.00005	NA
MW08S	1,2-dibromoethane	0.001	U	MG/L	0.00005	NA
MW09S	1,2-dibromoethane	0.001	U	MG/L	0.00005	NA
MW10B	1,2-dibromoethane	0.001	U	MG/L	0.00005	NA
MW10D	1,2-dibromoethane	0.001	U	MG/L	0.00005	NA
MW13S	1,2-dibromoethane	0.001	U	MG/L	0.00005	NA
MW06S	1,2-dichlorobenzene	0.021		MG/L	0.6	N
MW06S	1,2-dichlorobenzene	0.013		MG/L	0.6	N
MW06S	1,2-dichlorobenzene	0.013		MG/L	0.6	N
MW08S	1,2-dichlorobenzene	0.0019		MG/L	0.6	N
MW06S	1,2-dichlorobenzene	0.004	J	MG/L	0.6	N
MW08S	1,2-dichlorobenzene	0.001	J	MG/L	0.6	N
GEC6	1,2-dichlorobenzene	0.00022	J	MG/L	0.6	N
MW05S	1,2-dichlorobenzene	1.7	U	MG/L	0.6	NA
MW05S	1,2-DICHLOROBENZENE	1	U	MG/L	0.6	NA
MW05S	1,2-DICHLOROBENZENE	1	U	MG/L	0.6	NA
MW05S	1,2-dichlorobenzene	1	U	MG/L	0.6	NA
MW05S	1,2-dichlorobenzene	1	U	MG/L	0.6	NA
MW14M	1,2-dichlorobenzene	0.1	U	MG/L	0.6	NA
MW13D	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
MW10D	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW10B	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
MW10D	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
MW13B	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
MW13D	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
MW13S	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
TMW3	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
MW12B	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
MW11B	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
MW11M	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
MW11S	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
MW12B	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
MW12D	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
GEC2	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
GEC6	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
MW14M	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
MW15D	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
MW01S	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
MW01S	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
MW03S	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
MW07D	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
MW07S	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
MW08S	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
MW09S	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
MW04S	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
MW04B	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
MW04D	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
MW04S	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
MW02D	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
MW02M	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
MW02S	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
MW02S	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
MW07S	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
MW01S	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
MW01S	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
MW03S	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
MW09S	1,2-dichlorobenzene	0.01	U	MG/L	0.6	NA
MW02M	1,2-dichlorobenzene	0.005	U	MG/L	0.6	NA
MW02D	1,2-dichlorobenzene	0.004	U	MG/L	0.6	NA
MW13B	1,2-dichlorobenzene	0.004	U	MG/L	0.6	NA
MW03S	1,2-dichlorobenzene	0.001	U	MG/L	0.6	NA
GEC3	1,2-dichlorobenzene	0.001	U	MG/L	0.6	NA
MW01S	1,2-dichlorobenzene	0.001	U	MG/L	0.6	NA
MW11S	1,2-dichlorobenzene	0.001	U	MG/L	0.6	NA
MW12B	1,2-dichlorobenzene	0.001	U	MG/L	0.6	NA
MW12D	1,2-dichlorobenzene	0.001	U	MG/L	0.6	NA
GEC1	1,2-dichlorobenzene	0.001	U	MG/L	0.6	NA
GEC2	1,2-dichlorobenzene	0.001	U	MG/L	0.6	NA
GEC4	1,2-dichlorobenzene	0.001	U	MG/L	0.6	NA
GEC5	1,2-dichlorobenzene	0.001	U	MG/L	0.6	NA
GEC7	1,2-dichlorobenzene	0.001	U	MG/L	0.6	NA
MW07D	1,2-dichlorobenzene	0.001	U	MG/L	0.6	NA
MW07S	1,2-dichlorobenzene	0.001	U	MG/L	0.6	NA
MW11B	1,2-dichlorobenzene	0.001	U	MG/L	0.6	NA
MW11M	1,2-dichlorobenzene	0.001	U	MG/L	0.6	NA
MW15D	1,2-dichlorobenzene	0.001	U	MG/L	0.6	NA
MW02S	1,2-dichlorobenzene	0.001	U	MG/L	0.6	NA
MW04B	1,2-dichlorobenzene	0.001	U	MG/L	0.6	NA
MW04D	1,2-dichlorobenzene	0.001	U	MG/L	0.6	NA
MW04S	1,2-dichlorobenzene	0.001	U	MG/L	0.6	NA
MW09S	1,2-dichlorobenzene	0.001	U	MG/L	0.6	NA
MW10B	1,2-dichlorobenzene	0.001	U	MG/L	0.6	NA
MW10D	1,2-dichlorobenzene	0.001	U	MG/L	0.6	NA
MW13S	1,2-dichlorobenzene	0.001	U	MG/L	0.6	NA
MW-LEA-01	1,2-Dichloroethane	20	Uw	MG/L	0.005	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW-LEA-01	1,2-Dichloroethane	2	Uw	MG/L	0.005	NA
MW-LEA-02	1,2-Dichloroethane	2	Uw	MG/L	0.005	NA
MW-05S	1,2-Dichloroethane	2	Uw	MG/L	0.005	NA
MW-LEA-02	1,2-Dichloroethane	2	Uw	MG/L	0.005	NA
MW-LEA-02	1,2-Dichloroethane	0.2	Uw	MG/L	0.005	NA
MW-LEA-03	1,2-Dichloroethane	0.2	Uw	MG/L	0.005	NA
MW-LEA-03	1,2-Dichloroethane	0.004	Uw	MG/L	0.005	NA
MW05S	1,2-dichloroethane	1.7	U	MG/L	0.005	NA
MW05S	1,2-DICHLOROETHANE	1	U	MG/L	0.005	NA
MW05S	1,2-DICHLOROETHANE	1	U	MG/L	0.005	NA
MW05S	1,2-dichloroethane	1	U	MG/L	0.005	NA
MW05S	1,2-dichloroethane	1	U	MG/L	0.005	NA
MW14M	1,2-dichloroethane	0.1	U	MG/L	0.005	NA
MW06S	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW13D	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW10D	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW10B	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW10D	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW13B	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW13D	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW13S	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
TMW3	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW12B	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW11B	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW11M	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW11S	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW12B	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW12D	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
GEC2	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
GEC6	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW14M	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW15D	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW01S	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW01S	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW03S	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW06S	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW07D	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW07S	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW08S	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW09S	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW04S	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW04B	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW04D	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW04S	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW02D	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW02M	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW02S	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW02S	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW06S	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW07S	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW01S	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW01S	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW03S	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW08S	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW09S	1,2-dichloroethane	0.01	U	MG/L	0.005	NA
MW06S	1,2-dichloroethane	0.006	U	MG/L	0.005	NA
MW02M	1,2-dichloroethane	0.005	U	MG/L	0.005	NA
MW02D	1,2-dichloroethane	0.004	U	MG/L	0.005	NA
MW13B	1,2-dichloroethane	0.004	U	MG/L	0.005	NA
MW03S	1,2-dichloroethane	0.001	U	MG/L	0.005	NA
GEC3	1,2-dichloroethane	0.001	U	MG/L	0.005	NA
MW01S	1,2-dichloroethane	0.001	U	MG/L	0.005	NA
MW11S	1,2-dichloroethane	0.001	U	MG/L	0.005	NA
MW12B	1,2-dichloroethane	0.001	U	MG/L	0.005	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW12D	1,2-dichloroethane	0.001	U	MG/L	0.005	NA
GEC1	1,2-dichloroethane	0.001	U	MG/L	0.005	NA
GEC2	1,2-dichloroethane	0.001	U	MG/L	0.005	NA
GEC4	1,2-dichloroethane	0.001	U	MG/L	0.005	NA
GEC5	1,2-dichloroethane	0.001	U	MG/L	0.005	NA
GEC6	1,2-dichloroethane	0.001	U	MG/L	0.005	NA
GEC7	1,2-dichloroethane	0.001	U	MG/L	0.005	NA
MW07D	1,2-dichloroethane	0.001	U	MG/L	0.005	NA
MW07S	1,2-dichloroethane	0.001	U	MG/L	0.005	NA
MW11B	1,2-dichloroethane	0.001	U	MG/L	0.005	NA
MW11M	1,2-dichloroethane	0.001	U	MG/L	0.005	NA
MW15D	1,2-dichloroethane	0.001	U	MG/L	0.005	NA
MW02S	1,2-dichloroethane	0.001	U	MG/L	0.005	NA
MW04B	1,2-dichloroethane	0.001	U	MG/L	0.005	NA
MW04D	1,2-dichloroethane	0.001	U	MG/L	0.005	NA
MW04S	1,2-dichloroethane	0.001	U	MG/L	0.005	NA
MW08S	1,2-dichloroethane	0.001	U	MG/L	0.005	NA
MW09S	1,2-dichloroethane	0.001	U	MG/L	0.005	NA
MW10B	1,2-dichloroethane	0.001	U	MG/L	0.005	NA
MW10D	1,2-dichloroethane	0.001	U	MG/L	0.005	NA
MW13S	1,2-dichloroethane	0.001	U	MG/L	0.005	NA
MW-LEA-01	1,2-Dichloropropane	20	Uw	MG/L	0.005	NA
MW-LEA-01	1,2-Dichloropropane	2	Uw	MG/L	0.005	NA
MW-LEA-02	1,2-Dichloropropane	2	Uw	MG/L	0.005	NA
MW-05S	1,2-Dichloropropane	2	Uw	MG/L	0.005	NA
MW-LEA-02	1,2-Dichloropropane	2	Uw	MG/L	0.005	NA
MW-LEA-02	1,2-Dichloropropane	0.2	Uw	MG/L	0.005	NA
MW-LEA-03	1,2-Dichloropropane	0.2	Uw	MG/L	0.005	NA
MW-LEA-03	1,2-Dichloropropane	0.004	Uw	MG/L	0.005	NA
MW05S	1,2-DICHLOROPROPANE	1	U	MG/L	0.005	NA
MW05S	1,2-DICHLOROPROPANE	1	U	MG/L	0.005	NA
MW05S	1,2-dichloropropane	1	U	MG/L	0.005	NA
MW05S	1,2-dichloropropane	1	U	MG/L	0.005	NA
MW14M	1,2-dichloropropane	0.1	U	MG/L	0.005	NA
MW06S	1,2-dichloropropane	0.01	U	MG/L	0.005	NA
MW13D	1,2-dichloropropane	0.01	U	MG/L	0.005	NA
MW10D	1,2-dichloropropane	0.01	U	MG/L	0.005	NA
MW10B	1,2-dichloropropane	0.01	U	MG/L	0.005	NA
MW10D	1,2-dichloropropane	0.01	U	MG/L	0.005	NA
MW13B	1,2-dichloropropane	0.01	U	MG/L	0.005	NA
MW13D	1,2-dichloropropane	0.01	U	MG/L	0.005	NA
MW13S	1,2-dichloropropane	0.01	U	MG/L	0.005	NA
TMW3	1,2-dichloropropane	0.01	U	MG/L	0.005	NA
MW12B	1,2-dichloropropane	0.01	U	MG/L	0.005	NA
MW11B	1,2-dichloropropane	0.01	U	MG/L	0.005	NA
MW11M	1,2-dichloropropane	0.01	U	MG/L	0.005	NA
MW11S	1,2-dichloropropane	0.01	U	MG/L	0.005	NA
MW12B	1,2-dichloropropane	0.01	U	MG/L	0.005	NA
MW12D	1,2-dichloropropane	0.01	U	MG/L	0.005	NA
GEC2	1,2-dichloropropane	0.01	U	MG/L	0.005	NA
GEC6	1,2-dichloropropane	0.01	U	MG/L	0.005	NA
MW14M	1,2-dichloropropane	0.01	U	MG/L	0.005	NA
MW15D	1,2-dichloropropane	0.01	U	MG/L	0.005	NA
MW01S	1,2-dichloropropane	0.01	U	MG/L	0.005	NA
MW03S	1,2-dichloropropane	0.01	U	MG/L	0.005	NA
MW02S	1,2-dichloropropane	0.01	U	MG/L	0.005	NA
MW06S	1,2-dichloropropane	0.01	U	MG/L	0.005	NA
MW07S	1,2-dichloropropane	0.01	U	MG/L	0.005	NA
MW01S	1,2-dichloropropane	0.01	U	MG/L	0.005	NA
MW01S	1,2-dichloropropane	0.01	U	MG/L	0.005	NA
MW03S	1,2-dichloropropane	0.01	U	MG/L	0.005	NA
MW08S	1,2-dichloropropane	0.01	U	MG/L	0.005	NA
MW09S	1,2-dichloropropane	0.01	U	MG/L	0.005	NA
MW06S	1,2-dichloropropane	0.006	U	MG/L	0.005	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW02M	1,2-dichloropropane	0.005	U	MG/L	0.005	NA
MW02D	1,2-dichloropropane	0.004	U	MG/L	0.005	NA
MW13B	1,2-dichloropropane	0.004	U	MG/L	0.005	NA
MW03S	1,2-dichloropropane	0.001	U	MG/L	0.005	NA
GEC3	1,2-dichloropropane	0.001	U	MG/L	0.005	NA
MW01S	1,2-dichloropropane	0.001	U	MG/L	0.005	NA
MW11S	1,2-dichloropropane	0.001	U	MG/L	0.005	NA
MW12B	1,2-dichloropropane	0.001	U	MG/L	0.005	NA
MW12D	1,2-dichloropropane	0.001	U	MG/L	0.005	NA
GEC1	1,2-dichloropropane	0.001	U	MG/L	0.005	NA
GEC2	1,2-dichloropropane	0.001	U	MG/L	0.005	NA
GEC4	1,2-dichloropropane	0.001	U	MG/L	0.005	NA
GEC5	1,2-dichloropropane	0.001	U	MG/L	0.005	NA
GEC6	1,2-dichloropropane	0.001	U	MG/L	0.005	NA
GEC7	1,2-dichloropropane	0.001	U	MG/L	0.005	NA
MW07D	1,2-dichloropropane	0.001	U	MG/L	0.005	NA
MW07S	1,2-dichloropropane	0.001	U	MG/L	0.005	NA
MW11B	1,2-dichloropropane	0.001	U	MG/L	0.005	NA
MW11M	1,2-dichloropropane	0.001	U	MG/L	0.005	NA
MW15D	1,2-dichloropropane	0.001	U	MG/L	0.005	NA
MW02S	1,2-dichloropropane	0.001	U	MG/L	0.005	NA
MW04B	1,2-dichloropropane	0.001	U	MG/L	0.005	NA
MW04D	1,2-dichloropropane	0.001	U	MG/L	0.005	NA
MW04S	1,2-dichloropropane	0.001	U	MG/L	0.005	NA
MW08S	1,2-dichloropropane	0.001	U	MG/L	0.005	NA
MW09S	1,2-dichloropropane	0.001	U	MG/L	0.005	NA
MW10B	1,2-dichloropropane	0.001	U	MG/L	0.005	NA
MW10D	1,2-dichloropropane	0.001	U	MG/L	0.005	NA
MW13S	1,2-dichloropropane	0.001	U	MG/L	0.005	NA
MW05S	1,2-dichloropropane	1.7	UJ	MG/L	0.005	NA
MW01S	1,2-dichloropropane	0.01	UJ	MG/L	0.005	NA
MW06S	1,2-dichloropropane	0.01	UJ	MG/L	0.005	NA
MW07D	1,2-dichloropropane	0.01	UJ	MG/L	0.005	NA
MW07S	1,2-dichloropropane	0.01	UJ	MG/L	0.005	NA
MW08S	1,2-dichloropropane	0.01	UJ	MG/L	0.005	NA
MW09S	1,2-dichloropropane	0.01	UJ	MG/L	0.005	NA
MW04S	1,2-dichloropropane	0.01	UJ	MG/L	0.005	NA
MW04B	1,2-dichloropropane	0.01	UJ	MG/L	0.005	NA
MW04D	1,2-dichloropropane	0.01	UJ	MG/L	0.005	NA
MW04S	1,2-dichloropropane	0.01	UJ	MG/L	0.005	NA
MW02D	1,2-dichloropropane	0.01	UJ	MG/L	0.005	NA
MW02M	1,2-dichloropropane	0.01	UJ	MG/L	0.005	NA
MW02S	1,2-dichloropropane	0.01	UJ	MG/L	0.005	NA
MW-LEA-01	1,3,5-Trimethylbenzene	20	Uw	MG/L	nc	NA
MW-LEA-01	1,3,5-Trimethylbenzene	2	Uw	MG/L	nc	NA
MW-LEA-02	1,3,5-Trimethylbenzene	2	Uw	MG/L	nc	NA
MW-05S	1,3,5-Trimethylbenzene	2	Uw	MG/L	nc	NA
MW-LEA-02	1,3,5-Trimethylbenzene	2	Uw	MG/L	nc	NA
MW-LEA-02	1,3,5-Trimethylbenzene	0.2	Uw	MG/L	nc	NA
MW-LEA-03	1,3,5-Trimethylbenzene	0.2	Uw	MG/L	nc	NA
MW-LEA-03	1,3,5-Trimethylbenzene	0.004	Uw	MG/L	nc	NA
MW08S	1,3,5-trimethylbenzene	0.025		MG/L	nc	NA
MW05S	1,3,5-TRIMETHYLBENZENE	1	U	MG/L	nc	NA
MW05S	1,3,5-TRIMETHYLBENZENE	1	U	MG/L	nc	NA
MW05S	1,3,5-trimethylbenzene	1	U	MG/L	nc	NA
MW05S	1,3,5-trimethylbenzene	1	U	MG/L	nc	NA
MW14M	1,3,5-trimethylbenzene	0.1	U	MG/L	nc	NA
MW06S	1,3,5-trimethylbenzene	0.01	U	MG/L	nc	NA
MW13D	1,3,5-trimethylbenzene	0.01	U	MG/L	nc	NA
MW06S	1,3,5-trimethylbenzene	0.006	U	MG/L	nc	NA
MW02M	1,3,5-trimethylbenzene	0.005	U	MG/L	nc	NA
MW02D	1,3,5-trimethylbenzene	0.004	U	MG/L	nc	NA
MW13B	1,3,5-trimethylbenzene	0.004	U	MG/L	nc	NA
MW03S	1,3,5-trimethylbenzene	0.001	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
GEC3	1,3,5-trimethylbenzene	0.001	U	MG/L	nc	NA
MW01S	1,3,5-trimethylbenzene	0.001	U	MG/L	nc	NA
MW11S	1,3,5-trimethylbenzene	0.001	U	MG/L	nc	NA
MW12B	1,3,5-trimethylbenzene	0.001	U	MG/L	nc	NA
MW12D	1,3,5-trimethylbenzene	0.001	U	MG/L	nc	NA
GEC1	1,3,5-trimethylbenzene	0.001	U	MG/L	nc	NA
GEC2	1,3,5-trimethylbenzene	0.001	U	MG/L	nc	NA
GEC4	1,3,5-trimethylbenzene	0.001	U	MG/L	nc	NA
GEC5	1,3,5-trimethylbenzene	0.001	U	MG/L	nc	NA
GEC6	1,3,5-trimethylbenzene	0.001	U	MG/L	nc	NA
GEC7	1,3,5-trimethylbenzene	0.001	U	MG/L	nc	NA
MW07D	1,3,5-trimethylbenzene	0.001	U	MG/L	nc	NA
MW07S	1,3,5-trimethylbenzene	0.001	U	MG/L	nc	NA
MW11B	1,3,5-trimethylbenzene	0.001	U	MG/L	nc	NA
MW11M	1,3,5-trimethylbenzene	0.001	U	MG/L	nc	NA
MW15D	1,3,5-trimethylbenzene	0.001	U	MG/L	nc	NA
MW02S	1,3,5-trimethylbenzene	0.001	U	MG/L	nc	NA
MW04B	1,3,5-trimethylbenzene	0.001	U	MG/L	nc	NA
MW04D	1,3,5-trimethylbenzene	0.001	U	MG/L	nc	NA
MW04S	1,3,5-trimethylbenzene	0.001	U	MG/L	nc	NA
MW09S	1,3,5-trimethylbenzene	0.001	U	MG/L	nc	NA
MW10B	1,3,5-trimethylbenzene	0.001	U	MG/L	nc	NA
MW10D	1,3,5-trimethylbenzene	0.001	U	MG/L	nc	NA
MW13S	1,3,5-trimethylbenzene	0.001	U	MG/L	nc	NA
MW05S	1,3-benzenediol, 4,6-dichloro-	0.005	NJ	MG/L	nc	NA
GEC7	1,3-dichlorobenzene	0.00027	J	MG/L	nc	NA
MW05S	1,3-dichlorobenzene	1.7	U	MG/L	nc	NA
MW05S	1,3-DICHLOROBENZENE	1	U	MG/L	nc	NA
MW05S	1,3-DICHLOROBENZENE	1	U	MG/L	nc	NA
MW05S	1,3-dichlorobenzene	1	U	MG/L	nc	NA
MW05S	1,3-dichlorobenzene	1	U	MG/L	nc	NA
MW14M	1,3-dichlorobenzene	0.1	U	MG/L	nc	NA
MW06S	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW13D	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW10D	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW10B	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW10D	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW13B	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW13D	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW13S	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
TMW3	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW12B	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW11B	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW11M	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW11S	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW12B	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW12D	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
GEC2	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
GEC6	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW14M	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW15D	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW01S	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW01S	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW03S	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW06S	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW07D	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW07S	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW08S	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW09S	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW04S	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW04B	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW04D	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW04S	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW02D	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW02M	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW02S	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW02S	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW06S	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW07S	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW01S	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW01S	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW03S	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW08S	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW09S	1,3-dichlorobenzene	0.01	U	MG/L	nc	NA
MW06S	1,3-dichlorobenzene	0.006	U	MG/L	nc	NA
MW02M	1,3-dichlorobenzene	0.005	U	MG/L	nc	NA
MW02D	1,3-dichlorobenzene	0.004	U	MG/L	nc	NA
MW13B	1,3-dichlorobenzene	0.004	U	MG/L	nc	NA
MW03S	1,3-dichlorobenzene	0.001	U	MG/L	nc	NA
GEC3	1,3-dichlorobenzene	0.001	U	MG/L	nc	NA
MW01S	1,3-dichlorobenzene	0.001	U	MG/L	nc	NA
MW11S	1,3-dichlorobenzene	0.001	U	MG/L	nc	NA
MW12B	1,3-dichlorobenzene	0.001	U	MG/L	nc	NA
MW12D	1,3-dichlorobenzene	0.001	U	MG/L	nc	NA
GEC1	1,3-dichlorobenzene	0.001	U	MG/L	nc	NA
GEC2	1,3-dichlorobenzene	0.001	U	MG/L	nc	NA
GEC4	1,3-dichlorobenzene	0.001	U	MG/L	nc	NA
GEC5	1,3-dichlorobenzene	0.001	U	MG/L	nc	NA
GEC6	1,3-dichlorobenzene	0.001	U	MG/L	nc	NA
MW07D	1,3-dichlorobenzene	0.001	U	MG/L	nc	NA
MW07S	1,3-dichlorobenzene	0.001	U	MG/L	nc	NA
MW11B	1,3-dichlorobenzene	0.001	U	MG/L	nc	NA
MW11M	1,3-dichlorobenzene	0.001	U	MG/L	nc	NA
MW15D	1,3-dichlorobenzene	0.001	U	MG/L	nc	NA
MW02S	1,3-dichlorobenzene	0.001	U	MG/L	nc	NA
MW04B	1,3-dichlorobenzene	0.001	U	MG/L	nc	NA
MW04D	1,3-dichlorobenzene	0.001	U	MG/L	nc	NA
MW04S	1,3-dichlorobenzene	0.001	U	MG/L	nc	NA
MW08S	1,3-dichlorobenzene	0.001	U	MG/L	nc	NA
MW09S	1,3-dichlorobenzene	0.001	U	MG/L	nc	NA
MW10B	1,3-dichlorobenzene	0.001	U	MG/L	nc	NA
MW10D	1,3-dichlorobenzene	0.001	U	MG/L	nc	NA
MW13S	1,3-dichlorobenzene	0.001	U	MG/L	nc	NA
MW-LEA-01	1,3-Dichloropropane	20	Uw	MG/L	nc	NA
MW-LEA-01	1,3-Dichloropropane	2	Uw	MG/L	nc	NA
MW-LEA-02	1,3-Dichloropropane	2	Uw	MG/L	nc	NA
MW-05S	1,3-Dichloropropane	2	Uw	MG/L	nc	NA
MW-LEA-02	1,3-Dichloropropane	2	Uw	MG/L	nc	NA
MW-LEA-02	1,3-Dichloropropane	0.2	Uw	MG/L	nc	NA
MW-LEA-03	1,3-Dichloropropane	0.2	Uw	MG/L	nc	NA
MW-LEA-03	1,3-Dichloropropane	0.004	Uw	MG/L	nc	NA
MW05S	1,3-DICHLOROPROPANE	1	U	MG/L	nc	NA
MW05S	1,3-DICHLOROPROPANE	1	U	MG/L	nc	NA
MW05S	1,3-dichloropropane	1	U	MG/L	nc	NA
MW05S	1,3-dichloropropane	1	U	MG/L	nc	NA
MW14M	1,3-dichloropropane	0.1	U	MG/L	nc	NA
MW06S	1,3-dichloropropane	0.01	U	MG/L	nc	NA
MW13D	1,3-dichloropropane	0.01	U	MG/L	nc	NA
MW06S	1,3-dichloropropane	0.006	U	MG/L	nc	NA
MW02M	1,3-dichloropropane	0.005	U	MG/L	nc	NA
MW02D	1,3-dichloropropane	0.004	U	MG/L	nc	NA
MW13B	1,3-dichloropropane	0.004	U	MG/L	nc	NA
MW03S	1,3-dichloropropane	0.001	U	MG/L	nc	NA
GEC3	1,3-dichloropropane	0.001	U	MG/L	nc	NA
MW01S	1,3-dichloropropane	0.001	U	MG/L	nc	NA
MW11S	1,3-dichloropropane	0.001	U	MG/L	nc	NA
MW12B	1,3-dichloropropane	0.001	U	MG/L	nc	NA
MW12D	1,3-dichloropropane	0.001	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
GEC1	1,3-dichloropropane	0.001	U	MG/L	nc	NA
GEC2	1,3-dichloropropane	0.001	U	MG/L	nc	NA
GEC4	1,3-dichloropropane	0.001	U	MG/L	nc	NA
GEC5	1,3-dichloropropane	0.001	U	MG/L	nc	NA
GEC6	1,3-dichloropropane	0.001	U	MG/L	nc	NA
GEC7	1,3-dichloropropane	0.001	U	MG/L	nc	NA
MW07D	1,3-dichloropropane	0.001	U	MG/L	nc	NA
MW07S	1,3-dichloropropane	0.001	U	MG/L	nc	NA
MW11B	1,3-dichloropropane	0.001	U	MG/L	nc	NA
MW11M	1,3-dichloropropane	0.001	U	MG/L	nc	NA
MW15D	1,3-dichloropropane	0.001	U	MG/L	nc	NA
MW02S	1,3-dichloropropane	0.001	U	MG/L	nc	NA
MW04B	1,3-dichloropropane	0.001	U	MG/L	nc	NA
MW04D	1,3-dichloropropane	0.001	U	MG/L	nc	NA
MW04S	1,3-dichloropropane	0.001	U	MG/L	nc	NA
MW08S	1,3-dichloropropane	0.001	U	MG/L	nc	NA
MW09S	1,3-dichloropropane	0.001	U	MG/L	nc	NA
MW10B	1,3-dichloropropane	0.001	U	MG/L	nc	NA
MW10D	1,3-dichloropropane	0.001	U	MG/L	nc	NA
MW13S	1,3-dichloropropane	0.001	U	MG/L	nc	NA
MW06S	1,4-dichlorobenzene	0.0062	J	MG/L	0.075	N
MW06S	1,4-dichlorobenzene	0.005	J	MG/L	0.075	N
MW06S	1,4-dichlorobenzene	0.0049	J	MG/L	0.075	N
MW06S	1,4-dichlorobenzene	0.003	J	MG/L	0.075	N
MW08S	1,4-dichlorobenzene	0.00053	J	MG/L	0.075	N
MW05S	1,4-dichlorobenzene	1.7	U	MG/L	0.075	NA
MW05S	1,4-DICHLOROBENZENE	1	U	MG/L	0.075	NA
MW05S	1,4-DICHLOROBENZENE	1	U	MG/L	0.075	NA
MW05S	1,4-dichlorobenzene	1	U	MG/L	0.075	NA
MW05S	1,4-dichlorobenzene	1	U	MG/L	0.075	NA
MW14M	1,4-dichlorobenzene	0.1	U	MG/L	0.075	NA
MW13D	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW10D	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW10B	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW10D	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW13B	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW13D	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW13S	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
TMW3	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW12B	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW11B	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW11M	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW11S	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW12B	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW12D	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
GEC2	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
GEC6	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW14M	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW15D	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW01S	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW01S	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW03S	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW07D	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW07S	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW08S	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW09S	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW04S	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW04B	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW04D	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW04S	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW02D	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW02M	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW02S	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW02S	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW07S	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW01S	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW01S	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW03S	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW08S	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW09S	1,4-dichlorobenzene	0.01	U	MG/L	0.075	NA
MW02M	1,4-dichlorobenzene	0.005	U	MG/L	0.075	NA
MW02D	1,4-dichlorobenzene	0.004	U	MG/L	0.075	NA
MW13B	1,4-dichlorobenzene	0.004	U	MG/L	0.075	NA
MW03S	1,4-dichlorobenzene	0.001	U	MG/L	0.075	NA
GEC3	1,4-dichlorobenzene	0.001	U	MG/L	0.075	NA
MW01S	1,4-dichlorobenzene	0.001	U	MG/L	0.075	NA
MW11S	1,4-dichlorobenzene	0.001	U	MG/L	0.075	NA
MW12B	1,4-dichlorobenzene	0.001	U	MG/L	0.075	NA
MW12D	1,4-dichlorobenzene	0.001	U	MG/L	0.075	NA
GEC1	1,4-dichlorobenzene	0.001	U	MG/L	0.075	NA
GEC2	1,4-dichlorobenzene	0.001	U	MG/L	0.075	NA
GEC4	1,4-dichlorobenzene	0.001	U	MG/L	0.075	NA
GEC5	1,4-dichlorobenzene	0.001	U	MG/L	0.075	NA
GEC6	1,4-dichlorobenzene	0.001	U	MG/L	0.075	NA
GEC7	1,4-dichlorobenzene	0.001	U	MG/L	0.075	NA
MW07D	1,4-dichlorobenzene	0.001	U	MG/L	0.075	NA
MW07S	1,4-dichlorobenzene	0.001	U	MG/L	0.075	NA
MW11B	1,4-dichlorobenzene	0.001	U	MG/L	0.075	NA
MW11M	1,4-dichlorobenzene	0.001	U	MG/L	0.075	NA
MW15D	1,4-dichlorobenzene	0.001	U	MG/L	0.075	NA
MW02S	1,4-dichlorobenzene	0.001	U	MG/L	0.075	NA
MW04B	1,4-dichlorobenzene	0.001	U	MG/L	0.075	NA
MW04D	1,4-dichlorobenzene	0.001	U	MG/L	0.075	NA
MW04S	1,4-dichlorobenzene	0.001	U	MG/L	0.075	NA
MW09S	1,4-dichlorobenzene	0.001	U	MG/L	0.075	NA
MW10B	1,4-dichlorobenzene	0.001	U	MG/L	0.075	NA
MW10D	1,4-dichlorobenzene	0.001	U	MG/L	0.075	NA
MW13S	1,4-dichlorobenzene	0.001	U	MG/L	0.075	NA
MW13D	1-decene	0.003	NJ	MG/L	nc	NA
GEC3	1-methylnaphthalene	0.00047		MG/L	nc	NA
GEC7	1-methylnaphthalene	0.00023		MG/L	nc	NA
GEC4	1-methylnaphthalene	0.00017		MG/L	nc	NA
GEC2	1-methylnaphthalene	0.00015		MG/L	nc	NA
GEC1	1-methylnaphthalene	0.00018	U	MG/L	nc	NA
GEC5	1-methylnaphthalene	0.00012	U	MG/L	nc	NA
GEC6	1-methylnaphthalene	0.00012	U	MG/L	nc	NA
MW05S	1-naphthalenol, 2-methyl-	0.005	NJ	MG/L	nc	NA
MW09S	1-propene, 1,1,2-trichloro-	0.008	NJ	MG/L	nc	NA
MW02M	1-propene, 1,1,2-trichloro-	0.004	NJ	MG/L	nc	NA
MW04D	1-propene, 1,1,2-trichloro-	0.003	NJ	MG/L	nc	NA
MW05S	2,2-DICHLOROPROPANE	1	U	MG/L	nc	NA
MW05S	2,2-DICHLOROPROPANE	1	U	MG/L	nc	NA
MW05S	2,2-dichloropropane	1	U	MG/L	nc	NA
MW05S	2,2-dichloropropane	1	U	MG/L	nc	NA
MW14M	2,2-dichloropropane	0.1	U	MG/L	nc	NA
MW06S	2,2-dichloropropane	0.01	U	MG/L	nc	NA
MW13D	2,2-dichloropropane	0.01	U	MG/L	nc	NA
MW06S	2,2-dichloropropane	0.006	U	MG/L	nc	NA
MW02M	2,2-dichloropropane	0.005	U	MG/L	nc	NA
MW02D	2,2-dichloropropane	0.004	U	MG/L	nc	NA
MW13B	2,2-dichloropropane	0.004	U	MG/L	nc	NA
MW03S	2,2-dichloropropane	0.001	U	MG/L	nc	NA
GEC3	2,2-dichloropropane	0.001	U	MG/L	nc	NA
MW01S	2,2-dichloropropane	0.001	U	MG/L	nc	NA
MW11S	2,2-dichloropropane	0.001	U	MG/L	nc	NA
MW12B	2,2-dichloropropane	0.001	U	MG/L	nc	NA
MW12D	2,2-dichloropropane	0.001	U	MG/L	nc	NA
GEC1	2,2-dichloropropane	0.001	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
GEC2	2,2-dichloropropane	0.001	U	MG/L	nc	NA
GEC4	2,2-dichloropropane	0.001	U	MG/L	nc	NA
GEC5	2,2-dichloropropane	0.001	U	MG/L	nc	NA
GEC6	2,2-dichloropropane	0.001	U	MG/L	nc	NA
GEC7	2,2-dichloropropane	0.001	U	MG/L	nc	NA
MW07D	2,2-dichloropropane	0.001	U	MG/L	nc	NA
MW07S	2,2-dichloropropane	0.001	U	MG/L	nc	NA
MW11B	2,2-dichloropropane	0.001	U	MG/L	nc	NA
MW11M	2,2-dichloropropane	0.001	U	MG/L	nc	NA
MW15D	2,2-dichloropropane	0.001	U	MG/L	nc	NA
MW02S	2,2-dichloropropane	0.001	U	MG/L	nc	NA
MW04B	2,2-dichloropropane	0.001	U	MG/L	nc	NA
MW04D	2,2-dichloropropane	0.001	U	MG/L	nc	NA
MW04S	2,2-dichloropropane	0.001	U	MG/L	nc	NA
MW08S	2,2-dichloropropane	0.001	U	MG/L	nc	NA
MW09S	2,2-dichloropropane	0.001	U	MG/L	nc	NA
MW10B	2,2-dichloropropane	0.001	U	MG/L	nc	NA
MW10D	2,2-dichloropropane	0.001	U	MG/L	nc	NA
MW13S	2,2-dichloropropane	0.001	U	MG/L	nc	NA
MW05S	2,2'-methylenebis[3,4,6-trichlorophenol]	0.0007	NJ	MG/L	nc	NA
MW13D	2,2'-oxybis(1-chloropropane)	0.01	U	MG/L	nc	NA
MW13S	2,2'-oxybis(1-chloropropane)	0.01	U	MG/L	nc	NA
MW12B	2,2'-oxybis(1-chloropropane)	0.01	U	MG/L	nc	NA
MW11B	2,2'-oxybis(1-chloropropane)	0.01	U	MG/L	nc	NA
MW11M	2,2'-oxybis(1-chloropropane)	0.01	U	MG/L	nc	NA
MW11S	2,2'-oxybis(1-chloropropane)	0.01	U	MG/L	nc	NA
MW12D	2,2'-oxybis(1-chloropropane)	0.01	U	MG/L	nc	NA
GEC2	2,2'-oxybis(1-chloropropane)	0.01	U	MG/L	nc	NA
MW01S	2,2'-oxybis(1-chloropropane)	0.01	U	MG/L	nc	NA
MW01S	2,2'-oxybis(1-chloropropane)	0.01	U	MG/L	nc	NA
MW03S	2,2'-oxybis(1-chloropropane)	0.01	U	MG/L	nc	NA
MW05S	2,2'-oxybis(1-chloropropane)	0.01	U	MG/L	nc	NA
MW06S	2,2'-oxybis(1-chloropropane)	0.01	U	MG/L	nc	NA
MW07D	2,2'-oxybis(1-chloropropane)	0.01	U	MG/L	nc	NA
MW07S	2,2'-oxybis(1-chloropropane)	0.01	U	MG/L	nc	NA
MW08S	2,2'-oxybis(1-chloropropane)	0.01	U	MG/L	nc	NA
MW09S	2,2'-oxybis(1-chloropropane)	0.01	U	MG/L	nc	NA
MW04S	2,2'-oxybis(1-chloropropane)	0.01	U	MG/L	nc	NA
MW04B	2,2'-oxybis(1-chloropropane)	0.01	U	MG/L	nc	NA
MW04D	2,2'-oxybis(1-chloropropane)	0.01	U	MG/L	nc	NA
MW04S	2,2'-oxybis(1-chloropropane)	0.01	U	MG/L	nc	NA
MW02D	2,2'-oxybis(1-chloropropane)	0.01	U	MG/L	nc	NA
MW02M	2,2'-oxybis(1-chloropropane)	0.01	U	MG/L	nc	NA
MW02S	2,2'-oxybis(1-chloropropane)	0.01	U	MG/L	nc	NA
MW02S	2,2'-oxybis(1-chloropropane)	0.01	U	MG/L	nc	NA
MW06S	2,2'-oxybis(1-chloropropane)	0.01	U	MG/L	nc	NA
MW07S	2,2'-oxybis(1-chloropropane)	0.01	U	MG/L	nc	NA
MW01S	2,2'-oxybis(1-chloropropane)	0.01	U	MG/L	nc	NA
MW01S	2,2'-oxybis(1-chloropropane)	0.01	U	MG/L	nc	NA
MW03S	2,2'-oxybis(1-chloropropane)	0.01	U	MG/L	nc	NA
MW08S	2,2'-oxybis(1-chloropropane)	0.01	U	MG/L	nc	NA
MW09S	2,2'-oxybis(1-chloropropane)	0.01	U	MG/L	nc	NA
MW15D	2,2'-oxybis(1-chloropropane)	0.014	UJ	MG/L	nc	NA
MW10D	2,2'-oxybis(1-chloropropane)	0.01	UJ	MG/L	nc	NA
MW10B	2,2'-oxybis(1-chloropropane)	0.01	UJ	MG/L	nc	NA
MW10D	2,2'-oxybis(1-chloropropane)	0.01	UJ	MG/L	nc	NA
MW13B	2,2'-oxybis(1-chloropropane)	0.01	UJ	MG/L	nc	NA
TMW3	2,2'-oxybis(1-chloropropane)	0.01	UJ	MG/L	nc	NA
MW12B	2,2'-oxybis(1-chloropropane)	0.01	UJ	MG/L	nc	NA
GEC6	2,2'-oxybis(1-chloropropane)	0.01	UJ	MG/L	nc	NA
MW14M	2,2'-oxybis(1-chloropropane)	0.01	UJ	MG/L	nc	NA
MW-LEA-01	2,3,4,6,7,8-Hexachlorodibenzofuran (filtered)	2.457E-08	U	MG/L	nc	NA
MW-LEA-02	2,3,4,6,7,8-Hexachlorodibenzofuran (filtered)	1.84E-08	U	MG/L	nc	NA
MW-LEA-02	2,3,4,6,7,8-Hexachlorodibenzofuran (filtered)	9.561E-09	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW-05S	2,3,4,6,7,8-Hexachlorodibenzofuran (filtered)	5.708E-09	U	MG/L	nc	NA
MW-LEA-03	2,3,4,6,7,8-Hexachlorodibenzofuran (filtered)	4.924E-09	U	MG/L	nc	NA
MW-LEA-01	2,3,4,6,7,8-Hexachlorodibenzofuran (unfiltered)	2.326E-08	U	MG/L	nc	NA
MW-05S	2,3,4,6,7,8-Hexachlorodibenzofuran (unfiltered)	1.192E-08	U	MG/L	nc	NA
MW-LEA-03	2,3,4,6,7,8-Hexachlorodibenzofuran (unfiltered)	5.785E-09	U	MG/L	nc	NA
MW-LEA-02	2,3,4,6,7,8-Hexachlorodibenzofuran (unfiltered)	1.682E-09	U	MG/L	nc	NA
MW-LEA-02	2,3,4,6,7,8-Hexachlorodibenzofuran (unfiltered)	8.17E-10	U	MG/L	nc	NA
MW04D	2,3,4,6,7,8-HxCDF	0.000000003	EMPC	MG/L	nc	NA
MW07S	2,3,4,6,7,8-HxCDF	1.4E-09	EMPC	MG/L	nc	NA
MW07D	2,3,4,6,7,8-HxCDF	3.7E-09	J	MG/L	nc	NA
MW04S	2,3,4,6,7,8-HxCDF	3.4E-09	J	MG/L	nc	NA
MW05S	2,3,4,6,7,8-HxCDF	3.1E-09	J	MG/L	nc	NA
MW15D	2,3,4,6,7,8-HxCDF	3.6E-09	U	MG/L	nc	NA
MW05S	2,3,4,6,7,8-HxCDF	3.47E-09	U	MG/L	nc	NA
MW03S	2,3,4,6,7,8-HxCDF	3.3E-09	U	MG/L	nc	NA
MW06S	2,3,4,6,7,8-HxCDF	3.3E-09	U	MG/L	nc	NA
MW10D	2,3,4,6,7,8-HxCDF	0.000000003	U	MG/L	nc	NA
MW01S	2,3,4,6,7,8-HxCDF	0.000000003	U	MG/L	nc	NA
MW01S	2,3,4,6,7,8-HxCDF	2.8E-09	U	MG/L	nc	NA
MW03S	2,3,4,6,7,8-HxCDF	2.8E-09	U	MG/L	nc	NA
MW07S	2,3,4,6,7,8-HxCDF	2.7E-09	U	MG/L	nc	NA
MW01S	2,3,4,6,7,8-HxCDF	2.6E-09	U	MG/L	nc	NA
MW09S	2,3,4,6,7,8-HxCDF	2.6E-09	U	MG/L	nc	NA
MW10D	2,3,4,6,7,8-HxCDF	2.2E-09	U	MG/L	nc	NA
MW13S	2,3,4,6,7,8-HxCDF	2.2E-09	U	MG/L	nc	NA
GEC6	2,3,4,6,7,8-HxCDF	2.2E-09	U	MG/L	nc	NA
MW04S	2,3,4,6,7,8-HxCDF	2.2E-09	U	MG/L	nc	NA
TMW3	2,3,4,6,7,8-HxCDF	2.1E-09	U	MG/L	nc	NA
MW08S	2,3,4,6,7,8-HxCDF	0.000000002	U	MG/L	nc	NA
MW02S	2,3,4,6,7,8-HxCDF	1.8E-09	U	MG/L	nc	NA
MW13B	2,3,4,6,7,8-HxCDF	1.7E-09	U	MG/L	nc	NA
MW12D	2,3,4,6,7,8-HxCDF	1.7E-09	U	MG/L	nc	NA
MW01S	2,3,4,6,7,8-HxCDF	1.7E-09	U	MG/L	nc	NA
MW04B	2,3,4,6,7,8-HxCDF	1.7E-09	U	MG/L	nc	NA
MW10B	2,3,4,6,7,8-HxCDF	1.6E-09	U	MG/L	nc	NA
MW12B	2,3,4,6,7,8-HxCDF	1.6E-09	U	MG/L	nc	NA
MW06S	2,3,4,6,7,8-HxCDF	1.6E-09	U	MG/L	nc	NA
MW08S	2,3,4,6,7,8-HxCDF	1.6E-09	U	MG/L	nc	NA
MW09S	2,3,4,6,7,8-HxCDF	1.6E-09	U	MG/L	nc	NA
MW13D	2,3,4,6,7,8-HxCDF	1.5E-09	U	MG/L	nc	NA
MW11M	2,3,4,6,7,8-HxCDF	1.5E-09	U	MG/L	nc	NA
MW11S	2,3,4,6,7,8-HxCDF	1.5E-09	U	MG/L	nc	NA
GEC2	2,3,4,6,7,8-HxCDF	1.5E-09	U	MG/L	nc	NA
MW11B	2,3,4,6,7,8-HxCDF	1.4E-09	U	MG/L	nc	NA
MW02S	2,3,4,6,7,8-HxCDF	1.3E-09	U	MG/L	nc	NA
MW12B	2,3,4,6,7,8-HxCDF	1.2E-09	U	MG/L	nc	NA
MW02M	2,3,4,6,7,8-HxCDF	1.1E-09	U	MG/L	nc	NA
MW14M	2,3,4,6,7,8-HxCDF	0.000000001	U	MG/L	nc	NA
MW05S	2,3,4,6,7,8-HxCDF	9E-10	U	MG/L	nc	NA
MW02D	2,3,4,6,7,8-HxCDF	7E-10	U	MG/L	nc	NA
MW05S	2,3,4,6,7,8-HxCDF	6E-10	U	MG/L	nc	NA
MW07D	2,3,4,7,8-PeCDF	2.9E-09	EMPC	MG/L	nc	NA
MW04S	2,3,4,7,8-PeCDF	2.8E-09	EMPC	MG/L	nc	NA
GEC2	2,3,4,7,8-PeCDF	2.5E-09	EMPC	MG/L	nc	NA
MW12B	2,3,4,7,8-PeCDF	1.7E-09	EMPC	MG/L	nc	NA
MW04D	2,3,4,7,8-PeCDF	3.5E-09	J	MG/L	nc	NA
MW02M	2,3,4,7,8-PeCDF	6E-10	J	MG/L	nc	NA
MW15D	2,3,4,7,8-PeCDF	4.5E-09	U	MG/L	nc	NA
MW03S	2,3,4,7,8-PeCDF	3.7E-09	U	MG/L	nc	NA
MW05S	2,3,4,7,8-PeCDF	3.23E-09	U	MG/L	nc	NA
MW05S	2,3,4,7,8-PeCDF	3.03E-09	U	MG/L	nc	NA
MW06S	2,3,4,7,8-PeCDF	2.9E-09	U	MG/L	nc	NA
MW10D	2,3,4,7,8-PeCDF	2.7E-09	U	MG/L	nc	NA
MW01S	2,3,4,7,8-PeCDF	2.7E-09	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW13S	2,3,4,7,8-PeCDF	2.6E-09	U	MG/L	nc	NA
GEC6	2,3,4,7,8-PeCDF	2.4E-09	U	MG/L	nc	NA
MW07S	2,3,4,7,8-PeCDF	2.4E-09	U	MG/L	nc	NA
MW03S	2,3,4,7,8-PeCDF	2.4E-09	U	MG/L	nc	NA
MW10D	2,3,4,7,8-PeCDF	2.2E-09	U	MG/L	nc	NA
MW05S	2,3,4,7,8-PeCDF	2.2E-09	U	MG/L	nc	NA
MW01S	2,3,4,7,8-PeCDF	2.2E-09	U	MG/L	nc	NA
MW01S	2,3,4,7,8-PeCDF	2.2E-09	U	MG/L	nc	NA
MW09S	2,3,4,7,8-PeCDF	2.2E-09	U	MG/L	nc	NA
MW12D	2,3,4,7,8-PeCDF	2.1E-09	U	MG/L	nc	NA
MW10B	2,3,4,7,8-PeCDF	0.000000002	U	MG/L	nc	NA
TMW3	2,3,4,7,8-PeCDF	1.9E-09	U	MG/L	nc	NA
MW12B	2,3,4,7,8-PeCDF	1.9E-09	U	MG/L	nc	NA
MW01S	2,3,4,7,8-PeCDF	1.9E-09	U	MG/L	nc	NA
MW13D	2,3,4,7,8-PeCDF	1.8E-09	U	MG/L	nc	NA
MW11B	2,3,4,7,8-PeCDF	1.8E-09	U	MG/L	nc	NA
MW11S	2,3,4,7,8-PeCDF	1.8E-09	U	MG/L	nc	NA
MW04S	2,3,4,7,8-PeCDF	1.8E-09	U	MG/L	nc	NA
MW08S	2,3,4,7,8-PeCDF	1.8E-09	U	MG/L	nc	NA
MW11M	2,3,4,7,8-PeCDF	1.6E-09	U	MG/L	nc	NA
MW09S	2,3,4,7,8-PeCDF	1.6E-09	U	MG/L	nc	NA
MW13B	2,3,4,7,8-PeCDF	1.5E-09	U	MG/L	nc	NA
MW06S	2,3,4,7,8-PeCDF	1.5E-09	U	MG/L	nc	NA
MW07S	2,3,4,7,8-PeCDF	1.5E-09	U	MG/L	nc	NA
MW02S	2,3,4,7,8-PeCDF	1.5E-09	U	MG/L	nc	NA
MW08S	2,3,4,7,8-PeCDF	1.4E-09	U	MG/L	nc	NA
MW04B	2,3,4,7,8-PeCDF	1.4E-09	U	MG/L	nc	NA
MW14M	2,3,4,7,8-PeCDF	1.2E-09	U	MG/L	nc	NA
MW02S	2,3,4,7,8-PeCDF	1.1E-09	U	MG/L	nc	NA
MW02D	2,3,4,7,8-PeCDF	6E-10	U	MG/L	nc	NA
MW05S	2,3,4,7,8-PeCDF	7.1E-09	UJ	MG/L	nc	NA
MW-LEA-01	2,3,4,7,8-Pentachlorodibenzofuran (filtered)	1.304E-08	U	MG/L	nc	NA
MW-LEA-02	2,3,4,7,8-Pentachlorodibenzofuran (filtered)	8.162E-09	U	MG/L	nc	NA
MW-LEA-02	2,3,4,7,8-Pentachlorodibenzofuran (filtered)	2.901E-09	U	MG/L	nc	NA
MW-05S	2,3,4,7,8-Pentachlorodibenzofuran (filtered)	2.624E-09	U	MG/L	nc	NA
MW-LEA-03	2,3,4,7,8-Pentachlorodibenzofuran (filtered)	1.851E-09	U	MG/L	nc	NA
MW-LEA-01	2,3,4,7,8-Pentachlorodibenzofuran (unfiltered)	2.687E-09	U	MG/L	nc	NA
MW-05S	2,3,4,7,8-Pentachlorodibenzofuran (unfiltered)	2.013E-09	U	MG/L	nc	NA
MW-LEA-03	2,3,4,7,8-Pentachlorodibenzofuran (unfiltered)	1.49E-09	U	MG/L	nc	NA
MW-LEA-02	2,3,4,7,8-Pentachlorodibenzofuran (unfiltered)	9.31E-10	U	MG/L	nc	NA
MW-LEA-02	2,3,4,7,8-Pentachlorodibenzofuran (unfiltered)	6.51E-10	U	MG/L	nc	NA
MW05S	2,3,7,8-TCDD	4.14476E-06		MG/L	0.00000003	Y
MW05S	2,3,7,8-TCDD	1.45506E-06		MG/L	0.00000003	Y
MW05S	2,3,7,8-TCDD	1.03269E-06		MG/L	0.00000003	Y
MW09S	2,3,7,8-TCDD	1.82E-08		MG/L	0.00000003	N
MW03S	2,3,7,8-TCDD	1.13E-08		MG/L	0.00000003	N
MW09S	2,3,7,8-TCDD	1.02E-08		MG/L	0.00000003	N
GEC6	2,3,7,8-TCDD	1.08E-08	EMPC	MG/L	0.00000003	N
MW01S	2,3,7,8-TCDD	5.3E-09	EMPC	MG/L	0.00000003	N
MW01S	2,3,7,8-TCDD	4.7E-09	EMPC	MG/L	0.00000003	N
MW03S	2,3,7,8-TCDD	3.6E-09	EMPC	MG/L	0.00000003	N
MW12B	2,3,7,8-TCDD	2.2E-09	EMPC	MG/L	0.00000003	N
MW05S	2,3,7,8-TCDD	0.00000418	J	MG/L	0.00000003	Y
MW06S	2,3,7,8-TCDD	6.6E-09	J	MG/L	0.00000003	N
MW01S	2,3,7,8-TCDD	6.4E-09	J	MG/L	0.00000003	N
MW08S	2,3,7,8-TCDD	5.1E-09	J	MG/L	0.00000003	N
MW02S	2,3,7,8-TCDD	4.7E-09	J	MG/L	0.00000003	N
MW04D	2,3,7,8-TCDD	3.9E-09	J	MG/L	0.00000003	N
MW07D	2,3,7,8-TCDD	3.4E-09	J	MG/L	0.00000003	N
MW02D	2,3,7,8-TCDD	1.2E-09	J	MG/L	0.00000003	N
MW15D	2,3,7,8-TCDD	5.7E-09	U	MG/L	0.00000003	NA
MW12B	2,3,7,8-TCDD	4.7E-09	U	MG/L	0.00000003	NA
MW10D	2,3,7,8-TCDD	3.5E-09	U	MG/L	0.00000003	NA
GEC2	2,3,7,8-TCDD	3.2E-09	U	MG/L	0.00000003	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW13S	2,3,7,8-TCDD	3.1E-09	U	MG/L	0.00000003	NA
MW06S	2,3,7,8-TCDD	0.000000003	U	MG/L	0.00000003	NA
MW10D	2,3,7,8-TCDD	2.8E-09	U	MG/L	0.00000003	NA
MW12D	2,3,7,8-TCDD	2.7E-09	U	MG/L	0.00000003	NA
MW10B	2,3,7,8-TCDD	2.5E-09	U	MG/L	0.00000003	NA
MW07S	2,3,7,8-TCDD	2.4E-09	U	MG/L	0.00000003	NA
MW01S	2,3,7,8-TCDD	2.4E-09	U	MG/L	0.00000003	NA
MW13D	2,3,7,8-TCDD	2.3E-09	U	MG/L	0.00000003	NA
MW11B	2,3,7,8-TCDD	2.3E-09	U	MG/L	0.00000003	NA
MW11S	2,3,7,8-TCDD	2.2E-09	U	MG/L	0.00000003	NA
TMW3	2,3,7,8-TCDD	2.1E-09	U	MG/L	0.00000003	NA
MW04S	2,3,7,8-TCDD	0.000000002	U	MG/L	0.00000003	NA
MW13B	2,3,7,8-TCDD	1.9E-09	U	MG/L	0.00000003	NA
MW11M	2,3,7,8-TCDD	1.9E-09	U	MG/L	0.00000003	NA
MW08S	2,3,7,8-TCDD	1.9E-09	U	MG/L	0.00000003	NA
MW07S	2,3,7,8-TCDD	1.8E-09	U	MG/L	0.00000003	NA
MW02S	2,3,7,8-TCDD	1.8E-09	U	MG/L	0.00000003	NA
MW04B	2,3,7,8-TCDD	1.6E-09	U	MG/L	0.00000003	NA
MW14M	2,3,7,8-TCDD	1.5E-09	U	MG/L	0.00000003	NA
MW04S	2,3,7,8-TCDD	1.4E-09	U	MG/L	0.00000003	NA
MW02M	2,3,7,8-TCDD	1.2E-09	U	MG/L	0.00000003	NA
MW-LEA-02	2,3,7,8-TCDD (filtered)	7.26823E-07	J	MG/L	0.00000003	Y
MW-LEA-02	2,3,7,8-TCDD (filtered)	2.88775E-07	J	MG/L	0.00000003	Y
MW-LEA-01	2,3,7,8-TCDD (filtered)	1.492E-08	U	MG/L	0.00000003	NA
MW-05S	2,3,7,8-TCDD (filtered)	2.604E-09	U	MG/L	0.00000003	NA
MW-LEA-03	2,3,7,8-TCDD (filtered)	1.899E-09	U	MG/L	0.00000003	NA
MW-LEA-02	2,3,7,8-TCDD (unfiltered)	6.15418E-06	J	MG/L	0.00000003	Y
MW-LEA-02	2,3,7,8-TCDD (unfiltered)	2.74272E-06	J	MG/L	0.00000003	Y
MW-05S	2,3,7,8-TCDD (unfiltered)	3.38874E-07	J	MG/L	0.00000003	Y
MW-LEA-03	2,3,7,8-TCDD (unfiltered)	2.33874E-07	J	MG/L	0.00000003	Y
MW-LEA-01	2,3,7,8-TCDD (unfiltered)	6.8043E-08	J	MG/L	0.00000003	Y
MW05S	2,3,7,8-TCDF	1.82E-09		MG/L	nc	NA
GEC6	2,3,7,8-TCDF	1.11E-08	EMPC	MG/L	nc	NA
GEC2	2,3,7,8-TCDF	2.4E-09	EMPC	MG/L	nc	NA
MW05S	2,3,7,8-TCDF	9.3E-09	J	MG/L	nc	NA
MW05S	2,3,7,8-TCDF	9.2E-10	J	MG/L	nc	NA
MW15D	2,3,7,8-TCDF	3.8E-09	U	MG/L	nc	NA
MW03S	2,3,7,8-TCDF	3.4E-09	U	MG/L	nc	NA
MW10D	2,3,7,8-TCDF	2.8E-09	U	MG/L	nc	NA
MW01S	2,3,7,8-TCDF	2.4E-09	U	MG/L	nc	NA
MW06S	2,3,7,8-TCDF	2.3E-09	U	MG/L	nc	NA
MW13S	2,3,7,8-TCDF	2.2E-09	U	MG/L	nc	NA
MW07S	2,3,7,8-TCDF	2.1E-09	U	MG/L	nc	NA
MW10D	2,3,7,8-TCDF	0.000000002	U	MG/L	nc	NA
TMW3	2,3,7,8-TCDF	1.9E-09	U	MG/L	nc	NA
MW01S	2,3,7,8-TCDF	1.9E-09	U	MG/L	nc	NA
MW03S	2,3,7,8-TCDF	1.9E-09	U	MG/L	nc	NA
MW05S	2,3,7,8-TCDF	1.82E-09	U	MG/L	nc	NA
MW10B	2,3,7,8-TCDF	1.8E-09	U	MG/L	nc	NA
MW11M	2,3,7,8-TCDF	1.8E-09	U	MG/L	nc	NA
MW12D	2,3,7,8-TCDF	1.8E-09	U	MG/L	nc	NA
MW04S	2,3,7,8-TCDF	1.8E-09	U	MG/L	nc	NA
MW09S	2,3,7,8-TCDF	1.8E-09	U	MG/L	nc	NA
MW12B	2,3,7,8-TCDF	1.7E-09	U	MG/L	nc	NA
MW11B	2,3,7,8-TCDF	1.7E-09	U	MG/L	nc	NA
MW01S	2,3,7,8-TCDF	1.7E-09	U	MG/L	nc	NA
MW13B	2,3,7,8-TCDF	1.6E-09	U	MG/L	nc	NA
MW13D	2,3,7,8-TCDF	1.6E-09	U	MG/L	nc	NA
MW01S	2,3,7,8-TCDF	1.6E-09	U	MG/L	nc	NA
MW02S	2,3,7,8-TCDF	1.6E-09	U	MG/L	nc	NA
MW11S	2,3,7,8-TCDF	1.5E-09	U	MG/L	nc	NA
MW04B	2,3,7,8-TCDF	1.5E-09	U	MG/L	nc	NA
MW08S	2,3,7,8-TCDF	1.5E-09	U	MG/L	nc	NA
MW07S	2,3,7,8-TCDF	1.4E-09	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW09S	2,3,7,8-TCDF	1.4E-09	U	MG/L	nc	NA
MW06S	2,3,7,8-TCDF	1.2E-09	U	MG/L	nc	NA
MW12B	2,3,7,8-TCDF	1.1E-09	U	MG/L	nc	NA
MW07D	2,3,7,8-TCDF	1.1E-09	U	MG/L	nc	NA
MW08S	2,3,7,8-TCDF	1.1E-09	U	MG/L	nc	NA
MW14M	2,3,7,8-TCDF	0.000000001	U	MG/L	nc	NA
MW04S	2,3,7,8-TCDF	9E-10	U	MG/L	nc	NA
MW02M	2,3,7,8-TCDF	9E-10	U	MG/L	nc	NA
MW04D	2,3,7,8-TCDF	8E-10	U	MG/L	nc	NA
MW02S	2,3,7,8-TCDF	8E-10	U	MG/L	nc	NA
MW02D	2,3,7,8-TCDF	6E-10	U	MG/L	nc	NA
MW-LEA-01	2,3,7,8-Tetrachlorodibenzofuran (filtered)	1.226E-08	UJ	MG/L	nc	NA
MW-LEA-02	2,3,7,8-Tetrachlorodibenzofuran (filtered)	5.028E-09	UJ	MG/L	nc	NA
MW-LEA-02	2,3,7,8-Tetrachlorodibenzofuran (filtered)	3.247E-09	UJ	MG/L	nc	NA
MW-LEA-03	2,3,7,8-Tetrachlorodibenzofuran (filtered)	2.135E-09	UJ	MG/L	nc	NA
MW-05S	2,3,7,8-Tetrachlorodibenzofuran (filtered)	1.949E-09	UJ	MG/L	nc	NA
MW-LEA-02	2,3,7,8-Tetrachlorodibenzofuran (unfiltered)	1.06E-09	U	MG/L	nc	NA
MW-LEA-02	2,3,7,8-Tetrachlorodibenzofuran (unfiltered)	7.47E-10	U	MG/L	nc	NA
MW-05S	2,3,7,8-Tetrachlorodibenzofuran (unfiltered)	4.41E-10	U	MG/L	nc	NA
MW-LEA-03	2,3,7,8-Tetrachlorodibenzofuran (unfiltered)	3.72E-10	U	MG/L	nc	NA
MW-LEA-01	2,3,7,8-Tetrachlorodibenzofuran (unfiltered)	3.36E-10	U	MG/L	nc	NA
MW15D	2,4,5-trichlorophenol	0.036	U	MG/L	nc	NA
MW10D	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW10B	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW10D	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW13B	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW13D	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW13S	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
TMW3	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW12B	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW11B	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW11M	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW11S	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW12B	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW12D	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
GEC2	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
GEC6	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW14M	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW01S	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW01S	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW03S	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW05S	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW06S	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW07D	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW07S	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW08S	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW09S	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW04S	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW04B	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW04D	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW04S	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW02D	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW02M	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW02S	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW02S	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW06S	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW07S	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW01S	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW01S	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW03S	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW08S	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW09S	2,4,5-trichlorophenol	0.025	U	MG/L	nc	NA
MW05S	2,4,6-trichlorophenol	2.9	*	MG/L	nc	NA
MW08S	2,4,6-trichlorophenol	0.002	J	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW15D	2,4,6-trichlorophenol	0.014	U	MG/L	nc	NA
MW10D	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW10B	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW10D	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW13B	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW13D	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW13S	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
TMW3	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW12B	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW11B	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW11M	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW11S	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW12B	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW12D	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
GEC2	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
GEC6	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW14M	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW01S	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW01S	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW03S	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW06S	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW07D	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW07S	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW09S	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW04S	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW04B	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW04D	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW04S	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW02D	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW02M	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW02S	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW02S	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW06S	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW07S	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW01S	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW01S	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW03S	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW08S	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW09S	2,4,6-trichlorophenol	0.01	U	MG/L	nc	NA
MW05S	2,4-dichlorophenol	0.06		MG/L	nc	NA
MW15D	2,4-dichlorophenol	0.014	U	MG/L	nc	NA
MW10D	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW10B	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW10D	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW13B	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW13D	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW13S	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
TMW3	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW12B	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW11B	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW11M	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW11S	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW12B	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW12D	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
GEC2	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
GEC6	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW14M	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW01S	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW01S	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW03S	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW06S	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW07D	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW07S	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW08S	2,4-dichlorophenol	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW09S	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW04S	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW04B	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW04D	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW04S	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW02D	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW02M	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW02S	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW02S	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW06S	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW07S	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW01S	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW01S	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW03S	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW08S	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW09S	2,4-dichlorophenol	0.01	U	MG/L	nc	NA
MW15D	2,4-dimethylphenol	0.014	U	MG/L	nc	NA
MW10D	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW10B	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW10D	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW13B	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW13D	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW13S	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
TMW3	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW12B	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW11B	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW11M	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW11S	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW12B	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW12D	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
GEC2	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
GEC6	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW14M	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW01S	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW01S	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW03S	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW05S	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW06S	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW07D	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW07S	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW08S	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW09S	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW04S	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW04B	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW04D	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW04S	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW02D	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW02M	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW02S	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW02S	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW06S	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW07S	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW01S	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW01S	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW03S	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW08S	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW09S	2,4-dimethylphenol	0.01	U	MG/L	nc	NA
MW15D	2,4-dinitrophenol	0.036	U	MG/L	nc	NA
MW12B	2,4-dinitrophenol	0.025	U	MG/L	nc	NA
GEC6	2,4-dinitrophenol	0.025	U	MG/L	nc	NA
MW14M	2,4-dinitrophenol	0.025	U	MG/L	nc	NA
MW01S	2,4-dinitrophenol	0.025	U	MG/L	nc	NA
MW01S	2,4-dinitrophenol	0.025	U	MG/L	nc	NA
MW03S	2,4-dinitrophenol	0.025	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW05S	2,4-dinitrophenol	0.025	U	MG/L	nc	NA
MW06S	2,4-dinitrophenol	0.025	U	MG/L	nc	NA
MW07D	2,4-dinitrophenol	0.025	U	MG/L	nc	NA
MW07S	2,4-dinitrophenol	0.025	U	MG/L	nc	NA
MW08S	2,4-dinitrophenol	0.025	U	MG/L	nc	NA
MW09S	2,4-dinitrophenol	0.025	U	MG/L	nc	NA
MW04S	2,4-dinitrophenol	0.025	U	MG/L	nc	NA
MW04B	2,4-dinitrophenol	0.025	U	MG/L	nc	NA
MW04D	2,4-dinitrophenol	0.025	U	MG/L	nc	NA
MW04S	2,4-dinitrophenol	0.025	U	MG/L	nc	NA
MW02D	2,4-dinitrophenol	0.025	U	MG/L	nc	NA
MW02M	2,4-dinitrophenol	0.025	U	MG/L	nc	NA
MW02S	2,4-dinitrophenol	0.025	U	MG/L	nc	NA
MW10D	2,4-dinitrophenol	0.025	UJ	MG/L	nc	NA
MW10B	2,4-dinitrophenol	0.025	UJ	MG/L	nc	NA
MW10D	2,4-dinitrophenol	0.025	UJ	MG/L	nc	NA
MW13B	2,4-dinitrophenol	0.025	UJ	MG/L	nc	NA
MW13D	2,4-dinitrophenol	0.025	UJ	MG/L	nc	NA
MW13S	2,4-dinitrophenol	0.025	UJ	MG/L	nc	NA
TMW3	2,4-dinitrophenol	0.025	UJ	MG/L	nc	NA
MW12B	2,4-dinitrophenol	0.025	UJ	MG/L	nc	NA
MW11B	2,4-dinitrophenol	0.025	UJ	MG/L	nc	NA
MW11M	2,4-dinitrophenol	0.025	UJ	MG/L	nc	NA
MW11S	2,4-dinitrophenol	0.025	UJ	MG/L	nc	NA
MW12D	2,4-dinitrophenol	0.025	UJ	MG/L	nc	NA
GEC2	2,4-dinitrophenol	0.025	UJ	MG/L	nc	NA
MW02S	2,4-dinitrophenol	0.025	UJ	MG/L	nc	NA
MW06S	2,4-dinitrophenol	0.025	UJ	MG/L	nc	NA
MW07S	2,4-dinitrophenol	0.025	UJ	MG/L	nc	NA
MW01S	2,4-dinitrophenol	0.025	UJ	MG/L	nc	NA
MW01S	2,4-dinitrophenol	0.025	UJ	MG/L	nc	NA
MW03S	2,4-dinitrophenol	0.025	UJ	MG/L	nc	NA
MW08S	2,4-dinitrophenol	0.025	UJ	MG/L	nc	NA
MW09S	2,4-dinitrophenol	0.025	UJ	MG/L	nc	NA
MW15D	2,4-dinitrotoluene	0.014	U	MG/L	nc	NA
MW10D	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW10B	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW10D	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW13B	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW13D	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW13S	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
TMW3	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW12B	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW11B	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW11M	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW11S	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW12B	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW12D	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
GEC2	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
GEC6	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW14M	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW01S	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW01S	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW03S	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW05S	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW06S	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW07D	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW07S	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW08S	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW09S	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW04S	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW04B	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW04D	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW04S	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW02D	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW02M	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW02S	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW02S	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW06S	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW07S	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW01S	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW01S	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW03S	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW08S	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
MW09S	2,4-dinitrotoluene	0.01	U	MG/L	nc	NA
GEC2	2,5-cyclohexadiene-1,4-dione, 2,6-bis(1,	0.003	NJ	MG/L	nc	NA
MW06S	2,5-cyclohexadiene-1,4-dione, 2,6-bis(1,	0.003	NJ	MG/L	nc	NA
MW15D	2,6-dinitrotoluene	0.014	U	MG/L	nc	NA
MW10D	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW10B	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW10D	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW13B	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW13D	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW13S	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
TMW3	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW12B	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW11B	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW11M	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW11S	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW12B	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW12D	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
GEC2	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
GEC6	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW14M	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW01S	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW01S	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW03S	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW05S	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW06S	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW07D	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW07S	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW08S	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW09S	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW04S	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW04B	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW04D	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW04S	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW02D	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW02M	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW02S	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW02S	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW06S	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW07S	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW01S	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW01S	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW03S	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW08S	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW09S	2,6-dinitrotoluene	0.01	U	MG/L	nc	NA
MW05S	2-butanone	1.7	U	MG/L	nc	NA
MW13D	2-butanone	0.01	U	MG/L	nc	NA
MW13S	2-butanone	0.01	U	MG/L	nc	NA
MW01S	2-butanone	0.01	U	MG/L	nc	NA
MW01S	2-butanone	0.01	U	MG/L	nc	NA
MW03S	2-butanone	0.01	U	MG/L	nc	NA
MW06S	2-butanone	0.01	U	MG/L	nc	NA
MW07S	2-butanone	0.01	U	MG/L	nc	NA
MW08S	2-butanone	0.01	U	MG/L	nc	NA
MW09S	2-butanone	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW02S	2-butanone	0.01	U	MG/L	nc	NA
MW06S	2-butanone	0.01	U	MG/L	nc	NA
MW07S	2-butanone	0.01	U	MG/L	nc	NA
MW01S	2-butanone	0.01	U	MG/L	nc	NA
MW01S	2-butanone	0.01	U	MG/L	nc	NA
MW03S	2-butanone	0.01	U	MG/L	nc	NA
MW08S	2-butanone	0.01	U	MG/L	nc	NA
MW09S	2-butanone	0.01	U	MG/L	nc	NA
MW10D	2-butanone	0.01	UJ	MG/L	nc	NA
MW10B	2-butanone	0.01	UJ	MG/L	nc	NA
MW10D	2-butanone	0.01	UJ	MG/L	nc	NA
MW13B	2-butanone	0.01	UJ	MG/L	nc	NA
TMW3	2-butanone	0.01	UJ	MG/L	nc	NA
MW12B	2-butanone	0.01	UJ	MG/L	nc	NA
MW11B	2-butanone	0.01	UJ	MG/L	nc	NA
MW11M	2-butanone	0.01	UJ	MG/L	nc	NA
MW11S	2-butanone	0.01	UJ	MG/L	nc	NA
MW12B	2-butanone	0.01	UJ	MG/L	nc	NA
MW12D	2-butanone	0.01	UJ	MG/L	nc	NA
GEC2	2-butanone	0.01	UJ	MG/L	nc	NA
GEC6	2-butanone	0.01	UJ	MG/L	nc	NA
MW14M	2-butanone	0.01	UJ	MG/L	nc	NA
MW15D	2-butanone	0.01	UJ	MG/L	nc	NA
MW07D	2-butanone	0.01	UJ	MG/L	nc	NA
MW04S	2-butanone	0.01	UJ	MG/L	nc	NA
MW04B	2-butanone	0.01	UJ	MG/L	nc	NA
MW04D	2-butanone	0.01	UJ	MG/L	nc	NA
MW04S	2-butanone	0.01	UJ	MG/L	nc	NA
MW02D	2-butanone	0.01	UJ	MG/L	nc	NA
MW02M	2-butanone	0.01	UJ	MG/L	nc	NA
MW02S	2-butanone	0.01	UJ	MG/L	nc	NA
MW15D	2-chloronaphthalene	0.014	U	MG/L	nc	NA
MW10D	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW10B	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW10D	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW13B	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW13D	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW13S	2-chloronaphthalene	0.01	U	MG/L	nc	NA
TMW3	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW12B	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW11B	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW11M	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW11S	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW12B	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW12D	2-chloronaphthalene	0.01	U	MG/L	nc	NA
GEC2	2-chloronaphthalene	0.01	U	MG/L	nc	NA
GEC6	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW14M	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW01S	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW01S	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW03S	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW05S	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW06S	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW07D	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW07S	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW08S	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW09S	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW04S	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW04B	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW04D	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW04S	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW02D	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW02M	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW02S	2-chloronaphthalene	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW02S	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW06S	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW07S	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW01S	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW01S	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW03S	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW08S	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW09S	2-chloronaphthalene	0.01	U	MG/L	nc	NA
MW15D	2-chlorophenol	0.014	U	MG/L	nc	NA
MW10D	2-chlorophenol	0.01	U	MG/L	nc	NA
MW10B	2-chlorophenol	0.01	U	MG/L	nc	NA
MW10D	2-chlorophenol	0.01	U	MG/L	nc	NA
MW13B	2-chlorophenol	0.01	U	MG/L	nc	NA
MW13D	2-chlorophenol	0.01	U	MG/L	nc	NA
MW13S	2-chlorophenol	0.01	U	MG/L	nc	NA
TMW3	2-chlorophenol	0.01	U	MG/L	nc	NA
MW12B	2-chlorophenol	0.01	U	MG/L	nc	NA
MW11B	2-chlorophenol	0.01	U	MG/L	nc	NA
MW11M	2-chlorophenol	0.01	U	MG/L	nc	NA
MW11S	2-chlorophenol	0.01	U	MG/L	nc	NA
MW12B	2-chlorophenol	0.01	U	MG/L	nc	NA
MW12D	2-chlorophenol	0.01	U	MG/L	nc	NA
GEC2	2-chlorophenol	0.01	U	MG/L	nc	NA
GEC6	2-chlorophenol	0.01	U	MG/L	nc	NA
MW14M	2-chlorophenol	0.01	U	MG/L	nc	NA
MW01S	2-chlorophenol	0.01	U	MG/L	nc	NA
MW01S	2-chlorophenol	0.01	U	MG/L	nc	NA
MW03S	2-chlorophenol	0.01	U	MG/L	nc	NA
MW05S	2-chlorophenol	0.01	U	MG/L	nc	NA
MW06S	2-chlorophenol	0.01	U	MG/L	nc	NA
MW07D	2-chlorophenol	0.01	U	MG/L	nc	NA
MW07S	2-chlorophenol	0.01	U	MG/L	nc	NA
MW08S	2-chlorophenol	0.01	U	MG/L	nc	NA
MW09S	2-chlorophenol	0.01	U	MG/L	nc	NA
MW04S	2-chlorophenol	0.01	U	MG/L	nc	NA
MW04B	2-chlorophenol	0.01	U	MG/L	nc	NA
MW04D	2-chlorophenol	0.01	U	MG/L	nc	NA
MW04S	2-chlorophenol	0.01	U	MG/L	nc	NA
MW02D	2-chlorophenol	0.01	U	MG/L	nc	NA
MW02M	2-chlorophenol	0.01	U	MG/L	nc	NA
MW02S	2-chlorophenol	0.01	U	MG/L	nc	NA
MW02S	2-chlorophenol	0.01	U	MG/L	nc	NA
MW06S	2-chlorophenol	0.01	U	MG/L	nc	NA
MW07S	2-chlorophenol	0.01	U	MG/L	nc	NA
MW01S	2-chlorophenol	0.01	U	MG/L	nc	NA
MW01S	2-chlorophenol	0.01	U	MG/L	nc	NA
MW03S	2-chlorophenol	0.01	U	MG/L	nc	NA
MW08S	2-chlorophenol	0.01	U	MG/L	nc	NA
MW09S	2-chlorophenol	0.01	U	MG/L	nc	NA
MW05S	2-CHLOROTOLUENE	1	U	MG/L	nc	NA
MW05S	2-CHLOROTOLUENE	1	U	MG/L	nc	NA
MW05S	2-chlorotoluene	1	U	MG/L	nc	NA
MW05S	2-chlorotoluene	1	U	MG/L	nc	NA
MW14M	2-chlorotoluene	0.1	U	MG/L	nc	NA
MW06S	2-chlorotoluene	0.01	U	MG/L	nc	NA
MW13D	2-chlorotoluene	0.01	U	MG/L	nc	NA
MW06S	2-chlorotoluene	0.006	U	MG/L	nc	NA
MW02M	2-chlorotoluene	0.005	U	MG/L	nc	NA
MW02D	2-chlorotoluene	0.004	U	MG/L	nc	NA
MW13B	2-chlorotoluene	0.004	U	MG/L	nc	NA
MW03S	2-chlorotoluene	0.001	U	MG/L	nc	NA
GEC3	2-chlorotoluene	0.001	U	MG/L	nc	NA
MW01S	2-chlorotoluene	0.001	U	MG/L	nc	NA
MW11S	2-chlorotoluene	0.001	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW12B	2-chlorotoluene	0.001	U	MG/L	nc	NA
MW12D	2-chlorotoluene	0.001	U	MG/L	nc	NA
GEC1	2-chlorotoluene	0.001	U	MG/L	nc	NA
GEC2	2-chlorotoluene	0.001	U	MG/L	nc	NA
GEC4	2-chlorotoluene	0.001	U	MG/L	nc	NA
GEC5	2-chlorotoluene	0.001	U	MG/L	nc	NA
GEC6	2-chlorotoluene	0.001	U	MG/L	nc	NA
GEC7	2-chlorotoluene	0.001	U	MG/L	nc	NA
MW07D	2-chlorotoluene	0.001	U	MG/L	nc	NA
MW07S	2-chlorotoluene	0.001	U	MG/L	nc	NA
MW11B	2-chlorotoluene	0.001	U	MG/L	nc	NA
MW11M	2-chlorotoluene	0.001	U	MG/L	nc	NA
MW15D	2-chlorotoluene	0.001	U	MG/L	nc	NA
MW02S	2-chlorotoluene	0.001	U	MG/L	nc	NA
MW04B	2-chlorotoluene	0.001	U	MG/L	nc	NA
MW04D	2-chlorotoluene	0.001	U	MG/L	nc	NA
MW04S	2-chlorotoluene	0.001	U	MG/L	nc	NA
MW08S	2-chlorotoluene	0.001	U	MG/L	nc	NA
MW09S	2-chlorotoluene	0.001	U	MG/L	nc	NA
MW10B	2-chlorotoluene	0.001	U	MG/L	nc	NA
MW10D	2-chlorotoluene	0.001	U	MG/L	nc	NA
MW13S	2-chlorotoluene	0.001	U	MG/L	nc	NA
MW07S	2-hexanone	0.006	J	MG/L	nc	NA
MW10D	2-hexanone	0.01	U	MG/L	nc	NA
MW10B	2-hexanone	0.01	U	MG/L	nc	NA
MW10D	2-hexanone	0.01	U	MG/L	nc	NA
MW13B	2-hexanone	0.01	U	MG/L	nc	NA
MW13D	2-hexanone	0.01	U	MG/L	nc	NA
MW13S	2-hexanone	0.01	U	MG/L	nc	NA
TMW3	2-hexanone	0.01	U	MG/L	nc	NA
MW11S	2-hexanone	0.01	U	MG/L	nc	NA
MW12D	2-hexanone	0.01	U	MG/L	nc	NA
MW01S	2-hexanone	0.01	U	MG/L	nc	NA
MW03S	2-hexanone	0.01	U	MG/L	nc	NA
MW07D	2-hexanone	0.01	U	MG/L	nc	NA
MW04S	2-hexanone	0.01	U	MG/L	nc	NA
MW04B	2-hexanone	0.01	U	MG/L	nc	NA
MW04D	2-hexanone	0.01	U	MG/L	nc	NA
MW04S	2-hexanone	0.01	U	MG/L	nc	NA
MW02D	2-hexanone	0.01	U	MG/L	nc	NA
MW02M	2-hexanone	0.01	U	MG/L	nc	NA
MW02S	2-hexanone	0.01	U	MG/L	nc	NA
MW02S	2-hexanone	0.01	U	MG/L	nc	NA
MW06S	2-hexanone	0.01	U	MG/L	nc	NA
MW07S	2-hexanone	0.01	U	MG/L	nc	NA
MW01S	2-hexanone	0.01	U	MG/L	nc	NA
MW01S	2-hexanone	0.01	U	MG/L	nc	NA
MW03S	2-hexanone	0.01	U	MG/L	nc	NA
MW08S	2-hexanone	0.01	U	MG/L	nc	NA
MW09S	2-hexanone	0.01	U	MG/L	nc	NA
MW05S	2-hexanone	1.7	UJ	MG/L	nc	NA
MW12B	2-hexanone	0.01	UJ	MG/L	nc	NA
MW11B	2-hexanone	0.01	UJ	MG/L	nc	NA
MW11M	2-hexanone	0.01	UJ	MG/L	nc	NA
MW12B	2-hexanone	0.01	UJ	MG/L	nc	NA
GEC2	2-hexanone	0.01	UJ	MG/L	nc	NA
GEC6	2-hexanone	0.01	UJ	MG/L	nc	NA
MW14M	2-hexanone	0.01	UJ	MG/L	nc	NA
MW15D	2-hexanone	0.01	UJ	MG/L	nc	NA
MW01S	2-hexanone	0.01	UJ	MG/L	nc	NA
MW06S	2-hexanone	0.01	UJ	MG/L	nc	NA
MW08S	2-hexanone	0.01	UJ	MG/L	nc	NA
MW09S	2-hexanone	0.01	UJ	MG/L	nc	NA
MW08S	2-imidazolidinone	0.004	NJ	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW04S	2-imidazolidinone	0.002	NJ	MG/L	nc	NA
GEC3	2-methylnaphthalene	0.0006		MG/L	nc	NA
GEC7	2-methylnaphthalene	0.00024		MG/L	nc	NA
GEC4	2-methylnaphthalene	0.00018		MG/L	nc	NA
MW15D	2-methylnaphthalene	0.014	U	MG/L	nc	NA
MW10D	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW10B	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW10D	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW13B	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW13D	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW13S	2-methylnaphthalene	0.01	U	MG/L	nc	NA
TMW3	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW12B	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW11B	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW11M	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW11S	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW12B	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW12D	2-methylnaphthalene	0.01	U	MG/L	nc	NA
GEC2	2-methylnaphthalene	0.01	U	MG/L	nc	NA
GEC6	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW14M	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW01S	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW01S	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW03S	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW05S	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW06S	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW07D	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW07S	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW08S	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW09S	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW04S	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW04B	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW04D	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW04S	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW02D	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW02M	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW02S	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW02S	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW06S	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW07S	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW01S	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW01S	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW03S	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW08S	2-methylnaphthalene	0.01	U	MG/L	nc	NA
MW09S	2-methylnaphthalene	0.01	U	MG/L	nc	NA
GEC1	2-methylnaphthalene	0.00018	U	MG/L	nc	NA
GEC2	2-methylnaphthalene	0.00014	U	MG/L	nc	NA
GEC5	2-methylnaphthalene	0.00012	U	MG/L	nc	NA
GEC6	2-methylnaphthalene	0.00012	U	MG/L	nc	NA
MW15D	2-methylphenol	0.014	U	MG/L	nc	NA
MW10D	2-methylphenol	0.01	U	MG/L	nc	NA
MW10B	2-methylphenol	0.01	U	MG/L	nc	NA
MW10D	2-methylphenol	0.01	U	MG/L	nc	NA
MW13B	2-methylphenol	0.01	U	MG/L	nc	NA
MW13D	2-methylphenol	0.01	U	MG/L	nc	NA
MW13S	2-methylphenol	0.01	U	MG/L	nc	NA
TMW3	2-methylphenol	0.01	U	MG/L	nc	NA
MW12B	2-methylphenol	0.01	U	MG/L	nc	NA
MW11B	2-methylphenol	0.01	U	MG/L	nc	NA
MW11M	2-methylphenol	0.01	U	MG/L	nc	NA
MW11S	2-methylphenol	0.01	U	MG/L	nc	NA
MW12B	2-methylphenol	0.01	U	MG/L	nc	NA
MW12D	2-methylphenol	0.01	U	MG/L	nc	NA
GEC2	2-methylphenol	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
GEC6	2-methylphenol	0.01	U	MG/L	nc	NA
MW14M	2-methylphenol	0.01	U	MG/L	nc	NA
MW01S	2-methylphenol	0.01	U	MG/L	nc	NA
MW01S	2-methylphenol	0.01	U	MG/L	nc	NA
MW03S	2-methylphenol	0.01	U	MG/L	nc	NA
MW05S	2-methylphenol	0.01	U	MG/L	nc	NA
MW06S	2-methylphenol	0.01	U	MG/L	nc	NA
MW07D	2-methylphenol	0.01	U	MG/L	nc	NA
MW07S	2-methylphenol	0.01	U	MG/L	nc	NA
MW08S	2-methylphenol	0.01	U	MG/L	nc	NA
MW09S	2-methylphenol	0.01	U	MG/L	nc	NA
MW04S	2-methylphenol	0.01	U	MG/L	nc	NA
MW04B	2-methylphenol	0.01	U	MG/L	nc	NA
MW04D	2-methylphenol	0.01	U	MG/L	nc	NA
MW04S	2-methylphenol	0.01	U	MG/L	nc	NA
MW02D	2-methylphenol	0.01	U	MG/L	nc	NA
MW02M	2-methylphenol	0.01	U	MG/L	nc	NA
MW02S	2-methylphenol	0.01	U	MG/L	nc	NA
MW02S	2-methylphenol	0.01	U	MG/L	nc	NA
MW06S	2-methylphenol	0.01	U	MG/L	nc	NA
MW07S	2-methylphenol	0.01	U	MG/L	nc	NA
MW01S	2-methylphenol	0.01	U	MG/L	nc	NA
MW01S	2-methylphenol	0.01	U	MG/L	nc	NA
MW03S	2-methylphenol	0.01	U	MG/L	nc	NA
MW08S	2-methylphenol	0.01	U	MG/L	nc	NA
MW09S	2-methylphenol	0.01	U	MG/L	nc	NA
MW15D	2-nitroaniline	0.036	U	MG/L	nc	NA
MW10D	2-nitroaniline	0.025	U	MG/L	nc	NA
MW10B	2-nitroaniline	0.025	U	MG/L	nc	NA
MW10D	2-nitroaniline	0.025	U	MG/L	nc	NA
MW13B	2-nitroaniline	0.025	U	MG/L	nc	NA
MW13D	2-nitroaniline	0.025	U	MG/L	nc	NA
MW13S	2-nitroaniline	0.025	U	MG/L	nc	NA
TMW3	2-nitroaniline	0.025	U	MG/L	nc	NA
MW12B	2-nitroaniline	0.025	U	MG/L	nc	NA
MW11B	2-nitroaniline	0.025	U	MG/L	nc	NA
MW11M	2-nitroaniline	0.025	U	MG/L	nc	NA
MW11S	2-nitroaniline	0.025	U	MG/L	nc	NA
MW12B	2-nitroaniline	0.025	U	MG/L	nc	NA
MW12D	2-nitroaniline	0.025	U	MG/L	nc	NA
GEC2	2-nitroaniline	0.025	U	MG/L	nc	NA
GEC6	2-nitroaniline	0.025	U	MG/L	nc	NA
MW14M	2-nitroaniline	0.025	U	MG/L	nc	NA
MW01S	2-nitroaniline	0.025	U	MG/L	nc	NA
MW01S	2-nitroaniline	0.025	U	MG/L	nc	NA
MW03S	2-nitroaniline	0.025	U	MG/L	nc	NA
MW05S	2-nitroaniline	0.025	U	MG/L	nc	NA
MW06S	2-nitroaniline	0.025	U	MG/L	nc	NA
MW07D	2-nitroaniline	0.025	U	MG/L	nc	NA
MW07S	2-nitroaniline	0.025	U	MG/L	nc	NA
MW08S	2-nitroaniline	0.025	U	MG/L	nc	NA
MW09S	2-nitroaniline	0.025	U	MG/L	nc	NA
MW04S	2-nitroaniline	0.025	U	MG/L	nc	NA
MW04B	2-nitroaniline	0.025	U	MG/L	nc	NA
MW04D	2-nitroaniline	0.025	U	MG/L	nc	NA
MW04S	2-nitroaniline	0.025	U	MG/L	nc	NA
MW02D	2-nitroaniline	0.025	U	MG/L	nc	NA
MW02M	2-nitroaniline	0.025	U	MG/L	nc	NA
MW02S	2-nitroaniline	0.025	U	MG/L	nc	NA
MW02S	2-nitroaniline	0.025	U	MG/L	nc	NA
MW06S	2-nitroaniline	0.025	U	MG/L	nc	NA
MW07S	2-nitroaniline	0.025	U	MG/L	nc	NA
MW01S	2-nitroaniline	0.025	U	MG/L	nc	NA
MW01S	2-nitroaniline	0.025	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW03S	2-nitroaniline	0.025	U	MG/L	nc	NA
MW08S	2-nitroaniline	0.025	U	MG/L	nc	NA
MW09S	2-nitroaniline	0.025	U	MG/L	nc	NA
MW15D	2-nitrophenol	0.014	U	MG/L	nc	NA
MW10D	2-nitrophenol	0.01	U	MG/L	nc	NA
MW10B	2-nitrophenol	0.01	U	MG/L	nc	NA
MW10D	2-nitrophenol	0.01	U	MG/L	nc	NA
MW13B	2-nitrophenol	0.01	U	MG/L	nc	NA
MW13D	2-nitrophenol	0.01	U	MG/L	nc	NA
MW13S	2-nitrophenol	0.01	U	MG/L	nc	NA
TMW3	2-nitrophenol	0.01	U	MG/L	nc	NA
MW12B	2-nitrophenol	0.01	U	MG/L	nc	NA
MW11B	2-nitrophenol	0.01	U	MG/L	nc	NA
MW11M	2-nitrophenol	0.01	U	MG/L	nc	NA
MW11S	2-nitrophenol	0.01	U	MG/L	nc	NA
MW12B	2-nitrophenol	0.01	U	MG/L	nc	NA
MW12D	2-nitrophenol	0.01	U	MG/L	nc	NA
GEC2	2-nitrophenol	0.01	U	MG/L	nc	NA
GEC6	2-nitrophenol	0.01	U	MG/L	nc	NA
MW14M	2-nitrophenol	0.01	U	MG/L	nc	NA
MW01S	2-nitrophenol	0.01	U	MG/L	nc	NA
MW01S	2-nitrophenol	0.01	U	MG/L	nc	NA
MW03S	2-nitrophenol	0.01	U	MG/L	nc	NA
MW05S	2-nitrophenol	0.01	U	MG/L	nc	NA
MW06S	2-nitrophenol	0.01	U	MG/L	nc	NA
MW07D	2-nitrophenol	0.01	U	MG/L	nc	NA
MW07S	2-nitrophenol	0.01	U	MG/L	nc	NA
MW08S	2-nitrophenol	0.01	U	MG/L	nc	NA
MW09S	2-nitrophenol	0.01	U	MG/L	nc	NA
MW04S	2-nitrophenol	0.01	U	MG/L	nc	NA
MW04B	2-nitrophenol	0.01	U	MG/L	nc	NA
MW04D	2-nitrophenol	0.01	U	MG/L	nc	NA
MW04S	2-nitrophenol	0.01	U	MG/L	nc	NA
MW02D	2-nitrophenol	0.01	U	MG/L	nc	NA
MW02M	2-nitrophenol	0.01	U	MG/L	nc	NA
MW02S	2-nitrophenol	0.01	U	MG/L	nc	NA
MW02S	2-nitrophenol	0.01	U	MG/L	nc	NA
MW06S	2-nitrophenol	0.01	U	MG/L	nc	NA
MW07S	2-nitrophenol	0.01	U	MG/L	nc	NA
MW01S	2-nitrophenol	0.01	U	MG/L	nc	NA
MW01S	2-nitrophenol	0.01	U	MG/L	nc	NA
MW03S	2-nitrophenol	0.01	U	MG/L	nc	NA
MW08S	2-nitrophenol	0.01	U	MG/L	nc	NA
MW09S	2-nitrophenol	0.01	U	MG/L	nc	NA
MW15D	3,3'-dichlorobenzidine	0.014	U	MG/L	nc	NA
MW10D	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW10B	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW10D	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW13B	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW13D	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW13S	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
TMW3	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW12B	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW11B	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW11M	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW11S	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW12B	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW12D	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
GEC2	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
GEC6	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW14M	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW01S	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW01S	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW03S	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW05S	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW06S	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW07D	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW07S	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW08S	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW09S	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW04S	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW04B	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW04D	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW04S	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW02D	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW02M	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW02S	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW02S	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW06S	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW07S	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW01S	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW01S	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW03S	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW08S	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW09S	3,3'-dichlorobenzidine	0.01	U	MG/L	nc	NA
MW15D	3-nitroaniline	0.036	U	MG/L	nc	NA
MW10D	3-nitroaniline	0.025	U	MG/L	nc	NA
MW10B	3-nitroaniline	0.025	U	MG/L	nc	NA
MW10D	3-nitroaniline	0.025	U	MG/L	nc	NA
MW13B	3-nitroaniline	0.025	U	MG/L	nc	NA
MW13D	3-nitroaniline	0.025	U	MG/L	nc	NA
MW13S	3-nitroaniline	0.025	U	MG/L	nc	NA
TMW3	3-nitroaniline	0.025	U	MG/L	nc	NA
MW12B	3-nitroaniline	0.025	U	MG/L	nc	NA
MW11B	3-nitroaniline	0.025	U	MG/L	nc	NA
MW11M	3-nitroaniline	0.025	U	MG/L	nc	NA
MW11S	3-nitroaniline	0.025	U	MG/L	nc	NA
MW12B	3-nitroaniline	0.025	U	MG/L	nc	NA
MW12D	3-nitroaniline	0.025	U	MG/L	nc	NA
GEC2	3-nitroaniline	0.025	U	MG/L	nc	NA
GEC6	3-nitroaniline	0.025	U	MG/L	nc	NA
MW14M	3-nitroaniline	0.025	U	MG/L	nc	NA
MW01S	3-nitroaniline	0.025	U	MG/L	nc	NA
MW01S	3-nitroaniline	0.025	U	MG/L	nc	NA
MW03S	3-nitroaniline	0.025	U	MG/L	nc	NA
MW05S	3-nitroaniline	0.025	U	MG/L	nc	NA
MW06S	3-nitroaniline	0.025	U	MG/L	nc	NA
MW07D	3-nitroaniline	0.025	U	MG/L	nc	NA
MW07S	3-nitroaniline	0.025	U	MG/L	nc	NA
MW08S	3-nitroaniline	0.025	U	MG/L	nc	NA
MW09S	3-nitroaniline	0.025	U	MG/L	nc	NA
MW04S	3-nitroaniline	0.025	U	MG/L	nc	NA
MW04B	3-nitroaniline	0.025	U	MG/L	nc	NA
MW04D	3-nitroaniline	0.025	U	MG/L	nc	NA
MW04S	3-nitroaniline	0.025	U	MG/L	nc	NA
MW02D	3-nitroaniline	0.025	U	MG/L	nc	NA
MW02M	3-nitroaniline	0.025	U	MG/L	nc	NA
MW02S	3-nitroaniline	0.025	U	MG/L	nc	NA
MW02S	3-nitroaniline	0.025	U	MG/L	nc	NA
MW06S	3-nitroaniline	0.025	U	MG/L	nc	NA
MW07S	3-nitroaniline	0.025	U	MG/L	nc	NA
MW01S	3-nitroaniline	0.025	U	MG/L	nc	NA
MW01S	3-nitroaniline	0.025	U	MG/L	nc	NA
MW03S	3-nitroaniline	0.025	U	MG/L	nc	NA
MW08S	3-nitroaniline	0.025	U	MG/L	nc	NA
MW09S	3-nitroaniline	0.025	U	MG/L	nc	NA
MW10D	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW10B	4,4'-DDD	0.0001	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW10D	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW13B	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW13D	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW13S	4,4'-DDD	0.0001	U	MG/L	nc	NA
TMW3	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW12B	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW11B	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW11M	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW11S	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW12B	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW12D	4,4'-DDD	0.0001	U	MG/L	nc	NA
GEC2	4,4'-DDD	0.0001	U	MG/L	nc	NA
GEC6	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW14M	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW15D	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW01S	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW01S	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW03S	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW05S	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW06S	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW07D	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW07S	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW08S	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW09S	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW04S	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW04B	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW04D	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW04S	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW02M	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW02S	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW02S	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW06S	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW07S	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW01S	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW01S	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW03S	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW08S	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW09S	4,4'-DDD	0.0001	U	MG/L	nc	NA
MW02D	4,4'-DDD	0.0001	UJ	MG/L	nc	NA
MW10D	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW10B	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW10D	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW13B	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW13D	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW13S	4,4'-DDE	0.0001	U	MG/L	nc	NA
TMW3	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW12B	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW11B	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW11M	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW11S	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW12B	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW12D	4,4'-DDE	0.0001	U	MG/L	nc	NA
GEC2	4,4'-DDE	0.0001	U	MG/L	nc	NA
GEC6	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW14M	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW15D	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW01S	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW01S	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW03S	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW05S	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW06S	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW07D	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW07S	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW08S	4,4'-DDE	0.0001	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW09S	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW04S	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW04B	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW04D	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW04S	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW02M	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW02S	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW02S	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW06S	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW07S	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW01S	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW01S	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW03S	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW08S	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW09S	4,4'-DDE	0.0001	U	MG/L	nc	NA
MW02D	4,4'-DDE	0.0001	UJ	MG/L	nc	NA
MW10D	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW10B	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW10D	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW13B	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW13D	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW13S	4,4'-DDT	0.0001	U	MG/L	nc	NA
TMW3	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW12B	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW11B	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW11M	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW11S	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW12B	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW12D	4,4'-DDT	0.0001	U	MG/L	nc	NA
GEC2	4,4'-DDT	0.0001	U	MG/L	nc	NA
GEC6	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW14M	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW15D	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW01S	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW01S	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW03S	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW05S	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW06S	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW07D	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW07S	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW08S	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW09S	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW04S	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW04B	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW04D	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW04S	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW02M	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW02S	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW02S	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW06S	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW07S	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW01S	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW01S	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW03S	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW09S	4,4'-DDT	0.0001	U	MG/L	nc	NA
MW02D	4,4'-DDT	0.0001	UJ	MG/L	nc	NA
MW08S	4,4'-DDT	0.0001	UJ	MG/L	nc	NA
MW15D	4,6-dinitro-2-methylphenol	0.036	U	MG/L	nc	NA
MW10D	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW10B	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW10D	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW13B	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW13D	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW13S	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
TMW3	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW12B	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW11B	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW11M	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW11S	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW12B	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW12D	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
GEC2	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
GEC6	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW14M	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW01S	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW01S	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW03S	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW05S	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW06S	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW07D	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW07S	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW08S	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW09S	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW04S	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW04B	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW04D	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW04S	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW02D	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW02M	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW02S	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW02S	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW06S	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW07S	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW01S	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW01S	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW03S	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW08S	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW09S	4,6-dinitro-2-methylphenol	0.025	U	MG/L	nc	NA
MW15D	4-bromophenyl-phenylether	0.014	U	MG/L	nc	NA
MW10D	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW10B	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW10D	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW13B	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW13D	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW13S	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
TMW3	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW12B	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW11B	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW11M	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW11S	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW12B	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW12D	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
GEC2	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
GEC6	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW14M	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW01S	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW01S	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW03S	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW05S	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW06S	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW07D	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW07S	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW08S	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW09S	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW04S	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW04B	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW04D	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW04S	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW02D	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW02M	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW02S	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW02S	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW06S	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW07S	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW01S	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW01S	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW03S	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW08S	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW09S	4-bromophenyl-phenylether	0.01	U	MG/L	nc	NA
MW15D	4-chloro-3-methylphenol	0.014	U	MG/L	nc	NA
MW10D	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW10B	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW10D	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW13B	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW13D	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW13S	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
TMW3	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW12B	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW11B	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW11M	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW11S	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW12B	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW12D	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
GEC2	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
GEC6	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW14M	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW01S	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW01S	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW03S	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW05S	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW06S	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW07D	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW07S	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW08S	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW09S	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW04S	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW04B	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW04D	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW04S	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW02D	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW02M	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW02S	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW02S	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW06S	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW07S	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW01S	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW01S	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW03S	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW08S	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW09S	4-chloro-3-methylphenol	0.01	U	MG/L	nc	NA
MW15D	4-chloroaniline	0.014	U	MG/L	nc	NA
MW10D	4-chloroaniline	0.01	U	MG/L	nc	NA
MW10B	4-chloroaniline	0.01	U	MG/L	nc	NA
MW10D	4-chloroaniline	0.01	U	MG/L	nc	NA
MW13B	4-chloroaniline	0.01	U	MG/L	nc	NA
MW13D	4-chloroaniline	0.01	U	MG/L	nc	NA
MW13S	4-chloroaniline	0.01	U	MG/L	nc	NA
TMW3	4-chloroaniline	0.01	U	MG/L	nc	NA
MW12B	4-chloroaniline	0.01	U	MG/L	nc	NA
MW11B	4-chloroaniline	0.01	U	MG/L	nc	NA
MW11M	4-chloroaniline	0.01	U	MG/L	nc	NA
MW11S	4-chloroaniline	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW12B	4-chloroaniline	0.01	U	MG/L	nc	NA
MW12D	4-chloroaniline	0.01	U	MG/L	nc	NA
GEC2	4-chloroaniline	0.01	U	MG/L	nc	NA
GEC6	4-chloroaniline	0.01	U	MG/L	nc	NA
MW14M	4-chloroaniline	0.01	U	MG/L	nc	NA
MW01S	4-chloroaniline	0.01	U	MG/L	nc	NA
MW01S	4-chloroaniline	0.01	U	MG/L	nc	NA
MW03S	4-chloroaniline	0.01	U	MG/L	nc	NA
MW05S	4-chloroaniline	0.01	U	MG/L	nc	NA
MW06S	4-chloroaniline	0.01	U	MG/L	nc	NA
MW07D	4-chloroaniline	0.01	U	MG/L	nc	NA
MW07S	4-chloroaniline	0.01	U	MG/L	nc	NA
MW08S	4-chloroaniline	0.01	U	MG/L	nc	NA
MW09S	4-chloroaniline	0.01	U	MG/L	nc	NA
MW04S	4-chloroaniline	0.01	U	MG/L	nc	NA
MW04B	4-chloroaniline	0.01	U	MG/L	nc	NA
MW04D	4-chloroaniline	0.01	U	MG/L	nc	NA
MW04S	4-chloroaniline	0.01	U	MG/L	nc	NA
MW02D	4-chloroaniline	0.01	U	MG/L	nc	NA
MW02M	4-chloroaniline	0.01	U	MG/L	nc	NA
MW02S	4-chloroaniline	0.01	U	MG/L	nc	NA
MW02S	4-chloroaniline	0.01	U	MG/L	nc	NA
MW06S	4-chloroaniline	0.01	U	MG/L	nc	NA
MW07S	4-chloroaniline	0.01	U	MG/L	nc	NA
MW01S	4-chloroaniline	0.01	U	MG/L	nc	NA
MW01S	4-chloroaniline	0.01	U	MG/L	nc	NA
MW03S	4-chloroaniline	0.01	U	MG/L	nc	NA
MW08S	4-chloroaniline	0.01	U	MG/L	nc	NA
MW09S	4-chloroaniline	0.01	U	MG/L	nc	NA
MW15D	4-chlorophenyl-phenylether	0.014	U	MG/L	nc	NA
MW10D	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW10B	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW10D	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW13B	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW13D	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW13S	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
TMW3	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW12B	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW11B	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW11M	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW11S	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW12B	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW12D	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
GEC2	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
GEC6	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW14M	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW01S	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW01S	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW03S	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW05S	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW06S	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW07D	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW07S	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW08S	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW09S	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW04S	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW04B	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW04D	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW04S	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW02D	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW02M	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW02S	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW02S	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW06S	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW07S	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW01S	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW01S	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW03S	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW08S	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW09S	4-chlorophenyl-phenylether	0.01	U	MG/L	nc	NA
MW05S	4-CHLOROTOLUENE	1	U	MG/L	nc	NA
MW05S	4-CHLOROTOLUENE	1	U	MG/L	nc	NA
MW05S	4-chlorotoluene	1	U	MG/L	nc	NA
MW05S	4-chlorotoluene	1	U	MG/L	nc	NA
MW14M	4-chlorotoluene	0.1	U	MG/L	nc	NA
MW06S	4-chlorotoluene	0.01	U	MG/L	nc	NA
MW13D	4-chlorotoluene	0.01	U	MG/L	nc	NA
MW06S	4-chlorotoluene	0.006	U	MG/L	nc	NA
MW02M	4-chlorotoluene	0.005	U	MG/L	nc	NA
MW02D	4-chlorotoluene	0.004	U	MG/L	nc	NA
MW13B	4-chlorotoluene	0.004	U	MG/L	nc	NA
MW03S	4-chlorotoluene	0.001	U	MG/L	nc	NA
GEC3	4-chlorotoluene	0.001	U	MG/L	nc	NA
MW01S	4-chlorotoluene	0.001	U	MG/L	nc	NA
MW11S	4-chlorotoluene	0.001	U	MG/L	nc	NA
MW12B	4-chlorotoluene	0.001	U	MG/L	nc	NA
MW12D	4-chlorotoluene	0.001	U	MG/L	nc	NA
GEC1	4-chlorotoluene	0.001	U	MG/L	nc	NA
GEC2	4-chlorotoluene	0.001	U	MG/L	nc	NA
GEC4	4-chlorotoluene	0.001	U	MG/L	nc	NA
GEC5	4-chlorotoluene	0.001	U	MG/L	nc	NA
GEC6	4-chlorotoluene	0.001	U	MG/L	nc	NA
GEC7	4-chlorotoluene	0.001	U	MG/L	nc	NA
MW07D	4-chlorotoluene	0.001	U	MG/L	nc	NA
MW07S	4-chlorotoluene	0.001	U	MG/L	nc	NA
MW11B	4-chlorotoluene	0.001	U	MG/L	nc	NA
MW11M	4-chlorotoluene	0.001	U	MG/L	nc	NA
MW15D	4-chlorotoluene	0.001	U	MG/L	nc	NA
MW02S	4-chlorotoluene	0.001	U	MG/L	nc	NA
MW04B	4-chlorotoluene	0.001	U	MG/L	nc	NA
MW04D	4-chlorotoluene	0.001	U	MG/L	nc	NA
MW04S	4-chlorotoluene	0.001	U	MG/L	nc	NA
MW08S	4-chlorotoluene	0.001	U	MG/L	nc	NA
MW09S	4-chlorotoluene	0.001	U	MG/L	nc	NA
MW10B	4-chlorotoluene	0.001	U	MG/L	nc	NA
MW10D	4-chlorotoluene	0.001	U	MG/L	nc	NA
MW13S	4-chlorotoluene	0.001	U	MG/L	nc	NA
MW05S	4-heptanone, 2,6-dimethyl-	0.033	NJ	MG/L	nc	NA
MW-LEA-01	4-Isopropyltoluene	20	Uw	MG/L	nc	NA
MW-LEA-01	4-Isopropyltoluene	2	Uw	MG/L	nc	NA
MW-LEA-02	4-Isopropyltoluene	2	Uw	MG/L	nc	NA
MW-05S	4-Isopropyltoluene	2	Uw	MG/L	nc	NA
MW-LEA-02	4-Isopropyltoluene	2	Uw	MG/L	nc	NA
MW-LEA-02	4-Isopropyltoluene	0.2	Uw	MG/L	nc	NA
MW-LEA-03	4-Isopropyltoluene	0.2	Uw	MG/L	nc	NA
MW-LEA-03	4-Isopropyltoluene	0.004	Uw	MG/L	nc	NA
MW10D	4-methyl-2-pentanone	0.01	U	MG/L	nc	NA
MW10B	4-methyl-2-pentanone	0.01	U	MG/L	nc	NA
MW10D	4-methyl-2-pentanone	0.01	U	MG/L	nc	NA
MW13B	4-methyl-2-pentanone	0.01	U	MG/L	nc	NA
MW13D	4-methyl-2-pentanone	0.01	U	MG/L	nc	NA
MW13S	4-methyl-2-pentanone	0.01	U	MG/L	nc	NA
TMW3	4-methyl-2-pentanone	0.01	U	MG/L	nc	NA
MW11S	4-methyl-2-pentanone	0.01	U	MG/L	nc	NA
MW12D	4-methyl-2-pentanone	0.01	U	MG/L	nc	NA
MW01S	4-methyl-2-pentanone	0.01	U	MG/L	nc	NA
MW03S	4-methyl-2-pentanone	0.01	U	MG/L	nc	NA
MW07D	4-methyl-2-pentanone	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW04S	4-methyl-2-pentanone	0.01	U	MG/L	nc	NA
MW04B	4-methyl-2-pentanone	0.01	U	MG/L	nc	NA
MW04D	4-methyl-2-pentanone	0.01	U	MG/L	nc	NA
MW04S	4-methyl-2-pentanone	0.01	U	MG/L	nc	NA
MW02D	4-methyl-2-pentanone	0.01	U	MG/L	nc	NA
MW02M	4-methyl-2-pentanone	0.01	U	MG/L	nc	NA
MW02S	4-methyl-2-pentanone	0.01	U	MG/L	nc	NA
MW02S	4-methyl-2-pentanone	0.01	U	MG/L	nc	NA
MW06S	4-methyl-2-pentanone	0.01	U	MG/L	nc	NA
MW07S	4-methyl-2-pentanone	0.01	U	MG/L	nc	NA
MW01S	4-methyl-2-pentanone	0.01	U	MG/L	nc	NA
MW01S	4-methyl-2-pentanone	0.01	U	MG/L	nc	NA
MW03S	4-methyl-2-pentanone	0.01	U	MG/L	nc	NA
MW08S	4-methyl-2-pentanone	0.01	U	MG/L	nc	NA
MW09S	4-methyl-2-pentanone	0.01	U	MG/L	nc	NA
MW05S	4-methyl-2-pentanone	1.7	UJ	MG/L	nc	NA
MW12B	4-methyl-2-pentanone	0.01	UJ	MG/L	nc	NA
MW11B	4-methyl-2-pentanone	0.01	UJ	MG/L	nc	NA
MW11M	4-methyl-2-pentanone	0.01	UJ	MG/L	nc	NA
MW12B	4-methyl-2-pentanone	0.01	UJ	MG/L	nc	NA
GEC2	4-methyl-2-pentanone	0.01	UJ	MG/L	nc	NA
GEC6	4-methyl-2-pentanone	0.01	UJ	MG/L	nc	NA
MW14M	4-methyl-2-pentanone	0.01	UJ	MG/L	nc	NA
MW15D	4-methyl-2-pentanone	0.01	UJ	MG/L	nc	NA
MW01S	4-methyl-2-pentanone	0.01	UJ	MG/L	nc	NA
MW06S	4-methyl-2-pentanone	0.01	UJ	MG/L	nc	NA
MW07S	4-methyl-2-pentanone	0.01	UJ	MG/L	nc	NA
MW08S	4-methyl-2-pentanone	0.01	UJ	MG/L	nc	NA
MW09S	4-methyl-2-pentanone	0.01	UJ	MG/L	nc	NA
MW08S	4-methylphenol	0.003	J	MG/L	nc	NA
MW05S	4-methylphenol	0.001	J	MG/L	nc	NA
MW07S	4-methylphenol	0.001	J	MG/L	nc	NA
MW15D	4-methylphenol	0.014	U	MG/L	nc	NA
MW10D	4-methylphenol	0.01	U	MG/L	nc	NA
MW10B	4-methylphenol	0.01	U	MG/L	nc	NA
MW10D	4-methylphenol	0.01	U	MG/L	nc	NA
MW13B	4-methylphenol	0.01	U	MG/L	nc	NA
MW13D	4-methylphenol	0.01	U	MG/L	nc	NA
MW13S	4-methylphenol	0.01	U	MG/L	nc	NA
TMW3	4-methylphenol	0.01	U	MG/L	nc	NA
MW12B	4-methylphenol	0.01	U	MG/L	nc	NA
MW11B	4-methylphenol	0.01	U	MG/L	nc	NA
MW11M	4-methylphenol	0.01	U	MG/L	nc	NA
MW11S	4-methylphenol	0.01	U	MG/L	nc	NA
MW12B	4-methylphenol	0.01	U	MG/L	nc	NA
MW12D	4-methylphenol	0.01	U	MG/L	nc	NA
GEC2	4-methylphenol	0.01	U	MG/L	nc	NA
GEC6	4-methylphenol	0.01	U	MG/L	nc	NA
MW14M	4-methylphenol	0.01	U	MG/L	nc	NA
MW01S	4-methylphenol	0.01	U	MG/L	nc	NA
MW01S	4-methylphenol	0.01	U	MG/L	nc	NA
MW03S	4-methylphenol	0.01	U	MG/L	nc	NA
MW06S	4-methylphenol	0.01	U	MG/L	nc	NA
MW07D	4-methylphenol	0.01	U	MG/L	nc	NA
MW07S	4-methylphenol	0.01	U	MG/L	nc	NA
MW08S	4-methylphenol	0.01	U	MG/L	nc	NA
MW09S	4-methylphenol	0.01	U	MG/L	nc	NA
MW04S	4-methylphenol	0.01	U	MG/L	nc	NA
MW04B	4-methylphenol	0.01	U	MG/L	nc	NA
MW04D	4-methylphenol	0.01	U	MG/L	nc	NA
MW04S	4-methylphenol	0.01	U	MG/L	nc	NA
MW02D	4-methylphenol	0.01	U	MG/L	nc	NA
MW02M	4-methylphenol	0.01	U	MG/L	nc	NA
MW02S	4-methylphenol	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW02S	4-methylphenol	0.01	U	MG/L	nc	NA
MW06S	4-methylphenol	0.01	U	MG/L	nc	NA
MW01S	4-methylphenol	0.01	U	MG/L	nc	NA
MW01S	4-methylphenol	0.01	U	MG/L	nc	NA
MW03S	4-methylphenol	0.01	U	MG/L	nc	NA
MW09S	4-methylphenol	0.01	U	MG/L	nc	NA
MW15D	4-nitroaniline	0.036	U	MG/L	nc	NA
MW10D	4-nitroaniline	0.025	U	MG/L	nc	NA
MW10B	4-nitroaniline	0.025	U	MG/L	nc	NA
MW10D	4-nitroaniline	0.025	U	MG/L	nc	NA
MW13B	4-nitroaniline	0.025	U	MG/L	nc	NA
MW13D	4-nitroaniline	0.025	U	MG/L	nc	NA
MW13S	4-nitroaniline	0.025	U	MG/L	nc	NA
TMW3	4-nitroaniline	0.025	U	MG/L	nc	NA
MW12B	4-nitroaniline	0.025	U	MG/L	nc	NA
MW11B	4-nitroaniline	0.025	U	MG/L	nc	NA
MW11M	4-nitroaniline	0.025	U	MG/L	nc	NA
MW11S	4-nitroaniline	0.025	U	MG/L	nc	NA
MW12B	4-nitroaniline	0.025	U	MG/L	nc	NA
MW12D	4-nitroaniline	0.025	U	MG/L	nc	NA
GEC2	4-nitroaniline	0.025	U	MG/L	nc	NA
GEC6	4-nitroaniline	0.025	U	MG/L	nc	NA
MW14M	4-nitroaniline	0.025	U	MG/L	nc	NA
MW01S	4-nitroaniline	0.025	U	MG/L	nc	NA
MW01S	4-nitroaniline	0.025	U	MG/L	nc	NA
MW03S	4-nitroaniline	0.025	U	MG/L	nc	NA
MW05S	4-nitroaniline	0.025	U	MG/L	nc	NA
MW06S	4-nitroaniline	0.025	U	MG/L	nc	NA
MW07D	4-nitroaniline	0.025	U	MG/L	nc	NA
MW07S	4-nitroaniline	0.025	U	MG/L	nc	NA
MW08S	4-nitroaniline	0.025	U	MG/L	nc	NA
MW09S	4-nitroaniline	0.025	U	MG/L	nc	NA
MW04S	4-nitroaniline	0.025	U	MG/L	nc	NA
MW04B	4-nitroaniline	0.025	U	MG/L	nc	NA
MW04D	4-nitroaniline	0.025	U	MG/L	nc	NA
MW04S	4-nitroaniline	0.025	U	MG/L	nc	NA
MW02D	4-nitroaniline	0.025	U	MG/L	nc	NA
MW02M	4-nitroaniline	0.025	U	MG/L	nc	NA
MW02S	4-nitroaniline	0.025	U	MG/L	nc	NA
MW02S	4-nitroaniline	0.025	U	MG/L	nc	NA
MW06S	4-nitroaniline	0.025	U	MG/L	nc	NA
MW07S	4-nitroaniline	0.025	U	MG/L	nc	NA
MW01S	4-nitroaniline	0.025	U	MG/L	nc	NA
MW01S	4-nitroaniline	0.025	U	MG/L	nc	NA
MW03S	4-nitroaniline	0.025	U	MG/L	nc	NA
MW08S	4-nitroaniline	0.025	U	MG/L	nc	NA
MW09S	4-nitroaniline	0.025	U	MG/L	nc	NA
MW15D	4-nitrophenol	0.036	U	MG/L	nc	NA
MW10D	4-nitrophenol	0.025	U	MG/L	nc	NA
MW10B	4-nitrophenol	0.025	U	MG/L	nc	NA
MW10D	4-nitrophenol	0.025	U	MG/L	nc	NA
MW13B	4-nitrophenol	0.025	U	MG/L	nc	NA
MW13D	4-nitrophenol	0.025	U	MG/L	nc	NA
MW13S	4-nitrophenol	0.025	U	MG/L	nc	NA
TMW3	4-nitrophenol	0.025	U	MG/L	nc	NA
MW12B	4-nitrophenol	0.025	U	MG/L	nc	NA
MW11B	4-nitrophenol	0.025	U	MG/L	nc	NA
MW11M	4-nitrophenol	0.025	U	MG/L	nc	NA
MW11S	4-nitrophenol	0.025	U	MG/L	nc	NA
MW12B	4-nitrophenol	0.025	U	MG/L	nc	NA
MW12D	4-nitrophenol	0.025	U	MG/L	nc	NA
GEC2	4-nitrophenol	0.025	U	MG/L	nc	NA
GEC6	4-nitrophenol	0.025	U	MG/L	nc	NA
MW14M	4-nitrophenol	0.025	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW01S	4-nitrophenol	0.025	U	MG/L	nc	NA
MW01S	4-nitrophenol	0.025	U	MG/L	nc	NA
MW03S	4-nitrophenol	0.025	U	MG/L	nc	NA
MW05S	4-nitrophenol	0.025	U	MG/L	nc	NA
MW06S	4-nitrophenol	0.025	U	MG/L	nc	NA
MW07D	4-nitrophenol	0.025	U	MG/L	nc	NA
MW07S	4-nitrophenol	0.025	U	MG/L	nc	NA
MW08S	4-nitrophenol	0.025	U	MG/L	nc	NA
MW09S	4-nitrophenol	0.025	U	MG/L	nc	NA
MW04S	4-nitrophenol	0.025	U	MG/L	nc	NA
MW04B	4-nitrophenol	0.025	U	MG/L	nc	NA
MW04D	4-nitrophenol	0.025	U	MG/L	nc	NA
MW04S	4-nitrophenol	0.025	U	MG/L	nc	NA
MW02D	4-nitrophenol	0.025	U	MG/L	nc	NA
MW02M	4-nitrophenol	0.025	U	MG/L	nc	NA
MW02S	4-nitrophenol	0.025	U	MG/L	nc	NA
MW02S	4-nitrophenol	0.025	U	MG/L	nc	NA
MW06S	4-nitrophenol	0.025	U	MG/L	nc	NA
MW07S	4-nitrophenol	0.025	U	MG/L	nc	NA
MW01S	4-nitrophenol	0.025	U	MG/L	nc	NA
MW01S	4-nitrophenol	0.025	U	MG/L	nc	NA
MW03S	4-nitrophenol	0.025	U	MG/L	nc	NA
MW08S	4-nitrophenol	0.025	U	MG/L	nc	NA
MW09S	4-nitrophenol	0.025	U	MG/L	nc	NA
GEC3	Acenaphthene	0.00091		MG/L	nc	NA
GEC7	Acenaphthene	0.00069		MG/L	nc	NA
MW15D	Acenaphthene	0.014	U	MG/L	nc	NA
MW10D	Acenaphthene	0.01	U	MG/L	nc	NA
MW10B	Acenaphthene	0.01	U	MG/L	nc	NA
MW10D	Acenaphthene	0.01	U	MG/L	nc	NA
MW13B	Acenaphthene	0.01	U	MG/L	nc	NA
MW13D	Acenaphthene	0.01	U	MG/L	nc	NA
MW13S	Acenaphthene	0.01	U	MG/L	nc	NA
TMW3	Acenaphthene	0.01	U	MG/L	nc	NA
MW12B	Acenaphthene	0.01	U	MG/L	nc	NA
MW11B	Acenaphthene	0.01	U	MG/L	nc	NA
MW11M	Acenaphthene	0.01	U	MG/L	nc	NA
MW11S	Acenaphthene	0.01	U	MG/L	nc	NA
MW12B	Acenaphthene	0.01	U	MG/L	nc	NA
MW12D	Acenaphthene	0.01	U	MG/L	nc	NA
GEC2	Acenaphthene	0.01	U	MG/L	nc	NA
GEC6	Acenaphthene	0.01	U	MG/L	nc	NA
MW14M	Acenaphthene	0.01	U	MG/L	nc	NA
MW01S	Acenaphthene	0.01	U	MG/L	nc	NA
MW01S	Acenaphthene	0.01	U	MG/L	nc	NA
MW03S	Acenaphthene	0.01	U	MG/L	nc	NA
MW05S	Acenaphthene	0.01	U	MG/L	nc	NA
MW06S	Acenaphthene	0.01	U	MG/L	nc	NA
MW07D	Acenaphthene	0.01	U	MG/L	nc	NA
MW07S	Acenaphthene	0.01	U	MG/L	nc	NA
MW08S	Acenaphthene	0.01	U	MG/L	nc	NA
MW09S	Acenaphthene	0.01	U	MG/L	nc	NA
MW04S	Acenaphthene	0.01	U	MG/L	nc	NA
MW04B	Acenaphthene	0.01	U	MG/L	nc	NA
MW04D	Acenaphthene	0.01	U	MG/L	nc	NA
MW04S	Acenaphthene	0.01	U	MG/L	nc	NA
MW02D	Acenaphthene	0.01	U	MG/L	nc	NA
MW02M	Acenaphthene	0.01	U	MG/L	nc	NA
MW02S	Acenaphthene	0.01	U	MG/L	nc	NA
MW02S	Acenaphthene	0.01	U	MG/L	nc	NA
MW06S	Acenaphthene	0.01	U	MG/L	nc	NA
MW07S	Acenaphthene	0.01	U	MG/L	nc	NA
MW01S	Acenaphthene	0.01	U	MG/L	nc	NA
MW01S	Acenaphthene	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW03S	Acenaphthene	0.01	U	MG/L	nc	NA
MW08S	Acenaphthene	0.01	U	MG/L	nc	NA
MW09S	Acenaphthene	0.01	U	MG/L	nc	NA
GEC1	Acenaphthene	0.00018	U	MG/L	nc	NA
GEC2	Acenaphthene	0.00014	U	MG/L	nc	NA
GEC4	Acenaphthene	0.00012	U	MG/L	nc	NA
GEC5	Acenaphthene	0.00012	U	MG/L	nc	NA
GEC6	Acenaphthene	0.00012	U	MG/L	nc	NA
GEC3	Acenaphthylene	0.00055		MG/L	nc	NA
GEC7	Acenaphthylene	0.00024		MG/L	nc	NA
MW15D	Acenaphthylene	0.014	U	MG/L	nc	NA
MW10D	Acenaphthylene	0.01	U	MG/L	nc	NA
MW10B	Acenaphthylene	0.01	U	MG/L	nc	NA
MW10D	Acenaphthylene	0.01	U	MG/L	nc	NA
MW13B	Acenaphthylene	0.01	U	MG/L	nc	NA
MW13D	Acenaphthylene	0.01	U	MG/L	nc	NA
MW13S	Acenaphthylene	0.01	U	MG/L	nc	NA
TMW3	Acenaphthylene	0.01	U	MG/L	nc	NA
MW12B	Acenaphthylene	0.01	U	MG/L	nc	NA
MW11B	Acenaphthylene	0.01	U	MG/L	nc	NA
MW11M	Acenaphthylene	0.01	U	MG/L	nc	NA
MW11S	Acenaphthylene	0.01	U	MG/L	nc	NA
MW12B	Acenaphthylene	0.01	U	MG/L	nc	NA
MW12D	Acenaphthylene	0.01	U	MG/L	nc	NA
GEC2	Acenaphthylene	0.01	U	MG/L	nc	NA
GEC6	Acenaphthylene	0.01	U	MG/L	nc	NA
MW14M	Acenaphthylene	0.01	U	MG/L	nc	NA
MW01S	Acenaphthylene	0.01	U	MG/L	nc	NA
MW01S	Acenaphthylene	0.01	U	MG/L	nc	NA
MW03S	Acenaphthylene	0.01	U	MG/L	nc	NA
MW05S	Acenaphthylene	0.01	U	MG/L	nc	NA
MW06S	Acenaphthylene	0.01	U	MG/L	nc	NA
MW07D	Acenaphthylene	0.01	U	MG/L	nc	NA
MW07S	Acenaphthylene	0.01	U	MG/L	nc	NA
MW08S	Acenaphthylene	0.01	U	MG/L	nc	NA
MW09S	Acenaphthylene	0.01	U	MG/L	nc	NA
MW04S	Acenaphthylene	0.01	U	MG/L	nc	NA
MW04B	Acenaphthylene	0.01	U	MG/L	nc	NA
MW04D	Acenaphthylene	0.01	U	MG/L	nc	NA
MW04S	Acenaphthylene	0.01	U	MG/L	nc	NA
MW02D	Acenaphthylene	0.01	U	MG/L	nc	NA
MW02M	Acenaphthylene	0.01	U	MG/L	nc	NA
MW02S	Acenaphthylene	0.01	U	MG/L	nc	NA
MW02S	Acenaphthylene	0.01	U	MG/L	nc	NA
MW06S	Acenaphthylene	0.01	U	MG/L	nc	NA
MW07S	Acenaphthylene	0.01	U	MG/L	nc	NA
MW01S	Acenaphthylene	0.01	U	MG/L	nc	NA
MW01S	Acenaphthylene	0.01	U	MG/L	nc	NA
MW03S	Acenaphthylene	0.01	U	MG/L	nc	NA
MW08S	Acenaphthylene	0.01	U	MG/L	nc	NA
MW09S	Acenaphthylene	0.01	U	MG/L	nc	NA
GEC1	Acenaphthylene	0.00018	U	MG/L	nc	NA
GEC2	Acenaphthylene	0.00014	U	MG/L	nc	NA
GEC4	Acenaphthylene	0.00012	U	MG/L	nc	NA
GEC5	Acenaphthylene	0.00012	U	MG/L	nc	NA
GEC6	Acenaphthylene	0.00012	U	MG/L	nc	NA
MW-LEA-03	Acetone	0.006	Jw	MG/L	nc	NA
MW-LEA-01	Acetone	20	Uw	MG/L	nc	NA
MW-LEA-01	Acetone	2	Uw	MG/L	nc	NA
MW-LEA-02	Acetone	2	Uw	MG/L	nc	NA
MW-05S	Acetone	2	Uw	MG/L	nc	NA
MW-LEA-02	Acetone	2	Uw	MG/L	nc	NA
MW-LEA-02	Acetone	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Acetone	0.2	Uw	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
GEC2	Acetone	0.024		MG/L	nc	NA
MW09S	Acetone	0.035	U	MG/L	nc	NA
MW03S	Acetone	0.024	U	MG/L	nc	NA
MW08S	Acetone	0.011	U	MG/L	nc	NA
MW02S	Acetone	0.01	U	MG/L	nc	NA
MW02S	Acetone	0.01	U	MG/L	nc	NA
MW06S	Acetone	0.01	U	MG/L	nc	NA
MW07S	Acetone	0.01	U	MG/L	nc	NA
MW01S	Acetone	0.01	U	MG/L	nc	NA
MW01S	Acetone	0.01	U	MG/L	nc	NA
GEC1	Acetone	0.01	U	MG/L	nc	NA
GEC3	Acetone	0.01	U	MG/L	nc	NA
GEC4	Acetone	0.01	U	MG/L	nc	NA
GEC5	Acetone	0.01	U	MG/L	nc	NA
GEC6	Acetone	0.01	U	MG/L	nc	NA
GEC7	Acetone	0.01	U	MG/L	nc	NA
MW05S	Acetone	3.3	UJ	MG/L	nc	NA
MW01S	Acetone	0.018	UJ	MG/L	nc	NA
MW11S	Acetone	0.016	UJ	MG/L	nc	NA
MW09S	Acetone	0.013	UJ	MG/L	nc	NA
MW10D	Acetone	0.01	UJ	MG/L	nc	NA
MW10B	Acetone	0.01	UJ	MG/L	nc	NA
MW10D	Acetone	0.01	UJ	MG/L	nc	NA
MW13B	Acetone	0.01	UJ	MG/L	nc	NA
MW13D	Acetone	0.01	UJ	MG/L	nc	NA
MW13S	Acetone	0.01	UJ	MG/L	nc	NA
TMW3	Acetone	0.01	UJ	MG/L	nc	NA
MW12B	Acetone	0.01	UJ	MG/L	nc	NA
MW11B	Acetone	0.01	UJ	MG/L	nc	NA
MW11M	Acetone	0.01	UJ	MG/L	nc	NA
MW12B	Acetone	0.01	UJ	MG/L	nc	NA
MW12D	Acetone	0.01	UJ	MG/L	nc	NA
GEC2	Acetone	0.01	UJ	MG/L	nc	NA
GEC6	Acetone	0.01	UJ	MG/L	nc	NA
MW14M	Acetone	0.01	UJ	MG/L	nc	NA
MW15D	Acetone	0.01	UJ	MG/L	nc	NA
MW01S	Acetone	0.01	UJ	MG/L	nc	NA
MW03S	Acetone	0.01	UJ	MG/L	nc	NA
MW06S	Acetone	0.01	UJ	MG/L	nc	NA
MW07D	Acetone	0.01	UJ	MG/L	nc	NA
MW07S	Acetone	0.01	UJ	MG/L	nc	NA
MW08S	Acetone	0.01	UJ	MG/L	nc	NA
MW04S	Acetone	0.01	UJ	MG/L	nc	NA
MW04B	Acetone	0.01	UJ	MG/L	nc	NA
MW04D	Acetone	0.01	UJ	MG/L	nc	NA
MW04S	Acetone	0.01	UJ	MG/L	nc	NA
MW02D	Acetone	0.01	UJ	MG/L	nc	NA
MW02M	Acetone	0.01	UJ	MG/L	nc	NA
MW15D	Acetophenone	0.014	U	MG/L	nc	NA
MW10D	Acetophenone	0.01	U	MG/L	nc	NA
MW10B	Acetophenone	0.01	U	MG/L	nc	NA
MW10D	Acetophenone	0.01	U	MG/L	nc	NA
MW13B	Acetophenone	0.01	U	MG/L	nc	NA
TMW3	Acetophenone	0.01	U	MG/L	nc	NA
MW12B	Acetophenone	0.01	U	MG/L	nc	NA
MW11B	Acetophenone	0.01	U	MG/L	nc	NA
MW11M	Acetophenone	0.01	U	MG/L	nc	NA
MW12B	Acetophenone	0.01	U	MG/L	nc	NA
GEC2	Acetophenone	0.01	U	MG/L	nc	NA
GEC6	Acetophenone	0.01	U	MG/L	nc	NA
MW14M	Acetophenone	0.01	U	MG/L	nc	NA
MW01S	Acetophenone	0.01	U	MG/L	nc	NA
MW01S	Acetophenone	0.01	U	MG/L	nc	NA
MW03S	Acetophenone	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW05S	Acetophenone	0.01	U	MG/L	nc	NA
MW06S	Acetophenone	0.01	U	MG/L	nc	NA
MW07D	Acetophenone	0.01	U	MG/L	nc	NA
MW07S	Acetophenone	0.01	U	MG/L	nc	NA
MW08S	Acetophenone	0.01	U	MG/L	nc	NA
MW09S	Acetophenone	0.01	U	MG/L	nc	NA
MW04S	Acetophenone	0.01	U	MG/L	nc	NA
MW04B	Acetophenone	0.01	U	MG/L	nc	NA
MW04D	Acetophenone	0.01	U	MG/L	nc	NA
MW04S	Acetophenone	0.01	U	MG/L	nc	NA
MW02D	Acetophenone	0.01	U	MG/L	nc	NA
MW02M	Acetophenone	0.01	U	MG/L	nc	NA
MW02S	Acetophenone	0.01	U	MG/L	nc	NA
MW02S	Acetophenone	0.01	U	MG/L	nc	NA
MW06S	Acetophenone	0.01	U	MG/L	nc	NA
MW07S	Acetophenone	0.01	U	MG/L	nc	NA
MW01S	Acetophenone	0.01	U	MG/L	nc	NA
MW01S	Acetophenone	0.01	U	MG/L	nc	NA
MW03S	Acetophenone	0.01	U	MG/L	nc	NA
MW08S	Acetophenone	0.01	U	MG/L	nc	NA
MW09S	Acetophenone	0.01	U	MG/L	nc	NA
MW13D	Acetophenone	0.01	UJ	MG/L	nc	NA
MW13S	Acetophenone	0.01	UJ	MG/L	nc	NA
MW11S	Acetophenone	0.01	UJ	MG/L	nc	NA
MW12D	Acetophenone	0.01	UJ	MG/L	nc	NA
MW10D	Aldrin	0.00005	U	MG/L	nc	NA
MW10B	Aldrin	0.00005	U	MG/L	nc	NA
MW10D	Aldrin	0.00005	U	MG/L	nc	NA
MW13B	Aldrin	0.00005	U	MG/L	nc	NA
MW13D	Aldrin	0.00005	U	MG/L	nc	NA
MW13S	Aldrin	0.00005	U	MG/L	nc	NA
TMW3	Aldrin	0.00005	U	MG/L	nc	NA
MW12B	Aldrin	0.00005	U	MG/L	nc	NA
MW11B	Aldrin	0.00005	U	MG/L	nc	NA
MW11M	Aldrin	0.00005	U	MG/L	nc	NA
MW11S	Aldrin	0.00005	U	MG/L	nc	NA
MW12B	Aldrin	0.00005	U	MG/L	nc	NA
MW12D	Aldrin	0.00005	U	MG/L	nc	NA
GEC2	Aldrin	0.00005	U	MG/L	nc	NA
GEC6	Aldrin	0.00005	U	MG/L	nc	NA
MW14M	Aldrin	0.00005	U	MG/L	nc	NA
MW15D	Aldrin	0.00005	U	MG/L	nc	NA
MW01S	Aldrin	0.00005	U	MG/L	nc	NA
MW01S	Aldrin	0.00005	U	MG/L	nc	NA
MW03S	Aldrin	0.00005	U	MG/L	nc	NA
MW05S	Aldrin	0.00005	U	MG/L	nc	NA
MW06S	Aldrin	0.00005	U	MG/L	nc	NA
MW07D	Aldrin	0.00005	U	MG/L	nc	NA
MW07S	Aldrin	0.00005	U	MG/L	nc	NA
MW08S	Aldrin	0.00005	U	MG/L	nc	NA
MW09S	Aldrin	0.00005	U	MG/L	nc	NA
MW04S	Aldrin	0.00005	U	MG/L	nc	NA
MW04B	Aldrin	0.00005	U	MG/L	nc	NA
MW04D	Aldrin	0.00005	U	MG/L	nc	NA
MW04S	Aldrin	0.00005	U	MG/L	nc	NA
MW02M	Aldrin	0.00005	U	MG/L	nc	NA
MW02S	Aldrin	0.00005	U	MG/L	nc	NA
MW02S	Aldrin	0.00005	U	MG/L	nc	NA
MW06S	Aldrin	0.00005	U	MG/L	nc	NA
MW07S	Aldrin	0.00005	U	MG/L	nc	NA
MW01S	Aldrin	0.00005	U	MG/L	nc	NA
MW01S	Aldrin	0.00005	U	MG/L	nc	NA
MW03S	Aldrin	0.00005	U	MG/L	nc	NA
MW09S	Aldrin	0.00005	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW02D	Aldrin	0.00005	UJ	MG/L	nc	NA
MW08S	Aldrin	0.00005	UJ	MG/L	nc	NA
MW08S	Alkalinity	570		MG/L	nc	NA
MW08S	Alkalinity	190		MG/L	nc	NA
GEC2	Alkalinity	160		MG/L	nc	NA
MW06S	Alkalinity	140		MG/L	nc	NA
MW12B	Alkalinity	130		MG/L	nc	NA
MW12B	Alkalinity	130		MG/L	nc	NA
TMW3	Alkalinity	120		MG/L	nc	NA
MW01S	Alkalinity	120		MG/L	nc	NA
MW01S	Alkalinity	120		MG/L	nc	NA
MW09S	Alkalinity	120		MG/L	nc	NA
MW06S	Alkalinity	120		MG/L	nc	NA
MW03S	Alkalinity	100		MG/L	nc	NA
MW13B	Alkalinity	98		MG/L	nc	NA
MW07S	Alkalinity	87		MG/L	nc	NA
MW09S	Alkalinity	86		MG/L	nc	NA
MW04S	Alkalinity	85		MG/L	nc	NA
MW04S	Alkalinity	85		MG/L	nc	NA
MW05S	Alkalinity	83		MG/L	nc	NA
MW01S	Alkalinity	75		MG/L	nc	NA
MW07S	Alkalinity	71		MG/L	nc	NA
MW01S	Alkalinity	70		MG/L	nc	NA
MW13D	Alkalinity	60		MG/L	nc	NA
MW02S	Alkalinity	56		MG/L	nc	NA
MW15D	Alkalinity	54		MG/L	nc	NA
MW04B	Alkalinity	54		MG/L	nc	NA
MW13S	Alkalinity	52		MG/L	nc	NA
MW02D	Alkalinity	52		MG/L	nc	NA
MW03S	Alkalinity	40		MG/L	nc	NA
MW04D	Alkalinity	38		MG/L	nc	NA
MW02M	Alkalinity	38		MG/L	nc	NA
MW10B	Alkalinity	34		MG/L	nc	NA
MW02S	Alkalinity	30		MG/L	nc	NA
GEC6	Alkalinity	26		MG/L	nc	NA
MW10D	Alkalinity	20		MG/L	nc	NA
MW10D	Alkalinity	20		MG/L	nc	NA
MW11B	Alkalinity	20		MG/L	nc	NA
MW11M	Alkalinity	20		MG/L	nc	NA
MW12D	Alkalinity	20		MG/L	nc	NA
MW07D	Alkalinity	20		MG/L	nc	NA
MW11S	Alkalinity	10		MG/L	nc	NA
MW14M	Alkalinity	9		MG/L	nc	NA
MW10D	alpha-BHC	0.00005	U	MG/L	nc	NA
MW10B	alpha-BHC	0.00005	U	MG/L	nc	NA
MW10D	alpha-BHC	0.00005	U	MG/L	nc	NA
MW13B	alpha-BHC	0.00005	U	MG/L	nc	NA
MW13D	alpha-BHC	0.00005	U	MG/L	nc	NA
MW13S	alpha-BHC	0.00005	U	MG/L	nc	NA
TMW3	alpha-BHC	0.00005	U	MG/L	nc	NA
MW12B	alpha-BHC	0.00005	U	MG/L	nc	NA
MW11B	alpha-BHC	0.00005	U	MG/L	nc	NA
MW11M	alpha-BHC	0.00005	U	MG/L	nc	NA
MW11S	alpha-BHC	0.00005	U	MG/L	nc	NA
MW12B	alpha-BHC	0.00005	U	MG/L	nc	NA
MW12D	alpha-BHC	0.00005	U	MG/L	nc	NA
GEC2	alpha-BHC	0.00005	U	MG/L	nc	NA
GEC6	alpha-BHC	0.00005	U	MG/L	nc	NA
MW14M	alpha-BHC	0.00005	U	MG/L	nc	NA
MW15D	alpha-BHC	0.00005	U	MG/L	nc	NA
MW01S	alpha-BHC	0.00005	U	MG/L	nc	NA
MW01S	alpha-BHC	0.00005	U	MG/L	nc	NA
MW03S	alpha-BHC	0.00005	U	MG/L	nc	NA
MW05S	alpha-BHC	0.00005	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW06S	alpha-BHC	0.00005	U	MG/L	nc	NA
MW07D	alpha-BHC	0.00005	U	MG/L	nc	NA
MW07S	alpha-BHC	0.00005	U	MG/L	nc	NA
MW08S	alpha-BHC	0.00005	U	MG/L	nc	NA
MW09S	alpha-BHC	0.00005	U	MG/L	nc	NA
MW04S	alpha-BHC	0.00005	U	MG/L	nc	NA
MW04B	alpha-BHC	0.00005	U	MG/L	nc	NA
MW04D	alpha-BHC	0.00005	U	MG/L	nc	NA
MW04S	alpha-BHC	0.00005	U	MG/L	nc	NA
MW02M	alpha-BHC	0.00005	U	MG/L	nc	NA
MW02S	alpha-BHC	0.00005	U	MG/L	nc	NA
MW02S	alpha-BHC	0.00005	U	MG/L	nc	NA
MW06S	alpha-BHC	0.00005	U	MG/L	nc	NA
MW07S	alpha-BHC	0.00005	U	MG/L	nc	NA
MW01S	alpha-BHC	0.00005	U	MG/L	nc	NA
MW01S	alpha-BHC	0.00005	U	MG/L	nc	NA
MW03S	alpha-BHC	0.00005	U	MG/L	nc	NA
MW08S	alpha-BHC	0.00005	U	MG/L	nc	NA
MW09S	alpha-BHC	0.00005	U	MG/L	nc	NA
MW02D	alpha-BHC	0.00005	UJ	MG/L	nc	NA
MW06S	alpha-Chlordane	0.000032	J	MG/L	0.002	N
MW10D	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW10B	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW10D	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW13B	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW13D	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW13S	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
TMW3	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW12B	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW11B	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW11M	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW11S	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW12B	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW12D	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
GEC2	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
GEC6	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW14M	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW15D	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW01S	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW01S	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW03S	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW05S	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW07D	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW07S	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW08S	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW09S	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW04S	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW04B	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW04D	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW04S	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW02M	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW02S	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW02S	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW06S	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW07S	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW01S	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW01S	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW03S	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW08S	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW09S	alpha-Chlordane	0.00005	U	MG/L	0.002	NA
MW02D	alpha-Chlordane	0.00005	UJ	MG/L	0.002	NA
MW12B	Aluminum	4.98		MG/L	nc	NA
MW12B	Aluminum	4.36		MG/L	nc	NA
MW08S	Aluminum	0.756		MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW14M	Aluminum	0.738		MG/L	nc	NA
MW05S	Aluminum	0.508		MG/L	nc	NA
MW11S	Aluminum	0.383		MG/L	nc	NA
TMW3	Aluminum	0.316		MG/L	nc	NA
MW15D	Aluminum	0.151		MG/L	nc	NA
MW13B	Aluminum	0.13		MG/L	nc	NA
MW03S	Aluminum	0.118		MG/L	nc	NA
MW13D	Aluminum	0.112		MG/L	nc	NA
MW08S	Aluminum	0.112		MG/L	nc	NA
MW02D	Aluminum	0.0937		MG/L	nc	NA
GEC2	Aluminum	0.0693		MG/L	nc	NA
MW07D	Aluminum	0.0913	J	MG/L	nc	NA
MW09S	Aluminum	0.0886	J	MG/L	nc	NA
MW04D	Aluminum	0.0801	J	MG/L	nc	NA
MW01S	Aluminum	0.0626	J	MG/L	nc	NA
MW01S	Aluminum	0.0599	J	MG/L	nc	NA
MW06S	Aluminum	0.0545	J	MG/L	nc	NA
MW03S	Aluminum	0.146	U	MG/L	nc	NA
MW06S	Aluminum	0.143	U	MG/L	nc	NA
MW07S	Aluminum	0.0977	U	MG/L	nc	NA
MW13S	Aluminum	0.0871	U	MG/L	nc	NA
MW11M	Aluminum	0.0854	U	MG/L	nc	NA
MW09S	Aluminum	0.0853	U	MG/L	nc	NA
MW02S	Aluminum	0.0686	U	MG/L	nc	NA
MW11B	Aluminum	0.0674	U	MG/L	nc	NA
MW10D	Aluminum	0.065	U	MG/L	nc	NA
MW10B	Aluminum	0.0574	U	MG/L	nc	NA
MW01S	Aluminum	0.0554	U	MG/L	nc	NA
MW10D	Aluminum	0.0461	U	MG/L	nc	NA
MW07S	Aluminum	0.0457	U	MG/L	nc	NA
MW04S	Aluminum	0.0457	U	MG/L	nc	NA
MW04B	Aluminum	0.0457	U	MG/L	nc	NA
MW04S	Aluminum	0.0457	U	MG/L	nc	NA
MW02M	Aluminum	0.0457	U	MG/L	nc	NA
MW02S	Aluminum	0.0457	U	MG/L	nc	NA
MW12D	Aluminum	0.0375	U	MG/L	nc	NA
GEC6	Aluminum	0.0356	U	MG/L	nc	NA
MW01S	Aluminum	0.0351	U	MG/L	nc	NA
MW08S	Aluminum	0.509		MG/L	nc	NA
MW12B	Aluminum	0.465		MG/L	nc	NA
MW05S	Aluminum	0.352		MG/L	nc	NA
MW12B	Aluminum	0.178		MG/L	nc	NA
MW13B	Aluminum	0.105		MG/L	nc	NA
MW02D	Aluminum	0.1		MG/L	nc	NA
MW03S	Aluminum	0.0989		MG/L	nc	NA
MW08S	Aluminum	0.0842	J	MG/L	nc	NA
MW09S	Aluminum	0.0693	J	MG/L	nc	NA
MW01S	Aluminum	0.0685	J	MG/L	nc	NA
MW01S	Aluminum	0.0496	J	MG/L	nc	NA
MW11M	Aluminum	0.108	U	MG/L	nc	NA
MW14M	Aluminum	0.0956	U	MG/L	nc	NA
MW07S	Aluminum	0.0772	U	MG/L	nc	NA
MW09S	Aluminum	0.0747	U	MG/L	nc	NA
MW11S	Aluminum	0.0702	U	MG/L	nc	NA
MW03S	Aluminum	0.0688	U	MG/L	nc	NA
GEC6	Aluminum	0.0495	U	MG/L	nc	NA
MW10D	Aluminum	0.0484	U	MG/L	nc	NA
MW06S	Aluminum	0.0457	U	MG/L	nc	NA
MW07D	Aluminum	0.0457	U	MG/L	nc	NA
MW07S	Aluminum	0.0457	U	MG/L	nc	NA
MW04S	Aluminum	0.0457	U	MG/L	nc	NA
MW04B	Aluminum	0.0457	U	MG/L	nc	NA
MW04D	Aluminum	0.0457	U	MG/L	nc	NA
MW04S	Aluminum	0.0457	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW02M	Aluminum	0.0457	U	MG/L	nc	NA
MW02S	Aluminum	0.0457	U	MG/L	nc	NA
MW11B	Aluminum	0.0436	U	MG/L	nc	NA
MW02S	Aluminum	0.0414	U	MG/L	nc	NA
MW06S	Aluminum	0.0399	U	MG/L	nc	NA
MW01S	Aluminum	0.0363	U	MG/L	nc	NA
MW10D	Aluminum	0.0335	U	MG/L	nc	NA
MW01S	Aluminum	0.0285	U	MG/L	nc	NA
MW15D	Aluminum	0.0264	U	MG/L	nc	NA
MW10B	Aluminum	0.019	U	MG/L	nc	NA
MW12D	Aluminum	0.019	U	MG/L	nc	NA
TMW3	Aluminum	0.0169	U	MG/L	nc	NA
GEC2	Aluminum	0.0144	U	MG/L	nc	NA
MW13S	Aluminum	0.0126	U	MG/L	nc	NA
MW13D	Aluminum	0.01	U	MG/L	nc	NA
GEC3	Anthracene	0.0017		MG/L	nc	NA
GEC7	Anthracene	0.00047		MG/L	nc	NA
GEC4	Anthracene	0.00021		MG/L	nc	NA
MW15D	Anthracene	0.014	U	MG/L	nc	NA
MW10D	Anthracene	0.01	U	MG/L	nc	NA
MW10B	Anthracene	0.01	U	MG/L	nc	NA
MW10D	Anthracene	0.01	U	MG/L	nc	NA
MW13B	Anthracene	0.01	U	MG/L	nc	NA
MW13D	Anthracene	0.01	U	MG/L	nc	NA
MW13S	Anthracene	0.01	U	MG/L	nc	NA
TMW3	Anthracene	0.01	U	MG/L	nc	NA
MW12B	Anthracene	0.01	U	MG/L	nc	NA
MW11B	Anthracene	0.01	U	MG/L	nc	NA
MW11M	Anthracene	0.01	U	MG/L	nc	NA
MW11S	Anthracene	0.01	U	MG/L	nc	NA
MW12B	Anthracene	0.01	U	MG/L	nc	NA
MW12D	Anthracene	0.01	U	MG/L	nc	NA
GEC2	Anthracene	0.01	U	MG/L	nc	NA
GEC6	Anthracene	0.01	U	MG/L	nc	NA
MW14M	Anthracene	0.01	U	MG/L	nc	NA
MW01S	Anthracene	0.01	U	MG/L	nc	NA
MW01S	Anthracene	0.01	U	MG/L	nc	NA
MW03S	Anthracene	0.01	U	MG/L	nc	NA
MW08S	Anthracene	0.01	U	MG/L	nc	NA
MW04D	Anthracene	0.01	U	MG/L	nc	NA
MW02M	Anthracene	0.01	U	MG/L	nc	NA
MW02S	Anthracene	0.01	U	MG/L	nc	NA
MW02S	Anthracene	0.01	U	MG/L	nc	NA
MW06S	Anthracene	0.01	U	MG/L	nc	NA
MW07S	Anthracene	0.01	U	MG/L	nc	NA
MW01S	Anthracene	0.01	U	MG/L	nc	NA
MW01S	Anthracene	0.01	U	MG/L	nc	NA
MW03S	Anthracene	0.01	U	MG/L	nc	NA
MW08S	Anthracene	0.01	U	MG/L	nc	NA
MW09S	Anthracene	0.01	U	MG/L	nc	NA
GEC1	Anthracene	0.00018	U	MG/L	nc	NA
GEC2	Anthracene	0.00014	U	MG/L	nc	NA
GEC5	Anthracene	0.00012	U	MG/L	nc	NA
GEC6	Anthracene	0.00012	U	MG/L	nc	NA
MW05S	Anthracene	0.01	UJ	MG/L	nc	NA
MW06S	Anthracene	0.01	UJ	MG/L	nc	NA
MW07D	Anthracene	0.01	UJ	MG/L	nc	NA
MW07S	Anthracene	0.01	UJ	MG/L	nc	NA
MW09S	Anthracene	0.01	UJ	MG/L	nc	NA
MW04S	Anthracene	0.01	UJ	MG/L	nc	NA
MW04B	Anthracene	0.01	UJ	MG/L	nc	NA
MW04S	Anthracene	0.01	UJ	MG/L	nc	NA
MW02D	Anthracene	0.01	UJ	MG/L	nc	NA
MW10D	Antimony	0.0049	U	MG/L	0.006	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW10B	Antimony	0.0049	U	MG/L	0.006	NA
MW10D	Antimony	0.0049	U	MG/L	0.006	NA
MW13B	Antimony	0.0049	U	MG/L	0.006	NA
MW13D	Antimony	0.0049	U	MG/L	0.006	NA
MW13S	Antimony	0.0049	U	MG/L	0.006	NA
TMW3	Antimony	0.0049	U	MG/L	0.006	NA
MW12B	Antimony	0.0049	U	MG/L	0.006	NA
MW11B	Antimony	0.0049	U	MG/L	0.006	NA
MW11M	Antimony	0.0049	U	MG/L	0.006	NA
MW11S	Antimony	0.0049	U	MG/L	0.006	NA
MW12B	Antimony	0.0049	U	MG/L	0.006	NA
MW12D	Antimony	0.0049	U	MG/L	0.006	NA
GEC2	Antimony	0.0049	U	MG/L	0.006	NA
GEC6	Antimony	0.0049	U	MG/L	0.006	NA
MW14M	Antimony	0.0049	U	MG/L	0.006	NA
MW15D	Antimony	0.0049	U	MG/L	0.006	NA
MW01S	Antimony	0.0037	U	MG/L	0.006	NA
MW01S	Antimony	0.0037	U	MG/L	0.006	NA
MW03S	Antimony	0.0037	U	MG/L	0.006	NA
MW05S	Antimony	0.0037	U	MG/L	0.006	NA
MW06S	Antimony	0.0037	U	MG/L	0.006	NA
MW07D	Antimony	0.0037	U	MG/L	0.006	NA
MW07S	Antimony	0.0037	U	MG/L	0.006	NA
MW08S	Antimony	0.0037	U	MG/L	0.006	NA
MW09S	Antimony	0.0037	U	MG/L	0.006	NA
MW04S	Antimony	0.0037	U	MG/L	0.006	NA
MW04B	Antimony	0.0037	U	MG/L	0.006	NA
MW04D	Antimony	0.0037	U	MG/L	0.006	NA
MW04S	Antimony	0.0037	U	MG/L	0.006	NA
MW02D	Antimony	0.0037	U	MG/L	0.006	NA
MW02M	Antimony	0.0037	U	MG/L	0.006	NA
MW02S	Antimony	0.0037	U	MG/L	0.006	NA
MW02S	Antimony	0.0025	U	MG/L	0.006	NA
MW06S	Antimony	0.0025	U	MG/L	0.006	NA
MW07S	Antimony	0.0025	U	MG/L	0.006	NA
MW01S	Antimony	0.0025	U	MG/L	0.006	NA
MW01S	Antimony	0.0025	U	MG/L	0.006	NA
MW03S	Antimony	0.0025	U	MG/L	0.006	NA
MW08S	Antimony	0.0025	U	MG/L	0.006	NA
MW09S	Antimony	0.0025	U	MG/L	0.006	NA
MW07S	Antimony	0.0067	U	MG/L	0.006	NA
MW01S	Antimony	0.0066	U	MG/L	0.006	NA
MW06S	Antimony	0.0053	U	MG/L	0.006	NA
MW03S	Antimony	0.005	U	MG/L	0.006	NA
MW10D	Antimony	0.0049	U	MG/L	0.006	NA
MW10B	Antimony	0.0049	U	MG/L	0.006	NA
MW10D	Antimony	0.0049	U	MG/L	0.006	NA
MW13B	Antimony	0.0049	U	MG/L	0.006	NA
MW13D	Antimony	0.0049	U	MG/L	0.006	NA
MW13S	Antimony	0.0049	U	MG/L	0.006	NA
TMW3	Antimony	0.0049	U	MG/L	0.006	NA
MW12B	Antimony	0.0049	U	MG/L	0.006	NA
MW11B	Antimony	0.0049	U	MG/L	0.006	NA
MW11M	Antimony	0.0049	U	MG/L	0.006	NA
MW11S	Antimony	0.0049	U	MG/L	0.006	NA
MW12B	Antimony	0.0049	U	MG/L	0.006	NA
MW12D	Antimony	0.0049	U	MG/L	0.006	NA
GEC2	Antimony	0.0049	U	MG/L	0.006	NA
GEC6	Antimony	0.0049	U	MG/L	0.006	NA
MW14M	Antimony	0.0049	U	MG/L	0.006	NA
MW15D	Antimony	0.0049	U	MG/L	0.006	NA
MW01S	Antimony	0.0037	U	MG/L	0.006	NA
MW01S	Antimony	0.0037	U	MG/L	0.006	NA
MW03S	Antimony	0.0037	U	MG/L	0.006	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW05S	Antimony	0.0037	U	MG/L	0.006	NA
MW06S	Antimony	0.0037	U	MG/L	0.006	NA
MW07D	Antimony	0.0037	U	MG/L	0.006	NA
MW07S	Antimony	0.0037	U	MG/L	0.006	NA
MW08S	Antimony	0.0037	U	MG/L	0.006	NA
MW09S	Antimony	0.0037	U	MG/L	0.006	NA
MW04S	Antimony	0.0037	U	MG/L	0.006	NA
MW04B	Antimony	0.0037	U	MG/L	0.006	NA
MW04D	Antimony	0.0037	U	MG/L	0.006	NA
MW04S	Antimony	0.0037	U	MG/L	0.006	NA
MW02D	Antimony	0.0037	U	MG/L	0.006	NA
MW02M	Antimony	0.0037	U	MG/L	0.006	NA
MW02S	Antimony	0.0037	U	MG/L	0.006	NA
MW02S	Antimony	0.0025	U	MG/L	0.006	NA
MW08S	Antimony	0.0049	UJ	MG/L	0.006	NA
MW09S	Antimony	0.0044	UJ	MG/L	0.006	NA
MW01S	Antimony	0.0035	UJ	MG/L	0.006	NA
MW10D	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW10B	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW10D	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW13B	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW13D	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW13S	Aroclor-1016	0.001	U	MG/L	0.0005	NA
TMW3	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW12B	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW11B	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW11M	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW11S	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW12B	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW12D	Aroclor-1016	0.001	U	MG/L	0.0005	NA
GEC2	Aroclor-1016	0.001	U	MG/L	0.0005	NA
GEC6	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW14M	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW15D	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW01S	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW01S	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW03S	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW05S	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW06S	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW07D	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW07S	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW08S	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW09S	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW04S	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW04B	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW04D	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW04S	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW02M	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW02S	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW02S	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW06S	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW07S	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW01S	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW01S	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW03S	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW08S	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW09S	Aroclor-1016	0.001	U	MG/L	0.0005	NA
MW02D	Aroclor-1016	0.001	UJ	MG/L	0.0005	NA
MW10D	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW10B	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW10D	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW13B	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW13D	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW13S	Aroclor-1221	0.002	U	MG/L	0.0005	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
TMW3	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW12B	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW11B	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW11M	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW11S	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW12B	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW12D	Aroclor-1221	0.002	U	MG/L	0.0005	NA
GEC2	Aroclor-1221	0.002	U	MG/L	0.0005	NA
GEC6	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW14M	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW15D	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW01S	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW01S	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW03S	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW05S	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW06S	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW07D	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW07S	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW08S	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW09S	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW04S	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW04B	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW04D	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW04S	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW02M	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW02S	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW02S	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW06S	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW07S	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW01S	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW01S	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW03S	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW08S	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW09S	Aroclor-1221	0.002	U	MG/L	0.0005	NA
MW02D	Aroclor-1221	0.002	UJ	MG/L	0.0005	NA
MW10D	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW10B	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW10D	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW13B	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW13D	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW13S	Aroclor-1232	0.001	U	MG/L	0.0005	NA
TMW3	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW12B	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW11B	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW11M	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW11S	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW12B	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW12D	Aroclor-1232	0.001	U	MG/L	0.0005	NA
GEC2	Aroclor-1232	0.001	U	MG/L	0.0005	NA
GEC6	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW14M	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW15D	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW01S	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW01S	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW03S	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW05S	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW06S	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW07D	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW07S	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW08S	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW09S	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW04S	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW04B	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW04D	Aroclor-1232	0.001	U	MG/L	0.0005	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW04S	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW02M	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW02S	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW02S	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW06S	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW07S	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW01S	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW01S	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW03S	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW08S	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW09S	Aroclor-1232	0.001	U	MG/L	0.0005	NA
MW02D	Aroclor-1232	0.001	UJ	MG/L	0.0005	NA
MW10D	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW10B	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW10D	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW13B	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW13D	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW13S	Aroclor-1242	0.001	U	MG/L	0.0005	NA
TMW3	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW12B	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW11B	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW11M	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW11S	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW12B	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW12D	Aroclor-1242	0.001	U	MG/L	0.0005	NA
GEC2	Aroclor-1242	0.001	U	MG/L	0.0005	NA
GEC6	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW14M	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW15D	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW01S	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW01S	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW03S	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW05S	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW06S	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW07D	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW07S	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW08S	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW09S	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW04S	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW04B	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW04D	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW04S	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW02M	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW02S	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW02S	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW06S	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW07S	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW01S	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW01S	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW03S	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW08S	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW09S	Aroclor-1242	0.001	U	MG/L	0.0005	NA
MW02D	Aroclor-1242	0.001	UJ	MG/L	0.0005	NA
MW10D	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW10B	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW10D	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW13B	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW13D	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW13S	Aroclor-1248	0.001	U	MG/L	0.0005	NA
TMW3	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW12B	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW11B	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW11M	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW11S	Aroclor-1248	0.001	U	MG/L	0.0005	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW12B	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW12D	Aroclor-1248	0.001	U	MG/L	0.0005	NA
GEC2	Aroclor-1248	0.001	U	MG/L	0.0005	NA
GEC6	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW14M	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW15D	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW01S	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW01S	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW03S	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW05S	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW06S	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW07D	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW07S	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW08S	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW09S	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW04S	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW04B	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW04D	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW04S	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW02M	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW02S	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW02S	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW06S	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW07S	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW01S	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW01S	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW03S	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW08S	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW09S	Aroclor-1248	0.001	U	MG/L	0.0005	NA
MW02D	Aroclor-1248	0.001	UJ	MG/L	0.0005	NA
GEC6	Aroclor-1254	0.000264		MG/L	0.0005	N
GEC1	Aroclor-1254	0.00025	U	MG/L	0.0005	NA
GEC2	Aroclor-1254	0.00025	U	MG/L	0.0005	NA
GEC5	Aroclor-1254	0.00025	U	MG/L	0.0005	NA
MW10D	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW10B	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW10D	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW13B	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW13D	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW13S	Aroclor-1254	0.001	U	MG/L	0.0005	NA
TMW3	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW12B	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW11B	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW11M	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW11S	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW12B	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW12D	Aroclor-1254	0.001	U	MG/L	0.0005	NA
GEC2	Aroclor-1254	0.001	U	MG/L	0.0005	NA
GEC6	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW14M	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW15D	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW01S	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW01S	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW03S	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW05S	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW06S	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW07D	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW07S	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW08S	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW09S	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW04S	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW04B	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW04D	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW04S	Aroclor-1254	0.001	U	MG/L	0.0005	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW02M	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW02S	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW02S	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW06S	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW07S	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW01S	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW01S	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW03S	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW08S	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW09S	Aroclor-1254	0.001	U	MG/L	0.0005	NA
MW02D	Aroclor-1254	0.001	UJ	MG/L	0.0005	NA
MW10D	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW10B	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW10D	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW13B	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW13D	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW13S	Aroclor-1260	0.001	U	MG/L	0.0005	NA
TMW3	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW12B	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW11B	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW11M	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW11S	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW12B	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW12D	Aroclor-1260	0.001	U	MG/L	0.0005	NA
GEC2	Aroclor-1260	0.001	U	MG/L	0.0005	NA
GEC6	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW14M	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW15D	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW01S	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW01S	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW03S	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW05S	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW06S	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW07D	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW07S	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW08S	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW09S	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW04S	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW04B	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW04D	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW04S	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW02M	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW02S	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW02S	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW06S	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW07S	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW01S	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW01S	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW03S	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW08S	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW09S	Aroclor-1260	0.001	U	MG/L	0.0005	NA
MW02D	Aroclor-1260	0.001	UJ	MG/L	0.0005	NA
GEC6	Arsenic	0.02		MG/L	0.01	Y
GEC5	Arsenic	0.018		MG/L	0.01	Y
MW08S	Arsenic	0.0058	J	MG/L	0.01	N
MW01S	Arsenic	0.0045	J	MG/L	0.01	N
MW01S	Arsenic	0.0044	J	MG/L	0.01	N
MW08S	Arsenic	0.008	U	MG/L	0.01	NA
MW01S	Arsenic	0.0071	U	MG/L	0.01	NA
MW09S	Arsenic	0.0068	U	MG/L	0.01	NA
MW01S	Arsenic	0.0063	U	MG/L	0.01	NA
MW06S	Arsenic	0.0052	U	MG/L	0.01	NA
GEC1	Arsenic	0.005	U	MG/L	0.01	NA
GEC2	Arsenic	0.005	U	MG/L	0.01	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW07S	Arsenic	0.0042	U	MG/L	0.01	NA
MW02S	Arsenic	0.0042	U	MG/L	0.01	NA
MW06S	Arsenic	0.0042	U	MG/L	0.01	NA
MW07S	Arsenic	0.0042	U	MG/L	0.01	NA
MW03S	Arsenic	0.0042	U	MG/L	0.01	NA
MW09S	Arsenic	0.0042	U	MG/L	0.01	NA
MW07D	Arsenic	0.0026	U	MG/L	0.01	NA
MW04B	Arsenic	0.0026	U	MG/L	0.01	NA
MW04D	Arsenic	0.0026	U	MG/L	0.01	NA
MW04S	Arsenic	0.0026	U	MG/L	0.01	NA
MW02M	Arsenic	0.0026	U	MG/L	0.01	NA
MW02S	Arsenic	0.0026	U	MG/L	0.01	NA
MW10D	Arsenic	0.002	U	MG/L	0.01	NA
MW10B	Arsenic	0.002	U	MG/L	0.01	NA
MW13D	Arsenic	0.002	U	MG/L	0.01	NA
MW13S	Arsenic	0.002	U	MG/L	0.01	NA
MW11B	Arsenic	0.002	U	MG/L	0.01	NA
MW11M	Arsenic	0.002	U	MG/L	0.01	NA
MW12B	Arsenic	0.002	U	MG/L	0.01	NA
GEC2	Arsenic	0.002	U	MG/L	0.01	NA
GEC6	Arsenic	0.002	U	MG/L	0.01	NA
MW14M	Arsenic	0.002	U	MG/L	0.01	NA
MW15D	Arsenic	0.002	U	MG/L	0.01	NA
MW05S	Arsenic	0.0044	UJ	MG/L	0.01	NA
MW03S	Arsenic	0.0039	UJ	MG/L	0.01	NA
MW04S	Arsenic	0.0037	UJ	MG/L	0.01	NA
MW11S	Arsenic	0.0035	UJ	MG/L	0.01	NA
MW10D	Arsenic	0.0034	UJ	MG/L	0.01	NA
TMW3	Arsenic	0.0034	UJ	MG/L	0.01	NA
MW13B	Arsenic	0.0028	UJ	MG/L	0.01	NA
MW12D	Arsenic	0.0028	UJ	MG/L	0.01	NA
MW02D	Arsenic	0.0028	UJ	MG/L	0.01	NA
MW12B	Arsenic	0.0022	UJ	MG/L	0.01	NA
MW08S	Arsenic	0.0058	J	MG/L	0.01	N
MW01S	Arsenic	0.0054	J	MG/L	0.01	N
MW08S	Arsenic	0.008	U	MG/L	0.01	NA
MW09S	Arsenic	0.0068	U	MG/L	0.01	NA
MW01S	Arsenic	0.0064	U	MG/L	0.01	NA
MW01S	Arsenic	0.0057	U	MG/L	0.01	NA
MW03S	Arsenic	0.0053	U	MG/L	0.01	NA
MW06S	Arsenic	0.0053	U	MG/L	0.01	NA
TMW3	Arsenic	0.0048	U	MG/L	0.01	NA
MW02S	Arsenic	0.0042	U	MG/L	0.01	NA
MW06S	Arsenic	0.0042	U	MG/L	0.01	NA
MW07S	Arsenic	0.0042	U	MG/L	0.01	NA
MW01S	Arsenic	0.0042	U	MG/L	0.01	NA
MW03S	Arsenic	0.0042	U	MG/L	0.01	NA
MW09S	Arsenic	0.0042	U	MG/L	0.01	NA
MW07D	Arsenic	0.0026	U	MG/L	0.01	NA
MW04S	Arsenic	0.0026	U	MG/L	0.01	NA
MW04B	Arsenic	0.0026	U	MG/L	0.01	NA
MW04D	Arsenic	0.0026	U	MG/L	0.01	NA
MW04S	Arsenic	0.0026	U	MG/L	0.01	NA
MW02D	Arsenic	0.0026	U	MG/L	0.01	NA
MW02M	Arsenic	0.0026	U	MG/L	0.01	NA
MW02S	Arsenic	0.0026	U	MG/L	0.01	NA
MW10B	Arsenic	0.002	U	MG/L	0.01	NA
MW10D	Arsenic	0.002	U	MG/L	0.01	NA
MW13D	Arsenic	0.002	U	MG/L	0.01	NA
MW13S	Arsenic	0.002	U	MG/L	0.01	NA
MW12B	Arsenic	0.002	U	MG/L	0.01	NA
MW11B	Arsenic	0.002	U	MG/L	0.01	NA
MW11M	Arsenic	0.002	U	MG/L	0.01	NA
MW12B	Arsenic	0.002	U	MG/L	0.01	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW12D	Arsenic	0.002	U	MG/L	0.01	NA
GEC6	Arsenic	0.002	U	MG/L	0.01	NA
MW14M	Arsenic	0.002	U	MG/L	0.01	NA
MW15D	Arsenic	0.002	U	MG/L	0.01	NA
MW05S	Arsenic	0.0036	UJ	MG/L	0.01	NA
MW07S	Arsenic	0.0035	UJ	MG/L	0.01	NA
MW10D	Arsenic	0.0034	UJ	MG/L	0.01	NA
GEC2	Arsenic	0.0034	UJ	MG/L	0.01	NA
MW13B	Arsenic	0.0033	UJ	MG/L	0.01	NA
MW11S	Arsenic	0.0027	UJ	MG/L	0.01	NA
MW02S	Atrazine	0.01	U	MG/L	0.003	NA
MW06S	Atrazine	0.01	U	MG/L	0.003	NA
MW07S	Atrazine	0.01	U	MG/L	0.003	NA
MW01S	Atrazine	0.01	U	MG/L	0.003	NA
MW01S	Atrazine	0.01	U	MG/L	0.003	NA
MW03S	Atrazine	0.01	U	MG/L	0.003	NA
MW08S	Atrazine	0.01	U	MG/L	0.003	NA
MW09S	Atrazine	0.01	U	MG/L	0.003	NA
MW15D	Atrazine	0.014	UJ	MG/L	0.003	NA
MW10D	Atrazine	0.01	UJ	MG/L	0.003	NA
MW10B	Atrazine	0.01	UJ	MG/L	0.003	NA
MW10D	Atrazine	0.01	UJ	MG/L	0.003	NA
MW13B	Atrazine	0.01	UJ	MG/L	0.003	NA
MW13D	Atrazine	0.01	UJ	MG/L	0.003	NA
MW13S	Atrazine	0.01	UJ	MG/L	0.003	NA
TMW3	Atrazine	0.01	UJ	MG/L	0.003	NA
MW12B	Atrazine	0.01	UJ	MG/L	0.003	NA
MW11B	Atrazine	0.01	UJ	MG/L	0.003	NA
MW11M	Atrazine	0.01	UJ	MG/L	0.003	NA
MW11S	Atrazine	0.01	UJ	MG/L	0.003	NA
MW12B	Atrazine	0.01	UJ	MG/L	0.003	NA
MW12D	Atrazine	0.01	UJ	MG/L	0.003	NA
GEC2	Atrazine	0.01	UJ	MG/L	0.003	NA
GEC6	Atrazine	0.01	UJ	MG/L	0.003	NA
MW14M	Atrazine	0.01	UJ	MG/L	0.003	NA
MW01S	Atrazine	0.01	UJ	MG/L	0.003	NA
MW01S	Atrazine	0.01	UJ	MG/L	0.003	NA
MW03S	Atrazine	0.01	UJ	MG/L	0.003	NA
MW05S	Atrazine	0.01	UJ	MG/L	0.003	NA
MW06S	Atrazine	0.01	UJ	MG/L	0.003	NA
MW07D	Atrazine	0.01	UJ	MG/L	0.003	NA
MW07S	Atrazine	0.01	UJ	MG/L	0.003	NA
MW08S	Atrazine	0.01	UJ	MG/L	0.003	NA
MW09S	Atrazine	0.01	UJ	MG/L	0.003	NA
MW04S	Atrazine	0.01	UJ	MG/L	0.003	NA
MW04B	Atrazine	0.01	UJ	MG/L	0.003	NA
MW04D	Atrazine	0.01	UJ	MG/L	0.003	NA
MW04S	Atrazine	0.01	UJ	MG/L	0.003	NA
MW02D	Atrazine	0.01	UJ	MG/L	0.003	NA
MW02M	Atrazine	0.01	UJ	MG/L	0.003	NA
MW02S	Atrazine	0.01	UJ	MG/L	0.003	NA
GEC5	Barium	0.33		MG/L	2	N
GEC6	Barium	0.21		MG/L	2	N
MW02S	Barium	0.168		MG/L	2	N
GEC2	Barium	0.145		MG/L	2	N
GEC1	Barium	0.14		MG/L	2	N
MW11M	Barium	0.128		MG/L	2	N
MW01S	Barium	0.112		MG/L	2	N
MW01S	Barium	0.112		MG/L	2	N
MW13S	Barium	0.0964		MG/L	2	N
MW05S	Barium	0.0886		MG/L	2	N
MW12B	Barium	0.0885		MG/L	2	N
MW12B	Barium	0.0883		MG/L	2	N
MW03S	Barium	0.0827		MG/L	2	N

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW02S	Barium	0.0793		MG/L	2	N
MW11S	Barium	0.0667		MG/L	2	N
MW13D	Barium	0.0646		MG/L	2	N
MW06S	Barium	0.0632		MG/L	2	N
MW13B	Barium	0.0586		MG/L	2	N
MW10D	Barium	0.0556		MG/L	2	N
MW10D	Barium	0.0535		MG/L	2	N
TMW3	Barium	0.053		MG/L	2	N
MW03S	Barium	0.0448		MG/L	2	N
GEC6	Barium	0.0421		MG/L	2	N
MW11B	Barium	0.0406		MG/L	2	N
MW10B	Barium	0.0353		MG/L	2	N
MW14M	Barium	0.0346		MG/L	2	N
MW15D	Barium	0.0339		MG/L	2	N
MW07S	Barium	0.0337		MG/L	2	N
MW01S	Barium	0.0327		MG/L	2	N
MW12D	Barium	0.0326		MG/L	2	N
MW01S	Barium	0.0326		MG/L	2	N
MW07D	Barium	0.032		MG/L	2	N
MW08S	Barium	0.0318		MG/L	2	N
GEC2	Barium	0.03		MG/L	2	N
MW08S	Barium	0.0173		MG/L	2	N
MW09S	Barium	0.0097		MG/L	2	N
MW09S	Barium	0.0127	J	MG/L	2	N
MW04D	Barium	0.056	U	MG/L	2	NA
MW04S	Barium	0.0551	U	MG/L	2	NA
MW02M	Barium	0.055	U	MG/L	2	NA
MW06S	Barium	0.0544	U	MG/L	2	NA
MW04S	Barium	0.0518	U	MG/L	2	NA
MW04B	Barium	0.0357	U	MG/L	2	NA
MW07S	Barium	0.0326	U	MG/L	2	NA
MW02D	Barium	0.0321	U	MG/L	2	NA
MW02S	Barium	0.171		MG/L	2	N
GEC2	Barium	0.134		MG/L	2	N
MW11M	Barium	0.124		MG/L	2	N
MW01S	Barium	0.112		MG/L	2	N
MW01S	Barium	0.112		MG/L	2	N
MW13S	Barium	0.103		MG/L	2	N
MW03S	Barium	0.1		MG/L	2	N
MW05S	Barium	0.081		MG/L	2	N
MW02S	Barium	0.0804		MG/L	2	N
MW06S	Barium	0.0626		MG/L	2	N
MW11S	Barium	0.0585		MG/L	2	N
MW13B	Barium	0.0573		MG/L	2	N
MW12B	Barium	0.0573		MG/L	2	N
MW13D	Barium	0.056		MG/L	2	N
MW10D	Barium	0.0533		MG/L	2	N
MW12B	Barium	0.0517		MG/L	2	N
MW10D	Barium	0.0509		MG/L	2	N
TMW3	Barium	0.0469		MG/L	2	N
MW03S	Barium	0.0444		MG/L	2	N
GEC6	Barium	0.043		MG/L	2	N
MW11B	Barium	0.0411		MG/L	2	N
MW07S	Barium	0.0344		MG/L	2	N
MW01S	Barium	0.0335		MG/L	2	N
MW10B	Barium	0.0328		MG/L	2	N
MW14M	Barium	0.0326		MG/L	2	N
MW15D	Barium	0.0325		MG/L	2	N
MW12D	Barium	0.0323		MG/L	2	N
MW02D	Barium	0.0319		MG/L	2	N
MW01S	Barium	0.0309		MG/L	2	N
MW07D	Barium	0.0307		MG/L	2	N
MW08S	Barium	0.0212		MG/L	2	N
MW08S	Barium	0.0173		MG/L	2	N

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW09S	Barium	0.0091		MG/L	2	N
MW09S	Barium	0.0118	J	MG/L	2	N
MW06S	Barium	0.0563	U	MG/L	2	NA
MW04S	Barium	0.053	U	MG/L	2	NA
MW04D	Barium	0.0522	U	MG/L	2	NA
MW04S	Barium	0.0521	U	MG/L	2	NA
MW02M	Barium	0.0519	U	MG/L	2	NA
MW04B	Barium	0.0339	U	MG/L	2	NA
MW07S	Barium	0.0319	U	MG/L	2	NA
MW15D	Benzaldehyde	0.014	UJ	MG/L	nc	NA
MW10D	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW10B	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW10D	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW13B	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW13D	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW13S	Benzaldehyde	0.01	UJ	MG/L	nc	NA
TMW3	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW12B	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW11B	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW11M	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW11S	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW12B	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW12D	Benzaldehyde	0.01	UJ	MG/L	nc	NA
GEC2	Benzaldehyde	0.01	UJ	MG/L	nc	NA
GEC6	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW14M	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW01S	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW01S	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW03S	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW05S	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW06S	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW07D	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW07S	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW08S	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW09S	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW04S	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW04B	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW04D	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW04S	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW02D	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW02M	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW02S	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW02S	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW06S	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW07S	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW01S	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW01S	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW03S	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW08S	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW09S	Benzaldehyde	0.01	UJ	MG/L	nc	NA
MW05S	Benzenamine, 2-chloro-5-(trifluoromethyl	0.071	NJ	MG/L	nc	NA
MW06S	Benzenamine, 2-chloro-5-(trifluoromethyl	0.004	NJ	MG/L	nc	NA
MW06S	Benzenamine, 2-methyl-	0.005	NJ	MG/L	nc	NA
MW03S	Benzenamine, 3,3'-sulfonylbis-	0.49	NJ	MG/L	nc	NA
MW02M	Benzenamine, 3,3'-sulfonylbis-	0.087	NJ	MG/L	nc	NA
MW04D	Benzenamine, 3,3'-sulfonylbis-	0.011	NJ	MG/L	nc	NA
MW02S	Benzenamine, 3,3'-sulfonylbis-	0.01	NJ	MG/L	nc	NA
MW02S	Benzenamine, 3,3'-sulfonylbis-	0.69	NJ_2	MG/L	nc	NA
MW06S	Benzenamine, N,n-diethyl-	0.005	NJ	MG/L	nc	NA
MW06S	Benzenamine, N,n-diethyl-4-methyl-	0.003	NJ	MG/L	nc	NA
MW-LEA-01	Benzene	20	Uw	MG/L	0.005	NA
MW-LEA-01	Benzene	2	Uw	MG/L	0.005	NA
MW-LEA-02	Benzene	2	Uw	MG/L	0.005	NA
MW-05S	Benzene	2	Uw	MG/L	0.005	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW-LEA-02	Benzene	2	Uw	MG/L	0.005	NA
MW-LEA-02	Benzene	0.2	Uw	MG/L	0.005	NA
MW-LEA-03	Benzene	0.2	Uw	MG/L	0.005	NA
MW-LEA-03	Benzene	0.004	Uw	MG/L	0.005	NA
MW09S	Benzene	0.021		MG/L	0.005	Y
MW06S	Benzene	0.011		MG/L	0.005	Y
MW08S	Benzene	0.01		MG/L	0.005	Y
MW09S	Benzene	0.0097		MG/L	0.005	Y
GEC7	Benzene	0.0013		MG/L	0.005	N
MW06S	Benzene	0.0068	J	MG/L	0.005	Y
MW06S	Benzene	0.006	J	MG/L	0.005	Y
MW08S	Benzene	0.006	J	MG/L	0.005	Y
MW06S	Benzene	0.005	J	MG/L	0.005	N
MW08S	Benzene	0.004	J	MG/L	0.005	N
MW04S	Benzene	0.002	J	MG/L	0.005	N
MW04S	Benzene	0.002	J	MG/L	0.005	N
MW02S	Benzene	0.001	J	MG/L	0.005	N
MW09S	Benzene	0.001	J	MG/L	0.005	N
MW05S	Benzene	1.7	U	MG/L	0.005	NA
MW05S	Benzene	1	U	MG/L	0.005	NA
MW13D	Benzene	0.01	U	MG/L	0.005	NA
MW10D	Benzene	0.01	U	MG/L	0.005	NA
MW10B	Benzene	0.01	U	MG/L	0.005	NA
MW10D	Benzene	0.01	U	MG/L	0.005	NA
MW13B	Benzene	0.01	U	MG/L	0.005	NA
MW13D	Benzene	0.01	U	MG/L	0.005	NA
MW13S	Benzene	0.01	U	MG/L	0.005	NA
TMW3	Benzene	0.01	U	MG/L	0.005	NA
MW12B	Benzene	0.01	U	MG/L	0.005	NA
MW11B	Benzene	0.01	U	MG/L	0.005	NA
MW11M	Benzene	0.01	U	MG/L	0.005	NA
MW11S	Benzene	0.01	U	MG/L	0.005	NA
MW12B	Benzene	0.01	U	MG/L	0.005	NA
MW12D	Benzene	0.01	U	MG/L	0.005	NA
GEC2	Benzene	0.01	U	MG/L	0.005	NA
GEC6	Benzene	0.01	U	MG/L	0.005	NA
MW14M	Benzene	0.01	U	MG/L	0.005	NA
MW15D	Benzene	0.01	U	MG/L	0.005	NA
MW01S	Benzene	0.01	U	MG/L	0.005	NA
MW01S	Benzene	0.01	U	MG/L	0.005	NA
MW03S	Benzene	0.01	U	MG/L	0.005	NA
MW07D	Benzene	0.01	U	MG/L	0.005	NA
MW07S	Benzene	0.01	U	MG/L	0.005	NA
MW04B	Benzene	0.01	U	MG/L	0.005	NA
MW04D	Benzene	0.01	U	MG/L	0.005	NA
MW02D	Benzene	0.01	U	MG/L	0.005	NA
MW02M	Benzene	0.01	U	MG/L	0.005	NA
MW02S	Benzene	0.01	U	MG/L	0.005	NA
MW07S	Benzene	0.01	U	MG/L	0.005	NA
MW01S	Benzene	0.01	U	MG/L	0.005	NA
MW01S	Benzene	0.01	U	MG/L	0.005	NA
MW03S	Benzene	0.01	U	MG/L	0.005	NA
MW02M	Benzene	0.005	U	MG/L	0.005	NA
MW02D	Benzene	0.004	U	MG/L	0.005	NA
MW03S	Benzene	0.001	U	MG/L	0.005	NA
GEC3	Benzene	0.001	U	MG/L	0.005	NA
MW01S	Benzene	0.001	U	MG/L	0.005	NA
MW11S	Benzene	0.001	U	MG/L	0.005	NA
MW12B	Benzene	0.001	U	MG/L	0.005	NA
MW12D	Benzene	0.001	U	MG/L	0.005	NA
GEC1	Benzene	0.001	U	MG/L	0.005	NA
GEC2	Benzene	0.001	U	MG/L	0.005	NA
GEC4	Benzene	0.001	U	MG/L	0.005	NA
GEC5	Benzene	0.001	U	MG/L	0.005	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
GEC6	Benzene	0.001	U	MG/L	0.005	NA
GEC7	Benzene	0.001	U	MG/L	0.005	NA
MW07S	Benzene	0.001	U	MG/L	0.005	NA
MW11B	Benzene	0.001	U	MG/L	0.005	NA
MW11M	Benzene	0.001	U	MG/L	0.005	NA
MW15D	Benzene	0.001	U	MG/L	0.005	NA
MW02S	Benzene	0.001	U	MG/L	0.005	NA
MW04B	Benzene	0.001	U	MG/L	0.005	NA
MW04D	Benzene	0.001	U	MG/L	0.005	NA
MW04S	Benzene	0.001	U	MG/L	0.005	NA
MW10B	Benzene	0.001	U	MG/L	0.005	NA
MW10D	Benzene	0.001	U	MG/L	0.005	NA
MW13S	Benzene	0.001	U	MG/L	0.005	NA
GEC1	Benzene	0.001	U	MG/L	0.005	NA
GEC2	Benzene	0.001	U	MG/L	0.005	NA
GEC3	Benzene	0.001	U	MG/L	0.005	NA
GEC4	Benzene	0.001	U	MG/L	0.005	NA
GEC5	Benzene	0.001	U	MG/L	0.005	NA
GEC6	Benzene	0.001	U	MG/L	0.005	NA
MW05S	BENZENE	1	UJ	MG/L	0.005	NA
MW05S	BENZENE	1	UJ	MG/L	0.005	NA
MW05S	Benzene	1	UJ	MG/L	0.005	NA
MW14M	Benzene	0.1	UJ	MG/L	0.005	NA
MW13B	Benzene	0.004	UJ	MG/L	0.005	NA
MW07D	Benzene	0.001	UJ	MG/L	0.005	NA
MW08S	Benzene, 1,2,3-trimethyl-	0.003	NJ	MG/L	nc	NA
MW08S	Benzene, 1,2,3-trimethyl-	0.012	NJ	MG/L	nc	NA
MW08S	Benzene, 1,2,3-trimethyl-_total	0.039	NJ_2	MG/L	nc	NA
MW05S	Benzene, 1,2,4-trichloro-5-methoxy-	0.006	NJ	MG/L	nc	NA
MW08S	Benzene, 1,3,5-trimethyl-	0.061	NJ	MG/L	nc	NA
MW08S	Benzene, 1-ethyl-2-methyl-_total	0.004	NJ_1	MG/L	nc	NA
MW05S	Benzene, 1-ethyl-2-methyl-_total	0.01	NJ_2	MG/L	nc	NA
MW08S	Benzene, 1-ethyl-3-methyl-	0.01	NJ	MG/L	nc	NA
MW06S	Benzene, 1-ethyl-4-methyl-	0.003	NJ	MG/L	nc	NA
MW08S	Benzene, 1-ethyl-4-methyl-	0.022	NJ	MG/L	nc	NA
MW05S	Benzene, Dichlorodimethoxy-	0.032	NJ	MG/L	nc	NA
MW08S	Benzeneacetic Acid	0.028	NJ	MG/L	nc	NA
MW08S	Benzenebutanoic Acid	0.008	NJ	MG/L	nc	NA
MW05S	Benzenemethanol, 2-methyl-	0.007	NJ	MG/L	nc	NA
MW06S	Benzenesulfonamide, 2-methyl-	0.003	NJ	MG/L	nc	NA
MW09S	Benzenesulfonamide, 4-methyl-	0.004	NJ	MG/L	nc	NA
MW04S	Benzenesulfonamide, 4-methyl-	0.002	UJ	MG/L	nc	NA
GEC3	Benzo(a)anthracene	0.0037		MG/L	nc	NA
GEC7	Benzo(a)anthracene	0.00049		MG/L	nc	NA
GEC4	Benzo(a)anthracene	0.00043		MG/L	nc	NA
GEC6	Benzo(a)anthracene	0.00022		MG/L	nc	NA
GEC2	Benzo(a)anthracene	0.00018		MG/L	nc	NA
MW15D	Benzo(a)anthracene	0.014	U	MG/L	nc	NA
MW10D	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW10B	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW10D	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW13B	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW13D	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW13S	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
TMW3	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW12B	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW11B	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW11M	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW11S	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW12B	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW12D	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
GEC2	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
GEC6	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW14M	Benzo(a)anthracene	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW01S	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW01S	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW03S	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW05S	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW06S	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW07D	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW07S	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW08S	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW09S	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW04S	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW04B	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW04D	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW04S	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW02D	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW02M	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW02S	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW02S	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW06S	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW07S	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW01S	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW01S	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW03S	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW08S	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
MW09S	Benzo(a)anthracene	0.01	U	MG/L	nc	NA
GEC1	Benzo(a)anthracene	0.00018	U	MG/L	nc	NA
GEC5	Benzo(a)anthracene	0.00012	U	MG/L	nc	NA
MW15D	Benzo(a)pyrene	0.014	U	MG/L	0.0002	NA
MW10D	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW10B	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW10D	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW13B	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW13D	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW13S	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
TMW3	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW12B	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW11B	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW11M	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW11S	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW12B	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW12D	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
GEC2	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
GEC6	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW14M	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW01S	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW01S	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW03S	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW05S	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW06S	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW07D	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW07S	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW08S	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW09S	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW04S	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW04B	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW04D	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW04S	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW02D	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW02M	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW02S	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW02S	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW06S	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW07S	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW01S	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW01S	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW03S	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW08S	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
MW09S	Benzo(a)pyrene	0.01	U	MG/L	0.0002	NA
GEC3	Benzo(a,e)pyrene	0.0031		MG/L	nc	NA
GEC7	Benzo(a,e)pyrene	0.00054		MG/L	nc	NA
GEC4	Benzo(a,e)pyrene	0.00039		MG/L	nc	NA
GEC6	Benzo(a,e)pyrene	0.00018		MG/L	nc	NA
GEC2	Benzo(a,e)pyrene	0.00015		MG/L	nc	NA
GEC1	Benzo(a,e)pyrene	0.00018	U	MG/L	nc	NA
GEC5	Benzo(a,e)pyrene	0.00012	U	MG/L	nc	NA
GEC3	Benzo(b)fluoranthene	0.0025		MG/L	nc	NA
GEC7	Benzo(b)fluoranthene	0.00094		MG/L	nc	NA
GEC4	Benzo(b)fluoranthene	0.00035		MG/L	nc	NA
GEC6	Benzo(b)fluoranthene	0.00017		MG/L	nc	NA
GEC2	Benzo(b)fluoranthene	0.00014		MG/L	nc	NA
MW15D	Benzo(b)fluoranthene	0.014	U	MG/L	nc	NA
MW10D	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW10B	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW10D	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW13B	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW13D	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW13S	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
TMW3	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW12B	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW11B	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW11M	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW11S	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW12B	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW12D	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
GEC2	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
GEC6	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW14M	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW01S	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW01S	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW03S	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW05S	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW06S	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW07D	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW07S	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW08S	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW09S	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW04S	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW04B	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW04D	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW04S	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW02D	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW02M	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW02S	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW02S	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW06S	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW07S	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW01S	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW01S	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW03S	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW08S	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
MW09S	Benzo(b)fluoranthene	0.01	U	MG/L	nc	NA
GEC1	Benzo(b)fluoranthene	0.00018	U	MG/L	nc	NA
GEC5	Benzo(b)fluoranthene	0.00012	U	MG/L	nc	NA
GEC3	Benzo(g,h,i)perylene	0.0018		MG/L	nc	NA
GEC7	Benzo(g,h,i)perylene	0.00046		MG/L	nc	NA
GEC4	Benzo(g,h,i)perylene	0.00023		MG/L	nc	NA
MW15D	Benzo(g,h,i)perylene	0.014	U	MG/L	nc	NA
MW10D	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
MW10B	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW10D	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
MW13B	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
MW13D	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
MW13S	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
TMW3	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
MW11S	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
MW12B	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
MW12D	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
GEC2	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
GEC6	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
MW14M	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
MW01S	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
MW01S	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
MW03S	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
MW05S	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
MW06S	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
MW07D	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
MW07S	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
MW08S	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
MW09S	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
MW04S	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
MW04B	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
MW04D	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
MW04S	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
MW02D	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
MW02M	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
MW02S	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
MW02S	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
MW06S	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
MW07S	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
MW01S	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
MW01S	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
MW03S	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
MW08S	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
MW09S	Benzo(g,h,i)perylene	0.01	U	MG/L	nc	NA
GEC1	Benzo(g,h,i)perylene	0.00018	U	MG/L	nc	NA
GEC2	Benzo(g,h,i)perylene	0.00014	U	MG/L	nc	NA
GEC5	Benzo(g,h,i)perylene	0.00012	U	MG/L	nc	NA
GEC6	Benzo(g,h,i)perylene	0.00012	U	MG/L	nc	NA
MW12B	Benzo(g,h,i)perylene	0.01	UJ	MG/L	nc	NA
MW11B	Benzo(g,h,i)perylene	0.01	UJ	MG/L	nc	NA
MW11M	Benzo(g,h,i)perylene	0.01	UJ	MG/L	nc	NA
GEC3	Benzo(k)fluoranthene	0.0029		MG/L	nc	NA
GEC7	Benzo(k)fluoranthene	0.00088		MG/L	nc	NA
GEC4	Benzo(k)fluoranthene	0.00038		MG/L	nc	NA
GEC6	Benzo(k)fluoranthene	0.00018		MG/L	nc	NA
GEC2	Benzo(k)fluoranthene	0.00015		MG/L	nc	NA
MW15D	Benzo(k)fluoranthene	0.014	U	MG/L	nc	NA
MW10D	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW10B	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW10D	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW13B	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW13D	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW13S	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
TMW3	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW12B	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW11B	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW11M	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW11S	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW12B	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW12D	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
GEC2	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
GEC6	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW14M	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW01S	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW01S	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW03S	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW05S	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW06S	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW07D	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW07S	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW08S	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW09S	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW04S	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW04B	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW04D	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW04S	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW02D	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW02M	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW02S	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW02S	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW06S	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW07S	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW01S	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW01S	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW03S	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW08S	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
MW09S	Benzo(k)fluoranthene	0.01	U	MG/L	nc	NA
GEC1	Benzo(k)fluoranthene	0.00018	U	MG/L	nc	NA
GEC5	Benzo(k)fluoranthene	0.00012	U	MG/L	nc	NA
MW08S	Benzoic Acid, 3,5-dimethyl-	0.006	NJ	MG/L	nc	NA
MW02S	Beryllium	0.00023		MG/L	0.004	N
MW08S	Beryllium	0.00059	U	MG/L	0.004	NA
MW09S	Beryllium	0.00033	U	MG/L	0.004	NA
MW01S	Beryllium	0.00031	U	MG/L	0.004	NA
MW07S	Beryllium	0.00027	U	MG/L	0.004	NA
MW06S	Beryllium	0.0002	U	MG/L	0.004	NA
MW01S	Beryllium	0.0001	U	MG/L	0.004	NA
MW01S	Beryllium	0.0001	U	MG/L	0.004	NA
MW03S	Beryllium	0.0001	U	MG/L	0.004	NA
MW06S	Beryllium	0.0001	U	MG/L	0.004	NA
MW07D	Beryllium	0.0001	U	MG/L	0.004	NA
MW07S	Beryllium	0.0001	U	MG/L	0.004	NA
MW08S	Beryllium	0.0001	U	MG/L	0.004	NA
MW09S	Beryllium	0.0001	U	MG/L	0.004	NA
MW04S	Beryllium	0.0001	U	MG/L	0.004	NA
MW04B	Beryllium	0.0001	U	MG/L	0.004	NA
MW04D	Beryllium	0.0001	U	MG/L	0.004	NA
MW04S	Beryllium	0.0001	U	MG/L	0.004	NA
MW02M	Beryllium	0.0001	U	MG/L	0.004	NA
MW02S	Beryllium	0.0001	U	MG/L	0.004	NA
MW12B	Beryllium	0.0015	UJ	MG/L	0.004	NA
MW12B	Beryllium	0.0015	UJ	MG/L	0.004	NA
MW13B	Beryllium	0.0011	UJ	MG/L	0.004	NA
MW13S	Beryllium	0.00098	UJ	MG/L	0.004	NA
MW11S	Beryllium	0.00092	UJ	MG/L	0.004	NA
MW10D	Beryllium	0.0009	UJ	MG/L	0.004	NA
MW10D	Beryllium	0.0009	UJ	MG/L	0.004	NA
MW10B	Beryllium	0.00087	UJ	MG/L	0.004	NA
MW13D	Beryllium	0.00086	UJ	MG/L	0.004	NA
TMW3	Beryllium	0.00086	UJ	MG/L	0.004	NA
MW11M	Beryllium	0.00084	UJ	MG/L	0.004	NA
MW12D	Beryllium	0.00079	UJ	MG/L	0.004	NA
MW11B	Beryllium	0.00036	UJ	MG/L	0.004	NA
MW14M	Beryllium	0.00036	UJ	MG/L	0.004	NA
GEC2	Beryllium	0.00028	UJ	MG/L	0.004	NA
MW15D	Beryllium	0.00028	UJ	MG/L	0.004	NA
GEC6	Beryllium	0.00023	UJ	MG/L	0.004	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW01S	Beryllium	0.00019	UJ	MG/L	0.004	NA
MW03S	Beryllium	0.00016	UJ	MG/L	0.004	NA
MW05S	Beryllium	0.00012	UJ	MG/L	0.004	NA
MW02D	Beryllium	0.0001	UJ	MG/L	0.004	NA
MW08S	Beryllium	0.00048	U	MG/L	0.004	NA
MW07S	Beryllium	0.00032	U	MG/L	0.004	NA
MW09S	Beryllium	0.00029	U	MG/L	0.004	NA
MW02S	Beryllium	0.00027	U	MG/L	0.004	NA
MW01S	Beryllium	0.0001	U	MG/L	0.004	NA
MW01S	Beryllium	0.0001	U	MG/L	0.004	NA
MW03S	Beryllium	0.0001	U	MG/L	0.004	NA
MW05S	Beryllium	0.0001	U	MG/L	0.004	NA
MW06S	Beryllium	0.0001	U	MG/L	0.004	NA
MW07D	Beryllium	0.0001	U	MG/L	0.004	NA
MW07S	Beryllium	0.0001	U	MG/L	0.004	NA
MW08S	Beryllium	0.0001	U	MG/L	0.004	NA
MW09S	Beryllium	0.0001	U	MG/L	0.004	NA
MW04S	Beryllium	0.0001	U	MG/L	0.004	NA
MW04B	Beryllium	0.0001	U	MG/L	0.004	NA
MW04D	Beryllium	0.0001	U	MG/L	0.004	NA
MW04S	Beryllium	0.0001	U	MG/L	0.004	NA
MW02D	Beryllium	0.0001	U	MG/L	0.004	NA
MW02M	Beryllium	0.0001	U	MG/L	0.004	NA
MW02S	Beryllium	0.0001	U	MG/L	0.004	NA
MW13S	Beryllium	0.0011	UJ	MG/L	0.004	NA
MW13B	Beryllium	0.001	UJ	MG/L	0.004	NA
MW10D	Beryllium	0.00092	UJ	MG/L	0.004	NA
MW10D	Beryllium	0.00089	UJ	MG/L	0.004	NA
MW11S	Beryllium	0.00088	UJ	MG/L	0.004	NA
MW10B	Beryllium	0.00087	UJ	MG/L	0.004	NA
MW13D	Beryllium	0.00086	UJ	MG/L	0.004	NA
TMW3	Beryllium	0.00086	UJ	MG/L	0.004	NA
MW12D	Beryllium	0.00078	UJ	MG/L	0.004	NA
MW12B	Beryllium	0.00072	UJ	MG/L	0.004	NA
MW12B	Beryllium	0.00066	UJ	MG/L	0.004	NA
MW11M	Beryllium	0.00065	UJ	MG/L	0.004	NA
MW11B	Beryllium	0.0004	UJ	MG/L	0.004	NA
MW14M	Beryllium	0.0004	UJ	MG/L	0.004	NA
GEC2	Beryllium	0.00029	UJ	MG/L	0.004	NA
GEC6	Beryllium	0.00026	UJ	MG/L	0.004	NA
MW15D	Beryllium	0.00024	UJ	MG/L	0.004	NA
MW06S	Beryllium	0.00017	UJ	MG/L	0.004	NA
MW01S	Beryllium	0.00017	UJ	MG/L	0.004	NA
MW03S	Beryllium	0.00017	UJ	MG/L	0.004	NA
MW01S	Beryllium	0.00016	UJ	MG/L	0.004	NA
MW10D	beta-BHC	0.00005	U	MG/L	nc	NA
MW10B	beta-BHC	0.00005	U	MG/L	nc	NA
MW10D	beta-BHC	0.00005	U	MG/L	nc	NA
MW13B	beta-BHC	0.00005	U	MG/L	nc	NA
MW13D	beta-BHC	0.00005	U	MG/L	nc	NA
MW13S	beta-BHC	0.00005	U	MG/L	nc	NA
TMW3	beta-BHC	0.00005	U	MG/L	nc	NA
MW12B	beta-BHC	0.00005	U	MG/L	nc	NA
MW11B	beta-BHC	0.00005	U	MG/L	nc	NA
MW11M	beta-BHC	0.00005	U	MG/L	nc	NA
MW11S	beta-BHC	0.00005	U	MG/L	nc	NA
MW12B	beta-BHC	0.00005	U	MG/L	nc	NA
MW12D	beta-BHC	0.00005	U	MG/L	nc	NA
GEC2	beta-BHC	0.00005	U	MG/L	nc	NA
GEC6	beta-BHC	0.00005	U	MG/L	nc	NA
MW14M	beta-BHC	0.00005	U	MG/L	nc	NA
MW15D	beta-BHC	0.00005	U	MG/L	nc	NA
MW01S	beta-BHC	0.00005	U	MG/L	nc	NA
MW01S	beta-BHC	0.00005	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW03S	beta-BHC	0.00005	U	MG/L	nc	NA
MW05S	beta-BHC	0.00005	U	MG/L	nc	NA
MW06S	beta-BHC	0.00005	U	MG/L	nc	NA
MW07D	beta-BHC	0.00005	U	MG/L	nc	NA
MW07S	beta-BHC	0.00005	U	MG/L	nc	NA
MW08S	beta-BHC	0.00005	U	MG/L	nc	NA
MW09S	beta-BHC	0.00005	U	MG/L	nc	NA
MW04S	beta-BHC	0.00005	U	MG/L	nc	NA
MW04B	beta-BHC	0.00005	U	MG/L	nc	NA
MW04D	beta-BHC	0.00005	U	MG/L	nc	NA
MW04S	beta-BHC	0.00005	U	MG/L	nc	NA
MW02M	beta-BHC	0.00005	U	MG/L	nc	NA
MW02S	beta-BHC	0.00005	U	MG/L	nc	NA
MW02S	beta-BHC	0.00005	U	MG/L	nc	NA
MW06S	beta-BHC	0.00005	U	MG/L	nc	NA
MW07S	beta-BHC	0.00005	U	MG/L	nc	NA
MW01S	beta-BHC	0.00005	U	MG/L	nc	NA
MW01S	beta-BHC	0.00005	U	MG/L	nc	NA
MW03S	beta-BHC	0.00005	U	MG/L	nc	NA
MW08S	beta-BHC	0.00005	U	MG/L	nc	NA
MW09S	beta-BHC	0.00005	U	MG/L	nc	NA
MW02D	beta-BHC	0.00005	UJ	MG/L	nc	NA
MW08S	Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimet	0.009	NJ	MG/L	nc	NA
MW15D	Bis(2-chloroethoxy)methane	0.014	U	MG/L	nc	NA
MW10D	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW10B	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW10D	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW13B	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW13D	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW13S	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
TMW3	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW12B	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW11B	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW11M	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW11S	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW12B	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW12D	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
GEC2	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
GEC6	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW14M	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW01S	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW01S	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW03S	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW05S	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW06S	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW07D	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW07S	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW08S	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW09S	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW04S	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW04B	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW04D	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW04S	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW02D	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW02M	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW02S	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW02S	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW06S	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW07S	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW01S	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW01S	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW03S	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW08S	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA
MW09S	Bis(2-chloroethoxy)methane	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW15D	Bis(2-chloroethyl)ether	0.014	U	MG/L	nc	NA
MW10D	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW10B	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW10D	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW13B	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW13D	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW13S	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
TMW3	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW12B	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW11B	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW11M	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW11S	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW12B	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW12D	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
GEC2	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
GEC6	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW14M	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW01S	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW01S	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW03S	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW05S	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW06S	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW07D	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW07S	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW08S	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW09S	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW04S	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW04B	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW04D	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW04S	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW02D	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW02M	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW02S	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW02S	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW06S	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW07S	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW01S	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW01S	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW03S	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW08S	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW09S	Bis(2-chloroethyl)ether	0.01	U	MG/L	nc	NA
MW13D	Bis(2-ethylhexyl)phthalate	0.031		MG/L	nc	NA
MW01S	Bis(2-ethylhexyl)phthalate	0.016		MG/L	nc	NA
MW01S	Bis(2-ethylhexyl)phthalate	0.004	J	MG/L	nc	NA
MW01S	Bis(2-ethylhexyl)phthalate	0.004	J	MG/L	nc	NA
MW08S	Bis(2-ethylhexyl)phthalate	0.002	J	MG/L	nc	NA
MW03S	Bis(2-ethylhexyl)phthalate	0.001	J	MG/L	nc	NA
MW08S	Bis(2-ethylhexyl)phthalate	0.001	J	MG/L	nc	NA
MW10D	Bis(2-ethylhexyl)phthalate	0.01	U	MG/L	nc	NA
MW10B	Bis(2-ethylhexyl)phthalate	0.01	U	MG/L	nc	NA
MW10D	Bis(2-ethylhexyl)phthalate	0.01	U	MG/L	nc	NA
MW13B	Bis(2-ethylhexyl)phthalate	0.01	U	MG/L	nc	NA
TMW3	Bis(2-ethylhexyl)phthalate	0.01	U	MG/L	nc	NA
MW12B	Bis(2-ethylhexyl)phthalate	0.01	U	MG/L	nc	NA
MW11B	Bis(2-ethylhexyl)phthalate	0.01	U	MG/L	nc	NA
MW11M	Bis(2-ethylhexyl)phthalate	0.01	U	MG/L	nc	NA
MW11S	Bis(2-ethylhexyl)phthalate	0.01	U	MG/L	nc	NA
MW12B	Bis(2-ethylhexyl)phthalate	0.01	U	MG/L	nc	NA
MW12D	Bis(2-ethylhexyl)phthalate	0.01	U	MG/L	nc	NA
GEC6	Bis(2-ethylhexyl)phthalate	0.01	U	MG/L	nc	NA
MW14M	Bis(2-ethylhexyl)phthalate	0.01	U	MG/L	nc	NA
MW03S	Bis(2-ethylhexyl)phthalate	0.01	U	MG/L	nc	NA
MW05S	Bis(2-ethylhexyl)phthalate	0.01	U	MG/L	nc	NA
MW06S	Bis(2-ethylhexyl)phthalate	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW07D	Bis(2-ethylhexyl)phthalate	0.01	U	MG/L	nc	NA
MW07S	Bis(2-ethylhexyl)phthalate	0.01	U	MG/L	nc	NA
MW09S	Bis(2-ethylhexyl)phthalate	0.01	U	MG/L	nc	NA
MW04S	Bis(2-ethylhexyl)phthalate	0.01	U	MG/L	nc	NA
MW04B	Bis(2-ethylhexyl)phthalate	0.01	U	MG/L	nc	NA
MW04D	Bis(2-ethylhexyl)phthalate	0.01	U	MG/L	nc	NA
MW04S	Bis(2-ethylhexyl)phthalate	0.01	U	MG/L	nc	NA
MW02D	Bis(2-ethylhexyl)phthalate	0.01	U	MG/L	nc	NA
MW02M	Bis(2-ethylhexyl)phthalate	0.01	U	MG/L	nc	NA
MW02S	Bis(2-ethylhexyl)phthalate	0.01	U	MG/L	nc	NA
MW02S	Bis(2-ethylhexyl)phthalate	0.01	U	MG/L	nc	NA
MW06S	Bis(2-ethylhexyl)phthalate	0.01	U	MG/L	nc	NA
MW07S	Bis(2-ethylhexyl)phthalate	0.01	U	MG/L	nc	NA
MW01S	Bis(2-ethylhexyl)phthalate	0.01	U	MG/L	nc	NA
MW09S	Bis(2-ethylhexyl)phthalate	0.01	U	MG/L	nc	NA
MW15D	Bis(2-ethylhexyl)phthalate	0.014	UJ	MG/L	nc	NA
MW13S	Bis(2-ethylhexyl)phthalate	0.01	UJ	MG/L	nc	NA
GEC2	Bis(2-ethylhexyl)phthalate	0.01	UJ	MG/L	nc	NA
MW-LEA-01	Bromobenzene	20	Uw	MG/L	nc	NA
MW-LEA-01	Bromobenzene	2	Uw	MG/L	nc	NA
MW-LEA-02	Bromobenzene	2	Uw	MG/L	nc	NA
MW-05S	Bromobenzene	2	Uw	MG/L	nc	NA
MW-LEA-02	Bromobenzene	2	Uw	MG/L	nc	NA
MW-LEA-02	Bromobenzene	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Bromobenzene	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Bromobenzene	0.004	Uw	MG/L	nc	NA
MW05S	BROMOBENZENE	1	U	MG/L	nc	NA
MW05S	BROMOBENZENE	1	U	MG/L	nc	NA
MW05S	Bromobenzene	1	U	MG/L	nc	NA
MW05S	Bromobenzene	1	U	MG/L	nc	NA
MW14M	Bromobenzene	0.1	U	MG/L	nc	NA
MW06S	Bromobenzene	0.01	U	MG/L	nc	NA
MW13D	Bromobenzene	0.01	U	MG/L	nc	NA
MW06S	Bromobenzene	0.006	U	MG/L	nc	NA
MW02M	Bromobenzene	0.005	U	MG/L	nc	NA
MW02D	Bromobenzene	0.004	U	MG/L	nc	NA
MW13B	Bromobenzene	0.004	U	MG/L	nc	NA
MW03S	Bromobenzene	0.001	U	MG/L	nc	NA
GEC3	Bromobenzene	0.001	U	MG/L	nc	NA
MW01S	Bromobenzene	0.001	U	MG/L	nc	NA
MW11S	Bromobenzene	0.001	U	MG/L	nc	NA
MW12B	Bromobenzene	0.001	U	MG/L	nc	NA
MW12D	Bromobenzene	0.001	U	MG/L	nc	NA
GEC1	Bromobenzene	0.001	U	MG/L	nc	NA
GEC2	Bromobenzene	0.001	U	MG/L	nc	NA
GEC4	Bromobenzene	0.001	U	MG/L	nc	NA
GEC5	Bromobenzene	0.001	U	MG/L	nc	NA
GEC6	Bromobenzene	0.001	U	MG/L	nc	NA
GEC7	Bromobenzene	0.001	U	MG/L	nc	NA
MW07D	Bromobenzene	0.001	U	MG/L	nc	NA
MW07S	Bromobenzene	0.001	U	MG/L	nc	NA
MW11B	Bromobenzene	0.001	U	MG/L	nc	NA
MW11M	Bromobenzene	0.001	U	MG/L	nc	NA
MW15D	Bromobenzene	0.001	U	MG/L	nc	NA
MW02S	Bromobenzene	0.001	U	MG/L	nc	NA
MW04B	Bromobenzene	0.001	U	MG/L	nc	NA
MW04D	Bromobenzene	0.001	U	MG/L	nc	NA
MW04S	Bromobenzene	0.001	U	MG/L	nc	NA
MW08S	Bromobenzene	0.001	U	MG/L	nc	NA
MW09S	Bromobenzene	0.001	U	MG/L	nc	NA
MW10B	Bromobenzene	0.001	U	MG/L	nc	NA
MW10D	Bromobenzene	0.001	U	MG/L	nc	NA
MW13S	Bromobenzene	0.001	U	MG/L	nc	NA
MW-LEA-01	Bromochloromethane	20	Uw	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW-LEA-01	Bromochloromethane	2	Uw	MG/L	nc	NA
MW-LEA-02	Bromochloromethane	2	Uw	MG/L	nc	NA
MW-05S	Bromochloromethane	2	Uw	MG/L	nc	NA
MW-LEA-02	Bromochloromethane	2	Uw	MG/L	nc	NA
MW-LEA-02	Bromochloromethane	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Bromochloromethane	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Bromochloromethane	0.004	Uw	MG/L	nc	NA
MW05S	BROMOCHLOROMETHANE	1	U	MG/L	nc	NA
MW05S	BROMOCHLOROMETHANE	1	U	MG/L	nc	NA
MW05S	Bromochloromethane	1	U	MG/L	nc	NA
MW05S	Bromochloromethane	1	U	MG/L	nc	NA
MW14M	Bromochloromethane	0.1	U	MG/L	nc	NA
MW06S	Bromochloromethane	0.01	U	MG/L	nc	NA
MW13D	Bromochloromethane	0.01	U	MG/L	nc	NA
MW06S	Bromochloromethane	0.006	U	MG/L	nc	NA
MW02M	Bromochloromethane	0.005	U	MG/L	nc	NA
MW02D	Bromochloromethane	0.004	U	MG/L	nc	NA
MW13B	Bromochloromethane	0.004	U	MG/L	nc	NA
MW03S	Bromochloromethane	0.001	U	MG/L	nc	NA
GEC3	Bromochloromethane	0.001	U	MG/L	nc	NA
MW01S	Bromochloromethane	0.001	U	MG/L	nc	NA
MW11S	Bromochloromethane	0.001	U	MG/L	nc	NA
MW12B	Bromochloromethane	0.001	U	MG/L	nc	NA
MW12D	Bromochloromethane	0.001	U	MG/L	nc	NA
GEC1	Bromochloromethane	0.001	U	MG/L	nc	NA
GEC2	Bromochloromethane	0.001	U	MG/L	nc	NA
GEC4	Bromochloromethane	0.001	U	MG/L	nc	NA
GEC5	Bromochloromethane	0.001	U	MG/L	nc	NA
GEC6	Bromochloromethane	0.001	U	MG/L	nc	NA
GEC7	Bromochloromethane	0.001	U	MG/L	nc	NA
MW07D	Bromochloromethane	0.001	U	MG/L	nc	NA
MW07S	Bromochloromethane	0.001	U	MG/L	nc	NA
MW11B	Bromochloromethane	0.001	U	MG/L	nc	NA
MW11M	Bromochloromethane	0.001	U	MG/L	nc	NA
MW15D	Bromochloromethane	0.001	U	MG/L	nc	NA
MW02S	Bromochloromethane	0.001	U	MG/L	nc	NA
MW04B	Bromochloromethane	0.001	U	MG/L	nc	NA
MW04D	Bromochloromethane	0.001	U	MG/L	nc	NA
MW04S	Bromochloromethane	0.001	U	MG/L	nc	NA
MW08S	Bromochloromethane	0.001	U	MG/L	nc	NA
MW09S	Bromochloromethane	0.001	U	MG/L	nc	NA
MW10B	Bromochloromethane	0.001	U	MG/L	nc	NA
MW10D	Bromochloromethane	0.001	U	MG/L	nc	NA
MW13S	Bromochloromethane	0.001	U	MG/L	nc	NA
MW-LEA-01	Bromodichloromethane	20	Uw	MG/L	nc	NA
MW-LEA-01	Bromodichloromethane	2	Uw	MG/L	nc	NA
MW-LEA-02	Bromodichloromethane	2	Uw	MG/L	nc	NA
MW-05S	Bromodichloromethane	2	Uw	MG/L	nc	NA
MW-LEA-02	Bromodichloromethane	2	Uw	MG/L	nc	NA
MW-LEA-02	Bromodichloromethane	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Bromodichloromethane	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Bromodichloromethane	0.004	Uw	MG/L	nc	NA
MW05S	Bromodichloromethane	1.7	U	MG/L	nc	NA
MW05S	BROMODICHLOROMETHANE	1	U	MG/L	nc	NA
MW05S	BROMODICHLOROMETHANE	1	U	MG/L	nc	NA
MW05S	Bromodichloromethane	1	U	MG/L	nc	NA
MW05S	Bromodichloromethane	1	U	MG/L	nc	NA
MW14M	Bromodichloromethane	0.1	U	MG/L	nc	NA
MW06S	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW13D	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW10D	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW10B	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW10D	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW13B	Bromodichloromethane	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW13D	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW13S	Bromodichloromethane	0.01	U	MG/L	nc	NA
TMW3	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW12B	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW11B	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW11M	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW11S	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW12B	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW12D	Bromodichloromethane	0.01	U	MG/L	nc	NA
GEC2	Bromodichloromethane	0.01	U	MG/L	nc	NA
GEC6	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW14M	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW15D	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW01S	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW01S	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW03S	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW06S	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW07D	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW07S	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW08S	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW09S	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW04S	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW04B	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW04D	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW04S	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW02D	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW02M	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW02S	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW02S	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW06S	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW07S	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW01S	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW01S	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW03S	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW08S	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW09S	Bromodichloromethane	0.01	U	MG/L	nc	NA
MW06S	Bromodichloromethane	0.006	U	MG/L	nc	NA
MW02M	Bromodichloromethane	0.005	U	MG/L	nc	NA
MW02D	Bromodichloromethane	0.004	U	MG/L	nc	NA
MW13B	Bromodichloromethane	0.004	U	MG/L	nc	NA
MW03S	Bromodichloromethane	0.001	U	MG/L	nc	NA
GEC3	Bromodichloromethane	0.001	U	MG/L	nc	NA
MW01S	Bromodichloromethane	0.001	U	MG/L	nc	NA
MW11S	Bromodichloromethane	0.001	U	MG/L	nc	NA
MW12B	Bromodichloromethane	0.001	U	MG/L	nc	NA
MW12D	Bromodichloromethane	0.001	U	MG/L	nc	NA
GEC1	Bromodichloromethane	0.001	U	MG/L	nc	NA
GEC2	Bromodichloromethane	0.001	U	MG/L	nc	NA
GEC4	Bromodichloromethane	0.001	U	MG/L	nc	NA
GEC5	Bromodichloromethane	0.001	U	MG/L	nc	NA
GEC6	Bromodichloromethane	0.001	U	MG/L	nc	NA
GEC7	Bromodichloromethane	0.001	U	MG/L	nc	NA
MW07D	Bromodichloromethane	0.001	U	MG/L	nc	NA
MW07S	Bromodichloromethane	0.001	U	MG/L	nc	NA
MW11B	Bromodichloromethane	0.001	U	MG/L	nc	NA
MW11M	Bromodichloromethane	0.001	U	MG/L	nc	NA
MW15D	Bromodichloromethane	0.001	U	MG/L	nc	NA
MW02S	Bromodichloromethane	0.001	U	MG/L	nc	NA
MW04B	Bromodichloromethane	0.001	U	MG/L	nc	NA
MW04D	Bromodichloromethane	0.001	U	MG/L	nc	NA
MW04S	Bromodichloromethane	0.001	U	MG/L	nc	NA
MW08S	Bromodichloromethane	0.001	U	MG/L	nc	NA
MW09S	Bromodichloromethane	0.001	U	MG/L	nc	NA
MW10B	Bromodichloromethane	0.001	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW10D	Bromodichloromethane	0.001	U	MG/L	nc	NA
MW13S	Bromodichloromethane	0.001	U	MG/L	nc	NA
MW-LEA-01	Bromoform	20	Uw	MG/L	nc	NA
MW-LEA-01	Bromoform	2	Uw	MG/L	nc	NA
MW-LEA-02	Bromoform	2	Uw	MG/L	nc	NA
MW-05S	Bromoform	2	Uw	MG/L	nc	NA
MW-LEA-02	Bromoform	2	Uw	MG/L	nc	NA
MW-LEA-02	Bromoform	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Bromoform	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Bromoform	0.004	Uw	MG/L	nc	NA
MW07S	Bromoform	0.002	J	MG/L	nc	NA
MW05S	Bromoform	1.7	U	MG/L	nc	NA
MW05S	BROMOFORM	1	U	MG/L	nc	NA
MW05S	BROMOFORM	1	U	MG/L	nc	NA
MW05S	Bromoform	1	U	MG/L	nc	NA
MW05S	Bromoform	1	U	MG/L	nc	NA
MW14M	Bromoform	0.1	U	MG/L	nc	NA
MW06S	Bromoform	0.01	U	MG/L	nc	NA
MW13D	Bromoform	0.01	U	MG/L	nc	NA
MW10D	Bromoform	0.01	U	MG/L	nc	NA
MW10B	Bromoform	0.01	U	MG/L	nc	NA
MW10D	Bromoform	0.01	U	MG/L	nc	NA
MW13B	Bromoform	0.01	U	MG/L	nc	NA
MW13D	Bromoform	0.01	U	MG/L	nc	NA
MW13S	Bromoform	0.01	U	MG/L	nc	NA
TMW3	Bromoform	0.01	U	MG/L	nc	NA
MW12B	Bromoform	0.01	U	MG/L	nc	NA
MW11B	Bromoform	0.01	U	MG/L	nc	NA
MW11M	Bromoform	0.01	U	MG/L	nc	NA
MW11S	Bromoform	0.01	U	MG/L	nc	NA
MW12B	Bromoform	0.01	U	MG/L	nc	NA
MW12D	Bromoform	0.01	U	MG/L	nc	NA
GEC2	Bromoform	0.01	U	MG/L	nc	NA
GEC6	Bromoform	0.01	U	MG/L	nc	NA
MW14M	Bromoform	0.01	U	MG/L	nc	NA
MW15D	Bromoform	0.01	U	MG/L	nc	NA
MW01S	Bromoform	0.01	U	MG/L	nc	NA
MW01S	Bromoform	0.01	U	MG/L	nc	NA
MW03S	Bromoform	0.01	U	MG/L	nc	NA
MW06S	Bromoform	0.01	U	MG/L	nc	NA
MW07D	Bromoform	0.01	U	MG/L	nc	NA
MW08S	Bromoform	0.01	U	MG/L	nc	NA
MW09S	Bromoform	0.01	U	MG/L	nc	NA
MW04S	Bromoform	0.01	U	MG/L	nc	NA
MW04B	Bromoform	0.01	U	MG/L	nc	NA
MW04D	Bromoform	0.01	U	MG/L	nc	NA
MW04S	Bromoform	0.01	U	MG/L	nc	NA
MW02D	Bromoform	0.01	U	MG/L	nc	NA
MW02M	Bromoform	0.01	U	MG/L	nc	NA
MW02S	Bromoform	0.01	U	MG/L	nc	NA
MW02S	Bromoform	0.01	U	MG/L	nc	NA
MW07S	Bromoform	0.01	U	MG/L	nc	NA
MW01S	Bromoform	0.01	U	MG/L	nc	NA
MW01S	Bromoform	0.01	U	MG/L	nc	NA
MW03S	Bromoform	0.01	U	MG/L	nc	NA
MW08S	Bromoform	0.01	U	MG/L	nc	NA
MW09S	Bromoform	0.01	U	MG/L	nc	NA
MW06S	Bromoform	0.006	U	MG/L	nc	NA
MW02M	Bromoform	0.005	U	MG/L	nc	NA
MW02D	Bromoform	0.004	U	MG/L	nc	NA
MW13B	Bromoform	0.004	U	MG/L	nc	NA
MW03S	Bromoform	0.001	U	MG/L	nc	NA
GEC3	Bromoform	0.001	U	MG/L	nc	NA
MW01S	Bromoform	0.001	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW11S	Bromoform	0.001	U	MG/L	nc	NA
MW12B	Bromoform	0.001	U	MG/L	nc	NA
MW12D	Bromoform	0.001	U	MG/L	nc	NA
GEC1	Bromoform	0.001	U	MG/L	nc	NA
GEC2	Bromoform	0.001	U	MG/L	nc	NA
GEC4	Bromoform	0.001	U	MG/L	nc	NA
GEC5	Bromoform	0.001	U	MG/L	nc	NA
GEC6	Bromoform	0.001	U	MG/L	nc	NA
GEC7	Bromoform	0.001	U	MG/L	nc	NA
MW07D	Bromoform	0.001	U	MG/L	nc	NA
MW07S	Bromoform	0.001	U	MG/L	nc	NA
MW11B	Bromoform	0.001	U	MG/L	nc	NA
MW11M	Bromoform	0.001	U	MG/L	nc	NA
MW15D	Bromoform	0.001	U	MG/L	nc	NA
MW02S	Bromoform	0.001	U	MG/L	nc	NA
MW04B	Bromoform	0.001	U	MG/L	nc	NA
MW04D	Bromoform	0.001	U	MG/L	nc	NA
MW04S	Bromoform	0.001	U	MG/L	nc	NA
MW08S	Bromoform	0.001	U	MG/L	nc	NA
MW09S	Bromoform	0.001	U	MG/L	nc	NA
MW10B	Bromoform	0.001	U	MG/L	nc	NA
MW10D	Bromoform	0.001	U	MG/L	nc	NA
MW13S	Bromoform	0.001	U	MG/L	nc	NA
MW06S	Bromoform	0.01	UJ	MG/L	nc	NA
MW-LEA-01	Bromomethane	20	Uw	MG/L	nc	NA
MW-LEA-01	Bromomethane	2	Uw	MG/L	nc	NA
MW-LEA-02	Bromomethane	2	Uw	MG/L	nc	NA
MW-05S	Bromomethane	2	Uw	MG/L	nc	NA
MW-LEA-02	Bromomethane	2	Uw	MG/L	nc	NA
MW-LEA-02	Bromomethane	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Bromomethane	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Bromomethane	0.004	Uw	MG/L	nc	NA
MW05S	BROMOMETHANE	1	U	MG/L	nc	NA
MW05S	BROMOMETHANE	1	U	MG/L	nc	NA
MW05S	Bromomethane	1	U	MG/L	nc	NA
MW05S	Bromomethane	1	U	MG/L	nc	NA
MW14M	Bromomethane	0.1	U	MG/L	nc	NA
MW06S	Bromomethane	0.01	U	MG/L	nc	NA
MW13D	Bromomethane	0.01	U	MG/L	nc	NA
MW10D	Bromomethane	0.01	U	MG/L	nc	NA
MW10B	Bromomethane	0.01	U	MG/L	nc	NA
MW10D	Bromomethane	0.01	U	MG/L	nc	NA
MW13B	Bromomethane	0.01	U	MG/L	nc	NA
MW13D	Bromomethane	0.01	U	MG/L	nc	NA
MW13S	Bromomethane	0.01	U	MG/L	nc	NA
TMW3	Bromomethane	0.01	U	MG/L	nc	NA
MW12B	Bromomethane	0.01	U	MG/L	nc	NA
MW11B	Bromomethane	0.01	U	MG/L	nc	NA
MW11M	Bromomethane	0.01	U	MG/L	nc	NA
MW11S	Bromomethane	0.01	U	MG/L	nc	NA
MW12B	Bromomethane	0.01	U	MG/L	nc	NA
MW12D	Bromomethane	0.01	U	MG/L	nc	NA
GEC2	Bromomethane	0.01	U	MG/L	nc	NA
GEC6	Bromomethane	0.01	U	MG/L	nc	NA
MW14M	Bromomethane	0.01	U	MG/L	nc	NA
MW15D	Bromomethane	0.01	U	MG/L	nc	NA
MW07D	Bromomethane	0.01	U	MG/L	nc	NA
MW04S	Bromomethane	0.01	U	MG/L	nc	NA
MW04B	Bromomethane	0.01	U	MG/L	nc	NA
MW04D	Bromomethane	0.01	U	MG/L	nc	NA
MW04S	Bromomethane	0.01	U	MG/L	nc	NA
MW02D	Bromomethane	0.01	U	MG/L	nc	NA
MW02M	Bromomethane	0.01	U	MG/L	nc	NA
MW02S	Bromomethane	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW02S	Bromomethane	0.01	U	MG/L	nc	NA
MW06S	Bromomethane	0.01	U	MG/L	nc	NA
MW07S	Bromomethane	0.01	U	MG/L	nc	NA
MW01S	Bromomethane	0.01	U	MG/L	nc	NA
MW01S	Bromomethane	0.01	U	MG/L	nc	NA
MW03S	Bromomethane	0.01	U	MG/L	nc	NA
MW08S	Bromomethane	0.01	U	MG/L	nc	NA
MW09S	Bromomethane	0.01	U	MG/L	nc	NA
MW06S	Bromomethane	0.006	U	MG/L	nc	NA
MW02M	Bromomethane	0.005	U	MG/L	nc	NA
MW02D	Bromomethane	0.004	U	MG/L	nc	NA
MW13B	Bromomethane	0.004	U	MG/L	nc	NA
GEC3	Bromomethane	0.001	U	MG/L	nc	NA
MW01S	Bromomethane	0.001	U	MG/L	nc	NA
MW11S	Bromomethane	0.001	U	MG/L	nc	NA
MW12B	Bromomethane	0.001	U	MG/L	nc	NA
MW12D	Bromomethane	0.001	U	MG/L	nc	NA
GEC1	Bromomethane	0.001	U	MG/L	nc	NA
GEC2	Bromomethane	0.001	U	MG/L	nc	NA
GEC4	Bromomethane	0.001	U	MG/L	nc	NA
GEC5	Bromomethane	0.001	U	MG/L	nc	NA
GEC6	Bromomethane	0.001	U	MG/L	nc	NA
GEC7	Bromomethane	0.001	U	MG/L	nc	NA
MW07D	Bromomethane	0.001	U	MG/L	nc	NA
MW07S	Bromomethane	0.001	U	MG/L	nc	NA
MW11B	Bromomethane	0.001	U	MG/L	nc	NA
MW11M	Bromomethane	0.001	U	MG/L	nc	NA
MW15D	Bromomethane	0.001	U	MG/L	nc	NA
MW02S	Bromomethane	0.001	U	MG/L	nc	NA
MW04B	Bromomethane	0.001	U	MG/L	nc	NA
MW04D	Bromomethane	0.001	U	MG/L	nc	NA
MW04S	Bromomethane	0.001	U	MG/L	nc	NA
MW08S	Bromomethane	0.001	U	MG/L	nc	NA
MW09S	Bromomethane	0.001	U	MG/L	nc	NA
MW10B	Bromomethane	0.001	U	MG/L	nc	NA
MW10D	Bromomethane	0.001	U	MG/L	nc	NA
MW13S	Bromomethane	0.001	U	MG/L	nc	NA
MW05S	Bromomethane	1.7	UJ	MG/L	nc	NA
MW01S	Bromomethane	0.01	UJ	MG/L	nc	NA
MW01S	Bromomethane	0.01	UJ	MG/L	nc	NA
MW03S	Bromomethane	0.01	UJ	MG/L	nc	NA
MW06S	Bromomethane	0.01	UJ	MG/L	nc	NA
MW07S	Bromomethane	0.01	UJ	MG/L	nc	NA
MW08S	Bromomethane	0.01	UJ	MG/L	nc	NA
MW09S	Bromomethane	0.01	UJ	MG/L	nc	NA
MW03S	Bromomethane	0.001	UJ	MG/L	nc	NA
MW-LEA-01	Butyl Benzene	20	Uw	MG/L	nc	NA
MW-LEA-01	Butyl Benzene	2	Uw	MG/L	nc	NA
MW-LEA-02	Butyl Benzene	2	Uw	MG/L	nc	NA
MW-05S	Butyl Benzene	2	Uw	MG/L	nc	NA
MW-LEA-02	Butyl Benzene	2	Uw	MG/L	nc	NA
MW-LEA-02	Butyl Benzene	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Butyl Benzene	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Butyl Benzene	0.004	Uw	MG/L	nc	NA
MW10D	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW10B	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW10D	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW13B	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW13D	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW13S	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
TMW3	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW12B	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW11B	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW11M	Butylbenzylphthalate	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW11S	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW12B	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW12D	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
GEC2	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
GEC6	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW14M	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW01S	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW01S	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW03S	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW05S	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW06S	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW07D	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW07S	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW08S	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW09S	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW04S	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW04B	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW04D	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW04S	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW02D	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW02M	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW02S	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW02S	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW06S	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW07S	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW01S	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW01S	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW03S	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW08S	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW09S	Butylbenzylphthalate	0.01	U	MG/L	nc	NA
MW15D	Butylbenzylphthalate	0.014	UJ	MG/L	nc	NA
MW06S	C3-benzene Isomer	0.003	J	MG/L	nc	NA
MW08S	C3-benzene Isomer	0.006	J	MG/L	nc	NA
MW06S	C4-benzene Isomer	0.003	J	MG/L	nc	NA
MW08S	C7 Benzene Isomer	0.029	J	MG/L	nc	NA
MW10D	Cadmium	0.00054		MG/L	0.005	N
MW10D	Cadmium	0.00048		MG/L	0.005	N
MW03S	Cadmium	0.00099	J	MG/L	0.005	N
MW01S	Cadmium	0.0007	U	MG/L	0.005	NA
MW01S	Cadmium	0.0007	U	MG/L	0.005	NA
MW03S	Cadmium	0.0007	U	MG/L	0.005	NA
MW05S	Cadmium	0.0007	U	MG/L	0.005	NA
MW06S	Cadmium	0.0007	U	MG/L	0.005	NA
MW07D	Cadmium	0.0007	U	MG/L	0.005	NA
MW07S	Cadmium	0.0007	U	MG/L	0.005	NA
MW08S	Cadmium	0.0007	U	MG/L	0.005	NA
MW09S	Cadmium	0.0007	U	MG/L	0.005	NA
MW04S	Cadmium	0.0007	U	MG/L	0.005	NA
MW04B	Cadmium	0.0007	U	MG/L	0.005	NA
MW04D	Cadmium	0.0007	U	MG/L	0.005	NA
MW04S	Cadmium	0.0007	U	MG/L	0.005	NA
MW02D	Cadmium	0.0007	U	MG/L	0.005	NA
MW02M	Cadmium	0.0007	U	MG/L	0.005	NA
MW02S	Cadmium	0.0007	U	MG/L	0.005	NA
MW02S	Cadmium	0.0006	U	MG/L	0.005	NA
MW06S	Cadmium	0.0006	U	MG/L	0.005	NA
MW07S	Cadmium	0.0006	U	MG/L	0.005	NA
MW01S	Cadmium	0.0006	U	MG/L	0.005	NA
MW01S	Cadmium	0.0006	U	MG/L	0.005	NA
MW08S	Cadmium	0.0006	U	MG/L	0.005	NA
MW09S	Cadmium	0.0006	U	MG/L	0.005	NA
MW10B	Cadmium	0.0004	U	MG/L	0.005	NA
MW13B	Cadmium	0.0004	U	MG/L	0.005	NA
MW13D	Cadmium	0.0004	U	MG/L	0.005	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW13S	Cadmium	0.0004	U	MG/L	0.005	NA
TMW3	Cadmium	0.0004	U	MG/L	0.005	NA
MW12B	Cadmium	0.0004	U	MG/L	0.005	NA
MW11B	Cadmium	0.0004	U	MG/L	0.005	NA
MW11M	Cadmium	0.0004	U	MG/L	0.005	NA
MW11S	Cadmium	0.0004	U	MG/L	0.005	NA
MW12B	Cadmium	0.0004	U	MG/L	0.005	NA
MW12D	Cadmium	0.0004	U	MG/L	0.005	NA
GEC2	Cadmium	0.0004	U	MG/L	0.005	NA
GEC6	Cadmium	0.0004	U	MG/L	0.005	NA
MW14M	Cadmium	0.0004	U	MG/L	0.005	NA
MW15D	Cadmium	0.0004	U	MG/L	0.005	NA
MW10D	Cadmium	0.00065		MG/L	0.005	N
MW11S	Cadmium	0.0004		MG/L	0.005	N
MW03S	Cadmium	0.001	J	MG/L	0.005	N
MW11B	Cadmium	0.00056	J	MG/L	0.005	N
MW01S	Cadmium	0.0007	U	MG/L	0.005	NA
MW01S	Cadmium	0.0007	U	MG/L	0.005	NA
MW03S	Cadmium	0.0007	U	MG/L	0.005	NA
MW05S	Cadmium	0.0007	U	MG/L	0.005	NA
MW06S	Cadmium	0.0007	U	MG/L	0.005	NA
MW07D	Cadmium	0.0007	U	MG/L	0.005	NA
MW07S	Cadmium	0.0007	U	MG/L	0.005	NA
MW08S	Cadmium	0.0007	U	MG/L	0.005	NA
MW09S	Cadmium	0.0007	U	MG/L	0.005	NA
MW04S	Cadmium	0.0007	U	MG/L	0.005	NA
MW04B	Cadmium	0.0007	U	MG/L	0.005	NA
MW04D	Cadmium	0.0007	U	MG/L	0.005	NA
MW04S	Cadmium	0.0007	U	MG/L	0.005	NA
MW02D	Cadmium	0.0007	U	MG/L	0.005	NA
MW02M	Cadmium	0.0007	U	MG/L	0.005	NA
MW02S	Cadmium	0.0007	U	MG/L	0.005	NA
MW02S	Cadmium	0.0006	U	MG/L	0.005	NA
MW06S	Cadmium	0.0006	U	MG/L	0.005	NA
MW07S	Cadmium	0.0006	U	MG/L	0.005	NA
MW01S	Cadmium	0.0006	U	MG/L	0.005	NA
MW01S	Cadmium	0.0006	U	MG/L	0.005	NA
MW08S	Cadmium	0.0006	U	MG/L	0.005	NA
MW09S	Cadmium	0.0006	U	MG/L	0.005	NA
MW10B	Cadmium	0.0004	U	MG/L	0.005	NA
MW10D	Cadmium	0.0004	U	MG/L	0.005	NA
MW13B	Cadmium	0.0004	U	MG/L	0.005	NA
MW13D	Cadmium	0.0004	U	MG/L	0.005	NA
MW13S	Cadmium	0.0004	U	MG/L	0.005	NA
TMW3	Cadmium	0.0004	U	MG/L	0.005	NA
MW12B	Cadmium	0.0004	U	MG/L	0.005	NA
MW11M	Cadmium	0.0004	U	MG/L	0.005	NA
MW12B	Cadmium	0.0004	U	MG/L	0.005	NA
MW12D	Cadmium	0.0004	U	MG/L	0.005	NA
GEC2	Cadmium	0.0004	U	MG/L	0.005	NA
GEC6	Cadmium	0.0004	U	MG/L	0.005	NA
MW14M	Cadmium	0.0004	U	MG/L	0.005	NA
MW15D	Cadmium	0.0004	U	MG/L	0.005	NA
GEC2	Calcium	168		MG/L	nc	NA
MW13B	Calcium	58.7		MG/L	nc	NA
MW01S	Calcium	56.3		MG/L	nc	NA
MW01S	Calcium	55.8		MG/L	nc	NA
MW02S	Calcium	47.7		MG/L	nc	NA
MW12B	Calcium	44.6		MG/L	nc	NA
MW12B	Calcium	44.4		MG/L	nc	NA
MW13D	Calcium	43.6		MG/L	nc	NA
MW04B	Calcium	42.2		MG/L	nc	NA
MW13S	Calcium	38.4		MG/L	nc	NA
MW02D	Calcium	36.9		MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW02M	Calcium	36.7		MG/L	nc	NA
MW08S	Calcium	36.1		MG/L	nc	NA
MW04D	Calcium	35.1		MG/L	nc	NA
MW06S	Calcium	34.9		MG/L	nc	NA
MW10B	Calcium	32.8		MG/L	nc	NA
MW07S	Calcium	31.2		MG/L	nc	NA
MW04S	Calcium	31.1		MG/L	nc	NA
MW15D	Calcium	30.4		MG/L	nc	NA
MW04S	Calcium	29.9		MG/L	nc	NA
MW09S	Calcium	28.6		MG/L	nc	NA
MW05S	Calcium	27		MG/L	nc	NA
MW07S	Calcium	25.9		MG/L	nc	NA
MW06S	Calcium	25.9		MG/L	nc	NA
MW10D	Calcium	25		MG/L	nc	NA
MW02S	Calcium	24.7		MG/L	nc	NA
MW10D	Calcium	24.3		MG/L	nc	NA
MW09S	Calcium	23		MG/L	nc	NA
TMW3	Calcium	21		MG/L	nc	NA
GEC6	Calcium	20.1		MG/L	nc	NA
MW11M	Calcium	18.5		MG/L	nc	NA
MW08S	Calcium	15.9		MG/L	nc	NA
MW03S	Calcium	15.2		MG/L	nc	NA
MW11S	Calcium	15.1		MG/L	nc	NA
MW07D	Calcium	14.5		MG/L	nc	NA
MW11B	Calcium	13.8		MG/L	nc	NA
MW12D	Calcium	13.5		MG/L	nc	NA
MW03S	Calcium	12.9		MG/L	nc	NA
MW01S	Calcium	12.3		MG/L	nc	NA
MW01S	Calcium	12.2		MG/L	nc	NA
MW14M	Calcium	9.38		MG/L	nc	NA
GEC2	Calcium	155		MG/L	nc	NA
MW13B	Calcium	58.5		MG/L	nc	NA
MW01S	Calcium	56.8		MG/L	nc	NA
MW01S	Calcium	56.1		MG/L	nc	NA
MW02S	Calcium	47.8		MG/L	nc	NA
MW04B	Calcium	42.2		MG/L	nc	NA
MW13S	Calcium	41.2		MG/L	nc	NA
MW12B	Calcium	39.9		MG/L	nc	NA
MW12B	Calcium	38.3		MG/L	nc	NA
MW13D	Calcium	38		MG/L	nc	NA
MW08S	Calcium	37.8		MG/L	nc	NA
MW06S	Calcium	36.8		MG/L	nc	NA
MW02D	Calcium	36.3		MG/L	nc	NA
MW04D	Calcium	34.6		MG/L	nc	NA
MW02M	Calcium	34.2		MG/L	nc	NA
MW07S	Calcium	32.7		MG/L	nc	NA
MW10B	Calcium	31		MG/L	nc	NA
MW15D	Calcium	30.7		MG/L	nc	NA
MW04S	Calcium	30.4		MG/L	nc	NA
MW04S	Calcium	29.9		MG/L	nc	NA
MW09S	Calcium	27.5		MG/L	nc	NA
MW06S	Calcium	26.4		MG/L	nc	NA
MW05S	Calcium	25.8		MG/L	nc	NA
MW07S	Calcium	25.3		MG/L	nc	NA
MW10D	Calcium	24.4		MG/L	nc	NA
MW02S	Calcium	24.2		MG/L	nc	NA
MW09S	Calcium	23.3		MG/L	nc	NA
MW10D	Calcium	23.1		MG/L	nc	NA
GEC6	Calcium	20.8		MG/L	nc	NA
TMW3	Calcium	20		MG/L	nc	NA
MW11M	Calcium	18.2		MG/L	nc	NA
MW03S	Calcium	15.9		MG/L	nc	NA
MW08S	Calcium	15.8		MG/L	nc	NA
MW03S	Calcium	15.5		MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW11B	Calcium	14.5		MG/L	nc	NA
MW11S	Calcium	14.4		MG/L	nc	NA
MW07D	Calcium	14.2		MG/L	nc	NA
MW12D	Calcium	13.6		MG/L	nc	NA
MW01S	Calcium	12.6		MG/L	nc	NA
MW01S	Calcium	11.7		MG/L	nc	NA
MW14M	Calcium	8.7		MG/L	nc	NA
MW10B	Caprolactam	0.49	*	MG/L	nc	NA
MW12B	Caprolactam	0.01	U	MG/L	nc	NA
MW11B	Caprolactam	0.01	U	MG/L	nc	NA
MW11M	Caprolactam	0.01	U	MG/L	nc	NA
MW12B	Caprolactam	0.01	U	MG/L	nc	NA
GEC2	Caprolactam	0.01	U	MG/L	nc	NA
GEC6	Caprolactam	0.01	U	MG/L	nc	NA
MW14M	Caprolactam	0.01	U	MG/L	nc	NA
MW01S	Caprolactam	0.01	U	MG/L	nc	NA
MW01S	Caprolactam	0.01	U	MG/L	nc	NA
MW03S	Caprolactam	0.01	U	MG/L	nc	NA
MW05S	Caprolactam	0.01	U	MG/L	nc	NA
MW06S	Caprolactam	0.01	U	MG/L	nc	NA
MW07D	Caprolactam	0.01	U	MG/L	nc	NA
MW07S	Caprolactam	0.01	U	MG/L	nc	NA
MW08S	Caprolactam	0.01	U	MG/L	nc	NA
MW09S	Caprolactam	0.01	U	MG/L	nc	NA
MW04S	Caprolactam	0.01	U	MG/L	nc	NA
MW04B	Caprolactam	0.01	U	MG/L	nc	NA
MW04D	Caprolactam	0.01	U	MG/L	nc	NA
MW04S	Caprolactam	0.01	U	MG/L	nc	NA
MW02D	Caprolactam	0.01	U	MG/L	nc	NA
MW02M	Caprolactam	0.01	U	MG/L	nc	NA
MW02S	Caprolactam	0.01	U	MG/L	nc	NA
MW02S	Caprolactam	0.01	U	MG/L	nc	NA
MW06S	Caprolactam	0.01	U	MG/L	nc	NA
MW07S	Caprolactam	0.01	U	MG/L	nc	NA
MW01S	Caprolactam	0.01	U	MG/L	nc	NA
MW01S	Caprolactam	0.01	U	MG/L	nc	NA
MW03S	Caprolactam	0.01	U	MG/L	nc	NA
MW08S	Caprolactam	0.01	U	MG/L	nc	NA
MW09S	Caprolactam	0.01	U	MG/L	nc	NA
MW15D	Caprolactam	0.014	UJ	MG/L	nc	NA
MW10D	Caprolactam	0.01	UJ	MG/L	nc	NA
MW10D	Caprolactam	0.01	UJ	MG/L	nc	NA
MW13B	Caprolactam	0.01	UJ	MG/L	nc	NA
MW13D	Caprolactam	0.01	UJ	MG/L	nc	NA
MW13S	Caprolactam	0.01	UJ	MG/L	nc	NA
TMW3	Caprolactam	0.01	UJ	MG/L	nc	NA
MW11S	Caprolactam	0.01	UJ	MG/L	nc	NA
MW12D	Caprolactam	0.01	UJ	MG/L	nc	NA
MW15D	Carbazole	0.014	U	MG/L	nc	NA
MW10D	Carbazole	0.01	U	MG/L	nc	NA
MW10B	Carbazole	0.01	U	MG/L	nc	NA
MW10D	Carbazole	0.01	U	MG/L	nc	NA
MW13B	Carbazole	0.01	U	MG/L	nc	NA
MW13D	Carbazole	0.01	U	MG/L	nc	NA
MW13S	Carbazole	0.01	U	MG/L	nc	NA
TMW3	Carbazole	0.01	U	MG/L	nc	NA
MW12B	Carbazole	0.01	U	MG/L	nc	NA
MW11B	Carbazole	0.01	U	MG/L	nc	NA
MW11M	Carbazole	0.01	U	MG/L	nc	NA
MW11S	Carbazole	0.01	U	MG/L	nc	NA
MW12B	Carbazole	0.01	U	MG/L	nc	NA
MW12D	Carbazole	0.01	U	MG/L	nc	NA
GEC2	Carbazole	0.01	U	MG/L	nc	NA
GEC6	Carbazole	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW14M	Carbazole	0.01	U	MG/L	nc	NA
MW01S	Carbazole	0.01	U	MG/L	nc	NA
MW01S	Carbazole	0.01	U	MG/L	nc	NA
MW03S	Carbazole	0.01	U	MG/L	nc	NA
MW05S	Carbazole	0.01	U	MG/L	nc	NA
MW06S	Carbazole	0.01	U	MG/L	nc	NA
MW07D	Carbazole	0.01	U	MG/L	nc	NA
MW07S	Carbazole	0.01	U	MG/L	nc	NA
MW08S	Carbazole	0.01	U	MG/L	nc	NA
MW09S	Carbazole	0.01	U	MG/L	nc	NA
MW04S	Carbazole	0.01	U	MG/L	nc	NA
MW04B	Carbazole	0.01	U	MG/L	nc	NA
MW04D	Carbazole	0.01	U	MG/L	nc	NA
MW04S	Carbazole	0.01	U	MG/L	nc	NA
MW02D	Carbazole	0.01	U	MG/L	nc	NA
MW02M	Carbazole	0.01	U	MG/L	nc	NA
MW02S	Carbazole	0.01	U	MG/L	nc	NA
MW02S	Carbazole	0.01	U	MG/L	nc	NA
MW06S	Carbazole	0.01	U	MG/L	nc	NA
MW07S	Carbazole	0.01	U	MG/L	nc	NA
MW01S	Carbazole	0.01	U	MG/L	nc	NA
MW01S	Carbazole	0.01	U	MG/L	nc	NA
MW03S	Carbazole	0.01	U	MG/L	nc	NA
MW08S	Carbazole	0.01	U	MG/L	nc	NA
MW09S	Carbazole	0.01	U	MG/L	nc	NA
MW-LEA-01	Carbon Disulfide	20	Uw	MG/L	nc	NA
MW-LEA-01	Carbon Disulfide	2	Uw	MG/L	nc	NA
MW-LEA-02	Carbon Disulfide	2	Uw	MG/L	nc	NA
MW-05S	Carbon Disulfide	2	Uw	MG/L	nc	NA
MW-LEA-02	Carbon Disulfide	2	Uw	MG/L	nc	NA
MW-LEA-02	Carbon Disulfide	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Carbon Disulfide	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Carbon Disulfide	0.004	Uw	MG/L	nc	NA
MW05S	Carbon Disulfide	1.7	U	MG/L	nc	NA
MW10D	Carbon Disulfide	0.01	U	MG/L	nc	NA
MW10B	Carbon Disulfide	0.01	U	MG/L	nc	NA
MW10D	Carbon Disulfide	0.01	U	MG/L	nc	NA
MW13B	Carbon Disulfide	0.01	U	MG/L	nc	NA
MW13D	Carbon Disulfide	0.01	U	MG/L	nc	NA
MW13S	Carbon Disulfide	0.01	U	MG/L	nc	NA
TMW3	Carbon Disulfide	0.01	U	MG/L	nc	NA
MW11S	Carbon Disulfide	0.01	U	MG/L	nc	NA
MW12D	Carbon Disulfide	0.01	U	MG/L	nc	NA
MW01S	Carbon Disulfide	0.01	U	MG/L	nc	NA
MW06S	Carbon Disulfide	0.01	U	MG/L	nc	NA
MW07D	Carbon Disulfide	0.01	U	MG/L	nc	NA
MW07S	Carbon Disulfide	0.01	U	MG/L	nc	NA
MW08S	Carbon Disulfide	0.01	U	MG/L	nc	NA
MW09S	Carbon Disulfide	0.01	U	MG/L	nc	NA
MW04S	Carbon Disulfide	0.01	U	MG/L	nc	NA
MW04B	Carbon Disulfide	0.01	U	MG/L	nc	NA
MW04D	Carbon Disulfide	0.01	U	MG/L	nc	NA
MW04S	Carbon Disulfide	0.01	U	MG/L	nc	NA
MW02D	Carbon Disulfide	0.01	U	MG/L	nc	NA
MW02M	Carbon Disulfide	0.01	U	MG/L	nc	NA
MW02S	Carbon Disulfide	0.01	U	MG/L	nc	NA
MW02S	Carbon Disulfide	0.01	U	MG/L	nc	NA
MW06S	Carbon Disulfide	0.01	U	MG/L	nc	NA
MW07S	Carbon Disulfide	0.01	U	MG/L	nc	NA
MW01S	Carbon Disulfide	0.01	U	MG/L	nc	NA
MW01S	Carbon Disulfide	0.01	U	MG/L	nc	NA
MW03S	Carbon Disulfide	0.01	U	MG/L	nc	NA
MW08S	Carbon Disulfide	0.01	U	MG/L	nc	NA
MW09S	Carbon Disulfide	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW12B	Carbon Disulfide	0.01	UJ	MG/L	nc	NA
MW11B	Carbon Disulfide	0.01	UJ	MG/L	nc	NA
MW11M	Carbon Disulfide	0.01	UJ	MG/L	nc	NA
MW12B	Carbon Disulfide	0.01	UJ	MG/L	nc	NA
GEC2	Carbon Disulfide	0.01	UJ	MG/L	nc	NA
GEC6	Carbon Disulfide	0.01	UJ	MG/L	nc	NA
MW14M	Carbon Disulfide	0.01	UJ	MG/L	nc	NA
MW15D	Carbon Disulfide	0.01	UJ	MG/L	nc	NA
MW01S	Carbon Disulfide	0.01	UJ	MG/L	nc	NA
MW03S	Carbon Disulfide	0.01	UJ	MG/L	nc	NA
MW-LEA-01	Carbon Tetrachloride	20	Uw	MG/L	0.005	NA
MW-LEA-01	Carbon Tetrachloride	2	Uw	MG/L	0.005	NA
MW-LEA-02	Carbon Tetrachloride	2	Uw	MG/L	0.005	NA
MW-05S	Carbon Tetrachloride	2	Uw	MG/L	0.005	NA
MW-LEA-02	Carbon Tetrachloride	2	Uw	MG/L	0.005	NA
MW-LEA-02	Carbon Tetrachloride	0.2	Uw	MG/L	0.005	NA
MW-LEA-03	Carbon Tetrachloride	0.2	Uw	MG/L	0.005	NA
MW-LEA-03	Carbon Tetrachloride	0.004	Uw	MG/L	0.005	NA
MW05S	Carbon Tetrachloride	1.7	U	MG/L	0.005	NA
MW05S	CARBON TETRACHLORIDE	1	U	MG/L	0.005	NA
MW05S	CARBON TETRACHLORIDE	1	U	MG/L	0.005	NA
MW05S	Carbon Tetrachloride	1	U	MG/L	0.005	NA
MW05S	Carbon Tetrachloride	1	U	MG/L	0.005	NA
MW14M	Carbon Tetrachloride	0.1	U	MG/L	0.005	NA
MW06S	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW13D	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW10D	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW10B	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW10D	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW13B	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW13D	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW13S	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
TMW3	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW12B	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW11B	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW11M	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW11S	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW12B	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW12D	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
GEC2	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
GEC6	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW14M	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW15D	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW01S	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW01S	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW03S	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW06S	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW07D	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW07S	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW08S	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW09S	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW04S	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW04B	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW04D	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW04S	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW02D	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW02M	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW02S	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW02S	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW06S	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW07S	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW01S	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW01S	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW03S	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW08S	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW09S	Carbon Tetrachloride	0.01	U	MG/L	0.005	NA
MW06S	Carbon Tetrachloride	0.006	U	MG/L	0.005	NA
MW02M	Carbon Tetrachloride	0.005	U	MG/L	0.005	NA
MW02D	Carbon Tetrachloride	0.004	U	MG/L	0.005	NA
MW13B	Carbon Tetrachloride	0.004	U	MG/L	0.005	NA
MW03S	Carbon Tetrachloride	0.001	U	MG/L	0.005	NA
GEC3	Carbon Tetrachloride	0.001	U	MG/L	0.005	NA
MW01S	Carbon Tetrachloride	0.001	U	MG/L	0.005	NA
MW11S	Carbon Tetrachloride	0.001	U	MG/L	0.005	NA
MW12B	Carbon Tetrachloride	0.001	U	MG/L	0.005	NA
MW12D	Carbon Tetrachloride	0.001	U	MG/L	0.005	NA
GEC1	Carbon Tetrachloride	0.001	U	MG/L	0.005	NA
GEC2	Carbon Tetrachloride	0.001	U	MG/L	0.005	NA
GEC4	Carbon Tetrachloride	0.001	U	MG/L	0.005	NA
GEC5	Carbon Tetrachloride	0.001	U	MG/L	0.005	NA
GEC6	Carbon Tetrachloride	0.001	U	MG/L	0.005	NA
GEC7	Carbon Tetrachloride	0.001	U	MG/L	0.005	NA
MW07D	Carbon Tetrachloride	0.001	U	MG/L	0.005	NA
MW07S	Carbon Tetrachloride	0.001	U	MG/L	0.005	NA
MW11B	Carbon Tetrachloride	0.001	U	MG/L	0.005	NA
MW11M	Carbon Tetrachloride	0.001	U	MG/L	0.005	NA
MW15D	Carbon Tetrachloride	0.001	U	MG/L	0.005	NA
MW02S	Carbon Tetrachloride	0.001	U	MG/L	0.005	NA
MW04B	Carbon Tetrachloride	0.001	U	MG/L	0.005	NA
MW04D	Carbon Tetrachloride	0.001	U	MG/L	0.005	NA
MW04S	Carbon Tetrachloride	0.001	U	MG/L	0.005	NA
MW08S	Carbon Tetrachloride	0.001	U	MG/L	0.005	NA
MW09S	Carbon Tetrachloride	0.001	U	MG/L	0.005	NA
MW10B	Carbon Tetrachloride	0.001	U	MG/L	0.005	NA
MW10D	Carbon Tetrachloride	0.001	U	MG/L	0.005	NA
MW13S	Carbon Tetrachloride	0.001	U	MG/L	0.005	NA
MW-LEA-01	Chlorobenzene	20	Uw	MG/L	0.1	NA
MW-LEA-01	Chlorobenzene	2	Uw	MG/L	0.1	NA
MW-LEA-02	Chlorobenzene	2	Uw	MG/L	0.1	NA
MW-05S	Chlorobenzene	2	Uw	MG/L	0.1	NA
MW-LEA-02	Chlorobenzene	2	Uw	MG/L	0.1	NA
MW-LEA-02	Chlorobenzene	0.2	Uw	MG/L	0.1	NA
MW-LEA-03	Chlorobenzene	0.2	Uw	MG/L	0.1	NA
MW-LEA-03	Chlorobenzene	0.004	Uw	MG/L	0.1	NA
MW06S	Chlorobenzene	0.19		MG/L	0.1	Y
MW06S	Chlorobenzene	0.16		MG/L	0.1	Y
MW06S	Chlorobenzene	0.1		MG/L	0.1	N
MW06S	Chlorobenzene	0.058		MG/L	0.1	N
MW08S	Chlorobenzene	0.04		MG/L	0.1	N
MW08S	Chlorobenzene	0.023		MG/L	0.1	N
MW08S	Chlorobenzene	0.01		MG/L	0.1	N
MW09S	Chlorobenzene	0.0034		MG/L	0.1	N
MW02S	Chlorobenzene	0.0021		MG/L	0.1	N
MW04S	Chlorobenzene	0.0021		MG/L	0.1	N
GEC6	Chlorobenzene	0.0015		MG/L	0.1	N
MW04S	Chlorobenzene	0.005	J	MG/L	0.1	N
MW04S	Chlorobenzene	0.005	J	MG/L	0.1	N
MW02S	Chlorobenzene	0.001	J	MG/L	0.1	N
MW09S	Chlorobenzene	0.001	J	MG/L	0.1	N
GEC7	Chlorobenzene	0.00031	J	MG/L	0.1	N
MW05S	Chlorobenzene	1.7	U	MG/L	0.1	NA
MW05S	CHLOROBENZENE	1	U	MG/L	0.1	NA
MW05S	CHLOROBENZENE	1	U	MG/L	0.1	NA
MW05S	Chlorobenzene	1	U	MG/L	0.1	NA
MW05S	Chlorobenzene	1	U	MG/L	0.1	NA
MW14M	Chlorobenzene	0.1	U	MG/L	0.1	NA
MW13D	Chlorobenzene	0.01	U	MG/L	0.1	NA
MW10D	Chlorobenzene	0.01	U	MG/L	0.1	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW10B	Chlorobenzene	0.01	U	MG/L	0.1	NA
MW10D	Chlorobenzene	0.01	U	MG/L	0.1	NA
MW13B	Chlorobenzene	0.01	U	MG/L	0.1	NA
MW13D	Chlorobenzene	0.01	U	MG/L	0.1	NA
MW13S	Chlorobenzene	0.01	U	MG/L	0.1	NA
TMW3	Chlorobenzene	0.01	U	MG/L	0.1	NA
MW12B	Chlorobenzene	0.01	U	MG/L	0.1	NA
MW11B	Chlorobenzene	0.01	U	MG/L	0.1	NA
MW11M	Chlorobenzene	0.01	U	MG/L	0.1	NA
MW11S	Chlorobenzene	0.01	U	MG/L	0.1	NA
MW12B	Chlorobenzene	0.01	U	MG/L	0.1	NA
MW12D	Chlorobenzene	0.01	U	MG/L	0.1	NA
GEC2	Chlorobenzene	0.01	U	MG/L	0.1	NA
GEC6	Chlorobenzene	0.01	U	MG/L	0.1	NA
MW14M	Chlorobenzene	0.01	U	MG/L	0.1	NA
MW15D	Chlorobenzene	0.01	U	MG/L	0.1	NA
MW01S	Chlorobenzene	0.01	U	MG/L	0.1	NA
MW01S	Chlorobenzene	0.01	U	MG/L	0.1	NA
MW03S	Chlorobenzene	0.01	U	MG/L	0.1	NA
MW07D	Chlorobenzene	0.01	U	MG/L	0.1	NA
MW07S	Chlorobenzene	0.01	U	MG/L	0.1	NA
MW09S	Chlorobenzene	0.01	U	MG/L	0.1	NA
MW04B	Chlorobenzene	0.01	U	MG/L	0.1	NA
MW04D	Chlorobenzene	0.01	U	MG/L	0.1	NA
MW02D	Chlorobenzene	0.01	U	MG/L	0.1	NA
MW02M	Chlorobenzene	0.01	U	MG/L	0.1	NA
MW02S	Chlorobenzene	0.01	U	MG/L	0.1	NA
MW07S	Chlorobenzene	0.01	U	MG/L	0.1	NA
MW01S	Chlorobenzene	0.01	U	MG/L	0.1	NA
MW01S	Chlorobenzene	0.01	U	MG/L	0.1	NA
MW03S	Chlorobenzene	0.01	U	MG/L	0.1	NA
MW02M	Chlorobenzene	0.005	U	MG/L	0.1	NA
MW02D	Chlorobenzene	0.004	U	MG/L	0.1	NA
MW13B	Chlorobenzene	0.004	U	MG/L	0.1	NA
MW03S	Chlorobenzene	0.001	U	MG/L	0.1	NA
GEC3	Chlorobenzene	0.001	U	MG/L	0.1	NA
MW01S	Chlorobenzene	0.001	U	MG/L	0.1	NA
MW11S	Chlorobenzene	0.001	U	MG/L	0.1	NA
MW12B	Chlorobenzene	0.001	U	MG/L	0.1	NA
MW12D	Chlorobenzene	0.001	U	MG/L	0.1	NA
GEC1	Chlorobenzene	0.001	U	MG/L	0.1	NA
GEC2	Chlorobenzene	0.001	U	MG/L	0.1	NA
GEC4	Chlorobenzene	0.001	U	MG/L	0.1	NA
GEC5	Chlorobenzene	0.001	U	MG/L	0.1	NA
MW07D	Chlorobenzene	0.001	U	MG/L	0.1	NA
MW07S	Chlorobenzene	0.001	U	MG/L	0.1	NA
MW11B	Chlorobenzene	0.001	U	MG/L	0.1	NA
MW11M	Chlorobenzene	0.001	U	MG/L	0.1	NA
MW15D	Chlorobenzene	0.001	U	MG/L	0.1	NA
MW04B	Chlorobenzene	0.001	U	MG/L	0.1	NA
MW04D	Chlorobenzene	0.001	U	MG/L	0.1	NA
MW10B	Chlorobenzene	0.001	U	MG/L	0.1	NA
MW10D	Chlorobenzene	0.001	U	MG/L	0.1	NA
MW13S	Chlorobenzene	0.001	U	MG/L	0.1	NA
MW-LEA-01	Chlorodibromomethane	120	Jw	MG/L	nc	NA
MW-LEA-03	Chlorodibromomethane	0.56	Jw	MG/L	nc	NA
MW-LEA-01	Chlorodibromomethane	2	Uw	MG/L	nc	NA
MW-LEA-02	Chlorodibromomethane	2	Uw	MG/L	nc	NA
MW-05S	Chlorodibromomethane	2	Uw	MG/L	nc	NA
MW-LEA-02	Chlorodibromomethane	2	Uw	MG/L	nc	NA
MW-LEA-02	Chlorodibromomethane	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Chlorodibromomethane	0.2	Uw	MG/L	nc	NA
MW-LEA-01	Chloroethane	20	Uw	MG/L	nc	NA
MW-LEA-01	Chloroethane	2	Uw	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW-LEA-02	Chloroethane	2	Uw	MG/L	nc	NA
MW-05S	Chloroethane	2	Uw	MG/L	nc	NA
MW-LEA-02	Chloroethane	2	Uw	MG/L	nc	NA
MW-LEA-02	Chloroethane	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Chloroethane	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Chloroethane	0.004	Uw	MG/L	nc	NA
MW06S	Chloroethane	0.014	J	MG/L	nc	NA
MW09S	Chloroethane	0.00047	J	MG/L	nc	NA
MW05S	Chloroethane	1.7	U	MG/L	nc	NA
MW05S	CHLOROETHANE	1	U	MG/L	nc	NA
MW05S	CHLOROETHANE	1	U	MG/L	nc	NA
MW05S	Chloroethane	1	U	MG/L	nc	NA
MW05S	Chloroethane	1	U	MG/L	nc	NA
MW14M	Chloroethane	0.1	U	MG/L	nc	NA
MW13D	Chloroethane	0.01	U	MG/L	nc	NA
MW10D	Chloroethane	0.01	U	MG/L	nc	NA
MW10B	Chloroethane	0.01	U	MG/L	nc	NA
MW10D	Chloroethane	0.01	U	MG/L	nc	NA
MW13B	Chloroethane	0.01	U	MG/L	nc	NA
MW13D	Chloroethane	0.01	U	MG/L	nc	NA
MW13S	Chloroethane	0.01	U	MG/L	nc	NA
TMW3	Chloroethane	0.01	U	MG/L	nc	NA
MW12B	Chloroethane	0.01	U	MG/L	nc	NA
MW11B	Chloroethane	0.01	U	MG/L	nc	NA
MW11M	Chloroethane	0.01	U	MG/L	nc	NA
MW11S	Chloroethane	0.01	U	MG/L	nc	NA
MW12B	Chloroethane	0.01	U	MG/L	nc	NA
MW12D	Chloroethane	0.01	U	MG/L	nc	NA
GEC2	Chloroethane	0.01	U	MG/L	nc	NA
GEC6	Chloroethane	0.01	U	MG/L	nc	NA
MW14M	Chloroethane	0.01	U	MG/L	nc	NA
MW15D	Chloroethane	0.01	U	MG/L	nc	NA
MW01S	Chloroethane	0.01	U	MG/L	nc	NA
MW01S	Chloroethane	0.01	U	MG/L	nc	NA
MW03S	Chloroethane	0.01	U	MG/L	nc	NA
MW06S	Chloroethane	0.01	U	MG/L	nc	NA
MW07D	Chloroethane	0.01	U	MG/L	nc	NA
MW07S	Chloroethane	0.01	U	MG/L	nc	NA
MW08S	Chloroethane	0.01	U	MG/L	nc	NA
MW09S	Chloroethane	0.01	U	MG/L	nc	NA
MW04S	Chloroethane	0.01	U	MG/L	nc	NA
MW04B	Chloroethane	0.01	U	MG/L	nc	NA
MW04D	Chloroethane	0.01	U	MG/L	nc	NA
MW04S	Chloroethane	0.01	U	MG/L	nc	NA
MW02D	Chloroethane	0.01	U	MG/L	nc	NA
MW02M	Chloroethane	0.01	U	MG/L	nc	NA
MW02S	Chloroethane	0.01	U	MG/L	nc	NA
MW06S	Chloroethane	0.01	U	MG/L	nc	NA
MW02M	Chloroethane	0.005	U	MG/L	nc	NA
MW02D	Chloroethane	0.004	U	MG/L	nc	NA
MW13B	Chloroethane	0.004	U	MG/L	nc	NA
MW03S	Chloroethane	0.001	U	MG/L	nc	NA
MW12D	Chloroethane	0.001	U	MG/L	nc	NA
GEC5	Chloroethane	0.001	U	MG/L	nc	NA
GEC6	Chloroethane	0.001	U	MG/L	nc	NA
GEC7	Chloroethane	0.001	U	MG/L	nc	NA
MW07D	Chloroethane	0.001	U	MG/L	nc	NA
MW15D	Chloroethane	0.001	U	MG/L	nc	NA
MW02S	Chloroethane	0.001	U	MG/L	nc	NA
MW04B	Chloroethane	0.001	U	MG/L	nc	NA
MW04D	Chloroethane	0.001	U	MG/L	nc	NA
MW04S	Chloroethane	0.001	U	MG/L	nc	NA
MW08S	Chloroethane	0.001	U	MG/L	nc	NA
MW10B	Chloroethane	0.001	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW10D	Chloroethane	0.001	U	MG/L	nc	NA
MW13S	Chloroethane	0.001	U	MG/L	nc	NA
MW02S	Chloroethane	0.01	UJ	MG/L	nc	NA
MW07S	Chloroethane	0.01	UJ	MG/L	nc	NA
MW01S	Chloroethane	0.01	UJ	MG/L	nc	NA
MW01S	Chloroethane	0.01	UJ	MG/L	nc	NA
MW03S	Chloroethane	0.01	UJ	MG/L	nc	NA
MW08S	Chloroethane	0.01	UJ	MG/L	nc	NA
MW09S	Chloroethane	0.01	UJ	MG/L	nc	NA
MW06S	Chloroethane	0.006	UJ	MG/L	nc	NA
GEC3	Chloroethane	0.001	UJ	MG/L	nc	NA
MW01S	Chloroethane	0.001	UJ	MG/L	nc	NA
MW11S	Chloroethane	0.001	UJ	MG/L	nc	NA
MW12B	Chloroethane	0.001	UJ	MG/L	nc	NA
GEC1	Chloroethane	0.001	UJ	MG/L	nc	NA
GEC2	Chloroethane	0.001	UJ	MG/L	nc	NA
GEC4	Chloroethane	0.001	UJ	MG/L	nc	NA
MW07S	Chloroethane	0.001	UJ	MG/L	nc	NA
MW11B	Chloroethane	0.001	UJ	MG/L	nc	NA
MW11M	Chloroethane	0.001	UJ	MG/L	nc	NA
MW-LEA-03	Chloroform	0.002	Jw	MG/L	nc	NA
MW-LEA-01	Chloroform	20	Uw	MG/L	nc	NA
MW-LEA-01	Chloroform	2	Uw	MG/L	nc	NA
MW-LEA-02	Chloroform	2	Uw	MG/L	nc	NA
MW-05S	Chloroform	2	Uw	MG/L	nc	NA
MW-LEA-02	Chloroform	2	Uw	MG/L	nc	NA
MW-LEA-02	Chloroform	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Chloroform	0.2	Uw	MG/L	nc	NA
MW10D	Chloroform	0.0041		MG/L	nc	NA
MW10B	Chloroform	0.0017		MG/L	nc	NA
MW04D	Chloroform	0.00031	J	MG/L	nc	NA
MW12B	Chloroform	0.00025	J	MG/L	nc	NA
MW05S	Chloroform	1.7	U	MG/L	nc	NA
MW05S	CHLOROFORM	1	U	MG/L	nc	NA
MW05S	CHLOROFORM	1	U	MG/L	nc	NA
MW05S	Chloroform	1	U	MG/L	nc	NA
MW05S	Chloroform	1	U	MG/L	nc	NA
MW14M	Chloroform	0.1	U	MG/L	nc	NA
MW06S	Chloroform	0.01	U	MG/L	nc	NA
MW13D	Chloroform	0.01	U	MG/L	nc	NA
MW10D	Chloroform	0.01	U	MG/L	nc	NA
MW10B	Chloroform	0.01	U	MG/L	nc	NA
MW10D	Chloroform	0.01	U	MG/L	nc	NA
MW13B	Chloroform	0.01	U	MG/L	nc	NA
MW13D	Chloroform	0.01	U	MG/L	nc	NA
MW13S	Chloroform	0.01	U	MG/L	nc	NA
TMW3	Chloroform	0.01	U	MG/L	nc	NA
MW12B	Chloroform	0.01	U	MG/L	nc	NA
MW11B	Chloroform	0.01	U	MG/L	nc	NA
MW11M	Chloroform	0.01	U	MG/L	nc	NA
MW11S	Chloroform	0.01	U	MG/L	nc	NA
MW12B	Chloroform	0.01	U	MG/L	nc	NA
MW12D	Chloroform	0.01	U	MG/L	nc	NA
GEC2	Chloroform	0.01	U	MG/L	nc	NA
GEC6	Chloroform	0.01	U	MG/L	nc	NA
MW14M	Chloroform	0.01	U	MG/L	nc	NA
MW15D	Chloroform	0.01	U	MG/L	nc	NA
MW01S	Chloroform	0.01	U	MG/L	nc	NA
MW01S	Chloroform	0.01	U	MG/L	nc	NA
MW03S	Chloroform	0.01	U	MG/L	nc	NA
MW06S	Chloroform	0.01	U	MG/L	nc	NA
MW07D	Chloroform	0.01	U	MG/L	nc	NA
MW07S	Chloroform	0.01	U	MG/L	nc	NA
MW08S	Chloroform	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW09S	Chloroform	0.01	U	MG/L	nc	NA
MW04S	Chloroform	0.01	U	MG/L	nc	NA
MW04B	Chloroform	0.01	U	MG/L	nc	NA
MW04D	Chloroform	0.01	U	MG/L	nc	NA
MW04S	Chloroform	0.01	U	MG/L	nc	NA
MW02D	Chloroform	0.01	U	MG/L	nc	NA
MW02M	Chloroform	0.01	U	MG/L	nc	NA
MW02S	Chloroform	0.01	U	MG/L	nc	NA
MW02S	Chloroform	0.01	U	MG/L	nc	NA
MW06S	Chloroform	0.01	U	MG/L	nc	NA
MW07S	Chloroform	0.01	U	MG/L	nc	NA
MW01S	Chloroform	0.01	U	MG/L	nc	NA
MW01S	Chloroform	0.01	U	MG/L	nc	NA
MW03S	Chloroform	0.01	U	MG/L	nc	NA
MW08S	Chloroform	0.01	U	MG/L	nc	NA
MW09S	Chloroform	0.01	U	MG/L	nc	NA
MW06S	Chloroform	0.006	U	MG/L	nc	NA
MW02M	Chloroform	0.005	U	MG/L	nc	NA
MW02D	Chloroform	0.004	U	MG/L	nc	NA
MW13B	Chloroform	0.004	U	MG/L	nc	NA
MW03S	Chloroform	0.001	U	MG/L	nc	NA
GEC3	Chloroform	0.001	U	MG/L	nc	NA
MW01S	Chloroform	0.001	U	MG/L	nc	NA
MW11S	Chloroform	0.001	U	MG/L	nc	NA
MW12D	Chloroform	0.001	U	MG/L	nc	NA
GEC1	Chloroform	0.001	U	MG/L	nc	NA
GEC2	Chloroform	0.001	U	MG/L	nc	NA
GEC4	Chloroform	0.001	U	MG/L	nc	NA
GEC5	Chloroform	0.001	U	MG/L	nc	NA
GEC6	Chloroform	0.001	U	MG/L	nc	NA
GEC7	Chloroform	0.001	U	MG/L	nc	NA
MW07D	Chloroform	0.001	U	MG/L	nc	NA
MW07S	Chloroform	0.001	U	MG/L	nc	NA
MW11B	Chloroform	0.001	U	MG/L	nc	NA
MW11M	Chloroform	0.001	U	MG/L	nc	NA
MW15D	Chloroform	0.001	U	MG/L	nc	NA
MW02S	Chloroform	0.001	U	MG/L	nc	NA
MW04B	Chloroform	0.001	U	MG/L	nc	NA
MW04S	Chloroform	0.001	U	MG/L	nc	NA
MW08S	Chloroform	0.001	U	MG/L	nc	NA
MW09S	Chloroform	0.001	U	MG/L	nc	NA
MW13S	Chloroform	0.001	U	MG/L	nc	NA
MW-LEA-01	Chloromethane	20	Uw	MG/L	nc	NA
MW-LEA-01	Chloromethane	2	Uw	MG/L	nc	NA
MW-LEA-02	Chloromethane	2	Uw	MG/L	nc	NA
MW-05S	Chloromethane	2	Uw	MG/L	nc	NA
MW-LEA-02	Chloromethane	2	Uw	MG/L	nc	NA
MW-LEA-02	Chloromethane	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Chloromethane	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Chloromethane	0.004	Uw	MG/L	nc	NA
MW05S	Chloromethane	1.7	U	MG/L	nc	NA
MW05S	CHLOROMETHANE	1	U	MG/L	nc	NA
MW05S	CHLOROMETHANE	1	U	MG/L	nc	NA
MW05S	Chloromethane	1	U	MG/L	nc	NA
MW05S	Chloromethane	1	U	MG/L	nc	NA
MW14M	Chloromethane	0.1	U	MG/L	nc	NA
MW06S	Chloromethane	0.01	U	MG/L	nc	NA
MW13D	Chloromethane	0.01	U	MG/L	nc	NA
MW10D	Chloromethane	0.01	U	MG/L	nc	NA
MW10B	Chloromethane	0.01	U	MG/L	nc	NA
MW10D	Chloromethane	0.01	U	MG/L	nc	NA
MW13B	Chloromethane	0.01	U	MG/L	nc	NA
MW13D	Chloromethane	0.01	U	MG/L	nc	NA
MW13S	Chloromethane	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
TMW3	Chloromethane	0.01	U	MG/L	nc	NA
MW12B	Chloromethane	0.01	U	MG/L	nc	NA
MW11B	Chloromethane	0.01	U	MG/L	nc	NA
MW11M	Chloromethane	0.01	U	MG/L	nc	NA
MW11S	Chloromethane	0.01	U	MG/L	nc	NA
MW12B	Chloromethane	0.01	U	MG/L	nc	NA
MW12D	Chloromethane	0.01	U	MG/L	nc	NA
GEC2	Chloromethane	0.01	U	MG/L	nc	NA
GEC6	Chloromethane	0.01	U	MG/L	nc	NA
MW14M	Chloromethane	0.01	U	MG/L	nc	NA
MW15D	Chloromethane	0.01	U	MG/L	nc	NA
MW01S	Chloromethane	0.01	U	MG/L	nc	NA
MW01S	Chloromethane	0.01	U	MG/L	nc	NA
MW03S	Chloromethane	0.01	U	MG/L	nc	NA
MW06S	Chloromethane	0.01	U	MG/L	nc	NA
MW07D	Chloromethane	0.01	U	MG/L	nc	NA
MW07S	Chloromethane	0.01	U	MG/L	nc	NA
MW08S	Chloromethane	0.01	U	MG/L	nc	NA
MW09S	Chloromethane	0.01	U	MG/L	nc	NA
MW04S	Chloromethane	0.01	U	MG/L	nc	NA
MW04B	Chloromethane	0.01	U	MG/L	nc	NA
MW04D	Chloromethane	0.01	U	MG/L	nc	NA
MW04S	Chloromethane	0.01	U	MG/L	nc	NA
MW02D	Chloromethane	0.01	U	MG/L	nc	NA
MW02M	Chloromethane	0.01	U	MG/L	nc	NA
MW02S	Chloromethane	0.01	U	MG/L	nc	NA
MW06S	Chloromethane	0.006	U	MG/L	nc	NA
MW02M	Chloromethane	0.005	U	MG/L	nc	NA
MW02D	Chloromethane	0.004	U	MG/L	nc	NA
MW13B	Chloromethane	0.004	U	MG/L	nc	NA
MW03S	Chloromethane	0.001	U	MG/L	nc	NA
MW12D	Chloromethane	0.001	U	MG/L	nc	NA
GEC5	Chloromethane	0.001	U	MG/L	nc	NA
GEC6	Chloromethane	0.001	U	MG/L	nc	NA
GEC7	Chloromethane	0.001	U	MG/L	nc	NA
MW07D	Chloromethane	0.001	U	MG/L	nc	NA
MW15D	Chloromethane	0.001	U	MG/L	nc	NA
MW02S	Chloromethane	0.001	U	MG/L	nc	NA
MW04B	Chloromethane	0.001	U	MG/L	nc	NA
MW04D	Chloromethane	0.001	U	MG/L	nc	NA
MW04S	Chloromethane	0.001	U	MG/L	nc	NA
MW08S	Chloromethane	0.001	U	MG/L	nc	NA
MW09S	Chloromethane	0.001	U	MG/L	nc	NA
MW10B	Chloromethane	0.001	U	MG/L	nc	NA
MW10D	Chloromethane	0.001	U	MG/L	nc	NA
MW13S	Chloromethane	0.001	U	MG/L	nc	NA
MW02S	Chloromethane	0.01	UJ	MG/L	nc	NA
MW06S	Chloromethane	0.01	UJ	MG/L	nc	NA
MW07S	Chloromethane	0.01	UJ	MG/L	nc	NA
MW01S	Chloromethane	0.01	UJ	MG/L	nc	NA
MW01S	Chloromethane	0.01	UJ	MG/L	nc	NA
MW03S	Chloromethane	0.01	UJ	MG/L	nc	NA
MW08S	Chloromethane	0.01	UJ	MG/L	nc	NA
MW09S	Chloromethane	0.01	UJ	MG/L	nc	NA
GEC3	Chloromethane	0.001	UJ	MG/L	nc	NA
MW01S	Chloromethane	0.001	UJ	MG/L	nc	NA
MW11S	Chloromethane	0.001	UJ	MG/L	nc	NA
MW12B	Chloromethane	0.001	UJ	MG/L	nc	NA
GEC1	Chloromethane	0.001	UJ	MG/L	nc	NA
GEC2	Chloromethane	0.001	UJ	MG/L	nc	NA
GEC4	Chloromethane	0.001	UJ	MG/L	nc	NA
MW07S	Chloromethane	0.001	UJ	MG/L	nc	NA
MW11B	Chloromethane	0.001	UJ	MG/L	nc	NA
MW11M	Chloromethane	0.001	UJ	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW08S	Chromium	0.0527		MG/L	0.1	N
GEC5	Chromium	0.02		MG/L	0.1	N
GEC6	Chromium	0.02		MG/L	0.1	N
MW05S	Chromium	0.0129		MG/L	0.1	N
MW03S	Chromium	0.0066		MG/L	0.1	N
MW09S	Chromium	0.0066		MG/L	0.1	N
MW08S	Chromium	0.006		MG/L	0.1	N
MW09S	Chromium	0.0031		MG/L	0.1	N
MW07D	Chromium	0.003		MG/L	0.1	N
MW03S	Chromium	0.0028		MG/L	0.1	N
MW01S	Chromium	0.0022	J	MG/L	0.1	N
MW01S	Chromium	0.0017	J	MG/L	0.1	N
MW13D	Chromium	0.0359	U	MG/L	0.1	NA
MW10B	Chromium	0.0207	U	MG/L	0.1	NA
MW11S	Chromium	0.0204	U	MG/L	0.1	NA
MW13S	Chromium	0.0199	U	MG/L	0.1	NA
MW12B	Chromium	0.0154	U	MG/L	0.1	NA
MW12B	Chromium	0.0133	U	MG/L	0.1	NA
GEC1	Chromium	0.01	U	MG/L	0.1	NA
GEC2	Chromium	0.01	U	MG/L	0.1	NA
TMW3	Chromium	0.0081	U	MG/L	0.1	NA
MW02M	Chromium	0.0054	U	MG/L	0.1	NA
GEC2	Chromium	0.0041	U	MG/L	0.1	NA
MW11M	Chromium	0.0031	U	MG/L	0.1	NA
MW11B	Chromium	0.003	U	MG/L	0.1	NA
MW10D	Chromium	0.0029	U	MG/L	0.1	NA
MW10D	Chromium	0.0028	U	MG/L	0.1	NA
MW15D	Chromium	0.0024	U	MG/L	0.1	NA
MW02S	Chromium	0.0019	U	MG/L	0.1	NA
GEC6	Chromium	0.0017	U	MG/L	0.1	NA
MW06S	Chromium	0.0015	U	MG/L	0.1	NA
MW04S	Chromium	0.0013	U	MG/L	0.1	NA
MW04B	Chromium	0.0013	U	MG/L	0.1	NA
MW04D	Chromium	0.0013	U	MG/L	0.1	NA
MW04S	Chromium	0.0013	U	MG/L	0.1	NA
MW02D	Chromium	0.0013	U	MG/L	0.1	NA
MW06S	Chromium	0.0022	UJ	MG/L	0.1	NA
MW07S	Chromium	0.0016	UJ	MG/L	0.1	NA
MW02S	Chromium	0.0015	UJ	MG/L	0.1	NA
MW14M	Chromium	0.00096	UJ	MG/L	0.1	NA
MW01S	Chromium	0.00094	UJ	MG/L	0.1	NA
MW12D	Chromium	0.0009	UJ	MG/L	0.1	NA
MW01S	Chromium	0.00085	UJ	MG/L	0.1	NA
MW07S	Chromium	0.00083	UJ	MG/L	0.1	NA
MW13B	Chromium	0.0007	UJ	MG/L	0.1	NA
MW13B	Chromium	0.114		MG/L	0.1	Y
MW08S	Chromium	0.0435		MG/L	0.1	N
MW08S	Chromium	0.0067		MG/L	0.1	N
MW09S	Chromium	0.0065		MG/L	0.1	N
MW05S	Chromium	0.0055		MG/L	0.1	N
MW01S	Chromium	0.0045		MG/L	0.1	N
MW09S	Chromium	0.0039		MG/L	0.1	N
MW01S	Chromium	0.0038		MG/L	0.1	N
MW03S	Chromium	0.0026		MG/L	0.1	N
MW13D	Chromium	0.0224	U	MG/L	0.1	NA
MW12D	Chromium	0.0089	U	MG/L	0.1	NA
MW13S	Chromium	0.0085	U	MG/L	0.1	NA
MW12B	Chromium	0.0055	U	MG/L	0.1	NA
MW10B	Chromium	0.0047	U	MG/L	0.1	NA
TMW3	Chromium	0.0045	U	MG/L	0.1	NA
MW12B	Chromium	0.0044	U	MG/L	0.1	NA
GEC2	Chromium	0.0034	U	MG/L	0.1	NA
MW06S	Chromium	0.0029	U	MG/L	0.1	NA
MW11S	Chromium	0.0028	U	MG/L	0.1	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW10D	Chromium	0.0023	U	MG/L	0.1	NA
GEC6	Chromium	0.0023	U	MG/L	0.1	NA
MW10D	Chromium	0.002	U	MG/L	0.1	NA
MW07D	Chromium	0.0013	U	MG/L	0.1	NA
MW04B	Chromium	0.0013	U	MG/L	0.1	NA
MW04D	Chromium	0.0013	U	MG/L	0.1	NA
MW02D	Chromium	0.0013	U	MG/L	0.1	NA
MW02M	Chromium	0.0013	U	MG/L	0.1	NA
MW02S	Chromium	0.0013	U	MG/L	0.1	NA
MW11B	Chromium	0.0011	U	MG/L	0.1	NA
MW07S	Chromium	0.0011	U	MG/L	0.1	NA
MW06S	Chromium	0.001	U	MG/L	0.1	NA
MW03S	Chromium	0.001	U	MG/L	0.1	NA
MW15D	Chromium	0.0005	U	MG/L	0.1	NA
MW02S	Chromium	0.0005	U	MG/L	0.1	NA
MW01S	Chromium	0.0005	U	MG/L	0.1	NA
MW07S	Chromium	0.0021	UJ	MG/L	0.1	NA
MW04S	Chromium	0.0016	UJ	MG/L	0.1	NA
MW04S	Chromium	0.0016	UJ	MG/L	0.1	NA
MW14M	Chromium	0.00097	UJ	MG/L	0.1	NA
MW11M	Chromium	0.0006	UJ	MG/L	0.1	NA
MW01S	Chromium	0.0005	UJ	MG/L	0.1	NA
GEC3	Chrysene	0.0039		MG/L	nc	NA
GEC7	Chrysene	0.0013		MG/L	nc	NA
GEC4	Chrysene	0.00052		MG/L	nc	NA
GEC6	Chrysene	0.00028		MG/L	nc	NA
GEC2	Chrysene	0.00022		MG/L	nc	NA
MW15D	Chrysene	0.014	U	MG/L	nc	NA
MW10D	Chrysene	0.01	U	MG/L	nc	NA
MW10B	Chrysene	0.01	U	MG/L	nc	NA
MW10D	Chrysene	0.01	U	MG/L	nc	NA
MW13B	Chrysene	0.01	U	MG/L	nc	NA
MW13D	Chrysene	0.01	U	MG/L	nc	NA
MW13S	Chrysene	0.01	U	MG/L	nc	NA
TMW3	Chrysene	0.01	U	MG/L	nc	NA
MW12B	Chrysene	0.01	U	MG/L	nc	NA
MW11B	Chrysene	0.01	U	MG/L	nc	NA
MW11M	Chrysene	0.01	U	MG/L	nc	NA
MW11S	Chrysene	0.01	U	MG/L	nc	NA
MW12B	Chrysene	0.01	U	MG/L	nc	NA
MW12D	Chrysene	0.01	U	MG/L	nc	NA
GEC2	Chrysene	0.01	U	MG/L	nc	NA
GEC6	Chrysene	0.01	U	MG/L	nc	NA
MW14M	Chrysene	0.01	U	MG/L	nc	NA
MW01S	Chrysene	0.01	U	MG/L	nc	NA
MW01S	Chrysene	0.01	U	MG/L	nc	NA
MW03S	Chrysene	0.01	U	MG/L	nc	NA
MW05S	Chrysene	0.01	U	MG/L	nc	NA
MW06S	Chrysene	0.01	U	MG/L	nc	NA
MW07D	Chrysene	0.01	U	MG/L	nc	NA
MW07S	Chrysene	0.01	U	MG/L	nc	NA
MW08S	Chrysene	0.01	U	MG/L	nc	NA
MW09S	Chrysene	0.01	U	MG/L	nc	NA
MW04S	Chrysene	0.01	U	MG/L	nc	NA
MW04B	Chrysene	0.01	U	MG/L	nc	NA
MW04D	Chrysene	0.01	U	MG/L	nc	NA
MW04S	Chrysene	0.01	U	MG/L	nc	NA
MW02D	Chrysene	0.01	U	MG/L	nc	NA
MW02M	Chrysene	0.01	U	MG/L	nc	NA
MW02S	Chrysene	0.01	U	MG/L	nc	NA
MW02S	Chrysene	0.01	U	MG/L	nc	NA
MW06S	Chrysene	0.01	U	MG/L	nc	NA
MW07S	Chrysene	0.01	U	MG/L	nc	NA
MW01S	Chrysene	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW01S	Chrysene	0.01	U	MG/L	nc	NA
MW03S	Chrysene	0.01	U	MG/L	nc	NA
MW08S	Chrysene	0.01	U	MG/L	nc	NA
MW09S	Chrysene	0.01	U	MG/L	nc	NA
GEC1	Chrysene	0.00018	U	MG/L	nc	NA
GEC5	Chrysene	0.00012	U	MG/L	nc	NA
MW05S	CIS-1,2-DICHLOROETHENE	1.2		MG/L	0.07	Y
MW05S	CIS-1,2-DICHLOROETHENE	1		MG/L	0.07	Y
GEC5	Cis-1,2-dichloroethene	0.021		MG/L	0.07	N
GEC6	Cis-1,2-dichloroethene	0.018		MG/L	0.07	N
MW09S	Cis-1,2-dichloroethene	0.014		MG/L	0.07	N
MW02D	Cis-1,2-dichloroethene	0.012		MG/L	0.07	N
MW09S	Cis-1,2-dichloroethene	0.012		MG/L	0.07	N
MW08S	Cis-1,2-dichloroethene	0.0085		MG/L	0.07	N
MW04S	Cis-1,2-dichloroethene	0.0059		MG/L	0.07	N
GEC6	Cis-1,2-dichloroethene	0.0056		MG/L	0.07	N
GEC4	Cis-1,2-dichloroethene	0.0028		MG/L	0.07	N
MW05S	Cis-1,2-dichloroethene	1.6	J	MG/L	0.07	Y
MW05S	Cis-1,2-dichloroethene	1.2	J	MG/L	0.07	Y
MW05S	Cis-1,2-dichloroethene	0.52	J	MG/L	0.07	Y
MW04S	Cis-1,2-dichloroethene	0.007	J	MG/L	0.07	N
MW04S	Cis-1,2-dichloroethene	0.007	J	MG/L	0.07	N
MW06S	Cis-1,2-dichloroethene	0.004	J	MG/L	0.07	N
MW06S	Cis-1,2-dichloroethene	0.004	J	MG/L	0.07	N
MW06S	Cis-1,2-dichloroethene	0.0028	J	MG/L	0.07	N
MW02D	Cis-1,2-dichloroethene	0.002	J	MG/L	0.07	N
MW09S	Cis-1,2-dichloroethene	0.002	J	MG/L	0.07	N
GEC7	Cis-1,2-dichloroethene	0.00048	J	MG/L	0.07	N
MW14M	Cis-1,2-dichloroethene	0.1	U	MG/L	0.07	NA
GEC5	Cis-1,2-dichloroethene	0.038	U	MG/L	0.07	NA
MW06S	Cis-1,2-dichloroethene	0.01	U	MG/L	0.07	NA
MW13D	Cis-1,2-dichloroethene	0.01	U	MG/L	0.07	NA
MW10D	Cis-1,2-dichloroethene	0.01	U	MG/L	0.07	NA
MW10B	Cis-1,2-dichloroethene	0.01	U	MG/L	0.07	NA
MW10D	Cis-1,2-dichloroethene	0.01	U	MG/L	0.07	NA
MW13B	Cis-1,2-dichloroethene	0.01	U	MG/L	0.07	NA
MW13D	Cis-1,2-dichloroethene	0.01	U	MG/L	0.07	NA
MW13S	Cis-1,2-dichloroethene	0.01	U	MG/L	0.07	NA
TMW3	Cis-1,2-dichloroethene	0.01	U	MG/L	0.07	NA
MW12B	Cis-1,2-dichloroethene	0.01	U	MG/L	0.07	NA
MW11B	Cis-1,2-dichloroethene	0.01	U	MG/L	0.07	NA
MW11M	Cis-1,2-dichloroethene	0.01	U	MG/L	0.07	NA
MW11S	Cis-1,2-dichloroethene	0.01	U	MG/L	0.07	NA
MW12B	Cis-1,2-dichloroethene	0.01	U	MG/L	0.07	NA
MW12D	Cis-1,2-dichloroethene	0.01	U	MG/L	0.07	NA
GEC2	Cis-1,2-dichloroethene	0.01	U	MG/L	0.07	NA
MW14M	Cis-1,2-dichloroethene	0.01	U	MG/L	0.07	NA
MW15D	Cis-1,2-dichloroethene	0.01	U	MG/L	0.07	NA
MW01S	Cis-1,2-dichloroethene	0.01	U	MG/L	0.07	NA
MW07D	Cis-1,2-dichloroethene	0.01	U	MG/L	0.07	NA
MW07S	Cis-1,2-dichloroethene	0.01	U	MG/L	0.07	NA
MW08S	Cis-1,2-dichloroethene	0.01	U	MG/L	0.07	NA
MW04B	Cis-1,2-dichloroethene	0.01	U	MG/L	0.07	NA
MW04D	Cis-1,2-dichloroethene	0.01	U	MG/L	0.07	NA
MW02M	Cis-1,2-dichloroethene	0.01	U	MG/L	0.07	NA
MW02S	Cis-1,2-dichloroethene	0.01	U	MG/L	0.07	NA
MW02S	Cis-1,2-dichloroethene	0.01	U	MG/L	0.07	NA
MW07S	Cis-1,2-dichloroethene	0.01	U	MG/L	0.07	NA
MW01S	Cis-1,2-dichloroethene	0.01	U	MG/L	0.07	NA
MW01S	Cis-1,2-dichloroethene	0.01	U	MG/L	0.07	NA
MW03S	Cis-1,2-dichloroethene	0.01	U	MG/L	0.07	NA
MW08S	Cis-1,2-dichloroethene	0.01	U	MG/L	0.07	NA
GEC6	Cis-1,2-dichloroethene	0.01	U	MG/L	0.07	NA
GEC7	Cis-1,2-dichloroethene	0.0056	U	MG/L	0.07	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW02M	Cis-1,2-dichloroethene	0.005	U	MG/L	0.07	NA
MW13B	Cis-1,2-dichloroethene	0.004	U	MG/L	0.07	NA
MW03S	Cis-1,2-dichloroethene	0.001	U	MG/L	0.07	NA
GEC3	Cis-1,2-dichloroethene	0.001	U	MG/L	0.07	NA
MW01S	Cis-1,2-dichloroethene	0.001	U	MG/L	0.07	NA
MW11S	Cis-1,2-dichloroethene	0.001	U	MG/L	0.07	NA
MW12B	Cis-1,2-dichloroethene	0.001	U	MG/L	0.07	NA
MW12D	Cis-1,2-dichloroethene	0.001	U	MG/L	0.07	NA
GEC1	Cis-1,2-dichloroethene	0.001	U	MG/L	0.07	NA
GEC2	Cis-1,2-dichloroethene	0.001	U	MG/L	0.07	NA
MW07D	Cis-1,2-dichloroethene	0.001	U	MG/L	0.07	NA
MW07S	Cis-1,2-dichloroethene	0.001	U	MG/L	0.07	NA
MW11B	Cis-1,2-dichloroethene	0.001	U	MG/L	0.07	NA
MW11M	Cis-1,2-dichloroethene	0.001	U	MG/L	0.07	NA
MW15D	Cis-1,2-dichloroethene	0.001	U	MG/L	0.07	NA
MW02S	Cis-1,2-dichloroethene	0.001	U	MG/L	0.07	NA
MW04B	Cis-1,2-dichloroethene	0.001	U	MG/L	0.07	NA
MW04D	Cis-1,2-dichloroethene	0.001	U	MG/L	0.07	NA
MW10B	Cis-1,2-dichloroethene	0.001	U	MG/L	0.07	NA
MW10D	Cis-1,2-dichloroethene	0.001	U	MG/L	0.07	NA
MW13S	Cis-1,2-dichloroethene	0.001	U	MG/L	0.07	NA
GEC1	Cis-1,2-dichloroethene	0.001	U	MG/L	0.07	NA
GEC2	Cis-1,2-dichloroethene	0.001	U	MG/L	0.07	NA
GEC3	Cis-1,2-dichloroethene	0.001	U	MG/L	0.07	NA
GEC4	Cis-1,2-dichloroethene	0.001	U	MG/L	0.07	NA
MW01S	Cis-1,2-dichloroethene	0.01	UJ	MG/L	0.07	NA
MW03S	Cis-1,2-dichloroethene	0.01	UJ	MG/L	0.07	NA
MW-LEA-01	cis-1,2-Dichloroethylene	21	Jw	MG/L	0.07	Y
MW-LEA-01	cis-1,2-Dichloroethylene	19	Jw	MG/L	0.07	Y
MW-LEA-02	cis-1,2-Dichloroethylene	1.9	Jw	MG/L	0.07	Y
MW-05S	cis-1,2-Dichloroethylene	1.8	Jw	MG/L	0.07	Y
MW-LEA-02	cis-1,2-Dichloroethylene	1.5	Jw	MG/L	0.07	Y
MW-LEA-02	cis-1,2-Dichloroethylene	1.1	Jw	MG/L	0.07	Y
MW-LEA-03	cis-1,2-Dichloroethylene	0.026	Jw	MG/L	0.07	N
MW-LEA-03	cis-1,2-Dichloroethylene	0.2	Uw	MG/L	0.07	NA
MW05S	Cis-1,3-dichloropropene	1.7	U	MG/L	nc	NA
MW05S	CIS-1,3-DICHLOROPROPENE	1	U	MG/L	nc	NA
MW05S	CIS-1,3-DICHLOROPROPENE	1	U	MG/L	nc	NA
MW05S	Cis-1,3-dichloropropene	1	U	MG/L	nc	NA
MW05S	Cis-1,3-dichloropropene	1	U	MG/L	nc	NA
MW14M	Cis-1,3-dichloropropene	0.1	U	MG/L	nc	NA
MW06S	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW13D	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW10D	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW10B	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW10D	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW13B	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW13D	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW13S	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
TMW3	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW12B	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW11B	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW11M	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW11S	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW12B	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW12D	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
GEC2	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
GEC6	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW14M	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW15D	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW01S	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW01S	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW03S	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW06S	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW07D	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW07S	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW08S	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW09S	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW04S	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW04B	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW04D	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW04S	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW02D	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW02M	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW02S	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW02S	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW06S	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW07S	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW01S	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW01S	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW03S	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW08S	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW09S	Cis-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW06S	Cis-1,3-dichloropropene	0.006	U	MG/L	nc	NA
MW02M	Cis-1,3-dichloropropene	0.005	U	MG/L	nc	NA
MW02D	Cis-1,3-dichloropropene	0.004	U	MG/L	nc	NA
MW13B	Cis-1,3-dichloropropene	0.004	U	MG/L	nc	NA
MW03S	Cis-1,3-dichloropropene	0.001	U	MG/L	nc	NA
GEC3	Cis-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW01S	Cis-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW11S	Cis-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW12B	Cis-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW12D	Cis-1,3-dichloropropene	0.001	U	MG/L	nc	NA
GEC1	Cis-1,3-dichloropropene	0.001	U	MG/L	nc	NA
GEC2	Cis-1,3-dichloropropene	0.001	U	MG/L	nc	NA
GEC4	Cis-1,3-dichloropropene	0.001	U	MG/L	nc	NA
GEC5	Cis-1,3-dichloropropene	0.001	U	MG/L	nc	NA
GEC6	Cis-1,3-dichloropropene	0.001	U	MG/L	nc	NA
GEC7	Cis-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW07D	Cis-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW07S	Cis-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW11B	Cis-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW11M	Cis-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW15D	Cis-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW02S	Cis-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW04B	Cis-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW04D	Cis-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW04S	Cis-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW08S	Cis-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW09S	Cis-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW10B	Cis-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW10D	Cis-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW13S	Cis-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW05S	Cobalt	0.0356		MG/L	nc	NA
MW02M	Cobalt	0.034		MG/L	nc	NA
MW04S	Cobalt	0.016		MG/L	nc	NA
MW09S	Cobalt	0.014		MG/L	nc	NA
MW07S	Cobalt	0.0112		MG/L	nc	NA
MW08S	Cobalt	0.0083		MG/L	nc	NA
MW07D	Cobalt	0.0071		MG/L	nc	NA
MW11S	Cobalt	0.0053		MG/L	nc	NA
MW08S	Cobalt	0.0037		MG/L	nc	NA
MW01S	Cobalt	0.0036		MG/L	nc	NA
MW01S	Cobalt	0.0034		MG/L	nc	NA
MW10B	Cobalt	0.0026		MG/L	nc	NA
TMW3	Cobalt	0.0022		MG/L	nc	NA
MW13B	Cobalt	0.0017		MG/L	nc	NA
MW10D	Cobalt	0.0012		MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW10D	Cobalt	0.0012		MG/L	nc	NA
MW09S	Cobalt	0.0022	J	MG/L	nc	NA
MW03S	Cobalt	0.00085	J	MG/L	nc	NA
MW04S	Cobalt	0.0128	U	MG/L	nc	NA
MW12B	Cobalt	0.0062	U	MG/L	nc	NA
GEC2	Cobalt	0.0062	U	MG/L	nc	NA
MW07S	Cobalt	0.006	U	MG/L	nc	NA
MW12B	Cobalt	0.0053	U	MG/L	nc	NA
MW06S	Cobalt	0.0039	U	MG/L	nc	NA
MW02D	Cobalt	0.0037	U	MG/L	nc	NA
MW01S	Cobalt	0.0018	U	MG/L	nc	NA
MW01S	Cobalt	0.0018	U	MG/L	nc	NA
MW03S	Cobalt	0.0018	U	MG/L	nc	NA
MW04D	Cobalt	0.0018	U	MG/L	nc	NA
MW02S	Cobalt	0.0018	U	MG/L	nc	NA
MW13D	Cobalt	0.0007	U	MG/L	nc	NA
MW13S	Cobalt	0.0007	U	MG/L	nc	NA
MW11B	Cobalt	0.0007	U	MG/L	nc	NA
MW11M	Cobalt	0.0007	U	MG/L	nc	NA
MW12D	Cobalt	0.0007	U	MG/L	nc	NA
MW14M	Cobalt	0.0007	U	MG/L	nc	NA
MW15D	Cobalt	0.0007	U	MG/L	nc	NA
MW02S	Cobalt	0.0007	U	MG/L	nc	NA
MW06S	Cobalt	0.0007	U	MG/L	nc	NA
MW04B	Cobalt	0.0027	UJ	MG/L	nc	NA
GEC6	Cobalt	0.0012	UJ	MG/L	nc	NA
MW02M	Cobalt	0.0144		MG/L	nc	NA
MW09S	Cobalt	0.0135		MG/L	nc	NA
MW07S	Cobalt	0.0118		MG/L	nc	NA
MW08S	Cobalt	0.0081		MG/L	nc	NA
MW07D	Cobalt	0.0065		MG/L	nc	NA
MW08S	Cobalt	0.0052		MG/L	nc	NA
MW01S	Cobalt	0.0036		MG/L	nc	NA
MW01S	Cobalt	0.0035		MG/L	nc	NA
MW02D	Cobalt	0.0032	J	MG/L	nc	NA
MW05S	Cobalt	0.0031	J	MG/L	nc	NA
MW09S	Cobalt	0.0027	J	MG/L	nc	NA
MW03S	Cobalt	0.0007	J	MG/L	nc	NA
MW04S	Cobalt	0.0133	U	MG/L	nc	NA
MW04S	Cobalt	0.0099	U	MG/L	nc	NA
MW07S	Cobalt	0.0076	U	MG/L	nc	NA
GEC2	Cobalt	0.0072	U	MG/L	nc	NA
MW06S	Cobalt	0.0048	U	MG/L	nc	NA
TMW3	Cobalt	0.0026	U	MG/L	nc	NA
MW11S	Cobalt	0.0022	U	MG/L	nc	NA
MW13B	Cobalt	0.0019	U	MG/L	nc	NA
MW01S	Cobalt	0.0018	U	MG/L	nc	NA
MW01S	Cobalt	0.0018	U	MG/L	nc	NA
MW03S	Cobalt	0.0018	U	MG/L	nc	NA
MW04B	Cobalt	0.0018	U	MG/L	nc	NA
MW04D	Cobalt	0.0018	U	MG/L	nc	NA
MW02S	Cobalt	0.0018	U	MG/L	nc	NA
MW10D	Cobalt	0.0007	U	MG/L	nc	NA
MW10D	Cobalt	0.0007	U	MG/L	nc	NA
MW13S	Cobalt	0.0007	U	MG/L	nc	NA
MW12B	Cobalt	0.0007	U	MG/L	nc	NA
MW11B	Cobalt	0.0007	U	MG/L	nc	NA
MW11M	Cobalt	0.0007	U	MG/L	nc	NA
MW14M	Cobalt	0.0007	U	MG/L	nc	NA
MW15D	Cobalt	0.0007	U	MG/L	nc	NA
MW02S	Cobalt	0.0007	U	MG/L	nc	NA
MW06S	Cobalt	0.0007	U	MG/L	nc	NA
MW10B	Cobalt	0.0012	UJ	MG/L	nc	NA
MW12B	Cobalt	0.0012	UJ	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW12D	Cobalt	0.0012	UJ	MG/L	nc	NA
MW13D	Cobalt	0.00095	UJ	MG/L	nc	NA
GEC6	Cobalt	0.00071	UJ	MG/L	nc	NA
MW03S	Copper	0.05		MG/L	1.3	N
MW03S	Copper	0.0202		MG/L	1.3	N
MW04S	Copper	0.0184		MG/L	1.3	N
MW06S	Copper	0.0113		MG/L	1.3	N
MW07S	Copper	0.0112		MG/L	1.3	N
MW04D	Copper	0.0099		MG/L	1.3	N
MW04S	Copper	0.0052		MG/L	1.3	N
MW05S	Copper	0.0048		MG/L	1.3	N
MW08S	Copper	0.0021		MG/L	1.3	N
MW09S	Copper	0.0017		MG/L	1.3	N
MW09S	Copper	0.004	J	MG/L	1.3	N
MW08S	Copper	0.0022	J	MG/L	1.3	N
MW12B	Copper	0.014	U	MG/L	1.3	NA
MW12B	Copper	0.0137	U	MG/L	1.3	NA
MW13S	Copper	0.0122	U	MG/L	1.3	NA
MW10D	Copper	0.0103	U	MG/L	1.3	NA
TMW3	Copper	0.0102	U	MG/L	1.3	NA
MW13B	Copper	0.0096	U	MG/L	1.3	NA
MW11S	Copper	0.0088	U	MG/L	1.3	NA
MW15D	Copper	0.0087	U	MG/L	1.3	NA
MW13D	Copper	0.0085	U	MG/L	1.3	NA
MW11B	Copper	0.0081	U	MG/L	1.3	NA
MW12D	Copper	0.0081	U	MG/L	1.3	NA
MW14M	Copper	0.0079	U	MG/L	1.3	NA
MW10B	Copper	0.0073	U	MG/L	1.3	NA
MW10D	Copper	0.0073	U	MG/L	1.3	NA
MW11M	Copper	0.0071	U	MG/L	1.3	NA
GEC2	Copper	0.0063	U	MG/L	1.3	NA
GEC6	Copper	0.0054	U	MG/L	1.3	NA
MW01S	Copper	0.0022	U	MG/L	1.3	NA
MW01S	Copper	0.0022	U	MG/L	1.3	NA
MW07D	Copper	0.0022	U	MG/L	1.3	NA
MW04B	Copper	0.0022	U	MG/L	1.3	NA
MW02D	Copper	0.0022	U	MG/L	1.3	NA
MW02M	Copper	0.0022	U	MG/L	1.3	NA
MW02S	Copper	0.0022	U	MG/L	1.3	NA
MW02S	Copper	0.0007	U	MG/L	1.3	NA
MW06S	Copper	0.0007	U	MG/L	1.3	NA
MW07S	Copper	0.0007	U	MG/L	1.3	NA
MW01S	Copper	0.0007	U	MG/L	1.3	NA
MW01S	Copper	0.0007	U	MG/L	1.3	NA
MW03S	Copper	0.0401		MG/L	1.3	N
MW03S	Copper	0.0152		MG/L	1.3	N
MW06S	Copper	0.0112		MG/L	1.3	N
MW04B	Copper	0.0105		MG/L	1.3	N
MW04S	Copper	0.0091		MG/L	1.3	N
MW07S	Copper	0.0076		MG/L	1.3	N
MW04D	Copper	0.0055		MG/L	1.3	N
MW02S	Copper	0.0053		MG/L	1.3	N
MW05S	Copper	0.0034	J	MG/L	1.3	N
MW08S	Copper	0.0024	J	MG/L	1.3	N
MW08S	Copper	0.00071	J	MG/L	1.3	N
MW13D	Copper	0.0094	U	MG/L	1.3	NA
MW12B	Copper	0.0088	U	MG/L	1.3	NA
GEC6	Copper	0.0086	U	MG/L	1.3	NA
MW11B	Copper	0.0084	U	MG/L	1.3	NA
MW14M	Copper	0.0084	U	MG/L	1.3	NA
MW10D	Copper	0.008	U	MG/L	1.3	NA
MW11M	Copper	0.0078	U	MG/L	1.3	NA
MW13B	Copper	0.0076	U	MG/L	1.3	NA
TMW3	Copper	0.0075	U	MG/L	1.3	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW13S	Copper	0.0072	U	MG/L	1.3	NA
MW12D	Copper	0.0072	U	MG/L	1.3	NA
MW11S	Copper	0.0071	U	MG/L	1.3	NA
MW10B	Copper	0.007	U	MG/L	1.3	NA
MW10D	Copper	0.0069	U	MG/L	1.3	NA
MW12B	Copper	0.0062	U	MG/L	1.3	NA
MW15D	Copper	0.0048	U	MG/L	1.3	NA
GEC2	Copper	0.0047	U	MG/L	1.3	NA
MW01S	Copper	0.0022	U	MG/L	1.3	NA
MW01S	Copper	0.0022	U	MG/L	1.3	NA
MW07D	Copper	0.0022	U	MG/L	1.3	NA
MW09S	Copper	0.0022	U	MG/L	1.3	NA
MW04S	Copper	0.0022	U	MG/L	1.3	NA
MW02D	Copper	0.0022	U	MG/L	1.3	NA
MW02M	Copper	0.0022	U	MG/L	1.3	NA
MW02S	Copper	0.0007	U	MG/L	1.3	NA
MW06S	Copper	0.0007	U	MG/L	1.3	NA
MW07S	Copper	0.0007	U	MG/L	1.3	NA
MW01S	Copper	0.0007	U	MG/L	1.3	NA
MW01S	Copper	0.0007	U	MG/L	1.3	NA
MW09S	Copper	0.0007	U	MG/L	1.3	NA
MW-LEA-01	Cyclohexane	20	Uw	MG/L	nc	NA
MW-LEA-01	Cyclohexane	2	Uw	MG/L	nc	NA
MW-LEA-02	Cyclohexane	2	Uw	MG/L	nc	NA
MW-05S	Cyclohexane	2	Uw	MG/L	nc	NA
MW-LEA-02	Cyclohexane	2	Uw	MG/L	nc	NA
MW-LEA-02	Cyclohexane	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Cyclohexane	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Cyclohexane	0.004	Uw	MG/L	nc	NA
MW06S	Cyclohexane	0.004	J	MG/L	nc	NA
MW05S	Cyclohexane	1.7	U	MG/L	nc	NA
MW10D	Cyclohexane	0.01	U	MG/L	nc	NA
MW10B	Cyclohexane	0.01	U	MG/L	nc	NA
MW10D	Cyclohexane	0.01	U	MG/L	nc	NA
MW13B	Cyclohexane	0.01	U	MG/L	nc	NA
MW13D	Cyclohexane	0.01	U	MG/L	nc	NA
MW13S	Cyclohexane	0.01	U	MG/L	nc	NA
TMW3	Cyclohexane	0.01	U	MG/L	nc	NA
MW12B	Cyclohexane	0.01	U	MG/L	nc	NA
MW11B	Cyclohexane	0.01	U	MG/L	nc	NA
MW11M	Cyclohexane	0.01	U	MG/L	nc	NA
MW11S	Cyclohexane	0.01	U	MG/L	nc	NA
MW12B	Cyclohexane	0.01	U	MG/L	nc	NA
MW12D	Cyclohexane	0.01	U	MG/L	nc	NA
GEC2	Cyclohexane	0.01	U	MG/L	nc	NA
GEC6	Cyclohexane	0.01	U	MG/L	nc	NA
MW14M	Cyclohexane	0.01	U	MG/L	nc	NA
MW15D	Cyclohexane	0.01	U	MG/L	nc	NA
MW01S	Cyclohexane	0.01	U	MG/L	nc	NA
MW01S	Cyclohexane	0.01	U	MG/L	nc	NA
MW03S	Cyclohexane	0.01	U	MG/L	nc	NA
MW07D	Cyclohexane	0.01	U	MG/L	nc	NA
MW07S	Cyclohexane	0.01	U	MG/L	nc	NA
MW08S	Cyclohexane	0.01	U	MG/L	nc	NA
MW09S	Cyclohexane	0.01	U	MG/L	nc	NA
MW04S	Cyclohexane	0.01	U	MG/L	nc	NA
MW04B	Cyclohexane	0.01	U	MG/L	nc	NA
MW04D	Cyclohexane	0.01	U	MG/L	nc	NA
MW04S	Cyclohexane	0.01	U	MG/L	nc	NA
MW02D	Cyclohexane	0.01	U	MG/L	nc	NA
MW02M	Cyclohexane	0.01	U	MG/L	nc	NA
MW02S	Cyclohexane	0.01	U	MG/L	nc	NA
MW02S	Cyclohexane	0.01	U	MG/L	nc	NA
MW06S	Cyclohexane	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW07S	Cyclohexane	0.01	U	MG/L	nc	NA
MW01S	Cyclohexane	0.01	U	MG/L	nc	NA
MW01S	Cyclohexane	0.01	U	MG/L	nc	NA
MW03S	Cyclohexane	0.01	U	MG/L	nc	NA
MW08S	Cyclohexane	0.01	U	MG/L	nc	NA
MW09S	Cyclohexane	0.01	U	MG/L	nc	NA
MW09S	Cyclohexanone	0.004	NJ	MG/L	nc	NA
MW01S	Cyclopropanenonanoic Acid, 2-[(2-butylcy	0.002	NJ	MG/L	nc	NA
MW08S	Cyclotrisiloxane, Hexamethyl-	0.006	J	MG/L	nc	NA
MW10D	delta-BHC	0.00005	U	MG/L	nc	NA
MW10B	delta-BHC	0.00005	U	MG/L	nc	NA
MW10D	delta-BHC	0.00005	U	MG/L	nc	NA
MW13B	delta-BHC	0.00005	U	MG/L	nc	NA
MW13D	delta-BHC	0.00005	U	MG/L	nc	NA
MW13S	delta-BHC	0.00005	U	MG/L	nc	NA
TMW3	delta-BHC	0.00005	U	MG/L	nc	NA
MW12B	delta-BHC	0.00005	U	MG/L	nc	NA
MW11B	delta-BHC	0.00005	U	MG/L	nc	NA
MW11M	delta-BHC	0.00005	U	MG/L	nc	NA
MW11S	delta-BHC	0.00005	U	MG/L	nc	NA
MW12B	delta-BHC	0.00005	U	MG/L	nc	NA
MW12D	delta-BHC	0.00005	U	MG/L	nc	NA
GEC2	delta-BHC	0.00005	U	MG/L	nc	NA
GEC6	delta-BHC	0.00005	U	MG/L	nc	NA
MW14M	delta-BHC	0.00005	U	MG/L	nc	NA
MW15D	delta-BHC	0.00005	U	MG/L	nc	NA
MW01S	delta-BHC	0.00005	U	MG/L	nc	NA
MW01S	delta-BHC	0.00005	U	MG/L	nc	NA
MW03S	delta-BHC	0.00005	U	MG/L	nc	NA
MW05S	delta-BHC	0.00005	U	MG/L	nc	NA
MW06S	delta-BHC	0.00005	U	MG/L	nc	NA
MW07D	delta-BHC	0.00005	U	MG/L	nc	NA
MW07S	delta-BHC	0.00005	U	MG/L	nc	NA
MW08S	delta-BHC	0.00005	U	MG/L	nc	NA
MW09S	delta-BHC	0.00005	U	MG/L	nc	NA
MW04S	delta-BHC	0.00005	U	MG/L	nc	NA
MW04B	delta-BHC	0.00005	U	MG/L	nc	NA
MW04D	delta-BHC	0.00005	U	MG/L	nc	NA
MW04S	delta-BHC	0.00005	U	MG/L	nc	NA
MW02M	delta-BHC	0.00005	U	MG/L	nc	NA
MW02S	delta-BHC	0.00005	U	MG/L	nc	NA
MW02S	delta-BHC	0.00005	U	MG/L	nc	NA
MW06S	delta-BHC	0.00005	U	MG/L	nc	NA
MW07S	delta-BHC	0.00005	U	MG/L	nc	NA
MW01S	delta-BHC	0.00005	U	MG/L	nc	NA
MW01S	delta-BHC	0.00005	U	MG/L	nc	NA
MW03S	delta-BHC	0.00005	U	MG/L	nc	NA
MW08S	delta-BHC	0.00005	U	MG/L	nc	NA
MW09S	delta-BHC	0.00005	U	MG/L	nc	NA
MW02D	delta-BHC	0.00005	UJ	MG/L	nc	NA
GEC3	Dibenzo(a,h)anthracene	0.00047		MG/L	nc	NA
MW15D	Dibenzo(a,h)anthracene	0.014	U	MG/L	nc	NA
MW10D	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW10B	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW10D	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW13B	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW13D	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW13S	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
TMW3	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW12B	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW11B	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW11M	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW11S	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW12B	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW12D	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
GEC2	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
GEC6	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW14M	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW01S	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW01S	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW03S	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW05S	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW06S	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW07D	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW07S	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW08S	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW09S	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW04S	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW04B	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW04D	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW04S	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW02D	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW02M	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW02S	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW02S	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW06S	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW07S	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW01S	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW01S	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW03S	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW08S	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
MW09S	Dibenzo(a,h)anthracene	0.01	U	MG/L	nc	NA
GEC1	Dibenzo(a,h)anthracene	0.00018	U	MG/L	nc	NA
GEC2	Dibenzo(a,h)anthracene	0.00014	U	MG/L	nc	NA
GEC7	Dibenzo(a,h)anthracene	0.00014	U	MG/L	nc	NA
GEC4	Dibenzo(a,h)anthracene	0.00012	U	MG/L	nc	NA
GEC5	Dibenzo(a,h)anthracene	0.00012	U	MG/L	nc	NA
GEC6	Dibenzo(a,h)anthracene	0.00012	U	MG/L	nc	NA
MW05S	Dibenzo[b,e][1,4]dioxin, 1,2,3,4-tetrach	0.031	NJ	MG/L	nc	NA
MW15D	Dibenzofuran	0.014	U	MG/L	nc	NA
MW10D	Dibenzofuran	0.01	U	MG/L	nc	NA
MW10B	Dibenzofuran	0.01	U	MG/L	nc	NA
MW10D	Dibenzofuran	0.01	U	MG/L	nc	NA
MW13B	Dibenzofuran	0.01	U	MG/L	nc	NA
MW13D	Dibenzofuran	0.01	U	MG/L	nc	NA
MW13S	Dibenzofuran	0.01	U	MG/L	nc	NA
TMW3	Dibenzofuran	0.01	U	MG/L	nc	NA
MW12B	Dibenzofuran	0.01	U	MG/L	nc	NA
MW11B	Dibenzofuran	0.01	U	MG/L	nc	NA
MW11M	Dibenzofuran	0.01	U	MG/L	nc	NA
MW11S	Dibenzofuran	0.01	U	MG/L	nc	NA
MW12B	Dibenzofuran	0.01	U	MG/L	nc	NA
MW12D	Dibenzofuran	0.01	U	MG/L	nc	NA
GEC2	Dibenzofuran	0.01	U	MG/L	nc	NA
GEC6	Dibenzofuran	0.01	U	MG/L	nc	NA
MW14M	Dibenzofuran	0.01	U	MG/L	nc	NA
MW01S	Dibenzofuran	0.01	U	MG/L	nc	NA
MW01S	Dibenzofuran	0.01	U	MG/L	nc	NA
MW03S	Dibenzofuran	0.01	U	MG/L	nc	NA
MW05S	Dibenzofuran	0.01	U	MG/L	nc	NA
MW06S	Dibenzofuran	0.01	U	MG/L	nc	NA
MW07D	Dibenzofuran	0.01	U	MG/L	nc	NA
MW07S	Dibenzofuran	0.01	U	MG/L	nc	NA
MW08S	Dibenzofuran	0.01	U	MG/L	nc	NA
MW09S	Dibenzofuran	0.01	U	MG/L	nc	NA
MW04S	Dibenzofuran	0.01	U	MG/L	nc	NA
MW04B	Dibenzofuran	0.01	U	MG/L	nc	NA
MW04D	Dibenzofuran	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW04S	Dibenzofuran	0.01	U	MG/L	nc	NA
MW02D	Dibenzofuran	0.01	U	MG/L	nc	NA
MW02M	Dibenzofuran	0.01	U	MG/L	nc	NA
MW02S	Dibenzofuran	0.01	U	MG/L	nc	NA
MW02S	Dibenzofuran	0.01	U	MG/L	nc	NA
MW06S	Dibenzofuran	0.01	U	MG/L	nc	NA
MW07S	Dibenzofuran	0.01	U	MG/L	nc	NA
MW01S	Dibenzofuran	0.01	U	MG/L	nc	NA
MW01S	Dibenzofuran	0.01	U	MG/L	nc	NA
MW03S	Dibenzofuran	0.01	U	MG/L	nc	NA
MW08S	Dibenzofuran	0.01	U	MG/L	nc	NA
MW09S	Dibenzofuran	0.01	U	MG/L	nc	NA
MW05S	Dibromochloromethane	1.7	U	MG/L	nc	NA
MW05S	DIBROMOCHLOROMETHANE	1	U	MG/L	nc	NA
MW05S	DIBROMOCHLOROMETHANE	1	U	MG/L	nc	NA
MW05S	Dibromochloromethane	1	U	MG/L	nc	NA
MW05S	Dibromochloromethane	1	U	MG/L	nc	NA
MW14M	Dibromochloromethane	0.1	U	MG/L	nc	NA
MW06S	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW13D	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW10D	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW10B	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW10D	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW13B	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW13D	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW13S	Dibromochloromethane	0.01	U	MG/L	nc	NA
TMW3	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW12B	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW11B	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW11M	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW11S	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW12B	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW12D	Dibromochloromethane	0.01	U	MG/L	nc	NA
GEC2	Dibromochloromethane	0.01	U	MG/L	nc	NA
GEC6	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW14M	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW15D	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW01S	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW01S	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW03S	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW06S	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW07D	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW07S	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW08S	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW09S	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW04S	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW04B	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW04D	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW04S	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW02D	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW02M	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW02S	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW02S	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW06S	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW07S	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW01S	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW01S	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW03S	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW08S	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW09S	Dibromochloromethane	0.01	U	MG/L	nc	NA
MW06S	Dibromochloromethane	0.006	U	MG/L	nc	NA
MW02M	Dibromochloromethane	0.005	U	MG/L	nc	NA
MW02D	Dibromochloromethane	0.004	U	MG/L	nc	NA
MW13B	Dibromochloromethane	0.004	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW03S	Dibromochloromethane	0.001	U	MG/L	nc	NA
GEC3	Dibromochloromethane	0.001	U	MG/L	nc	NA
MW01S	Dibromochloromethane	0.001	U	MG/L	nc	NA
MW11S	Dibromochloromethane	0.001	U	MG/L	nc	NA
MW12B	Dibromochloromethane	0.001	U	MG/L	nc	NA
MW12D	Dibromochloromethane	0.001	U	MG/L	nc	NA
GEC1	Dibromochloromethane	0.001	U	MG/L	nc	NA
GEC2	Dibromochloromethane	0.001	U	MG/L	nc	NA
GEC4	Dibromochloromethane	0.001	U	MG/L	nc	NA
GEC5	Dibromochloromethane	0.001	U	MG/L	nc	NA
GEC6	Dibromochloromethane	0.001	U	MG/L	nc	NA
GEC7	Dibromochloromethane	0.001	U	MG/L	nc	NA
MW07D	Dibromochloromethane	0.001	U	MG/L	nc	NA
MW07S	Dibromochloromethane	0.001	U	MG/L	nc	NA
MW11B	Dibromochloromethane	0.001	U	MG/L	nc	NA
MW11M	Dibromochloromethane	0.001	U	MG/L	nc	NA
MW15D	Dibromochloromethane	0.001	U	MG/L	nc	NA
MW02S	Dibromochloromethane	0.001	U	MG/L	nc	NA
MW04B	Dibromochloromethane	0.001	U	MG/L	nc	NA
MW04D	Dibromochloromethane	0.001	U	MG/L	nc	NA
MW04S	Dibromochloromethane	0.001	U	MG/L	nc	NA
MW08S	Dibromochloromethane	0.001	U	MG/L	nc	NA
MW09S	Dibromochloromethane	0.001	U	MG/L	nc	NA
MW10B	Dibromochloromethane	0.001	U	MG/L	nc	NA
MW10D	Dibromochloromethane	0.001	U	MG/L	nc	NA
MW13S	Dibromochloromethane	0.001	U	MG/L	nc	NA
MW05S	DIBROMOMETHANE	1	U	MG/L	0.00005	NA
MW05S	DIBROMOMETHANE	1	U	MG/L	0.00005	NA
MW05S	Dibromomethane	1	U	MG/L	0.00005	NA
MW05S	Dibromomethane	1	U	MG/L	0.00005	NA
MW14M	Dibromomethane	0.1	U	MG/L	0.00005	NA
MW06S	Dibromomethane	0.01	U	MG/L	0.00005	NA
MW13D	Dibromomethane	0.01	U	MG/L	0.00005	NA
MW06S	Dibromomethane	0.006	U	MG/L	0.00005	NA
MW02M	Dibromomethane	0.005	U	MG/L	0.00005	NA
MW02D	Dibromomethane	0.004	U	MG/L	0.00005	NA
MW13B	Dibromomethane	0.004	U	MG/L	0.00005	NA
MW03S	Dibromomethane	0.001	U	MG/L	0.00005	NA
GEC3	Dibromomethane	0.001	U	MG/L	0.00005	NA
MW01S	Dibromomethane	0.001	U	MG/L	0.00005	NA
MW11S	Dibromomethane	0.001	U	MG/L	0.00005	NA
MW12B	Dibromomethane	0.001	U	MG/L	0.00005	NA
MW12D	Dibromomethane	0.001	U	MG/L	0.00005	NA
GEC1	Dibromomethane	0.001	U	MG/L	0.00005	NA
GEC2	Dibromomethane	0.001	U	MG/L	0.00005	NA
GEC4	Dibromomethane	0.001	U	MG/L	0.00005	NA
GEC5	Dibromomethane	0.001	U	MG/L	0.00005	NA
GEC6	Dibromomethane	0.001	U	MG/L	0.00005	NA
GEC7	Dibromomethane	0.001	U	MG/L	0.00005	NA
MW07D	Dibromomethane	0.001	U	MG/L	0.00005	NA
MW07S	Dibromomethane	0.001	U	MG/L	0.00005	NA
MW11B	Dibromomethane	0.001	U	MG/L	0.00005	NA
MW11M	Dibromomethane	0.001	U	MG/L	0.00005	NA
MW15D	Dibromomethane	0.001	U	MG/L	0.00005	NA
MW02S	Dibromomethane	0.001	U	MG/L	0.00005	NA
MW04B	Dibromomethane	0.001	U	MG/L	0.00005	NA
MW04D	Dibromomethane	0.001	U	MG/L	0.00005	NA
MW04S	Dibromomethane	0.001	U	MG/L	0.00005	NA
MW08S	Dibromomethane	0.001	U	MG/L	0.00005	NA
MW09S	Dibromomethane	0.001	U	MG/L	0.00005	NA
MW10B	Dibromomethane	0.001	U	MG/L	0.00005	NA
MW10D	Dibromomethane	0.001	U	MG/L	0.00005	NA
MW13S	Dibromomethane	0.001	U	MG/L	0.00005	NA
MW-LEA-01	Dichlorodifluoromethane	20	Uw	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW-LEA-01	Dichlorodifluoromethane	2	Uw	MG/L	nc	NA
MW-LEA-02	Dichlorodifluoromethane	2	Uw	MG/L	nc	NA
MW-05S	Dichlorodifluoromethane	2	Uw	MG/L	nc	NA
MW-LEA-02	Dichlorodifluoromethane	2	Uw	MG/L	nc	NA
MW-LEA-02	Dichlorodifluoromethane	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Dichlorodifluoromethane	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Dichlorodifluoromethane	0.004	Uw	MG/L	nc	NA
MW05S	Dichlorodifluoromethane	1	U	MG/L	nc	NA
MW05S	Dichlorodifluoromethane	1	U	MG/L	nc	NA
MW14M	Dichlorodifluoromethane	0.1	U	MG/L	nc	NA
MW06S	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
MW13D	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
MW10D	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
MW10B	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
MW10D	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
MW13B	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
MW13D	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
MW13S	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
TMW3	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
MW12B	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
MW11B	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
MW11M	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
MW11S	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
MW12B	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
MW12D	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
GEC2	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
GEC6	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
MW14M	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
MW15D	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
MW07D	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
MW04S	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
MW04B	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
MW04D	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
MW04S	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
MW02D	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
MW02M	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
MW02S	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
MW02S	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
MW06S	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
MW07S	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
MW01S	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
MW01S	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
MW03S	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
MW08S	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
MW09S	Dichlorodifluoromethane	0.01	U	MG/L	nc	NA
MW06S	Dichlorodifluoromethane	0.006	U	MG/L	nc	NA
MW02M	Dichlorodifluoromethane	0.005	U	MG/L	nc	NA
MW02D	Dichlorodifluoromethane	0.004	U	MG/L	nc	NA
MW13B	Dichlorodifluoromethane	0.004	U	MG/L	nc	NA
MW03S	Dichlorodifluoromethane	0.001	U	MG/L	nc	NA
GEC3	Dichlorodifluoromethane	0.001	U	MG/L	nc	NA
MW01S	Dichlorodifluoromethane	0.001	U	MG/L	nc	NA
MW11S	Dichlorodifluoromethane	0.001	U	MG/L	nc	NA
MW12B	Dichlorodifluoromethane	0.001	U	MG/L	nc	NA
MW12D	Dichlorodifluoromethane	0.001	U	MG/L	nc	NA
GEC1	Dichlorodifluoromethane	0.001	U	MG/L	nc	NA
GEC2	Dichlorodifluoromethane	0.001	U	MG/L	nc	NA
GEC4	Dichlorodifluoromethane	0.001	U	MG/L	nc	NA
GEC5	Dichlorodifluoromethane	0.001	U	MG/L	nc	NA
GEC6	Dichlorodifluoromethane	0.001	U	MG/L	nc	NA
GEC7	Dichlorodifluoromethane	0.001	U	MG/L	nc	NA
MW07D	Dichlorodifluoromethane	0.001	U	MG/L	nc	NA
MW07S	Dichlorodifluoromethane	0.001	U	MG/L	nc	NA
MW11B	Dichlorodifluoromethane	0.001	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW11M	Dichlorodifluoromethane	0.001	U	MG/L	nc	NA
MW15D	Dichlorodifluoromethane	0.001	U	MG/L	nc	NA
MW02S	Dichlorodifluoromethane	0.001	U	MG/L	nc	NA
MW04B	Dichlorodifluoromethane	0.001	U	MG/L	nc	NA
MW04D	Dichlorodifluoromethane	0.001	U	MG/L	nc	NA
MW04S	Dichlorodifluoromethane	0.001	U	MG/L	nc	NA
MW08S	Dichlorodifluoromethane	0.001	U	MG/L	nc	NA
MW09S	Dichlorodifluoromethane	0.001	U	MG/L	nc	NA
MW10B	Dichlorodifluoromethane	0.001	U	MG/L	nc	NA
MW10D	Dichlorodifluoromethane	0.001	U	MG/L	nc	NA
MW13S	Dichlorodifluoromethane	0.001	U	MG/L	nc	NA
MW05S	Dichlorodifluoromethane	1.7	UJ	MG/L	nc	NA
MW05S	DICHLORODIFLUOROMETHANE	1	UJ	MG/L	nc	NA
MW05S	DICHLORODIFLUOROMETHANE	1	UJ	MG/L	nc	NA
MW01S	Dichlorodifluoromethane	0.01	UJ	MG/L	nc	NA
MW01S	Dichlorodifluoromethane	0.01	UJ	MG/L	nc	NA
MW03S	Dichlorodifluoromethane	0.01	UJ	MG/L	nc	NA
MW06S	Dichlorodifluoromethane	0.01	UJ	MG/L	nc	NA
MW07S	Dichlorodifluoromethane	0.01	UJ	MG/L	nc	NA
MW08S	Dichlorodifluoromethane	0.01	UJ	MG/L	nc	NA
MW09S	Dichlorodifluoromethane	0.01	UJ	MG/L	nc	NA
MW06S	Dieldrin	0.00011		MG/L	nc	NA
MW10D	Dieldrin	0.0001	U	MG/L	nc	NA
MW10B	Dieldrin	0.0001	U	MG/L	nc	NA
MW10D	Dieldrin	0.0001	U	MG/L	nc	NA
MW13B	Dieldrin	0.0001	U	MG/L	nc	NA
MW13D	Dieldrin	0.0001	U	MG/L	nc	NA
MW13S	Dieldrin	0.0001	U	MG/L	nc	NA
TMW3	Dieldrin	0.0001	U	MG/L	nc	NA
MW12B	Dieldrin	0.0001	U	MG/L	nc	NA
MW11B	Dieldrin	0.0001	U	MG/L	nc	NA
MW11M	Dieldrin	0.0001	U	MG/L	nc	NA
MW11S	Dieldrin	0.0001	U	MG/L	nc	NA
MW12B	Dieldrin	0.0001	U	MG/L	nc	NA
MW12D	Dieldrin	0.0001	U	MG/L	nc	NA
GEC2	Dieldrin	0.0001	U	MG/L	nc	NA
GEC6	Dieldrin	0.0001	U	MG/L	nc	NA
MW14M	Dieldrin	0.0001	U	MG/L	nc	NA
MW15D	Dieldrin	0.0001	U	MG/L	nc	NA
MW01S	Dieldrin	0.0001	U	MG/L	nc	NA
MW01S	Dieldrin	0.0001	U	MG/L	nc	NA
MW03S	Dieldrin	0.0001	U	MG/L	nc	NA
MW05S	Dieldrin	0.0001	U	MG/L	nc	NA
MW07D	Dieldrin	0.0001	U	MG/L	nc	NA
MW07S	Dieldrin	0.0001	U	MG/L	nc	NA
MW08S	Dieldrin	0.0001	U	MG/L	nc	NA
MW09S	Dieldrin	0.0001	U	MG/L	nc	NA
MW04S	Dieldrin	0.0001	U	MG/L	nc	NA
MW04B	Dieldrin	0.0001	U	MG/L	nc	NA
MW04D	Dieldrin	0.0001	U	MG/L	nc	NA
MW04S	Dieldrin	0.0001	U	MG/L	nc	NA
MW02M	Dieldrin	0.0001	U	MG/L	nc	NA
MW02S	Dieldrin	0.0001	U	MG/L	nc	NA
MW02S	Dieldrin	0.0001	U	MG/L	nc	NA
MW06S	Dieldrin	0.0001	U	MG/L	nc	NA
MW07S	Dieldrin	0.0001	U	MG/L	nc	NA
MW01S	Dieldrin	0.0001	U	MG/L	nc	NA
MW01S	Dieldrin	0.0001	U	MG/L	nc	NA
MW03S	Dieldrin	0.0001	U	MG/L	nc	NA
MW08S	Dieldrin	0.0001	U	MG/L	nc	NA
MW09S	Dieldrin	0.0001	U	MG/L	nc	NA
MW02D	Dieldrin	0.0001	UJ	MG/L	nc	NA
MW15D	Diethylphthalate	0.014	U	MG/L	nc	NA
MW10D	Diethylphthalate	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW10B	Diethylphthalate	0.01	U	MG/L	nc	NA
MW10D	Diethylphthalate	0.01	U	MG/L	nc	NA
MW13B	Diethylphthalate	0.01	U	MG/L	nc	NA
MW13D	Diethylphthalate	0.01	U	MG/L	nc	NA
MW13S	Diethylphthalate	0.01	U	MG/L	nc	NA
TMW3	Diethylphthalate	0.01	U	MG/L	nc	NA
MW12B	Diethylphthalate	0.01	U	MG/L	nc	NA
MW11B	Diethylphthalate	0.01	U	MG/L	nc	NA
MW11M	Diethylphthalate	0.01	U	MG/L	nc	NA
MW11S	Diethylphthalate	0.01	U	MG/L	nc	NA
MW12B	Diethylphthalate	0.01	U	MG/L	nc	NA
MW12D	Diethylphthalate	0.01	U	MG/L	nc	NA
GEC2	Diethylphthalate	0.01	U	MG/L	nc	NA
GEC6	Diethylphthalate	0.01	U	MG/L	nc	NA
MW14M	Diethylphthalate	0.01	U	MG/L	nc	NA
MW01S	Diethylphthalate	0.01	U	MG/L	nc	NA
MW01S	Diethylphthalate	0.01	U	MG/L	nc	NA
MW03S	Diethylphthalate	0.01	U	MG/L	nc	NA
MW05S	Diethylphthalate	0.01	U	MG/L	nc	NA
MW06S	Diethylphthalate	0.01	U	MG/L	nc	NA
MW07D	Diethylphthalate	0.01	U	MG/L	nc	NA
MW07S	Diethylphthalate	0.01	U	MG/L	nc	NA
MW08S	Diethylphthalate	0.01	U	MG/L	nc	NA
MW09S	Diethylphthalate	0.01	U	MG/L	nc	NA
MW04S	Diethylphthalate	0.01	U	MG/L	nc	NA
MW04B	Diethylphthalate	0.01	U	MG/L	nc	NA
MW04D	Diethylphthalate	0.01	U	MG/L	nc	NA
MW04S	Diethylphthalate	0.01	U	MG/L	nc	NA
MW02D	Diethylphthalate	0.01	U	MG/L	nc	NA
MW02M	Diethylphthalate	0.01	U	MG/L	nc	NA
MW02S	Diethylphthalate	0.01	U	MG/L	nc	NA
MW02S	Diethylphthalate	0.01	U	MG/L	nc	NA
MW06S	Diethylphthalate	0.01	U	MG/L	nc	NA
MW07S	Diethylphthalate	0.01	U	MG/L	nc	NA
MW01S	Diethylphthalate	0.01	U	MG/L	nc	NA
MW01S	Diethylphthalate	0.01	U	MG/L	nc	NA
MW03S	Diethylphthalate	0.01	U	MG/L	nc	NA
MW08S	Diethylphthalate	0.01	U	MG/L	nc	NA
MW09S	Diethylphthalate	0.01	U	MG/L	nc	NA
MW15D	Dimethylphthalate	0.014	U	MG/L	nc	NA
MW10D	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW10B	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW10D	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW13B	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW13D	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW13S	Dimethylphthalate	0.01	U	MG/L	nc	NA
TMW3	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW12B	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW11B	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW11M	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW11S	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW12B	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW12D	Dimethylphthalate	0.01	U	MG/L	nc	NA
GEC2	Dimethylphthalate	0.01	U	MG/L	nc	NA
GEC6	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW14M	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW01S	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW01S	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW03S	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW05S	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW06S	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW07D	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW07S	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW08S	Dimethylphthalate	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW09S	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW04S	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW04B	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW04D	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW04S	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW02D	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW02M	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW02S	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW02S	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW06S	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW07S	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW01S	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW01S	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW03S	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW08S	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW09S	Dimethylphthalate	0.01	U	MG/L	nc	NA
MW15D	Di-n-butylphthalate	0.014	U	MG/L	nc	NA
MW10D	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW10B	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW10D	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW13B	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW13D	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
TMW3	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW12B	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW11B	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW11M	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW11S	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW12B	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW12D	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
GEC2	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
GEC6	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW14M	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW01S	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW01S	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW03S	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW05S	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW06S	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW07D	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW07S	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW08S	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW09S	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW04S	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW04B	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW04D	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW04S	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW02D	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW02M	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW02S	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW02S	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW06S	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW07S	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW01S	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW01S	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW03S	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW08S	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW09S	Di-n-butylphthalate	0.01	U	MG/L	nc	NA
MW13S	Di-n-butylphthalate	0.01	UJ	MG/L	nc	NA
MW10D	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW10B	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW10D	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW13B	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW13D	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
TMW3	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW12B	Di-n-octylphthalate	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW11B	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW11M	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW11S	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW12B	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW12D	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
GEC6	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW14M	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW01S	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW01S	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW03S	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW05S	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW06S	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW07D	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW07S	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW08S	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW09S	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW04S	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW04B	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW04D	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW04S	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW02D	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW02M	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW02S	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW02S	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW06S	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW07S	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW01S	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW01S	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW03S	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW08S	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW09S	Di-n-octylphthalate	0.01	U	MG/L	nc	NA
MW15D	Di-n-octylphthalate	0.014	UJ	MG/L	nc	NA
MW13S	Di-n-octylphthalate	0.01	UJ	MG/L	nc	NA
GEC2	Di-n-octylphthalate	0.01	UJ	MG/L	nc	NA
MW10D	Endosulfan I	0.00005	U	MG/L	nc	NA
MW10B	Endosulfan I	0.00005	U	MG/L	nc	NA
MW10D	Endosulfan I	0.00005	U	MG/L	nc	NA
MW13B	Endosulfan I	0.00005	U	MG/L	nc	NA
MW13D	Endosulfan I	0.00005	U	MG/L	nc	NA
MW13S	Endosulfan I	0.00005	U	MG/L	nc	NA
TMW3	Endosulfan I	0.00005	U	MG/L	nc	NA
MW12B	Endosulfan I	0.00005	U	MG/L	nc	NA
MW11B	Endosulfan I	0.00005	U	MG/L	nc	NA
MW11M	Endosulfan I	0.00005	U	MG/L	nc	NA
MW11S	Endosulfan I	0.00005	U	MG/L	nc	NA
MW12B	Endosulfan I	0.00005	U	MG/L	nc	NA
MW12D	Endosulfan I	0.00005	U	MG/L	nc	NA
GEC2	Endosulfan I	0.00005	U	MG/L	nc	NA
GEC6	Endosulfan I	0.00005	U	MG/L	nc	NA
MW14M	Endosulfan I	0.00005	U	MG/L	nc	NA
MW15D	Endosulfan I	0.00005	U	MG/L	nc	NA
MW01S	Endosulfan I	0.00005	U	MG/L	nc	NA
MW01S	Endosulfan I	0.00005	U	MG/L	nc	NA
MW03S	Endosulfan I	0.00005	U	MG/L	nc	NA
MW05S	Endosulfan I	0.00005	U	MG/L	nc	NA
MW06S	Endosulfan I	0.00005	U	MG/L	nc	NA
MW07D	Endosulfan I	0.00005	U	MG/L	nc	NA
MW07S	Endosulfan I	0.00005	U	MG/L	nc	NA
MW08S	Endosulfan I	0.00005	U	MG/L	nc	NA
MW09S	Endosulfan I	0.00005	U	MG/L	nc	NA
MW04S	Endosulfan I	0.00005	U	MG/L	nc	NA
MW04B	Endosulfan I	0.00005	U	MG/L	nc	NA
MW04D	Endosulfan I	0.00005	U	MG/L	nc	NA
MW04S	Endosulfan I	0.00005	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW02M	Endosulfan I	0.00005	U	MG/L	nc	NA
MW02S	Endosulfan I	0.00005	U	MG/L	nc	NA
MW02S	Endosulfan I	0.00005	U	MG/L	nc	NA
MW06S	Endosulfan I	0.00005	U	MG/L	nc	NA
MW07S	Endosulfan I	0.00005	U	MG/L	nc	NA
MW01S	Endosulfan I	0.00005	U	MG/L	nc	NA
MW01S	Endosulfan I	0.00005	U	MG/L	nc	NA
MW03S	Endosulfan I	0.00005	U	MG/L	nc	NA
MW08S	Endosulfan I	0.00005	U	MG/L	nc	NA
MW09S	Endosulfan I	0.00005	U	MG/L	nc	NA
MW02D	Endosulfan I	0.00005	UJ	MG/L	nc	NA
MW10D	Endosulfan II	0.0001	U	MG/L	nc	NA
MW10B	Endosulfan II	0.0001	U	MG/L	nc	NA
MW10D	Endosulfan II	0.0001	U	MG/L	nc	NA
MW13B	Endosulfan II	0.0001	U	MG/L	nc	NA
MW13D	Endosulfan II	0.0001	U	MG/L	nc	NA
MW13S	Endosulfan II	0.0001	U	MG/L	nc	NA
TMW3	Endosulfan II	0.0001	U	MG/L	nc	NA
MW12B	Endosulfan II	0.0001	U	MG/L	nc	NA
MW11B	Endosulfan II	0.0001	U	MG/L	nc	NA
MW11M	Endosulfan II	0.0001	U	MG/L	nc	NA
MW11S	Endosulfan II	0.0001	U	MG/L	nc	NA
MW12B	Endosulfan II	0.0001	U	MG/L	nc	NA
MW12D	Endosulfan II	0.0001	U	MG/L	nc	NA
GEC2	Endosulfan II	0.0001	U	MG/L	nc	NA
GEC6	Endosulfan II	0.0001	U	MG/L	nc	NA
MW14M	Endosulfan II	0.0001	U	MG/L	nc	NA
MW15D	Endosulfan II	0.0001	U	MG/L	nc	NA
MW01S	Endosulfan II	0.0001	U	MG/L	nc	NA
MW01S	Endosulfan II	0.0001	U	MG/L	nc	NA
MW03S	Endosulfan II	0.0001	U	MG/L	nc	NA
MW05S	Endosulfan II	0.0001	U	MG/L	nc	NA
MW06S	Endosulfan II	0.0001	U	MG/L	nc	NA
MW07D	Endosulfan II	0.0001	U	MG/L	nc	NA
MW07S	Endosulfan II	0.0001	U	MG/L	nc	NA
MW08S	Endosulfan II	0.0001	U	MG/L	nc	NA
MW09S	Endosulfan II	0.0001	U	MG/L	nc	NA
MW04S	Endosulfan II	0.0001	U	MG/L	nc	NA
MW04B	Endosulfan II	0.0001	U	MG/L	nc	NA
MW04D	Endosulfan II	0.0001	U	MG/L	nc	NA
MW04S	Endosulfan II	0.0001	U	MG/L	nc	NA
MW02M	Endosulfan II	0.0001	U	MG/L	nc	NA
MW02S	Endosulfan II	0.0001	U	MG/L	nc	NA
MW02S	Endosulfan II	0.0001	U	MG/L	nc	NA
MW06S	Endosulfan II	0.0001	U	MG/L	nc	NA
MW07S	Endosulfan II	0.0001	U	MG/L	nc	NA
MW01S	Endosulfan II	0.0001	U	MG/L	nc	NA
MW01S	Endosulfan II	0.0001	U	MG/L	nc	NA
MW03S	Endosulfan II	0.0001	U	MG/L	nc	NA
MW08S	Endosulfan II	0.0001	U	MG/L	nc	NA
MW09S	Endosulfan II	0.0001	U	MG/L	nc	NA
MW02D	Endosulfan II	0.0001	UJ	MG/L	nc	NA
MW10D	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW10B	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW10D	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW13B	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW13D	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW13S	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
TMW3	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW12B	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW11B	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW11M	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW11S	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW12B	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW12D	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
GEC2	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
GEC6	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW14M	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW15D	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW01S	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW01S	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW03S	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW05S	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW06S	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW07D	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW07S	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW08S	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW09S	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW04S	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW04B	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW04D	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW04S	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW02M	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW02S	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW02S	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW06S	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW07S	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW01S	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW01S	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW03S	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW08S	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW09S	Endosulfan Sulfate	0.0001	U	MG/L	nc	NA
MW02D	Endosulfan Sulfate	0.0001	UJ	MG/L	nc	NA
MW10D	Endrin	0.0001	U	MG/L	0.002	NA
MW10B	Endrin	0.0001	U	MG/L	0.002	NA
MW10D	Endrin	0.0001	U	MG/L	0.002	NA
MW13B	Endrin	0.0001	U	MG/L	0.002	NA
MW13D	Endrin	0.0001	U	MG/L	0.002	NA
MW13S	Endrin	0.0001	U	MG/L	0.002	NA
TMW3	Endrin	0.0001	U	MG/L	0.002	NA
MW12B	Endrin	0.0001	U	MG/L	0.002	NA
MW11B	Endrin	0.0001	U	MG/L	0.002	NA
MW11M	Endrin	0.0001	U	MG/L	0.002	NA
MW11S	Endrin	0.0001	U	MG/L	0.002	NA
MW12B	Endrin	0.0001	U	MG/L	0.002	NA
MW12D	Endrin	0.0001	U	MG/L	0.002	NA
GEC2	Endrin	0.0001	U	MG/L	0.002	NA
GEC6	Endrin	0.0001	U	MG/L	0.002	NA
MW14M	Endrin	0.0001	U	MG/L	0.002	NA
MW15D	Endrin	0.0001	U	MG/L	0.002	NA
MW01S	Endrin	0.0001	U	MG/L	0.002	NA
MW01S	Endrin	0.0001	U	MG/L	0.002	NA
MW03S	Endrin	0.0001	U	MG/L	0.002	NA
MW05S	Endrin	0.0001	U	MG/L	0.002	NA
MW06S	Endrin	0.0001	U	MG/L	0.002	NA
MW07D	Endrin	0.0001	U	MG/L	0.002	NA
MW07S	Endrin	0.0001	U	MG/L	0.002	NA
MW08S	Endrin	0.0001	U	MG/L	0.002	NA
MW09S	Endrin	0.0001	U	MG/L	0.002	NA
MW04S	Endrin	0.0001	U	MG/L	0.002	NA
MW04B	Endrin	0.0001	U	MG/L	0.002	NA
MW04D	Endrin	0.0001	U	MG/L	0.002	NA
MW04S	Endrin	0.0001	U	MG/L	0.002	NA
MW02M	Endrin	0.0001	U	MG/L	0.002	NA
MW02S	Endrin	0.0001	U	MG/L	0.002	NA
MW02S	Endrin	0.0001	U	MG/L	0.002	NA
MW06S	Endrin	0.0001	U	MG/L	0.002	NA
MW07S	Endrin	0.0001	U	MG/L	0.002	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW01S	Endrin	0.0001	U	MG/L	0.002	NA
MW01S	Endrin	0.0001	U	MG/L	0.002	NA
MW03S	Endrin	0.0001	U	MG/L	0.002	NA
MW08S	Endrin	0.0001	U	MG/L	0.002	NA
MW09S	Endrin	0.0001	U	MG/L	0.002	NA
MW02D	Endrin	0.0001	UJ	MG/L	0.002	NA
MW10D	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW10B	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW10D	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW13B	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW13D	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW13S	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
TMW3	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW12B	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW11B	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW11M	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW11S	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW12B	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW12D	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
GEC2	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
GEC6	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW14M	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW15D	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW01S	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW01S	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW03S	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW05S	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW06S	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW07D	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW07S	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW08S	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW09S	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW04S	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW04B	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW04D	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW04S	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW02M	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW02S	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW02S	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW06S	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW07S	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW01S	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW01S	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW03S	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW08S	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW09S	Endrin Aldehyde	0.0001	U	MG/L	nc	NA
MW02D	Endrin Aldehyde	0.0001	UJ	MG/L	nc	NA
MW10D	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW10B	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW10D	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW13B	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW13D	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW13S	Endrin Ketone	0.0001	U	MG/L	nc	NA
TMW3	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW12B	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW11B	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW11M	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW11S	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW12B	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW12D	Endrin Ketone	0.0001	U	MG/L	nc	NA
GEC2	Endrin Ketone	0.0001	U	MG/L	nc	NA
GEC6	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW14M	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW15D	Endrin Ketone	0.0001	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW01S	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW01S	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW03S	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW05S	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW06S	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW07D	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW07S	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW08S	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW09S	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW04S	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW04B	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW04D	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW04S	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW02M	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW02S	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW02S	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW06S	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW07S	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW01S	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW01S	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW03S	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW08S	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW09S	Endrin Ketone	0.0001	U	MG/L	nc	NA
MW02D	Endrin Ketone	0.0001	UJ	MG/L	nc	NA
MW06S	Ethanol, 2-(2-butoxyethoxy)-	0.006	NJ	MG/L	nc	NA
MW-LEA-02	Ethylbenzene	0.028	Jw	MG/L	0.7	N
MW-LEA-01	Ethylbenzene	20	Uw	MG/L	0.7	NA
MW-LEA-01	Ethylbenzene	2	Uw	MG/L	0.7	NA
MW-LEA-02	Ethylbenzene	2	Uw	MG/L	0.7	NA
MW-05S	Ethylbenzene	2	Uw	MG/L	0.7	NA
MW-LEA-02	Ethylbenzene	2	Uw	MG/L	0.7	NA
MW-LEA-03	Ethylbenzene	0.2	Uw	MG/L	0.7	NA
MW-LEA-03	Ethylbenzene	0.004	Uw	MG/L	0.7	NA
MW08S	Ethylbenzene	0.0024		MG/L	0.7	N
MW06S	Ethylbenzene	0.007	J	MG/L	0.7	N
MW06S	Ethylbenzene	0.0027	J	MG/L	0.7	N
MW06S	Ethylbenzene	0.0012	J	MG/L	0.7	N
MW08S	Ethylbenzene	0.001	J	MG/L	0.7	N
MW05S	Ethylbenzene	1.7	U	MG/L	0.7	NA
MW05S	ETHYLBENZENE	1	U	MG/L	0.7	NA
MW05S	ETHYLBENZENE	1	U	MG/L	0.7	NA
MW05S	Ethylbenzene	1	U	MG/L	0.7	NA
MW05S	Ethylbenzene	1	U	MG/L	0.7	NA
MW14M	Ethylbenzene	0.1	U	MG/L	0.7	NA
MW13D	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW10D	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW10B	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW10D	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW13B	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW13D	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW13S	Ethylbenzene	0.01	U	MG/L	0.7	NA
TMW3	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW12B	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW11B	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW11M	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW11S	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW12B	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW12D	Ethylbenzene	0.01	U	MG/L	0.7	NA
GEC2	Ethylbenzene	0.01	U	MG/L	0.7	NA
GEC6	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW14M	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW15D	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW01S	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW01S	Ethylbenzene	0.01	U	MG/L	0.7	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW03S	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW06S	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW07D	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW07S	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW08S	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW09S	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW04S	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW04B	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW04D	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW04S	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW02D	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW02M	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW02S	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW02S	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW07S	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW01S	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW01S	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW03S	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW09S	Ethylbenzene	0.01	U	MG/L	0.7	NA
MW02M	Ethylbenzene	0.005	U	MG/L	0.7	NA
MW02D	Ethylbenzene	0.004	U	MG/L	0.7	NA
MW13B	Ethylbenzene	0.004	U	MG/L	0.7	NA
MW03S	Ethylbenzene	0.001	U	MG/L	0.7	NA
GEC3	Ethylbenzene	0.001	U	MG/L	0.7	NA
MW01S	Ethylbenzene	0.001	U	MG/L	0.7	NA
MW11S	Ethylbenzene	0.001	U	MG/L	0.7	NA
MW12B	Ethylbenzene	0.001	U	MG/L	0.7	NA
MW12D	Ethylbenzene	0.001	U	MG/L	0.7	NA
GEC1	Ethylbenzene	0.001	U	MG/L	0.7	NA
GEC2	Ethylbenzene	0.001	U	MG/L	0.7	NA
GEC4	Ethylbenzene	0.001	U	MG/L	0.7	NA
GEC5	Ethylbenzene	0.001	U	MG/L	0.7	NA
GEC6	Ethylbenzene	0.001	U	MG/L	0.7	NA
GEC7	Ethylbenzene	0.001	U	MG/L	0.7	NA
MW07D	Ethylbenzene	0.001	U	MG/L	0.7	NA
MW07S	Ethylbenzene	0.001	U	MG/L	0.7	NA
MW11B	Ethylbenzene	0.001	U	MG/L	0.7	NA
MW11M	Ethylbenzene	0.001	U	MG/L	0.7	NA
MW15D	Ethylbenzene	0.001	U	MG/L	0.7	NA
MW02S	Ethylbenzene	0.001	U	MG/L	0.7	NA
MW04B	Ethylbenzene	0.001	U	MG/L	0.7	NA
MW04D	Ethylbenzene	0.001	U	MG/L	0.7	NA
MW04S	Ethylbenzene	0.001	U	MG/L	0.7	NA
MW09S	Ethylbenzene	0.001	U	MG/L	0.7	NA
MW10B	Ethylbenzene	0.001	U	MG/L	0.7	NA
MW10D	Ethylbenzene	0.001	U	MG/L	0.7	NA
MW13S	Ethylbenzene	0.001	U	MG/L	0.7	NA
MW-LEA-01	Ethylene Dibromide	20	Uw	MG/L	0.00005	NA
MW-LEA-01	Ethylene Dibromide	2	Uw	MG/L	0.00005	NA
MW-LEA-02	Ethylene Dibromide	2	Uw	MG/L	0.00005	NA
MW-05S	Ethylene Dibromide	2	Uw	MG/L	0.00005	NA
MW-LEA-02	Ethylene Dibromide	2	Uw	MG/L	0.00005	NA
MW-LEA-02	Ethylene Dibromide	0.2	Uw	MG/L	0.00005	NA
MW-LEA-03	Ethylene Dibromide	0.2	Uw	MG/L	0.00005	NA
MW-LEA-03	Ethylene Dibromide	0.004	Uw	MG/L	0.00005	NA
GEC3	Fluoranthene	0.01		MG/L	nc	NA
GEC7	Fluoranthene	0.0053		MG/L	nc	NA
GEC4	Fluoranthene	0.0014		MG/L	nc	NA
GEC6	Fluoranthene	0.00081		MG/L	nc	NA
GEC2	Fluoranthene	0.00046		MG/L	nc	NA
GEC1	Fluoranthene	0.00025		MG/L	nc	NA
MW15D	Fluoranthene	0.014	U	MG/L	nc	NA
MW10D	Fluoranthene	0.01	U	MG/L	nc	NA
MW10B	Fluoranthene	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW10D	Fluoranthene	0.01	U	MG/L	nc	NA
MW13B	Fluoranthene	0.01	U	MG/L	nc	NA
MW13D	Fluoranthene	0.01	U	MG/L	nc	NA
MW13S	Fluoranthene	0.01	U	MG/L	nc	NA
TMW3	Fluoranthene	0.01	U	MG/L	nc	NA
MW12B	Fluoranthene	0.01	U	MG/L	nc	NA
MW11B	Fluoranthene	0.01	U	MG/L	nc	NA
MW11M	Fluoranthene	0.01	U	MG/L	nc	NA
MW11S	Fluoranthene	0.01	U	MG/L	nc	NA
MW12B	Fluoranthene	0.01	U	MG/L	nc	NA
MW12D	Fluoranthene	0.01	U	MG/L	nc	NA
GEC2	Fluoranthene	0.01	U	MG/L	nc	NA
GEC6	Fluoranthene	0.01	U	MG/L	nc	NA
MW14M	Fluoranthene	0.01	U	MG/L	nc	NA
MW01S	Fluoranthene	0.01	U	MG/L	nc	NA
MW01S	Fluoranthene	0.01	U	MG/L	nc	NA
MW03S	Fluoranthene	0.01	U	MG/L	nc	NA
MW05S	Fluoranthene	0.01	U	MG/L	nc	NA
MW06S	Fluoranthene	0.01	U	MG/L	nc	NA
MW07D	Fluoranthene	0.01	U	MG/L	nc	NA
MW07S	Fluoranthene	0.01	U	MG/L	nc	NA
MW08S	Fluoranthene	0.01	U	MG/L	nc	NA
MW09S	Fluoranthene	0.01	U	MG/L	nc	NA
MW04S	Fluoranthene	0.01	U	MG/L	nc	NA
MW04B	Fluoranthene	0.01	U	MG/L	nc	NA
MW04D	Fluoranthene	0.01	U	MG/L	nc	NA
MW04S	Fluoranthene	0.01	U	MG/L	nc	NA
MW02D	Fluoranthene	0.01	U	MG/L	nc	NA
MW02M	Fluoranthene	0.01	U	MG/L	nc	NA
MW02S	Fluoranthene	0.01	U	MG/L	nc	NA
MW02S	Fluoranthene	0.01	U	MG/L	nc	NA
MW06S	Fluoranthene	0.01	U	MG/L	nc	NA
MW07S	Fluoranthene	0.01	U	MG/L	nc	NA
MW01S	Fluoranthene	0.01	U	MG/L	nc	NA
MW01S	Fluoranthene	0.01	U	MG/L	nc	NA
MW03S	Fluoranthene	0.01	U	MG/L	nc	NA
MW08S	Fluoranthene	0.01	U	MG/L	nc	NA
MW09S	Fluoranthene	0.01	U	MG/L	nc	NA
GEC5	Fluoranthene	0.00012	U	MG/L	nc	NA
GEC3	Fluorene	0.0012		MG/L	nc	NA
GEC7	Fluorene	0.00073		MG/L	nc	NA
GEC4	Fluorene	0.00016		MG/L	nc	NA
MW15D	Fluorene	0.014	U	MG/L	nc	NA
MW10D	Fluorene	0.01	U	MG/L	nc	NA
MW10B	Fluorene	0.01	U	MG/L	nc	NA
MW10D	Fluorene	0.01	U	MG/L	nc	NA
MW13B	Fluorene	0.01	U	MG/L	nc	NA
MW13D	Fluorene	0.01	U	MG/L	nc	NA
MW13S	Fluorene	0.01	U	MG/L	nc	NA
TMW3	Fluorene	0.01	U	MG/L	nc	NA
MW12B	Fluorene	0.01	U	MG/L	nc	NA
MW11B	Fluorene	0.01	U	MG/L	nc	NA
MW11M	Fluorene	0.01	U	MG/L	nc	NA
MW11S	Fluorene	0.01	U	MG/L	nc	NA
MW12B	Fluorene	0.01	U	MG/L	nc	NA
MW12D	Fluorene	0.01	U	MG/L	nc	NA
GEC2	Fluorene	0.01	U	MG/L	nc	NA
GEC6	Fluorene	0.01	U	MG/L	nc	NA
MW14M	Fluorene	0.01	U	MG/L	nc	NA
MW01S	Fluorene	0.01	U	MG/L	nc	NA
MW01S	Fluorene	0.01	U	MG/L	nc	NA
MW03S	Fluorene	0.01	U	MG/L	nc	NA
MW05S	Fluorene	0.01	U	MG/L	nc	NA
MW06S	Fluorene	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW07D	Fluorene	0.01	U	MG/L	nc	NA
MW07S	Fluorene	0.01	U	MG/L	nc	NA
MW08S	Fluorene	0.01	U	MG/L	nc	NA
MW09S	Fluorene	0.01	U	MG/L	nc	NA
MW04S	Fluorene	0.01	U	MG/L	nc	NA
MW04B	Fluorene	0.01	U	MG/L	nc	NA
MW04D	Fluorene	0.01	U	MG/L	nc	NA
MW04S	Fluorene	0.01	U	MG/L	nc	NA
MW02D	Fluorene	0.01	U	MG/L	nc	NA
MW02M	Fluorene	0.01	U	MG/L	nc	NA
MW02S	Fluorene	0.01	U	MG/L	nc	NA
MW02S	Fluorene	0.01	U	MG/L	nc	NA
MW06S	Fluorene	0.01	U	MG/L	nc	NA
MW07S	Fluorene	0.01	U	MG/L	nc	NA
MW01S	Fluorene	0.01	U	MG/L	nc	NA
MW01S	Fluorene	0.01	U	MG/L	nc	NA
MW03S	Fluorene	0.01	U	MG/L	nc	NA
MW08S	Fluorene	0.01	U	MG/L	nc	NA
MW09S	Fluorene	0.01	U	MG/L	nc	NA
GEC1	Fluorene	0.00018	U	MG/L	nc	NA
GEC2	Fluorene	0.00014	U	MG/L	nc	NA
GEC5	Fluorene	0.00012	U	MG/L	nc	NA
GEC6	Fluorene	0.00012	U	MG/L	nc	NA
MW10D	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW10B	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW10D	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW13B	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW13D	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW13S	gamma-BHC	0.00005	U	MG/L	0.0002	NA
TMW3	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW12B	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW11B	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW11M	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW11S	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW12B	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW12D	gamma-BHC	0.00005	U	MG/L	0.0002	NA
GEC2	gamma-BHC	0.00005	U	MG/L	0.0002	NA
GEC6	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW14M	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW15D	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW01S	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW01S	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW03S	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW05S	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW06S	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW07D	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW07S	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW08S	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW09S	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW04S	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW04B	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW04D	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW04S	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW02M	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW02S	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW02S	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW06S	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW07S	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW01S	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW01S	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW03S	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW08S	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW09S	gamma-BHC	0.00005	U	MG/L	0.0002	NA
MW02D	gamma-BHC	0.00005	UJ	MG/L	0.0002	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW06S	gamma-Chlordane	0.000049	J	MG/L	0.002	N
MW07S	gamma-Chlordane	0.000018	J	MG/L	0.002	N
MW10D	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW10B	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW10D	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW13B	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW13D	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW13S	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
TMW3	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW12B	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW11B	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW11M	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW11S	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW12B	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW12D	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
GEC2	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
GEC6	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW14M	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW15D	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW01S	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW01S	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW03S	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW05S	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW07D	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW08S	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW09S	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW04S	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW04B	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW04D	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW04S	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW02M	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW02S	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW02S	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW06S	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW07S	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW01S	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW01S	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW03S	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW08S	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW09S	gamma-Chlordane	0.00005	U	MG/L	0.002	NA
MW02D	gamma-Chlordane	0.00005	UJ	MG/L	0.002	NA
MW10D	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW10B	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW10D	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW13B	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW13D	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW13S	Heptachlor	0.00005	U	MG/L	0.0004	NA
TMW3	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW12B	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW11B	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW11M	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW11S	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW12B	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW12D	Heptachlor	0.00005	U	MG/L	0.0004	NA
GEC2	Heptachlor	0.00005	U	MG/L	0.0004	NA
GEC6	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW14M	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW15D	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW01S	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW01S	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW03S	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW05S	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW06S	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW07D	Heptachlor	0.00005	U	MG/L	0.0004	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW07S	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW08S	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW09S	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW04S	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW04B	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW04D	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW04S	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW02M	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW02S	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW02S	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW06S	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW07S	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW01S	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW01S	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW03S	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW08S	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW09S	Heptachlor	0.00005	U	MG/L	0.0004	NA
MW02D	Heptachlor	0.00005	UJ	MG/L	0.0004	NA
MW10D	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW10B	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW10D	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW13B	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW13D	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW13S	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
TMW3	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW12B	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW11B	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW11M	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW11S	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW12B	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW12D	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
GEC2	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
GEC6	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW14M	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW15D	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW01S	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW01S	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW03S	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW05S	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW06S	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW07D	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW07S	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW08S	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW09S	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW04S	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW04B	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW04D	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW04S	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW02M	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW02S	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW02S	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW06S	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW07S	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW01S	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW01S	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW03S	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW08S	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW09S	Heptachlor Epoxide	0.00005	U	MG/L	0.0002	NA
MW02D	Heptachlor Epoxide	0.00005	UJ	MG/L	0.0002	NA
MW-LEA-01	Heptachlorodibenzofurans (filtered)	2.251E-08	U	MG/L	nc	NA
MW-LEA-02	Heptachlorodibenzofurans (filtered)	1.467E-08	U	MG/L	nc	NA
MW-LEA-02	Heptachlorodibenzofurans (filtered)	5.425E-09	U	MG/L	nc	NA
MW-05S	Heptachlorodibenzofurans (filtered)	3.826E-09	U	MG/L	nc	NA
MW-LEA-03	Heptachlorodibenzofurans (filtered)	2.732E-09	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW-LEA-01	Heptachlorodibenzofurans (unfiltered)	1.1148E-08	U	MG/L	nc	NA
MW-LEA-03	Heptachlorodibenzofurans (unfiltered)	4.021E-09	U	MG/L	nc	NA
MW-LEA-02	Heptachlorodibenzofurans (unfiltered)	3.214E-09	U	MG/L	nc	NA
MW-05S	Heptachlorodibenzofurans (unfiltered)	6.54E-10	U	MG/L	nc	NA
MW-LEA-02	Heptachlorodibenzofurans (unfiltered)	1.96E-10	U	MG/L	nc	NA
MW-LEA-01	Heptachlorodibenzo-p-Dioxins (filtered)	2.89E-08	U	MG/L	nc	NA
MW-LEA-02	Heptachlorodibenzo-p-Dioxins (filtered)	1.687E-08	U	MG/L	nc	NA
MW-LEA-02	Heptachlorodibenzo-p-Dioxins (filtered)	7.233E-09	U	MG/L	nc	NA
MW-05S	Heptachlorodibenzo-p-Dioxins (filtered)	4.196E-09	U	MG/L	nc	NA
MW-LEA-03	Heptachlorodibenzo-p-Dioxins (filtered)	2.24E-09	U	MG/L	nc	NA
MW-LEA-02	Heptachlorodibenzo-p-Dioxins (unfiltered)	7.214E-09	J	MG/L	nc	NA
MW-LEA-01	Heptachlorodibenzo-p-Dioxins (unfiltered)	9.02E-09	U	MG/L	nc	NA
MW-05S	Heptachlorodibenzo-p-Dioxins (unfiltered)	8.03E-10	U	MG/L	nc	NA
MW-LEA-03	Heptachlorodibenzo-p-Dioxins (unfiltered)	6.41E-10	U	MG/L	nc	NA
MW-LEA-02	Heptachlorodibenzo-p-Dioxins (unfiltered)	4.36E-10	U	MG/L	nc	NA
MW15D	Hexachlorobenzene	0.014	U	MG/L	0.001	NA
MW10D	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW10B	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW10D	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW13B	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW13D	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW13S	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
TMW3	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW12B	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW11B	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW11M	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW11S	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW12B	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW12D	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
GEC2	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
GEC6	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW14M	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW01S	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW01S	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW03S	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW05S	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW06S	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW07D	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW07S	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW08S	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW09S	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW04S	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW04B	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW04D	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW04S	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW02D	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW02M	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW02S	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW02S	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW06S	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW07S	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW01S	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW01S	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW03S	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW08S	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW09S	Hexachlorobenzene	0.01	U	MG/L	0.001	NA
MW-LEA-01	Hexachlorobutadiene	20	Uw	MG/L	nc	NA
MW-LEA-01	Hexachlorobutadiene	2	Uw	MG/L	nc	NA
MW-LEA-02	Hexachlorobutadiene	2	Uw	MG/L	nc	NA
MW-05S	Hexachlorobutadiene	2	Uw	MG/L	nc	NA
MW-LEA-02	Hexachlorobutadiene	2	Uw	MG/L	nc	NA
MW-LEA-02	Hexachlorobutadiene	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Hexachlorobutadiene	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Hexachlorobutadiene	0.004	Uw	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW15D	Hexachlorobutadiene	0.014	U	MG/L	nc	NA
MW10D	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW10B	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW10D	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW13B	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW13D	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW13S	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
TMW3	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW12B	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW11B	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW11M	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW11S	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW12B	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW12D	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
GEC2	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
GEC6	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW14M	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW01S	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW01S	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW03S	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW05S	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW06S	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW07D	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW07S	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW08S	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW09S	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW04S	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW04B	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW04D	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW04S	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW02D	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW02M	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW02S	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW02S	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW06S	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW07S	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW01S	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW01S	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW03S	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW08S	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW09S	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW05S	Hexachlorobutadiene	1	U	MG/L	nc	NA
MW05S	Hexachlorobutadiene	1	U	MG/L	nc	NA
MW14M	Hexachlorobutadiene	0.1	U	MG/L	nc	NA
MW06S	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW13D	Hexachlorobutadiene	0.01	U	MG/L	nc	NA
MW06S	Hexachlorobutadiene	0.006	U	MG/L	nc	NA
MW02M	Hexachlorobutadiene	0.005	U	MG/L	nc	NA
MW02D	Hexachlorobutadiene	0.004	U	MG/L	nc	NA
MW13B	Hexachlorobutadiene	0.004	U	MG/L	nc	NA
MW03S	Hexachlorobutadiene	0.001	U	MG/L	nc	NA
GEC3	Hexachlorobutadiene	0.001	U	MG/L	nc	NA
MW01S	Hexachlorobutadiene	0.001	U	MG/L	nc	NA
MW11S	Hexachlorobutadiene	0.001	U	MG/L	nc	NA
MW12B	Hexachlorobutadiene	0.001	U	MG/L	nc	NA
MW12D	Hexachlorobutadiene	0.001	U	MG/L	nc	NA
GEC1	Hexachlorobutadiene	0.001	U	MG/L	nc	NA
GEC2	Hexachlorobutadiene	0.001	U	MG/L	nc	NA
GEC4	Hexachlorobutadiene	0.001	U	MG/L	nc	NA
GEC5	Hexachlorobutadiene	0.001	U	MG/L	nc	NA
GEC6	Hexachlorobutadiene	0.001	U	MG/L	nc	NA
GEC7	Hexachlorobutadiene	0.001	U	MG/L	nc	NA
MW07D	Hexachlorobutadiene	0.001	U	MG/L	nc	NA
MW07S	Hexachlorobutadiene	0.001	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW11B	Hexachlorobutadiene	0.001	U	MG/L	nc	NA
MW11M	Hexachlorobutadiene	0.001	U	MG/L	nc	NA
MW15D	Hexachlorobutadiene	0.001	U	MG/L	nc	NA
MW02S	Hexachlorobutadiene	0.001	U	MG/L	nc	NA
MW04B	Hexachlorobutadiene	0.001	U	MG/L	nc	NA
MW04D	Hexachlorobutadiene	0.001	U	MG/L	nc	NA
MW04S	Hexachlorobutadiene	0.001	U	MG/L	nc	NA
MW08S	Hexachlorobutadiene	0.001	U	MG/L	nc	NA
MW09S	Hexachlorobutadiene	0.001	U	MG/L	nc	NA
MW10B	Hexachlorobutadiene	0.001	U	MG/L	nc	NA
MW10D	Hexachlorobutadiene	0.001	U	MG/L	nc	NA
MW13S	Hexachlorobutadiene	0.001	U	MG/L	nc	NA
MW05S	HEXACHLOROBUTADIENE	1	UJ	MG/L	nc	NA
MW05S	HEXACHLOROBUTADIENE	1	UJ	MG/L	nc	NA
MW15D	Hexachlorocyclopentadiene	0.014	U	MG/L	0.05	NA
MW12B	Hexachlorocyclopentadiene	0.01	U	MG/L	0.05	NA
GEC6	Hexachlorocyclopentadiene	0.01	U	MG/L	0.05	NA
MW14M	Hexachlorocyclopentadiene	0.01	U	MG/L	0.05	NA
MW01S	Hexachlorocyclopentadiene	0.01	U	MG/L	0.05	NA
MW01S	Hexachlorocyclopentadiene	0.01	U	MG/L	0.05	NA
MW03S	Hexachlorocyclopentadiene	0.01	U	MG/L	0.05	NA
MW05S	Hexachlorocyclopentadiene	0.01	U	MG/L	0.05	NA
MW06S	Hexachlorocyclopentadiene	0.01	U	MG/L	0.05	NA
MW07D	Hexachlorocyclopentadiene	0.01	U	MG/L	0.05	NA
MW07S	Hexachlorocyclopentadiene	0.01	U	MG/L	0.05	NA
MW08S	Hexachlorocyclopentadiene	0.01	U	MG/L	0.05	NA
MW09S	Hexachlorocyclopentadiene	0.01	U	MG/L	0.05	NA
MW04S	Hexachlorocyclopentadiene	0.01	U	MG/L	0.05	NA
MW04B	Hexachlorocyclopentadiene	0.01	U	MG/L	0.05	NA
MW04D	Hexachlorocyclopentadiene	0.01	U	MG/L	0.05	NA
MW04S	Hexachlorocyclopentadiene	0.01	U	MG/L	0.05	NA
MW02D	Hexachlorocyclopentadiene	0.01	U	MG/L	0.05	NA
MW02M	Hexachlorocyclopentadiene	0.01	U	MG/L	0.05	NA
MW02S	Hexachlorocyclopentadiene	0.01	U	MG/L	0.05	NA
MW02S	Hexachlorocyclopentadiene	0.01	U	MG/L	0.05	NA
MW06S	Hexachlorocyclopentadiene	0.01	U	MG/L	0.05	NA
MW07S	Hexachlorocyclopentadiene	0.01	U	MG/L	0.05	NA
MW01S	Hexachlorocyclopentadiene	0.01	U	MG/L	0.05	NA
MW01S	Hexachlorocyclopentadiene	0.01	U	MG/L	0.05	NA
MW03S	Hexachlorocyclopentadiene	0.01	U	MG/L	0.05	NA
MW08S	Hexachlorocyclopentadiene	0.01	U	MG/L	0.05	NA
MW09S	Hexachlorocyclopentadiene	0.01	U	MG/L	0.05	NA
MW10D	Hexachlorocyclopentadiene	0.01	UJ	MG/L	0.05	NA
MW10B	Hexachlorocyclopentadiene	0.01	UJ	MG/L	0.05	NA
MW10D	Hexachlorocyclopentadiene	0.01	UJ	MG/L	0.05	NA
MW13B	Hexachlorocyclopentadiene	0.01	UJ	MG/L	0.05	NA
MW13D	Hexachlorocyclopentadiene	0.01	UJ	MG/L	0.05	NA
MW13S	Hexachlorocyclopentadiene	0.01	UJ	MG/L	0.05	NA
TMW3	Hexachlorocyclopentadiene	0.01	UJ	MG/L	0.05	NA
MW12B	Hexachlorocyclopentadiene	0.01	UJ	MG/L	0.05	NA
MW11B	Hexachlorocyclopentadiene	0.01	UJ	MG/L	0.05	NA
MW11M	Hexachlorocyclopentadiene	0.01	UJ	MG/L	0.05	NA
MW11S	Hexachlorocyclopentadiene	0.01	UJ	MG/L	0.05	NA
MW12D	Hexachlorocyclopentadiene	0.01	UJ	MG/L	0.05	NA
GEC2	Hexachlorocyclopentadiene	0.01	UJ	MG/L	0.05	NA
MW-LEA-01	Hexachlorodibenzofurans (filtered)	2.334E-08	U	MG/L	nc	NA
MW-LEA-02	Hexachlorodibenzofurans (filtered)	1.748E-08	U	MG/L	nc	NA
MW-LEA-02	Hexachlorodibenzofurans (filtered)	9.082E-09	U	MG/L	nc	NA
MW-05S	Hexachlorodibenzofurans (filtered)	5.422E-09	U	MG/L	nc	NA
MW-LEA-03	Hexachlorodibenzofurans (filtered)	4.678E-09	U	MG/L	nc	NA
MW-05S	Hexachlorodibenzofurans (unfiltered)	1.88874E-07		MG/L	nc	NA
MW-LEA-03	Hexachlorodibenzofurans (unfiltered)	8.1812E-08		MG/L	nc	NA
MW-LEA-02	Hexachlorodibenzofurans (unfiltered)	6.6015E-08		MG/L	nc	NA
MW-LEA-01	Hexachlorodibenzofurans (unfiltered)	6.0022E-08		MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW-LEA-02	Hexachlorodibenzofurans (unfiltered)	1.634E-09	U	MG/L	nc	NA
MW-LEA-01	Hexachlorodibenzo-p-Dioxins (filtered)	1.68E-08	U	MG/L	nc	NA
MW-LEA-02	Hexachlorodibenzo-p-Dioxins (filtered)	1.101E-08	U	MG/L	nc	NA
MW-LEA-02	Hexachlorodibenzo-p-Dioxins (filtered)	4.568E-09	U	MG/L	nc	NA
MW-05S	Hexachlorodibenzo-p-Dioxins (filtered)	3.402E-09	U	MG/L	nc	NA
MW-LEA-03	Hexachlorodibenzo-p-Dioxins (filtered)	1.948E-09	U	MG/L	nc	NA
MW-LEA-01	Hexachlorodibenzo-p-Dioxins (unfiltered)	1.168E-08	U	MG/L	nc	NA
MW-05S	Hexachlorodibenzo-p-Dioxins (unfiltered)	3.531E-09	U	MG/L	nc	NA
MW-LEA-03	Hexachlorodibenzo-p-Dioxins (unfiltered)	4.8E-10	U	MG/L	nc	NA
MW-LEA-02	Hexachlorodibenzo-p-Dioxins (unfiltered)	3.1E-10	U	MG/L	nc	NA
MW-LEA-02	Hexachlorodibenzo-p-Dioxins (unfiltered)	2.88E-10	U	MG/L	nc	NA
MW15D	Hexachloroethane	0.014	U	MG/L	nc	NA
MW10D	Hexachloroethane	0.01	U	MG/L	nc	NA
MW10B	Hexachloroethane	0.01	U	MG/L	nc	NA
MW10D	Hexachloroethane	0.01	U	MG/L	nc	NA
MW13B	Hexachloroethane	0.01	U	MG/L	nc	NA
MW13D	Hexachloroethane	0.01	U	MG/L	nc	NA
MW13S	Hexachloroethane	0.01	U	MG/L	nc	NA
TMW3	Hexachloroethane	0.01	U	MG/L	nc	NA
MW12B	Hexachloroethane	0.01	U	MG/L	nc	NA
MW11B	Hexachloroethane	0.01	U	MG/L	nc	NA
MW11M	Hexachloroethane	0.01	U	MG/L	nc	NA
MW11S	Hexachloroethane	0.01	U	MG/L	nc	NA
MW12B	Hexachloroethane	0.01	U	MG/L	nc	NA
MW12D	Hexachloroethane	0.01	U	MG/L	nc	NA
GEC2	Hexachloroethane	0.01	U	MG/L	nc	NA
GEC6	Hexachloroethane	0.01	U	MG/L	nc	NA
MW14M	Hexachloroethane	0.01	U	MG/L	nc	NA
MW01S	Hexachloroethane	0.01	U	MG/L	nc	NA
MW01S	Hexachloroethane	0.01	U	MG/L	nc	NA
MW03S	Hexachloroethane	0.01	U	MG/L	nc	NA
MW05S	Hexachloroethane	0.01	U	MG/L	nc	NA
MW06S	Hexachloroethane	0.01	U	MG/L	nc	NA
MW07D	Hexachloroethane	0.01	U	MG/L	nc	NA
MW07S	Hexachloroethane	0.01	U	MG/L	nc	NA
MW08S	Hexachloroethane	0.01	U	MG/L	nc	NA
MW09S	Hexachloroethane	0.01	U	MG/L	nc	NA
MW04S	Hexachloroethane	0.01	U	MG/L	nc	NA
MW04B	Hexachloroethane	0.01	U	MG/L	nc	NA
MW04D	Hexachloroethane	0.01	U	MG/L	nc	NA
MW04S	Hexachloroethane	0.01	U	MG/L	nc	NA
MW02D	Hexachloroethane	0.01	U	MG/L	nc	NA
MW02M	Hexachloroethane	0.01	U	MG/L	nc	NA
MW02S	Hexachloroethane	0.01	U	MG/L	nc	NA
MW02S	Hexachloroethane	0.01	U	MG/L	nc	NA
MW06S	Hexachloroethane	0.01	U	MG/L	nc	NA
MW07S	Hexachloroethane	0.01	U	MG/L	nc	NA
MW01S	Hexachloroethane	0.01	U	MG/L	nc	NA
MW01S	Hexachloroethane	0.01	U	MG/L	nc	NA
MW03S	Hexachloroethane	0.01	U	MG/L	nc	NA
MW08S	Hexachloroethane	0.01	U	MG/L	nc	NA
MW09S	Hexachloroethane	0.01	U	MG/L	nc	NA
MW01S	Hexanedioic Acid, Bis(2-ethylhexyl) Este	0.01	NJ	MG/L	nc	NA
MW-LEA-01	Hexanone,2-	20	Uw	MG/L	nc	NA
MW-LEA-01	Hexanone,2-	2	Uw	MG/L	nc	NA
MW-LEA-02	Hexanone,2-	2	Uw	MG/L	nc	NA
MW-05S	Hexanone,2-	2	Uw	MG/L	nc	NA
MW-LEA-02	Hexanone,2-	2	Uw	MG/L	nc	NA
MW-LEA-02	Hexanone,2-	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Hexanone,2-	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Hexanone,2-	0.004	Uw	MG/L	nc	NA
MW08S	Indane	0.009	J	MG/L	nc	NA
GEC3	Indeno(1,2,3-cd)pyrene	0.002		MG/L	nc	NA
GEC7	Indeno(1,2,3-cd)pyrene	0.00053		MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
GEC4	Indeno(1,2,3-cd)pyrene	0.00025		MG/L	nc	NA
MW15D	Indeno(1,2,3-cd)pyrene	0.014	U	MG/L	nc	NA
MW10D	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW10B	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW10D	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW13B	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW13D	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW13S	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
TMW3	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW12B	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW11B	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW11M	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW11S	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW12B	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW12D	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
GEC2	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
GEC6	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW14M	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW01S	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW01S	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW03S	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW05S	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW06S	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW07D	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW07S	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW08S	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW09S	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW04S	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW04B	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW04D	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW04S	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW02D	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW02M	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW02S	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW02S	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW06S	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW07S	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW01S	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW01S	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW03S	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW08S	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
MW09S	Indeno(1,2,3-cd)pyrene	0.01	U	MG/L	nc	NA
GEC1	Indeno(1,2,3-cd)pyrene	0.00018	U	MG/L	nc	NA
GEC2	Indeno(1,2,3-cd)pyrene	0.00014	U	MG/L	nc	NA
GEC5	Indeno(1,2,3-cd)pyrene	0.00012	U	MG/L	nc	NA
GEC6	Indeno(1,2,3-cd)pyrene	0.00012	U	MG/L	nc	NA
MW09S	Iron	68.9		MG/L	nc	NA
MW01S	Iron	63.4		MG/L	nc	NA
MW01S	Iron	63.3		MG/L	nc	NA
MW09S	Iron	49.1		MG/L	nc	NA
MW08S	Iron	35.3		MG/L	nc	NA
MW07S	Iron	31.6		MG/L	nc	NA
MW06S	Iron	28.5		MG/L	nc	NA
MW06S	Iron	26.9		MG/L	nc	NA
MW07S	Iron	23.3		MG/L	nc	NA
MW02S	Iron	9.96		MG/L	nc	NA
MW08S	Iron	8.49		MG/L	nc	NA
MW01S	Iron	8.22		MG/L	nc	NA
MW01S	Iron	8.12		MG/L	nc	NA
MW03S	Iron	6.83		MG/L	nc	NA
MW02S	Iron	5.31		MG/L	nc	NA
GEC2	Iron	4.41		MG/L	nc	NA
MW12B	Iron	4.04		MG/L	nc	NA
MW12B	Iron	3.97		MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW04S	Iron	3.58		MG/L	nc	NA
TMW3	Iron	3.56		MG/L	nc	NA
MW04S	Iron	3.54		MG/L	nc	NA
MW03S	Iron	2.58		MG/L	nc	NA
MW05S	Iron	0.329		MG/L	nc	NA
MW02D	Iron	0.191		MG/L	nc	NA
MW04D	Iron	0.182		MG/L	nc	NA
MW07D	Iron	0.0806		MG/L	nc	NA
MW11S	Iron	0.618	U	MG/L	nc	NA
MW15D	Iron	0.416	U	MG/L	nc	NA
MW10B	Iron	0.391	U	MG/L	nc	NA
MW13D	Iron	0.37	U	MG/L	nc	NA
MW13S	Iron	0.228	U	MG/L	nc	NA
GEC6	Iron	0.136	U	MG/L	nc	NA
MW13B	Iron	0.126	U	MG/L	nc	NA
MW10D	Iron	0.0929	U	MG/L	nc	NA
MW12D	Iron	0.0894	U	MG/L	nc	NA
MW10D	Iron	0.0884	U	MG/L	nc	NA
MW04B	Iron	0.0865	U	MG/L	nc	NA
MW11B	Iron	0.0806	U	MG/L	nc	NA
MW14M	Iron	0.0702	U	MG/L	nc	NA
MW02M	Iron	0.0604	U	MG/L	nc	NA
MW11M	Iron	0.0323	UJ	MG/L	nc	NA
MW09S	Iron	66.2		MG/L	nc	NA
MW01S	Iron	64.2		MG/L	nc	NA
MW01S	Iron	63.4		MG/L	nc	NA
MW09S	Iron	48.4		MG/L	nc	NA
MW08S	Iron	36.8		MG/L	nc	NA
MW07S	Iron	33.5		MG/L	nc	NA
MW06S	Iron	28.6		MG/L	nc	NA
MW06S	Iron	28.2		MG/L	nc	NA
MW07S	Iron	23.2		MG/L	nc	NA
MW02S	Iron	10		MG/L	nc	NA
MW01S	Iron	8.41		MG/L	nc	NA
MW01S	Iron	7.84		MG/L	nc	NA
MW08S	Iron	7.69		MG/L	nc	NA
MW03S	Iron	6.85		MG/L	nc	NA
MW02S	Iron	4.95		MG/L	nc	NA
MW04S	Iron	4.15		MG/L	nc	NA
MW04S	Iron	4.07		MG/L	nc	NA
TMW3	Iron	2.87		MG/L	nc	NA
MW03S	Iron	2.18		MG/L	nc	NA
MW05S	Iron	0.238		MG/L	nc	NA
MW02D	Iron	0.144		MG/L	nc	NA
GEC2	Iron	4.04	J	MG/L	nc	NA
MW12B	Iron	0.8	J	MG/L	nc	NA
MW12B	Iron	0.5	J	MG/L	nc	NA
MW13B	Iron	0.554	U	MG/L	nc	NA
MW10B	Iron	0.212	U	MG/L	nc	NA
MW11S	Iron	0.174	U	MG/L	nc	NA
MW13D	Iron	0.109	U	MG/L	nc	NA
MW12D	Iron	0.105	U	MG/L	nc	NA
MW04D	Iron	0.0529	U	MG/L	nc	NA
MW10D	Iron	0.0521	U	MG/L	nc	NA
MW13S	Iron	0.0472	U	MG/L	nc	NA
MW10D	Iron	0.0466	U	MG/L	nc	NA
MW04B	Iron	0.0327	U	MG/L	nc	NA
MW07D	Iron	0.0131	U	MG/L	nc	NA
MW02M	Iron	0.0131	U	MG/L	nc	NA
GEC6	Iron	0.138	UJ	MG/L	nc	NA
MW15D	Iron	0.075	UJ	MG/L	nc	NA
MW14M	Iron	0.0393	UJ	MG/L	nc	NA
MW11M	Iron	0.035	UJ	MG/L	nc	NA
MW11B	Iron	0.0255	UJ	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW-LEA-01	Isocumene	20	Uw	MG/L	nc	NA
MW-LEA-01	Isocumene	2	Uw	MG/L	nc	NA
MW-LEA-02	Isocumene	2	Uw	MG/L	nc	NA
MW-05S	Isocumene	2	Uw	MG/L	nc	NA
MW-LEA-02	Isocumene	2	Uw	MG/L	nc	NA
MW-LEA-02	Isocumene	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Isocumene	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Isocumene	0.004	Uw	MG/L	nc	NA
MW15D	Isophorone	0.014	U	MG/L	nc	NA
MW10D	Isophorone	0.01	U	MG/L	nc	NA
MW10B	Isophorone	0.01	U	MG/L	nc	NA
MW10D	Isophorone	0.01	U	MG/L	nc	NA
MW13B	Isophorone	0.01	U	MG/L	nc	NA
MW13D	Isophorone	0.01	U	MG/L	nc	NA
MW13S	Isophorone	0.01	U	MG/L	nc	NA
TMW3	Isophorone	0.01	U	MG/L	nc	NA
MW12B	Isophorone	0.01	U	MG/L	nc	NA
MW11B	Isophorone	0.01	U	MG/L	nc	NA
MW11M	Isophorone	0.01	U	MG/L	nc	NA
MW11S	Isophorone	0.01	U	MG/L	nc	NA
MW12B	Isophorone	0.01	U	MG/L	nc	NA
MW12D	Isophorone	0.01	U	MG/L	nc	NA
GEC2	Isophorone	0.01	U	MG/L	nc	NA
GEC6	Isophorone	0.01	U	MG/L	nc	NA
MW14M	Isophorone	0.01	U	MG/L	nc	NA
MW01S	Isophorone	0.01	U	MG/L	nc	NA
MW01S	Isophorone	0.01	U	MG/L	nc	NA
MW03S	Isophorone	0.01	U	MG/L	nc	NA
MW05S	Isophorone	0.01	U	MG/L	nc	NA
MW06S	Isophorone	0.01	U	MG/L	nc	NA
MW07D	Isophorone	0.01	U	MG/L	nc	NA
MW07S	Isophorone	0.01	U	MG/L	nc	NA
MW08S	Isophorone	0.01	U	MG/L	nc	NA
MW09S	Isophorone	0.01	U	MG/L	nc	NA
MW04S	Isophorone	0.01	U	MG/L	nc	NA
MW04B	Isophorone	0.01	U	MG/L	nc	NA
MW04D	Isophorone	0.01	U	MG/L	nc	NA
MW04S	Isophorone	0.01	U	MG/L	nc	NA
MW02D	Isophorone	0.01	U	MG/L	nc	NA
MW02M	Isophorone	0.01	U	MG/L	nc	NA
MW02S	Isophorone	0.01	U	MG/L	nc	NA
MW02S	Isophorone	0.01	U	MG/L	nc	NA
MW06S	Isophorone	0.01	U	MG/L	nc	NA
MW07S	Isophorone	0.01	U	MG/L	nc	NA
MW01S	Isophorone	0.01	U	MG/L	nc	NA
MW01S	Isophorone	0.01	U	MG/L	nc	NA
MW03S	Isophorone	0.01	U	MG/L	nc	NA
MW08S	Isophorone	0.01	U	MG/L	nc	NA
MW09S	Isophorone	0.01	U	MG/L	nc	NA
MW03S	Isopropyl Alcohol	0.007	J	MG/L	nc	NA
MW07S	Isopropyl Alcohol	0.006	J	MG/L	nc	NA
GEC2	Isopropyl Alcohol	0.07	NJ	MG/L	nc	NA
MW11S	Isopropyl Alcohol	0.053	NJ	MG/L	nc	NA
MW10D	Isopropyl Alcohol	0.006	NJ	MG/L	nc	NA
MW08S	Isopropylbenzene	0.002		MG/L	nc	NA
MW06S	Isopropylbenzene	0.001	J	MG/L	nc	NA
MW05S	Isopropylbenzene	1.7	U	MG/L	nc	NA
MW05S	ISOPROPYLBENZENE	1	U	MG/L	nc	NA
MW05S	ISOPROPYLBENZENE	1	U	MG/L	nc	NA
MW05S	Isopropylbenzene	1	U	MG/L	nc	NA
MW05S	Isopropylbenzene	1	U	MG/L	nc	NA
MW14M	Isopropylbenzene	0.1	U	MG/L	nc	NA
MW06S	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW13D	Isopropylbenzene	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW10D	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW10B	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW10D	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW13B	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW13D	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW13S	Isopropylbenzene	0.01	U	MG/L	nc	NA
TMW3	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW12B	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW11B	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW11M	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW11S	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW12B	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW12D	Isopropylbenzene	0.01	U	MG/L	nc	NA
GEC2	Isopropylbenzene	0.01	U	MG/L	nc	NA
GEC6	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW14M	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW15D	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW01S	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW01S	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW03S	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW06S	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW07D	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW07S	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW08S	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW09S	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW04S	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW04B	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW04D	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW04S	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW02D	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW02M	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW02S	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW02S	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW07S	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW01S	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW01S	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW03S	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW08S	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW09S	Isopropylbenzene	0.01	U	MG/L	nc	NA
MW06S	Isopropylbenzene	0.006	U	MG/L	nc	NA
MW02M	Isopropylbenzene	0.005	U	MG/L	nc	NA
MW02D	Isopropylbenzene	0.004	U	MG/L	nc	NA
MW13B	Isopropylbenzene	0.004	U	MG/L	nc	NA
MW03S	Isopropylbenzene	0.001	U	MG/L	nc	NA
GEC3	Isopropylbenzene	0.001	U	MG/L	nc	NA
MW01S	Isopropylbenzene	0.001	U	MG/L	nc	NA
MW11S	Isopropylbenzene	0.001	U	MG/L	nc	NA
MW12B	Isopropylbenzene	0.001	U	MG/L	nc	NA
MW12D	Isopropylbenzene	0.001	U	MG/L	nc	NA
GEC1	Isopropylbenzene	0.001	U	MG/L	nc	NA
GEC2	Isopropylbenzene	0.001	U	MG/L	nc	NA
GEC4	Isopropylbenzene	0.001	U	MG/L	nc	NA
GEC5	Isopropylbenzene	0.001	U	MG/L	nc	NA
GEC6	Isopropylbenzene	0.001	U	MG/L	nc	NA
GEC7	Isopropylbenzene	0.001	U	MG/L	nc	NA
MW07D	Isopropylbenzene	0.001	U	MG/L	nc	NA
MW07S	Isopropylbenzene	0.001	U	MG/L	nc	NA
MW11B	Isopropylbenzene	0.001	U	MG/L	nc	NA
MW11M	Isopropylbenzene	0.001	U	MG/L	nc	NA
MW15D	Isopropylbenzene	0.001	U	MG/L	nc	NA
MW02S	Isopropylbenzene	0.001	U	MG/L	nc	NA
MW04B	Isopropylbenzene	0.001	U	MG/L	nc	NA
MW04D	Isopropylbenzene	0.001	U	MG/L	nc	NA
MW04S	Isopropylbenzene	0.001	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW09S	Isopropylbenzene	0.001	U	MG/L	nc	NA
MW10B	Isopropylbenzene	0.001	U	MG/L	nc	NA
MW10D	Isopropylbenzene	0.001	U	MG/L	nc	NA
MW13S	Isopropylbenzene	0.001	U	MG/L	nc	NA
MW-LEA-01	Isopropylbenzene (Cumene)	20	Uw	MG/L	nc	NA
MW-LEA-01	Isopropylbenzene (Cumene)	2	Uw	MG/L	nc	NA
MW-LEA-02	Isopropylbenzene (Cumene)	2	Uw	MG/L	nc	NA
MW-05S	Isopropylbenzene (Cumene)	2	Uw	MG/L	nc	NA
MW-LEA-02	Isopropylbenzene (Cumene)	2	Uw	MG/L	nc	NA
MW-LEA-02	Isopropylbenzene (Cumene)	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Isopropylbenzene (Cumene)	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Isopropylbenzene (Cumene)	0.004	Uw	MG/L	nc	NA
MW08S	Laboratory Artifact_total	0.044	J_2	MG/L	nc	NA
GEC6	Lead	0.07		MG/L	0.015	Y
MW03S	Lead	0.037		MG/L	0.015	Y
MW08S	Lead	0.017		MG/L	0.015	Y
MW03S	Lead	0.0122		MG/L	0.015	N
MW09S	Lead	0.0038		MG/L	0.015	N
MW12B	Lead	0.0053	J	MG/L	0.015	N
MW12B	Lead	0.0046	J	MG/L	0.015	N
MW08S	Lead	0.0027	J	MG/L	0.015	N
MW01S	Lead	0.002	J	MG/L	0.015	N
GEC1	Lead	0.07	U	MG/L	0.015	NA
GEC5	Lead	0.06	U	MG/L	0.015	NA
MW11S	Lead	0.018	U	MG/L	0.015	NA
GEC2	Lead	0.01	U	MG/L	0.015	NA
MW02S	Lead	0.0017	U	MG/L	0.015	NA
MW06S	Lead	0.0017	U	MG/L	0.015	NA
MW07S	Lead	0.0017	U	MG/L	0.015	NA
MW01S	Lead	0.0017	U	MG/L	0.015	NA
MW01S	Lead	0.0017	U	MG/L	0.015	NA
MW09S	Lead	0.0017	U	MG/L	0.015	NA
MW01S	Lead	0.0015	U	MG/L	0.015	NA
MW05S	Lead	0.0015	U	MG/L	0.015	NA
MW07D	Lead	0.0015	U	MG/L	0.015	NA
TMW3	Lead	0.0074	UJ	MG/L	0.015	NA
MW12D	Lead	0.0038	UJ	MG/L	0.015	NA
MW06S	Lead	0.0024	UJ	MG/L	0.015	NA
MW10B	Lead	0.002	UJ	MG/L	0.015	NA
MW07S	Lead	0.0015	UJ	MG/L	0.015	NA
MW04S	Lead	0.0015	UJ	MG/L	0.015	NA
MW04B	Lead	0.0015	UJ	MG/L	0.015	NA
MW04D	Lead	0.0015	UJ	MG/L	0.015	NA
MW04S	Lead	0.0015	UJ	MG/L	0.015	NA
MW02D	Lead	0.0015	UJ	MG/L	0.015	NA
MW02M	Lead	0.0015	UJ	MG/L	0.015	NA
MW02S	Lead	0.0015	UJ	MG/L	0.015	NA
MW10D	Lead	0.0013	UJ	MG/L	0.015	NA
MW10D	Lead	0.0013	UJ	MG/L	0.015	NA
MW13B	Lead	0.0013	UJ	MG/L	0.015	NA
MW13D	Lead	0.0013	UJ	MG/L	0.015	NA
MW13S	Lead	0.0013	UJ	MG/L	0.015	NA
MW11B	Lead	0.0013	UJ	MG/L	0.015	NA
MW11M	Lead	0.0013	UJ	MG/L	0.015	NA
GEC2	Lead	0.0013	UJ	MG/L	0.015	NA
GEC6	Lead	0.0013	UJ	MG/L	0.015	NA
MW14M	Lead	0.0013	UJ	MG/L	0.015	NA
MW15D	Lead	0.0013	UJ	MG/L	0.015	NA
MW03S	Lead	0.0277		MG/L	0.015	Y
MW08S	Lead	0.0038		MG/L	0.015	N
MW08S	Lead	0.0023	J	MG/L	0.015	N
MW10B	Lead	0.0148	U	MG/L	0.015	NA
MW02S	Lead	0.0017	U	MG/L	0.015	NA
MW06S	Lead	0.0017	U	MG/L	0.015	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW07S	Lead	0.0017	U	MG/L	0.015	NA
MW01S	Lead	0.0017	U	MG/L	0.015	NA
MW01S	Lead	0.0017	U	MG/L	0.015	NA
MW03S	Lead	0.0017	U	MG/L	0.015	NA
MW09S	Lead	0.0017	U	MG/L	0.015	NA
MW01S	Lead	0.0015	U	MG/L	0.015	NA
MW01S	Lead	0.0015	U	MG/L	0.015	NA
MW05S	Lead	0.0015	U	MG/L	0.015	NA
MW07D	Lead	0.0015	U	MG/L	0.015	NA
MW09S	Lead	0.0015	U	MG/L	0.015	NA
MW02D	Lead	0.0015	U	MG/L	0.015	NA
MW12D	Lead	0.0035	UJ	MG/L	0.015	NA
TMW3	Lead	0.0022	UJ	MG/L	0.015	NA
MW02M	Lead	0.0022	UJ	MG/L	0.015	NA
MW02S	Lead	0.0018	UJ	MG/L	0.015	NA
MW06S	Lead	0.0015	UJ	MG/L	0.015	NA
MW07S	Lead	0.0015	UJ	MG/L	0.015	NA
MW04S	Lead	0.0015	UJ	MG/L	0.015	NA
MW04B	Lead	0.0015	UJ	MG/L	0.015	NA
MW04D	Lead	0.0015	UJ	MG/L	0.015	NA
MW04S	Lead	0.0015	UJ	MG/L	0.015	NA
MW10D	Lead	0.0013	UJ	MG/L	0.015	NA
MW10D	Lead	0.0013	UJ	MG/L	0.015	NA
MW13B	Lead	0.0013	UJ	MG/L	0.015	NA
MW13D	Lead	0.0013	UJ	MG/L	0.015	NA
MW13S	Lead	0.0013	UJ	MG/L	0.015	NA
MW12B	Lead	0.0013	UJ	MG/L	0.015	NA
MW11B	Lead	0.0013	UJ	MG/L	0.015	NA
MW11M	Lead	0.0013	UJ	MG/L	0.015	NA
MW11S	Lead	0.0013	UJ	MG/L	0.015	NA
MW12B	Lead	0.0013	UJ	MG/L	0.015	NA
GEC2	Lead	0.0013	UJ	MG/L	0.015	NA
GEC6	Lead	0.0013	UJ	MG/L	0.015	NA
MW14M	Lead	0.0013	UJ	MG/L	0.015	NA
MW15D	Lead	0.0013	UJ	MG/L	0.015	NA
MW06S	Lycopodan-5-one, 12-hydroxy-15-methyl-,	0.005	NJ	MG/L	nc	NA
MW09S	Magnesium	6.86		MG/L	nc	NA
MW08S	Magnesium	6.81		MG/L	nc	NA
GEC2	Magnesium	5.82		MG/L	nc	NA
MW09S	Magnesium	5.35		MG/L	nc	NA
MW02M	Magnesium	5.33		MG/L	nc	NA
MW04B	Magnesium	5.13		MG/L	nc	NA
MW04D	Magnesium	5.08		MG/L	nc	NA
MW01S	Magnesium	4.9		MG/L	nc	NA
MW01S	Magnesium	4.88		MG/L	nc	NA
MW12B	Magnesium	4.5		MG/L	nc	NA
MW04S	Magnesium	4.37		MG/L	nc	NA
MW02D	Magnesium	4.36		MG/L	nc	NA
MW12B	Magnesium	4.35		MG/L	nc	NA
MW04S	Magnesium	4.22		MG/L	nc	NA
MW02S	Magnesium	4.13		MG/L	nc	NA
MW10B	Magnesium	4.03		MG/L	nc	NA
MW13D	Magnesium	3.91		MG/L	nc	NA
MW13B	Magnesium	3.78		MG/L	nc	NA
MW06S	Magnesium	3.75		MG/L	nc	NA
MW08S	Magnesium	3.66		MG/L	nc	NA
MW10D	Magnesium	3.64		MG/L	nc	NA
MW10D	Magnesium	3.52		MG/L	nc	NA
MW13S	Magnesium	3.45		MG/L	nc	NA
MW06S	Magnesium	2.91		MG/L	nc	NA
MW15D	Magnesium	2.89		MG/L	nc	NA
GEC6	Magnesium	2.73		MG/L	nc	NA
TMW3	Magnesium	2.61		MG/L	nc	NA
MW07S	Magnesium	2.56		MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW07S	Magnesium	2.29		MG/L	nc	NA
MW11M	Magnesium	2.09		MG/L	nc	NA
MW11S	Magnesium	2.06		MG/L	nc	NA
MW02S	Magnesium	2.01		MG/L	nc	NA
MW12D	Magnesium	1.93		MG/L	nc	NA
MW05S	Magnesium	1.81		MG/L	nc	NA
MW11B	Magnesium	1.73		MG/L	nc	NA
MW07D	Magnesium	1.68		MG/L	nc	NA
MW14M	Magnesium	1.34		MG/L	nc	NA
MW03S	Magnesium	1.11		MG/L	nc	NA
MW01S	Magnesium	0.897		MG/L	nc	NA
MW01S	Magnesium	0.893		MG/L	nc	NA
MW03S	Magnesium	0.764		MG/L	nc	NA
MW08S	Magnesium	7.09		MG/L	nc	NA
MW09S	Magnesium	6.55		MG/L	nc	NA
MW09S	Magnesium	5.39		MG/L	nc	NA
GEC2	Magnesium	5.36		MG/L	nc	NA
MW04B	Magnesium	5.1		MG/L	nc	NA
MW04D	Magnesium	4.96		MG/L	nc	NA
MW02M	Magnesium	4.96		MG/L	nc	NA
MW01S	Magnesium	4.93		MG/L	nc	NA
MW01S	Magnesium	4.93		MG/L	nc	NA
MW02D	Magnesium	4.29		MG/L	nc	NA
MW04S	Magnesium	4.25		MG/L	nc	NA
MW04S	Magnesium	4.2		MG/L	nc	NA
MW02S	Magnesium	4.17		MG/L	nc	NA
MW06S	Magnesium	3.93		MG/L	nc	NA
MW10B	Magnesium	3.8		MG/L	nc	NA
MW13B	Magnesium	3.8		MG/L	nc	NA
MW13S	Magnesium	3.72		MG/L	nc	NA
MW08S	Magnesium	3.66		MG/L	nc	NA
MW10D	Magnesium	3.5		MG/L	nc	NA
MW13D	Magnesium	3.44		MG/L	nc	NA
MW10D	Magnesium	3.36		MG/L	nc	NA
MW12B	Magnesium	3.1		MG/L	nc	NA
MW06S	Magnesium	2.97		MG/L	nc	NA
MW15D	Magnesium	2.88		MG/L	nc	NA
MW12B	Magnesium	2.87		MG/L	nc	NA
GEC6	Magnesium	2.87		MG/L	nc	NA
MW07S	Magnesium	2.63		MG/L	nc	NA
TMW3	Magnesium	2.44		MG/L	nc	NA
MW07S	Magnesium	2.24		MG/L	nc	NA
MW11M	Magnesium	2.06		MG/L	nc	NA
MW02S	Magnesium	1.95		MG/L	nc	NA
MW11S	Magnesium	1.93		MG/L	nc	NA
MW12D	Magnesium	1.92		MG/L	nc	NA
MW11B	Magnesium	1.76		MG/L	nc	NA
MW05S	Magnesium	1.72		MG/L	nc	NA
MW07D	Magnesium	1.62		MG/L	nc	NA
MW14M	Magnesium	1.24		MG/L	nc	NA
MW03S	Magnesium	1.14		MG/L	nc	NA
MW01S	Magnesium	0.939		MG/L	nc	NA
MW03S	Magnesium	0.898		MG/L	nc	NA
MW01S	Magnesium	0.861		MG/L	nc	NA
MW09S	Manganese	5.53		MG/L	nc	NA
MW09S	Manganese	4.48		MG/L	nc	NA
MW08S	Manganese	3.6		MG/L	nc	NA
MW07S	Manganese	2.68		MG/L	nc	NA
MW01S	Manganese	2.46		MG/L	nc	NA
MW01S	Manganese	2.43		MG/L	nc	NA
MW04S	Manganese	2.29		MG/L	nc	NA
MW04S	Manganese	2.23		MG/L	nc	NA
GEC2	Manganese	2.2		MG/L	nc	NA
MW07S	Manganese	2.02		MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW06S	Manganese	1.84		MG/L	nc	NA
MW06S	Manganese	1.8		MG/L	nc	NA
MW02M	Manganese	1.5		MG/L	nc	NA
MW02S	Manganese	1.45		MG/L	nc	NA
MW08S	Manganese	1.1		MG/L	nc	NA
TMW3	Manganese	0.983		MG/L	nc	NA
MW10D	Manganese	0.927		MG/L	nc	NA
MW10D	Manganese	0.899		MG/L	nc	NA
MW02S	Manganese	0.704		MG/L	nc	NA
MW02D	Manganese	0.672		MG/L	nc	NA
GEC6	Manganese	0.63		MG/L	nc	NA
MW11M	Manganese	0.602		MG/L	nc	NA
MW05S	Manganese	0.593		MG/L	nc	NA
MW15D	Manganese	0.488		MG/L	nc	NA
MW10B	Manganese	0.407		MG/L	nc	NA
MW01S	Manganese	0.351		MG/L	nc	NA
MW01S	Manganese	0.348		MG/L	nc	NA
MW04D	Manganese	0.337		MG/L	nc	NA
MW11S	Manganese	0.239		MG/L	nc	NA
MW13B	Manganese	0.215		MG/L	nc	NA
MW12B	Manganese	0.211		MG/L	nc	NA
MW12B	Manganese	0.21		MG/L	nc	NA
MW04B	Manganese	0.194		MG/L	nc	NA
MW12D	Manganese	0.134		MG/L	nc	NA
MW03S	Manganese	0.118		MG/L	nc	NA
MW11B	Manganese	0.11		MG/L	nc	NA
MW14M	Manganese	0.0887		MG/L	nc	NA
MW07D	Manganese	0.0739		MG/L	nc	NA
MW03S	Manganese	0.0605		MG/L	nc	NA
MW13D	Manganese	0.0536		MG/L	nc	NA
MW13S	Manganese	0.0522		MG/L	nc	NA
MW09S	Manganese	5.59		MG/L	nc	NA
MW09S	Manganese	4.28		MG/L	nc	NA
MW08S	Manganese	3.76		MG/L	nc	NA
MW07S	Manganese	2.8		MG/L	nc	NA
MW01S	Manganese	2.48		MG/L	nc	NA
MW01S	Manganese	2.45		MG/L	nc	NA
MW04S	Manganese	2.35		MG/L	nc	NA
MW04S	Manganese	2.28		MG/L	nc	NA
GEC2	Manganese	2.03		MG/L	nc	NA
MW07S	Manganese	1.99		MG/L	nc	NA
MW06S	Manganese	1.87		MG/L	nc	NA
MW06S	Manganese	1.86		MG/L	nc	NA
MW02S	Manganese	1.46		MG/L	nc	NA
MW02M	Manganese	1.41		MG/L	nc	NA
MW08S	Manganese	1.07		MG/L	nc	NA
TMW3	Manganese	0.929		MG/L	nc	NA
MW10D	Manganese	0.909		MG/L	nc	NA
MW10D	Manganese	0.85		MG/L	nc	NA
MW02D	Manganese	0.666		MG/L	nc	NA
MW02S	Manganese	0.654		MG/L	nc	NA
GEC6	Manganese	0.638		MG/L	nc	NA
MW11M	Manganese	0.595		MG/L	nc	NA
MW05S	Manganese	0.564		MG/L	nc	NA
MW15D	Manganese	0.483		MG/L	nc	NA
MW10B	Manganese	0.383		MG/L	nc	NA
MW01S	Manganese	0.361		MG/L	nc	NA
MW01S	Manganese	0.335		MG/L	nc	NA
MW04D	Manganese	0.322		MG/L	nc	NA
MW13B	Manganese	0.22		MG/L	nc	NA
MW11S	Manganese	0.209		MG/L	nc	NA
MW04B	Manganese	0.194		MG/L	nc	NA
MW12B	Manganese	0.151		MG/L	nc	NA
MW12B	Manganese	0.134		MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW12D	Manganese	0.134		MG/L	nc	NA
MW03S	Manganese	0.121		MG/L	nc	NA
MW11B	Manganese	0.119		MG/L	nc	NA
MW03S	Manganese	0.0831		MG/L	nc	NA
MW14M	Manganese	0.0825		MG/L	nc	NA
MW07D	Manganese	0.0728		MG/L	nc	NA
MW13S	Manganese	0.047		MG/L	nc	NA
MW13D	Manganese	0.0355		MG/L	nc	NA
MW-LEA-01	m-Dichlorobenzene	20	Uw	MG/L	nc	NA
MW-LEA-01	m-Dichlorobenzene	2	Uw	MG/L	nc	NA
MW-LEA-02	m-Dichlorobenzene	2	Uw	MG/L	nc	NA
MW-05S	m-Dichlorobenzene	2	Uw	MG/L	nc	NA
MW-LEA-02	m-Dichlorobenzene	2	Uw	MG/L	nc	NA
MW-LEA-02	m-Dichlorobenzene	0.2	Uw	MG/L	nc	NA
MW-LEA-03	m-Dichlorobenzene	0.2	Uw	MG/L	nc	NA
MW-LEA-03	m-Dichlorobenzene	0.004	Uw	MG/L	nc	NA
MW06S	Mercury	0.0004	U	MG/L	0.002	NA
MW02S	Mercury	0.00024	U	MG/L	0.002	NA
MW01S	Mercury	0.0002	U	MG/L	0.002	NA
MW01S	Mercury	0.0002	U	MG/L	0.002	NA
MW03S	Mercury	0.0002	U	MG/L	0.002	NA
MW05S	Mercury	0.0002	U	MG/L	0.002	NA
MW06S	Mercury	0.0002	U	MG/L	0.002	NA
MW07D	Mercury	0.0002	U	MG/L	0.002	NA
MW07S	Mercury	0.0002	U	MG/L	0.002	NA
MW08S	Mercury	0.0002	U	MG/L	0.002	NA
MW09S	Mercury	0.0002	U	MG/L	0.002	NA
MW04S	Mercury	0.0002	U	MG/L	0.002	NA
MW04B	Mercury	0.0002	U	MG/L	0.002	NA
MW04D	Mercury	0.0002	U	MG/L	0.002	NA
MW04S	Mercury	0.0002	U	MG/L	0.002	NA
MW02D	Mercury	0.0002	U	MG/L	0.002	NA
MW02M	Mercury	0.0002	U	MG/L	0.002	NA
MW02S	Mercury	0.0002	U	MG/L	0.002	NA
MW08S	Mercury	0.0002	U	MG/L	0.002	NA
MW03S	Mercury	0.00015	U	MG/L	0.002	NA
MW07S	Mercury	0.00014	U	MG/L	0.002	NA
MW10D	Mercury	0.0001	U	MG/L	0.002	NA
MW10B	Mercury	0.0001	U	MG/L	0.002	NA
MW10D	Mercury	0.0001	U	MG/L	0.002	NA
MW13B	Mercury	0.0001	U	MG/L	0.002	NA
MW13D	Mercury	0.0001	U	MG/L	0.002	NA
MW13S	Mercury	0.0001	U	MG/L	0.002	NA
TMW3	Mercury	0.0001	U	MG/L	0.002	NA
MW12B	Mercury	0.0001	U	MG/L	0.002	NA
MW11B	Mercury	0.0001	U	MG/L	0.002	NA
MW11M	Mercury	0.0001	U	MG/L	0.002	NA
MW11S	Mercury	0.0001	U	MG/L	0.002	NA
MW12B	Mercury	0.0001	U	MG/L	0.002	NA
MW12D	Mercury	0.0001	U	MG/L	0.002	NA
GEC2	Mercury	0.0001	U	MG/L	0.002	NA
GEC6	Mercury	0.0001	U	MG/L	0.002	NA
MW14M	Mercury	0.0001	U	MG/L	0.002	NA
MW15D	Mercury	0.0001	U	MG/L	0.002	NA
MW09S	Mercury	0.0001	U	MG/L	0.002	NA
MW01S	Mercury	0.00016	UJ	MG/L	0.002	NA
MW01S	Mercury	0.00015	UJ	MG/L	0.002	NA
MW06S	Mercury	0.00058	U	MG/L	0.002	NA
MW08S	Mercury	0.00034	U	MG/L	0.002	NA
MW07S	Mercury	0.00026	U	MG/L	0.002	NA
MW02S	Mercury	0.00024	U	MG/L	0.002	NA
MW01S	Mercury	0.0002	U	MG/L	0.002	NA
MW01S	Mercury	0.0002	U	MG/L	0.002	NA
MW03S	Mercury	0.0002	U	MG/L	0.002	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW05S	Mercury	0.0002	U	MG/L	0.002	NA
MW06S	Mercury	0.0002	U	MG/L	0.002	NA
MW07D	Mercury	0.0002	U	MG/L	0.002	NA
MW07S	Mercury	0.0002	U	MG/L	0.002	NA
MW08S	Mercury	0.0002	U	MG/L	0.002	NA
MW09S	Mercury	0.0002	U	MG/L	0.002	NA
MW04S	Mercury	0.0002	U	MG/L	0.002	NA
MW04B	Mercury	0.0002	U	MG/L	0.002	NA
MW04D	Mercury	0.0002	U	MG/L	0.002	NA
MW04S	Mercury	0.0002	U	MG/L	0.002	NA
MW02D	Mercury	0.0002	U	MG/L	0.002	NA
MW02M	Mercury	0.0002	U	MG/L	0.002	NA
MW02S	Mercury	0.0002	U	MG/L	0.002	NA
MW03S	Mercury	0.00019	U	MG/L	0.002	NA
MW09S	Mercury	0.00012	U	MG/L	0.002	NA
MW01S	Mercury	0.00011	U	MG/L	0.002	NA
MW10D	Mercury	0.0001	U	MG/L	0.002	NA
MW10B	Mercury	0.0001	U	MG/L	0.002	NA
MW10D	Mercury	0.0001	U	MG/L	0.002	NA
MW13B	Mercury	0.0001	U	MG/L	0.002	NA
MW13D	Mercury	0.0001	U	MG/L	0.002	NA
MW13S	Mercury	0.0001	U	MG/L	0.002	NA
TMW3	Mercury	0.0001	U	MG/L	0.002	NA
MW12B	Mercury	0.0001	U	MG/L	0.002	NA
MW11B	Mercury	0.0001	U	MG/L	0.002	NA
MW11M	Mercury	0.0001	U	MG/L	0.002	NA
MW11S	Mercury	0.0001	U	MG/L	0.002	NA
MW12B	Mercury	0.0001	U	MG/L	0.002	NA
MW12D	Mercury	0.0001	U	MG/L	0.002	NA
GEC2	Mercury	0.0001	U	MG/L	0.002	NA
GEC6	Mercury	0.0001	U	MG/L	0.002	NA
MW14M	Mercury	0.0001	U	MG/L	0.002	NA
MW15D	Mercury	0.0001	U	MG/L	0.002	NA
MW01S	Mercury	0.00018	UJ	MG/L	0.002	NA
MW10D	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW10B	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW10D	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW13B	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW13D	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW13S	Methoxychlor	0.0005	U	MG/L	0.04	NA
TMW3	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW12B	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW11B	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW11M	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW11S	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW12B	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW12D	Methoxychlor	0.0005	U	MG/L	0.04	NA
GEC2	Methoxychlor	0.0005	U	MG/L	0.04	NA
GEC6	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW14M	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW15D	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW01S	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW01S	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW03S	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW05S	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW06S	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW07D	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW07S	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW08S	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW09S	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW04S	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW04B	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW04D	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW04S	Methoxychlor	0.0005	U	MG/L	0.04	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW02M	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW02S	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW02S	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW06S	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW07S	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW01S	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW01S	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW03S	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW08S	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW09S	Methoxychlor	0.0005	U	MG/L	0.04	NA
MW02D	Methoxychlor	0.0005	UJ	MG/L	0.04	NA
MW-LEA-03	Methyl Acetate	0.2	UJw	MG/L	nc	NA
MW-LEA-01	Methyl Acetate	20	Uw	MG/L	nc	NA
MW-LEA-01	Methyl Acetate	2	Uw	MG/L	nc	NA
MW-LEA-02	Methyl Acetate	2	Uw	MG/L	nc	NA
MW-05S	Methyl Acetate	2	Uw	MG/L	nc	NA
MW-LEA-02	Methyl Acetate	2	Uw	MG/L	nc	NA
MW-LEA-02	Methyl Acetate	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Methyl Acetate	0.004	Uw	MG/L	nc	NA
MW05S	Methyl Acetate	0.43	J	MG/L	nc	NA
MW07S	Methyl Acetate	0.006	J	MG/L	nc	NA
MW10D	Methyl Acetate	0.01	U	MG/L	nc	NA
MW10B	Methyl Acetate	0.01	U	MG/L	nc	NA
MW10D	Methyl Acetate	0.01	U	MG/L	nc	NA
MW13B	Methyl Acetate	0.01	U	MG/L	nc	NA
MW13D	Methyl Acetate	0.01	U	MG/L	nc	NA
MW13S	Methyl Acetate	0.01	U	MG/L	nc	NA
TMW3	Methyl Acetate	0.01	U	MG/L	nc	NA
MW12B	Methyl Acetate	0.01	U	MG/L	nc	NA
MW11B	Methyl Acetate	0.01	U	MG/L	nc	NA
MW11M	Methyl Acetate	0.01	U	MG/L	nc	NA
MW11S	Methyl Acetate	0.01	U	MG/L	nc	NA
MW12B	Methyl Acetate	0.01	U	MG/L	nc	NA
MW12D	Methyl Acetate	0.01	U	MG/L	nc	NA
GEC2	Methyl Acetate	0.01	U	MG/L	nc	NA
GEC6	Methyl Acetate	0.01	U	MG/L	nc	NA
MW14M	Methyl Acetate	0.01	U	MG/L	nc	NA
MW15D	Methyl Acetate	0.01	U	MG/L	nc	NA
MW01S	Methyl Acetate	0.01	U	MG/L	nc	NA
MW06S	Methyl Acetate	0.01	U	MG/L	nc	NA
MW07D	Methyl Acetate	0.01	U	MG/L	nc	NA
MW08S	Methyl Acetate	0.01	U	MG/L	nc	NA
MW09S	Methyl Acetate	0.01	U	MG/L	nc	NA
MW04S	Methyl Acetate	0.01	U	MG/L	nc	NA
MW04B	Methyl Acetate	0.01	U	MG/L	nc	NA
MW04D	Methyl Acetate	0.01	U	MG/L	nc	NA
MW04S	Methyl Acetate	0.01	U	MG/L	nc	NA
MW02D	Methyl Acetate	0.01	U	MG/L	nc	NA
MW02M	Methyl Acetate	0.01	U	MG/L	nc	NA
MW02S	Methyl Acetate	0.01	U	MG/L	nc	NA
MW02S	Methyl Acetate	0.01	U	MG/L	nc	NA
MW06S	Methyl Acetate	0.01	U	MG/L	nc	NA
MW07S	Methyl Acetate	0.01	U	MG/L	nc	NA
MW01S	Methyl Acetate	0.01	U	MG/L	nc	NA
MW01S	Methyl Acetate	0.01	U	MG/L	nc	NA
MW03S	Methyl Acetate	0.01	U	MG/L	nc	NA
MW08S	Methyl Acetate	0.01	U	MG/L	nc	NA
MW09S	Methyl Acetate	0.01	U	MG/L	nc	NA
MW03S	Methyl Acetate	0.01	UJ	MG/L	nc	NA
MW01S	Methyl Acetate	0.005	UJ	MG/L	nc	NA
MW-LEA-01	Methyl Ethyl ketone	20	Uw	MG/L	nc	NA
MW-LEA-01	Methyl Ethyl ketone	2	Uw	MG/L	nc	NA
MW-LEA-02	Methyl Ethyl ketone	2	Uw	MG/L	nc	NA
MW-05S	Methyl Ethyl ketone	2	Uw	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW-LEA-02	Methyl Ethyl ketone	2	Uw	MG/L	nc	NA
MW-LEA-02	Methyl Ethyl ketone	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Methyl Ethyl ketone	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Methyl Ethyl ketone	0.004	Uw	MG/L	nc	NA
MW-LEA-01	Methyl Isobutyl ketone	20	Uw	MG/L	nc	NA
MW-LEA-01	Methyl Isobutyl ketone	2	Uw	MG/L	nc	NA
MW-LEA-02	Methyl Isobutyl ketone	2	Uw	MG/L	nc	NA
MW-05S	Methyl Isobutyl ketone	2	Uw	MG/L	nc	NA
MW-LEA-02	Methyl Isobutyl ketone	2	Uw	MG/L	nc	NA
MW-LEA-02	Methyl Isobutyl ketone	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Methyl Isobutyl ketone	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Methyl Isobutyl ketone	0.004	Uw	MG/L	nc	NA
MW-LEA-03	Methyl tert-Butyl ether	0.012	Jw	MG/L	nc	NA
MW-LEA-01	Methyl tert-Butyl ether	20	Uw	MG/L	nc	NA
MW-LEA-01	Methyl tert-Butyl ether	2	Uw	MG/L	nc	NA
MW-LEA-02	Methyl tert-Butyl ether	2	Uw	MG/L	nc	NA
MW-05S	Methyl tert-Butyl ether	2	Uw	MG/L	nc	NA
MW-LEA-02	Methyl tert-Butyl ether	2	Uw	MG/L	nc	NA
MW-LEA-02	Methyl tert-Butyl ether	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Methyl tert-Butyl ether	0.2	Uw	MG/L	nc	NA
MW03S	Methyl Tert-butyl Ether	0.011		MG/L	nc	NA
MW04B	Methyl Tert-butyl Ether	0.004	J	MG/L	nc	NA
MW04D	Methyl Tert-butyl Ether	0.004	J	MG/L	nc	NA
MW02D	Methyl Tert-butyl Ether	0.004	J	MG/L	nc	NA
MW02M	Methyl Tert-butyl Ether	0.003	J	MG/L	nc	NA
MW04S	Methyl Tert-butyl Ether	0.002	J	MG/L	nc	NA
MW04S	Methyl Tert-butyl Ether	0.002	J	MG/L	nc	NA
MW07S	Methyl Tert-butyl Ether	0.001	J	MG/L	nc	NA
MW05S	Methyl Tert-butyl Ether	1.7	U	MG/L	nc	NA
MW10D	Methyl Tert-butyl Ether	0.01	U	MG/L	nc	NA
MW10B	Methyl Tert-butyl Ether	0.01	U	MG/L	nc	NA
MW10D	Methyl Tert-butyl Ether	0.01	U	MG/L	nc	NA
MW13B	Methyl Tert-butyl Ether	0.01	U	MG/L	nc	NA
MW13D	Methyl Tert-butyl Ether	0.01	U	MG/L	nc	NA
MW13S	Methyl Tert-butyl Ether	0.01	U	MG/L	nc	NA
TMW3	Methyl Tert-butyl Ether	0.01	U	MG/L	nc	NA
MW12B	Methyl Tert-butyl Ether	0.01	U	MG/L	nc	NA
MW11B	Methyl Tert-butyl Ether	0.01	U	MG/L	nc	NA
MW11M	Methyl Tert-butyl Ether	0.01	U	MG/L	nc	NA
MW11S	Methyl Tert-butyl Ether	0.01	U	MG/L	nc	NA
MW12B	Methyl Tert-butyl Ether	0.01	U	MG/L	nc	NA
MW12D	Methyl Tert-butyl Ether	0.01	U	MG/L	nc	NA
GEC2	Methyl Tert-butyl Ether	0.01	U	MG/L	nc	NA
GEC6	Methyl Tert-butyl Ether	0.01	U	MG/L	nc	NA
MW14M	Methyl Tert-butyl Ether	0.01	U	MG/L	nc	NA
MW15D	Methyl Tert-butyl Ether	0.01	U	MG/L	nc	NA
MW01S	Methyl Tert-butyl Ether	0.01	U	MG/L	nc	NA
MW06S	Methyl Tert-butyl Ether	0.01	U	MG/L	nc	NA
MW07D	Methyl Tert-butyl Ether	0.01	U	MG/L	nc	NA
MW08S	Methyl Tert-butyl Ether	0.01	U	MG/L	nc	NA
MW09S	Methyl Tert-butyl Ether	0.01	U	MG/L	nc	NA
MW02S	Methyl Tert-butyl Ether	0.01	U	MG/L	nc	NA
MW02S	Methyl Tert-butyl Ether	0.01	U	MG/L	nc	NA
MW06S	Methyl Tert-butyl Ether	0.01	U	MG/L	nc	NA
MW07S	Methyl Tert-butyl Ether	0.01	U	MG/L	nc	NA
MW01S	Methyl Tert-butyl Ether	0.01	U	MG/L	nc	NA
MW01S	Methyl Tert-butyl Ether	0.01	U	MG/L	nc	NA
MW08S	Methyl Tert-butyl Ether	0.01	U	MG/L	nc	NA
MW09S	Methyl Tert-butyl Ether	0.01	U	MG/L	nc	NA
MW01S	Methyl Tert-butyl Ether	0.01	UJ	MG/L	nc	NA
MW03S	Methyl Tert-butyl Ether	0.01	UJ	MG/L	nc	NA
MW-LEA-02	Methylcyclohexane	0.1	Jw	MG/L	nc	NA
MW-LEA-01	Methylcyclohexane	20	Uw	MG/L	nc	NA
MW-LEA-01	Methylcyclohexane	2	Uw	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW-LEA-02	Methylcyclohexane	2	Uw	MG/L	nc	NA
MW-05S	Methylcyclohexane	2	Uw	MG/L	nc	NA
MW-LEA-02	Methylcyclohexane	2	Uw	MG/L	nc	NA
MW-LEA-03	Methylcyclohexane	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Methylcyclohexane	0.004	Uw	MG/L	nc	NA
MW06S	Methylcyclohexane	0.013		MG/L	nc	NA
MW06S	Methylcyclohexane	0.005	J	MG/L	nc	NA
MW05S	Methylcyclohexane	1.7	U	MG/L	nc	NA
MW10D	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW10B	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW10D	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW13B	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW13D	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW13S	Methylcyclohexane	0.01	U	MG/L	nc	NA
TMW3	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW12B	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW11B	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW11M	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW11S	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW12B	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW12D	Methylcyclohexane	0.01	U	MG/L	nc	NA
GEC2	Methylcyclohexane	0.01	U	MG/L	nc	NA
GEC6	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW14M	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW15D	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW01S	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW01S	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW03S	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW07D	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW07S	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW08S	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW09S	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW04S	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW04B	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW04D	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW04S	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW02D	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW02M	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW02S	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW02S	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW07S	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW01S	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW01S	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW03S	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW08S	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW09S	Methylcyclohexane	0.01	U	MG/L	nc	NA
MW-LEA-01	Methylene Chloride	20	Uw	MG/L	0.005	NA
MW-LEA-01	Methylene Chloride	2	Uw	MG/L	0.005	NA
MW-LEA-02	Methylene Chloride	2	Uw	MG/L	0.005	NA
MW-05S	Methylene Chloride	2	Uw	MG/L	0.005	NA
MW-LEA-02	Methylene Chloride	2	Uw	MG/L	0.005	NA
MW-LEA-02	Methylene Chloride	0.2	Uw	MG/L	0.005	NA
MW-LEA-03	Methylene Chloride	0.2	Uw	MG/L	0.005	NA
MW-LEA-03	Methylene Chloride	0.004	Uw	MG/L	0.005	NA
MW06S	Methylene Chloride	0.0036	J	MG/L	0.005	N
MW02D	Methylene Chloride	0.0019	J	MG/L	0.005	N
MW15D	Methylene Chloride	0.0002	J	MG/L	0.005	N
MW05S	Methylene Chloride	2	U	MG/L	0.005	NA
MW05S	Methylene Chloride	2	U	MG/L	0.005	NA
MW05S	METHYLENE CHLORIDE	0.72	U	MG/L	0.005	NA
MW05S	METHYLENE CHLORIDE	0.7	U	MG/L	0.005	NA
MW14M	Methylene Chloride	0.2	U	MG/L	0.005	NA
MW13D	Methylene Chloride	0.02	U	MG/L	0.005	NA
MW06S	Methylene Chloride	0.02	U	MG/L	0.005	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW06S	Methylene Chloride	0.012	U	MG/L	0.005	NA
MW02M	Methylene Chloride	0.01	U	MG/L	0.005	NA
MW10D	Methylene Chloride	0.01	U	MG/L	0.005	NA
MW10B	Methylene Chloride	0.01	U	MG/L	0.005	NA
MW10D	Methylene Chloride	0.01	U	MG/L	0.005	NA
MW13B	Methylene Chloride	0.01	U	MG/L	0.005	NA
MW13D	Methylene Chloride	0.01	U	MG/L	0.005	NA
MW13S	Methylene Chloride	0.01	U	MG/L	0.005	NA
TMW3	Methylene Chloride	0.01	U	MG/L	0.005	NA
MW11S	Methylene Chloride	0.01	U	MG/L	0.005	NA
MW12D	Methylene Chloride	0.01	U	MG/L	0.005	NA
MW07D	Methylene Chloride	0.01	U	MG/L	0.005	NA
MW04S	Methylene Chloride	0.01	U	MG/L	0.005	NA
MW04B	Methylene Chloride	0.01	U	MG/L	0.005	NA
MW04D	Methylene Chloride	0.01	U	MG/L	0.005	NA
MW04S	Methylene Chloride	0.01	U	MG/L	0.005	NA
MW02D	Methylene Chloride	0.01	U	MG/L	0.005	NA
MW02M	Methylene Chloride	0.01	U	MG/L	0.005	NA
MW02S	Methylene Chloride	0.01	U	MG/L	0.005	NA
MW02S	Methylene Chloride	0.01	U	MG/L	0.005	NA
MW07S	Methylene Chloride	0.01	U	MG/L	0.005	NA
MW01S	Methylene Chloride	0.01	U	MG/L	0.005	NA
MW01S	Methylene Chloride	0.01	U	MG/L	0.005	NA
MW03S	Methylene Chloride	0.01	U	MG/L	0.005	NA
MW08S	Methylene Chloride	0.01	U	MG/L	0.005	NA
MW09S	Methylene Chloride	0.01	U	MG/L	0.005	NA
MW13B	Methylene Chloride	0.008	U	MG/L	0.005	NA
MW03S	Methylene Chloride	0.002	U	MG/L	0.005	NA
GEC3	Methylene Chloride	0.002	U	MG/L	0.005	NA
MW01S	Methylene Chloride	0.002	U	MG/L	0.005	NA
MW11S	Methylene Chloride	0.002	U	MG/L	0.005	NA
MW12B	Methylene Chloride	0.002	U	MG/L	0.005	NA
MW12D	Methylene Chloride	0.002	U	MG/L	0.005	NA
GEC1	Methylene Chloride	0.002	U	MG/L	0.005	NA
GEC2	Methylene Chloride	0.002	U	MG/L	0.005	NA
GEC4	Methylene Chloride	0.002	U	MG/L	0.005	NA
GEC5	Methylene Chloride	0.002	U	MG/L	0.005	NA
GEC6	Methylene Chloride	0.002	U	MG/L	0.005	NA
GEC7	Methylene Chloride	0.002	U	MG/L	0.005	NA
MW07D	Methylene Chloride	0.002	U	MG/L	0.005	NA
MW07S	Methylene Chloride	0.002	U	MG/L	0.005	NA
MW11B	Methylene Chloride	0.002	U	MG/L	0.005	NA
MW11M	Methylene Chloride	0.002	U	MG/L	0.005	NA
MW02S	Methylene Chloride	0.002	U	MG/L	0.005	NA
MW04B	Methylene Chloride	0.002	U	MG/L	0.005	NA
MW04D	Methylene Chloride	0.002	U	MG/L	0.005	NA
MW04S	Methylene Chloride	0.002	U	MG/L	0.005	NA
MW08S	Methylene Chloride	0.002	U	MG/L	0.005	NA
MW09S	Methylene Chloride	0.002	U	MG/L	0.005	NA
MW10B	Methylene Chloride	0.002	U	MG/L	0.005	NA
MW10D	Methylene Chloride	0.002	U	MG/L	0.005	NA
MW13S	Methylene Chloride	0.002	U	MG/L	0.005	NA
MW05S	Methylene Chloride	1.7	UJ	MG/L	0.005	NA
MW12B	Methylene Chloride	0.01	UJ	MG/L	0.005	NA
MW11B	Methylene Chloride	0.01	UJ	MG/L	0.005	NA
MW11M	Methylene Chloride	0.01	UJ	MG/L	0.005	NA
MW12B	Methylene Chloride	0.01	UJ	MG/L	0.005	NA
GEC2	Methylene Chloride	0.01	UJ	MG/L	0.005	NA
GEC6	Methylene Chloride	0.01	UJ	MG/L	0.005	NA
MW14M	Methylene Chloride	0.01	UJ	MG/L	0.005	NA
MW15D	Methylene Chloride	0.01	UJ	MG/L	0.005	NA
MW01S	Methylene Chloride	0.01	UJ	MG/L	0.005	NA
MW01S	Methylene Chloride	0.01	UJ	MG/L	0.005	NA
MW03S	Methylene Chloride	0.01	UJ	MG/L	0.005	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW06S	Methylene Chloride	0.01	UJ	MG/L	0.005	NA
MW07S	Methylene Chloride	0.01	UJ	MG/L	0.005	NA
MW08S	Methylene Chloride	0.01	UJ	MG/L	0.005	NA
MW09S	Methylene Chloride	0.01	UJ	MG/L	0.005	NA
MW-LEA-01	Methylene Dibromide	20	Uw	MG/L	nc	NA
MW-LEA-01	Methylene Dibromide	2	Uw	MG/L	nc	NA
MW-LEA-02	Methylene Dibromide	2	Uw	MG/L	nc	NA
MW-05S	Methylene Dibromide	2	Uw	MG/L	nc	NA
MW-LEA-02	Methylene Dibromide	2	Uw	MG/L	nc	NA
MW-LEA-02	Methylene Dibromide	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Methylene Dibromide	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Methylene Dibromide	0.004	Uw	MG/L	nc	NA
MW08S	M-xylene & P-xylene	0.013		MG/L	nc	NA
MW06S	M-xylene & P-xylene	0.012	J	MG/L	nc	NA
MW06S	M-xylene & P-xylene	0.0092	J	MG/L	nc	NA
MW03S	M-xylene & P-xylene	0.00022	J	MG/L	nc	NA
MW05S	M-XYLENE & P-XYLENE	2	U	MG/L	nc	NA
MW05S	M-XYLENE & P-XYLENE	2	U	MG/L	nc	NA
MW05S	M-xylene & P-xylene	2	U	MG/L	nc	NA
MW05S	M-xylene & P-xylene	2	U	MG/L	nc	NA
MW14M	M-xylene & P-xylene	0.2	U	MG/L	nc	NA
MW13D	M-xylene & P-xylene	0.02	U	MG/L	nc	NA
MW02M	M-xylene & P-xylene	0.01	U	MG/L	nc	NA
MW02D	M-xylene & P-xylene	0.008	U	MG/L	nc	NA
MW13B	M-xylene & P-xylene	0.008	U	MG/L	nc	NA
GEC3	M-xylene & P-xylene	0.002	U	MG/L	nc	NA
MW01S	M-xylene & P-xylene	0.002	U	MG/L	nc	NA
MW11S	M-xylene & P-xylene	0.002	U	MG/L	nc	NA
MW12B	M-xylene & P-xylene	0.002	U	MG/L	nc	NA
MW12D	M-xylene & P-xylene	0.002	U	MG/L	nc	NA
GEC1	M-xylene & P-xylene	0.002	U	MG/L	nc	NA
GEC2	M-xylene & P-xylene	0.002	U	MG/L	nc	NA
GEC4	M-xylene & P-xylene	0.002	U	MG/L	nc	NA
GEC5	M-xylene & P-xylene	0.002	U	MG/L	nc	NA
GEC6	M-xylene & P-xylene	0.002	U	MG/L	nc	NA
GEC7	M-xylene & P-xylene	0.002	U	MG/L	nc	NA
MW07D	M-xylene & P-xylene	0.002	U	MG/L	nc	NA
MW07S	M-xylene & P-xylene	0.002	U	MG/L	nc	NA
MW11B	M-xylene & P-xylene	0.002	U	MG/L	nc	NA
MW11M	M-xylene & P-xylene	0.002	U	MG/L	nc	NA
MW15D	M-xylene & P-xylene	0.002	U	MG/L	nc	NA
MW02S	M-xylene & P-xylene	0.002	U	MG/L	nc	NA
MW04B	M-xylene & P-xylene	0.002	U	MG/L	nc	NA
MW04D	M-xylene & P-xylene	0.002	U	MG/L	nc	NA
MW04S	M-xylene & P-xylene	0.002	U	MG/L	nc	NA
MW09S	M-xylene & P-xylene	0.002	U	MG/L	nc	NA
MW10B	M-xylene & P-xylene	0.002	U	MG/L	nc	NA
MW10D	M-xylene & P-xylene	0.002	U	MG/L	nc	NA
MW13S	M-xylene & P-xylene	0.002	U	MG/L	nc	NA
MW-LEA-01	Naphthalene	20	Uw	MG/L	nc	NA
MW-LEA-01	Naphthalene	2	Uw	MG/L	nc	NA
MW-LEA-02	Naphthalene	2	Uw	MG/L	nc	NA
MW-05S	Naphthalene	2	Uw	MG/L	nc	NA
MW-LEA-02	Naphthalene	2	Uw	MG/L	nc	NA
MW-LEA-02	Naphthalene	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Naphthalene	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Naphthalene	0.004	Uw	MG/L	nc	NA
MW05S	Naphthalene	0.011		MG/L	nc	NA
GEC3	Naphthalene	0.0019		MG/L	nc	NA
GEC2	Naphthalene	0.00015		MG/L	nc	NA
GEC4	Naphthalene	0.00013		MG/L	nc	NA
MW06S	Naphthalene	0.001	J	MG/L	nc	NA
MW15D	Naphthalene	0.014	U	MG/L	nc	NA
MW10D	Naphthalene	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW10B	Naphthalene	0.01	U	MG/L	nc	NA
MW10D	Naphthalene	0.01	U	MG/L	nc	NA
MW13B	Naphthalene	0.01	U	MG/L	nc	NA
MW13D	Naphthalene	0.01	U	MG/L	nc	NA
MW13S	Naphthalene	0.01	U	MG/L	nc	NA
TMW3	Naphthalene	0.01	U	MG/L	nc	NA
MW12B	Naphthalene	0.01	U	MG/L	nc	NA
MW11B	Naphthalene	0.01	U	MG/L	nc	NA
MW11M	Naphthalene	0.01	U	MG/L	nc	NA
MW11S	Naphthalene	0.01	U	MG/L	nc	NA
MW12B	Naphthalene	0.01	U	MG/L	nc	NA
MW12D	Naphthalene	0.01	U	MG/L	nc	NA
GEC2	Naphthalene	0.01	U	MG/L	nc	NA
GEC6	Naphthalene	0.01	U	MG/L	nc	NA
MW14M	Naphthalene	0.01	U	MG/L	nc	NA
MW01S	Naphthalene	0.01	U	MG/L	nc	NA
MW01S	Naphthalene	0.01	U	MG/L	nc	NA
MW03S	Naphthalene	0.01	U	MG/L	nc	NA
MW06S	Naphthalene	0.01	U	MG/L	nc	NA
MW07D	Naphthalene	0.01	U	MG/L	nc	NA
MW07S	Naphthalene	0.01	U	MG/L	nc	NA
MW08S	Naphthalene	0.01	U	MG/L	nc	NA
MW09S	Naphthalene	0.01	U	MG/L	nc	NA
MW04S	Naphthalene	0.01	U	MG/L	nc	NA
MW04B	Naphthalene	0.01	U	MG/L	nc	NA
MW04D	Naphthalene	0.01	U	MG/L	nc	NA
MW04S	Naphthalene	0.01	U	MG/L	nc	NA
MW02D	Naphthalene	0.01	U	MG/L	nc	NA
MW02M	Naphthalene	0.01	U	MG/L	nc	NA
MW02S	Naphthalene	0.01	U	MG/L	nc	NA
MW02S	Naphthalene	0.01	U	MG/L	nc	NA
MW07S	Naphthalene	0.01	U	MG/L	nc	NA
MW01S	Naphthalene	0.01	U	MG/L	nc	NA
MW01S	Naphthalene	0.01	U	MG/L	nc	NA
MW03S	Naphthalene	0.01	U	MG/L	nc	NA
MW08S	Naphthalene	0.01	U	MG/L	nc	NA
MW09S	Naphthalene	0.01	U	MG/L	nc	NA
GEC1	Naphthalene	0.00018	U	MG/L	nc	NA
GEC7	Naphthalene	0.00014	U	MG/L	nc	NA
GEC5	Naphthalene	0.00012	U	MG/L	nc	NA
GEC6	Naphthalene	0.00012	U	MG/L	nc	NA
MW08S	Naphthalene	0.0017		MG/L	nc	NA
MW05S	NAPHTHALENE	1	U	MG/L	nc	NA
MW05S	NAPHTHALENE	1	U	MG/L	nc	NA
MW05S	Naphthalene	1	U	MG/L	nc	NA
MW05S	Naphthalene	1	U	MG/L	nc	NA
MW14M	Naphthalene	0.1	U	MG/L	nc	NA
MW06S	Naphthalene	0.01	U	MG/L	nc	NA
MW13D	Naphthalene	0.01	U	MG/L	nc	NA
MW06S	Naphthalene	0.006	U	MG/L	nc	NA
MW02M	Naphthalene	0.005	U	MG/L	nc	NA
MW02D	Naphthalene	0.004	U	MG/L	nc	NA
MW13B	Naphthalene	0.004	U	MG/L	nc	NA
MW03S	Naphthalene	0.001	U	MG/L	nc	NA
GEC3	Naphthalene	0.001	U	MG/L	nc	NA
MW01S	Naphthalene	0.001	U	MG/L	nc	NA
MW11S	Naphthalene	0.001	U	MG/L	nc	NA
MW12B	Naphthalene	0.001	U	MG/L	nc	NA
MW12D	Naphthalene	0.001	U	MG/L	nc	NA
GEC1	Naphthalene	0.001	U	MG/L	nc	NA
GEC2	Naphthalene	0.001	U	MG/L	nc	NA
GEC4	Naphthalene	0.001	U	MG/L	nc	NA
GEC5	Naphthalene	0.001	U	MG/L	nc	NA
GEC6	Naphthalene	0.001	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
GEC7	Naphthalene	0.001	U	MG/L	nc	NA
MW07D	Naphthalene	0.001	U	MG/L	nc	NA
MW07S	Naphthalene	0.001	U	MG/L	nc	NA
MW11B	Naphthalene	0.001	U	MG/L	nc	NA
MW11M	Naphthalene	0.001	U	MG/L	nc	NA
MW15D	Naphthalene	0.001	U	MG/L	nc	NA
MW02S	Naphthalene	0.001	U	MG/L	nc	NA
MW04B	Naphthalene	0.001	U	MG/L	nc	NA
MW04D	Naphthalene	0.001	U	MG/L	nc	NA
MW04S	Naphthalene	0.001	U	MG/L	nc	NA
MW09S	Naphthalene	0.001	U	MG/L	nc	NA
MW10B	Naphthalene	0.001	U	MG/L	nc	NA
MW10D	Naphthalene	0.001	U	MG/L	nc	NA
MW13S	Naphthalene	0.001	U	MG/L	nc	NA
MW05S	N-BUTYLBENZENE	1	U	MG/L	nc	NA
MW05S	N-BUTYLBENZENE	1	U	MG/L	nc	NA
MW05S	N-butylbenzene	1	U	MG/L	nc	NA
MW05S	N-butylbenzene	1	U	MG/L	nc	NA
MW14M	N-butylbenzene	0.1	U	MG/L	nc	NA
MW06S	N-butylbenzene	0.01	U	MG/L	nc	NA
MW13D	N-butylbenzene	0.01	U	MG/L	nc	NA
MW06S	N-butylbenzene	0.006	U	MG/L	nc	NA
MW02M	N-butylbenzene	0.005	U	MG/L	nc	NA
MW02D	N-butylbenzene	0.004	U	MG/L	nc	NA
MW13B	N-butylbenzene	0.004	U	MG/L	nc	NA
MW03S	N-butylbenzene	0.001	U	MG/L	nc	NA
GEC3	N-butylbenzene	0.001	U	MG/L	nc	NA
MW01S	N-butylbenzene	0.001	U	MG/L	nc	NA
MW11S	N-butylbenzene	0.001	U	MG/L	nc	NA
MW12B	N-butylbenzene	0.001	U	MG/L	nc	NA
MW12D	N-butylbenzene	0.001	U	MG/L	nc	NA
GEC1	N-butylbenzene	0.001	U	MG/L	nc	NA
GEC2	N-butylbenzene	0.001	U	MG/L	nc	NA
GEC4	N-butylbenzene	0.001	U	MG/L	nc	NA
GEC5	N-butylbenzene	0.001	U	MG/L	nc	NA
GEC6	N-butylbenzene	0.001	U	MG/L	nc	NA
GEC7	N-butylbenzene	0.001	U	MG/L	nc	NA
MW07D	N-butylbenzene	0.001	U	MG/L	nc	NA
MW07S	N-butylbenzene	0.001	U	MG/L	nc	NA
MW11B	N-butylbenzene	0.001	U	MG/L	nc	NA
MW11M	N-butylbenzene	0.001	U	MG/L	nc	NA
MW15D	N-butylbenzene	0.001	U	MG/L	nc	NA
MW02S	N-butylbenzene	0.001	U	MG/L	nc	NA
MW04B	N-butylbenzene	0.001	U	MG/L	nc	NA
MW04D	N-butylbenzene	0.001	U	MG/L	nc	NA
MW04S	N-butylbenzene	0.001	U	MG/L	nc	NA
MW08S	N-butylbenzene	0.001	U	MG/L	nc	NA
MW09S	N-butylbenzene	0.001	U	MG/L	nc	NA
MW10B	N-butylbenzene	0.001	U	MG/L	nc	NA
MW10D	N-butylbenzene	0.001	U	MG/L	nc	NA
MW13S	N-butylbenzene	0.001	U	MG/L	nc	NA
MW10D	Nickel	0.158		MG/L	nc	NA
MW10D	Nickel	0.153		MG/L	nc	NA
MW10B	Nickel	0.0445		MG/L	nc	NA
MW11S	Nickel	0.0387		MG/L	nc	NA
MW09S	Nickel	0.0309		MG/L	nc	NA
MW02M	Nickel	0.015		MG/L	nc	NA
MW05S	Nickel	0.0128		MG/L	nc	NA
MW03S	Nickel	0.0118		MG/L	nc	NA
MW08S	Nickel	0.0112		MG/L	nc	NA
MW02D	Nickel	0.0095		MG/L	nc	NA
MW04D	Nickel	0.0082		MG/L	nc	NA
MW07S	Nickel	0.0045		MG/L	nc	NA
MW04B	Nickel	0.0052	J	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW03S	Nickel	0.005	J	MG/L	nc	NA
MW02S	Nickel	0.0025	J	MG/L	nc	NA
MW06S	Nickel	0.0023	J	MG/L	nc	NA
MW13D	Nickel	0.0285	U	MG/L	nc	NA
MW12B	Nickel	0.0141	U	MG/L	nc	NA
MW13S	Nickel	0.0135	U	MG/L	nc	NA
MW12B	Nickel	0.0124	U	MG/L	nc	NA
TMW3	Nickel	0.0115	U	MG/L	nc	NA
MW11B	Nickel	0.0061	U	MG/L	nc	NA
MW11M	Nickel	0.0049	U	MG/L	nc	NA
MW01S	Nickel	0.003	U	MG/L	nc	NA
MW01S	Nickel	0.003	U	MG/L	nc	NA
MW06S	Nickel	0.003	U	MG/L	nc	NA
MW07D	Nickel	0.003	U	MG/L	nc	NA
MW07S	Nickel	0.003	U	MG/L	nc	NA
MW08S	Nickel	0.003	U	MG/L	nc	NA
MW09S	Nickel	0.003	U	MG/L	nc	NA
MW04S	Nickel	0.003	U	MG/L	nc	NA
MW04S	Nickel	0.003	U	MG/L	nc	NA
MW02S	Nickel	0.003	U	MG/L	nc	NA
MW13B	Nickel	0.0029	U	MG/L	nc	NA
MW12D	Nickel	0.0029	U	MG/L	nc	NA
MW14M	Nickel	0.0026	U	MG/L	nc	NA
GEC2	Nickel	0.0024	U	MG/L	nc	NA
MW15D	Nickel	0.0018	U	MG/L	nc	NA
MW01S	Nickel	0.0013	U	MG/L	nc	NA
MW01S	Nickel	0.0013	U	MG/L	nc	NA
GEC6	Nickel	0.0009	U	MG/L	nc	NA
MW10D	Nickel	0.152		MG/L	nc	NA
MW10D	Nickel	0.145		MG/L	nc	NA
MW13B	Nickel	0.0826		MG/L	nc	NA
MW11S	Nickel	0.0522		MG/L	nc	NA
MW09S	Nickel	0.0304		MG/L	nc	NA
MW08S	Nickel	0.0109		MG/L	nc	NA
MW03S	Nickel	0.0105		MG/L	nc	NA
MW02M	Nickel	0.0102		MG/L	nc	NA
MW02D	Nickel	0.0094		MG/L	nc	NA
MW04D	Nickel	0.0073		MG/L	nc	NA
MW07S	Nickel	0.0044		MG/L	nc	NA
MW05S	Nickel	0.0054	J	MG/L	nc	NA
MW03S	Nickel	0.0053	J	MG/L	nc	NA
MW04B	Nickel	0.0043	J	MG/L	nc	NA
MW06S	Nickel	0.002	J	MG/L	nc	NA
MW02S	Nickel	0.0016	J	MG/L	nc	NA
MW10B	Nickel	0.0322	U	MG/L	nc	NA
MW13D	Nickel	0.0194	U	MG/L	nc	NA
MW13S	Nickel	0.0086	U	MG/L	nc	NA
TMW3	Nickel	0.0084	U	MG/L	nc	NA
MW12B	Nickel	0.0071	U	MG/L	nc	NA
MW11B	Nickel	0.0069	U	MG/L	nc	NA
MW12D	Nickel	0.0069	U	MG/L	nc	NA
MW12B	Nickel	0.0066	U	MG/L	nc	NA
MW11M	Nickel	0.0048	U	MG/L	nc	NA
MW01S	Nickel	0.003	U	MG/L	nc	NA
MW01S	Nickel	0.003	U	MG/L	nc	NA
MW06S	Nickel	0.003	U	MG/L	nc	NA
MW07D	Nickel	0.003	U	MG/L	nc	NA
MW07S	Nickel	0.003	U	MG/L	nc	NA
MW08S	Nickel	0.003	U	MG/L	nc	NA
MW09S	Nickel	0.003	U	MG/L	nc	NA
MW04S	Nickel	0.003	U	MG/L	nc	NA
MW04S	Nickel	0.003	U	MG/L	nc	NA
MW02S	Nickel	0.003	U	MG/L	nc	NA
GEC2	Nickel	0.0025	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW01S	Nickel	0.0013	U	MG/L	nc	NA
MW01S	Nickel	0.0013	U	MG/L	nc	NA
GEC6	Nickel	0.0017	UJ	MG/L	nc	NA
MW15D	Nickel	0.0012	UJ	MG/L	nc	NA
MW14M	Nickel	0.0011	UJ	MG/L	nc	NA
MW15D	Nitrobenzene	0.014	U	MG/L	nc	NA
MW10D	Nitrobenzene	0.01	U	MG/L	nc	NA
MW10B	Nitrobenzene	0.01	U	MG/L	nc	NA
MW10D	Nitrobenzene	0.01	U	MG/L	nc	NA
MW13B	Nitrobenzene	0.01	U	MG/L	nc	NA
MW13D	Nitrobenzene	0.01	U	MG/L	nc	NA
MW13S	Nitrobenzene	0.01	U	MG/L	nc	NA
TMW3	Nitrobenzene	0.01	U	MG/L	nc	NA
MW12B	Nitrobenzene	0.01	U	MG/L	nc	NA
MW11B	Nitrobenzene	0.01	U	MG/L	nc	NA
MW11M	Nitrobenzene	0.01	U	MG/L	nc	NA
MW11S	Nitrobenzene	0.01	U	MG/L	nc	NA
MW12B	Nitrobenzene	0.01	U	MG/L	nc	NA
MW12D	Nitrobenzene	0.01	U	MG/L	nc	NA
GEC2	Nitrobenzene	0.01	U	MG/L	nc	NA
GEC6	Nitrobenzene	0.01	U	MG/L	nc	NA
MW14M	Nitrobenzene	0.01	U	MG/L	nc	NA
MW01S	Nitrobenzene	0.01	U	MG/L	nc	NA
MW01S	Nitrobenzene	0.01	U	MG/L	nc	NA
MW03S	Nitrobenzene	0.01	U	MG/L	nc	NA
MW05S	Nitrobenzene	0.01	U	MG/L	nc	NA
MW06S	Nitrobenzene	0.01	U	MG/L	nc	NA
MW07D	Nitrobenzene	0.01	U	MG/L	nc	NA
MW07S	Nitrobenzene	0.01	U	MG/L	nc	NA
MW08S	Nitrobenzene	0.01	U	MG/L	nc	NA
MW09S	Nitrobenzene	0.01	U	MG/L	nc	NA
MW04S	Nitrobenzene	0.01	U	MG/L	nc	NA
MW04B	Nitrobenzene	0.01	U	MG/L	nc	NA
MW04D	Nitrobenzene	0.01	U	MG/L	nc	NA
MW04S	Nitrobenzene	0.01	U	MG/L	nc	NA
MW02D	Nitrobenzene	0.01	U	MG/L	nc	NA
MW02M	Nitrobenzene	0.01	U	MG/L	nc	NA
MW02S	Nitrobenzene	0.01	U	MG/L	nc	NA
MW02S	Nitrobenzene	0.01	U	MG/L	nc	NA
MW06S	Nitrobenzene	0.01	U	MG/L	nc	NA
MW07S	Nitrobenzene	0.01	U	MG/L	nc	NA
MW01S	Nitrobenzene	0.01	U	MG/L	nc	NA
MW01S	Nitrobenzene	0.01	U	MG/L	nc	NA
MW03S	Nitrobenzene	0.01	U	MG/L	nc	NA
MW08S	Nitrobenzene	0.01	U	MG/L	nc	NA
MW09S	Nitrobenzene	0.01	U	MG/L	nc	NA
MW15D	N-nitroso-di-n-propylamine	0.014	U	MG/L	nc	NA
MW10D	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW10B	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW10D	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW13B	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW13D	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW13S	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
TMW3	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW12B	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW11B	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW11M	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW11S	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW12B	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW12D	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
GEC2	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
GEC6	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW14M	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW01S	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW01S	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW03S	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW05S	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW06S	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW07D	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW07S	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW08S	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW09S	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW04S	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW04B	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW04D	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW04S	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW02D	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW02M	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW02S	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW02S	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW06S	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW07S	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW01S	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW01S	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW03S	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW09S	N-nitroso-di-n-propylamine	0.01	U	MG/L	nc	NA
MW08S	N-nitroso-di-n-propylamine	0.01	UJ	MG/L	nc	NA
MW15D	N-nitroso-diphenylamine	0.014	U	MG/L	nc	NA
MW10D	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW10B	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW10D	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW13B	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW13D	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW13S	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
TMW3	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW12B	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW11B	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW11M	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW11S	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW12B	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW12D	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
GEC2	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
GEC6	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW14M	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW01S	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW01S	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW03S	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW05S	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW06S	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW07D	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW07S	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW08S	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW09S	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW04S	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW04B	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW04D	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW04S	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW02D	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW02M	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW02S	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW02S	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW06S	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW07S	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW01S	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW01S	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW03S	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW08S	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA
MW09S	N-nitroso-diphenylamine	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW08S	N-propylbenzene	0.0074		MG/L	nc	NA
MW05S	N-PROPYLBENZENE	1	U	MG/L	nc	NA
MW05S	N-PROPYLBENZENE	1	U	MG/L	nc	NA
MW05S	N-propylbenzene	1	U	MG/L	nc	NA
MW05S	N-propylbenzene	1	U	MG/L	nc	NA
MW14M	N-propylbenzene	0.1	U	MG/L	nc	NA
MW06S	N-propylbenzene	0.01	U	MG/L	nc	NA
MW13D	N-propylbenzene	0.01	U	MG/L	nc	NA
MW06S	N-propylbenzene	0.006	U	MG/L	nc	NA
MW02M	N-propylbenzene	0.005	U	MG/L	nc	NA
MW02D	N-propylbenzene	0.004	U	MG/L	nc	NA
MW13B	N-propylbenzene	0.004	U	MG/L	nc	NA
MW03S	N-propylbenzene	0.001	U	MG/L	nc	NA
GEC3	N-propylbenzene	0.001	U	MG/L	nc	NA
MW01S	N-propylbenzene	0.001	U	MG/L	nc	NA
MW11S	N-propylbenzene	0.001	U	MG/L	nc	NA
MW12B	N-propylbenzene	0.001	U	MG/L	nc	NA
MW12D	N-propylbenzene	0.001	U	MG/L	nc	NA
GEC1	N-propylbenzene	0.001	U	MG/L	nc	NA
GEC2	N-propylbenzene	0.001	U	MG/L	nc	NA
GEC4	N-propylbenzene	0.001	U	MG/L	nc	NA
GEC5	N-propylbenzene	0.001	U	MG/L	nc	NA
GEC6	N-propylbenzene	0.001	U	MG/L	nc	NA
GEC7	N-propylbenzene	0.001	U	MG/L	nc	NA
MW07D	N-propylbenzene	0.001	U	MG/L	nc	NA
MW07S	N-propylbenzene	0.001	U	MG/L	nc	NA
MW11B	N-propylbenzene	0.001	U	MG/L	nc	NA
MW11M	N-propylbenzene	0.001	U	MG/L	nc	NA
MW15D	N-propylbenzene	0.001	U	MG/L	nc	NA
MW02S	N-propylbenzene	0.001	U	MG/L	nc	NA
MW04B	N-propylbenzene	0.001	U	MG/L	nc	NA
MW04D	N-propylbenzene	0.001	U	MG/L	nc	NA
MW04S	N-propylbenzene	0.001	U	MG/L	nc	NA
MW09S	N-propylbenzene	0.001	U	MG/L	nc	NA
MW10B	N-propylbenzene	0.001	U	MG/L	nc	NA
MW10D	N-propylbenzene	0.001	U	MG/L	nc	NA
MW13S	N-propylbenzene	0.001	U	MG/L	nc	NA
MW05S	OCDD	1.653E-08		MG/L	nc	NA
MW15D	OCDD	0.000000017	EMPC	MG/L	nc	NA
MW03S	OCDD	1.67E-08	EMPC	MG/L	nc	NA
MW07S	OCDD	1.31E-08	EMPC	MG/L	nc	NA
MW11B	OCDD	1.11E-08	EMPC	MG/L	nc	NA
MW10D	OCDD	1.02E-08	EMPC	MG/L	nc	NA
MW05S	OCDD	1.02E-08	EMPC	MG/L	nc	NA
TMW3	OCDD	9.5E-09	EMPC	MG/L	nc	NA
GEC6	OCDD	7.3E-09	EMPC	MG/L	nc	NA
MW13D	OCDD	6.7E-09	EMPC	MG/L	nc	NA
MW07S	OCDD	5.8E-09	EMPC	MG/L	nc	NA
MW02D	OCDD	3.2E-09	EMPC	MG/L	nc	NA
MW01S	OCDD	7.24E-08	J	MG/L	nc	NA
MW02S	OCDD	0.000000052	J	MG/L	nc	NA
MW08S	OCDD	1.94E-08	J	MG/L	nc	NA
MW01S	OCDD	0.000000019	J	MG/L	nc	NA
MW03S	OCDD	1.55E-08	J	MG/L	nc	NA
MW06S	OCDD	1.26E-08	J	MG/L	nc	NA
MW09S	OCDD	1.11E-08	J	MG/L	nc	NA
MW04D	OCDD	0.000000021	U	MG/L	nc	NA
GEC2	OCDD	2.04E-08	U	MG/L	nc	NA
MW12B	OCDD	1.95E-08	U	MG/L	nc	NA
MW01S	OCDD	1.92E-08	U	MG/L	nc	NA
MW13S	OCDD	1.81E-08	U	MG/L	nc	NA
MW01S	OCDD	1.48E-08	U	MG/L	nc	NA
MW02S	OCDD	1.35E-08	U	MG/L	nc	NA
MW12B	OCDD	1.32E-08	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW07D	OCDD	1.31E-08	U	MG/L	nc	NA
MW10D	OCDD	1.19E-08	U	MG/L	nc	NA
MW04B	OCDD	1.04E-08	U	MG/L	nc	NA
MW09S	OCDD	1.01E-08	U	MG/L	nc	NA
MW04S	OCDD	9.9E-09	U	MG/L	nc	NA
MW04S	OCDD	9.7E-09	U	MG/L	nc	NA
MW11S	OCDD	7.4E-09	U	MG/L	nc	NA
MW08S	OCDD	7.4E-09	U	MG/L	nc	NA
MW06S	OCDD	7.1E-09	U	MG/L	nc	NA
MW12D	OCDD	6.2E-09	U	MG/L	nc	NA
MW14M	OCDD	5.9E-09	U	MG/L	nc	NA
MW13B	OCDD	5.2E-09	U	MG/L	nc	NA
MW11M	OCDD	4.8E-09	U	MG/L	nc	NA
MW05S	OCDD	4.62E-09	U	MG/L	nc	NA
MW10B	OCDD	4.4E-09	U	MG/L	nc	NA
MW05S	OCDD	4.08E-09	U	MG/L	nc	NA
MW02M	OCDD	3.2E-09	U	MG/L	nc	NA
MW05S	OCDF	4.5E-09		MG/L	nc	NA
MW13D	OCDF	3.23E-08	EMPC	MG/L	nc	NA
MW15D	OCDF	1.54E-08	EMPC	MG/L	nc	NA
MW12B	OCDF	0.000000011	EMPC	MG/L	nc	NA
TMW3	OCDF	9.2E-09	EMPC	MG/L	nc	NA
MW04S	OCDF	0.000000007	EMPC	MG/L	nc	NA
MW11M	OCDF	5.1E-09	EMPC	MG/L	nc	NA
MW04D	OCDF	5.1E-09	EMPC	MG/L	nc	NA
MW14M	OCDF	3.9E-09	EMPC	MG/L	nc	NA
MW01S	OCDF	1.47E-08	J	MG/L	nc	NA
GEC2	OCDF	1.76E-08	U	MG/L	nc	NA
MW12B	OCDF	1.72E-08	U	MG/L	nc	NA
MW11B	OCDF	1.16E-08	U	MG/L	nc	NA
MW03S	OCDF	1.07E-08	U	MG/L	nc	NA
GEC6	OCDF	9.5E-09	U	MG/L	nc	NA
MW05S	OCDF	9.3E-09	U	MG/L	nc	NA
MW10D	OCDF	8.7E-09	U	MG/L	nc	NA
MW01S	OCDF	8.7E-09	U	MG/L	nc	NA
MW06S	OCDF	8.6E-09	U	MG/L	nc	NA
MW13S	OCDF	8.5E-09	U	MG/L	nc	NA
MW01S	OCDF	7.9E-09	U	MG/L	nc	NA
MW08S	OCDF	7.5E-09	U	MG/L	nc	NA
MW07D	OCDF	7.3E-09	U	MG/L	nc	NA
MW07S	OCDF	7.2E-09	U	MG/L	nc	NA
MW01S	OCDF	7.2E-09	U	MG/L	nc	NA
MW03S	OCDF	7.2E-09	U	MG/L	nc	NA
MW10D	OCDF	6.7E-09	U	MG/L	nc	NA
MW09S	OCDF	6.7E-09	U	MG/L	nc	NA
MW09S	OCDF	6.1E-09	U	MG/L	nc	NA
MW06S	OCDF	5.9E-09	U	MG/L	nc	NA
MW07S	OCDF	5.9E-09	U	MG/L	nc	NA
MW04S	OCDF	5.7E-09	U	MG/L	nc	NA
MW12D	OCDF	5.4E-09	U	MG/L	nc	NA
MW11S	OCDF	5.2E-09	U	MG/L	nc	NA
MW08S	OCDF	5.1E-09	U	MG/L	nc	NA
MW10B	OCDF	4.7E-09	U	MG/L	nc	NA
MW13B	OCDF	4.2E-09	U	MG/L	nc	NA
MW02M	OCDF	3.8E-09	U	MG/L	nc	NA
MW02S	OCDF	3.8E-09	U	MG/L	nc	NA
MW04B	OCDF	3.7E-09	U	MG/L	nc	NA
MW02S	OCDF	3.7E-09	U	MG/L	nc	NA
MW02D	OCDF	2.7E-09	U	MG/L	nc	NA
MW05S	OCDF	2.46E-09	U	MG/L	nc	NA
MW05S	OCDF	8.3E-10	U	MG/L	nc	NA
MW-LEA-01	o-Chlorotoluene		Rw	MG/L	nc	NA
MW-LEA-02	o-Chlorotoluene		Rw	MG/L	nc	NA
MW-05S	o-Chlorotoluene		Rw	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW-LEA-01	o-Chlorotoluene	20	Uw	MG/L	nc	NA
MW-LEA-02	o-Chlorotoluene	2	Uw	MG/L	nc	NA
MW-LEA-02	o-Chlorotoluene	0.2	Uw	MG/L	nc	NA
MW-LEA-03	o-Chlorotoluene	0.2	Uw	MG/L	nc	NA
MW-LEA-03	o-Chlorotoluene	0.004	Uw	MG/L	nc	NA
MW-LEA-01	Octachlorodibenzofuran (filtered)	3.539E-08	U	MG/L	nc	NA
MW-LEA-02	Octachlorodibenzofuran (filtered)	2.25E-08	U	MG/L	nc	NA
MW-LEA-02	Octachlorodibenzofuran (filtered)	9.91E-09	U	MG/L	nc	NA
MW-05S	Octachlorodibenzofuran (filtered)	4.866E-09	U	MG/L	nc	NA
MW-LEA-03	Octachlorodibenzofuran (filtered)	2.7E-09	U	MG/L	nc	NA
MW-05S	Octachlorodibenzofuran (unfiltered)	9.95E-10	U	MG/L	nc	NA
MW-LEA-03	Octachlorodibenzofuran (unfiltered)	9.53E-10	U	MG/L	nc	NA
MW-LEA-02	Octachlorodibenzofuran (unfiltered)	6.36E-10	U	MG/L	nc	NA
MW-LEA-02	Octachlorodibenzofuran (unfiltered)	3.09E-10	U	MG/L	nc	NA
MW-LEA-01	Octachlorodibenzofuran (unfiltered)	2.0836E-08	UB	MG/L	nc	NA
MW-LEA-01	o-Dichlorobenzene	20	Uw	MG/L	0.6	NA
MW-LEA-01	o-Dichlorobenzene	2	Uw	MG/L	0.6	NA
MW-LEA-02	o-Dichlorobenzene	2	Uw	MG/L	0.6	NA
MW-05S	o-Dichlorobenzene	2	Uw	MG/L	0.6	NA
MW-LEA-02	o-Dichlorobenzene	2	Uw	MG/L	0.6	NA
MW-LEA-02	o-Dichlorobenzene	0.2	Uw	MG/L	0.6	NA
MW-LEA-03	o-Dichlorobenzene	0.2	Uw	MG/L	0.6	NA
MW-LEA-03	o-Dichlorobenzene	0.004	Uw	MG/L	0.6	NA
MW08S	O-hydroxybiphenyl	0.003	NJ	MG/L	nc	NA
MW-LEA-02	o-Xylene	0.056	Jw	MG/L	nc	NA
MW-LEA-01	o-Xylene	20	Uw	MG/L	nc	NA
MW-LEA-01	o-Xylene	2	Uw	MG/L	nc	NA
MW-LEA-02	o-Xylene	2	Uw	MG/L	nc	NA
MW-05S	o-Xylene	2	Uw	MG/L	nc	NA
MW-LEA-02	o-Xylene	2	Uw	MG/L	nc	NA
MW-LEA-03	o-Xylene	0.2	Uw	MG/L	nc	NA
MW-LEA-03	o-Xylene	0.004	Uw	MG/L	nc	NA
MW08S	O-xylene	0.015		MG/L	nc	NA
MW06S	O-xylene	0.011		MG/L	nc	NA
MW06S	O-xylene	0.0095		MG/L	nc	NA
MW05S	O-XYLENE	1	U	MG/L	nc	NA
MW05S	O-XYLENE	1	U	MG/L	nc	NA
MW05S	O-xylene	1	U	MG/L	nc	NA
MW05S	O-xylene	1	U	MG/L	nc	NA
MW14M	O-xylene	0.1	U	MG/L	nc	NA
MW13D	O-xylene	0.01	U	MG/L	nc	NA
MW02M	O-xylene	0.005	U	MG/L	nc	NA
MW02D	O-xylene	0.004	U	MG/L	nc	NA
MW13B	O-xylene	0.004	U	MG/L	nc	NA
MW03S	O-xylene	0.001	U	MG/L	nc	NA
GEC3	O-xylene	0.001	U	MG/L	nc	NA
MW01S	O-xylene	0.001	U	MG/L	nc	NA
MW11S	O-xylene	0.001	U	MG/L	nc	NA
MW12B	O-xylene	0.001	U	MG/L	nc	NA
MW12D	O-xylene	0.001	U	MG/L	nc	NA
GEC1	O-xylene	0.001	U	MG/L	nc	NA
GEC2	O-xylene	0.001	U	MG/L	nc	NA
GEC4	O-xylene	0.001	U	MG/L	nc	NA
GEC5	O-xylene	0.001	U	MG/L	nc	NA
GEC6	O-xylene	0.001	U	MG/L	nc	NA
GEC7	O-xylene	0.001	U	MG/L	nc	NA
MW07D	O-xylene	0.001	U	MG/L	nc	NA
MW07S	O-xylene	0.001	U	MG/L	nc	NA
MW11B	O-xylene	0.001	U	MG/L	nc	NA
MW11M	O-xylene	0.001	U	MG/L	nc	NA
MW15D	O-xylene	0.001	U	MG/L	nc	NA
MW02S	O-xylene	0.001	U	MG/L	nc	NA
MW04B	O-xylene	0.001	U	MG/L	nc	NA
MW04D	O-xylene	0.001	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW04S	O-xylene	0.001	U	MG/L	nc	NA
MW09S	O-xylene	0.001	U	MG/L	nc	NA
MW10B	O-xylene	0.001	U	MG/L	nc	NA
MW10D	O-xylene	0.001	U	MG/L	nc	NA
MW13S	O-xylene	0.001	U	MG/L	nc	NA
MW05S	Parachlorophenol	0.009	NJ	MG/L	nc	NA
MW-LEA-01	p-Chlorotoluene		Rw	MG/L	nc	NA
MW-LEA-02	p-Chlorotoluene		Rw	MG/L	nc	NA
MW-05S	p-Chlorotoluene		Rw	MG/L	nc	NA
MW-LEA-01	p-Chlorotoluene	20	Uw	MG/L	nc	NA
MW-LEA-02	p-Chlorotoluene	2	Uw	MG/L	nc	NA
MW-LEA-02	p-Chlorotoluene	0.2	Uw	MG/L	nc	NA
MW-LEA-03	p-Chlorotoluene	0.2	Uw	MG/L	nc	NA
MW-LEA-03	p-Chlorotoluene	0.004	Uw	MG/L	nc	NA
MW-LEA-01	p-Dichlorobenzene	20	Uw	MG/L	0.075	NA
MW-LEA-01	p-Dichlorobenzene	2	Uw	MG/L	0.075	NA
MW-LEA-02	p-Dichlorobenzene	2	Uw	MG/L	0.075	NA
MW-05S	p-Dichlorobenzene	2	Uw	MG/L	0.075	NA
MW-LEA-02	p-Dichlorobenzene	2	Uw	MG/L	0.075	NA
MW-LEA-02	p-Dichlorobenzene	0.2	Uw	MG/L	0.075	NA
MW-LEA-03	p-Dichlorobenzene	0.2	Uw	MG/L	0.075	NA
MW-LEA-03	p-Dichlorobenzene	0.004	Uw	MG/L	0.075	NA
MW-LEA-01	Pentachlorodibenzofurans (filtered)	2.20272E-07		MG/L	nc	NA
MW-LEA-02	Pentachlorodibenzofurans (filtered)	8.31E-09	U	MG/L	nc	NA
MW-LEA-02	Pentachlorodibenzofurans (filtered)	2.954E-09	U	MG/L	nc	NA
MW-05S	Pentachlorodibenzofurans (filtered)	2.671E-09	U	MG/L	nc	NA
MW-LEA-03	Pentachlorodibenzofurans (filtered)	1.884E-09	U	MG/L	nc	NA
MW-LEA-01	Pentachlorodibenzofurans (unfiltered)	1.02652E-06		MG/L	nc	NA
MW-05S	Pentachlorodibenzofurans (unfiltered)	5.56593E-07		MG/L	nc	NA
MW-LEA-03	Pentachlorodibenzofurans (unfiltered)	4.73756E-07		MG/L	nc	NA
MW-LEA-02	Pentachlorodibenzofurans (unfiltered)	5.2994E-08		MG/L	nc	NA
MW-LEA-02	Pentachlorodibenzofurans (unfiltered)	9.37E-10	U	MG/L	nc	NA
MW-LEA-01	Pentachlorodibenzo-p-Dioxins (filtered)	1.14295E-07		MG/L	nc	NA
MW-LEA-02	Pentachlorodibenzo-p-Dioxins (filtered)	1.616E-08	U	MG/L	nc	NA
MW-LEA-02	Pentachlorodibenzo-p-Dioxins (filtered)	4.355E-09	U	MG/L	nc	NA
MW-05S	Pentachlorodibenzo-p-Dioxins (filtered)	3.621E-09	U	MG/L	nc	NA
MW-LEA-03	Pentachlorodibenzo-p-Dioxins (filtered)	2.44E-09	U	MG/L	nc	NA
MW-LEA-01	Pentachlorodibenzo-p-Dioxins (unfiltered)	9.78643E-06		MG/L	nc	NA
MW-05S	Pentachlorodibenzo-p-Dioxins (unfiltered)	1.97969E-06		MG/L	nc	NA
MW-LEA-03	Pentachlorodibenzo-p-Dioxins (unfiltered)	4.36273E-07		MG/L	nc	NA
MW-LEA-02	Pentachlorodibenzo-p-Dioxins (unfiltered)	1.065E-09	U	MG/L	nc	NA
MW-LEA-02	Pentachlorodibenzo-p-Dioxins (unfiltered)	9.73E-10	U	MG/L	nc	NA
MW15D	Pentachlorophenol	0.036	U	MG/L	0.001	NA
MW10D	Pentachlorophenol	0.025	U	MG/L	0.001	NA
MW10B	Pentachlorophenol	0.025	U	MG/L	0.001	NA
MW10D	Pentachlorophenol	0.025	U	MG/L	0.001	NA
MW13B	Pentachlorophenol	0.025	U	MG/L	0.001	NA
MW13D	Pentachlorophenol	0.025	U	MG/L	0.001	NA
MW13S	Pentachlorophenol	0.025	U	MG/L	0.001	NA
TMW3	Pentachlorophenol	0.025	U	MG/L	0.001	NA
MW12B	Pentachlorophenol	0.025	U	MG/L	0.001	NA
MW11B	Pentachlorophenol	0.025	U	MG/L	0.001	NA
MW11M	Pentachlorophenol	0.025	U	MG/L	0.001	NA
MW11S	Pentachlorophenol	0.025	U	MG/L	0.001	NA
MW12B	Pentachlorophenol	0.025	U	MG/L	0.001	NA
MW12D	Pentachlorophenol	0.025	U	MG/L	0.001	NA
GEC2	Pentachlorophenol	0.025	U	MG/L	0.001	NA
GEC6	Pentachlorophenol	0.025	U	MG/L	0.001	NA
MW14M	Pentachlorophenol	0.025	U	MG/L	0.001	NA
MW01S	Pentachlorophenol	0.025	U	MG/L	0.001	NA
MW01S	Pentachlorophenol	0.025	U	MG/L	0.001	NA
MW03S	Pentachlorophenol	0.025	U	MG/L	0.001	NA
MW05S	Pentachlorophenol	0.025	U	MG/L	0.001	NA
MW06S	Pentachlorophenol	0.025	U	MG/L	0.001	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW07D	Pentachlorophenol	0.025	U	MG/L	0.001	NA
MW07S	Pentachlorophenol	0.025	U	MG/L	0.001	NA
MW08S	Pentachlorophenol	0.025	U	MG/L	0.001	NA
MW09S	Pentachlorophenol	0.025	U	MG/L	0.001	NA
MW04S	Pentachlorophenol	0.025	U	MG/L	0.001	NA
MW04B	Pentachlorophenol	0.025	U	MG/L	0.001	NA
MW04D	Pentachlorophenol	0.025	U	MG/L	0.001	NA
MW04S	Pentachlorophenol	0.025	U	MG/L	0.001	NA
MW02D	Pentachlorophenol	0.025	U	MG/L	0.001	NA
MW02M	Pentachlorophenol	0.025	U	MG/L	0.001	NA
MW02S	Pentachlorophenol	0.025	U	MG/L	0.001	NA
MW02S	Pentachlorophenol	0.025	UJ	MG/L	0.001	NA
MW06S	Pentachlorophenol	0.025	UJ	MG/L	0.001	NA
MW07S	Pentachlorophenol	0.025	UJ	MG/L	0.001	NA
MW01S	Pentachlorophenol	0.025	UJ	MG/L	0.001	NA
MW01S	Pentachlorophenol	0.025	UJ	MG/L	0.001	NA
MW03S	Pentachlorophenol	0.025	UJ	MG/L	0.001	NA
MW08S	Pentachlorophenol	0.025	UJ	MG/L	0.001	NA
MW09S	Pentachlorophenol	0.025	UJ	MG/L	0.001	NA
GEC3	Phenanthrene	0.0074		MG/L	nc	NA
GEC7	Phenanthrene	0.0016		MG/L	nc	NA
GEC4	Phenanthrene	0.00092		MG/L	nc	NA
GEC6	Phenanthrene	0.00077		MG/L	nc	NA
GEC2	Phenanthrene	0.00054		MG/L	nc	NA
GEC1	Phenanthrene	0.0003		MG/L	nc	NA
MW08S	Phenanthrene	0.001	J	MG/L	nc	NA
MW15D	Phenanthrene	0.014	U	MG/L	nc	NA
MW10D	Phenanthrene	0.01	U	MG/L	nc	NA
MW10B	Phenanthrene	0.01	U	MG/L	nc	NA
MW10D	Phenanthrene	0.01	U	MG/L	nc	NA
MW13B	Phenanthrene	0.01	U	MG/L	nc	NA
MW13D	Phenanthrene	0.01	U	MG/L	nc	NA
MW13S	Phenanthrene	0.01	U	MG/L	nc	NA
TMW3	Phenanthrene	0.01	U	MG/L	nc	NA
MW12B	Phenanthrene	0.01	U	MG/L	nc	NA
MW11B	Phenanthrene	0.01	U	MG/L	nc	NA
MW11M	Phenanthrene	0.01	U	MG/L	nc	NA
MW11S	Phenanthrene	0.01	U	MG/L	nc	NA
MW12B	Phenanthrene	0.01	U	MG/L	nc	NA
MW12D	Phenanthrene	0.01	U	MG/L	nc	NA
GEC2	Phenanthrene	0.01	U	MG/L	nc	NA
GEC6	Phenanthrene	0.01	U	MG/L	nc	NA
MW14M	Phenanthrene	0.01	U	MG/L	nc	NA
MW01S	Phenanthrene	0.01	U	MG/L	nc	NA
MW01S	Phenanthrene	0.01	U	MG/L	nc	NA
MW03S	Phenanthrene	0.01	U	MG/L	nc	NA
MW05S	Phenanthrene	0.01	U	MG/L	nc	NA
MW06S	Phenanthrene	0.01	U	MG/L	nc	NA
MW07D	Phenanthrene	0.01	U	MG/L	nc	NA
MW07S	Phenanthrene	0.01	U	MG/L	nc	NA
MW08S	Phenanthrene	0.01	U	MG/L	nc	NA
MW09S	Phenanthrene	0.01	U	MG/L	nc	NA
MW04S	Phenanthrene	0.01	U	MG/L	nc	NA
MW04B	Phenanthrene	0.01	U	MG/L	nc	NA
MW04D	Phenanthrene	0.01	U	MG/L	nc	NA
MW04S	Phenanthrene	0.01	U	MG/L	nc	NA
MW02D	Phenanthrene	0.01	U	MG/L	nc	NA
MW02M	Phenanthrene	0.01	U	MG/L	nc	NA
MW02S	Phenanthrene	0.01	U	MG/L	nc	NA
MW02S	Phenanthrene	0.01	U	MG/L	nc	NA
MW06S	Phenanthrene	0.01	U	MG/L	nc	NA
MW07S	Phenanthrene	0.01	U	MG/L	nc	NA
MW01S	Phenanthrene	0.01	U	MG/L	nc	NA
MW01S	Phenanthrene	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW03S	Phenanthrene	0.01	U	MG/L	nc	NA
MW09S	Phenanthrene	0.01	U	MG/L	nc	NA
GEC5	Phenanthrene	0.00012	U	MG/L	nc	NA
MW15D	Phenol	0.014	U	MG/L	nc	NA
MW10D	Phenol	0.01	U	MG/L	nc	NA
MW10B	Phenol	0.01	U	MG/L	nc	NA
MW10D	Phenol	0.01	U	MG/L	nc	NA
MW13B	Phenol	0.01	U	MG/L	nc	NA
MW13D	Phenol	0.01	U	MG/L	nc	NA
MW13S	Phenol	0.01	U	MG/L	nc	NA
TMW3	Phenol	0.01	U	MG/L	nc	NA
MW12B	Phenol	0.01	U	MG/L	nc	NA
MW11B	Phenol	0.01	U	MG/L	nc	NA
MW11M	Phenol	0.01	U	MG/L	nc	NA
MW11S	Phenol	0.01	U	MG/L	nc	NA
MW12B	Phenol	0.01	U	MG/L	nc	NA
MW12D	Phenol	0.01	U	MG/L	nc	NA
GEC2	Phenol	0.01	U	MG/L	nc	NA
GEC6	Phenol	0.01	U	MG/L	nc	NA
MW14M	Phenol	0.01	U	MG/L	nc	NA
MW01S	Phenol	0.01	U	MG/L	nc	NA
MW01S	Phenol	0.01	U	MG/L	nc	NA
MW03S	Phenol	0.01	U	MG/L	nc	NA
MW05S	Phenol	0.01	U	MG/L	nc	NA
MW06S	Phenol	0.01	U	MG/L	nc	NA
MW07D	Phenol	0.01	U	MG/L	nc	NA
MW07S	Phenol	0.01	U	MG/L	nc	NA
MW08S	Phenol	0.01	U	MG/L	nc	NA
MW09S	Phenol	0.01	U	MG/L	nc	NA
MW04S	Phenol	0.01	U	MG/L	nc	NA
MW04B	Phenol	0.01	U	MG/L	nc	NA
MW04D	Phenol	0.01	U	MG/L	nc	NA
MW04S	Phenol	0.01	U	MG/L	nc	NA
MW02D	Phenol	0.01	U	MG/L	nc	NA
MW02M	Phenol	0.01	U	MG/L	nc	NA
MW02S	Phenol	0.01	U	MG/L	nc	NA
MW02S	Phenol	0.01	U	MG/L	nc	NA
MW06S	Phenol	0.01	U	MG/L	nc	NA
MW07S	Phenol	0.01	U	MG/L	nc	NA
MW01S	Phenol	0.01	U	MG/L	nc	NA
MW01S	Phenol	0.01	U	MG/L	nc	NA
MW03S	Phenol	0.01	U	MG/L	nc	NA
MW08S	Phenol	0.01	U	MG/L	nc	NA
MW09S	Phenol	0.01	U	MG/L	nc	NA
MW06S	Phenol, 2-[1-(4-hydroxyphenyl)-1-methyle	0.008	NJ	MG/L	nc	NA
MW05S	Phenol, 3,4-dichloro-	0.031	NJ	MG/L	nc	NA
MW06S	Phenol, 4-(1,1,3,3-tetramethylbutyl)-	0.067	NJ	MG/L	nc	NA
MW06S	Phenol, 4-(1,1-dimethylpropyl)-	0.003	NJ	MG/L	nc	NA
MW08S	Phenol, 4-(2,2,3,3-tetramethylbutyl)-	0.008	NJ	MG/L	nc	NA
MW08S	Phenol, 4-(2,2,4-trimethylpentyl)-	0.008	NJ	MG/L	nc	NA
MW06S	Phenol, 4-(2,2,4-trimethylpentyl)-	0.003	NJ	MG/L	nc	NA
MW06S	Phenol, 4,4'-(1-methylethylidene)bis-	0.068	NJ	MG/L	nc	NA
MW06S	Phenol, 4,4'-(1-methylethylidene)bis-	0.012	NJ	MG/L	nc	NA
MW06S	Phenol, M-tert-butyl-	0.005	NJ	MG/L	nc	NA
MW06S	Phenol, Nonyl-	0.06	NJ	MG/L	nc	NA
MW08S	Phenol, P-tert-butyl-	0.006	NJ	MG/L	nc	NA
MW06S	Phenylbutazone	0.01	NJ	MG/L	nc	NA
MW06S	Phenylbutazone	0.009	NJ	MG/L	nc	NA
MW08S	Phthalic Anhydride	0.022	NJ	MG/L	nc	NA
MW08S	P-isopropyltoluene	0.0012		MG/L	nc	NA
MW05S	P-ISOPROPYLTOLUENE	1	U	MG/L	nc	NA
MW05S	P-ISOPROPYLTOLUENE	1	U	MG/L	nc	NA
MW05S	P-isopropyltoluene	1	U	MG/L	nc	NA
MW05S	P-isopropyltoluene	1	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW14M	P-isopropyltoluene	0.1	U	MG/L	nc	NA
MW06S	P-isopropyltoluene	0.01	U	MG/L	nc	NA
MW13D	P-isopropyltoluene	0.01	U	MG/L	nc	NA
MW06S	P-isopropyltoluene	0.006	U	MG/L	nc	NA
MW02M	P-isopropyltoluene	0.005	U	MG/L	nc	NA
MW02D	P-isopropyltoluene	0.004	U	MG/L	nc	NA
MW13B	P-isopropyltoluene	0.004	U	MG/L	nc	NA
MW03S	P-isopropyltoluene	0.001	U	MG/L	nc	NA
GEC3	P-isopropyltoluene	0.001	U	MG/L	nc	NA
MW01S	P-isopropyltoluene	0.001	U	MG/L	nc	NA
MW11S	P-isopropyltoluene	0.001	U	MG/L	nc	NA
MW12B	P-isopropyltoluene	0.001	U	MG/L	nc	NA
MW12D	P-isopropyltoluene	0.001	U	MG/L	nc	NA
GEC1	P-isopropyltoluene	0.001	U	MG/L	nc	NA
GEC2	P-isopropyltoluene	0.001	U	MG/L	nc	NA
GEC4	P-isopropyltoluene	0.001	U	MG/L	nc	NA
GEC5	P-isopropyltoluene	0.001	U	MG/L	nc	NA
GEC6	P-isopropyltoluene	0.001	U	MG/L	nc	NA
GEC7	P-isopropyltoluene	0.001	U	MG/L	nc	NA
MW07D	P-isopropyltoluene	0.001	U	MG/L	nc	NA
MW07S	P-isopropyltoluene	0.001	U	MG/L	nc	NA
MW11B	P-isopropyltoluene	0.001	U	MG/L	nc	NA
MW11M	P-isopropyltoluene	0.001	U	MG/L	nc	NA
MW15D	P-isopropyltoluene	0.001	U	MG/L	nc	NA
MW02S	P-isopropyltoluene	0.001	U	MG/L	nc	NA
MW04B	P-isopropyltoluene	0.001	U	MG/L	nc	NA
MW04D	P-isopropyltoluene	0.001	U	MG/L	nc	NA
MW04S	P-isopropyltoluene	0.001	U	MG/L	nc	NA
MW09S	P-isopropyltoluene	0.001	U	MG/L	nc	NA
MW10B	P-isopropyltoluene	0.001	U	MG/L	nc	NA
MW10D	P-isopropyltoluene	0.001	U	MG/L	nc	NA
MW13S	P-isopropyltoluene	0.001	U	MG/L	nc	NA
GEC2	Potassium	16.7	J	MG/L	nc	NA
MW08S	Potassium	13.6	J	MG/L	nc	NA
MW08S	Potassium	9.67	J	MG/L	nc	NA
MW03S	Potassium	8.94	J	MG/L	nc	NA
MW02M	Potassium	7.44	J	MG/L	nc	NA
MW02D	Potassium	6.22	J	MG/L	nc	NA
MW06S	Potassium	5.74	J	MG/L	nc	NA
MW01S	Potassium	5.6	J	MG/L	nc	NA
MW04D	Potassium	5.59	J	MG/L	nc	NA
MW01S	Potassium	5.58	J	MG/L	nc	NA
MW04B	Potassium	5.27	J	MG/L	nc	NA
MW04S	Potassium	5.23	J	MG/L	nc	NA
MW10D	Potassium	5.12	J	MG/L	nc	NA
MW10B	Potassium	5.04	J	MG/L	nc	NA
MW04S	Potassium	4.97	J	MG/L	nc	NA
MW07S	Potassium	4.96	J	MG/L	nc	NA
TMW3	Potassium	4.94	J	MG/L	nc	NA
MW13B	Potassium	4.93	J	MG/L	nc	NA
MW10D	Potassium	4.9	J	MG/L	nc	NA
MW07S	Potassium	4.54	J	MG/L	nc	NA
MW09S	Potassium	4.52	J	MG/L	nc	NA
MW13S	Potassium	4.51	J	MG/L	nc	NA
MW02S	Potassium	4.41	J	MG/L	nc	NA
MW13D	Potassium	4.32	J	MG/L	nc	NA
MW05S	Potassium	4.2	J	MG/L	nc	NA
MW15D	Potassium	4.16	J	MG/L	nc	NA
MW06S	Potassium	4.09	J	MG/L	nc	NA
MW12B	Potassium	3.73	J	MG/L	nc	NA
MW12B	Potassium	3.69	J	MG/L	nc	NA
MW09S	Potassium	3.67	J	MG/L	nc	NA
MW11S	Potassium	3.23	J	MG/L	nc	NA
MW11M	Potassium	3.2	J	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW01S	Potassium	3.17	J	MG/L	nc	NA
MW01S	Potassium	3.14	J	MG/L	nc	NA
GEC6	Potassium	2.98	J	MG/L	nc	NA
MW03S	Potassium	2.85	J	MG/L	nc	NA
MW02S	Potassium	2.81	J	MG/L	nc	NA
MW07D	Potassium	2.7	J	MG/L	nc	NA
MW11B	Potassium	2.63	J	MG/L	nc	NA
MW12D	Potassium	2.49	J	MG/L	nc	NA
MW14M	Potassium	1.52	J	MG/L	nc	NA
GEC2	Potassium	15.3	J	MG/L	nc	NA
MW08S	Potassium	14.1	J	MG/L	nc	NA
MW08S	Potassium	9.65	J	MG/L	nc	NA
MW03S	Potassium	9.09	J	MG/L	nc	NA
MW02M	Potassium	6.96	J	MG/L	nc	NA
MW06S	Potassium	6.1	J	MG/L	nc	NA
MW02D	Potassium	5.99	J	MG/L	nc	NA
MW01S	Potassium	5.55	J	MG/L	nc	NA
MW01S	Potassium	5.55	J	MG/L	nc	NA
MW04D	Potassium	5.33	J	MG/L	nc	NA
MW04S	Potassium	5.03	J	MG/L	nc	NA
MW04B	Potassium	5.02	J	MG/L	nc	NA
MW13S	Potassium	5.01	J	MG/L	nc	NA
MW13B	Potassium	4.94	J	MG/L	nc	NA
MW04S	Potassium	4.91	J	MG/L	nc	NA
MW10D	Potassium	4.89	J	MG/L	nc	NA
MW07S	Potassium	4.76	J	MG/L	nc	NA
MW07S	Potassium	4.75	J	MG/L	nc	NA
MW10B	Potassium	4.65	J	MG/L	nc	NA
MW10D	Potassium	4.63	J	MG/L	nc	NA
TMW3	Potassium	4.55	J	MG/L	nc	NA
MW09S	Potassium	4.51	J	MG/L	nc	NA
MW02S	Potassium	4.47	J	MG/L	nc	NA
MW15D	Potassium	4.11	J	MG/L	nc	NA
MW06S	Potassium	4.11	J	MG/L	nc	NA
MW12B	Potassium	3.97	J	MG/L	nc	NA
MW05S	Potassium	3.96	J	MG/L	nc	NA
MW13D	Potassium	3.69	J	MG/L	nc	NA
MW12B	Potassium	3.68	J	MG/L	nc	NA
MW09S	Potassium	3.48	J	MG/L	nc	NA
MW01S	Potassium	3.2	J	MG/L	nc	NA
GEC6	Potassium	3.12	J	MG/L	nc	NA
MW11M	Potassium	3.1	J	MG/L	nc	NA
MW11S	Potassium	3.08	J	MG/L	nc	NA
MW01S	Potassium	2.98	J	MG/L	nc	NA
MW03S	Potassium	2.89	J	MG/L	nc	NA
MW11B	Potassium	2.78	J	MG/L	nc	NA
MW02S	Potassium	2.74	J	MG/L	nc	NA
MW07D	Potassium	2.53	J	MG/L	nc	NA
MW12D	Potassium	2.45	J	MG/L	nc	NA
MW14M	Potassium	1.44	J	MG/L	nc	NA
MW13S	Propanoic Acid, 2-methyl-, 2,2-dimethyl-	0.002	JN	MG/L	nc	NA
MW13S	Propanoic Acid, 2-methyl-, 3-hydroxy-2,4	0.003	JN	MG/L	nc	NA
GEC3	Pyrene	0.008		MG/L	nc	NA
GEC7	Pyrene	0.0029		MG/L	nc	NA
GEC4	Pyrene	0.0011		MG/L	nc	NA
GEC6	Pyrene	0.00061		MG/L	nc	NA
GEC2	Pyrene	0.00043		MG/L	nc	NA
GEC1	Pyrene	0.00024		MG/L	nc	NA
MW15D	Pyrene	0.014	U	MG/L	nc	NA
MW10D	Pyrene	0.01	U	MG/L	nc	NA
MW10B	Pyrene	0.01	U	MG/L	nc	NA
MW10D	Pyrene	0.01	U	MG/L	nc	NA
MW13B	Pyrene	0.01	U	MG/L	nc	NA
MW13D	Pyrene	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW13S	Pyrene	0.01	U	MG/L	nc	NA
TMW3	Pyrene	0.01	U	MG/L	nc	NA
MW12B	Pyrene	0.01	U	MG/L	nc	NA
MW11B	Pyrene	0.01	U	MG/L	nc	NA
MW11M	Pyrene	0.01	U	MG/L	nc	NA
MW11S	Pyrene	0.01	U	MG/L	nc	NA
MW12B	Pyrene	0.01	U	MG/L	nc	NA
MW12D	Pyrene	0.01	U	MG/L	nc	NA
GEC2	Pyrene	0.01	U	MG/L	nc	NA
GEC6	Pyrene	0.01	U	MG/L	nc	NA
MW14M	Pyrene	0.01	U	MG/L	nc	NA
MW01S	Pyrene	0.01	U	MG/L	nc	NA
MW01S	Pyrene	0.01	U	MG/L	nc	NA
MW03S	Pyrene	0.01	U	MG/L	nc	NA
MW05S	Pyrene	0.01	U	MG/L	nc	NA
MW06S	Pyrene	0.01	U	MG/L	nc	NA
MW07D	Pyrene	0.01	U	MG/L	nc	NA
MW07S	Pyrene	0.01	U	MG/L	nc	NA
MW08S	Pyrene	0.01	U	MG/L	nc	NA
MW09S	Pyrene	0.01	U	MG/L	nc	NA
MW04S	Pyrene	0.01	U	MG/L	nc	NA
MW04B	Pyrene	0.01	U	MG/L	nc	NA
MW04D	Pyrene	0.01	U	MG/L	nc	NA
MW04S	Pyrene	0.01	U	MG/L	nc	NA
MW02D	Pyrene	0.01	U	MG/L	nc	NA
MW02M	Pyrene	0.01	U	MG/L	nc	NA
MW02S	Pyrene	0.01	U	MG/L	nc	NA
MW02S	Pyrene	0.01	U	MG/L	nc	NA
MW06S	Pyrene	0.01	U	MG/L	nc	NA
MW07S	Pyrene	0.01	U	MG/L	nc	NA
MW01S	Pyrene	0.01	U	MG/L	nc	NA
MW01S	Pyrene	0.01	U	MG/L	nc	NA
MW03S	Pyrene	0.01	U	MG/L	nc	NA
MW08S	Pyrene	0.01	U	MG/L	nc	NA
MW09S	Pyrene	0.01	U	MG/L	nc	NA
GEC5	Pyrene	0.00012	U	MG/L	nc	NA
MW-LEA-01	sec-Butylbenzene	20	Uw	MG/L	nc	NA
MW-LEA-01	sec-Butylbenzene	2	Uw	MG/L	nc	NA
MW-LEA-02	sec-Butylbenzene	2	Uw	MG/L	nc	NA
MW-05S	sec-Butylbenzene	2	Uw	MG/L	nc	NA
MW-LEA-02	sec-Butylbenzene	2	Uw	MG/L	nc	NA
MW-LEA-02	sec-Butylbenzene	0.2	Uw	MG/L	nc	NA
MW-LEA-03	sec-Butylbenzene	0.2	Uw	MG/L	nc	NA
MW-LEA-03	sec-Butylbenzene	0.004	Uw	MG/L	nc	NA
MW05S	SEC-BUTYLBENZENE	1	U	MG/L	nc	NA
MW05S	SEC-BUTYLBENZENE	1	U	MG/L	nc	NA
MW05S	Sec-butylbenzene	1	U	MG/L	nc	NA
MW05S	Sec-butylbenzene	1	U	MG/L	nc	NA
MW14M	Sec-butylbenzene	0.1	U	MG/L	nc	NA
MW06S	Sec-butylbenzene	0.01	U	MG/L	nc	NA
MW13D	Sec-butylbenzene	0.01	U	MG/L	nc	NA
MW06S	Sec-butylbenzene	0.006	U	MG/L	nc	NA
MW02M	Sec-butylbenzene	0.005	U	MG/L	nc	NA
MW02D	Sec-butylbenzene	0.004	U	MG/L	nc	NA
MW13B	Sec-butylbenzene	0.004	U	MG/L	nc	NA
MW03S	Sec-butylbenzene	0.001	U	MG/L	nc	NA
GEC3	Sec-butylbenzene	0.001	U	MG/L	nc	NA
MW01S	Sec-butylbenzene	0.001	U	MG/L	nc	NA
MW11S	Sec-butylbenzene	0.001	U	MG/L	nc	NA
MW12B	Sec-butylbenzene	0.001	U	MG/L	nc	NA
MW12D	Sec-butylbenzene	0.001	U	MG/L	nc	NA
GEC1	Sec-butylbenzene	0.001	U	MG/L	nc	NA
GEC2	Sec-butylbenzene	0.001	U	MG/L	nc	NA
GEC4	Sec-butylbenzene	0.001	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
GEC5	Sec-butylbenzene	0.001	U	MG/L	nc	NA
GEC6	Sec-butylbenzene	0.001	U	MG/L	nc	NA
GEC7	Sec-butylbenzene	0.001	U	MG/L	nc	NA
MW07D	Sec-butylbenzene	0.001	U	MG/L	nc	NA
MW07S	Sec-butylbenzene	0.001	U	MG/L	nc	NA
MW11B	Sec-butylbenzene	0.001	U	MG/L	nc	NA
MW11M	Sec-butylbenzene	0.001	U	MG/L	nc	NA
MW15D	Sec-butylbenzene	0.001	U	MG/L	nc	NA
MW02S	Sec-butylbenzene	0.001	U	MG/L	nc	NA
MW04B	Sec-butylbenzene	0.001	U	MG/L	nc	NA
MW04D	Sec-butylbenzene	0.001	U	MG/L	nc	NA
MW04S	Sec-butylbenzene	0.001	U	MG/L	nc	NA
MW08S	Sec-butylbenzene	0.001	U	MG/L	nc	NA
MW09S	Sec-butylbenzene	0.001	U	MG/L	nc	NA
MW10B	Sec-butylbenzene	0.001	U	MG/L	nc	NA
MW10D	Sec-butylbenzene	0.001	U	MG/L	nc	NA
MW13S	Sec-butylbenzene	0.001	U	MG/L	nc	NA
MW-LEA-01	sec-Dichloropropane	20	Uw	MG/L	nc	NA
MW-LEA-01	sec-Dichloropropane	2	Uw	MG/L	nc	NA
MW-LEA-02	sec-Dichloropropane	2	Uw	MG/L	nc	NA
MW-05S	sec-Dichloropropane	2	Uw	MG/L	nc	NA
MW-LEA-02	sec-Dichloropropane	2	Uw	MG/L	nc	NA
MW-LEA-02	sec-Dichloropropane	0.2	Uw	MG/L	nc	NA
MW-LEA-03	sec-Dichloropropane	0.2	Uw	MG/L	nc	NA
MW-LEA-03	sec-Dichloropropane	0.004	Uw	MG/L	nc	NA
MW02S	Selenium	0.0048	U	MG/L	0.05	NA
MW06S	Selenium	0.0048	U	MG/L	0.05	NA
MW07S	Selenium	0.0048	U	MG/L	0.05	NA
MW01S	Selenium	0.0048	U	MG/L	0.05	NA
MW01S	Selenium	0.0048	U	MG/L	0.05	NA
MW03S	Selenium	0.0048	U	MG/L	0.05	NA
MW08S	Selenium	0.0048	U	MG/L	0.05	NA
MW09S	Selenium	0.0048	U	MG/L	0.05	NA
MW01S	Selenium	0.0022	U	MG/L	0.05	NA
MW01S	Selenium	0.0022	U	MG/L	0.05	NA
MW03S	Selenium	0.0022	U	MG/L	0.05	NA
MW07D	Selenium	0.0022	U	MG/L	0.05	NA
MW08S	Selenium	0.0022	U	MG/L	0.05	NA
MW10D	Selenium	0.0044	UJ	MG/L	0.05	NA
MW10B	Selenium	0.0044	UJ	MG/L	0.05	NA
MW10D	Selenium	0.0044	UJ	MG/L	0.05	NA
MW13B	Selenium	0.0044	UJ	MG/L	0.05	NA
MW13D	Selenium	0.0044	UJ	MG/L	0.05	NA
MW13S	Selenium	0.0044	UJ	MG/L	0.05	NA
TMW3	Selenium	0.0044	UJ	MG/L	0.05	NA
MW12B	Selenium	0.0044	UJ	MG/L	0.05	NA
MW11B	Selenium	0.0044	UJ	MG/L	0.05	NA
MW11M	Selenium	0.0044	UJ	MG/L	0.05	NA
MW11S	Selenium	0.0044	UJ	MG/L	0.05	NA
MW12B	Selenium	0.0044	UJ	MG/L	0.05	NA
MW12D	Selenium	0.0044	UJ	MG/L	0.05	NA
GEC2	Selenium	0.0044	UJ	MG/L	0.05	NA
GEC6	Selenium	0.0044	UJ	MG/L	0.05	NA
MW14M	Selenium	0.0044	UJ	MG/L	0.05	NA
MW15D	Selenium	0.0044	UJ	MG/L	0.05	NA
MW05S	Selenium	0.0038	UJ	MG/L	0.05	NA
MW09S	Selenium	0.003	UJ	MG/L	0.05	NA
MW02M	Selenium	0.0025	UJ	MG/L	0.05	NA
MW06S	Selenium	0.0022	UJ	MG/L	0.05	NA
MW07S	Selenium	0.0022	UJ	MG/L	0.05	NA
MW04S	Selenium	0.0022	UJ	MG/L	0.05	NA
MW04B	Selenium	0.0022	UJ	MG/L	0.05	NA
MW04D	Selenium	0.0022	UJ	MG/L	0.05	NA
MW04S	Selenium	0.0022	UJ	MG/L	0.05	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW02D	Selenium	0.0022	UJ	MG/L	0.05	NA
MW02S	Selenium	0.0022	UJ	MG/L	0.05	NA
MW02S	Selenium	0.0048	U	MG/L	0.05	NA
MW06S	Selenium	0.0048	U	MG/L	0.05	NA
MW07S	Selenium	0.0048	U	MG/L	0.05	NA
MW01S	Selenium	0.0048	U	MG/L	0.05	NA
MW01S	Selenium	0.0048	U	MG/L	0.05	NA
MW03S	Selenium	0.0048	U	MG/L	0.05	NA
MW08S	Selenium	0.0048	U	MG/L	0.05	NA
MW09S	Selenium	0.0048	U	MG/L	0.05	NA
MW01S	Selenium	0.0022	U	MG/L	0.05	NA
MW01S	Selenium	0.0022	U	MG/L	0.05	NA
MW03S	Selenium	0.0022	U	MG/L	0.05	NA
MW07D	Selenium	0.0022	U	MG/L	0.05	NA
MW08S	Selenium	0.0022	U	MG/L	0.05	NA
MW02D	Selenium	0.0022	U	MG/L	0.05	NA
MW10D	Selenium	0.0044	UJ	MG/L	0.05	NA
MW10B	Selenium	0.0044	UJ	MG/L	0.05	NA
MW10D	Selenium	0.0044	UJ	MG/L	0.05	NA
MW13B	Selenium	0.0044	UJ	MG/L	0.05	NA
MW13D	Selenium	0.0044	UJ	MG/L	0.05	NA
MW13S	Selenium	0.0044	UJ	MG/L	0.05	NA
TMW3	Selenium	0.0044	UJ	MG/L	0.05	NA
MW12B	Selenium	0.0044	UJ	MG/L	0.05	NA
MW11B	Selenium	0.0044	UJ	MG/L	0.05	NA
MW11M	Selenium	0.0044	UJ	MG/L	0.05	NA
MW11S	Selenium	0.0044	UJ	MG/L	0.05	NA
MW12B	Selenium	0.0044	UJ	MG/L	0.05	NA
MW12D	Selenium	0.0044	UJ	MG/L	0.05	NA
GEC2	Selenium	0.0044	UJ	MG/L	0.05	NA
GEC6	Selenium	0.0044	UJ	MG/L	0.05	NA
MW14M	Selenium	0.0044	UJ	MG/L	0.05	NA
MW15D	Selenium	0.0044	UJ	MG/L	0.05	NA
MW09S	Selenium	0.0043	UJ	MG/L	0.05	NA
MW05S	Selenium	0.0023	UJ	MG/L	0.05	NA
MW06S	Selenium	0.0022	UJ	MG/L	0.05	NA
MW07S	Selenium	0.0022	UJ	MG/L	0.05	NA
MW04S	Selenium	0.0022	UJ	MG/L	0.05	NA
MW04B	Selenium	0.0022	UJ	MG/L	0.05	NA
MW04D	Selenium	0.0022	UJ	MG/L	0.05	NA
MW04S	Selenium	0.0022	UJ	MG/L	0.05	NA
MW02M	Selenium	0.0022	UJ	MG/L	0.05	NA
MW02S	Selenium	0.0022	UJ	MG/L	0.05	NA
MW10B	Silver	0.00092		MG/L	nc	NA
MW13D	Silver	0.00088		MG/L	nc	NA
MW13B	Silver	0.00078		MG/L	nc	NA
MW10D	Silver	0.00073		MG/L	nc	NA
MW01S	Silver	0.004	U	MG/L	nc	NA
MW01S	Silver	0.004	U	MG/L	nc	NA
MW03S	Silver	0.004	U	MG/L	nc	NA
MW05S	Silver	0.004	U	MG/L	nc	NA
MW06S	Silver	0.004	U	MG/L	nc	NA
MW07D	Silver	0.004	U	MG/L	nc	NA
MW07S	Silver	0.004	U	MG/L	nc	NA
MW08S	Silver	0.004	U	MG/L	nc	NA
MW09S	Silver	0.004	U	MG/L	nc	NA
MW04S	Silver	0.004	U	MG/L	nc	NA
MW04B	Silver	0.004	U	MG/L	nc	NA
MW04D	Silver	0.004	U	MG/L	nc	NA
MW04S	Silver	0.004	U	MG/L	nc	NA
MW02D	Silver	0.004	U	MG/L	nc	NA
MW02M	Silver	0.004	U	MG/L	nc	NA
MW02S	Silver	0.004	U	MG/L	nc	NA
MW10D	Silver	0.0007	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW13S	Silver	0.0007	U	MG/L	nc	NA
TMW3	Silver	0.0007	U	MG/L	nc	NA
MW11B	Silver	0.0007	U	MG/L	nc	NA
MW11M	Silver	0.0007	U	MG/L	nc	NA
MW11S	Silver	0.0007	U	MG/L	nc	NA
MW12B	Silver	0.0007	U	MG/L	nc	NA
MW12D	Silver	0.0007	U	MG/L	nc	NA
MW15D	Silver	0.0007	U	MG/L	nc	NA
MW02S	Silver	0.0005	U	MG/L	nc	NA
MW06S	Silver	0.0005	U	MG/L	nc	NA
MW07S	Silver	0.0005	U	MG/L	nc	NA
MW01S	Silver	0.0005	U	MG/L	nc	NA
MW01S	Silver	0.0005	U	MG/L	nc	NA
MW03S	Silver	0.0005	U	MG/L	nc	NA
MW08S	Silver	0.0005	U	MG/L	nc	NA
MW09S	Silver	0.0005	U	MG/L	nc	NA
MW14M	Silver	0.0008	UJ	MG/L	nc	NA
MW12B	Silver	0.00078	UJ	MG/L	nc	NA
GEC2	Silver	0.00077	UJ	MG/L	nc	NA
GEC6	Silver	0.00076	UJ	MG/L	nc	NA
MW12D	Silver	0.0014		MG/L	nc	NA
MW10D	Silver	0.0011		MG/L	nc	NA
MW10B	Silver	0.0011		MG/L	nc	NA
MW13D	Silver	0.0011		MG/L	nc	NA
MW11S	Silver	0.00082		MG/L	nc	NA
TMW3	Silver	0.00077		MG/L	nc	NA
MW10D	Silver	0.00073		MG/L	nc	NA
MW13S	Silver	0.00072		MG/L	nc	NA
MW01S	Silver	0.004	U	MG/L	nc	NA
MW01S	Silver	0.004	U	MG/L	nc	NA
MW03S	Silver	0.004	U	MG/L	nc	NA
MW05S	Silver	0.004	U	MG/L	nc	NA
MW06S	Silver	0.004	U	MG/L	nc	NA
MW07D	Silver	0.004	U	MG/L	nc	NA
MW07S	Silver	0.004	U	MG/L	nc	NA
MW08S	Silver	0.004	U	MG/L	nc	NA
MW09S	Silver	0.004	U	MG/L	nc	NA
MW04S	Silver	0.004	U	MG/L	nc	NA
MW04B	Silver	0.004	U	MG/L	nc	NA
MW04D	Silver	0.004	U	MG/L	nc	NA
MW04S	Silver	0.004	U	MG/L	nc	NA
MW02D	Silver	0.004	U	MG/L	nc	NA
MW02M	Silver	0.004	U	MG/L	nc	NA
MW02S	Silver	0.004	U	MG/L	nc	NA
MW13B	Silver	0.0007	U	MG/L	nc	NA
MW12B	Silver	0.0007	U	MG/L	nc	NA
MW11B	Silver	0.0007	U	MG/L	nc	NA
MW11M	Silver	0.0007	U	MG/L	nc	NA
MW12B	Silver	0.0007	U	MG/L	nc	NA
GEC2	Silver	0.0007	U	MG/L	nc	NA
MW14M	Silver	0.0007	U	MG/L	nc	NA
MW15D	Silver	0.0007	U	MG/L	nc	NA
MW02S	Silver	0.0005	U	MG/L	nc	NA
MW06S	Silver	0.0005	U	MG/L	nc	NA
MW07S	Silver	0.0005	U	MG/L	nc	NA
MW01S	Silver	0.0005	U	MG/L	nc	NA
MW01S	Silver	0.0005	U	MG/L	nc	NA
MW03S	Silver	0.0005	U	MG/L	nc	NA
MW08S	Silver	0.0005	U	MG/L	nc	NA
MW09S	Silver	0.0005	U	MG/L	nc	NA
GEC6	Silver	0.00072	UJ	MG/L	nc	NA
MW03S	Sodium	371		MG/L	nc	NA
MW01S	Sodium	136		MG/L	nc	NA
MW01S	Sodium	135		MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW08S	Sodium	132		MG/L	nc	NA
TMW3	Sodium	131		MG/L	nc	NA
GEC2	Sodium	120		MG/L	nc	NA
MW02M	Sodium	111		MG/L	nc	NA
MW02D	Sodium	96.8		MG/L	nc	NA
MW04D	Sodium	92.1		MG/L	nc	NA
MW04B	Sodium	83		MG/L	nc	NA
MW02S	Sodium	65.4		MG/L	nc	NA
MW13D	Sodium	63.4		MG/L	nc	NA
MW10D	Sodium	63.3		MG/L	nc	NA
MW10D	Sodium	61.3		MG/L	nc	NA
MW02S	Sodium	61.3		MG/L	nc	NA
MW13S	Sodium	59.8		MG/L	nc	NA
MW13B	Sodium	53		MG/L	nc	NA
MW04S	Sodium	51.2		MG/L	nc	NA
MW04S	Sodium	48.3		MG/L	nc	NA
MW10B	Sodium	46.3		MG/L	nc	NA
MW12B	Sodium	43.7		MG/L	nc	NA
MW12B	Sodium	42.7		MG/L	nc	NA
MW09S	Sodium	40.5		MG/L	nc	NA
MW06S	Sodium	37		MG/L	nc	NA
MW07S	Sodium	35.5		MG/L	nc	NA
GEC6	Sodium	34.5		MG/L	nc	NA
MW11S	Sodium	32		MG/L	nc	NA
MW15D	Sodium	30.8		MG/L	nc	NA
MW11M	Sodium	30.5		MG/L	nc	NA
MW06S	Sodium	29		MG/L	nc	NA
MW07S	Sodium	27.1		MG/L	nc	NA
MW12D	Sodium	26.2		MG/L	nc	NA
MW11B	Sodium	16.6		MG/L	nc	NA
MW14M	Sodium	13.7		MG/L	nc	NA
MW08S	Sodium	151	J	MG/L	nc	NA
MW01S	Sodium	127	J	MG/L	nc	NA
MW01S	Sodium	126	J	MG/L	nc	NA
MW03S	Sodium	55	J	MG/L	nc	NA
MW05S	Sodium	33.2	J	MG/L	nc	NA
MW09S	Sodium	31.6	J	MG/L	nc	NA
MW07D	Sodium	23.3	J	MG/L	nc	NA
MW03S	Sodium	378		MG/L	nc	NA
MW01S	Sodium	136		MG/L	nc	NA
MW01S	Sodium	136		MG/L	nc	NA
MW08S	Sodium	132		MG/L	nc	NA
TMW3	Sodium	124		MG/L	nc	NA
MW02M	Sodium	104		MG/L	nc	NA
MW04D	Sodium	88.5		MG/L	nc	NA
GEC2	Sodium	84.7		MG/L	nc	NA
MW04B	Sodium	80.6		MG/L	nc	NA
MW02S	Sodium	67.3		MG/L	nc	NA
MW13S	Sodium	64		MG/L	nc	NA
MW02S	Sodium	61.8		MG/L	nc	NA
MW10D	Sodium	61.4		MG/L	nc	NA
MW10D	Sodium	58.9		MG/L	nc	NA
MW13D	Sodium	57.5		MG/L	nc	NA
MW13B	Sodium	53.6		MG/L	nc	NA
MW12B	Sodium	49.7		MG/L	nc	NA
MW04S	Sodium	48.3		MG/L	nc	NA
MW04S	Sodium	47.9		MG/L	nc	NA
MW12B	Sodium	45.8		MG/L	nc	NA
MW10B	Sodium	44.3		MG/L	nc	NA
MW09S	Sodium	39		MG/L	nc	NA
MW06S	Sodium	38.8		MG/L	nc	NA
GEC6	Sodium	36.2		MG/L	nc	NA
MW07S	Sodium	35		MG/L	nc	NA
MW11S	Sodium	31.2		MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW15D	Sodium	31.1		MG/L	nc	NA
MW11M	Sodium	30		MG/L	nc	NA
MW06S	Sodium	29.5		MG/L	nc	NA
MW07S	Sodium	28		MG/L	nc	NA
MW12D	Sodium	26		MG/L	nc	NA
MW11B	Sodium	17.3		MG/L	nc	NA
MW14M	Sodium	12.8		MG/L	nc	NA
MW08S	Sodium	156	J	MG/L	nc	NA
MW01S	Sodium	129	J	MG/L	nc	NA
MW01S	Sodium	121	J	MG/L	nc	NA
MW02D	Sodium	91	J	MG/L	nc	NA
MW03S	Sodium	54.8	J	MG/L	nc	NA
MW09S	Sodium	32.2	J	MG/L	nc	NA
MW05S	Sodium	31.7	J	MG/L	nc	NA
MW07D	Sodium	22.8	J	MG/L	nc	NA
MW-LEA-01	Styrene	20	Uw	MG/L	0.1	NA
MW-LEA-01	Styrene	2	Uw	MG/L	0.1	NA
MW-LEA-02	Styrene	2	Uw	MG/L	0.1	NA
MW-05S	Styrene	2	Uw	MG/L	0.1	NA
MW-LEA-02	Styrene	2	Uw	MG/L	0.1	NA
MW-LEA-02	Styrene	0.2	Uw	MG/L	0.1	NA
MW-LEA-03	Styrene	0.2	Uw	MG/L	0.1	NA
MW-LEA-03	Styrene	0.004	Uw	MG/L	0.1	NA
MW05S	Styrene	1.7	U	MG/L	0.1	NA
MW05S	STYRENE	1	U	MG/L	0.1	NA
MW05S	STYRENE	1	U	MG/L	0.1	NA
MW05S	Styrene	1	U	MG/L	0.1	NA
MW05S	Styrene	1	U	MG/L	0.1	NA
MW14M	Styrene	0.1	U	MG/L	0.1	NA
MW06S	Styrene	0.01	U	MG/L	0.1	NA
MW13D	Styrene	0.01	U	MG/L	0.1	NA
MW10D	Styrene	0.01	U	MG/L	0.1	NA
MW10B	Styrene	0.01	U	MG/L	0.1	NA
MW10D	Styrene	0.01	U	MG/L	0.1	NA
MW13B	Styrene	0.01	U	MG/L	0.1	NA
MW13D	Styrene	0.01	U	MG/L	0.1	NA
MW13S	Styrene	0.01	U	MG/L	0.1	NA
TMW3	Styrene	0.01	U	MG/L	0.1	NA
MW12B	Styrene	0.01	U	MG/L	0.1	NA
MW11B	Styrene	0.01	U	MG/L	0.1	NA
MW11M	Styrene	0.01	U	MG/L	0.1	NA
MW11S	Styrene	0.01	U	MG/L	0.1	NA
MW12B	Styrene	0.01	U	MG/L	0.1	NA
MW12D	Styrene	0.01	U	MG/L	0.1	NA
GEC2	Styrene	0.01	U	MG/L	0.1	NA
GEC6	Styrene	0.01	U	MG/L	0.1	NA
MW14M	Styrene	0.01	U	MG/L	0.1	NA
MW15D	Styrene	0.01	U	MG/L	0.1	NA
MW01S	Styrene	0.01	U	MG/L	0.1	NA
MW01S	Styrene	0.01	U	MG/L	0.1	NA
MW03S	Styrene	0.01	U	MG/L	0.1	NA
MW06S	Styrene	0.01	U	MG/L	0.1	NA
MW07D	Styrene	0.01	U	MG/L	0.1	NA
MW07S	Styrene	0.01	U	MG/L	0.1	NA
MW08S	Styrene	0.01	U	MG/L	0.1	NA
MW09S	Styrene	0.01	U	MG/L	0.1	NA
MW04S	Styrene	0.01	U	MG/L	0.1	NA
MW04B	Styrene	0.01	U	MG/L	0.1	NA
MW04D	Styrene	0.01	U	MG/L	0.1	NA
MW04S	Styrene	0.01	U	MG/L	0.1	NA
MW02D	Styrene	0.01	U	MG/L	0.1	NA
MW02M	Styrene	0.01	U	MG/L	0.1	NA
MW02S	Styrene	0.01	U	MG/L	0.1	NA
MW02S	Styrene	0.01	U	MG/L	0.1	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW06S	Styrene	0.01	U	MG/L	0.1	NA
MW07S	Styrene	0.01	U	MG/L	0.1	NA
MW01S	Styrene	0.01	U	MG/L	0.1	NA
MW01S	Styrene	0.01	U	MG/L	0.1	NA
MW03S	Styrene	0.01	U	MG/L	0.1	NA
MW08S	Styrene	0.01	U	MG/L	0.1	NA
MW09S	Styrene	0.01	U	MG/L	0.1	NA
MW06S	Styrene	0.006	U	MG/L	0.1	NA
MW02M	Styrene	0.005	U	MG/L	0.1	NA
MW02D	Styrene	0.004	U	MG/L	0.1	NA
MW13B	Styrene	0.004	U	MG/L	0.1	NA
MW03S	Styrene	0.001	U	MG/L	0.1	NA
GEC3	Styrene	0.001	U	MG/L	0.1	NA
MW01S	Styrene	0.001	U	MG/L	0.1	NA
MW11S	Styrene	0.001	U	MG/L	0.1	NA
MW12B	Styrene	0.001	U	MG/L	0.1	NA
MW12D	Styrene	0.001	U	MG/L	0.1	NA
GEC1	Styrene	0.001	U	MG/L	0.1	NA
GEC2	Styrene	0.001	U	MG/L	0.1	NA
GEC4	Styrene	0.001	U	MG/L	0.1	NA
GEC5	Styrene	0.001	U	MG/L	0.1	NA
GEC6	Styrene	0.001	U	MG/L	0.1	NA
GEC7	Styrene	0.001	U	MG/L	0.1	NA
MW07D	Styrene	0.001	U	MG/L	0.1	NA
MW07S	Styrene	0.001	U	MG/L	0.1	NA
MW11B	Styrene	0.001	U	MG/L	0.1	NA
MW11M	Styrene	0.001	U	MG/L	0.1	NA
MW15D	Styrene	0.001	U	MG/L	0.1	NA
MW02S	Styrene	0.001	U	MG/L	0.1	NA
MW04B	Styrene	0.001	U	MG/L	0.1	NA
MW04D	Styrene	0.001	U	MG/L	0.1	NA
MW04S	Styrene	0.001	U	MG/L	0.1	NA
MW08S	Styrene	0.001	U	MG/L	0.1	NA
MW09S	Styrene	0.001	U	MG/L	0.1	NA
MW10B	Styrene	0.001	U	MG/L	0.1	NA
MW10D	Styrene	0.001	U	MG/L	0.1	NA
MW13S	Styrene	0.001	U	MG/L	0.1	NA
MW06S	Substituted Phenol_total	0.035	J_2	MG/L	nc	NA
MW01S	Sulfide	6		MG/L	nc	NA
MW05S	Sulfide	6		MG/L	nc	NA
MW02D	Sulfide	5.4		MG/L	nc	NA
MW12D	Sulfide	4		MG/L	nc	NA
GEC6	Sulfide	4		MG/L	nc	NA
MW01S	Sulfide	4		MG/L	nc	NA
MW07D	Sulfide	4		MG/L	nc	NA
MW10D	Sulfide	3		MG/L	nc	NA
MW11B	Sulfide	2		MG/L	nc	NA
MW11M	Sulfide	2		MG/L	nc	NA
MW02S	Sulfide	2		MG/L	nc	NA
MW09S	Sulfide	100	U	MG/L	nc	NA
MW08S	Sulfide	64	U	MG/L	nc	NA
MW06S	Sulfide	25	U	MG/L	nc	NA
MW06S	Sulfide	16	U	MG/L	nc	NA
MW07S	Sulfide	16	U	MG/L	nc	NA
MW12B	Sulfide	13	U	MG/L	nc	NA
MW12B	Sulfide	8	U	MG/L	nc	NA
MW01S	Sulfide	6	U	MG/L	nc	NA
GEC2	Sulfide	4	U	MG/L	nc	NA
MW03S	Sulfide	4	U	MG/L	nc	NA
MW04S	Sulfide	4	U	MG/L	nc	NA
MW04B	Sulfide	4	U	MG/L	nc	NA
MW04D	Sulfide	4	U	MG/L	nc	NA
MW04S	Sulfide	4	U	MG/L	nc	NA
MW02M	Sulfide	4	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW02S	Sulfide	4	U	MG/L	nc	NA
MW07S	Sulfide	4	U	MG/L	nc	NA
MW01S	Sulfide	4	U	MG/L	nc	NA
MW09S	Sulfide	4	U	MG/L	nc	NA
MW10B	Sulfide	2	U	MG/L	nc	NA
MW10D	Sulfide	2	U	MG/L	nc	NA
MW13B	Sulfide	2	U	MG/L	nc	NA
MW13D	Sulfide	2	U	MG/L	nc	NA
MW13S	Sulfide	2	U	MG/L	nc	NA
MW11S	Sulfide	2	U	MG/L	nc	NA
MW14M	Sulfide	2	U	MG/L	nc	NA
MW15D	Sulfide	2	U	MG/L	nc	NA
TMW3	Sulfide	1	U	MG/L	nc	NA
MW03S	Sulfide	1	U	MG/L	nc	NA
MW08S	Sulfide	1	U	MG/L	nc	NA
MW08S	Sulfur, Mol. (s8)	0.004	NJ	MG/L	nc	NA
MW05S	TEQ	4.15118E-06		MG/L	nc	NA
MW05S	TEQ	1.45515E-06		MG/L	nc	NA
MW05S	TEQ	1.03269E-06		MG/L	nc	NA
MW03S	TEQ	0.000000011		MG/L	nc	NA
MW05S	TEQ	0.0000044	J	MG/L	nc	NA
MW07D	TEQ	0.000000011	J	MG/L	nc	NA
MW09S	TEQ	0.00000001	J	MG/L	nc	NA
MW04D	TEQ	0.00000001	J	MG/L	nc	NA
MW04S	TEQ	7.14E-09	J	MG/L	nc	NA
MW06S	TEQ	6.7E-09	J	MG/L	nc	NA
MW01S	TEQ	5.3E-09	J	MG/L	nc	NA
MW08S	TEQ	5.1E-09	J	MG/L	nc	NA
MW01S	TEQ	4.7E-09	J	MG/L	nc	NA
MW02D	TEQ	1.2E-09	J	MG/L	nc	NA
MW02M	TEQ	3E-10	J	MG/L	nc	NA
MW07S	TEQ	2.8E-10	J	MG/L	nc	NA
MW04B	TEQ	0	U	MG/L	nc	NA
MW04S	TEQ	0	U	MG/L	nc	NA
MW02S	TEQ	0	U	MG/L	nc	NA
MW10D	TEQ	0	UJ	MG/L	nc	NA
MW10B	TEQ	0	UJ	MG/L	nc	NA
MW10D	TEQ	0	UJ	MG/L	nc	NA
MW13B	TEQ	0	UJ	MG/L	nc	NA
MW13D	TEQ	0	UJ	MG/L	nc	NA
MW13S	TEQ	0	UJ	MG/L	nc	NA
TMW3	TEQ	0	UJ	MG/L	nc	NA
MW12B	TEQ	0	UJ	MG/L	nc	NA
MW11B	TEQ	0	UJ	MG/L	nc	NA
MW11M	TEQ	0	UJ	MG/L	nc	NA
MW11S	TEQ	0	UJ	MG/L	nc	NA
MW12B	TEQ	0	UJ	MG/L	nc	NA
MW12D	TEQ	0	UJ	MG/L	nc	NA
GEC2	TEQ	0	UJ	MG/L	nc	NA
GEC6	TEQ	0	UJ	MG/L	nc	NA
MW14M	TEQ	0	UJ	MG/L	nc	NA
MW15D	TEQ	0	UJ	MG/L	nc	NA
MW-LEA-01	tert-Butylbenzene	20	Uw	MG/L	nc	NA
MW-LEA-01	tert-Butylbenzene	2	Uw	MG/L	nc	NA
MW-LEA-02	tert-Butylbenzene	2	Uw	MG/L	nc	NA
MW-05S	tert-Butylbenzene	2	Uw	MG/L	nc	NA
MW-LEA-02	tert-Butylbenzene	2	Uw	MG/L	nc	NA
MW-LEA-02	tert-Butylbenzene	0.2	Uw	MG/L	nc	NA
MW-LEA-03	tert-Butylbenzene	0.2	Uw	MG/L	nc	NA
MW-LEA-03	tert-Butylbenzene	0.004	Uw	MG/L	nc	NA
MW05S	TERT-BUTYLBENZENE	1	U	MG/L	nc	NA
MW05S	TERT-BUTYLBENZENE	1	U	MG/L	nc	NA
MW05S	Tert-butylbenzene	1	U	MG/L	nc	NA
MW05S	Tert-butylbenzene	1	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW14M	Tert-butylbenzene	0.1	U	MG/L	nc	NA
MW06S	Tert-butylbenzene	0.01	U	MG/L	nc	NA
MW13D	Tert-butylbenzene	0.01	U	MG/L	nc	NA
MW06S	Tert-butylbenzene	0.006	U	MG/L	nc	NA
MW02M	Tert-butylbenzene	0.005	U	MG/L	nc	NA
MW02D	Tert-butylbenzene	0.004	U	MG/L	nc	NA
MW13B	Tert-butylbenzene	0.004	U	MG/L	nc	NA
MW03S	Tert-butylbenzene	0.001	U	MG/L	nc	NA
GEC3	Tert-butylbenzene	0.001	U	MG/L	nc	NA
MW01S	Tert-butylbenzene	0.001	U	MG/L	nc	NA
MW11S	Tert-butylbenzene	0.001	U	MG/L	nc	NA
MW12B	Tert-butylbenzene	0.001	U	MG/L	nc	NA
MW12D	Tert-butylbenzene	0.001	U	MG/L	nc	NA
GEC1	Tert-butylbenzene	0.001	U	MG/L	nc	NA
GEC2	Tert-butylbenzene	0.001	U	MG/L	nc	NA
GEC4	Tert-butylbenzene	0.001	U	MG/L	nc	NA
GEC5	Tert-butylbenzene	0.001	U	MG/L	nc	NA
GEC6	Tert-butylbenzene	0.001	U	MG/L	nc	NA
GEC7	Tert-butylbenzene	0.001	U	MG/L	nc	NA
MW07D	Tert-butylbenzene	0.001	U	MG/L	nc	NA
MW07S	Tert-butylbenzene	0.001	U	MG/L	nc	NA
MW11B	Tert-butylbenzene	0.001	U	MG/L	nc	NA
MW11M	Tert-butylbenzene	0.001	U	MG/L	nc	NA
MW15D	Tert-butylbenzene	0.001	U	MG/L	nc	NA
MW02S	Tert-butylbenzene	0.001	U	MG/L	nc	NA
MW04B	Tert-butylbenzene	0.001	U	MG/L	nc	NA
MW04D	Tert-butylbenzene	0.001	U	MG/L	nc	NA
MW04S	Tert-butylbenzene	0.001	U	MG/L	nc	NA
MW08S	Tert-butylbenzene	0.001	U	MG/L	nc	NA
MW09S	Tert-butylbenzene	0.001	U	MG/L	nc	NA
MW10B	Tert-butylbenzene	0.001	U	MG/L	nc	NA
MW10D	Tert-butylbenzene	0.001	U	MG/L	nc	NA
MW13S	Tert-butylbenzene	0.001	U	MG/L	nc	NA
MW-LEA-02	Tetrachlorodibenzo-p-Dioxins (filtered)	7.2682E-07	J	MG/L	0.00000003	Y
MW-LEA-02	Tetrachlorodibenzo-p-Dioxins (filtered)	2.88775E-07	J	MG/L	0.00000003	Y
MW-LEA-01	Tetrachlorodibenzo-p-Dioxins (filtered)	1.492E-08	U	MG/L	0.00000003	NA
MW-05S	Tetrachlorodibenzo-p-Dioxins (filtered)	2.604E-09	U	MG/L	0.00000003	NA
MW-LEA-03	Tetrachlorodibenzo-p-Dioxins (filtered)	1.899E-09	U	MG/L	0.00000003	NA
MW-LEA-02	Tetrachlorodibenzo-p-Dioxins (unfiltered)	6.33408E-06	J	MG/L	0.00000003	Y
MW-LEA-02	Tetrachlorodibenzo-p-Dioxins (unfiltered)	2.74272E-06	J	MG/L	0.00000003	Y
MW-05S	Tetrachlorodibenzo-p-Dioxins (unfiltered)	3.38874E-07	J	MG/L	0.00000003	Y
MW-LEA-03	Tetrachlorodibenzo-p-Dioxins (unfiltered)	2.33874E-07	J	MG/L	0.00000003	Y
MW-LEA-01	Tetrachlorodibenzo-p-Dioxins (unfiltered)	1.42463E-07	J	MG/L	0.00000003	Y
MW05S	Tetrachloroethene	37		MG/L	0.005	Y
MW05S	Tetrachloroethene	28		MG/L	0.005	Y
MW05S	TETRACHLOROETHENE	22		MG/L	0.005	Y
MW05S	TETRACHLOROETHENE	17		MG/L	0.005	Y
MW14M	Tetrachloroethene	1.9		MG/L	0.005	Y
MW13D	Tetrachloroethene	0.22		MG/L	0.005	Y
GEC6	Tetrachloroethene	0.15		MG/L	0.005	Y
MW02M	Tetrachloroethene	0.11		MG/L	0.005	Y
MW02M	Tetrachloroethene	0.11		MG/L	0.005	Y
MW13B	Tetrachloroethene	0.096		MG/L	0.005	Y
MW02D	Tetrachloroethene	0.073		MG/L	0.005	Y
MW04D	Tetrachloroethene	0.064		MG/L	0.005	Y
MW04B	Tetrachloroethene	0.063		MG/L	0.005	Y
MW04D	Tetrachloroethene	0.027		MG/L	0.005	Y
MW12D	Tetrachloroethene	0.018		MG/L	0.005	Y
MW04B	Tetrachloroethene	0.017		MG/L	0.005	Y
GEC6	Tetrachloroethene	0.011		MG/L	0.005	Y
GEC7	Tetrachloroethene	0.011		MG/L	0.005	Y
MW07D	Tetrachloroethene	0.01		MG/L	0.005	Y
MW13S	Tetrachloroethene	0.0077		MG/L	0.005	Y
MW04S	Tetrachloroethene	0.0044		MG/L	0.005	N

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW09S	Tetrachloroethene	0.0033		MG/L	0.005	N
GEC5	Tetrachloroethene	0.0022		MG/L	0.005	N
MW05S	Tetrachloroethene	61	*	MG/L	0.005	Y
MW02D	Tetrachloroethene	0.7	*	MG/L	0.005	Y
MW13D	Tetrachloroethene	0.34	*	MG/L	0.005	Y
MW13B	Tetrachloroethene	0.22	*	MG/L	0.005	Y
GEC6	Tetrachloroethene	0.2	*	MG/L	0.005	Y
MW09S	Tetrachloroethene	0.002	J	MG/L	0.005	N
MW12B	Tetrachloroethene	0.00089	J	MG/L	0.005	N
GEC5	Tetrachloroethene	0.00086	J	MG/L	0.005	N
MW12D	Tetrachloroethene	0.00064	J	MG/L	0.005	N
MW10D	Tetrachloroethene	0.00039	J	MG/L	0.005	N
MW10B	Tetrachloroethene	0.00025	J	MG/L	0.005	N
GEC7	Tetrachloroethene	0.00021	J	MG/L	0.005	N
MW09S	Tetrachloroethene	0.021	U	MG/L	0.005	NA
MW04S	Tetrachloroethene	0.017	U	MG/L	0.005	NA
MW04S	Tetrachloroethene	0.017	U	MG/L	0.005	NA
MW08S	Tetrachloroethene	0.016	U	MG/L	0.005	NA
MW06S	Tetrachloroethene	0.01	U	MG/L	0.005	NA
MW10D	Tetrachloroethene	0.01	U	MG/L	0.005	NA
MW10B	Tetrachloroethene	0.01	U	MG/L	0.005	NA
MW10D	Tetrachloroethene	0.01	U	MG/L	0.005	NA
MW13S	Tetrachloroethene	0.01	U	MG/L	0.005	NA
TMW3	Tetrachloroethene	0.01	U	MG/L	0.005	NA
MW12B	Tetrachloroethene	0.01	U	MG/L	0.005	NA
MW11B	Tetrachloroethene	0.01	U	MG/L	0.005	NA
MW11M	Tetrachloroethene	0.01	U	MG/L	0.005	NA
MW11S	Tetrachloroethene	0.01	U	MG/L	0.005	NA
MW12B	Tetrachloroethene	0.01	U	MG/L	0.005	NA
GEC2	Tetrachloroethene	0.01	U	MG/L	0.005	NA
MW14M	Tetrachloroethene	0.01	U	MG/L	0.005	NA
MW15D	Tetrachloroethene	0.01	U	MG/L	0.005	NA
MW01S	Tetrachloroethene	0.01	U	MG/L	0.005	NA
MW01S	Tetrachloroethene	0.01	U	MG/L	0.005	NA
MW03S	Tetrachloroethene	0.01	U	MG/L	0.005	NA
MW06S	Tetrachloroethene	0.01	U	MG/L	0.005	NA
MW07D	Tetrachloroethene	0.01	U	MG/L	0.005	NA
MW07S	Tetrachloroethene	0.01	U	MG/L	0.005	NA
MW02S	Tetrachloroethene	0.01	U	MG/L	0.005	NA
MW02S	Tetrachloroethene	0.01	U	MG/L	0.005	NA
MW06S	Tetrachloroethene	0.01	U	MG/L	0.005	NA
MW07S	Tetrachloroethene	0.01	U	MG/L	0.005	NA
MW01S	Tetrachloroethene	0.01	U	MG/L	0.005	NA
MW01S	Tetrachloroethene	0.01	U	MG/L	0.005	NA
MW03S	Tetrachloroethene	0.01	U	MG/L	0.005	NA
MW08S	Tetrachloroethene	0.01	U	MG/L	0.005	NA
MW06S	Tetrachloroethene	0.006	U	MG/L	0.005	NA
GEC1	Tetrachloroethene	0.0015	U	MG/L	0.005	NA
GEC2	Tetrachloroethene	0.0015	U	MG/L	0.005	NA
GEC3	Tetrachloroethene	0.0015	U	MG/L	0.005	NA
GEC4	Tetrachloroethene	0.0015	U	MG/L	0.005	NA
MW03S	Tetrachloroethene	0.001	U	MG/L	0.005	NA
GEC3	Tetrachloroethene	0.001	U	MG/L	0.005	NA
MW01S	Tetrachloroethene	0.001	U	MG/L	0.005	NA
MW11S	Tetrachloroethene	0.001	U	MG/L	0.005	NA
GEC1	Tetrachloroethene	0.001	U	MG/L	0.005	NA
GEC2	Tetrachloroethene	0.001	U	MG/L	0.005	NA
GEC4	Tetrachloroethene	0.001	U	MG/L	0.005	NA
MW07S	Tetrachloroethene	0.001	U	MG/L	0.005	NA
MW11B	Tetrachloroethene	0.001	U	MG/L	0.005	NA
MW11M	Tetrachloroethene	0.001	U	MG/L	0.005	NA
MW15D	Tetrachloroethene	0.001	U	MG/L	0.005	NA
MW02S	Tetrachloroethene	0.001	U	MG/L	0.005	NA
MW08S	Tetrachloroethene	0.001	U	MG/L	0.005	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW-LEA-01	Tetrachloroethylene	220	Jw	MG/L	0.005	Y
MW-LEA-01	Tetrachloroethylene	160	Jw	MG/L	0.005	Y
MW-LEA-02	Tetrachloroethylene	11	Jw	MG/L	0.005	Y
MW-LEA-03	Tetrachloroethylene	0.73	Jw	MG/L	0.005	Y
MW-LEA-03	Tetrachloroethylene	0.59	Jw	MG/L	0.005	Y
MW-05S	Tetrachloroethylene	40	Uw	MG/L	0.005	NA
MW-LEA-02	Tetrachloroethylene	15	Uw	MG/L	0.005	NA
MW-LEA-02	Tetrachloroethylene	4.4	Uw	MG/L	0.005	NA
MW09S	Thallium	0.0086	J	MG/L	0.0005	Y
MW01S	Thallium	0.0065	J	MG/L	0.0005	Y
MW01S	Thallium	0.0065	J	MG/L	0.0005	Y
MW02S	Thallium	0.0062	U	MG/L	0.0005	NA
MW06S	Thallium	0.0062	U	MG/L	0.0005	NA
MW07S	Thallium	0.0062	U	MG/L	0.0005	NA
MW03S	Thallium	0.0062	U	MG/L	0.0005	NA
MW08S	Thallium	0.0062	U	MG/L	0.0005	NA
MW01S	Thallium	0.0057	U	MG/L	0.0005	NA
MW01S	Thallium	0.0057	U	MG/L	0.0005	NA
MW03S	Thallium	0.0057	U	MG/L	0.0005	NA
MW05S	Thallium	0.0057	U	MG/L	0.0005	NA
MW06S	Thallium	0.0057	U	MG/L	0.0005	NA
MW07D	Thallium	0.0057	U	MG/L	0.0005	NA
MW07S	Thallium	0.0057	U	MG/L	0.0005	NA
MW08S	Thallium	0.0057	U	MG/L	0.0005	NA
MW09S	Thallium	0.0057	U	MG/L	0.0005	NA
MW04S	Thallium	0.0057	U	MG/L	0.0005	NA
MW04B	Thallium	0.0057	U	MG/L	0.0005	NA
MW04D	Thallium	0.0057	U	MG/L	0.0005	NA
MW04S	Thallium	0.0057	U	MG/L	0.0005	NA
MW02D	Thallium	0.0057	U	MG/L	0.0005	NA
MW02M	Thallium	0.0057	U	MG/L	0.0005	NA
MW02S	Thallium	0.0057	U	MG/L	0.0005	NA
MW10D	Thallium	0.0056	U	MG/L	0.0005	NA
MW10B	Thallium	0.0056	U	MG/L	0.0005	NA
MW10D	Thallium	0.0056	U	MG/L	0.0005	NA
MW13B	Thallium	0.0056	U	MG/L	0.0005	NA
MW13D	Thallium	0.0056	U	MG/L	0.0005	NA
MW13S	Thallium	0.0056	U	MG/L	0.0005	NA
TMW3	Thallium	0.0056	U	MG/L	0.0005	NA
MW11S	Thallium	0.0056	U	MG/L	0.0005	NA
MW12D	Thallium	0.0056	U	MG/L	0.0005	NA
MW12B	Thallium	0.0056	UJ	MG/L	0.0005	NA
MW11B	Thallium	0.0056	UJ	MG/L	0.0005	NA
MW11M	Thallium	0.0056	UJ	MG/L	0.0005	NA
MW12B	Thallium	0.0056	UJ	MG/L	0.0005	NA
GEC2	Thallium	0.0056	UJ	MG/L	0.0005	NA
GEC6	Thallium	0.0056	UJ	MG/L	0.0005	NA
MW14M	Thallium	0.0056	UJ	MG/L	0.0005	NA
MW15D	Thallium	0.0056	UJ	MG/L	0.0005	NA
MW09S	Thallium	0.0069	J	MG/L	0.0005	Y
MW09S	Thallium	0.0063	J	MG/L	0.0005	Y
MW08S	Thallium	0.0062	J	MG/L	0.0005	Y
MW02S	Thallium	0.0062	U	MG/L	0.0005	NA
MW06S	Thallium	0.0062	U	MG/L	0.0005	NA
MW07S	Thallium	0.0062	U	MG/L	0.0005	NA
MW01S	Thallium	0.0062	U	MG/L	0.0005	NA
MW01S	Thallium	0.0062	U	MG/L	0.0005	NA
MW03S	Thallium	0.0062	U	MG/L	0.0005	NA
MW08S	Thallium	0.0062	U	MG/L	0.0005	NA
MW01S	Thallium	0.0057	U	MG/L	0.0005	NA
MW01S	Thallium	0.0057	U	MG/L	0.0005	NA
MW03S	Thallium	0.0057	U	MG/L	0.0005	NA
MW05S	Thallium	0.0057	U	MG/L	0.0005	NA
MW06S	Thallium	0.0057	U	MG/L	0.0005	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW07D	Thallium	0.0057	U	MG/L	0.0005	NA
MW07S	Thallium	0.0057	U	MG/L	0.0005	NA
MW04S	Thallium	0.0057	U	MG/L	0.0005	NA
MW04B	Thallium	0.0057	U	MG/L	0.0005	NA
MW04D	Thallium	0.0057	U	MG/L	0.0005	NA
MW04S	Thallium	0.0057	U	MG/L	0.0005	NA
MW02D	Thallium	0.0057	U	MG/L	0.0005	NA
MW02M	Thallium	0.0057	U	MG/L	0.0005	NA
MW02S	Thallium	0.0057	U	MG/L	0.0005	NA
MW10D	Thallium	0.0056	U	MG/L	0.0005	NA
MW10B	Thallium	0.0056	U	MG/L	0.0005	NA
MW10D	Thallium	0.0056	U	MG/L	0.0005	NA
MW13B	Thallium	0.0056	U	MG/L	0.0005	NA
MW13D	Thallium	0.0056	U	MG/L	0.0005	NA
MW13S	Thallium	0.0056	U	MG/L	0.0005	NA
TMW3	Thallium	0.0056	U	MG/L	0.0005	NA
MW11S	Thallium	0.0056	U	MG/L	0.0005	NA
MW12D	Thallium	0.0056	U	MG/L	0.0005	NA
MW12B	Thallium	0.0056	UJ	MG/L	0.0005	NA
MW11B	Thallium	0.0056	UJ	MG/L	0.0005	NA
MW11M	Thallium	0.0056	UJ	MG/L	0.0005	NA
MW12B	Thallium	0.0056	UJ	MG/L	0.0005	NA
GEC2	Thallium	0.0056	UJ	MG/L	0.0005	NA
GEC6	Thallium	0.0056	UJ	MG/L	0.0005	NA
MW14M	Thallium	0.0056	UJ	MG/L	0.0005	NA
MW15D	Thallium	0.0056	UJ	MG/L	0.0005	NA
MW-LEA-01	Toluene	20	Uw	MG/L	1	NA
MW-LEA-01	Toluene	2	Uw	MG/L	1	NA
MW-LEA-02	Toluene	2	Uw	MG/L	1	NA
MW-05S	Toluene	2	Uw	MG/L	1	NA
MW-LEA-02	Toluene	2	Uw	MG/L	1	NA
MW-LEA-02	Toluene	0.2	Uw	MG/L	1	NA
MW-LEA-03	Toluene	0.2	Uw	MG/L	1	NA
MW-LEA-03	Toluene	0.004	Uw	MG/L	1	NA
MW08S	Toluene	0.0014		MG/L	1	N
MW06S	Toluene	0.005	J	MG/L	1	N
MW07S	Toluene	0.005	J	MG/L	1	N
MW06S	Toluene	0.0033	J	MG/L	1	N
MW02D	Toluene	0.0018	J	MG/L	1	N
MW08S	Toluene	0.001	J	MG/L	1	N
MW05S	Toluene	1.7	U	MG/L	1	NA
MW05S	TOLUENE	1	U	MG/L	1	NA
MW05S	TOLUENE	1	U	MG/L	1	NA
MW05S	Toluene	1	U	MG/L	1	NA
MW05S	Toluene	1	U	MG/L	1	NA
MW14M	Toluene	0.1	U	MG/L	1	NA
MW06S	Toluene	0.01	U	MG/L	1	NA
MW13D	Toluene	0.01	U	MG/L	1	NA
MW10D	Toluene	0.01	U	MG/L	1	NA
MW10B	Toluene	0.01	U	MG/L	1	NA
MW10D	Toluene	0.01	U	MG/L	1	NA
MW13B	Toluene	0.01	U	MG/L	1	NA
MW13D	Toluene	0.01	U	MG/L	1	NA
MW13S	Toluene	0.01	U	MG/L	1	NA
TMW3	Toluene	0.01	U	MG/L	1	NA
MW12B	Toluene	0.01	U	MG/L	1	NA
MW11B	Toluene	0.01	U	MG/L	1	NA
MW11M	Toluene	0.01	U	MG/L	1	NA
MW11S	Toluene	0.01	U	MG/L	1	NA
MW12B	Toluene	0.01	U	MG/L	1	NA
MW12D	Toluene	0.01	U	MG/L	1	NA
GEC2	Toluene	0.01	U	MG/L	1	NA
GEC6	Toluene	0.01	U	MG/L	1	NA
MW14M	Toluene	0.01	U	MG/L	1	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW15D	Toluene	0.01	U	MG/L	1	NA
MW01S	Toluene	0.01	U	MG/L	1	NA
MW01S	Toluene	0.01	U	MG/L	1	NA
MW03S	Toluene	0.01	U	MG/L	1	NA
MW06S	Toluene	0.01	U	MG/L	1	NA
MW07D	Toluene	0.01	U	MG/L	1	NA
MW07S	Toluene	0.01	U	MG/L	1	NA
MW08S	Toluene	0.01	U	MG/L	1	NA
MW09S	Toluene	0.01	U	MG/L	1	NA
MW04S	Toluene	0.01	U	MG/L	1	NA
MW04B	Toluene	0.01	U	MG/L	1	NA
MW04D	Toluene	0.01	U	MG/L	1	NA
MW04S	Toluene	0.01	U	MG/L	1	NA
MW02D	Toluene	0.01	U	MG/L	1	NA
MW02M	Toluene	0.01	U	MG/L	1	NA
MW02S	Toluene	0.01	U	MG/L	1	NA
MW02S	Toluene	0.01	U	MG/L	1	NA
MW01S	Toluene	0.01	U	MG/L	1	NA
MW01S	Toluene	0.01	U	MG/L	1	NA
MW03S	Toluene	0.01	U	MG/L	1	NA
MW09S	Toluene	0.01	U	MG/L	1	NA
MW02M	Toluene	0.005	U	MG/L	1	NA
MW13B	Toluene	0.004	U	MG/L	1	NA
GEC3	Toluene	0.001	U	MG/L	1	NA
MW01S	Toluene	0.001	U	MG/L	1	NA
MW11S	Toluene	0.001	U	MG/L	1	NA
MW12B	Toluene	0.001	U	MG/L	1	NA
MW12D	Toluene	0.001	U	MG/L	1	NA
GEC1	Toluene	0.001	U	MG/L	1	NA
GEC2	Toluene	0.001	U	MG/L	1	NA
GEC4	Toluene	0.001	U	MG/L	1	NA
GEC5	Toluene	0.001	U	MG/L	1	NA
GEC6	Toluene	0.001	U	MG/L	1	NA
GEC7	Toluene	0.001	U	MG/L	1	NA
MW07D	Toluene	0.001	U	MG/L	1	NA
MW07S	Toluene	0.001	U	MG/L	1	NA
MW11B	Toluene	0.001	U	MG/L	1	NA
MW11M	Toluene	0.001	U	MG/L	1	NA
MW15D	Toluene	0.001	U	MG/L	1	NA
MW02S	Toluene	0.001	U	MG/L	1	NA
MW04B	Toluene	0.001	U	MG/L	1	NA
MW04D	Toluene	0.001	U	MG/L	1	NA
MW04S	Toluene	0.001	U	MG/L	1	NA
MW09S	Toluene	0.001	U	MG/L	1	NA
MW10B	Toluene	0.001	U	MG/L	1	NA
MW10D	Toluene	0.001	U	MG/L	1	NA
MW13S	Toluene	0.001	U	MG/L	1	NA
MW03S	Toluene	0.00044	U	MG/L	1	NA
MW-LEA-02	Total Dissolved Solids	760		MG/L	nc	NA
MW-LEA-02	Total Dissolved Solids	730		MG/L	nc	NA
MW-LEA-03	Total Dissolved Solids	460		MG/L	nc	NA
MW-LEA-01	Total Dissolved Solids	300		MG/L	nc	NA
MW-05S	Total Dissolved Solids	180		MG/L	nc	NA
MW-LEA-02	Total Dissolved Solids (unfiltered)	740		MG/L	nc	NA
MW-LEA-02	Total Dissolved Solids (unfiltered)	720		MG/L	nc	NA
MW-LEA-03	Total Dissolved Solids (unfiltered)	510		MG/L	nc	NA
MW-LEA-01	Total Dissolved Solids (unfiltered)	290		MG/L	nc	NA
MW-05S	Total Dissolved Solids (unfiltered)	210		MG/L	nc	NA
MW05S	Total Hepta-Dioxins	2.88E-09	J	MG/L	nc	NA
MW05S	Total Hepta-dioxins	1.2E-09	UJ	MG/L	nc	NA
MW05S	Total Hepta-dioxins	5.9E-10	UJ	MG/L	nc	NA
MW05S	Total Hepta-Furans	1.41E-09	J	MG/L	nc	NA
MW05S	Total Hepta-furans	1.43E-09	UJ	MG/L	nc	NA
MW05S	Total Hepta-furans	5E-10	UJ	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW05S	Total Hexa-Dioxins	2.26E-09	UJ	MG/L	nc	NA
MW05S	Total Hexa-dioxins	1.61E-09	UJ	MG/L	nc	NA
MW05S	Total Hexa-dioxins	8.4E-10	UJ	MG/L	nc	NA
MW05S	Total Hexa-Furans	4.013E-08	J	MG/L	nc	NA
MW05S	Total Hexa-furans	1.677E-08	UJ	MG/L	nc	NA
MW05S	Total Hexa-furans	1.504E-08	UJ	MG/L	nc	NA
MW02S	Total HpCDD	1.08E-08	EMPC	MG/L	nc	NA
MW01S	Total HpCDD	1.02E-08	EMPC	MG/L	nc	NA
MW12B	Total HpCDD	9.1E-09	EMPC	MG/L	nc	NA
MW04D	Total HpCDD	7.7E-09	EMPC	MG/L	nc	NA
GEC2	Total HpCDD	6.9E-09	EMPC	MG/L	nc	NA
MW07D	Total HpCDD	3.7E-09	EMPC	MG/L	nc	NA
MW10D	Total HpCDD	2.9E-09	EMPC	MG/L	nc	NA
MW12B	Total HpCDD	2.8E-09	EMPC	MG/L	nc	NA
MW06S	Total HpCDD	6.7E-09	U	MG/L	nc	NA
MW07S	Total HpCDD	6.5E-09	U	MG/L	nc	NA
MW03S	Total HpCDD	0.000000006	U	MG/L	nc	NA
MW09S	Total HpCDD	0.000000006	U	MG/L	nc	NA
MW01S	Total HpCDD	5.6E-09	U	MG/L	nc	NA
MW08S	Total HpCDD	4.4E-09	U	MG/L	nc	NA
MW15D	Total HpCDD	0.00000001	UJ	MG/L	nc	NA
MW03S	Total HpCDD	8.4E-09	UJ	MG/L	nc	NA
MW10D	Total HpCDD	6.5E-09	UJ	MG/L	nc	NA
GEC6	Total HpCDD	6.3E-09	UJ	MG/L	nc	NA
MW01S	Total HpCDD	6.3E-09	UJ	MG/L	nc	NA
MW05S	Total HpCDD	6.2E-09	UJ	MG/L	nc	NA
MW04S	Total HpCDD	0.000000006	UJ	MG/L	nc	NA
MW04S	Total HpCDD	5.8E-09	UJ	MG/L	nc	NA
MW13S	Total HpCDD	5.5E-09	UJ	MG/L	nc	NA
MW01S	Total HpCDD	0.000000005	UJ	MG/L	nc	NA
TMW3	Total HpCDD	4.8E-09	UJ	MG/L	nc	NA
MW08S	Total HpCDD	4.6E-09	UJ	MG/L	nc	NA
MW06S	Total HpCDD	4.4E-09	UJ	MG/L	nc	NA
MW09S	Total HpCDD	4.3E-09	UJ	MG/L	nc	NA
MW02S	Total HpCDD	4.2E-09	UJ	MG/L	nc	NA
MW04B	Total HpCDD	0.000000004	UJ	MG/L	nc	NA
MW12D	Total HpCDD	3.9E-09	UJ	MG/L	nc	NA
MW07S	Total HpCDD	3.9E-09	UJ	MG/L	nc	NA
MW13D	Total HpCDD	3.8E-09	UJ	MG/L	nc	NA
MW11M	Total HpCDD	3.8E-09	UJ	MG/L	nc	NA
MW11S	Total HpCDD	3.7E-09	UJ	MG/L	nc	NA
MW13B	Total HpCDD	3.6E-09	UJ	MG/L	nc	NA
MW11B	Total HpCDD	3.6E-09	UJ	MG/L	nc	NA
MW02M	Total HpCDD	3.2E-09	UJ	MG/L	nc	NA
MW14M	Total HpCDD	2.6E-09	UJ	MG/L	nc	NA
MW02D	Total HpCDD	2.3E-09	UJ	MG/L	nc	NA
MW10B	Total HpCDD	2.2E-09	UJ	MG/L	nc	NA
MW02S	Total HpCDF	0.000000004		MG/L	nc	NA
MW07D	Total HpCDF	7.6E-09	EMPC	MG/L	nc	NA
MW10D	Total HpCDF	7.3E-09	EMPC	MG/L	nc	NA
MW01S	Total HpCDF	7.1E-09	EMPC	MG/L	nc	NA
MW05S	Total HpCDF	4.2E-09	EMPC	MG/L	nc	NA
MW04D	Total HpCDF	4.1E-09	EMPC	MG/L	nc	NA
MW04S	Total HpCDF	3.4E-09	EMPC	MG/L	nc	NA
MW04S	Total HpCDF	1.6E-09	EMPC	MG/L	nc	NA
MW06S	Total HpCDF	4.8E-09	U	MG/L	nc	NA
MW01S	Total HpCDF	4.2E-09	U	MG/L	nc	NA
MW03S	Total HpCDF	4.2E-09	U	MG/L	nc	NA
MW09S	Total HpCDF	4.1E-09	U	MG/L	nc	NA
MW07S	Total HpCDF	3.9E-09	U	MG/L	nc	NA
MW08S	Total HpCDF	2.7E-09	U	MG/L	nc	NA
MW13D	Total HpCDF	8.2E-09	UJ	MG/L	nc	NA
GEC2	Total HpCDF	5.9E-09	UJ	MG/L	nc	NA
MW12B	Total HpCDF	5.6E-09	UJ	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW15D	Total HpCDF	5.2E-09	UJ	MG/L	nc	NA
MW10D	Total HpCDF	4.3E-09	UJ	MG/L	nc	NA
MW03S	Total HpCDF	3.9E-09	UJ	MG/L	nc	NA
MW01S	Total HpCDF	3.6E-09	UJ	MG/L	nc	NA
TMW3	Total HpCDF	3.3E-09	UJ	MG/L	nc	NA
GEC6	Total HpCDF	3.3E-09	UJ	MG/L	nc	NA
MW13S	Total HpCDF	3.2E-09	UJ	MG/L	nc	NA
MW01S	Total HpCDF	2.8E-09	UJ	MG/L	nc	NA
MW13B	Total HpCDF	2.6E-09	UJ	MG/L	nc	NA
MW12D	Total HpCDF	2.5E-09	UJ	MG/L	nc	NA
MW08S	Total HpCDF	2.5E-09	UJ	MG/L	nc	NA
MW04B	Total HpCDF	2.5E-09	UJ	MG/L	nc	NA
MW02S	Total HpCDF	2.5E-09	UJ	MG/L	nc	NA
MW06S	Total HpCDF	2.4E-09	UJ	MG/L	nc	NA
MW10B	Total HpCDF	2.3E-09	UJ	MG/L	nc	NA
MW11S	Total HpCDF	2.3E-09	UJ	MG/L	nc	NA
MW07S	Total HpCDF	2.3E-09	UJ	MG/L	nc	NA
MW09S	Total HpCDF	2.3E-09	UJ	MG/L	nc	NA
MW11B	Total HpCDF	0.000000002	UJ	MG/L	nc	NA
MW12B	Total HpCDF	1.8E-09	UJ	MG/L	nc	NA
MW11M	Total HpCDF	1.7E-09	UJ	MG/L	nc	NA
MW14M	Total HpCDF	1.5E-09	UJ	MG/L	nc	NA
MW02M	Total HpCDF	1.5E-09	UJ	MG/L	nc	NA
MW02D	Total HpCDF	1.2E-09	UJ	MG/L	nc	NA
MW04S	Total HxCDD	4.56E-08	EMPC	MG/L	nc	NA
MW10D	Total HxCDD	3.89E-08	EMPC	MG/L	nc	NA
MW12D	Total HxCDD	3.11E-08	EMPC	MG/L	nc	NA
MW13S	Total HxCDD	0.00000003	EMPC	MG/L	nc	NA
MW13D	Total HxCDD	2.97E-08	EMPC	MG/L	nc	NA
MW11S	Total HxCDD	2.95E-08	EMPC	MG/L	nc	NA
MW10B	Total HxCDD	2.34E-08	EMPC	MG/L	nc	NA
MW07D	Total HxCDD	1.96E-08	EMPC	MG/L	nc	NA
MW02D	Total HxCDD	1.85E-08	EMPC	MG/L	nc	NA
MW02M	Total HxCDD	1.74E-08	EMPC	MG/L	nc	NA
GEC2	Total HxCDD	0.000000016	EMPC	MG/L	nc	NA
MW13B	Total HxCDD	1.12E-08	EMPC	MG/L	nc	NA
MW04D	Total HxCDD	8.6E-09	EMPC	MG/L	nc	NA
MW12B	Total HxCDD	8.5E-09	EMPC	MG/L	nc	NA
MW14M	Total HxCDD	8.5E-09	EMPC	MG/L	nc	NA
TMW3	Total HxCDD	8.4E-09	EMPC	MG/L	nc	NA
MW11M	Total HxCDD	8.2E-09	EMPC	MG/L	nc	NA
MW05S	Total HxCDD	8.2E-09	EMPC	MG/L	nc	NA
MW11B	Total HxCDD	6.9E-09	EMPC	MG/L	nc	NA
MW12B	Total HxCDD	0.000000006	EMPC	MG/L	nc	NA
MW06S	Total HxCDD	0.000000005	U	MG/L	nc	NA
MW01S	Total HxCDD	4.4E-09	U	MG/L	nc	NA
MW01S	Total HxCDD	4.1E-09	U	MG/L	nc	NA
MW07S	Total HxCDD	0.000000004	U	MG/L	nc	NA
MW03S	Total HxCDD	3.9E-09	U	MG/L	nc	NA
MW09S	Total HxCDD	3.7E-09	U	MG/L	nc	NA
MW08S	Total HxCDD	2.9E-09	U	MG/L	nc	NA
MW02S	Total HxCDD	1.8E-09	U	MG/L	nc	NA
MW15D	Total HxCDD	0.000000006	UJ	MG/L	nc	NA
MW03S	Total HxCDD	5.3E-09	UJ	MG/L	nc	NA
MW10D	Total HxCDD	4.4E-09	UJ	MG/L	nc	NA
MW01S	Total HxCDD	0.000000004	UJ	MG/L	nc	NA
GEC6	Total HxCDD	3.7E-09	UJ	MG/L	nc	NA
MW04S	Total HxCDD	3.1E-09	UJ	MG/L	nc	NA
MW01S	Total HxCDD	0.000000003	UJ	MG/L	nc	NA
MW09S	Total HxCDD	2.8E-09	UJ	MG/L	nc	NA
MW06S	Total HxCDD	2.6E-09	UJ	MG/L	nc	NA
MW04B	Total HxCDD	2.5E-09	UJ	MG/L	nc	NA
MW02S	Total HxCDD	2.5E-09	UJ	MG/L	nc	NA
MW07S	Total HxCDD	2.4E-09	UJ	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW08S	Total HxCDD	2.4E-09	UJ	MG/L	nc	NA
GEC6	Total HxCDF	8.11E-08	EMPC	MG/L	nc	NA
MW07D	Total HxCDF	1.76E-08	EMPC	MG/L	nc	NA
MW10D	Total HxCDF	1.52E-08	EMPC	MG/L	nc	NA
MW04S	Total HxCDF	0.000000012	EMPC	MG/L	nc	NA
MW04D	Total HxCDF	1.18E-08	EMPC	MG/L	nc	NA
GEC2	Total HxCDF	8.4E-09	EMPC	MG/L	nc	NA
MW12B	Total HxCDF	5.9E-09	EMPC	MG/L	nc	NA
MW11B	Total HxCDF	5.7E-09	EMPC	MG/L	nc	NA
MW10D	Total HxCDF	0.000000004	EMPC	MG/L	nc	NA
MW13D	Total HxCDF	3.4E-09	EMPC	MG/L	nc	NA
MW07S	Total HxCDF	3.4E-09	EMPC	MG/L	nc	NA
MW10B	Total HxCDF	1.3E-09	EMPC	MG/L	nc	NA
MW02M	Total HxCDF	6.7E-10	EMPC	MG/L	nc	NA
MW05S	Total HxCDF	9.92E-08	J	MG/L	nc	NA
MW06S	Total HxCDF	3.2E-09	U	MG/L	nc	NA
MW01S	Total HxCDF	0.000000003	U	MG/L	nc	NA
MW03S	Total HxCDF	2.8E-09	U	MG/L	nc	NA
MW07S	Total HxCDF	2.7E-09	U	MG/L	nc	NA
MW01S	Total HxCDF	2.7E-09	U	MG/L	nc	NA
MW09S	Total HxCDF	2.6E-09	U	MG/L	nc	NA
MW08S	Total HxCDF	0.000000002	U	MG/L	nc	NA
MW02S	Total HxCDF	1.3E-09	U	MG/L	nc	NA
MW03S	Total HxCDF	5.3E-09	UJ	MG/L	nc	NA
MW15D	Total HxCDF	3.8E-09	UJ	MG/L	nc	NA
MW13S	Total HxCDF	3.3E-09	UJ	MG/L	nc	NA
MW12B	Total HxCDF	3.1E-09	UJ	MG/L	nc	NA
MW01S	Total HxCDF	2.8E-09	UJ	MG/L	nc	NA
TMW3	Total HxCDF	2.3E-09	UJ	MG/L	nc	NA
MW04S	Total HxCDF	2.3E-09	UJ	MG/L	nc	NA
MW02S	Total HxCDF	1.9E-09	UJ	MG/L	nc	NA
MW13B	Total HxCDF	1.8E-09	UJ	MG/L	nc	NA
MW01S	Total HxCDF	1.8E-09	UJ	MG/L	nc	NA
MW04B	Total HxCDF	1.8E-09	UJ	MG/L	nc	NA
MW08S	Total HxCDF	1.7E-09	UJ	MG/L	nc	NA
MW09S	Total HxCDF	1.7E-09	UJ	MG/L	nc	NA
MW11M	Total HxCDF	1.6E-09	UJ	MG/L	nc	NA
MW11S	Total HxCDF	1.6E-09	UJ	MG/L	nc	NA
MW06S	Total HxCDF	1.6E-09	UJ	MG/L	nc	NA
MW12D	Total HxCDF	1.3E-09	UJ	MG/L	nc	NA
MW14M	Total HxCDF	0.000000001	UJ	MG/L	nc	NA
MW02D	Total HxCDF	5.7E-10	UJ	MG/L	nc	NA
MW09S	Total Organic Carbon	35		MG/L	nc	NA
MW03S	Total Organic Carbon	30		MG/L	nc	NA
MW08S	Total Organic Carbon	27		MG/L	nc	NA
MW06S	Total Organic Carbon	24		MG/L	nc	NA
MW09S	Total Organic Carbon	24		MG/L	nc	NA
MW06S	Total Organic Carbon	23		MG/L	nc	NA
MW05S	Total Organic Carbon	19		MG/L	nc	NA
MW11B	Total Organic Carbon	16		MG/L	nc	NA
MW01S	Total Organic Carbon	16		MG/L	nc	NA
GEC2	Total Organic Carbon	15		MG/L	nc	NA
MW01S	Total Organic Carbon	15		MG/L	nc	NA
MW07S	Total Organic Carbon	15		MG/L	nc	NA
MW02S	Total Organic Carbon	10		MG/L	nc	NA
MW03S	Total Organic Carbon	9		MG/L	nc	NA
MW07S	Total Organic Carbon	8.3		MG/L	nc	NA
MW04S	Total Organic Carbon	7.6		MG/L	nc	NA
MW04S	Total Organic Carbon	7.1		MG/L	nc	NA
MW02S	Total Organic Carbon	7		MG/L	nc	NA
MW01S	Total Organic Carbon	7		MG/L	nc	NA
TMW3	Total Organic Carbon	6		MG/L	nc	NA
MW12B	Total Organic Carbon	5		MG/L	nc	NA
GEC6	Total Organic Carbon	5		MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW02M	Total Organic Carbon	5		MG/L	nc	NA
MW01S	Total Organic Carbon	5		MG/L	nc	NA
MW12B	Total Organic Carbon	4		MG/L	nc	NA
MW08S	Total Organic Carbon	4		MG/L	nc	NA
MW10B	Total Organic Carbon	3		MG/L	nc	NA
MW11M	Total Organic Carbon	3		MG/L	nc	NA
MW15D	Total Organic Carbon	3		MG/L	nc	NA
MW10D	Total Organic Carbon	2		MG/L	nc	NA
MW10D	Total Organic Carbon	2		MG/L	nc	NA
MW13D	Total Organic Carbon	2		MG/L	nc	NA
MW11S	Total Organic Carbon	2		MG/L	nc	NA
MW14M	Total Organic Carbon	2		MG/L	nc	NA
MW07D	Total Organic Carbon	2		MG/L	nc	NA
MW04B	Total Organic Carbon	2		MG/L	nc	NA
MW04D	Total Organic Carbon	2		MG/L	nc	NA
MW02D	Total Organic Carbon	2		MG/L	nc	NA
MW13B	Total Organic Carbon	1		MG/L	nc	NA
MW13S	Total Organic Carbon	1		MG/L	nc	NA
MW12D	Total Organic Carbon	1		MG/L	nc	NA
MW12D	Total PeCDD	1.39E-08	EMPC	MG/L	nc	NA
MW13S	Total PeCDD	1.35E-08	EMPC	MG/L	nc	NA
MW13D	Total PeCDD	1.25E-08	EMPC	MG/L	nc	NA
MW10D	Total PeCDD	1.12E-08	EMPC	MG/L	nc	NA
MW10B	Total PeCDD	8.9E-09	EMPC	MG/L	nc	NA
MW11S	Total PeCDD	6.1E-09	EMPC	MG/L	nc	NA
MW02D	Total PeCDD	5.9E-09	EMPC	MG/L	nc	NA
MW04S	Total PeCDD	5.7E-09	EMPC	MG/L	nc	NA
MW14M	Total PeCDD	5.2E-09	EMPC	MG/L	nc	NA
MW04B	Total PeCDD	4.6E-09	EMPC	MG/L	nc	NA
MW02M	Total PeCDD	3.8E-09	EMPC	MG/L	nc	NA
MW07D	Total PeCDD	3.3E-09	EMPC	MG/L	nc	NA
MW07S	Total PeCDD	2.7E-09	EMPC	MG/L	nc	NA
MW05S	Total PeCDD	0.00000394	J	MG/L	nc	NA
MW06S	Total PeCDD	4.5E-09	U	MG/L	nc	NA
MW07S	Total PeCDD	3.5E-09	U	MG/L	nc	NA
MW03S	Total PeCDD	3.5E-09	U	MG/L	nc	NA
MW01S	Total PeCDD	3.4E-09	U	MG/L	nc	NA
MW01S	Total PeCDD	3.3E-09	U	MG/L	nc	NA
MW09S	Total PeCDD	3.2E-09	U	MG/L	nc	NA
MW08S	Total PeCDD	2.5E-09	U	MG/L	nc	NA
MW02S	Total PeCDD	1.6E-09	U	MG/L	nc	NA
MW04D	Total PeCDD	8.9E-09	UJ	MG/L	nc	NA
GEC6	Total PeCDD	6.6E-09	UJ	MG/L	nc	NA
MW15D	Total PeCDD	6.1E-09	UJ	MG/L	nc	NA
MW03S	Total PeCDD	4.9E-09	UJ	MG/L	nc	NA
MW01S	Total PeCDD	3.7E-09	UJ	MG/L	nc	NA
MW10D	Total PeCDD	3.5E-09	UJ	MG/L	nc	NA
MW12B	Total PeCDD	2.8E-09	UJ	MG/L	nc	NA
MW01S	Total PeCDD	2.7E-09	UJ	MG/L	nc	NA
TMW3	Total PeCDD	2.6E-09	UJ	MG/L	nc	NA
MW11B	Total PeCDD	2.5E-09	UJ	MG/L	nc	NA
MW09S	Total PeCDD	2.4E-09	UJ	MG/L	nc	NA
MW11M	Total PeCDD	2.3E-09	UJ	MG/L	nc	NA
MW04S	Total PeCDD	2.3E-09	UJ	MG/L	nc	NA
GEC2	Total PeCDD	2.2E-09	UJ	MG/L	nc	NA
MW06S	Total PeCDD	2.2E-09	UJ	MG/L	nc	NA
MW08S	Total PeCDD	2.1E-09	UJ	MG/L	nc	NA
MW13B	Total PeCDD	1.9E-09	UJ	MG/L	nc	NA
MW12B	Total PeCDD	1.9E-09	UJ	MG/L	nc	NA
MW02S	Total PeCDD	1.9E-09	UJ	MG/L	nc	NA
GEC2	Total PeCDF	7.2E-09	EMPC	MG/L	nc	NA
MW12B	Total PeCDF	5.3E-09	EMPC	MG/L	nc	NA
MW05S	Total PeCDF	0.00000114	J	MG/L	nc	NA
MW04S	Total PeCDF	6.9E-09	J	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW07D	Total PeCDF	3.8E-09	J	MG/L	nc	NA
MW04D	Total PeCDF	3.5E-09	J	MG/L	nc	NA
MW07S	Total PeCDF	2.7E-09	J	MG/L	nc	NA
MW06S	Total PeCDF	2.3E-09	J	MG/L	nc	NA
MW02M	Total PeCDF	6E-10	J	MG/L	nc	NA
MW06S	Total PeCDF	2.9E-09	U	MG/L	nc	NA
MW07S	Total PeCDF	2.4E-09	U	MG/L	nc	NA
MW03S	Total PeCDF	2.4E-09	U	MG/L	nc	NA
MW01S	Total PeCDF	2.2E-09	U	MG/L	nc	NA
MW01S	Total PeCDF	2.2E-09	U	MG/L	nc	NA
MW09S	Total PeCDF	2.2E-09	U	MG/L	nc	NA
MW08S	Total PeCDF	1.9E-09	U	MG/L	nc	NA
MW02S	Total PeCDF	1.1E-09	U	MG/L	nc	NA
GEC6	Total PeCDF	1.85E-08	UJ	MG/L	nc	NA
MW10D	Total PeCDF	5.1E-09	UJ	MG/L	nc	NA
MW13D	Total PeCDF	4.6E-09	UJ	MG/L	nc	NA
MW15D	Total PeCDF	4.6E-09	UJ	MG/L	nc	NA
MW12B	Total PeCDF	3.9E-09	UJ	MG/L	nc	NA
MW03S	Total PeCDF	3.8E-09	UJ	MG/L	nc	NA
MW10D	Total PeCDF	2.8E-09	UJ	MG/L	nc	NA
MW01S	Total PeCDF	2.8E-09	UJ	MG/L	nc	NA
MW13S	Total PeCDF	2.7E-09	UJ	MG/L	nc	NA
MW12D	Total PeCDF	2.2E-09	UJ	MG/L	nc	NA
MW10B	Total PeCDF	0.000000002	UJ	MG/L	nc	NA
TMW3	Total PeCDF	1.9E-09	UJ	MG/L	nc	NA
MW01S	Total PeCDF	1.9E-09	UJ	MG/L	nc	NA
MW11B	Total PeCDF	1.8E-09	UJ	MG/L	nc	NA
MW11S	Total PeCDF	1.8E-09	UJ	MG/L	nc	NA
MW04S	Total PeCDF	1.8E-09	UJ	MG/L	nc	NA
MW13B	Total PeCDF	1.6E-09	UJ	MG/L	nc	NA
MW11M	Total PeCDF	1.6E-09	UJ	MG/L	nc	NA
MW09S	Total PeCDF	1.6E-09	UJ	MG/L	nc	NA
MW02S	Total PeCDF	1.5E-09	UJ	MG/L	nc	NA
MW08S	Total PeCDF	1.4E-09	UJ	MG/L	nc	NA
MW04B	Total PeCDF	1.4E-09	UJ	MG/L	nc	NA
MW14M	Total PeCDF	1.3E-09	UJ	MG/L	nc	NA
MW02D	Total PeCDF	7E-10	UJ	MG/L	nc	NA
MW05S	Total Penta-Dioxins	1.2542E-07	J	MG/L	nc	NA
MW05S	Total Penta-dioxins	1.1837E-07	J	MG/L	nc	NA
MW05S	Total Penta-dioxins	1.0343E-07	J	MG/L	nc	NA
MW05S	Total Penta-Furans	4.1507E-07	J	MG/L	nc	NA
MW05S	Total Penta-furans	2.7525E-07	J	MG/L	nc	NA
MW05S	Total Penta-furans	2.4801E-07	J	MG/L	nc	NA
MW-LEA-03	Total Suspended Solids (unfiltered)	14.6		MG/L	nc	NA
MW-LEA-02	Total Suspended Solids (unfiltered)	11.2		MG/L	nc	NA
MW-LEA-02	Total Suspended Solids (unfiltered)	2		MG/L	nc	NA
MW-LEA-01	Total Suspended Solids (unfiltered)	1	U	MG/L	nc	NA
MW-05S	Total Suspended Solids (unfiltered)	1	U	MG/L	nc	NA
MW09S	Total TCDD	1.82E-08		MG/L	nc	NA
MW01S	Total TCDD	6.4E-09		MG/L	nc	NA
MW02S	Total TCDD	4.7E-09		MG/L	nc	NA
MW11M	Total TCDD	4.46E-08	EMPC	MG/L	nc	NA
MW15D	Total TCDD	3.43E-08	EMPC	MG/L	nc	NA
GEC6	Total TCDD	3.27E-08	EMPC	MG/L	nc	NA
MW14M	Total TCDD	2.65E-08	EMPC	MG/L	nc	NA
MW01S	Total TCDD	2.38E-08	EMPC	MG/L	nc	NA
MW06S	Total TCDD	1.64E-08	EMPC	MG/L	nc	NA
MW12D	Total TCDD	1.56E-08	EMPC	MG/L	nc	NA
MW11B	Total TCDD	1.41E-08	EMPC	MG/L	nc	NA
MW12B	Total TCDD	1.12E-08	EMPC	MG/L	nc	NA
MW11S	Total TCDD	1.11E-08	EMPC	MG/L	nc	NA
GEC2	Total TCDD	9.4E-09	EMPC	MG/L	nc	NA
MW10D	Total TCDD	8.5E-09	EMPC	MG/L	nc	NA
MW07S	Total TCDD	8.1E-09	EMPC	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW13D	Total TCDD	7.8E-09	EMPC	MG/L	nc	NA
MW13S	Total TCDD	6.7E-09	EMPC	MG/L	nc	NA
MW10B	Total TCDD	5.8E-09	EMPC	MG/L	nc	NA
MW01S	Total TCDD	5.3E-09	EMPC	MG/L	nc	NA
MW01S	Total TCDD	4.7E-09	EMPC	MG/L	nc	NA
MW02D	Total TCDD	4.4E-09	EMPC	MG/L	nc	NA
MW03S	Total TCDD	3.6E-09	EMPC	MG/L	nc	NA
MW02M	Total TCDD	2.3E-09	EMPC	MG/L	nc	NA
MW12B	Total TCDD	2.2E-09	EMPC	MG/L	nc	NA
MW05S	Total TCDD	0.00000446	J	MG/L	nc	NA
MW08S	Total TCDD	1.9E-09	U	MG/L	nc	NA
MW03S	Total TCDD	1.13E-08	UJ	MG/L	nc	NA
MW09S	Total TCDD	1.02E-08	UJ	MG/L	nc	NA
MW06S	Total TCDD	6.6E-09	UJ	MG/L	nc	NA
MW08S	Total TCDD	5.1E-09	UJ	MG/L	nc	NA
MW04D	Total TCDD	3.9E-09	UJ	MG/L	nc	NA
MW10D	Total TCDD	3.5E-09	UJ	MG/L	nc	NA
MW07D	Total TCDD	3.4E-09	UJ	MG/L	nc	NA
TMW3	Total TCDD	2.1E-09	UJ	MG/L	nc	NA
MW04S	Total TCDD	0.000000002	UJ	MG/L	nc	NA
MW13B	Total TCDD	1.9E-09	UJ	MG/L	nc	NA
MW07S	Total TCDD	1.8E-09	UJ	MG/L	nc	NA
MW02S	Total TCDD	1.8E-09	UJ	MG/L	nc	NA
MW04B	Total TCDD	1.6E-09	UJ	MG/L	nc	NA
MW04S	Total TCDD	1.4E-09	UJ	MG/L	nc	NA
MW03S	Total TCDF	4.1E-09		MG/L	nc	NA
MW07S	Total TCDF	2.43E-08	EMPC	MG/L	nc	NA
GEC6	Total TCDF	1.11E-08	EMPC	MG/L	nc	NA
MW11M	Total TCDF	1.08E-08	EMPC	MG/L	nc	NA
MW11S	Total TCDF	1.01E-08	EMPC	MG/L	nc	NA
MW10D	Total TCDF	9.9E-09	EMPC	MG/L	nc	NA
MW12D	Total TCDF	7.6E-09	EMPC	MG/L	nc	NA
MW10D	Total TCDF	7.5E-09	EMPC	MG/L	nc	NA
MW01S	Total TCDF	6.7E-09	EMPC	MG/L	nc	NA
MW13S	Total TCDF	6.3E-09	EMPC	MG/L	nc	NA
MW14M	Total TCDF	5.2E-09	EMPC	MG/L	nc	NA
GEC2	Total TCDF	4.8E-09	EMPC	MG/L	nc	NA
MW01S	Total TCDF	4.7E-09	EMPC	MG/L	nc	NA
MW13B	Total TCDF	4.5E-09	EMPC	MG/L	nc	NA
MW02M	Total TCDF	4.1E-09	EMPC	MG/L	nc	NA
TMW3	Total TCDF	3.9E-09	EMPC	MG/L	nc	NA
MW11B	Total TCDF	3.9E-09	EMPC	MG/L	nc	NA
MW12B	Total TCDF	3.6E-09	EMPC	MG/L	nc	NA
MW09S	Total TCDF	3.6E-09	EMPC	MG/L	nc	NA
MW02D	Total TCDF	3.1E-09	EMPC	MG/L	nc	NA
MW13D	Total TCDF	1.5E-09	EMPC	MG/L	nc	NA
MW07D	Total TCDF	1.1E-09	EMPC	MG/L	nc	NA
MW05S	Total TCDF	0.00000271	J	MG/L	nc	NA
MW06S	Total TCDF	2.3E-09	U	MG/L	nc	NA
MW08S	Total TCDF	1.5E-09	U	MG/L	nc	NA
MW02S	Total TCDF	8E-10	U	MG/L	nc	NA
MW03S	Total TCDF	1.07E-08	UJ	MG/L	nc	NA
MW15D	Total TCDF	3.8E-09	UJ	MG/L	nc	NA
MW01S	Total TCDF	2.4E-09	UJ	MG/L	nc	NA
MW10B	Total TCDF	1.8E-09	UJ	MG/L	nc	NA
MW04S	Total TCDF	1.8E-09	UJ	MG/L	nc	NA
MW12B	Total TCDF	1.7E-09	UJ	MG/L	nc	NA
MW01S	Total TCDF	1.6E-09	UJ	MG/L	nc	NA
MW02S	Total TCDF	1.6E-09	UJ	MG/L	nc	NA
MW04B	Total TCDF	1.5E-09	UJ	MG/L	nc	NA
MW07S	Total TCDF	1.4E-09	UJ	MG/L	nc	NA
MW09S	Total TCDF	1.4E-09	UJ	MG/L	nc	NA
MW06S	Total TCDF	1.2E-09	UJ	MG/L	nc	NA
MW08S	Total TCDF	1.1E-09	UJ	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW04S	Total TCDF	9E-10	UJ	MG/L	nc	NA
MW04D	Total TCDF	8E-10	UJ	MG/L	nc	NA
MW-LEA-01	Total Tetrachlorodibenzofurans, NOS (filtered)	1.222E-08	U	MG/L	nc	NA
MW-LEA-02	Total Tetrachlorodibenzofurans, NOS (filtered)	5.011E-09	U	MG/L	nc	NA
MW-LEA-02	Total Tetrachlorodibenzofurans, NOS (filtered)	3.236E-09	U	MG/L	nc	NA
MW-LEA-03	Total Tetrachlorodibenzofurans, NOS (filtered)	2.128E-09	U	MG/L	nc	NA
MW-05S	Total Tetrachlorodibenzofurans, NOS (filtered)	1.943E-09	U	MG/L	nc	NA
MW-05S	Total Tetrachlorodibenzofurans, NOS (unfiltered)	5.41784E-07		MG/L	nc	NA
MW-LEA-01	Total Tetrachlorodibenzofurans, NOS (unfiltered)	1.99032E-07		MG/L	nc	NA
MW-LEA-03	Total Tetrachlorodibenzofurans, NOS (unfiltered)	3.8679E-08		MG/L	nc	NA
MW-LEA-02	Total Tetrachlorodibenzofurans, NOS (unfiltered)	1.06E-09	U	MG/L	nc	NA
MW-LEA-02	Total Tetrachlorodibenzofurans, NOS (unfiltered)	7.47E-10	U	MG/L	nc	NA
MW05S	Total Tetra-Dioxins	4.35055E-06	J	MG/L	nc	NA
MW05S	Total Tetra-dioxins	1.51337E-06	J	MG/L	nc	NA
MW05S	Total Tetra-dioxins	1.07122E-06	J	MG/L	nc	NA
MW05S	Total Tetra-Furans	1.2963E-07	J	MG/L	nc	NA
MW05S	Total Tetra-furans	1.1344E-07	J	MG/L	nc	NA
MW05S	Total Tetra-furans	1.0841E-07	J	MG/L	nc	NA
MW06S	Total Xylenes	0.069		MG/L	10	N
MW08S	Total Xylenes	0.027		MG/L	10	N
GEC1	Total Xylenes	0.0041		MG/L	10	N
GEC7	Total Xylenes	0.004		MG/L	10	N
MW08S	Total Xylenes	0.008	J	MG/L	10	N
MW06S	Total Xylenes	0.003	J	MG/L	10	N
MW05S	Total Xylenes	1.7	U	MG/L	10	NA
MW10D	Total Xylenes	0.01	U	MG/L	10	NA
MW10B	Total Xylenes	0.01	U	MG/L	10	NA
MW10D	Total Xylenes	0.01	U	MG/L	10	NA
MW13B	Total Xylenes	0.01	U	MG/L	10	NA
MW13D	Total Xylenes	0.01	U	MG/L	10	NA
MW13S	Total Xylenes	0.01	U	MG/L	10	NA
TMW3	Total Xylenes	0.01	U	MG/L	10	NA
MW12B	Total Xylenes	0.01	U	MG/L	10	NA
MW11B	Total Xylenes	0.01	U	MG/L	10	NA
MW11M	Total Xylenes	0.01	U	MG/L	10	NA
MW11S	Total Xylenes	0.01	U	MG/L	10	NA
MW12B	Total Xylenes	0.01	U	MG/L	10	NA
MW12D	Total Xylenes	0.01	U	MG/L	10	NA
GEC2	Total Xylenes	0.01	U	MG/L	10	NA
GEC6	Total Xylenes	0.01	U	MG/L	10	NA
MW14M	Total Xylenes	0.01	U	MG/L	10	NA
MW15D	Total Xylenes	0.01	U	MG/L	10	NA
MW01S	Total Xylenes	0.01	U	MG/L	10	NA
MW01S	Total Xylenes	0.01	U	MG/L	10	NA
MW03S	Total Xylenes	0.01	U	MG/L	10	NA
MW07D	Total Xylenes	0.01	U	MG/L	10	NA
MW07S	Total Xylenes	0.01	U	MG/L	10	NA
MW09S	Total Xylenes	0.01	U	MG/L	10	NA
MW04S	Total Xylenes	0.01	U	MG/L	10	NA
MW04B	Total Xylenes	0.01	U	MG/L	10	NA
MW04D	Total Xylenes	0.01	U	MG/L	10	NA
MW04S	Total Xylenes	0.01	U	MG/L	10	NA
MW02D	Total Xylenes	0.01	U	MG/L	10	NA
MW02M	Total Xylenes	0.01	U	MG/L	10	NA
MW02S	Total Xylenes	0.01	U	MG/L	10	NA
MW02S	Total Xylenes	0.01	U	MG/L	10	NA
MW07S	Total Xylenes	0.01	U	MG/L	10	NA
MW01S	Total Xylenes	0.01	U	MG/L	10	NA
MW01S	Total Xylenes	0.01	U	MG/L	10	NA
MW03S	Total Xylenes	0.01	U	MG/L	10	NA
MW09S	Total Xylenes	0.01	U	MG/L	10	NA
GEC2	Total Xylenes	0.001	U	MG/L	10	NA
GEC3	Total Xylenes	0.001	U	MG/L	10	NA
GEC4	Total Xylenes	0.001	U	MG/L	10	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
GEC5	Total Xylenes	0.001	U	MG/L	10	NA
GEC6	Total Xylenes	0.001	U	MG/L	10	NA
MW10D	Toxaphene	0.005	U	MG/L	0.003	NA
MW10B	Toxaphene	0.005	U	MG/L	0.003	NA
MW10D	Toxaphene	0.005	U	MG/L	0.003	NA
MW13B	Toxaphene	0.005	U	MG/L	0.003	NA
MW13D	Toxaphene	0.005	U	MG/L	0.003	NA
MW13S	Toxaphene	0.005	U	MG/L	0.003	NA
TMW3	Toxaphene	0.005	U	MG/L	0.003	NA
MW12B	Toxaphene	0.005	U	MG/L	0.003	NA
MW11B	Toxaphene	0.005	U	MG/L	0.003	NA
MW11M	Toxaphene	0.005	U	MG/L	0.003	NA
MW11S	Toxaphene	0.005	U	MG/L	0.003	NA
MW12B	Toxaphene	0.005	U	MG/L	0.003	NA
MW12D	Toxaphene	0.005	U	MG/L	0.003	NA
GEC2	Toxaphene	0.005	U	MG/L	0.003	NA
GEC6	Toxaphene	0.005	U	MG/L	0.003	NA
MW14M	Toxaphene	0.005	U	MG/L	0.003	NA
MW15D	Toxaphene	0.005	U	MG/L	0.003	NA
MW01S	Toxaphene	0.005	U	MG/L	0.003	NA
MW01S	Toxaphene	0.005	U	MG/L	0.003	NA
MW03S	Toxaphene	0.005	U	MG/L	0.003	NA
MW05S	Toxaphene	0.005	U	MG/L	0.003	NA
MW06S	Toxaphene	0.005	U	MG/L	0.003	NA
MW07D	Toxaphene	0.005	U	MG/L	0.003	NA
MW07S	Toxaphene	0.005	U	MG/L	0.003	NA
MW08S	Toxaphene	0.005	U	MG/L	0.003	NA
MW09S	Toxaphene	0.005	U	MG/L	0.003	NA
MW04S	Toxaphene	0.005	U	MG/L	0.003	NA
MW04B	Toxaphene	0.005	U	MG/L	0.003	NA
MW04D	Toxaphene	0.005	U	MG/L	0.003	NA
MW04S	Toxaphene	0.005	U	MG/L	0.003	NA
MW02M	Toxaphene	0.005	U	MG/L	0.003	NA
MW02S	Toxaphene	0.005	U	MG/L	0.003	NA
MW02S	Toxaphene	0.005	U	MG/L	0.003	NA
MW06S	Toxaphene	0.005	U	MG/L	0.003	NA
MW07S	Toxaphene	0.005	U	MG/L	0.003	NA
MW01S	Toxaphene	0.005	U	MG/L	0.003	NA
MW01S	Toxaphene	0.005	U	MG/L	0.003	NA
MW03S	Toxaphene	0.005	U	MG/L	0.003	NA
MW08S	Toxaphene	0.005	U	MG/L	0.003	NA
MW09S	Toxaphene	0.005	U	MG/L	0.003	NA
MW02D	Toxaphene	0.005	UJ	MG/L	0.003	NA
MW08S	Trans-1,2-dichloroethene	0.00062	J	MG/L	0.1	N
MW05S	TRANS-1,2-DICHLOROETHENE	1	U	MG/L	0.1	NA
MW05S	TRANS-1,2-DICHLOROETHENE	1	U	MG/L	0.1	NA
MW05S	Trans-1,2-dichloroethene	1	U	MG/L	0.1	NA
MW14M	Trans-1,2-dichloroethene	0.1	U	MG/L	0.1	NA
MW06S	Trans-1,2-dichloroethene	0.01	U	MG/L	0.1	NA
MW13D	Trans-1,2-dichloroethene	0.01	U	MG/L	0.1	NA
MW13D	Trans-1,2-dichloroethene	0.01	U	MG/L	0.1	NA
MW13S	Trans-1,2-dichloroethene	0.01	U	MG/L	0.1	NA
MW07D	Trans-1,2-dichloroethene	0.01	U	MG/L	0.1	NA
MW04S	Trans-1,2-dichloroethene	0.01	U	MG/L	0.1	NA
MW04B	Trans-1,2-dichloroethene	0.01	U	MG/L	0.1	NA
MW04D	Trans-1,2-dichloroethene	0.01	U	MG/L	0.1	NA
MW04S	Trans-1,2-dichloroethene	0.01	U	MG/L	0.1	NA
MW02D	Trans-1,2-dichloroethene	0.01	U	MG/L	0.1	NA
MW02M	Trans-1,2-dichloroethene	0.01	U	MG/L	0.1	NA
MW02S	Trans-1,2-dichloroethene	0.01	U	MG/L	0.1	NA
MW02S	Trans-1,2-dichloroethene	0.01	U	MG/L	0.1	NA
MW06S	Trans-1,2-dichloroethene	0.01	U	MG/L	0.1	NA
MW07S	Trans-1,2-dichloroethene	0.01	U	MG/L	0.1	NA
MW01S	Trans-1,2-dichloroethene	0.01	U	MG/L	0.1	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW01S	Trans-1,2-dichloroethene	0.01	U	MG/L	0.1	NA
MW03S	Trans-1,2-dichloroethene	0.01	U	MG/L	0.1	NA
MW08S	Trans-1,2-dichloroethene	0.01	U	MG/L	0.1	NA
MW09S	Trans-1,2-dichloroethene	0.01	U	MG/L	0.1	NA
MW06S	Trans-1,2-dichloroethene	0.006	U	MG/L	0.1	NA
MW02M	Trans-1,2-dichloroethene	0.005	U	MG/L	0.1	NA
MW02D	Trans-1,2-dichloroethene	0.004	U	MG/L	0.1	NA
MW13B	Trans-1,2-dichloroethene	0.004	U	MG/L	0.1	NA
MW03S	Trans-1,2-dichloroethene	0.001	U	MG/L	0.1	NA
MW12D	Trans-1,2-dichloroethene	0.001	U	MG/L	0.1	NA
GEC5	Trans-1,2-dichloroethene	0.001	U	MG/L	0.1	NA
GEC7	Trans-1,2-dichloroethene	0.001	U	MG/L	0.1	NA
MW07D	Trans-1,2-dichloroethene	0.001	U	MG/L	0.1	NA
MW15D	Trans-1,2-dichloroethene	0.001	U	MG/L	0.1	NA
MW02S	Trans-1,2-dichloroethene	0.001	U	MG/L	0.1	NA
MW04B	Trans-1,2-dichloroethene	0.001	U	MG/L	0.1	NA
MW04D	Trans-1,2-dichloroethene	0.001	U	MG/L	0.1	NA
MW04S	Trans-1,2-dichloroethene	0.001	U	MG/L	0.1	NA
MW09S	Trans-1,2-dichloroethene	0.001	U	MG/L	0.1	NA
MW10B	Trans-1,2-dichloroethene	0.001	U	MG/L	0.1	NA
MW10D	Trans-1,2-dichloroethene	0.001	U	MG/L	0.1	NA
MW13S	Trans-1,2-dichloroethene	0.001	U	MG/L	0.1	NA
MW05S	Trans-1,2-dichloroethene	1.7	UJ	MG/L	0.1	NA
MW05S	Trans-1,2-dichloroethene	1	UJ	MG/L	0.1	NA
MW10D	Trans-1,2-dichloroethene	0.01	UJ	MG/L	0.1	NA
MW10B	Trans-1,2-dichloroethene	0.01	UJ	MG/L	0.1	NA
MW10D	Trans-1,2-dichloroethene	0.01	UJ	MG/L	0.1	NA
MW13B	Trans-1,2-dichloroethene	0.01	UJ	MG/L	0.1	NA
TMW3	Trans-1,2-dichloroethene	0.01	UJ	MG/L	0.1	NA
MW12B	Trans-1,2-dichloroethene	0.01	UJ	MG/L	0.1	NA
MW11B	Trans-1,2-dichloroethene	0.01	UJ	MG/L	0.1	NA
MW11M	Trans-1,2-dichloroethene	0.01	UJ	MG/L	0.1	NA
MW11S	Trans-1,2-dichloroethene	0.01	UJ	MG/L	0.1	NA
MW12B	Trans-1,2-dichloroethene	0.01	UJ	MG/L	0.1	NA
MW12D	Trans-1,2-dichloroethene	0.01	UJ	MG/L	0.1	NA
GEC2	Trans-1,2-dichloroethene	0.01	UJ	MG/L	0.1	NA
GEC6	Trans-1,2-dichloroethene	0.01	UJ	MG/L	0.1	NA
MW14M	Trans-1,2-dichloroethene	0.01	UJ	MG/L	0.1	NA
MW15D	Trans-1,2-dichloroethene	0.01	UJ	MG/L	0.1	NA
MW01S	Trans-1,2-dichloroethene	0.01	UJ	MG/L	0.1	NA
MW01S	Trans-1,2-dichloroethene	0.01	UJ	MG/L	0.1	NA
MW03S	Trans-1,2-dichloroethene	0.01	UJ	MG/L	0.1	NA
MW06S	Trans-1,2-dichloroethene	0.01	UJ	MG/L	0.1	NA
MW07S	Trans-1,2-dichloroethene	0.01	UJ	MG/L	0.1	NA
MW08S	Trans-1,2-dichloroethene	0.01	UJ	MG/L	0.1	NA
MW09S	Trans-1,2-dichloroethene	0.01	UJ	MG/L	0.1	NA
GEC3	Trans-1,2-dichloroethene	0.001	UJ	MG/L	0.1	NA
MW01S	Trans-1,2-dichloroethene	0.001	UJ	MG/L	0.1	NA
MW11S	Trans-1,2-dichloroethene	0.001	UJ	MG/L	0.1	NA
MW12B	Trans-1,2-dichloroethene	0.001	UJ	MG/L	0.1	NA
GEC1	Trans-1,2-dichloroethene	0.001	UJ	MG/L	0.1	NA
GEC2	Trans-1,2-dichloroethene	0.001	UJ	MG/L	0.1	NA
GEC4	Trans-1,2-dichloroethene	0.001	UJ	MG/L	0.1	NA
GEC6	Trans-1,2-dichloroethene	0.001	UJ	MG/L	0.1	NA
MW07S	Trans-1,2-dichloroethene	0.001	UJ	MG/L	0.1	NA
MW11B	Trans-1,2-dichloroethene	0.001	UJ	MG/L	0.1	NA
MW11M	Trans-1,2-dichloroethene	0.001	UJ	MG/L	0.1	NA
MW-LEA-02	trans-1,2-Dichloroethylene	0.096	Jw	MG/L	0.1	N
MW-LEA-01	trans-1,2-Dichloroethylene	20	Uw	MG/L	0.1	NA
MW-LEA-01	trans-1,2-Dichloroethylene	2	Uw	MG/L	0.1	NA
MW-LEA-02	trans-1,2-Dichloroethylene	2	Uw	MG/L	0.1	NA
MW-05S	trans-1,2-Dichloroethylene	2	Uw	MG/L	0.1	NA
MW-LEA-02	trans-1,2-Dichloroethylene	2	Uw	MG/L	0.1	NA
MW-LEA-03	trans-1,2-Dichloroethylene	0.2	Uw	MG/L	0.1	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW-LEA-03	trans-1,2-Dichloroethylene	0.004	Uw	MG/L	0.1	NA
MW05S	Trans-1,3-dichloropropene	1.7	U	MG/L	nc	NA
MW05S	Trans-1,3-dichloropropene	1	U	MG/L	nc	NA
MW05S	Trans-1,3-dichloropropene	1	U	MG/L	nc	NA
MW14M	Trans-1,3-dichloropropene	0.1	U	MG/L	nc	NA
MW06S	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW13D	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW10D	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW10B	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW10D	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW13B	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW13D	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW13S	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
TMW3	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW12B	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW11B	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW11M	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW11S	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW12B	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW12D	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
GEC2	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
GEC6	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW14M	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW15D	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW01S	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW01S	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW03S	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW06S	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW07D	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW07S	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW08S	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW09S	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW04S	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW04B	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW04D	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW04S	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW02D	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW02M	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW02S	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW02S	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW06S	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW07S	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW01S	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW01S	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW03S	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW08S	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW09S	Trans-1,3-dichloropropene	0.01	U	MG/L	nc	NA
MW06S	Trans-1,3-dichloropropene	0.006	U	MG/L	nc	NA
MW02M	Trans-1,3-dichloropropene	0.005	U	MG/L	nc	NA
MW02D	Trans-1,3-dichloropropene	0.004	U	MG/L	nc	NA
MW13B	Trans-1,3-dichloropropene	0.004	U	MG/L	nc	NA
MW03S	Trans-1,3-dichloropropene	0.001	U	MG/L	nc	NA
GEC3	Trans-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW01S	Trans-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW11S	Trans-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW12B	Trans-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW12D	Trans-1,3-dichloropropene	0.001	U	MG/L	nc	NA
GEC1	Trans-1,3-dichloropropene	0.001	U	MG/L	nc	NA
GEC2	Trans-1,3-dichloropropene	0.001	U	MG/L	nc	NA
GEC4	Trans-1,3-dichloropropene	0.001	U	MG/L	nc	NA
GEC5	Trans-1,3-dichloropropene	0.001	U	MG/L	nc	NA
GEC6	Trans-1,3-dichloropropene	0.001	U	MG/L	nc	NA
GEC7	Trans-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW07D	Trans-1,3-dichloropropene	0.001	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW07S	Trans-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW11B	Trans-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW11M	Trans-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW15D	Trans-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW02S	Trans-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW04B	Trans-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW04D	Trans-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW04S	Trans-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW08S	Trans-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW09S	Trans-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW10B	Trans-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW10D	Trans-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW13S	Trans-1,3-dichloropropene	0.001	U	MG/L	nc	NA
MW05S	TRANS-1,3-DICHLOROPROPENE	1	UJ	MG/L	nc	NA
MW05S	TRANS-1,3-DICHLOROPROPENE	1	UJ	MG/L	nc	NA
MW05S	Trichloroethene	2.5		MG/L	0.005	Y
MW05S	Trichloroethene	2.2		MG/L	0.005	Y
MW05S	Trichloroethene	1.8		MG/L	0.005	Y
MW05S	TRICHLOROETHENE	1.5		MG/L	0.005	Y
MW05S	TRICHLOROETHENE	1.4		MG/L	0.005	Y
MW02D	Trichloroethene	0.027		MG/L	0.005	Y
MW13B	Trichloroethene	0.005		MG/L	0.005	N
MW02D	Trichloroethene	0.0042		MG/L	0.005	N
MW04S	Trichloroethene	0.0032		MG/L	0.005	N
MW08S	Trichloroethene	0.0023		MG/L	0.005	N
GEC7	Trichloroethene	0.002		MG/L	0.005	N
GEC5	Trichloroethene	0.0013		MG/L	0.005	N
MW13B	Trichloroethene	0.007	J	MG/L	0.005	Y
MW13D	Trichloroethene	0.006	J	MG/L	0.005	Y
MW13D	Trichloroethene	0.0052	J	MG/L	0.005	Y
MW02M	Trichloroethene	0.002	J	MG/L	0.005	N
MW02M	Trichloroethene	0.0011	J	MG/L	0.005	N
MW09S	Trichloroethene	0.001	J	MG/L	0.005	N
MW04D	Trichloroethene	0.001	J	MG/L	0.005	N
MW06S	Trichloroethene	0.0009	J	MG/L	0.005	N
MW04B	Trichloroethene	0.0009	J	MG/L	0.005	N
MW04S	Trichloroethene	0.0008	J	MG/L	0.005	N
MW04S	Trichloroethene	0.0008	J	MG/L	0.005	N
GEC6	Trichloroethene	0.00074	J	MG/L	0.005	N
MW09S	Trichloroethene	0.00072	J	MG/L	0.005	N
GEC5	Trichloroethene	0.00062	J	MG/L	0.005	N
MW04D	Trichloroethene	0.00046	J	MG/L	0.005	N
MW04B	Trichloroethene	0.00039	J	MG/L	0.005	N
MW07D	Trichloroethene	0.00031	J	MG/L	0.005	N
MW14M	Trichloroethene	0.1	U	MG/L	0.005	NA
MW06S	Trichloroethene	0.01	U	MG/L	0.005	NA
MW10D	Trichloroethene	0.01	U	MG/L	0.005	NA
MW10B	Trichloroethene	0.01	U	MG/L	0.005	NA
MW10D	Trichloroethene	0.01	U	MG/L	0.005	NA
MW13S	Trichloroethene	0.01	U	MG/L	0.005	NA
TMW3	Trichloroethene	0.01	U	MG/L	0.005	NA
MW12B	Trichloroethene	0.01	U	MG/L	0.005	NA
MW11B	Trichloroethene	0.01	U	MG/L	0.005	NA
MW11M	Trichloroethene	0.01	U	MG/L	0.005	NA
MW11S	Trichloroethene	0.01	U	MG/L	0.005	NA
MW12B	Trichloroethene	0.01	U	MG/L	0.005	NA
MW12D	Trichloroethene	0.01	U	MG/L	0.005	NA
GEC2	Trichloroethene	0.01	U	MG/L	0.005	NA
GEC6	Trichloroethene	0.01	U	MG/L	0.005	NA
MW14M	Trichloroethene	0.01	U	MG/L	0.005	NA
MW15D	Trichloroethene	0.01	U	MG/L	0.005	NA
MW01S	Trichloroethene	0.01	U	MG/L	0.005	NA
MW01S	Trichloroethene	0.01	U	MG/L	0.005	NA
MW03S	Trichloroethene	0.01	U	MG/L	0.005	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW07D	Trichloroethene	0.01	U	MG/L	0.005	NA
MW07S	Trichloroethene	0.01	U	MG/L	0.005	NA
MW08S	Trichloroethene	0.01	U	MG/L	0.005	NA
MW02S	Trichloroethene	0.01	U	MG/L	0.005	NA
MW02S	Trichloroethene	0.01	U	MG/L	0.005	NA
MW06S	Trichloroethene	0.01	U	MG/L	0.005	NA
MW07S	Trichloroethene	0.01	U	MG/L	0.005	NA
MW01S	Trichloroethene	0.01	U	MG/L	0.005	NA
MW01S	Trichloroethene	0.01	U	MG/L	0.005	NA
MW03S	Trichloroethene	0.01	U	MG/L	0.005	NA
MW08S	Trichloroethene	0.01	U	MG/L	0.005	NA
MW09S	Trichloroethene	0.01	U	MG/L	0.005	NA
MW06S	Trichloroethene	0.006	U	MG/L	0.005	NA
GEC3	Trichloroethene	0.001	U	MG/L	0.005	NA
MW01S	Trichloroethene	0.001	U	MG/L	0.005	NA
MW11S	Trichloroethene	0.001	U	MG/L	0.005	NA
MW12B	Trichloroethene	0.001	U	MG/L	0.005	NA
MW12D	Trichloroethene	0.001	U	MG/L	0.005	NA
GEC1	Trichloroethene	0.001	U	MG/L	0.005	NA
GEC2	Trichloroethene	0.001	U	MG/L	0.005	NA
GEC4	Trichloroethene	0.001	U	MG/L	0.005	NA
GEC7	Trichloroethene	0.001	U	MG/L	0.005	NA
MW07S	Trichloroethene	0.001	U	MG/L	0.005	NA
MW11B	Trichloroethene	0.001	U	MG/L	0.005	NA
MW11M	Trichloroethene	0.001	U	MG/L	0.005	NA
MW15D	Trichloroethene	0.001	U	MG/L	0.005	NA
MW02S	Trichloroethene	0.001	U	MG/L	0.005	NA
MW10B	Trichloroethene	0.001	U	MG/L	0.005	NA
MW10D	Trichloroethene	0.001	U	MG/L	0.005	NA
MW13S	Trichloroethene	0.001	U	MG/L	0.005	NA
GEC1	Trichloroethene	0.001	U	MG/L	0.005	NA
GEC2	Trichloroethene	0.001	U	MG/L	0.005	NA
GEC3	Trichloroethene	0.001	U	MG/L	0.005	NA
GEC4	Trichloroethene	0.001	U	MG/L	0.005	NA
GEC6	Trichloroethene	0.001	U	MG/L	0.005	NA
MW03S	Trichloroethene	0.001	UJ	MG/L	0.005	NA
MW-LEA-02	Trichloroethylene	42	Jw	MG/L	0.005	Y
MW-LEA-02	Trichloroethylene	23	Jw	MG/L	0.005	Y
MW-LEA-02	Trichloroethylene	22	Jw	MG/L	0.005	Y
MW-LEA-01	Trichloroethylene	10	Jw	MG/L	0.005	Y
MW-05S	Trichloroethylene	2.4	Jw	MG/L	0.005	Y
MW-LEA-03	Trichloroethylene	0.021	Jw	MG/L	0.005	Y
MW-LEA-01	Trichloroethylene	28	Uw	MG/L	0.005	NA
MW-LEA-03	Trichloroethylene	0.2	Uw	MG/L	0.005	NA
MW-LEA-01	Trichlorofluoromethane	20	Uw	MG/L	nc	NA
MW-LEA-01	Trichlorofluoromethane	2	Uw	MG/L	nc	NA
MW-LEA-02	Trichlorofluoromethane	2	Uw	MG/L	nc	NA
MW-05S	Trichlorofluoromethane	2	Uw	MG/L	nc	NA
MW-LEA-02	Trichlorofluoromethane	2	Uw	MG/L	nc	NA
MW-LEA-02	Trichlorofluoromethane	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Trichlorofluoromethane	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Trichlorofluoromethane	0.004	Uw	MG/L	nc	NA
MW05S	TRICHLOROFLUOROMETHANE	1	U	MG/L	nc	NA
MW05S	TRICHLOROFLUOROMETHANE	1	U	MG/L	nc	NA
MW05S	Trichlorofluoromethane	1	U	MG/L	nc	NA
MW05S	Trichlorofluoromethane	1	U	MG/L	nc	NA
MW14M	Trichlorofluoromethane	0.1	U	MG/L	nc	NA
MW06S	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
MW13D	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
MW10D	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
MW10B	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
MW10D	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
MW13B	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
MW13D	Trichlorofluoromethane	0.01	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW13S	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
TMW3	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
MW12B	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
MW11B	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
MW11M	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
MW11S	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
MW12B	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
MW12D	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
GEC2	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
GEC6	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
MW14M	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
MW15D	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
MW01S	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
MW03S	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
MW07D	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
MW04S	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
MW04B	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
MW04D	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
MW04S	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
MW02D	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
MW02M	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
MW02S	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
MW02S	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
MW06S	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
MW07S	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
MW01S	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
MW01S	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
MW03S	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
MW08S	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
MW09S	Trichlorofluoromethane	0.01	U	MG/L	nc	NA
MW06S	Trichlorofluoromethane	0.006	U	MG/L	nc	NA
MW02M	Trichlorofluoromethane	0.005	U	MG/L	nc	NA
MW02D	Trichlorofluoromethane	0.004	U	MG/L	nc	NA
MW13B	Trichlorofluoromethane	0.004	U	MG/L	nc	NA
MW03S	Trichlorofluoromethane	0.001	U	MG/L	nc	NA
MW12D	Trichlorofluoromethane	0.001	U	MG/L	nc	NA
GEC5	Trichlorofluoromethane	0.001	U	MG/L	nc	NA
GEC6	Trichlorofluoromethane	0.001	U	MG/L	nc	NA
GEC7	Trichlorofluoromethane	0.001	U	MG/L	nc	NA
MW07D	Trichlorofluoromethane	0.001	U	MG/L	nc	NA
MW15D	Trichlorofluoromethane	0.001	U	MG/L	nc	NA
MW02S	Trichlorofluoromethane	0.001	U	MG/L	nc	NA
MW04B	Trichlorofluoromethane	0.001	U	MG/L	nc	NA
MW04D	Trichlorofluoromethane	0.001	U	MG/L	nc	NA
MW04S	Trichlorofluoromethane	0.001	U	MG/L	nc	NA
MW08S	Trichlorofluoromethane	0.001	U	MG/L	nc	NA
MW09S	Trichlorofluoromethane	0.001	U	MG/L	nc	NA
MW10B	Trichlorofluoromethane	0.001	U	MG/L	nc	NA
MW10D	Trichlorofluoromethane	0.001	U	MG/L	nc	NA
MW13S	Trichlorofluoromethane	0.001	U	MG/L	nc	NA
MW05S	Trichlorofluoromethane	1.7	UJ	MG/L	nc	NA
MW01S	Trichlorofluoromethane	0.01	UJ	MG/L	nc	NA
MW06S	Trichlorofluoromethane	0.01	UJ	MG/L	nc	NA
MW07S	Trichlorofluoromethane	0.01	UJ	MG/L	nc	NA
MW08S	Trichlorofluoromethane	0.01	UJ	MG/L	nc	NA
MW09S	Trichlorofluoromethane	0.01	UJ	MG/L	nc	NA
GEC3	Trichlorofluoromethane	0.001	UJ	MG/L	nc	NA
MW01S	Trichlorofluoromethane	0.001	UJ	MG/L	nc	NA
MW11S	Trichlorofluoromethane	0.001	UJ	MG/L	nc	NA
MW12B	Trichlorofluoromethane	0.001	UJ	MG/L	nc	NA
GEC1	Trichlorofluoromethane	0.001	UJ	MG/L	nc	NA
GEC2	Trichlorofluoromethane	0.001	UJ	MG/L	nc	NA
GEC4	Trichlorofluoromethane	0.001	UJ	MG/L	nc	NA
MW07S	Trichlorofluoromethane	0.001	UJ	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW11B	Trichlorofluoromethane	0.001	UJ	MG/L	nc	NA
MW11M	Trichlorofluoromethane	0.001	UJ	MG/L	nc	NA
MW01S	Trichloropropene	0.003	J	MG/L	nc	NA
MW07S	Trichloropropene	0.003	J	MG/L	nc	NA
MW04B	Trichloropropene	0.002	J	MG/L	nc	NA
MW05S	Trifluralin	0.041	NJ	MG/L	nc	NA
MW04S	Unknown Alcohol	0.014	J	MG/L	nc	NA
GEC2	Unknown Alkyl Phenol	0.003	J	MG/L	nc	NA
MW01S	Unknown Amide	0.005	J	MG/L	nc	NA
MW07S	Unknown Phthalate	0.009	J	MG/L	nc	NA
MW02S	Unknown Siloxane_total	0.032	J_5	MG/L	nc	NA
MW08S	Unknown Siloxane_total	0.045	J_7	MG/L	nc	NA
MW03S	Vanadium	0.0387		MG/L	nc	NA
MW08S	Vanadium	0.0109		MG/L	nc	NA
MW03S	Vanadium	0.0064		MG/L	nc	NA
MW12B	Vanadium	0.0063		MG/L	nc	NA
MW12B	Vanadium	0.0057		MG/L	nc	NA
MW09S	Vanadium	0.0035		MG/L	nc	NA
MW01S	Vanadium	0.0024		MG/L	nc	NA
MW01S	Vanadium	0.0022		MG/L	nc	NA
MW06S	Vanadium	0.0021		MG/L	nc	NA
MW07S	Vanadium	0.0016		MG/L	nc	NA
MW13B	Vanadium	0.0014		MG/L	nc	NA
MW01S	Vanadium	0.0032	U	MG/L	nc	NA
MW01S	Vanadium	0.0032	U	MG/L	nc	NA
MW05S	Vanadium	0.0032	U	MG/L	nc	NA
MW06S	Vanadium	0.0032	U	MG/L	nc	NA
MW07D	Vanadium	0.0032	U	MG/L	nc	NA
MW07S	Vanadium	0.0032	U	MG/L	nc	NA
MW08S	Vanadium	0.0032	U	MG/L	nc	NA
MW09S	Vanadium	0.0032	U	MG/L	nc	NA
MW04S	Vanadium	0.0032	U	MG/L	nc	NA
MW04B	Vanadium	0.0032	U	MG/L	nc	NA
MW04D	Vanadium	0.0032	U	MG/L	nc	NA
MW04S	Vanadium	0.0032	U	MG/L	nc	NA
MW02D	Vanadium	0.0032	U	MG/L	nc	NA
MW02M	Vanadium	0.0032	U	MG/L	nc	NA
MW02S	Vanadium	0.0032	U	MG/L	nc	NA
MW10D	Vanadium	0.0009	U	MG/L	nc	NA
MW10B	Vanadium	0.0009	U	MG/L	nc	NA
MW10D	Vanadium	0.0009	U	MG/L	nc	NA
MW13D	Vanadium	0.0009	U	MG/L	nc	NA
MW13S	Vanadium	0.0009	U	MG/L	nc	NA
TMW3	Vanadium	0.0009	U	MG/L	nc	NA
MW11B	Vanadium	0.0009	U	MG/L	nc	NA
MW11M	Vanadium	0.0009	U	MG/L	nc	NA
MW11S	Vanadium	0.0009	U	MG/L	nc	NA
MW12D	Vanadium	0.0009	U	MG/L	nc	NA
GEC2	Vanadium	0.0009	U	MG/L	nc	NA
GEC6	Vanadium	0.0009	U	MG/L	nc	NA
MW14M	Vanadium	0.0009	U	MG/L	nc	NA
MW15D	Vanadium	0.0009	U	MG/L	nc	NA
MW02S	Vanadium	0.0007	U	MG/L	nc	NA
MW03S	Vanadium	0.0362		MG/L	nc	NA
MW08S	Vanadium	0.0091		MG/L	nc	NA
MW09S	Vanadium	0.0032		MG/L	nc	NA
MW01S	Vanadium	0.0024		MG/L	nc	NA
MW03S	Vanadium	0.0024		MG/L	nc	NA
MW12B	Vanadium	0.0023		MG/L	nc	NA
MW01S	Vanadium	0.0021		MG/L	nc	NA
MW12B	Vanadium	0.0019		MG/L	nc	NA
MW06S	Vanadium	0.0018		MG/L	nc	NA
MW07S	Vanadium	0.0017		MG/L	nc	NA
MW01S	Vanadium	0.0032	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW01S	Vanadium	0.0032	U	MG/L	nc	NA
MW05S	Vanadium	0.0032	U	MG/L	nc	NA
MW06S	Vanadium	0.0032	U	MG/L	nc	NA
MW07D	Vanadium	0.0032	U	MG/L	nc	NA
MW07S	Vanadium	0.0032	U	MG/L	nc	NA
MW08S	Vanadium	0.0032	U	MG/L	nc	NA
MW09S	Vanadium	0.0032	U	MG/L	nc	NA
MW04S	Vanadium	0.0032	U	MG/L	nc	NA
MW04B	Vanadium	0.0032	U	MG/L	nc	NA
MW04D	Vanadium	0.0032	U	MG/L	nc	NA
MW04S	Vanadium	0.0032	U	MG/L	nc	NA
MW02D	Vanadium	0.0032	U	MG/L	nc	NA
MW02M	Vanadium	0.0032	U	MG/L	nc	NA
MW02S	Vanadium	0.0032	U	MG/L	nc	NA
MW10D	Vanadium	0.0009	U	MG/L	nc	NA
MW10B	Vanadium	0.0009	U	MG/L	nc	NA
MW10D	Vanadium	0.0009	U	MG/L	nc	NA
MW13B	Vanadium	0.0009	U	MG/L	nc	NA
MW13D	Vanadium	0.0009	U	MG/L	nc	NA
MW13S	Vanadium	0.0009	U	MG/L	nc	NA
TMW3	Vanadium	0.0009	U	MG/L	nc	NA
MW11B	Vanadium	0.0009	U	MG/L	nc	NA
MW11M	Vanadium	0.0009	U	MG/L	nc	NA
MW11S	Vanadium	0.0009	U	MG/L	nc	NA
MW12D	Vanadium	0.0009	U	MG/L	nc	NA
GEC2	Vanadium	0.0009	U	MG/L	nc	NA
GEC6	Vanadium	0.0009	U	MG/L	nc	NA
MW14M	Vanadium	0.0009	U	MG/L	nc	NA
MW15D	Vanadium	0.0009	U	MG/L	nc	NA
MW02S	Vanadium	0.0007	U	MG/L	nc	NA
MW10B	Vanillin	0.002	J	MG/L	nc	NA
MW-LEA-01	Vinyl Chloride	0.48	Jw	MG/L	0.002	Y
MW-LEA-02	Vinyl Chloride	0.03	Jw	MG/L	0.002	Y
MW-LEA-03	Vinyl Chloride	0.002	Jw	MG/L	0.002	N
MW-LEA-01	Vinyl Chloride	20	Uw	MG/L	0.002	NA
MW-LEA-02	Vinyl Chloride	2	Uw	MG/L	0.002	NA
MW-05S	Vinyl Chloride	2	Uw	MG/L	0.002	NA
MW-LEA-02	Vinyl Chloride	2	Uw	MG/L	0.002	NA
MW-LEA-03	Vinyl Chloride	0.2	Uw	MG/L	0.002	NA
GEC4	Vinyl Chloride	0.027		MG/L	0.002	Y
MW09S	Vinyl Chloride	0.014		MG/L	0.002	Y
GEC7	Vinyl Chloride	0.0069		MG/L	0.002	Y
GEC5	Vinyl Chloride	0.0018		MG/L	0.002	N
GEC4	Vinyl Chloride	0.001		MG/L	0.002	N
MW09S	Vinyl Chloride	0.01	J	MG/L	0.002	Y
MW04S	Vinyl Chloride	0.003	J	MG/L	0.002	Y
MW04S	Vinyl Chloride	0.003	J	MG/L	0.002	Y
MW08S	Vinyl Chloride	0.00072	J	MG/L	0.002	N
MW02S	Vinyl Chloride	0.00069	J	MG/L	0.002	N
MW04S	Vinyl Chloride	0.00068	J	MG/L	0.002	N
GEC6	Vinyl Chloride	0.00039	J	MG/L	0.002	N
MW05S	Vinyl Chloride	1.7	U	MG/L	0.002	NA
MW05S	VINYL CHLORIDE	1	U	MG/L	0.002	NA
MW05S	VINYL CHLORIDE	1	U	MG/L	0.002	NA
MW05S	Vinyl Chloride	1	U	MG/L	0.002	NA
MW05S	Vinyl Chloride	1	U	MG/L	0.002	NA
MW14M	Vinyl Chloride	0.1	U	MG/L	0.002	NA
MW06S	Vinyl Chloride	0.01	U	MG/L	0.002	NA
MW13D	Vinyl Chloride	0.01	U	MG/L	0.002	NA
MW10D	Vinyl Chloride	0.01	U	MG/L	0.002	NA
MW10B	Vinyl Chloride	0.01	U	MG/L	0.002	NA
MW10D	Vinyl Chloride	0.01	U	MG/L	0.002	NA
MW13B	Vinyl Chloride	0.01	U	MG/L	0.002	NA
MW13D	Vinyl Chloride	0.01	U	MG/L	0.002	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW13S	Vinyl Chloride	0.01	U	MG/L	0.002	NA
TMW3	Vinyl Chloride	0.01	U	MG/L	0.002	NA
MW12B	Vinyl Chloride	0.01	U	MG/L	0.002	NA
MW11B	Vinyl Chloride	0.01	U	MG/L	0.002	NA
MW11M	Vinyl Chloride	0.01	U	MG/L	0.002	NA
MW11S	Vinyl Chloride	0.01	U	MG/L	0.002	NA
MW12B	Vinyl Chloride	0.01	U	MG/L	0.002	NA
MW12D	Vinyl Chloride	0.01	U	MG/L	0.002	NA
GEC2	Vinyl Chloride	0.01	U	MG/L	0.002	NA
GEC6	Vinyl Chloride	0.01	U	MG/L	0.002	NA
MW14M	Vinyl Chloride	0.01	U	MG/L	0.002	NA
MW15D	Vinyl Chloride	0.01	U	MG/L	0.002	NA
MW01S	Vinyl Chloride	0.01	U	MG/L	0.002	NA
MW01S	Vinyl Chloride	0.01	U	MG/L	0.002	NA
MW03S	Vinyl Chloride	0.01	U	MG/L	0.002	NA
MW06S	Vinyl Chloride	0.01	U	MG/L	0.002	NA
MW07D	Vinyl Chloride	0.01	U	MG/L	0.002	NA
MW07S	Vinyl Chloride	0.01	U	MG/L	0.002	NA
MW08S	Vinyl Chloride	0.01	U	MG/L	0.002	NA
MW04B	Vinyl Chloride	0.01	U	MG/L	0.002	NA
MW04D	Vinyl Chloride	0.01	U	MG/L	0.002	NA
MW02D	Vinyl Chloride	0.01	U	MG/L	0.002	NA
MW02M	Vinyl Chloride	0.01	U	MG/L	0.002	NA
MW02S	Vinyl Chloride	0.01	U	MG/L	0.002	NA
MW06S	Vinyl Chloride	0.006	U	MG/L	0.002	NA
MW02M	Vinyl Chloride	0.005	U	MG/L	0.002	NA
MW02D	Vinyl Chloride	0.004	U	MG/L	0.002	NA
MW13B	Vinyl Chloride	0.004	U	MG/L	0.002	NA
GEC1	Vinyl Chloride	0.002	U	MG/L	0.002	NA
GEC2	Vinyl Chloride	0.002	U	MG/L	0.002	NA
GEC3	Vinyl Chloride	0.002	U	MG/L	0.002	NA
GEC5	Vinyl Chloride	0.002	U	MG/L	0.002	NA
GEC6	Vinyl Chloride	0.002	U	MG/L	0.002	NA
MW03S	Vinyl Chloride	0.001	U	MG/L	0.002	NA
GEC3	Vinyl Chloride	0.001	U	MG/L	0.002	NA
MW01S	Vinyl Chloride	0.001	U	MG/L	0.002	NA
MW11S	Vinyl Chloride	0.001	U	MG/L	0.002	NA
MW12B	Vinyl Chloride	0.001	U	MG/L	0.002	NA
MW12D	Vinyl Chloride	0.001	U	MG/L	0.002	NA
GEC1	Vinyl Chloride	0.001	U	MG/L	0.002	NA
GEC2	Vinyl Chloride	0.001	U	MG/L	0.002	NA
GEC7	Vinyl Chloride	0.001	U	MG/L	0.002	NA
MW07D	Vinyl Chloride	0.001	U	MG/L	0.002	NA
MW07S	Vinyl Chloride	0.001	U	MG/L	0.002	NA
MW11B	Vinyl Chloride	0.001	U	MG/L	0.002	NA
MW11M	Vinyl Chloride	0.001	U	MG/L	0.002	NA
MW15D	Vinyl Chloride	0.001	U	MG/L	0.002	NA
MW04B	Vinyl Chloride	0.001	U	MG/L	0.002	NA
MW04D	Vinyl Chloride	0.001	U	MG/L	0.002	NA
MW10B	Vinyl Chloride	0.001	U	MG/L	0.002	NA
MW10D	Vinyl Chloride	0.001	U	MG/L	0.002	NA
MW13S	Vinyl Chloride	0.001	U	MG/L	0.002	NA
MW02S	Vinyl Chloride	0.01	UJ	MG/L	0.002	NA
MW06S	Vinyl Chloride	0.01	UJ	MG/L	0.002	NA
MW07S	Vinyl Chloride	0.01	UJ	MG/L	0.002	NA
MW01S	Vinyl Chloride	0.01	UJ	MG/L	0.002	NA
MW01S	Vinyl Chloride	0.01	UJ	MG/L	0.002	NA
MW03S	Vinyl Chloride	0.01	UJ	MG/L	0.002	NA
MW08S	Vinyl Chloride	0.01	UJ	MG/L	0.002	NA
MW09S	Vinyl Chloride	0.01	UJ	MG/L	0.002	NA
MW-LEA-02	Xylenes,m- & p-	0.24	Jw	MG/L	nc	NA
MW-LEA-02	Xylenes,m- & p-	0.096	Jw	MG/L	nc	NA
MW-LEA-01	Xylenes,m- & p-	20	Uw	MG/L	nc	NA
MW-LEA-01	Xylenes,m- & p-	2	Uw	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW-LEA-02	Xylenes,m- & p-	2	Uw	MG/L	nc	NA
MW-05S	Xylenes,m- & p-	2	Uw	MG/L	nc	NA
MW-LEA-03	Xylenes,m- & p-	0.2	Uw	MG/L	nc	NA
MW-LEA-03	Xylenes,m- & p-	0.004	Uw	MG/L	nc	NA
MW03S	Zinc	0.054		MG/L	nc	NA
MW07D	Zinc	0.0351		MG/L	nc	NA
MW09S	Zinc	0.0238		MG/L	nc	NA
MW05S	Zinc	0.023		MG/L	nc	NA
MW01S	Zinc	0.0212		MG/L	nc	NA
MW08S	Zinc	0.0191		MG/L	nc	NA
MW03S	Zinc	0.169	J	MG/L	nc	NA
MW09S	Zinc	0.0551	J	MG/L	nc	NA
MW01S	Zinc	0.0154	J	MG/L	nc	NA
MW10B	Zinc	0.0817	U	MG/L	nc	NA
MW11S	Zinc	0.0567	U	MG/L	nc	NA
MW12B	Zinc	0.0563	U	MG/L	nc	NA
MW11B	Zinc	0.0549	U	MG/L	nc	NA
MW14M	Zinc	0.0498	U	MG/L	nc	NA
MW12B	Zinc	0.0483	U	MG/L	nc	NA
GEC2	Zinc	0.0419	U	MG/L	nc	NA
MW12D	Zinc	0.0303	U	MG/L	nc	NA
TMW3	Zinc	0.0293	U	MG/L	nc	NA
GEC6	Zinc	0.0287	U	MG/L	nc	NA
MW10D	Zinc	0.0272	U	MG/L	nc	NA
MW11M	Zinc	0.0259	U	MG/L	nc	NA
MW15D	Zinc	0.0252	U	MG/L	nc	NA
MW10D	Zinc	0.0238	U	MG/L	nc	NA
MW13B	Zinc	0.0235	U	MG/L	nc	NA
MW13S	Zinc	0.0189	U	MG/L	nc	NA
MW13D	Zinc	0.0152	U	MG/L	nc	NA
MW04D	Zinc	0.0244	UJ	MG/L	nc	NA
MW04S	Zinc	0.0238	UJ	MG/L	nc	NA
MW06S	Zinc	0.0237	UJ	MG/L	nc	NA
MW04S	Zinc	0.0227	UJ	MG/L	nc	NA
MW04B	Zinc	0.0195	UJ	MG/L	nc	NA
MW02S	Zinc	0.016	UJ	MG/L	nc	NA
MW07S	Zinc	0.0152	UJ	MG/L	nc	NA
MW02M	Zinc	0.0113	UJ	MG/L	nc	NA
MW02D	Zinc	0.011	UJ	MG/L	nc	NA
MW08S	Zinc	0.0077	UJ	MG/L	nc	NA
MW01S	Zinc	0.0072	UJ	MG/L	nc	NA
MW01S	Zinc	0.0062	UJ	MG/L	nc	NA
MW07S	Zinc	0.0042	UJ	MG/L	nc	NA
MW06S	Zinc	0.003	UJ	MG/L	nc	NA
MW02S	Zinc	0.0011	UJ	MG/L	nc	NA
MW03S	Zinc	0.174	J	MG/L	nc	NA
MW09S	Zinc	0.076	J	MG/L	nc	NA
MW10B	Zinc	0.108	U	MG/L	nc	NA
MW11B	Zinc	0.0652	U	MG/L	nc	NA
MW03S	Zinc	0.0529	U	MG/L	nc	NA
MW11M	Zinc	0.0513	U	MG/L	nc	NA
MW11S	Zinc	0.0494	U	MG/L	nc	NA
MW14M	Zinc	0.0434	U	MG/L	nc	NA
MW13B	Zinc	0.0341	U	MG/L	nc	NA
MW12B	Zinc	0.0339	U	MG/L	nc	NA
MW07D	Zinc	0.0308	U	MG/L	nc	NA
TMW3	Zinc	0.0288	U	MG/L	nc	NA
MW10D	Zinc	0.026	U	MG/L	nc	NA
GEC2	Zinc	0.0259	U	MG/L	nc	NA
MW10D	Zinc	0.0207	U	MG/L	nc	NA
MW15D	Zinc	0.0203	U	MG/L	nc	NA
MW09S	Zinc	0.0202	U	MG/L	nc	NA
MW08S	Zinc	0.0194	U	MG/L	nc	NA
MW12B	Zinc	0.0192	U	MG/L	nc	NA

Table F-5b. Comparison of Groundwater Data at the Source Area to Potential ARARs

BORING[2]	PARAMETER	LAB RESULT	QUAL	UNIT	Potential ARARs[1] Federal MCL and/or non-zero MCLG (mg/L)	Exceed Criteria (Y/N)
MW01S	Zinc	0.0192	U	MG/L	nc	NA
MW02D	Zinc	0.019	U	MG/L	nc	NA
MW13S	Zinc	0.0186	U	MG/L	nc	NA
MW12D	Zinc	0.0183	U	MG/L	nc	NA
GEC6	Zinc	0.0166	U	MG/L	nc	NA
MW13D	Zinc	0.0155	U	MG/L	nc	NA
MW04S	Zinc	0.0528	UJ	MG/L	nc	NA
MW02S	Zinc	0.0352	UJ	MG/L	nc	NA
MW04B	Zinc	0.0177	UJ	MG/L	nc	NA
MW04D	Zinc	0.0176	UJ	MG/L	nc	NA
MW06S	Zinc	0.017	UJ	MG/L	nc	NA
MW04S	Zinc	0.017	UJ	MG/L	nc	NA
MW05S	Zinc	0.0148	UJ	MG/L	nc	NA
MW07S	Zinc	0.0142	UJ	MG/L	nc	NA
MW01S	Zinc	0.0122	UJ	MG/L	nc	NA
MW02M	Zinc	0.0101	UJ	MG/L	nc	NA
MW01S	Zinc	0.0088	UJ	MG/L	nc	NA
MW01S	Zinc	0.0063	UJ	MG/L	nc	NA
MW07S	Zinc	0.0062	UJ	MG/L	nc	NA
MW08S	Zinc	0.0053	UJ	MG/L	nc	NA
MW06S	Zinc	0.0027	UJ	MG/L	nc	NA
MW02S	Zinc	0.0011	UJ	MG/L	nc	NA

Notes:

[1] ARARs include Federal Maximum Contaminant Levels (MCLs) for drinking water (EPA, 2009).

[2] VOC data for wells MW-LEA-01, MW-LEA-02, and MW-LEA-03 used qualitatively only.

NA - Undetected contaminants (where qualifier = U, UB, UJ, UJw, or Uw) and rejected data (where qualifier = R) were not compared to potential ARARs. Nor were cleanup goals developed for undetected contaminants where the laboratory detection limits (reported in the LAB_RESULT field) are in excess of ARARs.

Key

ARAR - Applicable or Relevant and Appropriate Requirement; MCL - Maximum Contaminant Level; nc - no criteria; NA - not applicable; N - no; Y - yes; MG/L - milligram per liter.

APPENDIX G
(Revised from the 2010 Feasibility Study)

Proposed Cleanup Areas for the CMRP Site

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G.1 Introduction

The approach and supporting evaluations used to develop proposed areas for cleanup (i.e., remedial footprints) at the Centredale Manor Restoration Project (CMRP) Superfund Site were presented in Appendix G of the feasibility study (FS) (Battelle, 2010) for the following action areas:

- Section G.2 – Allendale and Lyman Mill Sediment
- Section G.3 – Allendale Reach Floodplain Soil
- Section G.4 – Lyman Mill Reach Stream Sediment and Floodplain Soil
- Section G.5 – Source Area Soil
- Section G.6 – Source Area Groundwater

Overall, the proposed areas for cleanup were delineated by constructing a footprint to encompass all sampling stations (borings) with contaminant concentrations above the cleanup goals. The proposed cleanup areas or remedial footprints as conveyed are conceptual. More precise cleanup areas will be developed during the remedial design, and the removal of contaminated media will be confirmed through appropriate sampling and monitoring.

The approach and supporting evaluations used to develop proposed cleanup areas for Lyman Mill Reach stream sediment and floodplain soil (Section G.4) and groundwater within the Source Area (Section G.6) are updated below based on supplemental site activities, which resulted in additional data for the Lyman Mill action area as well as revised cleanup goals for Lyman Mill Reach floodplain soil and groundwater within the Source Area. Revised cleanup goals used in the evaluations below are summarized in Tables 3-4 (floodplain soil) and 3-7 (groundwater); detailed information is also provided in Appendix F (of this Addendum).

Proposed cleanup areas developed in the 2010 FS for Allendale and Lyman Mill sediment (Section G.2), Allendale Reach floodplain soil (Section G.3), and Source Area soil (Section G.5) are not impacted by the information from the supplemental site activities, and are not repeated here. While the cleanup goals for Source Area soil were revised (Appendix F of this Addendum), the areas proposed for cleanup are not impacted because all locations with contaminant concentrations above the revised cleanup goals are encompassed in the cleanup area proposed for Source Area soil in the FS (Battelle, 2010).

G.4 Lyman Mill Reach Stream Sediment and Floodplain Soil Footprints

The spatial extent of the stream sediment and floodplain soil cleanup area was determined based on a comparison of site data to the revised cleanup goals, as well as an assessment of local topography, vegetation, and land use. The comparison of Lyman Mill Reach stream sediment and floodplain soil data to the cleanup goals is presented in Tables G-8 and G-9, respectively, and shown in Figure G-4. Contaminants that were undetected (U or UJ qualified) or rejected by third party validation (R qualified) were not compared to the cleanup goal. Each cleanup goal exceedance is identified by contaminant in Tables G-8 (sediment) and G-9 (floodplain soil).

Sediment cleanup goals used in the evaluation were developed in the 2010 FS (Table 3-3 and Appendix F of the 2010 FS). Floodplain soil cleanup goals used in the evaluation are provided in Table 3-4 and Appendix F of this Addendum. The sediment cleanup goal developed for dioxin in Allendale and Lyman Mill Pond sediments (14.7 nanograms per kilogram [ng/kg], based on background [Battelle, 2010]) was used to delineate proposed sediment cleanup areas at the Oxbow because contaminated sediments at the

Oxbow area could pose a risk to ecological receptors[1] and are a potential secondary source of contamination to downstream areas if remobilized during flooding events (MACTEC and Battelle, 2011).

Lyman Mill Reach Stream Sediments are located at the main stream channel connecting Allendale and Lyman Mill Ponds, within the abandoned channel (i.e., remnant of the former river channel that previously received flow at its eastern end and flowed westward and then in a southerly direction to Lyman Mill Pond), and within the scrub-shrub and emergent marsh habitat at the southern end of the Oxbow (Figure G-4). The spatial extent of the cleanup area encompasses all sampling locations with contaminant concentrations above the cleanup goals (Table G-8, Figure G-4). The primary risk driver, dioxin (2,3,7,8-TCDD), was detected above the cleanup goal at approximately 87% of locations sampled (Table G-8). The vertical extent of the sediment footprint was determined by comparing sub-surface (> 1 foot) sediment data to the cleanup goals; contaminants that were undetected (U or UJ qualified) were not compared to the cleanup goal. The depth for cleanup corresponds to that depth at which concentrations of the contaminants do not exceed the cleanup goals. Overall, the vertical extent of the footprint varies from 1 foot below ground surface (ft bgs) to 3 ft bgs, and represents the depth needed to meet the cleanup goals. Where sub-surface data were not available, the vertical extent of the footprint was assumed to be 1 ft bgs, which encompasses the area where the most significant ecological exposures occur. The actual depth of removal would be determined during design based on sampling and analysis of deeper sediment samples.

Lyman Mill Reach Floodplain Soils are located at the old mill raceway connecting Allendale and Lyman Mill Ponds, and within the 100-year floodplain of the Oxbow and Lyman Mill Pond (Figures G-4). Within the old mill raceway and Oxbow areas, the spatial extent of the cleanup area encompasses all floodplain locations within the 100-year floodplain with contaminant concentrations above the cleanup goals (Figure G-4)[2]. Concentrations of dioxin, as 2,3,7,8-TCDD, exceed the cleanup goals at approximately 33% of the locations sampled (approximately 39% of locations exceed the dioxin cleanup goal as toxic equivalency [TEQ]) (Table G-9). The vertical extent of the footprint is assumed to be 1 foot; the actual depth of removal would extend deeper within the vadose zone to meet applicable or relevant and appropriate requirement (ARARs) or U.S. Environmental Protection Agency's (EPA's) dioxin requirements as necessary, and would be determined during design based on sampling and analysis of deeper soil samples.

Following the non-time critical removal action performed in 2002 and 2003, floodplain soils along the shore of Lyman Mill Pond pose an exposure hazard to ecological receptors only. Therefore, the spatial extent of the proposed footprint was delineated to include only areas with contaminant concentrations above the cleanup goals (Table G-9, Figure G-4) that represent high value ecological floodplain habitat or have potential for erosion, as follows:

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[1] The Supplemental BERA (MACTEC and Battelle, 2011) conducted a qualitative evaluation of the sediment data available for the Oxbow area including the scrub-shrub habitat located in the southern portion as well as the remnant river channel that bisects the area. As discussed in the Supplemental BERA, wildlife exposures within the scrub-shrub habitat may be somewhat limited due to the nature of the habitat and prey types and life stages available. Although application of sediment cleanup goals that are protective of bioaccumulation hazards posed by contaminants of concern developed for Lyman Mill Pond might be considered unduly conservative, it is warranted because of the recontamination threat posed by the periodic flooding of this area. The Lyman Mill sediment cleanup goals are directly applicable to the remnant river channel that bisects the Oxbow Area.

[2] Antimony, arsenic, copper and dioxin TEQ concentrations are above the cleanup goals at LPX-SD-4404; however, this area is above the 100-year flood elevation and has a dioxin composition similar to background conditions (MACTEC and Battelle, 2006). Additionally, the dioxin TEQ concentration (262 ng/kg) is below EPA's recommended residential level. Selected inorganic concentrations are above Rhode Island Department of Environmental Protection's residential exposure criteria, but are comparable to background conditions.

- The small area along the eastern shore south of Falco Street (contaminant concentrations are above the cleanup goals);
- The small patch of forested area occurring along the eastern shore north of Water Street (contaminant concentrations are above the cleanup goals); and,
- The small peninsula north of the confluence of Assapumpset Brook and Lyman Mill Pond (available contaminant data for this area are above the cleanup goals and this area has potential for erosion).

Floodplain areas that do not represent high value ecological habitat (i.e., areas are developed, in close proximity to residential structures and lacking native vegetation or where the grade is steep and the riparian zone only narrowly defined) and have low potential for erosion were excluded from the proposed footprint (Table G-9, Figure G-4), as follows:

- The small isolated patches of floodplain vegetation occurring along the eastern shore, between Warren Avenue and Lyman Mill Dam; and
- The western shore of Lyman Mill Pond, except the small peninsula north of the confluence of Assapumpset Brook and Lyman Mill Pond which is included in the cleanup area (above).

G.6 Groundwater

The approach used to delineate the cleanup area for groundwater presented in the Appendix G and Tables G-10 and G-11 of the 2010 FS (Battelle, 2010) are not relevant under the revised groundwater classification (Class IIB) for groundwater within the Source Area and should be disregarded. Under the Class IIB groundwater classification, potential areas for cleanup were identified by comparing the groundwater data within the Source Area to the revised cleanup goals (federal maximum contaminant levels [MCLs] and non-zero maximum contaminant level goals [MCLGs] for drinking water). Overall, the proposed area for cleanup is approximately 8 acres and encompasses nearly the entire Source Area (Figure 3-6). The proposed area for cleanup is much larger than the cleanup area developed in the 2010 FS (0.13 acres) because the revised groundwater classification at the Source Area (changed from Class III [non-potable water] to Class IIB [potential drinking water source]) resulted in substantially lower cleanup goals (frequently an order of magnitude or lower compared to cleanup goals developed based on the Class III groundwater classification) as well as cleanup goals for additional contaminants, which in turn resulted in widespread contamination above the revised cleanup goals (see Figures 2-13 through 2-15 and Appendix F, Table F-5b). The cleanup volume was not determined because it is variable and dependent upon the specific cleanup alternative.

References

Battelle. 2010. *Interim Final Feasibility Study, Centredale Manor Restoration Project Superfund Site*. Prepared for U.S. Army Corps of Engineers New England District. June.

MACTEC, Inc. and Battelle. 2011. *Interim Final Supplemental Baseline Human Health and Ecological Risk Assessment: Oxbow Area Floodplain Soil and Sediment, Centredale Manor Restoration Project Superfund Site*. Prepared for USACE New England District. June.

MACTEC, Inc. and Battelle. 2006. *Addendum to the Interim Final Baseline Risk Assessment: Oxbow Area, Part I – Human Health and Part II – Ecological, Centredale Manor Restoration Project Superfund Site*. Prepared for USACE New England District. August.

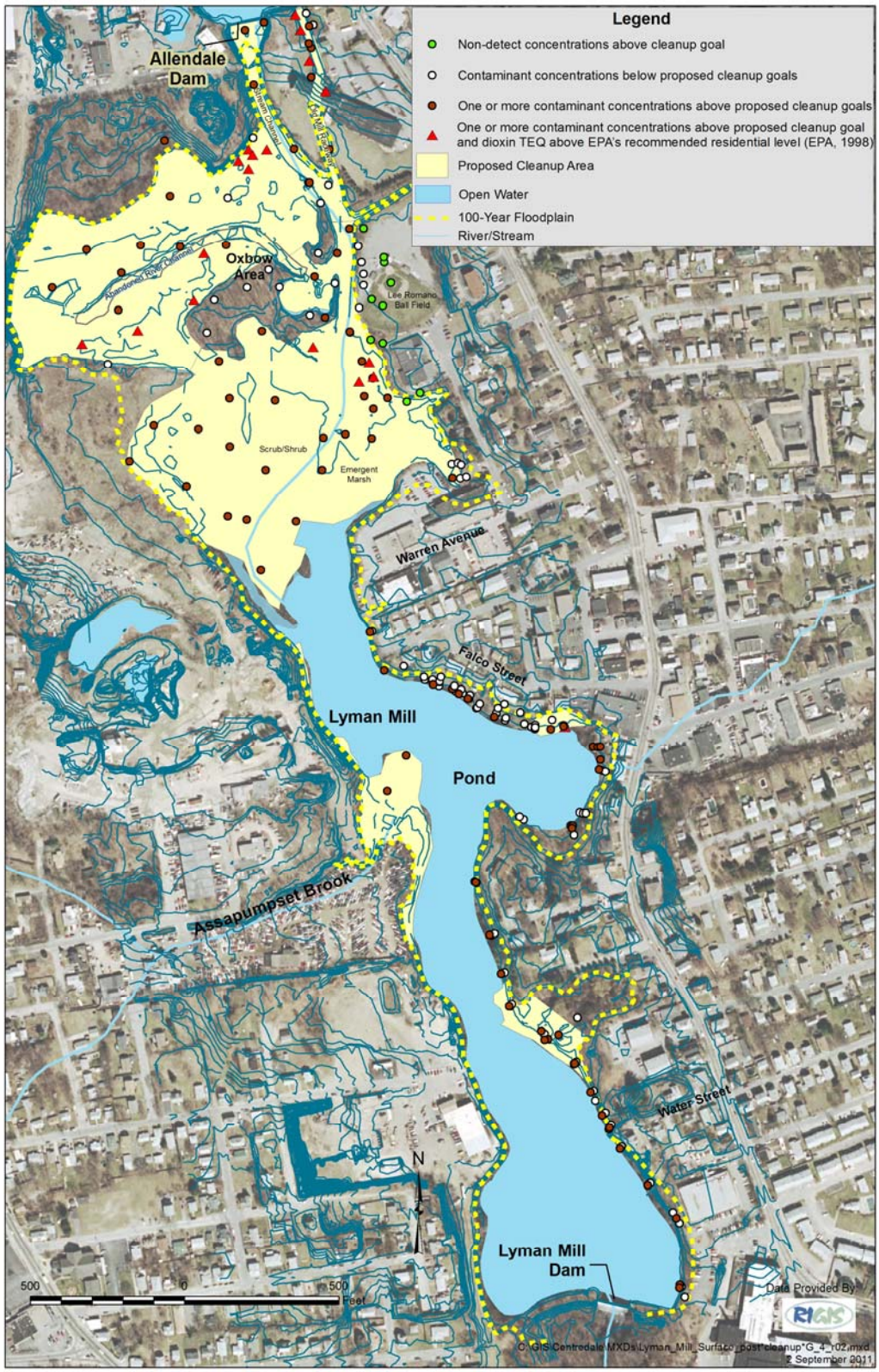

Figure G-4. Contaminant Concentrations in Lyman Mill Reach Stream Sediment and Floodplain Soil (All Depths), Relative to the Proposed Cleanup Goals and Cleanup Areas

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Appendix G Tables

Comparison of CMRP Site Data to Cleanup Goals

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Table G-8. Comparison of Lyman Mill Reach Stream Sediment (including Oxbow) Data to Cleanup Goals (Sorted by Parameter, See Figure G-4)

BORING	TOP_OF_SAMPLE	BOTTOM_OF_SAMPLE	PARAMETER	LAB_RESULT	QUAL	UNITS	Cleanup Goal[1]	Above Cleanup Goal (Y/N)	Number Values	Number Values Above Cleanup Goal	% Above Cleanup Goal
AD-05	0	1	2,3,7,8-TCDD	2800		NG/KG	14.7	Y	60	52	86.7%
LPX-SD-2046	2	4	2,3,7,8-TCDD	14.6		NG/KG	14.7	N			
LPX-SD-2046	0.5	2	2,3,7,8-TCDD	2060	J&	NG/KG	14.7	Y			
LPX-SD-2046	0	0.5	2,3,7,8-TCDD	7110	J&	NG/KG	14.7	Y			
SD-18	0	0.25	2,3,7,8-TCDD	7987.02	J	NG/KG	14.7	Y			
SD-19	0	0.25	2,3,7,8-TCDD	18.11	J	NG/KG	14.7	Y			
WRL-BK-2004	0	0.5	2,3,7,8-TCDD	374	&	NG/KG	14.7	Y			
WRL-BK-2004	0	0.5	2,3,7,8-TCDD	966	&	NG/KG	14.7	Y			
WRL-BK-2004	0	0.5	2,3,7,8-TCDD	2930	J&	NG/KG	14.7	Y			
WRL-BK-2005	0	0.5	2,3,7,8-TCDD	10.5		NG/KG	14.7	N			
WRL-BK-2005	0	0.5	2,3,7,8-TCDD	86.4		NG/KG	14.7	Y			
WRL-BK-2005	0	0.5	2,3,7,8-TCDD	945	&	NG/KG	14.7	Y			
WRL-SD-2039	0	0.5	2,3,7,8-TCDD	2840	$	NG/KG	14.7	Y			
WRL-SD-2040	0	0.5	2,3,7,8-TCDD	60		NG/KG	14.7	Y			
WRL-SD-2040	0	0.5	2,3,7,8-TCDD	80.8		NG/KG	14.7	Y			
WRL-SD-2041	0	0.2	2,3,7,8-TCDD	485	J$	ng/kg	14.7	Y			
WRL-SD-2041	0	0.2	2,3,7,8-TCDD	2020	J$	ng/kg	14.7	Y			
WRL-SD-2041	0	0.5	2,3,7,8-TCDD	3150	$	NG/KG	14.7	Y			
WRL-SD-2071	0	0.2	2,3,7,8-TCDD	1730	$	ng/kg	14.7	Y			
WRL-SD-4005	0	0.5	2,3,7,8-TCDD	751.75		NG/KG	14.7	Y			
LPX-SD-4401	0	0.5	2,3,7,8-TCDD	3140	#	PG/G_DRYWT	14.7	Y			
LPX-SD-4402	0	0.5	2,3,7,8-TCDD	594.5	J#	PG/G_DRYWT	14.7	Y			
LPX-SD-4403	0	0.5	2,3,7,8-TCDD	521	#	PG/G_DRYWT	14.7	Y			
LPX-SD-2072	0	0.5	2,3,7,8-TCDD	487	$	ng/kg	14.7	Y			
SD_G-01	2	3	2,3,7,8-TCDD	272		PG/G_DRY	14.7	Y			
SD_G-01	1	2	2,3,7,8-TCDD	603	J	PG/G_DRY	14.7	Y			
SD_G-01	0	1	2,3,7,8-TCDD	14600	J	PG/G_DRY	14.7	Y			
SD_G-02	0	1	2,3,7,8-TCDD	4990	J	PG/G_DRY	14.7	Y			
SD_G-03	2	3	2,3,7,8-TCDD	7.19		PG/G_DRY	14.7	N			
SD_G-03	1	2	2,3,7,8-TCDD	12		PG/G_DRY	14.7	N			
SD_G-03	0	1	2,3,7,8-TCDD	3190	J	PG/G_DRY	14.7	Y			
SD_G-04	1	2	2,3,7,8-TCDD	1.2		PG/G_DRY	14.7	N			
SD_G-04	2	3	2,3,7,8-TCDD	4.05		PG/G_DRY	14.7	N			
SD_G-04	0	1	2,3,7,8-TCDD	1640	J	PG/G_DRY	14.7	Y			
SD_G-05	2	3	2,3,7,8-TCDD	798		PG/G_DRY	14.7	Y			
SD_G-05	1	2	2,3,7,8-TCDD	2590	J	PG/G_DRY	14.7	Y			
SD_G-05	0	1	2,3,7,8-TCDD	4170	J	PG/G_DRY	14.7	Y			
SD_G-06	0	1	2,3,7,8-TCDD	75		PG/G_DRY	14.7	Y			
SD_G-07	1	2	2,3,7,8-TCDD	400		PG/G_DRY	14.7	Y			

Table G-8. Comparison of Lyman Mill Reach Stream Sediment (including Oxbow) Data to Cleanup Goals (Sorted by Parameter, See Figure G-4)

BORING	TOP_OF_SAMPLE	BOTTOM_OF_SAMPLE	PARAMETER	LAB_RESULT	QUAL	UNITS	Cleanup Goal[1]	Above Cleanup Goal (Y/N)	Number Values	Number Values Above Cleanup Goal	% Above Cleanup Goal
SD_G-07	0	1	2,3,7,8-TCDD	625	J	PG/G_DRY	14.7	Y			
SD_G-07	2	3	2,3,7,8-TCDD	951	J	PG/G_DRY	14.7	Y			
SD_G-09	1	2	2,3,7,8-TCDD	131		PG/G_DRY	14.7	Y			
SD_G-09	0	1	2,3,7,8-TCDD	5150	J	PG/G_DRY	14.7	Y			
SD_G-10	1	2	2,3,7,8-TCDD	13.7		PG/G_DRY	14.7	N			
SD_G-10	0	1	2,3,7,8-TCDD	546	J	PG/G_DRY	14.7	Y			
SD_G-11	1	2	2,3,7,8-TCDD	651	J	PG/G_DRY	14.7	Y			
SD_G-11	2	3	2,3,7,8-TCDD	2100	J	PG/G_DRY	14.7	Y			
SD_G-11	0	1	2,3,7,8-TCDD	7300	J	PG/G_DRY	14.7	Y			
SD_G-11	0	1	2,3,7,8-TCDD	8760	J	PG/G_DRY	14.7	Y			
SD_G-12	2	3	2,3,7,8-TCDD	4.2		PG/G_DRY	14.7	N			
SD_G-12	0	1	2,3,7,8-TCDD	754	J	PG/G_DRY	14.7	Y			
SD_G-17	1	2	2,3,7,8-TCDD	30.7		PG/G_DRY	14.7	Y			
SD_G-17	0	1	2,3,7,8-TCDD	1120	J	PG/G_DRY	14.7	Y			
WRL-SD-2042	0	0.3	2,3,7,8-TCDD	1720	$	ng/kg	14.7	Y			
WRL-SD-2042	0	0.5	2,3,7,8-TCDD	2010	J$	NG/KG	14.7	Y			
WRL-SD-2043	0	0.2	2,3,7,8-TCDD	1190	J$	ng/kg	14.7	Y			
WRL-SD-2043	0	0.5	2,3,7,8-TCDD	3230	J&	NG/KG	14.7	Y			
WRL-SD-2044	2	3	2,3,7,8-TCDD	217		NG/KG	14.7	Y			
WRL-SD-2044	0.5	2	2,3,7,8-TCDD	2220	J$	NG/KG	14.7	Y			
WRL-SD-2044	0	0.5	2,3,7,8-TCDD	3350	J$	NG/KG	14.7	Y			
AD-05	0	1	4,4'-DDD	55	U	UG/KG	8.4	NA	14	0	0.0%
LPX-SD-2046	0	0.5	4,4'-DDD	5	U	UG/KG	8.4	NA			
SD-18	0	0.25	4,4'-DDD	3.7	U	UG/KG	8.4	NA			
SD-19	0	0.25	4,4'-DDD	4.2	U	UG/KG	8.4	NA			
WRL-BK-2004	0	0.5	4,4'-DDD	3.1	U	UG/KG	8.4	NA			
WRL-BK-2004	0	0.5	4,4'-DDD	5.6	U	UG/KG	8.4	NA			
WRL-BK-2005	0	0.5	4,4'-DDD	3.5	U	UG/KG	8.4	NA			
WRL-BK-2005	0	0.5	4,4'-DDD	4	U	UG/KG	8.4	NA			
WRL-SD-2039	0	0.5	4,4'-DDD	4.9	U	UG/KG	8.4	NA			
WRL-SD-2040	0	0.5	4,4'-DDD	3.8	U	UG/KG	8.4	NA			
WRL-SD-2041	0	0.5	4,4'-DDD	4.9	U	UG/KG	8.4	NA			
WRL-SD-2041	0	0.2	4,4'-DDD	7	U	UG/KG	8.4	NA			
WRL-SD-2041	0	0.2	4,4'-DDD	8	U	UG/KG	8.4	NA			
WRL-SD-4005	0	0.5	4,4'-DDD	6.42		UG/KG	8.4	N			
AD-05	0	1	4,4'-DDE	18	J	UG/KG	6	Y	15	2	13.3%
LPX-SD-2046	0	0.5	4,4'-DDE	5	U	UG/KG	6	NA			
SD-18	0	0.25	4,4'-DDE	2.8	J	UG/KG	6	N			
SD-19	0	0.25	4,4'-DDE	1.3	J	UG/KG	6	N			

Table G-8. Comparison of Lyman Mill Reach Stream Sediment (including Oxbow) Data to Cleanup Goals (Sorted by Parameter, See Figure G-4)

BORING	TOP_OF_SAMPLE	BOTTOM_OF_SAMPLE	PARAMETER	LAB_RESULT	QUAL	UNITS	Cleanup Goal[1]	Above Cleanup Goal (Y/N)	Number Values	Number Values Above Cleanup Goal	% Above Cleanup Goal
WRL-BK-2004	0	0.5	4,4'-DDE	3.1	U	UG/KG	6	NA			
WRL-BK-2004	0	0.5	4,4'-DDE	5.6	U	UG/KG	6	NA			
WRL-BK-2005	0	0.5	4,4'-DDE	3.5	U	UG/KG	6	NA			
WRL-BK-2005	0	0.5	4,4'-DDE	4	U	UG/KG	6	NA			
WRL-BK-2005	0	0.5	4,4'-DDE	4.9		UG/KG	6	N			
WRL-SD-2039	0	0.5	4,4'-DDE	4.9	U	UG/KG	6	NA			
WRL-SD-2040	0	0.5	4,4'-DDE	3.8	U	UG/KG	6	NA			
WRL-SD-2041	0	0.5	4,4'-DDE	4.9	U	UG/KG	6	NA			
WRL-SD-2041	0	0.2	4,4'-DDE	7	U	UG/KG	6	NA			
WRL-SD-2041	0	0.2	4,4'-DDE	9		UG/KG	6	Y			
WRL-SD-4005	0	0.5	4,4'-DDE	4.96		UG/KG	6	N			
LPX-SD-2046	0	0.5	Aluminum	12200		MG/KG	8210	Y	16	3	18.8%
WRL-BK-2004	0	0.5	Aluminum	4620		MG/KG	8210	N			
WRL-BK-2004	0	0.5	Aluminum	5640		MG/KG	8210	N			
WRL-BK-2004	0	0.5	Aluminum	7340		MG/KG	8210	N			
WRL-BK-2005	0	0.5	Aluminum	1690		MG/KG	8210	N			
WRL-BK-2005	0	0.5	Aluminum	2020		MG/KG	8210	N			
WRL-BK-2005	0	0.5	Aluminum	3780		MG/KG	8210	N			
WRL-SD-2039	0	0.5	Aluminum	2670		MG/KG	8210	N			
WRL-SD-2040	0	0.5	Aluminum	2140		MG/KG	8210	N			
WRL-SD-2040	0	0.5	Aluminum	2260		MG/KG	8210	N			
WRL-SD-2041	0	0.5	Aluminum	5960		MG/KG	8210	N			
WRL-SD-2041	0	0.2	Aluminum	6090		MG/KG	8210	N			
WRL-SD-2041	0	0.2	Aluminum	6400		MG/KG	8210	N			
WRL-SD-2071	0	0.2	Aluminum	10900		MG/KG	8210	Y			
WRL-SD-4005	0	0.5	Aluminum	6949	J	MG/KG	8210	N			
WRL-SD-4005	0	0.5	Aluminum	8335	J	MG/KG	8210	Y			
AD-05	0	1	Aroclor, Total	910		UG/KG	210	Y	14	1	7.1%
LPX-SD-2046	0	0.5	Aroclor, Total	178		UG/KG	210	N			
SD-18	0	0.25	Aroclor, Total	120		UG/KG	210	N			
SD-19	0	0.25	Aroclor, Total	86	U	UG/KG	210	NA			
WRL-BK-2004	0	0.5	Aroclor, Total	13		UG/KG	210	N			
WRL-BK-2004	0	0.5	Aroclor, Total	160		UG/KG	210	N			
WRL-BK-2005	0	0.5	Aroclor, Total	60		UG/KG	210	N			
WRL-BK-2005	0	0.5	Aroclor, Total	81	U	UG/KG	210	NA			
WRL-BK-2005	0	0.5	Aroclor, Total	82	U	UG/KG	210	NA			
WRL-SD-2039	0	0.5	Aroclor, Total	40		UG/KG	210	N			
WRL-SD-2040	0	0.5	Aroclor, Total	28		UG/KG	210	N			
WRL-SD-2040	0	0.5	Aroclor, Total	31		UG/KG	210	N			

Table G-8. Comparison of Lyman Mill Reach Stream Sediment (including Oxbow) Data to Cleanup Goals (Sorted by Parameter, See Figure G-4)

BORING	TOP_OF_SAMPLE	BOTTOM_OF_SAMPLE	PARAMETER	LAB_RESULT	QUAL	UNITS	Cleanup Goal[1]	Above Cleanup Goal (Y/N)	Number Values	Number Values Above Cleanup Goal	% Above Cleanup Goal
WRL-SD-2041	0	0.5	Aroclor, Total	210		UG/KG	210	N			
WRL-SD-4005	0	0.5	Aroclor, Total	191.9		UG/KG	210	N			
AD-05	0	1	Aroclor-1254	910		UG/KG	150	Y	16	7	43.8%
LPX-SD-2046	0	0.5	Aroclor-1254	120		UG/KG	150	N			
SD-18	0	0.25	Aroclor-1254	120		UG/KG	150	N			
SD-19	0	0.25	Aroclor-1254	42	U	UG/KG	150	NA			
WRL-BK-2004	0	0.5	Aroclor-1254	13	JP	UG/KG	150	N			
WRL-BK-2004	0	0.5	Aroclor-1254	160	P	UG/KG	150	Y			
WRL-BK-2005	0	0.5	Aroclor-1254	40	U	UG/KG	150	NA			
WRL-BK-2005	0	0.5	Aroclor-1254	60		UG/KG	150	N			
WRL-SD-2039	0	0.5	Aroclor-1254	40	J	UG/KG	150	N			
WRL-SD-2040	0	0.5	Aroclor-1254	28	J	UG/KG	150	N			
WRL-SD-2040	0	0.5	Aroclor-1254	31	J	UG/KG	150	N			
WRL-SD-2041	0	0.5	Aroclor-1254	210		UG/KG	150	Y			
WRL-SD-2041	0	0.2	Aroclor-1254	310	J	UG/KG	150	Y			
WRL-SD-2041	0	0.2	Aroclor-1254	430	J	UG/KG	150	Y			
WRL-SD-2071	0	0.2	Aroclor-1254	600	J	UG/KG	150	Y			
WRL-SD-4005	0	0.5	Aroclor-1254	154.9		UG/KG	150	Y			
WRL-SD-4005	0	0.5	Aroclor-1268	36.99		UG/KG	140	N	1	0	0.0%
AD-05	0	1	Arsenic	48.1	U	MG/KG	3.9	NA	17	6	35.3%
LPX-SD-2046	0	0.5	Arsenic	5.4		MG/KG	3.9	Y			
WRL-BK-2004	0	0.5	Arsenic	3.1		MG/KG	3.9	N			
WRL-BK-2004	0	0.5	Arsenic	3.4		MG/KG	3.9	N			
WRL-BK-2004	0	0.5	Arsenic	5.2		MG/KG	3.9	Y			
WRL-BK-2005	0	0.5	Arsenic	1.5		MG/KG	3.9	N			
WRL-BK-2005	0	0.5	Arsenic	2.2		MG/KG	3.9	N			
WRL-BK-2005	0	0.5	Arsenic	2.8		MG/KG	3.9	N			
WRL-SD-2039	0	0.5	Arsenic	4.7		MG/KG	3.9	Y			
WRL-SD-2040	0	0.5	Arsenic	0.54	U	MG/KG	3.9	NA			
WRL-SD-2040	0	0.5	Arsenic	0.64	U	MG/KG	3.9	NA			
WRL-SD-2041	0	0.2	Arsenic	3.8		MG/KG	3.9	N			
WRL-SD-2041	0	0.2	Arsenic	4		MG/KG	3.9	Y			
WRL-SD-2041	0	0.5	Arsenic	6.5		MG/KG	3.9	Y			
WRL-SD-2071	0	0.2	Arsenic	6	J	MG/KG	3.9	Y			
WRL-SD-4005	0	0.5	Arsenic	2.62	J	MG/KG	3.9	N			
WRL-SD-4005	0	0.5	Arsenic	3.23	J	MG/KG	3.9	N			
AD-05	0	1	Barium	65.9		MG/KG	134	N	17	2	11.8%
LPX-SD-2046	0	0.5	Barium	235		MG/KG	134	Y			
WRL-BK-2004	0	0.5	Barium	20.7		MG/KG	134	N			

Table G-8. Comparison of Lyman Mill Reach Stream Sediment (including Oxbow) Data to Cleanup Goals (Sorted by Parameter, See Figure G-4)

BORING	TOP_OF_SAMPLE	BOTTOM_OF_SAMPLE	PARAMETER	LAB_RESULT	QUAL	UNITS	Cleanup Goal[1]	Above Cleanup Goal (Y/N)	Number Values	Number Values Above Cleanup Goal	% Above Cleanup Goal
WRL-BK-2004	0	0.5	Barium	38.5		MG/KG	134	N			
WRL-BK-2004	0	0.5	Barium	81.1		MG/KG	134	N			
WRL-BK-2005	0	0.5	Barium	10		MG/KG	134	N			
WRL-BK-2005	0	0.5	Barium	12.6		MG/KG	134	N			
WRL-BK-2005	0	0.5	Barium	40.7		MG/KG	134	N			
WRL-SD-2039	0	0.5	Barium	48.9		MG/KG	134	N			
WRL-SD-2040	0	0.5	Barium	19.4		MG/KG	134	N			
WRL-SD-2040	0	0.5	Barium	22.6		MG/KG	134	N			
WRL-SD-2041	0	0.5	Barium	82.9		MG/KG	134	N			
WRL-SD-2041	0	0.2	Barium	108		MG/KG	134	N			
WRL-SD-2041	0	0.2	Barium	111		MG/KG	134	N			
WRL-SD-2071	0	0.2	Barium	156		MG/KG	134	Y			
WRL-SD-4005	0	0.5	Barium	86.3	J	MG/KG	134	N			
WRL-SD-4005	0	0.5	Barium	92.9	J	MG/KG	134	N			
AD-05	0	1	Benzo(a)pyrene	1400		UG/KG	1400	N	15	3	20.0%
LPX-SD-2046	0	0.5	Benzo(a)pyrene	580	J	UG/KG	1400	N			
WRL-BK-2004	0	0.5	Benzo(a)pyrene	230	J	UG/KG	1400	N			
WRL-BK-2004	0	0.5	Benzo(a)pyrene	400	J	UG/KG	1400	N			
WRL-BK-2004	0	0.5	Benzo(a)pyrene	440	J	UG/KG	1400	N			
WRL-BK-2005	0	0.5	Benzo(a)pyrene	65	J	UG/KG	1400	N			
WRL-BK-2005	0	0.5	Benzo(a)pyrene	80	J	UG/KG	1400	N			
WRL-BK-2005	0	0.5	Benzo(a)pyrene	700	J	UG/KG	1400	N			
WRL-SD-2039	0	0.5	Benzo(a)pyrene	440	J	UG/KG	1400	N			
WRL-SD-2040	0	0.5	Benzo(a)pyrene	200	J	UG/KG	1400	N			
WRL-SD-2040	0	0.5	Benzo(a)pyrene	310	J	UG/KG	1400	N			
WRL-SD-2041	0	0.5	Benzo(a)pyrene	1300		UG/KG	1400	N			
WRL-SD-2041	0	0.2	Benzo(a)pyrene	3000		UG/KG	1400	Y			
WRL-SD-2041	0	0.2	Benzo(a)pyrene	3500	J	UG/KG	1400	Y			
WRL-SD-2071	0	0.2	Benzo(a)pyrene	2000	J	UG/KG	1400	Y			
AD-05	0	1	Dibenzo(a,h)anthracene	260	J	UG/KG	970	N	14	0	0.0%
LPX-SD-2046	0	0.5	Dibenzo(a,h)anthracene	2500	U	UG/KG	970	NA			
WRL-BK-2004	0	0.5	Dibenzo(a,h)anthracene	1900	U	UG/KG	970	NA			
WRL-BK-2004	0	0.5	Dibenzo(a,h)anthracene	2000	U	UG/KG	970	NA			
WRL-BK-2004	0	0.5	Dibenzo(a,h)anthracene	2500	U	UG/KG	970	NA			
WRL-BK-2005	0	0.5	Dibenzo(a,h)anthracene	400	U	UG/KG	970	NA			
WRL-BK-2005	0	0.5	Dibenzo(a,h)anthracene	3600	U	UG/KG	970	NA			
WRL-SD-2039	0	0.5	Dibenzo(a,h)anthracene	120	J	UG/KG	970	N			
WRL-SD-2040	0	0.5	Dibenzo(a,h)anthracene	750	U	UG/KG	970	NA			
WRL-SD-2040	0	0.5	Dibenzo(a,h)anthracene	780	U	UG/KG	970	NA			

Table G-8. Comparison of Lyman Mill Reach Stream Sediment (including Oxbow) Data to Cleanup Goals (Sorted by Parameter, See Figure G-4)

BORING	TOP_OF_SAMPLE	BOTTOM_OF_SAMPLE	PARAMETER	LAB_RESULT	QUAL	UNITS	Cleanup Goal[1]	Above Cleanup Goal (Y/N)	Number Values	Number Values Above Cleanup Goal	% Above Cleanup Goal
WRL-SD-2041	0	0.5	Dibenzo(a,h)anthracene	340	J	UG/KG	970	N			
WRL-SD-2041	0	0.2	Dibenzo(a,h)anthracene	510	J	UG/KG	970	N			
WRL-SD-2041	0	0.2	Dibenzo(a,h)anthracene	680	J	UG/KG	970	N			
WRL-SD-2071	0	0.2	Dibenzo(a,h)anthracene	350	J	UG/KG	970	N			
AD-05	0	1	Dieldrin	55	U	UG/KG	2.6	NA	14	4	28.6%
LPX-SD-2046	0	0.5	Dieldrin	5	U	UG/KG	2.6	NA			
SD-18	0	0.25	Dieldrin	3.7	U	UG/KG	2.6	NA			
SD-19	0	0.25	Dieldrin	2.2	U	UG/KG	2.6	NA			
WRL-BK-2004	0	0.5	Dieldrin	4.9	P	UG/KG	2.6	Y			
WRL-BK-2004	0	0.5	Dieldrin	17	P	UG/KG	2.6	Y			
WRL-BK-2005	0	0.5	Dieldrin	4	U	UG/KG	2.6	NA			
WRL-BK-2005	0	0.5	Dieldrin	4.4	P	UG/KG	2.6	Y			
WRL-SD-2039	0	0.5	Dieldrin	4.9	U	UG/KG	2.6	NA			
WRL-SD-2040	0	0.5	Dieldrin	3.8	U	UG/KG	2.6	NA			
WRL-SD-2041	0	0.5	Dieldrin	4.9	U	UG/KG	2.6	NA			
WRL-SD-2041	0	0.2	Dieldrin	7	U	UG/KG	2.6	NA			
WRL-SD-2041	0	0.2	Dieldrin	8	U	UG/KG	2.6	NA			
WRL-SD-4005	0	0.5	Dieldrin	10.02		UG/KG	2.6	Y			
LPX-SD-2046	0	0.5	N-nitroso-di-n-propylamine	2500	U	UG/KG	456	NA	12	0	0.0%
WRL-BK-2004	0	0.5	N-nitroso-di-n-propylamine	1900	U	UG/KG	456	NA			
WRL-BK-2004	0	0.5	N-nitroso-di-n-propylamine	2000	U	UG/KG	456	NA			
WRL-BK-2004	0	0.5	N-nitroso-di-n-propylamine	2500	U	UG/KG	456	NA			
WRL-BK-2005	0	0.5	N-nitroso-di-n-propylamine	400	U	UG/KG	456	NA			
WRL-BK-2005	0	0.5	N-nitroso-di-n-propylamine	3600	U	UG/KG	456	NA			
WRL-SD-2039	0	0.5	N-nitroso-di-n-propylamine	490	U	UG/KG	456	NA			
WRL-SD-2040	0	0.5	N-nitroso-di-n-propylamine	750	U	UG/KG	456	NA			
WRL-SD-2040	0	0.5	N-nitroso-di-n-propylamine	780	U	UG/KG	456	NA			
WRL-SD-2041	0	0.5	N-nitroso-di-n-propylamine	490	U	UG/KG	456	NA			
WRL-SD-2041	0	0.2	N-nitroso-di-n-propylamine	760	U	UG/KG	456	NA			
WRL-SD-2041	0	0.2	N-nitroso-di-n-propylamine	3600	U	UG/KG	456	NA			
AD-05	0	1	Selenium	40.1	U	MG/KG	1.1	NA	17	1	5.9%
LPX-SD-2046	0	0.5	Selenium	1	UJ	MG/KG	1.1	NA			
WRL-BK-2004	0	0.5	Selenium	0.93	U	MG/KG	1.1	NA			
WRL-BK-2004	0	0.5	Selenium	0.97	J	MG/KG	1.1	N			
WRL-BK-2004	0	0.5	Selenium	1.6	U	MG/KG	1.1	NA			
WRL-BK-2005	0	0.5	Selenium	0.96	U	MG/KG	1.1	NA			
WRL-BK-2005	0	0.5	Selenium	1.1	U	MG/KG	1.1	NA			
WRL-BK-2005	0	0.5	Selenium	1.3	U	MG/KG	1.1	NA			
WRL-SD-2039	0	0.5	Selenium	0.93	U	MG/KG	1.1	NA			

Table G-8. Comparison of Lyman Mill Reach Stream Sediment (including Oxbow) Data to Cleanup Goals (Sorted by Parameter, See Figure G-4)

BORING	TOP_OF_SAMPLE	BOTTOM_OF_SAMPLE	PARAMETER	LAB_RESULT	QUAL	UNITS	Cleanup Goal[1]	Above Cleanup Goal (Y/N)	Number Values	Number Values Above Cleanup Goal	% Above Cleanup Goal
WRL-SD-2040	0	0.5	Selenium	0.89	U	MG/KG	1.1	NA			
WRL-SD-2040	0	0.5	Selenium	1	U	MG/KG	1.1	NA			
WRL-SD-2041	0	0.2	Selenium	1.1	U	MG/KG	1.1	NA			
WRL-SD-2041	0	0.2	Selenium	1.2	U	MG/KG	1.1	NA			
WRL-SD-2041	0	0.5	Selenium	1.3	U	MG/KG	1.1	NA			
WRL-SD-2071	0	0.2	Selenium	1.4	J	MG/KG	1.1	Y			
WRL-SD-4005	0	0.5	Selenium	0.456	U	MG/KG	1.1	NA			
WRL-SD-4005	0	0.5	Selenium	0.555	U	MG/KG	1.1	NA			
AD-05	0	1	Technical Chlordane	17	J	UG/KG	400	N	2	1	50.0%
WRL-SD-4005	0	0.5	Technical Chlordane	848.11		UG/KG	400	Y			
AD-05	0	1	TEQ	2810		NG/KG	289	Y	18	13	72.2%
LPX-SD-2046	0	0.5	TEQ	7170		NG/KG	289	Y			
SD-18	0	0.25	TEQ	8030		NG/KG	289	Y			
SD-19	0	0.25	TEQ	20.3		NG/KG	289	N			
WRL-BK-2004	0	0.5	TEQ	390		NG/KG	289	Y			
WRL-BK-2004	0	0.5	TEQ	982		NG/KG	289	Y			
WRL-BK-2004	0	0.5	TEQ	2960		NG/KG	289	Y			
WRL-BK-2005	0	0.5	TEQ	16.6		NG/KG	289	N			
WRL-BK-2005	0	0.5	TEQ	91.6		NG/KG	289	N			
WRL-BK-2005	0	0.5	TEQ	956		NG/KG	289	Y			
WRL-SD-2039	0	0.5	TEQ	2870		NG/KG	289	Y			
WRL-SD-2040	0	0.5	TEQ	60.5		NG/KG	289	N			
WRL-SD-2040	0	0.5	TEQ	81.1		NG/KG	289	N			
WRL-SD-2041	0	0.2	TEQ	500	J	ng/Kg	289	Y			
WRL-SD-2041	0	0.2	TEQ	2000	J	ng/Kg	289	Y			
WRL-SD-2041	0	0.5	TEQ	3170		NG/KG	289	Y			
WRL-SD-2071	0	0.2	TEQ	1800	J	ng/Kg	289	Y			
WRL-SD-4005	0	0.5	TEQ	767		NG/KG	289	Y			
LPX-SD-2046	0	0.5	Vanadium	37.7		MG/KG	37.6	Y	16	6	37.5%
WRL-BK-2004	0	0.5	Vanadium	25.7		MG/KG	37.6	N			
WRL-BK-2004	0	0.5	Vanadium	47		MG/KG	37.6	Y			
WRL-BK-2004	0	0.5	Vanadium	56.1		MG/KG	37.6	Y			
WRL-BK-2005	0	0.5	Vanadium	15.2		MG/KG	37.6	N			
WRL-BK-2005	0	0.5	Vanadium	22.3		MG/KG	37.6	N			
WRL-BK-2005	0	0.5	Vanadium	23		MG/KG	37.6	N			
WRL-SD-2039	0	0.5	Vanadium	10.6		MG/KG	37.6	N			
WRL-SD-2040	0	0.5	Vanadium	4		MG/KG	37.6	N			
WRL-SD-2040	0	0.5	Vanadium	7.3		MG/KG	37.6	N			
WRL-SD-2041	0	0.5	Vanadium	23.6		MG/KG	37.6	N			

Table G-8. Comparison of Lyman Mill Reach Stream Sediment (including Oxbow) Data to Cleanup Goals (Sorted by Parameter, See Figure G-4)

BORING	TOP_OF_SAMPLE	BOTTOM_OF_SAMPLE	PARAMETER	LAB_RESULT	QUAL	UNITS	Cleanup Goal[1]	Above Cleanup Goal (Y/N)	Number Values	Number Values Above Cleanup Goal	% Above Cleanup Goal
WRL-SD-2041	0	0.2	Vanadium	24.2	J	MG/KG	37.6	N			
WRL-SD-2041	0	0.2	Vanadium	27.9	J	MG/KG	37.6	N			
WRL-SD-2071	0	0.2	Vanadium	45.4		MG/KG	37.6	Y			
WRL-SD-4005	0	0.5	Vanadium	42.8		MG/KG	37.6	Y			
WRL-SD-4005	0	0.5	Vanadium	53.1		MG/KG	37.6	Y			
LPX-SD-2046	0	0.5	Zinc	662		MG/KG	221	Y	16	5	31.3%
WRL-BK-2004	0	0.5	Zinc	65	J	MG/KG	221	N			
WRL-BK-2004	0	0.5	Zinc	77.5	J	MG/KG	221	N			
WRL-BK-2004	0	0.5	Zinc	105	J	MG/KG	221	N			
WRL-BK-2005	0	0.5	Zinc	32.9		MG/KG	221	N			
WRL-BK-2005	0	0.5	Zinc	34		MG/KG	221	N			
WRL-BK-2005	0	0.5	Zinc	82	J	MG/KG	221	N			
WRL-SD-2039	0	0.5	Zinc	159		MG/KG	221	N			
WRL-SD-2040	0	0.5	Zinc	56.1		MG/KG	221	N			
WRL-SD-2040	0	0.5	Zinc	61.8		MG/KG	221	N			
WRL-SD-2041	0	0.2	Zinc	237		MG/KG	221	Y			
WRL-SD-2041	0	0.2	Zinc	256		MG/KG	221	Y			
WRL-SD-2041	0	0.5	Zinc	260		MG/KG	221	Y			
WRL-SD-2071	0	0.2	Zinc	353		MG/KG	221	Y			
WRL-SD-4005	0	0.5	Zinc	172	J	MG/KG	221	N			
WRL-SD-4005	0	0.5	Zinc	204	J	MG/KG	221	N			

Notes

[1] Dioxin cleanup goal developed for Allendale and Lyman Mill sediment (Table 3-3 of the 2010 FS) used to delineate sediment areas within the Oxbow area for cleanup. Cleanup goals developed for Allendale and Lyman Mill sediment (Table 3-3 of 2010 FS, all contaminants) used to delineate areas for cleanup in the stream channel.

Non-detects (U and UJ qualified data) not used to determine proposed areas for cleanup.

Shading represents the first record within each parameter-specific dataset; summary statistics including the number of values and the number and % of values above the cleanup goal are reported.

Key

NA - not applicable; N - No; Y - Yes; MG/KG - milligrams per kilogram; NG/KG - nanograms per kilogram; PG/G - picograms per kilogram; UG/KG - micrograms per kilogram.

Table G-9. Comparison of Lyman Mill Reach Floodplain Soil Data to Cleanup Goals
(Sorted by Parameter, See Figure G-4)

BORING	TOP_OF_SAMPLE	BOTTOM_OF_SAMPLE	PARAMETER (a)	LAB_RESULT	QUAL	UNITS	Cleanup Goal	Above Cleanup Goal (Y/N) (b)	Number Values	Number Values Above Cleanup Goal	% Above Cleanup Goal	Comment
CMS-217	0	0.25	2,3,7,8-TCDD	2420		NG/KG	34.6	Y	186	62	33.3%	
CMS-217	0	0.25	2,3,7,8-TCDD	5030		NG/KG	34.6	Y				
CMS-218	0	0.25	2,3,7,8-TCDD	2290		NG/KG	34.6	Y				
CMS-219	0	0.25	2,3,7,8-TCDD	2220		NG/KG	34.6	Y				
CMS-457	0	1	2,3,7,8-TCDD	3800		NG/KG	34.6	Y				
CMS-458	0	1	2,3,7,8-TCDD	720		NG/KG	34.6	Y				
CMS-459	0	1	2,3,7,8-TCDD	130	J	NG/KG	34.6	Y				
CMS-468	0	1	2,3,7,8-TCDD	6.95		NG/KG	34.6	N				
LPX-4112	0	0.5	2,3,7,8-TCDD	2.01		PG/G_DRYWT	34.6	N				
LPX-4113	0	0.5	2,3,7,8-TCDD	3.18		PG/G_DRYWT	34.6	N				
LPX-4114	0	0.5	2,3,7,8-TCDD	2.65		PG/G_DRYWT	34.6	N				
LPX-FP-4004	0	0.5	2,3,7,8-TCDD	1130.07		NG/KG	34.6	Y				
LPX-FP-4006	0	0.5	2,3,7,8-TCDD	123.29		NG/KG	34.6	Y				Not in footprint (1)
LPX-FP-4007	0	0.5	2,3,7,8-TCDD	19.71	UJ	NG/KG	34.6	NA				
LPX-SD-4404	0	0.5	2,3,7,8-TCDD	12.2		PG/G_DRYWT	34.6	N				
LPX-SD-4405	0	0.5	2,3,7,8-TCDD	4270	J#	PG/G_DRYWT	34.6	Y				
LPX-SD-4406	0	0.5	2,3,7,8-TCDD	1800	#	PG/G_DRYWT	34.6	Y				
LPX-SD-4407	0	0.5	2,3,7,8-TCDD	2070	#	PG/G_DRYWT	34.6	Y				
RES-10-004-01	0	1	2,3,7,8-TCDD	113	J	NG/KG	34.6	Y				Not in footprint (1)
RES-10-004-02	0	1	2,3,7,8-TCDD	4.4		NG/KG	34.6	N				
RES-10-004-03	0	1	2,3,7,8-TCDD	0.6	U	NG/KG	34.6	NA				
RES-10-005-01	0	1	2,3,7,8-TCDD	148		NG/KG	34.6	Y				Not in footprint (1)
RES-10-005-02	0	1	2,3,7,8-TCDD	6.3		NG/KG	34.6	N				
RES-10-005-03	0	1	2,3,7,8-TCDD	0.86	EMPC	NG/KG	34.6	N				
RES-10-042-01	0	1	2,3,7,8-TCDD	161		NG/KG	34.6	Y				
RES-10-042-02	0	1	2,3,7,8-TCDD	2		NG/KG	34.6	N				
RES-10-042-03	0	1	2,3,7,8-TCDD	2		NG/KG	34.6	N				
RES-10-044-01	0	1	2,3,7,8-TCDD	496	&	NG/KG	34.6	Y				
RES-10-044-02	0	1	2,3,7,8-TCDD	58.6		NG/KG	34.6	Y				
RES-10-044-03	0	1	2,3,7,8-TCDD	8.4		NG/KG	34.6	N				
RES-10-053-01	0	1	2,3,7,8-TCDD	32.7		NG/KG	34.6	N				
RES-10-053-02	0	1	2,3,7,8-TCDD	6		NG/KG	34.6	N				
RES-10-053-03	0	1	2,3,7,8-TCDD	1.8	U	NG/KG	34.6	NA				
RES-10-053-03	0	1	2,3,7,8-TCDD	1.3	J	NG/KG	34.6	N				
RES-10-068-01	0	1	2,3,7,8-TCDD	18.5		NG/KG	34.6	N				
RES-10-068-02	0	1	2,3,7,8-TCDD	5		NG/KG	34.6	N				
RES-10-068-03	0	1	2,3,7,8-TCDD	10.6		NG/KG	34.6	N				
RES-10-074-01	0	1	2,3,7,8-TCDD	5.2	J	NG/KG	34.6	N				

Table G-9. Comparison of Lyman Mill Reach Floodplain Soil Data to Cleanup Goals
(Sorted by Parameter, See Figure G-4)

BORING	TOP_OF_SAMPLE	BOTTOM_OF_SAMPLE	PARAMETER (a)	LAB_RESULT	QUAL	UNITS	Cleanup Goal	Above Cleanup Goal (Y/N) (b)	Number Values	Number Values Above Cleanup Goal	% Above Cleanup Goal	Comment
RES-10-074-01	0	1	2,3,7,8-TCDD	14.7	J	NG/KG	34.6	N				
RES-10-074-02	0	1	2,3,7,8-TCDD	59.1		NG/KG	34.6	Y				Not in footprint (1)
RES-10-074-03	0	1	2,3,7,8-TCDD	5.4		NG/KG	34.6	N				
RES-10-075-01	0	1	2,3,7,8-TCDD	11.7		NG/KG	34.6	N				
RES-10-075-01	0	1	2,3,7,8-TCDD	8.5		NG/KG	34.6	N				
RES-10-075-02	0	1	2,3,7,8-TCDD	1.2		NG/KG	34.6	N				
RES-10-075-03	0	1	2,3,7,8-TCDD	2.7		NG/KG	34.6	N				
RES-10-076-01	0	1	2,3,7,8-TCDD	106	J	NG/KG	34.6	Y				Not in footprint (1)
RES-10-076-02	0	1	2,3,7,8-TCDD	11.5		NG/KG	34.6	N				
RES-10-076-03	0	1	2,3,7,8-TCDD	1.4		NG/KG	34.6	N				
RES-10-604-01	0	1	2,3,7,8-TCDD	241		NG/KG	34.6	Y				
RES-10-604-01	0	1	2,3,7,8-TCDD	204		NG/KG	34.6	Y				
RES-10-604-02	0	1	2,3,7,8-TCDD	49.7		NG/KG	34.6	Y				
RES-10-604-03	0	1	2,3,7,8-TCDD	1.7		NG/KG	34.6	N				
RES-11-011-01	0	1	2,3,7,8-TCDD	5.7	J	NG/KG	34.6	N				
RES-11-011-02	0	1	2,3,7,8-TCDD	3.1	J	NG/KG	34.6	N				
RES-11-011-03	0	1	2,3,7,8-TCDD	0.75	J	NG/KG	34.6	N				
RES-11-011-03	0	1	2,3,7,8-TCDD	1		NG/KG	34.6	N				
RES-11-012-01	0	1	2,3,7,8-TCDD	7.7	J	NG/KG	34.6	N				
RES-11-012-02	0	1	2,3,7,8-TCDD	0.5	J	NG/KG	34.6	N				
RES-11-012-03	0	1	2,3,7,8-TCDD	0.69	J	NG/KG	34.6	N				
RES-11-328-01	0	1	2,3,7,8-TCDD	371	EB	NG/KG	34.6	Y				Not in footprint (1)
RES-11-328-01	0	1	2,3,7,8-TCDD	335		NG/KG	34.6	Y				Not in footprint (1)
RES-11-328-02	0	1	2,3,7,8-TCDD	12.2	EB	NG/KG	34.6	N				
RES-11-328-03	0	1	2,3,7,8-TCDD	1.5	EB	NG/KG	34.6	N				
RES-11-396-02	0	1	2,3,7,8-TCDD	49.1	EB	NG/KG	34.6	Y				Not in footprint (1)
RES-11-396-03	0	1	2,3,7,8-TCDD	3.8	EB	NG/KG	34.6	N				
RES-11-419-01	0	1	2,3,7,8-TCDD	585	$	NG/KG	34.6	Y				Not in footprint (1)
RES-11-419-02	0	1	2,3,7,8-TCDD	144		NG/KG	34.6	Y				
RES-11-419-03	0	1	2,3,7,8-TCDD	1.1		NG/KG	34.6	N				
RES-11-420-01	0	1	2,3,7,8-TCDD	10	EB	NG/KG	34.6	N				
RES-11-420-02	0	1	2,3,7,8-TCDD	2.4	EB	NG/KG	34.6	N				
RES-11-420-03	0	1	2,3,7,8-TCDD	0.3	U	NG/KG	34.6	NA				
RES-11-420-03	0	1	2,3,7,8-TCDD	0.32	JEB	NG/KG	34.6	N				
RES-11-420-04	0	1	2,3,7,8-TCDD	103	EB	NG/KG	34.6	Y				Not in footprint (1)
RES-11-422-01	0	1	2,3,7,8-TCDD	37.6	EB	NG/KG	34.6	Y				Not in footprint (1)
RES-11-422-02	0	1	2,3,7,8-TCDD	4.8	EB	NG/KG	34.6	N				
RES-11-422-03	0	1	2,3,7,8-TCDD	3.1	EB	NG/KG	34.6	N				

Table G-9. Comparison of Lyman Mill Reach Floodplain Soil Data to Cleanup Goals
(Sorted by Parameter, See Figure G-4)

BORING	TOP_OF_SAMPLE	BOTTOM_OF_SAMPLE	PARAMETER (a)	LAB_RESULT	QUAL	UNITS	Cleanup Goal	Above Cleanup Goal (Y/N) (b)	Number Values	Number Values Above Cleanup Goal	% Above Cleanup Goal	Comment
RES-11-423-01	0	1	2,3,7,8-TCDD	13.1	EB	NG/KG	34.6	N				
RES-11-423-02	0	1	2,3,7,8-TCDD	0.43	JEB	NG/KG	34.6	N				
RES-11-423-03	0	1	2,3,7,8-TCDD	0.31	EMPC	NG/KG	34.6	N				
RES-11-424-01	0	1	2,3,7,8-TCDD	21.7		NG/KG	34.6	N				
RES-11-424-02	0	1	2,3,7,8-TCDD	5.2		NG/KG	34.6	N				
RES-11-424-03	0	1	2,3,7,8-TCDD	24.1		NG/KG	34.6	N				
RES-11-425-02	0	1	2,3,7,8-TCDD	9.9	EB	NG/KG	34.6	N				
RES-11-425-03	0	1	2,3,7,8-TCDD	0.68	JEB	NG/KG	34.6	N				
RES-11-425-03	0	1	2,3,7,8-TCDD	1.9	EB	NG/KG	34.6	N				
RES-11-426-01	0	1	2,3,7,8-TCDD	31.9	EB	NG/KG	34.6	N				
RES-11-426-02	0	1	2,3,7,8-TCDD	1.3	EB	NG/KG	34.6	N				
RES-11-426-03	0	1	2,3,7,8-TCDD	0.3	U	NG/KG	34.6	NA				
RES-11-427-01	0	1	2,3,7,8-TCDD	0.26	JEB	NG/KG	34.6	N				
RES-11-427-02	0	1	2,3,7,8-TCDD	0.32	JEB	NG/KG	34.6	N				
RES-11-427-03	0	1	2,3,7,8-TCDD	0.3	U	NG/KG	34.6	NA				
RES-11-428-01	0	1	2,3,7,8-TCDD	3	EB	NG/KG	34.6	N				
RES-11-428-02	0	1	2,3,7,8-TCDD	2.8	EB	NG/KG	34.6	N				
RES-11-428-03	0	1	2,3,7,8-TCDD	1.6	EB	NG/KG	34.6	N				
RES-11-428-03	0	1	2,3,7,8-TCDD	2.2	EB	NG/KG	34.6	N				
RES-11-428-G	0	1	2,3,7,8-TCDD	0.28	EMPC	NG/KG	34.6	N				
RES-11-429-01	0	1	2,3,7,8-TCDD	11.3	JEB	NG/KG	34.6	N				
RES-11-429-02	0	1	2,3,7,8-TCDD	4.1	EB	NG/KG	34.6	N				
RES-11-430-01	0	1	2,3,7,8-TCDD	1	EMPC	NG/KG	34.6	N				
RES-11-430-02	0	1	2,3,7,8-TCDD	6.3	EB	NG/KG	34.6	N				
RES-11-430-03	0	1	2,3,7,8-TCDD	0.64	JEB	NG/KG	34.6	N				
RES-11-431-01	0	1	2,3,7,8-TCDD	30.4	EB	NG/KG	34.6	N				
RES-11-431-02	0	1	2,3,7,8-TCDD	26.9	EB	NG/KG	34.6	N				
RES-11-431-03	0	1	2,3,7,8-TCDD	1.1	EMPC	NG/KG	34.6	N				
RES-11-432-01	0	1	2,3,7,8-TCDD	65.5	JEB	NG/KG	34.6	Y				
RES-11-432-01	0	1	2,3,7,8-TCDD	118	EB	NG/KG	34.6	Y				
RES-11-432-02	0	1	2,3,7,8-TCDD	2.7		NG/KG	34.6	N				
RES-11-432-03	0	1	2,3,7,8-TCDD	5.1		NG/KG	34.6	N				
RES-11-433-01	0	1	2,3,7,8-TCDD	46.1		NG/KG	34.6	Y				
RES-11-433-02	0	1	2,3,7,8-TCDD	72.8		NG/KG	34.6	Y				
RES-11-433-03	0	1	2,3,7,8-TCDD	11.4	EB	NG/KG	34.6	N				
RES-11-486-01	0	1	2,3,7,8-TCDD	23.9	EB	NG/KG	34.6	N				
RES-11-486-01	0	1	2,3,7,8-TCDD	27.3	EB	NG/KG	34.6	N				
RES-11-486-02	0	1	2,3,7,8-TCDD	60	EB	NG/KG	34.6	Y				Not in footprint (1)

Table G-9. Comparison of Lyman Mill Reach Floodplain Soil Data to Cleanup Goals
(Sorted by Parameter, See Figure G-4)

BORING	TOP_OF_SAMPLE	BOTTOM_OF_SAMPLE	PARAMETER (a)	LAB_RESULT	QUAL	UNITS	Cleanup Goal	Above Cleanup Goal (Y/N) (b)	Number Values	Number Values Above Cleanup Goal	% Above Cleanup Goal	Comment
RES-11-486-03	0	1	2,3,7,8-TCDD	9.5	EB	NG/KG	34.6	N				
RES-11-497-01	0	1	2,3,7,8-TCDD	7	J	NG/KG	34.6	N				
RES-11-497-02	0	1	2,3,7,8-TCDD	4.1	J	NG/KG	34.6	N				
RES-11-497-03	0	1	2,3,7,8-TCDD	2.2	J	NG/KG	34.6	N				
RES-11-577-01	0	1	2,3,7,8-TCDD	401		NG/KG	34.6	Y				Not in footprint (1)
RES-11-577-01	0	1	2,3,7,8-TCDD	305	$	NG/KG	34.6	Y				Not in footprint (1)
RES-11-577-02	0	1	2,3,7,8-TCDD	41.7		NG/KG	34.6	Y				Not in footprint (1)
RES-11-577-03	0	1	2,3,7,8-TCDD	8.4		NG/KG	34.6	N				
RES-12-556-01	0	1	2,3,7,8-TCDD	24.9	JEB	NG/KG	34.6	N				
RES-12-556-02	0	1	2,3,7,8-TCDD	6	EB	NG/KG	34.6	N				
SS_G-01	0	1	2,3,7,8-TCDD	11500	R	PG/G_DRY	34.6	NA				
SS_G-01	0	1	2,3,7,8-TCDD	2470		PG/G_DRY	34.6	Y				
SS_G-01	0	1	2,3,7,8-TCDD	2080	R	PG/G_DRY	34.6	NA				
SS_G-01	0	1	2,3,7,8-TCDD	2600		PG/G_DRY	34.6	Y				
SS_G-01	1	2	2,3,7,8-TCDD	329		PG/G_DRY	34.6	Y				
SS_G-01-01	0	1	2,3,7,8-TCDD	4870	J	PG/G_DRY	34.6	Y				
SS_G-01-02	0	1	2,3,7,8-TCDD	3470	J	PG/G_DRY	34.6	Y				
SS_G-01-03	0	1	2,3,7,8-TCDD	14600	J	PG/G_DRY	34.6	Y				
SS_G-01-04	0	1	2,3,7,8-TCDD	14.8		PG/G_DRY	34.6	N				
SS_G-02	0	1	2,3,7,8-TCDD	3.12		PG/G_DRY	34.6	N				
SS_G-03	0	1	2,3,7,8-TCDD	233		PG/G_DRY	34.6	Y				
SS_G-04	0	1	2,3,7,8-TCDD	491		PG/G_DRY	34.6	Y				
SS_G-05	0	1	2,3,7,8-TCDD	44.6		PG/G_DRY	34.6	Y				
SS_G-05	1	2	2,3,7,8-TCDD	10.3		PG/G_DRY	34.6	N				
SS_G-06	0	1	2,3,7,8-TCDD	7.95		PG/G_DRY	34.6	N				
SS_G-07	0	1	2,3,7,8-TCDD	2060		PG/G_DRY	34.6	Y				
SS_G-08	0	1	2,3,7,8-TCDD	585	J	PG/G_DRY	34.6	Y				
SS_G-09	0	1	2,3,7,8-TCDD	2270		PG/G_DRY	34.6	Y				
SS_G-10	0	1	2,3,7,8-TCDD	6		PG/G_DRY	34.6	N				
SS_G-12	0	1	2,3,7,8-TCDD	68.5		PG/G_DRY	34.6	Y				
SS_G-13	0	1	2,3,7,8-TCDD	571	J	PG/G_DRY	34.6	Y				
SS_G-13	0	1	2,3,7,8-TCDD	641	J	PG/G_DRY	34.6	Y				
SS_G-14	0	1	2,3,7,8-TCDD	390		PG/G_DRY	34.6	Y				
SS_G-15	0	1	2,3,7,8-TCDD	392		PG/G_DRY	34.6	Y				
SS_G-18	0	1	2,3,7,8-TCDD	1190		PG/G_DRY	34.6	Y				
SS_G-23	0	1	2,3,7,8-TCDD	1000		PG/G_DRY	34.6	Y				
SS_G-26	0	1	2,3,7,8-TCDD	590	J	PG/G_DRY	34.6	Y				
SS_G-26	1	2	2,3,7,8-TCDD	14.9		PG/G_DRY	34.6	N				

Table G-9. Comparison of Lyman Mill Reach Floodplain Soil Data to Cleanup Goals
(Sorted by Parameter, See Figure G-4)

BORING	TOP_OF_SAMPLE	BOTTOM_OF_SAMPLE	PARAMETER (a)	LAB_RESULT	QUAL	UNITS	Cleanup Goal	Above Cleanup Goal (Y/N) (b)	Number Values	Number Values Above Cleanup Goal	% Above Cleanup Goal	Comment
SS_G-29	0	1	2,3,7,8-TCDD	5130		PG/G_DRY	34.6	Y				
SS_G-29-01	0	1	2,3,7,8-TCDD	12600	J	PG/G_DRY	34.6	Y				
SS_G-29-02	0	1	2,3,7,8-TCDD	794	J	PG/G_DRY	34.6	Y				
SS_G-30	0	1	2,3,7,8-TCDD	1.21		PG/G_DRY	34.6	N				
SS_G-31	0	1	2,3,7,8-TCDD	2.44		PG/G_DRY	34.6	N				
SS_G-32	0	1	2,3,7,8-TCDD	132		PG/G_DRY	34.6	Y				
SS_G-33	0	1	2,3,7,8-TCDD	0.116	U	PG/G_DRY	34.6	NA				
SS_H-01	0	1	2,3,7,8-TCDD	3.69		PG/G_DRY	34.6	N				
SS_H-03	0	1	2,3,7,8-TCDD	0.717		PG/G_DRY	34.6	N				
SS_H-06	0	1	2,3,7,8-TCDD	1.96		PG/G_DRY	34.6	N				
SS_H-07	0	1	2,3,7,8-TCDD	1.92		PG/G_DRY	34.6	N				
SS_H-10	0	1	2,3,7,8-TCDD	1.25		PG/G_DRY	34.6	N				
SS_H-13	0	1	2,3,7,8-TCDD	7.9		PG/G_DRY	34.6	N				
SS_H-16	0	1	2,3,7,8-TCDD	1.89		PG/G_DRY	34.6	N				
SS_H-18	0	1	2,3,7,8-TCDD	3.62		PG/G_DRY	34.6	N				
SS_H-18	0	1	2,3,7,8-TCDD	5.39		PG/G_DRY	34.6	N				
SS_H-19	0	1	2,3,7,8-TCDD	2.2		PG/G_DRY	34.6	N				
SS_H-22	0	1	2,3,7,8-TCDD	1.67		PG/G_DRY	34.6	N				
SS-99-07	0	0.25	2,3,7,8-TCDD	478	U	NG/KG	34.6	NA				
SS-99-08	0	0.25	2,3,7,8-TCDD	414	U	NG/KG	34.6	NA				
SS-99-09	0	0.25	2,3,7,8-TCDD	405	U	NG/KG	34.6	NA				
SS-99-10	0	0.25	2,3,7,8-TCDD	332	U	NG/KG	34.6	NA				
SS-99-11	0	0.25	2,3,7,8-TCDD	395	U	NG/KG	34.6	NA				
SS-99-12	0	0.25	2,3,7,8-TCDD	375	U	NG/KG	34.6	NA				
SS-99-13	0	0.25	2,3,7,8-TCDD	405	U	NG/KG	34.6	NA				
SS-99-14	0	0.25	2,3,7,8-TCDD	397	U	NG/KG	34.6	NA				
SS-99-15	0	0.25	2,3,7,8-TCDD	493	U	NG/KG	34.6	NA				
SS-99-16	0	0.25	2,3,7,8-TCDD	437	U	NG/KG	34.6	NA				
SS-99-21	0	0.25	2,3,7,8-TCDD	0.231	EMPC	NG/KG	34.6	N				
SS-99-22	0	0.25	2,3,7,8-TCDD	0.0948	EMPC	NG/KG	34.6	N				
SS-99-23	0	0.25	2,3,7,8-TCDD	0.388	EMPC	NG/KG	34.6	N				
SS-99-24	0	0.25	2,3,7,8-TCDD	1.18	EMPC	NG/KG	34.6	N				
SS-99-25	0	0.25	2,3,7,8-TCDD	1.11	EMPC	NG/KG	34.6	N				
WRL-SD-2038	0	0.5	2,3,7,8-TCDD	611	$	NG/KG	34.6	Y				
LPX-4112	0	0.5	4,4'-DDE	12.47		NG/G_DRYWT	13.3	N	89	16	18.0%	
LPX-4112	0	0.5	4,4'-DDE	11.40		NG/G_DRYWT	13.3	N				
LPX-4113	0	0.5	4,4'-DDE	17.12		NG/G_DRYWT	13.3	Y				Not in footprint (1)
LPX-4114	0	0.5	4,4'-DDE	9.05		NG/G_DRYWT	13.3	N				

Table G-9. Comparison of Lyman Mill Reach Floodplain Soil Data to Cleanup Goals
(Sorted by Parameter, See Figure G-4)

BORING	TOP_OF_SAMPLE	BOTTOM_OF_SAMPLE	PARAMETER (a)	LAB_RESULT	QUAL	UNITS	Cleanup Goal	Above Cleanup Goal (Y/N) (b)	Number Values	Number Values Above Cleanup Goal	% Above Cleanup Goal	Comment
LPX-FP-4004	0	0.5	4,4'-DDE	5.05		UG/KG	13.3	N				
LPX-FP-4004	0	0.5	4,4'-DDE	36.33	J	UG/KG	13.3	Y				
LPX-FP-4006	0	0.5	4,4'-DDE	13.77	J	UG/KG	13.3	Y				Not in footprint (1)
LPX-FP-4007	0	0.5	4,4'-DDE	31.59		UG/KG	13.3	Y				
LPX-SD-4404	0	0.5	4,4'-DDE	6.42		NG/G_DRY	13.3	N				
LPX-SD-4407	0	0.5	4,4'-DDE	42.36		NG/G_DRY	13.3	Y				
RES-10-004-01	0	1	4,4'-DDE	4.7	U	UG/KG	13.3	NA				
RES-10-005-01	0	1	4,4'-DDE	31		UG/KG	13.3	Y				Not in footprint (1)
RES-10-042-01	0	1	4,4'-DDE	8.1	U	UG/KG	13.3	NA				
RES-10-044-01	0	1	4,4'-DDE	33		UG/KG	13.3	Y				
RES-10-044-01	0	1	4,4'-DDE	39		UG/KG	13.3	Y				
RES-10-053-01	0	1	4,4'-DDE	5.1	U	UG/KG	13.3	NA				
RES-10-053-01	0	1	4,4'-DDE	4.8	U	UG/KG	13.3	NA				
RES-10-068-01	0	1	4,4'-DDE	6.4		UG/KG	13.3	N				
RES-10-074-01	0	1	4,4'-DDE	5	U	UG/KG	13.3	NA				
RES-10-075-01	0	1	4,4'-DDE	4.6	U	UG/KG	13.3	NA				
RES-10-076-01	0	1	4,4'-DDE	4.8	U	UG/KG	13.3	NA				
RES-10-604-01	0	1	4,4'-DDE	13		UG/KG	13.3	N				
RES-11-011-01	0	1	4,4'-DDE	5.4	U	UG/KG	13.3	NA				
RES-11-012-01	0	1	4,4'-DDE	21	P	UG/KG	13.3	Y				
RES-11-328-01	0	1	4,4'-DDE	21		UG/KG	13.3	Y				Not in footprint (1)
RES-11-419-01	0	1	4,4'-DDE	23		UG/KG	13.3	Y				Not in footprint (1)
RES-11-420-01	0	1	4,4'-DDE	4.9		UG/KG	13.3	N				
RES-11-422-01	0	1	4,4'-DDE	4.7	U	UG/KG	13.3	NA				
RES-11-423-01	0	1	4,4'-DDE	4.1	U	UG/KG	13.3	NA				
RES-11-424-01	0	1	4,4'-DDE	22		UG/KG	13.3	Y				Not in footprint (1)
RES-11-426-01	0	1	4,4'-DDE	3.7	U	UG/KG	13.3	NA				
RES-11-427-01	0	1	4,4'-DDE	3.5	U	UG/KG	13.3	NA				
RES-11-428-01	0	1	4,4'-DDE	4.6		UG/KG	13.3	N				
RES-11-429-01	0	1	4,4'-DDE	4	U	UG/KG	13.3	NA				
RES-11-430-01	0	1	4,4'-DDE	3.8	U	UG/KG	13.3	NA				
RES-11-431-01	0	1	4,4'-DDE	4.1	U	UG/KG	13.3	NA				
RES-11-432-01	0	1	4,4'-DDE	6.9	U	UG/KG	13.3	NA				
RES-11-486-01	0	1	4,4'-DDE	56		UG/KG	13.3	Y				Not in footprint (1)
RES-11-497-01	0	1	4,4'-DDE	4.4	U	UG/KG	13.3	NA				
RES-11-577-01	0	1	4,4'-DDE	12		UG/KG	13.3	N				
RES-12-556-01	0	1	4,4'-DDE	1000		UG/KG	13.3	Y				
RES-12-560-01	0	1	4,4'-DDE	5.2		UG/KG	13.3	N				

Table G-9. Comparison of Lyman Mill Reach Floodplain Soil Data to Cleanup Goals
(Sorted by Parameter, See Figure G-4)

BORING	TOP_OF_SAMPLE	BOTTOM_OF_SAMPLE	PARAMETER (a)	LAB_RESULT	QUAL	UNITS	Cleanup Goal	Above Cleanup Goal (Y/N) (b)	Number Values	Number Values Above Cleanup Goal	% Above Cleanup Goal	Comment
RES-12-560-02	0	1	4,4'-DDE	5.4		UG/KG	13.3	N				
SS_G-01	0	1	4,4'-DDE	3.6	U	UG/KG_DRY	13.3	NA				
SS_G-01	0	1	4,4'-DDE	4	U	UG/KG_DRY	13.3	NA				
SS_G-01	1	2	4,4'-DDE	0.97	U	UG/KG_DRY	13.3	NA				
SS_G-01-01	0	1	4,4'-DDE	7.3		UG/KG_DRY	13.3	N				
SS_G-01-02	0	1	4,4'-DDE	1	R	UG/KG_DRY	13.3	NA				
SS_G-01-02	0	1	4,4'-DDE	3.7	UJ	UG/KG_DRY	13.3	NA				
SS_G-01-03	0	1	4,4'-DDE	7.8	U	UG/KG_DRY	13.3	NA				
SS_G-01-04	0	1	4,4'-DDE	0.91	J	UG/KG_DRY	13.3	N				
SS_G-02	0	1	4,4'-DDE	1.8		UG/KG_DRY	13.3	N				
SS_G-03	0	1	4,4'-DDE	1.7		UG/KG_DRY	13.3	N				
SS_G-04	0	1	4,4'-DDE	5.8	J	UG/KG_DRY	13.3	N				
SS_G-05	0	1	4,4'-DDE	1.2		UG/KG_DRY	13.3	N				
SS_G-05	1	2	4,4'-DDE	0.7		UG/KG_DRY	13.3	N				
SS_G-06	0	1	4,4'-DDE	1		UG/KG_DRY	13.3	N				
SS_G-07	0	1	4,4'-DDE	12		UG/KG_DRY	13.3	N				
SS_G-08	0	1	4,4'-DDE	6.3		UG/KG_DRY	13.3	N				
SS_G-09	0	1	4,4'-DDE	14		UG/KG_DRY	13.3	Y				
SS_G-10	0	1	4,4'-DDE	3.3		UG/KG_DRY	13.3	N				
SS_G-12	0	1	4,4'-DDE	1.2	U	UG/KG_DRY	13.3	NA				
SS_G-13	0	1	4,4'-DDE	2.4		UG/KG_DRY	13.3	N				
SS_G-13	0	1	4,4'-DDE	2.3		UG/KG_DRY	13.3	N				
SS_G-14	0	1	4,4'-DDE	1.9		UG/KG_DRY	13.3	N				
SS_G-15	0	1	4,4'-DDE	1.7		UG/KG_DRY	13.3	N				
SS_G-18	0	1	4,4'-DDE	6.5		UG/KG_DRY	13.3	N				
SS_G-23	0	1	4,4'-DDE	5.3		UG/KG_DRY	13.3	N				
SS_G-26	0	1	4,4'-DDE	2.6		UG/KG_DRY	13.3	N				
SS_G-26	1	2	4,4'-DDE	0.26	J	UG/KG_DRY	13.3	N				
SS_G-29	0	1	4,4'-DDE	5.2	J	UG/KG_DRY	13.3	N				
SS_G-29-01	0	1	4,4'-DDE	11		UG/KG_DRY	13.3	N				
SS_G-29-02	0	1	4,4'-DDE	2.4		UG/KG_DRY	13.3	N				
SS_G-30	0	1	4,4'-DDE	36		UG/KG_DRY	13.3	Y				
SS_G-31	0	1	4,4'-DDE	8.5	J	UG/KG_DRY	13.3	N				
SS_G-32	0	1	4,4'-DDE	8.8		UG/KG_DRY	13.3	N				
SS_G-33	0	1	4,4'-DDE	1.1		UG/KG_DRY	13.3	N				
SS_H-01	0	1	4,4'-DDE	2.2		UG/KG_DRY	13.3	N				
SS_H-03	0	1	4,4'-DDE	0.49	J	UG/KG_DRY	13.3	N				
SS_H-06	0	1	4,4'-DDE	0.46	J	UG/KG_DRY	13.3	N				

Table G-9. Comparison of Lyman Mill Reach Floodplain Soil Data to Cleanup Goals
(Sorted by Parameter, See Figure G-4)

BORING	TOP_OF_SAMPLE	BOTTOM_OF_SAMPLE	PARAMETER (a)	LAB_RESULT	QUAL	UNITS	Cleanup Goal	Above Cleanup Goal (Y/N) (b)	Number Values	Number Values Above Cleanup Goal	% Above Cleanup Goal	Comment
SS_H-07	0	1	4,4'-DDE	1.2		UG/KG_DRY	13.3	N				
SS_H-10	0	1	4,4'-DDE	0.4	J	UG/KG_DRY	13.3	N				
SS_H-13	0	1	4,4'-DDE	2.4		UG/KG_DRY	13.3	N				
SS_H-16	0	1	4,4'-DDE	0.57		UG/KG_DRY	13.3	N				
SS_H-18	0	1	4,4'-DDE	2.9		UG/KG_DRY	13.3	N				
SS_H-18	0	1	4,4'-DDE	3		UG/KG_DRY	13.3	N				
SS_H-19	0	1	4,4'-DDE	2.5		UG/KG_DRY	13.3	N				
SS_H-22	0	1	4,4'-DDE	0.88		UG/KG_DRY	13.3	N				
WRL-SD-2038	0	0.5	4,4'-DDE	4.2	U	UG/KG	13.3	NA				
LPX-4112	0	0.5	4,4'-DDT	27.19	J	NG/G_DRYWT	100	N	89	1	1.1%	
LPX-4112	0	0.5	4,4'-DDT	22.82	J	NG/G_DRYWT	100	N				
LPX-4113	0	0.5	4,4'-DDT	22.20	J	NG/G_DRYWT	100	N				
LPX-4114	0	0.5	4,4'-DDT	16.83	J	NG/G_DRYWT	100	N				
LPX-FP-4004	0	0.5	4,4'-DDT	3.04		UG/KG	100	N				
LPX-FP-4004	0	0.5	4,4'-DDT	14.45	J	UG/KG	100	N				
LPX-FP-4006	0	0.5	4,4'-DDT	8.31	J	UG/KG	100	N				
LPX-FP-4007	0	0.5	4,4'-DDT	43.13		UG/KG	100	N				
LPX-SD-4404	0	0.5	4,4'-DDT	0.96	J	NG/G_DRY	100	N				
LPX-SD-4407	0	0.5	4,4'-DDT	2.76	J	NG/G_DRY	100	N				
RES-10-004-01	0	1	4,4'-DDT	4.7	U	UG/KG	100	NA				
RES-10-005-01	0	1	4,4'-DDT	6.6	J	UG/KG	100	N				
RES-10-042-01	0	1	4,4'-DDT	8.1	U	UG/KG	100	NA				
RES-10-044-01	0	1	4,4'-DDT	12		UG/KG	100	N				
RES-10-044-01	0	1	4,4'-DDT	14		UG/KG	100	N				
RES-10-053-01	0	1	4,4'-DDT	5.1	U	UG/KG	100	NA				
RES-10-053-01	0	1	4,4'-DDT	4.8	U	UG/KG	100	NA				
RES-10-068-01	0	1	4,4'-DDT	9.2		UG/KG	100	N				
RES-10-074-01	0	1	4,4'-DDT	7.2		UG/KG	100	N				
RES-10-075-01	0	1	4,4'-DDT	4.6	U	UG/KG	100	NA				
RES-10-076-01	0	1	4,4'-DDT	14		UG/KG	100	N				
RES-10-604-01	0	1	4,4'-DDT	7.8		UG/KG	100	N				
RES-11-011-01	0	1	4,4'-DDT	5.4	U	UG/KG	100	NA				
RES-11-012-01	0	1	4,4'-DDT	27		UG/KG	100	N				
RES-11-328-01	0	1	4,4'-DDT	5.4	U	UG/KG	100	NA				
RES-11-419-01	0	1	4,4'-DDT	7.9	J	UG/KG	100	N				
RES-11-420-01	0	1	4,4'-DDT	4.6	U	UG/KG	100	NA				
RES-11-422-01	0	1	4,4'-DDT	4.7	U	UG/KG	100	NA				
RES-11-423-01	0	1	4,4'-DDT	4.1	U	UG/KG	100	NA				

Table G-9. Comparison of Lyman Mill Reach Floodplain Soil Data to Cleanup Goals
(Sorted by Parameter, See Figure G-4)

BORING	TOP_OF_SAMPLE	BOTTOM_OF_SAMPLE	PARAMETER (a)	LAB_RESULT	QUAL	UNITS	Cleanup Goal	Above Cleanup Goal (Y/N) (b)	Number Values	Number Values Above Cleanup Goal	% Above Cleanup Goal	Comment
RES-11-424-01	0	1	4,4'-DDT	6.1		UG/KG	100	N				
RES-11-426-01	0	1	4,4'-DDT	3.7	U	UG/KG	100	NA				
RES-11-427-01	0	1	4,4'-DDT	2.9	J	UG/KG	100	N				
RES-11-428-01	0	1	4,4'-DDT	4.4	U	UG/KG	100	NA				
RES-11-429-01	0	1	4,4'-DDT	4	U	UG/KG	100	NA				
RES-11-430-01	0	1	4,4'-DDT	3.8	U	UG/KG	100	NA				
RES-11-431-01	0	1	4,4'-DDT	4.1	U	UG/KG	100	NA				
RES-11-432-01	0	1	4,4'-DDT	6.9	U	UG/KG	100	NA				
RES-11-486-01	0	1	4,4'-DDT	26		UG/KG	100	N				
RES-11-497-01	0	1	4,4'-DDT	4.4	U	UG/KG	100	NA				
RES-11-577-01	0	1	4,4'-DDT	9.6		UG/KG	100	N				
RES-12-556-01	0	1	4,4'-DDT	1300		UG/KG	100	Y				
RES-12-560-01	0	1	4,4'-DDT	4.6		UG/KG	100	N				
RES-12-560-02	0	1	4,4'-DDT	5.3		UG/KG	100	N				
SS_G-01	0	1	4,4'-DDT	34	U	UG/KG_DRY	100	NA				
SS_G-01	0	1	4,4'-DDT	40		UG/KG_DRY	100	N				
SS_G-01	1	2	4,4'-DDT	2.5		UG/KG_DRY	100	N				
SS_G-01-01	0	1	4,4'-DDT	34		UG/KG_DRY	100	N				
SS_G-01-02	0	1	4,4'-DDT	3.7	J	UG/KG_DRY	100	N				
SS_G-01-02	0	1	4,4'-DDT	27	J	UG/KG_DRY	100	N				
SS_G-01-03	0	1	4,4'-DDT	78		UG/KG_DRY	100	N				
SS_G-01-04	0	1	4,4'-DDT	3.4		UG/KG_DRY	100	N				
SS_G-02	0	1	4,4'-DDT	1.2	U	UG/KG_DRY	100	NA				
SS_G-03	0	1	4,4'-DDT	1.8		UG/KG_DRY	100	N				
SS_G-04	0	1	4,4'-DDT	5.9	UJ	UG/KG_DRY	100	NA				
SS_G-05	0	1	4,4'-DDT	0.94	U	UG/KG_DRY	100	NA				
SS_G-05	1	2	4,4'-DDT	0.35	J	UG/KG_DRY	100	N				
SS_G-06	0	1	4,4'-DDT	2		UG/KG_DRY	100	N				
SS_G-07	0	1	4,4'-DDT	12		UG/KG_DRY	100	N				
SS_G-08	0	1	4,4'-DDT	10		UG/KG_DRY	100	N				
SS_G-09	0	1	4,4'-DDT	27		UG/KG_DRY	100	N				
SS_G-10	0	1	4,4'-DDT	9		UG/KG_DRY	100	N				
SS_G-12	0	1	4,4'-DDT	15		UG/KG_DRY	100	N				
SS_G-13	0	1	4,4'-DDT	11		UG/KG_DRY	100	N				
SS_G-13	0	1	4,4'-DDT	9.4		UG/KG_DRY	100	N				
SS_G-14	0	1	4,4'-DDT	6.1		UG/KG_DRY	100	N				
SS_G-15	0	1	4,4'-DDT	4		UG/KG_DRY	100	N				
SS_G-18	0	1	4,4'-DDT	18		UG/KG_DRY	100	N				

Table G-9. Comparison of Lyman Mill Reach Floodplain Soil Data to Cleanup Goals
(Sorted by Parameter, See Figure G-4)

BORING	TOP_OF_SAMPLE	BOTTOM_OF_SAMPLE	PARAMETER (a)	LAB_RESULT	QUAL	UNITS	Cleanup Goal	Above Cleanup Goal (Y/N) (b)	Number Values	Number Values Above Cleanup Goal	% Above Cleanup Goal	Comment
SS_G-23	0	1	4,4'-DDT	17		UG/KG_DRY	100	N				
SS_G-26	0	1	4,4'-DDT	5.4		UG/KG_DRY	100	N				
SS_G-26	1	2	4,4'-DDT	0.4	U	UG/KG_DRY	100	NA				
SS_G-29	0	1	4,4'-DDT	42		UG/KG_DRY	100	N				
SS_G-29-01	0	1	4,4'-DDT	40		UG/KG_DRY	100	N				
SS_G-29-02	0	1	4,4'-DDT	5.8	U	UG/KG_DRY	100	NA				
SS_G-30	0	1	4,4'-DDT	52		UG/KG_DRY	100	N				
SS_G-31	0	1	4,4'-DDT	53	J	UG/KG_DRY	100	N				
SS_G-32	0	1	4,4'-DDT	14		UG/KG_DRY	100	N				
SS_G-33	0	1	4,4'-DDT	1.2		UG/KG_DRY	100	N				
SS_H-01	0	1	4,4'-DDT	2.5		UG/KG_DRY	100	N				
SS_H-03	0	1	4,4'-DDT	0.53	J	UG/KG_DRY	100	N				
SS_H-06	0	1	4,4'-DDT	0.85		UG/KG_DRY	100	N				
SS_H-07	0	1	4,4'-DDT	2		UG/KG_DRY	100	N				
SS_H-10	0	1	4,4'-DDT	0.58	U	UG/KG_DRY	100	NA				
SS_H-13	0	1	4,4'-DDT	1.5		UG/KG_DRY	100	N				
SS_H-16	0	1	4,4'-DDT	1.7		UG/KG_DRY	100	N				
SS_H-18	0	1	4,4'-DDT	2.4		UG/KG_DRY	100	N				
SS_H-18	0	1	4,4'-DDT	1.9		UG/KG_DRY	100	N				
SS_H-19	0	1	4,4'-DDT	3.7		UG/KG_DRY	100	N				
SS_H-22	0	1	4,4'-DDT	2		UG/KG_DRY	100	N				
WRL-SD-2038	0	0.5	4,4'-DDT	6.1		UG/KG	100	N				
LPX-4112	0	0.5	Antimony	0.0702	J	UG/G_DRYWT	0.62	N	88	27	30.7%	
LPX-4112	0	0.5	Antimony	0.13	J	UG/G_DRYWT	0.62	N				
LPX-4113	0	0.5	Antimony	0.0675	J	UG/G_DRYWT	0.62	N				
LPX-4114	0	0.5	Antimony	0.163	J	UG/G_DRYWT	0.62	N				
LPX-FP-4004	0	0.5	Antimony	0.112	U	MG/KG	0.62	NA				
LPX-FP-4006	0	0.5	Antimony	0.704	J	MG/KG	0.62	Y				Not in footprint (1); concentration below ARAR
LPX-FP-4007	0	0.5	Antimony	0.213	J	MG/KG	0.62	N				
LPX-SD-4404	0	0.5	Antimony	7.01		UG/G_DRYWT	0.62	Y				Not in footprint (2)
LPX-SD-4407	0	0.5	Antimony	2.8		UG/G_DRYWT	0.62	Y				
RES-10-004-01	0	1	Antimony	0.86	UJ	MG/KG	0.62	NA				
RES-10-005-01	0	1	Antimony	0.82	UJ	MG/KG	0.62	NA				
RES-10-042-01	0	1	Antimony	38.2	J	MG/KG	0.62	Y				
RES-10-044-01	0	1	Antimony	3.8	J	MG/KG	0.62	Y				
RES-10-044-01	0	1	Antimony	5.2	J	MG/KG	0.62	Y				
RES-10-053-01	0	1	Antimony	1.4	U	MG/KG	0.62	NA				
RES-10-053-01	0	1	Antimony	1.4	J	MG/KG	0.62	Y				Not in footprint (1); concentration below ARAR

Table G-9. Comparison of Lyman Mill Reach Floodplain Soil Data to Cleanup Goals
(Sorted by Parameter, See Figure G-4)

BORING	TOP_OF_SAMPLE	BOTTOM_OF_SAMPLE	PARAMETER (a)	LAB_RESULT	QUAL	UNITS	Cleanup Goal	Above Cleanup Goal (Y/N) (b)	Number Values	Number Values Above Cleanup Goal	% Above Cleanup Goal	Comment
RES-10-068-01	0	1	Antimony	0.52	UJ	MG/KG	0.62	NA				
RES-10-074-01	0	1	Antimony	2.5	J	MG/KG	0.62	Y				Not in footprint (1); concentration below ARAR
RES-10-075-01	0	1	Antimony	3.2	J	MG/KG	0.62	Y				Not in footprint (1); concentration below ARAR
RES-10-076-01	0	1	Antimony	2.2	UJ	MG/KG	0.62	NA				
RES-10-604-01	0	1	Antimony	0.76	UJ	MG/KG	0.62	NA				
RES-11-011-01	0	1	Antimony	1.2	U	MG/KG	0.62	NA				
RES-11-012-01	0	1	Antimony	2.5	J	MG/KG	0.62	Y				
RES-11-328-01	0	1	Antimony	1.9	U	MG/KG	0.62	NA				
RES-11-419-01	0	1	Antimony	2.2	UJ	MG/KG	0.62	NA				
RES-11-420-01	0	1	Antimony	1.5	U	MG/KG	0.62	NA				
RES-11-422-01	0	1	Antimony	1.8	U	MG/KG	0.62	NA				
RES-11-423-01	0	1	Antimony	1.3	U	MG/KG	0.62	NA				
RES-11-424-01	0	1	Antimony	7.1		MG/KG	0.62	Y				Not in footprint (1); concentration below ARAR
RES-11-426-01	0	1	Antimony	1.5	U	MG/KG	0.62	NA				
RES-11-427-01	0	1	Antimony	1.1	U	MG/KG	0.62	NA				
RES-11-428-01	0	1	Antimony	1.6	J	MG/KG	0.62	Y				Not in footprint (1); concentration below ARAR
RES-11-429-01	0	1	Antimony	1.3	U	MG/KG	0.62	NA				
RES-11-430-01	0	1	Antimony	1.3	U	MG/KG	0.62	NA				
RES-11-431-01	0	1	Antimony	2.3	J	MG/KG	0.62	Y				
RES-11-432-01	0	1	Antimony	3.1	J	MG/KG	0.62	Y				
RES-11-433-01	0	1	Antimony	17		MG/KG	0.62	Y				
RES-11-486-01	0	1	Antimony	5.8		MG/KG	0.62	Y				Not in footprint (1); concentration below ARAR
RES-11-497-01	0	1	Antimony	1.3	U	MG/KG	0.62	NA				
RES-11-577-01	0	1	Antimony	1	UJ	MG/KG	0.62	NA				
RES-12-556-01	0	1	Antimony	3.1		MG/KG	0.62	Y				
RES-12-560-01	0	1	Antimony	1.2	U	MG/KG	0.62	NA				
RES-12-560-02	0	1	Antimony	1.3	U	MG/KG	0.62	NA				
SS_G-01	0	1	Antimony	0.311		MG/KG_DRY	0.62	N				
SS_G-01	0	1	Antimony	0.294		MG/KG_DRY	0.62	N				
SS_G-01	1	2	Antimony	0.01	UJ	MG/KG_DRY	0.62	NA				
SS_G-01-01	0	1	Antimony	0.725	J	MG/KG_DRY	0.62	Y				
SS_G-01-02	0	1	Antimony	0.238	J	MG/KG_DRY	0.62	N				
SS_G-01-03	0	1	Antimony	0.574	J	MG/KG_DRY	0.62	N				
SS_G-01-04	0	1	Antimony	0.023	UJ	MG/KG_DRY	0.62	NA				
SS_G-02	0	1	Antimony	0.273		MG/KG_DRY	0.62	N				
SS_G-03	0	1	Antimony	0.235		MG/KG_DRY	0.62	N				
SS_G-04	0	1	Antimony	0.965		MG/KG_DRY	0.62	Y				
SS_G-05	0	1	Antimony	0.089	U	MG/KG_DRY	0.62	NA				

Table G-9. Comparison of Lyman Mill Reach Floodplain Soil Data to Cleanup Goals
(Sorted by Parameter, See Figure G-4)

BORING	TOP_OF_SAMPLE	BOTTOM_OF_SAMPLE	PARAMETER (a)	LAB_RESULT	QUAL	UNITS	Cleanup Goal	Above Cleanup Goal (Y/N) (b)	Number Values	Number Values Above Cleanup Goal	% Above Cleanup Goal	Comment
SS_G-05	1	2	Antimony	0.049	U	MG/KG_DRY	0.62	NA				
SS_G-06	0	1	Antimony	0.112	U	MG/KG_DRY	0.62	NA				
SS_G-07	0	1	Antimony	0.638		MG/KG_DRY	0.62	Y				
SS_G-08	0	1	Antimony	0.636		MG/KG_DRY	0.62	Y				
SS_G-09	0	1	Antimony	1.33		MG/KG_DRY	0.62	Y				
SS_G-10	0	1	Antimony	0.017	UJ	MG/KG_DRY	0.62	NA				
SS_G-12	0	1	Antimony	0.82	J	MG/KG_DRY	0.62	Y				
SS_G-13	0	1	Antimony	0.49	J	MG/KG_DRY	0.62	N				
SS_G-13	0	1	Antimony	0.28	J	MG/KG_DRY	0.62	N				
SS_G-14	0	1	Antimony	0.488		MG/KG_DRY	0.62	N				
SS_G-15	0	1	Antimony	0.402		MG/KG_DRY	0.62	N				
SS_G-18	0	1	Antimony	0.955		MG/KG_DRY	0.62	Y				
SS_G-23	0	1	Antimony	0.564		MG/KG_DRY	0.62	N				
SS_G-26	0	1	Antimony	0.237		MG/KG_DRY	0.62	N				
SS_G-26	1	2	Antimony	0.037	U	MG/KG_DRY	0.62	NA				
SS_G-29	0	1	Antimony	0.599		MG/KG_DRY	0.62	N				
SS_G-29-01	0	1	Antimony	1.51	J	MG/KG_DRY	0.62	Y				
SS_G-29-02	0	1	Antimony	0.05	UJ	MG/KG_DRY	0.62	NA				
SS_G-30	0	1	Antimony	3.18		MG/KG_DRY	0.62	Y				
SS_G-31	0	1	Antimony	1.38		MG/KG_DRY	0.62	Y				
SS_G-32	0	1	Antimony	0.249		MG/KG_DRY	0.62	N				
SS_G-33	0	1	Antimony	0.131		MG/KG_DRY	0.62	N				
SS_H-01	0	1	Antimony	0.129		MG/KG_DRY	0.62	N				
SS_H-03	0	1	Antimony	0.085	U	MG/KG_DRY	0.62	NA				
SS_H-06	0	1	Antimony	0.098	U	MG/KG_DRY	0.62	NA				
SS_H-07	0	1	Antimony	0.08	U	MG/KG_DRY	0.62	NA				
SS_H-10	0	1	Antimony	0.196		MG/KG_DRY	0.62	N				
SS_H-13	0	1	Antimony	0.137		MG/KG_DRY	0.62	N				
SS_H-16	0	1	Antimony	0.12		MG/KG_DRY	0.62	N				
SS_H-18	0	1	Antimony	0.257		MG/KG_DRY	0.62	N				
SS_H-18	0	1	Antimony	0.217		MG/KG_DRY	0.62	N				
SS_H-19	0	1	Antimony	0.186		MG/KG_DRY	0.62	N				
SS_H-22	0	1	Antimony	0.154		MG/KG_DRY	0.62	N				
WRL-SD-2038	0	0.5	Antimony	0.54	U	MG/KG	0.62	NA				
LPX-FP-4004	0	0.5	Arsenic	4.25		MG/KG	7.7	N	53	12	22.6%	
LPX-SD-4404	0	0.5	Arsenic	12.8		UG/G_DRYWT	7.7	Y				Not in footprint (2,3)
LPX-SD-4407	0	0.5	Arsenic	2.61		UG/G_DRYWT	7.7	N				
RES-11-011-01	0	1	Arsenic	3.9		MG/KG	7.7	N				

Table G-9. Comparison of Lyman Mill Reach Floodplain Soil Data to Cleanup Goals
(Sorted by Parameter, See Figure G-4)

BORING	TOP_OF_SAMPLE	BOTTOM_OF_SAMPLE	PARAMETER (a)	LAB_RESULT	QUAL	UNITS	Cleanup Goal	Above Cleanup Goal (Y/N) (b)	Number Values	Number Values Above Cleanup Goal	% Above Cleanup Goal	Comment
RES-11-012-01	0	1	Arsenic	7.8		MG/KG	7.7	Y				
RES-12-556-01	0	1	Arsenic	9.3		MG/KG	7.7	Y				
RES-12-560-01	0	1	Arsenic	5.8		MG/KG	7.7	N				
RES-12-560-02	0	1	Arsenic	10.9		MG/KG	7.7	Y				
SS_G-01	1	2	Arsenic	3		MG/KG_DRY	7.7	N				
SS_G-01	0	1	Arsenic	3.9		MG/KG_DRY	7.7	N				
SS_G-01	0	1	Arsenic	3.5		MG/KG_DRY	7.7	N				
SS_G-01-01	0	1	Arsenic	8.6		MG/KG_DRY	7.7	Y				
SS_G-01-02	0	1	Arsenic	5.2		MG/KG_DRY	7.7	N				
SS_G-01-03	0	1	Arsenic	6.1		MG/KG_DRY	7.7	N				
SS_G-01-04	0	1	Arsenic	3.2		MG/KG_DRY	7.7	N				
SS_G-02	0	1	Arsenic	13.3		MG/KG_DRY	7.7	Y				
SS_G-03	0	1	Arsenic	10		MG/KG_DRY	7.7	Y				
SS_G-04	0	1	Arsenic	9.2		MG/KG_DRY	7.7	Y				
SS_G-05	1	2	Arsenic	5.7		MG/KG_DRY	7.7	N				
SS_G-05	0	1	Arsenic	7.7		MG/KG_DRY	7.7	N				
SS_G-06	0	1	Arsenic	3.3		MG/KG_DRY	7.7	N				
SS_G-07	0	1	Arsenic	4.5		MG/KG_DRY	7.7	N				
SS_G-08	0	1	Arsenic	4.2		MG/KG_DRY	7.7	N				
SS_G-09	0	1	Arsenic	6.1		MG/KG_DRY	7.7	N				
SS_G-10	0	1	Arsenic	3.4		MG/KG_DRY	7.7	N				
SS_G-12	0	1	Arsenic	10.6		MG/KG_DRY	7.7	Y				
SS_G-13	0	1	Arsenic	7		MG/KG_DRY	7.7	N				
SS_G-13	0	1	Arsenic	5.1		MG/KG_DRY	7.7	N				
SS_G-14	0	1	Arsenic	4.5		MG/KG_DRY	7.7	N				
SS_G-15	0	1	Arsenic	3.4		MG/KG_DRY	7.7	N				
SS_G-18	0	1	Arsenic	4.9		MG/KG_DRY	7.7	N				
SS_G-23	0	1	Arsenic	4.8		MG/KG_DRY	7.7	N				
SS_G-26	1	2	Arsenic	2	J	MG/KG_DRY	7.7	N				
SS_G-26	0	1	Arsenic	3.1		MG/KG_DRY	7.7	N				
SS_G-29	0	1	Arsenic	2.1	J	MG/KG_DRY	7.7	N				
SS_G-29-01	0	1	Arsenic	18.4		MG/KG_DRY	7.7	Y				
SS_G-29-02	0	1	Arsenic	1.2	U	MG/KG_DRY	7.7	NA				
SS_G-30	0	1	Arsenic	6.3		MG/KG_DRY	7.7	N				
SS_G-31	0	1	Arsenic	5.3		MG/KG_DRY	7.7	N				
SS_G-32	0	1	Arsenic	13.7		MG/KG_DRY	7.7	Y				
SS_G-33	0	1	Arsenic	6		MG/KG_DRY	7.7	N				
SS_H-01	0	1	Arsenic	2.4		MG/KG_DRY	7.7	N				

Table G-9. Comparison of Lyman Mill Reach Floodplain Soil Data to Cleanup Goals
(Sorted by Parameter, See Figure G-4)

BORING	TOP_OF_SAMPLE	BOTTOM_OF_SAMPLE	PARAMETER (a)	LAB_RESULT	QUAL	UNITS	Cleanup Goal	Above Cleanup Goal (Y/N) (b)	Number Values	Number Values Above Cleanup Goal	% Above Cleanup Goal	Comment
SS_H-03	0	1	Arsenic	2.8		MG/KG_DRY	7.7	N				
SS_H-06	0	1	Arsenic	2.5		MG/KG_DRY	7.7	N				
SS_H-07	0	1	Arsenic	1.7	J	MG/KG_DRY	7.7	N				
SS_H-10	0	1	Arsenic	2.3		MG/KG_DRY	7.7	N				
SS_H-13	0	1	Arsenic	2	J	MG/KG_DRY	7.7	N				
SS_H-16	0	1	Arsenic	2.9		MG/KG_DRY	7.7	N				
SS_H-18	0	1	Arsenic	3.3		MG/KG_DRY	7.7	N				
SS_H-18	0	1	Arsenic	3.4		MG/KG_DRY	7.7	N				
SS_H-19	0	1	Arsenic	2.6		MG/KG_DRY	7.7	N				
SS_H-22	0	1	Arsenic	8.9		MG/KG_DRY	7.7	Y				Not in footprint (2,3)
WRL-SD-2038	0	0.5	Arsenic	1.2		MG/KG	7.7	N				
LPX-FP-4004	0	0.5	Benzo(a)pyrene	349.67	J	UG/KG	3100	N	51	4	7.8%	
RES-11-011-01	0	1	Benzo(a)pyrene	960		UG/KG	3100	N				
RES-11-012-01	0	1	Benzo(a)pyrene	1700	J	UG/KG	3100	N				
RES-12-556-01	0	1	Benzo(a)pyrene	3200	J	UG/KG	3100	Y				
RES-12-560-01	0	1	Benzo(a)pyrene	340	J	UG/KG	3100	N				
RES-12-560-02	0	1	Benzo(a)pyrene	2000	J	UG/KG	3100	N				
SS_G-01	0	1	Benzo(a)pyrene	280		UG/KG_DRY	3100	N				
SS_G-01	0	1	Benzo(a)pyrene	280		UG/KG_DRY	3100	N				
SS_G-01	1	2	Benzo(a)pyrene	23		UG/KG_DRY	3100	N				
SS_G-01-01	0	1	Benzo(a)pyrene	1300		UG/KG_DRY	3100	N				
SS_G-01-02	0	1	Benzo(a)pyrene	430		UG/KG_DRY	3100	N				
SS_G-01-03	0	1	Benzo(a)pyrene	830		UG/KG_DRY	3100	N				
SS_G-01-04	0	1	Benzo(a)pyrene	73		UG/KG_DRY	3100	N				
SS_G-02	0	1	Benzo(a)pyrene	130		UG/KG_DRY	3100	N				
SS_G-03	0	1	Benzo(a)pyrene	42		UG/KG_DRY	3100	N				
SS_G-04	0	1	Benzo(a)pyrene	370	J	UG/KG_DRY	3100	N				
SS_G-05	0	1	Benzo(a)pyrene	23		UG/KG_DRY	3100	N				
SS_G-05	1	2	Benzo(a)pyrene	7		UG/KG_DRY	3100	N				
SS_G-06	0	1	Benzo(a)pyrene	56		UG/KG_DRY	3100	N				
SS_G-07	0	1	Benzo(a)pyrene	230		UG/KG_DRY	3100	N				
SS_G-08	0	1	Benzo(a)pyrene	290		UG/KG_DRY	3100	N				
SS_G-09	0	1	Benzo(a)pyrene	460		UG/KG_DRY	3100	N				
SS_G-10	0	1	Benzo(a)pyrene	1000		UG/KG_DRY	3100	N				
SS_G-12	0	1	Benzo(a)pyrene	360		UG/KG_DRY	3100	N				
SS_G-13	0	1	Benzo(a)pyrene	20000		UG/KG_DRY	3100	Y				
SS_G-13	0	1	Benzo(a)pyrene	52000		UG/KG_DRY	3100	Y				
SS_G-14	0	1	Benzo(a)pyrene	170		UG/KG_DRY	3100	N				

Table G-9. Comparison of Lyman Mill Reach Floodplain Soil Data to Cleanup Goals
(Sorted by Parameter, See Figure G-4)

BORING	TOP_OF_SAMPLE	BOTTOM_OF_SAMPLE	PARAMETER (a)	LAB_RESULT	QUAL	UNITS	Cleanup Goal	Above Cleanup Goal (Y/N) (b)	Number Values	Number Values Above Cleanup Goal	% Above Cleanup Goal	Comment
SS_G-15	0	1	Benzo(a)pyrene	120		UG/KG_DRY	3100	N				
SS_G-18	0	1	Benzo(a)pyrene	570		UG/KG_DRY	3100	N				
SS_G-23	0	1	Benzo(a)pyrene	2400		UG/KG_DRY	3100	N				
SS_G-26	0	1	Benzo(a)pyrene	330		UG/KG_DRY	3100	N				
SS_G-26	1	2	Benzo(a)pyrene	14		UG/KG_DRY	3100	N				
SS_G-29	0	1	Benzo(a)pyrene	1500		UG/KG_DRY	3100	N				
SS_G-29-01	0	1	Benzo(a)pyrene	3900		UG/KG_DRY	3100	Y				
SS_G-29-02	0	1	Benzo(a)pyrene	2900		UG/KG_DRY	3100	N				
SS_G-30	0	1	Benzo(a)pyrene	410		UG/KG_DRY	3100	N				
SS_G-31	0	1	Benzo(a)pyrene	670		UG/KG_DRY	3100	N				
SS_G-32	0	1	Benzo(a)pyrene	290		UG/KG_DRY	3100	N				
SS_G-33	0	1	Benzo(a)pyrene	42		UG/KG_DRY	3100	N				
SS_H-01	0	1	Benzo(a)pyrene	51		UG/KG_DRY	3100	N				
SS_H-03	0	1	Benzo(a)pyrene	15		UG/KG_DRY	3100	N				
SS_H-06	0	1	Benzo(a)pyrene	47	U	UG/KG_DRY	3100	NA				
SS_H-07	0	1	Benzo(a)pyrene	38	U	UG/KG_DRY	3100	NA				
SS_H-10	0	1	Benzo(a)pyrene	49	U	UG/KG_DRY	3100	NA				
SS_H-13	0	1	Benzo(a)pyrene	62	U	UG/KG_DRY	3100	NA				
SS_H-16	0	1	Benzo(a)pyrene	88	U	UG/KG_DRY	3100	NA				
SS_H-18	0	1	Benzo(a)pyrene	15		UG/KG_DRY	3100	N				
SS_H-18	0	1	Benzo(a)pyrene	13		UG/KG_DRY	3100	N				
SS_H-19	0	1	Benzo(a)pyrene	72		UG/KG_DRY	3100	N				
SS_H-22	0	1	Benzo(a)pyrene	30	U	UG/KG_DRY	3100	NA				
WRL-SD-2038	0	0.5	Benzo(a)pyrene	1200	J	UG/KG	3100	N				
LPX-4112	0	0.5	Copper	26.9		UG/G_DRYWT	205	N	88	6	6.8%	
LPX-4112	0	0.5	Copper	30		UG/G_DRYWT	205	N				
LPX-4113	0	0.5	Copper	29.2		UG/G_DRYWT	205	N				
LPX-4114	0	0.5	Copper	36.7		UG/G_DRYWT	205	N				
LPX-FP-4004	0	0.5	Copper	33.4		MG/KG	205	N				
LPX-FP-4006	0	0.5	Copper	400		MG/KG	205	Y				Not in footprint (1); concentration below ARAR
LPX-FP-4007	0	0.5	Copper	86		MG/KG	205	N				
LPX-SD-4404	0	0.5	Copper	357		UG/G_DRYWT	205	Y				Not in footprint (1); concentration below ARAR
LPX-SD-4407	0	0.5	Copper	73.2		UG/G_DRYWT	205	N				
RES-10-004-01	0	1	Copper	25.3		MG/KG	205	N				
RES-10-005-01	0	1	Copper	32		MG/KG	205	N				
RES-10-042-01	0	1	Copper	2350		MG/KG	205	Y				
RES-10-044-01	0	1	Copper	82.4		MG/KG	205	N				
RES-10-044-01	0	1	Copper	83.6		MG/KG	205	N				

Table G-9. Comparison of Lyman Mill Reach Floodplain Soil Data to Cleanup Goals
(Sorted by Parameter, See Figure G-4)

BORING	TOP_OF_SAMPLE	BOTTOM_OF_SAMPLE	PARAMETER (a)	LAB_RESULT	QUAL	UNITS	Cleanup Goal	Above Cleanup Goal (Y/N) (b)	Number Values	Number Values Above Cleanup Goal	% Above Cleanup Goal	Comment
RES-10-053-01	0	1	Copper	23.5		MG/KG	205	N				
RES-10-053-01	0	1	Copper	25.9		MG/KG	205	N				
RES-10-068-01	0	1	Copper	18.1		MG/KG	205	N				
RES-10-074-01	0	1	Copper	142		MG/KG	205	N				
RES-10-075-01	0	1	Copper	175		MG/KG	205	N				
RES-10-076-01	0	1	Copper	409		MG/KG	205	Y				Not in footprint (1); concentration below ARAR
RES-10-604-01	0	1	Copper	45.9		MG/KG	205	N				
RES-11-011-01	0	1	Copper	28.8		MG/KG	205	N				
RES-11-012-01	0	1	Copper	251		MG/KG	205	Y				
RES-11-328-01	0	1	Copper	64.3		MG/KG	205	N				
RES-11-419-01	0	1	Copper	44.1		MG/KG	205	N				
RES-11-420-01	0	1	Copper	20		MG/KG	205	N				
RES-11-422-01	0	1	Copper	18.8		MG/KG	205	N				
RES-11-423-01	0	1	Copper	7.3	U	MG/KG	205	NA				
RES-11-424-01	0	1	Copper	62.2		MG/KG	205	N				
RES-11-426-01	0	1	Copper	21.6		MG/KG	205	N				
RES-11-427-01	0	1	Copper	10		MG/KG	205	N				
RES-11-428-01	0	1	Copper	42.8		MG/KG	205	N				
RES-11-429-01	0	1	Copper	14.5		MG/KG	205	N				
RES-11-430-01	0	1	Copper	11		MG/KG	205	N				
RES-11-431-01	0	1	Copper	53.1		MG/KG	205	N				
RES-11-432-01	0	1	Copper	138		MG/KG	205	N				
RES-11-433-01	0	1	Copper	25500		MG/KG	205	Y				
RES-11-486-01	0	1	Copper	76		MG/KG	205	N				
RES-11-497-01	0	1	Copper	20.4		MG/KG	205	N				
RES-11-577-01	0	1	Copper	26.2		MG/KG	205	N				
RES-12-556-01	0	1	Copper	72.7		MG/KG	205	N				
RES-12-560-01	0	1	Copper	29.7		MG/KG	205	N				
RES-12-560-02	0	1	Copper	41.4		MG/KG	205	N				
SS_G-01	0	1	Copper	28.1		MG/KG_DRY	205	N				
SS_G-01	0	1	Copper	31.3		MG/KG_DRY	205	N				
SS_G-01	1	2	Copper	6		MG/KG_DRY	205	N				
SS_G-01-01	0	1	Copper	66		MG/KG_DRY	205	N				
SS_G-01-02	0	1	Copper	37.9		MG/KG_DRY	205	N				
SS_G-01-03	0	1	Copper	55.7		MG/KG_DRY	205	N				
SS_G-01-04	0	1	Copper	11		MG/KG_DRY	205	N				
SS_G-02	0	1	Copper	30.7		MG/KG_DRY	205	N				
SS_G-03	0	1	Copper	20.5		MG/KG_DRY	205	N				

Table G-9. Comparison of Lyman Mill Reach Floodplain Soil Data to Cleanup Goals
(Sorted by Parameter, See Figure G-4)

BORING	TOP_OF_SAMPLE	BOTTOM_OF_SAMPLE	PARAMETER (a)	LAB_RESULT	QUAL	UNITS	Cleanup Goal	Above Cleanup Goal (Y/N) (b)	Number Values	Number Values Above Cleanup Goal	% Above Cleanup Goal	Comment
SS_G-04	0	1	Copper	46.4		MG/KG_DRY	205	N				
SS_G-05	0	1	Copper	6.2		MG/KG_DRY	205	N				
SS_G-05	1	2	Copper	3.6		MG/KG_DRY	205	N				
SS_G-06	0	1	Copper	7.1		MG/KG_DRY	205	N				
SS_G-07	0	1	Copper	24.2		MG/KG_DRY	205	N				
SS_G-08	0	1	Copper	21.5		MG/KG_DRY	205	N				
SS_G-09	0	1	Copper	37.7		MG/KG_DRY	205	N				
SS_G-10	0	1	Copper	10.4		MG/KG_DRY	205	N				
SS_G-12	0	1	Copper	61.2		MG/KG_DRY	205	N				
SS_G-13	0	1	Copper	117		MG/KG_DRY	205	N				
SS_G-13	0	1	Copper	151		MG/KG_DRY	205	N				
SS_G-14	0	1	Copper	16.2		MG/KG_DRY	205	N				
SS_G-15	0	1	Copper	10.7		MG/KG_DRY	205	N				
SS_G-18	0	1	Copper	32.9		MG/KG_DRY	205	N				
SS_G-23	0	1	Copper	41.1		MG/KG_DRY	205	N				
SS_G-26	0	1	Copper	14.9		MG/KG_DRY	205	N				
SS_G-26	1	2	Copper	5.8		MG/KG_DRY	205	N				
SS_G-29	0	1	Copper	38.8		MG/KG_DRY	205	N				
SS_G-29-01	0	1	Copper	92.7		MG/KG_DRY	205	N				
SS_G-29-02	0	1	Copper	6.4		MG/KG_DRY	205	N				
SS_G-30	0	1	Copper	91.9		MG/KG_DRY	205	N				
SS_G-31	0	1	Copper	119		MG/KG_DRY	205	N				
SS_G-32	0	1	Copper	35.3		MG/KG_DRY	205	N				
SS_G-33	0	1	Copper	16.2		MG/KG_DRY	205	N				
SS_H-01	0	1	Copper	5.2		MG/KG_DRY	205	N				
SS_H-03	0	1	Copper	5.9		MG/KG_DRY	205	N				
SS_H-06	0	1	Copper	5.4		MG/KG_DRY	205	N				
SS_H-07	0	1	Copper	8.3		MG/KG_DRY	205	N				
SS_H-10	0	1	Copper	7.2		MG/KG_DRY	205	N				
SS_H-13	0	1	Copper	8.8		MG/KG_DRY	205	N				
SS_H-16	0	1	Copper	8.6		MG/KG_DRY	205	N				
SS_H-18	0	1	Copper	13.5		MG/KG_DRY	205	N				
SS_H-18	0	1	Copper	14.4		MG/KG_DRY	205	N				
SS_H-19	0	1	Copper	8.9		MG/KG_DRY	205	N				
SS_H-22	0	1	Copper	10.9		MG/KG_DRY	205	N				
WRL-SD-2038	0	0.5	Copper	28.5		MG/KG	205	N				
CMS-217	0	0.25	Mammal_2005_TEQ	2420		NG/KG	53	Y	199	78	39.2%	
CMS-217	0	0.25	Mammal_2005_TEQ	5030		NG/KG	53	Y				

Table G-9. Comparison of Lyman Mill Reach Floodplain Soil Data to Cleanup Goals
(Sorted by Parameter, See Figure G-4)

BORING	TOP_OF_SAMPLE	BOTTOM_OF_SAMPLE	PARAMETER (a)	LAB_RESULT	QUAL	UNITS	Cleanup Goal	Above Cleanup Goal (Y/N) (b)	Number Values	Number Values Above Cleanup Goal	% Above Cleanup Goal	Comment
CMS-218	0	0.25	Mammal_2005_TEQ	2290		NG/KG	53	Y				
CMS-219	0	0.25	Mammal_2005_TEQ	2220		NG/KG	53	Y				
CMS-457	0	1	Mammal_2005_TEQ	3800		NG/KG	53	Y				
CMS-458	0	1	Mammal_2005_TEQ	720		NG/KG	53	Y				
CMS-459	0	1	Mammal_2005_TEQ	130		NG/KG	53	Y				
CMS-468	0	1	Mammal_2005_TEQ	12.81		NG/KG	53	N				
LPX-4112	0	0.5	Mammal_2005_TEQ	5.02		PG/G_DRYWT	53	N				
LPX-4113	0	0.5	Mammal_2005_TEQ	4.93		PG/G_DRYWT	53	N				
LPX-4114	0	0.5	Mammal_2005_TEQ	6.52		PG/G_DRYWT	53	N				
LPX-FP-4004	0	0.5	Mammal_2005_TEQ	1133.44		NG/KG	53	Y				
LPX-FP-4006	0	0.5	Mammal_2005_TEQ	151.72		NG/KG	53	Y				Not in footprint (1); concentration below TBC
LPX-FP-4007	0	0.5	Mammal_2005_TEQ	82.82		NG/KG	53	Y				
LPX-SD-4404	0	0.5	Mammal_2005_TEQ	262.48		PG/G_DRYWT	53	Y				Not in footprint (2); concentration below TBC
LPX-SD-4405	0	0.5	Mammal_2005_TEQ	4288.33		PG/G_DRYWT	53	Y				
LPX-SD-4406	0	0.5	Mammal_2005_TEQ	1823.41		PG/G_DRYWT	53	Y				
LPX-SD-4407	0	0.5	Mammal_2005_TEQ	2096.68		PG/G_DRYWT	53	Y				
RES-10-004-01	0	1	Mammal_2005_TEQ	118.17		NG/KG	53	Y				Not in footprint (1); concentration below TBC
RES-10-004-02	0	1	Mammal_2005_TEQ	6.59		NG/KG	53	N				
RES-10-004-03	0	1	Mammal_2005_TEQ	2.14		NG/KG	53	N				
RES-10-005-01	0	1	Mammal_2005_TEQ	154.46		NG/KG	53	Y				Not in footprint (1); concentration below TBC
RES-10-005-02	0	1	Mammal_2005_TEQ	8.96		NG/KG	53	N				
RES-10-005-03	0	1	Mammal_2005_TEQ	3.17		NG/KG	53	N				
RES-10-042-01	0	1	Mammal_2005_TEQ	331.93		NG/KG	53	Y				
RES-10-042-02	0	1	Mammal_2005_TEQ	4.28		NG/KG	53	N				
RES-10-042-03	0	1	Mammal_2005_TEQ	4.10		NG/KG	53	N				
RES-10-044-01	0	1	Mammal_2005_TEQ	531.80		NG/KG	53	Y				
RES-10-044-02	0	1	Mammal_2005_TEQ	62.34		NG/KG	53	Y				
RES-10-044-03	0	1	Mammal_2005_TEQ	11.81		NG/KG	53	N				
RES-10-053-01	0	1	Mammal_2005_TEQ	42.19		NG/KG	53	N				
RES-10-053-02	0	1	Mammal_2005_TEQ	8.53		NG/KG	53	N				
RES-10-053-03	0	1	Mammal_2005_TEQ	2.25		NG/KG	53	N				
RES-10-053-03	0	1	Mammal_2005_TEQ	3.38		NG/KG	53	N				
RES-10-068-01	0	1	Mammal_2005_TEQ	25.55		NG/KG	53	N				
RES-10-068-02	0	1	Mammal_2005_TEQ	8.69		NG/KG	53	N				
RES-10-068-03	0	1	Mammal_2005_TEQ	18.81		NG/KG	53	N				
RES-10-074-01	0	1	Mammal_2005_TEQ	16.57		NG/KG	53	N				
RES-10-074-01	0	1	Mammal_2005_TEQ	32.68		NG/KG	53	N				
RES-10-074-02	0	1	Mammal_2005_TEQ	85.94		NG/KG	53	Y				Not in footprint (1); concentration below TBC

Table G-9. Comparison of Lyman Mill Reach Floodplain Soil Data to Cleanup Goals
(Sorted by Parameter, See Figure G-4)

BORING	TOP_OF_SAMPLE	BOTTOM_OF_SAMPLE	PARAMETER (a)	LAB_RESULT	QUAL	UNITS	Cleanup Goal	Above Cleanup Goal (Y/N) (b)	Number Values	Number Values Above Cleanup Goal	% Above Cleanup Goal	Comment
RES-10-074-03	0	1	Mammal_2005_TEQ	16.37		NG/KG	53	N				
RES-10-075-01	0	1	Mammal_2005_TEQ	14.26		NG/KG	53	N				
RES-10-075-01	0	1	Mammal_2005_TEQ	10.70		NG/KG	53	N				
RES-10-075-02	0	1	Mammal_2005_TEQ	3.30		NG/KG	53	N				
RES-10-075-03	0	1	Mammal_2005_TEQ	5.40		NG/KG	53	N				
RES-10-076-01	0	1	Mammal_2005_TEQ	115.21		NG/KG	53	Y				Not in footprint (1); concentration below TBC
RES-10-076-02	0	1	Mammal_2005_TEQ	17.47		NG/KG	53	N				
RES-10-076-03	0	1	Mammal_2005_TEQ	3.53		NG/KG	53	N				
RES-10-604-01	0	1	Mammal_2005_TEQ	263.72		NG/KG	53	Y				
RES-10-604-01	0	1	Mammal_2005_TEQ	232.46		NG/KG	53	Y				
RES-10-604-02	0	1	Mammal_2005_TEQ	52.30		NG/KG	53	N				
RES-10-604-03	0	1	Mammal_2005_TEQ	3.18		NG/KG	53	N				
RES-11-011-01	0	1	Mammal_2005_TEQ	7.21		NG/KG	53	N				
RES-11-011-02	0	1	Mammal_2005_TEQ	4.43		NG/KG	53	N				
RES-11-011-03	0	1	Mammal_2005_TEQ	4.47		NG/KG	53	N				
RES-11-011-03	0	1	Mammal_2005_TEQ	6.58		NG/KG	53	N				
RES-11-012-01	0	1	Mammal_2005_TEQ	13.72		NG/KG	53	N				
RES-11-012-02	0	1	Mammal_2005_TEQ	3.47		NG/KG	53	N				
RES-11-012-03	0	1	Mammal_2005_TEQ	5.74		NG/KG	53	N				
RES-11-328-01	0	1	Mammal_2005_TEQ	386.71		NG/KG	53	Y				Not in footprint (1); concentration below TBC
RES-11-328-01	0	1	Mammal_2005_TEQ	347.86		NG/KG	53	Y				Not in footprint (1); concentration below TBC
RES-11-328-02	0	1	Mammal_2005_TEQ	22.22		NG/KG	53	N				
RES-11-328-03	0	1	Mammal_2005_TEQ	3.45		NG/KG	53	N				
RES-11-396-02	0	1	Mammal_2005_TEQ	60.79		NG/KG	53	Y				Not in footprint (1); concentration below TBC
RES-11-396-03	0	1	Mammal_2005_TEQ	8.54		NG/KG	53	N				
RES-11-419-01	0	1	Mammal_2005_TEQ	595.80		NG/KG	53	Y				Not in footprint (1); concentration below TBC
RES-11-419-02	0	1	Mammal_2005_TEQ	147.69		NG/KG	53	Y				
RES-11-419-03	0	1	Mammal_2005_TEQ	2.12		NG/KG	53	N				
RES-11-420-01	0	1	Mammal_2005_TEQ	11.17		NG/KG	53	N				
RES-11-420-02	0	1	Mammal_2005_TEQ	6.41		NG/KG	53	N				
RES-11-420-03	0	1	Mammal_2005_TEQ	2.03		NG/KG	53	N				
RES-11-420-03	0	1	Mammal_2005_TEQ	2.13		NG/KG	53	N				
RES-11-420-04	0	1	Mammal_2005_TEQ	115.61		NG/KG	53	Y				Not in footprint (1); concentration below TBC
RES-11-422-01	0	1	Mammal_2005_TEQ	39.95		NG/KG	53	N				
RES-11-422-02	0	1	Mammal_2005_TEQ	6.71		NG/KG	53	N				
RES-11-422-03	0	1	Mammal_2005_TEQ	4.43		NG/KG	53	N				
RES-11-423-01	0	1	Mammal_2005_TEQ	13.66		NG/KG	53	N				
RES-11-423-02	0	1	Mammal_2005_TEQ	0.80		NG/KG	53	N				

Table G-9. Comparison of Lyman Mill Reach Floodplain Soil Data to Cleanup Goals
(Sorted by Parameter, See Figure G-4)

BORING	TOP_OF_SAMPLE	BOTTOM_OF_SAMPLE	PARAMETER (a)	LAB_RESULT	QUAL	UNITS	Cleanup Goal	Above Cleanup Goal (Y/N) (b)	Number Values	Number Values Above Cleanup Goal	% Above Cleanup Goal	Comment
RES-11-423-03	0	1	Mammal_2005_TEQ	0.89		NG/KG	53	N				
RES-11-424-01	0	1	Mammal_2005_TEQ	39.94		NG/KG	53	N				
RES-11-424-02	0	1	Mammal_2005_TEQ	29.70		NG/KG	53	N				
RES-11-424-03	0	1	Mammal_2005_TEQ	27.85		NG/KG	53	N				
RES-11-425-02	0	1	Mammal_2005_TEQ	10.42		NG/KG	53	N				
RES-11-425-03	0	1	Mammal_2005_TEQ	1.12		NG/KG	53	N				
RES-11-425-03	0	1	Mammal_2005_TEQ	2.36		NG/KG	53	N				
RES-11-426-01	0	1	Mammal_2005_TEQ	36.85		NG/KG	53	N				
RES-11-426-02	0	1	Mammal_2005_TEQ	1.87		NG/KG	53	N				
RES-11-426-03	0	1	Mammal_2005_TEQ	0.73		NG/KG	53	N				
RES-11-427-01	0	1	Mammal_2005_TEQ	0.91		NG/KG	53	N				
RES-11-427-02	0	1	Mammal_2005_TEQ	1.18		NG/KG	53	N				
RES-11-427-03	0	1	Mammal_2005_TEQ	1.11		NG/KG	53	N				
RES-11-428-01	0	1	Mammal_2005_TEQ	4.98		NG/KG	53	N				
RES-11-428-02	0	1	Mammal_2005_TEQ	3.37		NG/KG	53	N				
RES-11-428-03	0	1	Mammal_2005_TEQ	2.92		NG/KG	53	N				
RES-11-428-03	0	1	Mammal_2005_TEQ	3.36		NG/KG	53	N				
RES-11-428-G	0	1	Mammal_2005_TEQ	1.29		NG/KG	53	N				
RES-11-429-01	0	1	Mammal_2005_TEQ	17.38		NG/KG	53	N				
RES-11-429-02	0	1	Mammal_2005_TEQ	7.94		NG/KG	53	N				
RES-11-430-01	0	1	Mammal_2005_TEQ	1.51		NG/KG	53	N				
RES-11-430-02	0	1	Mammal_2005_TEQ	8.20		NG/KG	53	N				
RES-11-430-03	0	1	Mammal_2005_TEQ	2.42		NG/KG	53	N				
RES-11-431-01	0	1	Mammal_2005_TEQ	35.34		NG/KG	53	N				
RES-11-431-02	0	1	Mammal_2005_TEQ	29.87		NG/KG	53	N				
RES-11-431-03	0	1	Mammal_2005_TEQ	4.29		NG/KG	53	N				
RES-11-432-01	0	1	Mammal_2005_TEQ	121.96		NG/KG	53	Y				
RES-11-432-01	0	1	Mammal_2005_TEQ	163.50		NG/KG	53	Y				
RES-11-432-02	0	1	Mammal_2005_TEQ	5.01		NG/KG	53	N				
RES-11-432-03	0	1	Mammal_2005_TEQ	8.20		NG/KG	53	N				
RES-11-433-01	0	1	Mammal_2005_TEQ	1018.81		NG/KG	53	Y				
RES-11-433-02	0	1	Mammal_2005_TEQ	138.94		NG/KG	53	Y				
RES-11-433-03	0	1	Mammal_2005_TEQ	28.18		NG/KG	53	N				
RES-11-486-01	0	1	Mammal_2005_TEQ	46.17		NG/KG	53	N				
RES-11-486-01	0	1	Mammal_2005_TEQ	50.82		NG/KG	53	N				
RES-11-486-02	0	1	Mammal_2005_TEQ	72.96		NG/KG	53	Y				Not in footprint (1); concentration below TBC
RES-11-486-03	0	1	Mammal_2005_TEQ	59.12		NG/KG	53	Y				Not in footprint (1); concentration below TBC
RES-11-497-01	0	1	Mammal_2005_TEQ	7.55		NG/KG	53	N				

Table G-9. Comparison of Lyman Mill Reach Floodplain Soil Data to Cleanup Goals
(Sorted by Parameter, See Figure G-4)

BORING	TOP_OF_SAMPLE	BOTTOM_OF_SAMPLE	PARAMETER (a)	LAB_RESULT	QUAL	UNITS	Cleanup Goal	Above Cleanup Goal (Y/N) (b)	Number Values	Number Values Above Cleanup Goal	% Above Cleanup Goal	Comment
RES-11-497-02	0	1	Mammal_2005_TEQ	6.24		NG/KG	53	N				
RES-11-497-03	0	1	Mammal_2005_TEQ	5.10		NG/KG	53	N				
RES-11-577-01	0	1	Mammal_2005_TEQ	416.28		NG/KG	53	Y				Not in footprint (1); concentration below TBC
RES-11-577-01	0	1	Mammal_2005_TEQ	322.45		NG/KG	53	Y				Not in footprint (1); concentration below TBC
RES-11-577-02	0	1	Mammal_2005_TEQ	67.37		NG/KG	53	Y				Not in footprint (1); concentration below TBC
RES-11-577-03	0	1	Mammal_2005_TEQ	18.94		NG/KG	53	N				
RES-12-556-01	0	1	Mammal_2005_TEQ	37.71		NG/KG	53	N				
RES-12-556-02	0	1	Mammal_2005_TEQ	18.51		NG/KG	53	N				
SS_G-01	0	1	Mammal_2005_TEQ	2481.41		PG/G_DRY	53	Y				
SS_G-01	0	1	Mammal_2005_TEQ	2608.08		PG/G_DRY	53	Y				
SS_G-01	1	2	Mammal_2005_TEQ	329.84		PG/G_DRY	53	Y				
SS_G-01-01	0	1	Mammal_2005_TEQ	4887.70		PG/G_DRY	53	Y				
SS_G-01-02	0	1	Mammal_2005_TEQ	3480.66		PG/G_DRY	53	Y				
SS_G-01-03	0	1	Mammal_2005_TEQ	14633.13		PG/G_DRY	53	Y				
SS_G-01-04	0	1	Mammal_2005_TEQ	16.08		PG/G_DRY	53	N				
SS_G-02	0	1	Mammal_2005_TEQ	8.28		PG/G_DRY	53	N				
SS_G-03	0	1	Mammal_2005_TEQ	235.25		PG/G_DRY	53	Y				
SS_G-04	0	1	Mammal_2005_TEQ	516.45		PG/G_DRY	53	Y				
SS_G-05	0	1	Mammal_2005_TEQ	45.37		PG/G_DRY	53	N				
SS_G-05	1	2	Mammal_2005_TEQ	10.56		PG/G_DRY	53	N				
SS_G-06	0	1	Mammal_2005_TEQ	9.29		PG/G_DRY	53	N				
SS_G-07	0	1	Mammal_2005_TEQ	2070.72		PG/G_DRY	53	Y				
SS_G-08	0	1	Mammal_2005_TEQ	591.79		PG/G_DRY	53	Y				
SS_G-09	0	1	Mammal_2005_TEQ	2286.23		PG/G_DRY	53	Y				
SS_G-10	0	1	Mammal_2005_TEQ	8.26		PG/G_DRY	53	N				
SS_G-12	0	1	Mammal_2005_TEQ	78.30		PG/G_DRY	53	Y				
SS_G-13	0	1	Mammal_2005_TEQ	577.90		PG/G_DRY	53	Y				
SS_G-13	0	1	Mammal_2005_TEQ	648.09		PG/G_DRY	53	Y				
SS_G-14	0	1	Mammal_2005_TEQ	395.57		PG/G_DRY	53	Y				
SS_G-15	0	1	Mammal_2005_TEQ	397.24		PG/G_DRY	53	Y				
SS_G-18	0	1	Mammal_2005_TEQ	1204.40		PG/G_DRY	53	Y				
SS_G-23	0	1	Mammal_2005_TEQ	1013.26		PG/G_DRY	53	Y				
SS_G-26	0	1	Mammal_2005_TEQ	594.27		PG/G_DRY	53	Y				
SS_G-26	1	2	Mammal_2005_TEQ	15.09		PG/G_DRY	53	N				
SS_G-29	0	1	Mammal_2005_TEQ	5150.15		PG/G_DRY	53	Y				
SS_G-29-01	0	1	Mammal_2005_TEQ	12641.62		PG/G_DRY	53	Y				
SS_G-29-02	0	1	Mammal_2005_TEQ	800.99		PG/G_DRY	53	Y				
SS_G-30	0	1	Mammal_2005_TEQ	14.71		PG/G_DRY	53	N				

Table G-9. Comparison of Lyman Mill Reach Floodplain Soil Data to Cleanup Goals
(Sorted by Parameter, See Figure G-4)

BORING	TOP_OF_SAMPLE	BOTTOM_OF_SAMPLE	PARAMETER (a)	LAB_RESULT	QUAL	UNITS	Cleanup Goal	Above Cleanup Goal (Y/N) (b)	Number Values	Number Values Above Cleanup Goal	% Above Cleanup Goal	Comment
SS_G-31	0	1	Mammal_2005_TEQ	48.70		PG/G_DRY	53	N				
SS_G-32	0	1	Mammal_2005_TEQ	141.95		PG/G_DRY	53	Y				
SS_G-33	0	1	Mammal_2005_TEQ	1.00		PG/G_DRY	53	N				
SS_H-01	0	1	Mammal_2005_TEQ	5.90		PG/G_DRY	53	N				
SS_H-03	0	1	Mammal_2005_TEQ	1.49		PG/G_DRY	53	N				
SS_H-06	0	1	Mammal_2005_TEQ	3.06		PG/G_DRY	53	N				
SS_H-07	0	1	Mammal_2005_TEQ	2.70		PG/G_DRY	53	N				
SS_H-10	0	1	Mammal_2005_TEQ	2.48		PG/G_DRY	53	N				
SS_H-13	0	1	Mammal_2005_TEQ	8.73		PG/G_DRY	53	N				
SS_H-16	0	1	Mammal_2005_TEQ	2.81		PG/G_DRY	53	N				
SS_H-18	0	1	Mammal_2005_TEQ	4.47		PG/G_DRY	53	N				
SS_H-18	0	1	Mammal_2005_TEQ	6.12		PG/G_DRY	53	N				
SS_H-19	0	1	Mammal_2005_TEQ	4.17		PG/G_DRY	53	N				
SS_H-22	0	1	Mammal_2005_TEQ	3.06		PG/G_DRY	53	N				
SS-99-07	0	0.25	Mammal_2005_TEQ	239.00		NG/KG	53	Y				Exceedance based on elevated detection limit (c)
SS-99-08	0	0.25	Mammal_2005_TEQ	207.00		NG/KG	53	Y				Exceedance based on elevated detection limit (c)
SS-99-09	0	0.25	Mammal_2005_TEQ	202.50		NG/KG	53	Y				Exceedance based on elevated detection limit (c)
SS-99-10	0	0.25	Mammal_2005_TEQ	166.00		NG/KG	53	Y				Exceedance based on elevated detection limit (c)
SS-99-11	0	0.25	Mammal_2005_TEQ	197.50		NG/KG	53	Y				Exceedance based on elevated detection limit (c)
SS-99-12	0	0.25	Mammal_2005_TEQ	187.50		NG/KG	53	Y				Exceedance based on elevated detection limit (c)
SS-99-13	0	0.25	Mammal_2005_TEQ	202.50		NG/KG	53	Y				Exceedance based on elevated detection limit (c)
SS-99-14	0	0.25	Mammal_2005_TEQ	198.50		NG/KG	53	Y				Exceedance based on elevated detection limit (c)
SS-99-15	0	0.25	Mammal_2005_TEQ	246.50		NG/KG	53	Y				Exceedance based on elevated detection limit (c)
SS-99-16	0	0.25	Mammal_2005_TEQ	218.50		NG/KG	53	Y				Exceedance based on elevated detection limit (c)
SS-99-21	0	0.25	Mammal_2005_TEQ	0.67		NG/KG	53	N				
SS-99-22	0	0.25	Mammal_2005_TEQ	1.47		NG/KG	53	N				
SS-99-23	0	0.25	Mammal_2005_TEQ	3.43		NG/KG	53	N				
SS-99-24	0	0.25	Mammal_2005_TEQ	3.42		NG/KG	53	N				
SS-99-25	0	0.25	Mammal_2005_TEQ	4.72		NG/KG	53	N				
WRL-SD-2038	0	0.5	Mammal_2005_TEQ	629.13		NG/KG	53	Y				
10-DEL-100	0	2	TEQ (d)	13		pg/g	53	N				
10-DEL-200	0	2	TEQ (d)	45		pg/g	53	N				
10-DEL-301	0	2	TEQ (d)	374		pg/g	53	Y				not in footprint (1); concentration below TBC
10-DEL-301	0	2	TEQ (d)	333		pg/g	53	Y				not in footprint (1); concentration below TBC
10-DEL-302	0	2	TEQ (d)	98		pg/g	53	Y				not in footprint (1); concentration below TBC
11-DEL-100	0	2	TEQ (d)	51		pg/g	53	N				
12-DEL-101	0	1	TEQ (d)	820		pg/g	53	Y				not in footprint (1); concentration below TBC
12-DEL-102	0	2	TEQ (d)	9		pg/g	53	N				

Table G-9. Comparison of Lyman Mill Reach Floodplain Soil Data to Cleanup Goals
(Sorted by Parameter, See Figure G-4)

BORING	TOP_OF_SAMPLE	BOTTOM_OF_SAMPLE	PARAMETER (a)	LAB_RESULT	QUAL	UNITS	Cleanup Goal	Above Cleanup Goal (Y/N) (b)	Number Values	Number Values Above Cleanup Goal	% Above Cleanup Goal	Comment
12-DEL-103	0	1	TEQ (d)	617		pg/g	53	Y				not in footprint (1); concentration below TBC
12-DEL-200	0	1.5	TEQ (d)	4		pg/g	53	N				
9-DEL-100	0	2	TEQ (d)	15		pg/g	53	N				
9-DEL-201	0	2	TEQ (d)	20		pg/g	53	N				
9-DEL-202	0	2	TEQ (d)	17		pg/g	53	N				
9-DEL-203	0	2	TEQ (d)	60		pg/g	53	Y				Not in footprint (1); concentration below TBC
9-DEL-300	0	2	TEQ (d)	12		pg/g	53	N				

Notes

(a) Human health cleanup goal for dioxin TEQ, developed for Oxbow area, also compared to TEQ data for shoreline soils.

(b) Non-detects (U and UJ qualified data) and rejected data (R qualified) not used to determine proposed areas for cleanup. Locations with contaminant concentration above the cleanup goals (Above Cleanup Goal field = "Y") are encompassed within the proposed cleanup area unless otherwise indicated in the COMMENT field.

(c) Samples will be re-sampled during design to confirm dioxin concentrations.

(d) Data source: Additional Sampling Activities (LEA, 2002)

(1) Excluded from cleanup footprint because location(s) does not provide habitat that would likely attract ecological receptors (e.g., location abuts residential properties and lack natural vegetation; and/or the grade is too steep/narrow to provide significant habitat).

(2) Excluded from cleanup footprint because contamination comparable to background conditions; location above 100-yr flood elevation.

(3) Concentration in excess of ARAR; however, contaminants appear to be comparable to background conditions. Additional sampling will be performed during design to confirm background conditions.

Applicable or Relevant and Appropriate Requirement (ARARs): RIDEM residential direct exposure criteria (RIDEM, 2004)

To Be Considered (TBC) criteria: EPA's recommended residential level for dioxin in soil (EPA, 1998)

Shading represents the first record within each parameter-specific dataset; summary statistics including the number of values and the number and % of values above the cleanup goal are reported.

Key

NA - not applicable; N - No; Y - Yes; MG/KG - milligrams per kilogram; NG/G - nanograms per gram; NG/KG - nanograms per kilogram; PG/G - picograms per kilogram; UG/G - micrograms per gram; UG/KG - micrograms per kilogram.

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APPENDIX J
(Revised from the 2010 Feasibility Study)

Remedial Cost Estimates for the CMRP Site

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J.1 Introduction

The approach and supporting evaluations used to develop remedial cost estimates for the Centredale Manor Restoration Project (CMRP) Superfund Site are presented in Appendix J of the feasibility study (FS) (Battelle, 2010). Present worth costs were developed for the sediment, soil, and groundwater alternatives retained for detailed analysis in the 2010 FS. Present worth cost estimates are refined in this Addendum for the Allendale and Lyman Mill sediment, Lyman Mill Reach stream sediment and floodplain soil, Source Area soil and groundwater alternatives, as follows:

- Allendale and Lyman Mill Sediment – Present worth cost estimates for the off-site disposal options are updated for the active alternatives (Alternatives 7, 8, 10, and 11) based on applying the alternative treatment standards for soil to excavated, dewatered sediment, resulting in a smaller percentage of dewatered sediment (10% rather than 50%) potentially requiring treatment to meet the land disposal restrictions (LDRs).
- Lyman Mill Reach Stream Sediment and Floodplain Soil – Present worth cost estimates are updated for the active alternatives (Alternatives 3 and 5) based on the revised cleanup areas and larger volumes of contaminated material for removal and disposal and/or treatment. Costs for off-site disposal options are also updated as described above for the sediment alternatives.
- Source Area Soil – Present worth cost estimates for Alternative 3e, Targeted Excavation, Upgrade and Maintain Existing Surfaces, and Off-site Disposal and/or Treatment, are updated based on the expanded areas for excavation and larger volume of contaminated material for off-site disposal and/or treatment.
- Source Area Groundwater – Present worth cost estimates for Alternative 2e, Excavation/Dewatering, are updated to account for the additional construction and monitoring requirements needed to ensure the continued effectiveness of the 2009–2010 time-critical removal action (see Sections 2.2.1 and 6.5 of this Addendum).

Action Area	Alternative No.	Estimated Costs to Comply with NHPA (USACE, 2011)		
		Phase IB Survey Costs	Potential Mitigation Costs	Total Estimated Costs
Allendale and Lyman Mill Sediment	Alternatives 7 or 8	$70,000 to $80,000	$140,000 to $160,000	$210,000 to $240,000
	Alternatives 10 or 11	$90,000 to $100,000	$200,000 to $250,000	$290,000 to $350,000
Allendale Reach Floodplain Soil	Alternative 5	$60,000 to $75,000	$180,000 to $200,000	$240,000 to $275,000
Lyman Mill Reach Stream Sediment and Floodplain Soil	Alternative 3 or 5	$90,000 to $100,000	$200,000 to $250,000	$290,000 to $350,000
Source Area Soil	Alternative 3e or 4e	$30,000 to $35,000	$90,000 to $100,000	$120,000 to $135,000

Present worth costs for all sediment and soil alternatives presented either in the 2010 FS (Allendale Reach floodplain soil) or this Addendum (Allendale and Lyman Mill sediment, Lyman Mill Reach stream sediment and floodplain soil, and Source Area soil) could increase if remediation measures (e.g., excavation, capping) have the potential to adversely impact significant historic features and archaeological deposits at the site (USACE, 2011). Additional activities could be required to comply with the National Historic Preservation Act (NHPA), resulting in additional costs associated with a Stage IB cultural resource survey (archaeological survey testing and excavation) and additional mitigation measures. Estimated costs to comply with NHPA are identified below; these costs would be better refined during the design and construction phases of the remedial action.

Present Worth Costs

The present worth cost is the sum of the capital cost and the present worth of the monitoring and maintenance costs for 30 years. The capital costs include the following:

- Estimated construction cost;
- Estimated design costs, which includes pre-design sampling and analysis;
- Estimated construction oversight and quality control;
- Contingency of 25 percent, except 10% is applied to off-site disposal costs; and,
- Post-construction monitoring costs.

The cost tables for each action area (excluding Allendale Reach floodplain soil which are presented in the 2010 FS) are organized as follows:

- **Present Worth Cost** that shows the capital costs and monitoring and maintenance costs for each alternative.
- **Construction Cost** that shows the quantities, unit costs and total costs for the work tasks in each alternative, including costs for mitigation (additional details regarding mitigative measures are provided in Appendix K of the 2010 FS and Appendix M of this Addendum).
- **Design Cost** that shows the pre-design sampling and analysis and design costs for each alternative.
- **Construction Oversight Cost** that shows the construction oversight and quality control staff and includes water quality monitoring and confirmation sampling at the end of construction.
- **Long-Term Monitoring Cost** that includes monitoring for 30 years, and estimated maintenance costs for 30 years, including costs for invasive species management.
- **Unit Cost** that shows the labor, equipment, material and subcontract costs, estimated production rates and estimated unit costs used for the construction, design and monitoring cost estimates.
- **Volume Estimates** that show the calculations for the quantities used in the construction cost estimates.

The estimated costs presented are prepared for alternative comparison and selection of the recommended remedial action. The costs are based on the information available at the time of the estimate; cost estimates include acquisition of property required for remedy implementation (i.e., property for upland confined disposal facility [CDF]). The actual costs of remediation depend on many variables, including quantity of contaminated sediment/soils, disposal fees, health and safety regulations, Applicable or Relevant and Appropriate Requirement (ARARs), labor and equipment costs, and the final project scope. As a result, the final project costs will vary from the estimates presented herein. Costs are expected to be within the range of accuracy typical for feasibility study or conceptual engineering cost estimates. Because of this, project feasibility and funding needs must be carefully reviewed prior to making specific financial decisions to help ensure proper evaluation and adequate funding.

The costs presented in this appendix have been refined for select sediment, soil and groundwater alternatives identified above, and are based on the alternatives described in Section 6.0 of this Addendum (Evaluation of Remedial Alternatives). In order to prepare cost estimates that best reflect the differences between alternatives and are the most accurate relative costs, it is necessary to make a number of assumptions on the project scope, especially for design (Section J.2), construction oversight (Section J.3) and long-term monitoring (Section J.4). The key assumptions for construction costs are:

1. The construction costs include overhead and profit in the unit costs for the implementing contractor or subcontractor.
2. The labor rates are based on union or "prevailing wage" rates. Equipment rates are based on RS Means *Building Construction Cost Data* or experience with past dredging projects. Material costs are based on personnel communications from local vendors, or experience with past projects.
3. Construction production rates are based on equipment rated capacity modified for work in shallow water at the CMRP site. All work would be done in one eight-hour shift per work day, working 5 days per week.

J.2 Design Cost Key Assumptions

Design hours based on preparation of design reports (including engineering calculations) and drawings for 30%, 90%, and final designs; technical specifications for 90%; and final designs and construction work plans.

Costs for procurement are not included since they would not affect cost comparisons and are dependent on the acquisition strategy.

The assumed level of effort for field sampling and laboratory analysis are presented in Table J-1 for Allendale and Lyman Mill Sediment, J-3 for Lyman Mill Reach stream sediment and floodplain soil (including Oxbow), in Table J-4 for Source Area soil, and Table J-5 for Source Area groundwater. (Table J-2 for Allendale Reach Floodplain Soil is provided in Appendix J of the 2010 FS.)

Table J-1 Allendale and Lyman Mill Reach Sediment Action Area
Design Field and Lab Assumptions

Activity	Alternative 7 Excavation and Disposal and/or Treatment	Alternative 8 Partial Excavation, Isolation Capping and Disposal and/or Treatment	Alternative 10 Dam Replacement, Excavation and Disposal and/or Treatment	Alternative 11 Dam Replacement, Partial Excavation, Isolation Capping and Disposal and/or Treatment
Physical survey (days)	4	4	4	4
Sediment sampling (days)	20	20	20	20
Ecologic sampling (days)	4	4	4	4
Water dioxins (no.)	15	15	15	15
Sediment engineering properties (no.)[1]	20	20	20	20
Sediment characterization (no.)[2]	160	160	160	160
Background characterization (no.)[3]	20	20	20	20
Fish tissue chemistry[4]	20	20	20	20
Benthic community analysis (no.)	22	22	22	22

[1] Sediment engineering properties includes shear strength and consolidation tests.
[2] Sediment characterization (for design) includes: dioxins, percent solids, grain size, organic content and TCLP analysis for metals, pesticides, volatiles and semi-volatiles.
[3] Background characterization includes sampling and analysis to confirm background conditions (for design), and includes: dioxins, pesticides, volatile and semi-volatile organic compounds, inorganics, percent solids, grain size, organic content.
[4] Fish tissue monitoring for dioxin/furans, pesticides, PCBs and PAHs (establish post-construction baseline conditions to support long-term monitoring).

Table J-3 Lyman Mill Reach Stream Sediment and Floodplain Soil (Oxbow) Action Area Design Field and Lab Assumptions		
Activity	Alternative 3 Targeted Excavation, Enhanced Natural Recovery, and Disposal and/or Treatment	Alternative 5 Partial Excavation, Enhanced Natural Cover, and Disposal and/or Treatment
Physical survey (days)	2	2
Sediment/soil sampling (days)	5	5
Benthic sampling (days)	2	2
Water characterization (no.)[1]	10	10
Sediment/soil characterization (no.)	80	80
Background characterization (no.)[2]	20	20
Animal tissue dioxins (no.)	10	10

[1]Water chemical analysis includes dioxins, PCBs, pesticides, inorganics.
[2] Background characterization includes sampling and analysis to confirm background conditions (for design), and includes: dioxins, pesticides, volatile and semi-volatile organic compounds, inorganics, percent solids, grain size, organic content.

Table J-4 Source Area Soil Action Area Design Field and Lab Assumptions		
Activity	Alternative 3e Targeted Excavation, Upgrade and Maintain Existing Surfaces, and Disposal and/or Treatment	Alternative 4e Targeted Excavation, Convert to RCRA Caps and Maintain, and Disposal and/or Treatment
Physical survey (days)	2	2
Soil sampling (days)	16	5
Soil characterization (no.)	32	8
Dioxin chemistry (no.)	96	24

Table J-5 Source Area Groundwater Action Area Design Field and Lab Assumptions		
Activity	Alternative 2 Excavation/ Dewatering	Alternative 5 In-Situ Chemical Oxidation
Physical survey (days)	2	2
Soil sampling (days)	–	5
Well installation (linear feet)	–	100
Groundwater sampling (days)	2	2
Groundwater dioxins (no.)	7	14
Soil characterization (no.)[1]	–	75

[1] Soil characterization consists of dioxins and volatiles, with other analyses (grain size, organic content, semi-volatiles, and TCLP for metals) analyzed at approximately 5%.

J.3 Construction Oversight and Quality Control Key Assumptions

1. The project manager, resident engineer, and administrative support person would be on site full-time for one eight-hour shift per work day.
2. Water quality monitoring and sampling would be done once a week during excavation and cap placement. Assume analysis of one composite water chemistry sample per week on average.
3. Bathymetric surveys would be done once a week during excavation and cap placement.

4. Confirmation sediment sampling would be done during the excavation work. For the ponds sediment action area, assume approximately 4 confirmation samples would be taken per acre over an area of approximately 40 acres.
5. Designation sampling would be done on dewatered stockpiles of excavated material. For the river/ponds action area, assume one designation sample would be taken per day of sediment dewatering operations.
6. Based on an evaluation of the available data, the disposal costs for the upland CDF (Option 'a') assume that approximately 10% of the excavated material from the Allendale and Lyman Mill sediment and Lyman Mill Reach stream sediment and floodplain soil action areas would be shipped off site for disposal and/or treatment.
7. Disposal costs for the nearshore CDF (Option 'b') assume that the sediment will not dewatered, or otherwise treated ex-situ, and that the sediment does not need to meet the treatment standards in the LDRs prior to disposal in a nearshore CDF that is within the area of contamination.
8. Based on an evaluation of the available data, the disposal costs for off-site disposal and/or treatment (Option 'e') assume that approximately 10% of the excavated material from the Allendale and Lyman Mill sediment and Lyman Mill stream sediment and floodplain soil action areas, 10% of soil and 100% of potential buried water material from the Source Area soil action area, and 20% of the excavated material from the groundwater action area would require treatment to meet the LDRs.
9. For Groundwater, assume installation of three (3) additional deep monitoring wells, each drilled to 80 feet below ground surface (ft bgs) and installed with multiple screened intervals for monitoring distinct depth intervals at approximately 40 and 80 ft bgs, for a combined piping length of 120 feet each, or 360 feet total.

Table J-6 Allendale and Lyman Mill Reach Sediment Action Area Design Field and Lab Assumptions

Activity	Alternative 7 Excavation and Disposal and/or Treatment	Alternative 8 Partial Excavation, Isolation Capping and Disposal and/or Treatment	Alternative 10 Dam Replacement, Excavation and Disposal and/or Treatment	Alternative 11 Dam Replacement, Partial Excavation, Isolation Capping and Disposal and/or Treatment
Physical survey (days)	4	4	4	4
Sediment sampling (days)	20	20	20	20
Ecologic sampling (days)	4	4	4	4
Water dioxins (no.)	15	15	15	15
Sediment engineering properties (no.)[1]	20	20	20	20
Sediment characterization (no.)[2]	160	160	160	160
Background characterization (no.)[3]	20	20	20	20
Fish tissue chemistry[4]	20	20	20	20
Benthic community analysis (no.)	22	22	22	22

[1] Sediment engineering properties includes shear strength and consolidation tests.
[2] Sediment characterization (for design) includes: dioxins, percent solids, grain size, organic content and TCLP analysis for metals, pesticides, volatiles and semi-volatiles.
[3] Background characterization includes sampling and analysis to confirm background conditions (for design), and includes: dioxins, pesticides, volatile and semi-volatile organic compounds, inorganics, percent solids, grain size, organic content.
[4] Fish tissue monitoring for dioxin/furans, pesticides, PCBs and PAHs (establish post-construction baseline conditions to support long-term monitoring).

Table J-8 Lyman Mill Reach Stream Sediment and Floodplain Soil (Oxbow) Action Area Construction Oversight Field and Lab Assumptions		
Activity	Alternative 3 Targeted Excavation, Enhanced Natural Recovery, and Disposal and/or Treatment	Alternative 5 Partial Excavation, Enhanced Natural Cover, and Disposal and/or Treatment
Physical survey (days)	4	10
Sediment/soil sampling (days)	10	20
Sediment/soil confirmation (no.)	28	48
Sediment/soil designation (no.)[1]	48	136

[1] Options 3d, 3e, 5d, and 5e only; design samples would be used to characterize soils for Options 3a and 5a.

Table J-9 Source Area Soil Action Area Construction Oversight Field and Lab Assumptions		
Activity	Alternative 3e Targeted Excavation, Upgrade and Maintain Existing Surfaces, and Disposal and/or Treatment	Alternative 4e Targeted Excavation, Convert to RCRA Cap and Maintain, and Disposal and/or Treatment
Physical survey (days)	20	40
Soil sampling (days)	2	1
Soil confirmation (no.)	10	–
Soil designation (no.)	24	14

Table J-10 Source Area Groundwater Action Area Construction Oversight Field and Lab Assumptions		
Activity	Alternative 2 Excavation/ Dewatering	Alternative 5 In-Situ Chemical Oxidation
Groundwater sampling (days)	5	2
Physical survey (days)	3	3
Soil sampling (days)	–	2
Well installation (linear feet)	360	–
Soil confirmation (no.)	–	50
Soil designation (no.)	10	–
Groundwater dioxins (no.)	10	14
Groundwater discharge (no.)[1]	10	–

[1] Groundwater discharge chemical analysis includes dioxins, volatiles, semi-volatiles, petroleum, inorganics, oil and grease, and biological oxygen demand (BOD).

J.4 Long-term Monitoring Key Assumptions

For the excavation alternatives, it is assumed that there would be some residual contamination and, as a result, long-term monitoring would be required. The annual monitoring for the partial excavation alternatives is assumed to be ½ of the effort required for the excavation alternatives.

It is assumed that annual monitoring of physical conditions and groundwater would be required for the CDF sites.

Annual cap maintenance costs are based on the assumption that a small percentage of the cap will require repair each year.

- For the Allendale and Lyman Mill sediment action area, it is assumed that the repair area would be ½ acre per year for the partial excavation alternatives and ¼ acre per year for the excavation alternative.
- For the Source Area soil action area, it is assumed that the repair area would be 1/10 acre per year for the Upgrade Cap and RCRA Cap alternatives.
- For the Lyman Mill Reach stream sediment and floodplain soil (Oxbow) action area, it is assumed that the repair area would be ¼ acre per year for the targeted and partial excavation alternatives.
- For the Source Area Groundwater, it is assumed that 14 existing well intervals and 6 new well intervals will be monitored annually, for a total of 20 well intervals. Including quality control (QC) samples leads to analysis of 25 samples per event.

All sediment, floodplain soil, and source area soil alternatives include annual maintenance costs for invasive species management.

Annual costs assume that maintenance of the Allendale and Lyman Mill Dams would be required. It is assumed that the annual maintenance would include: (a) checking gate operation, (b) cutting vegetation on the embankments and (c) visual inspection of dam structure.

Table J-11 Allendale and Lyman Mill Reach Sediment Action Area
Long-Term Monitoring Field and Lab Assumptions

Activity	Alternative 1 No Action	Alternative 7 Excavation and Disposal and/or Treatment	Alternative 8 Partial Excavation, Isolation Capping and Disposal and/or Treatment	Alternative 10 Dam Replacement, Excavation and Disposal and/or Treatment	Alternative 11 Dam Replacement, Partial Excavation, Isolation Capping and Disposal and/or Treatment
Sediment sampling (days/yr)[1]	–	7	12	7	12
Physical survey (days/yr)	–	2	4	2	4
Biota sampling (days/yr)	2	2	2	2	4
CDF physical survey (days/yr)[2]	–	2	2	2	2
Surface water dioxins (no./yr)	–	20	20	20	20
Fish tissue chemistry (no/yr.)[3]	10	20	20	20	20
Sediment dioxin and physical properties (no./yr)[4]	–	30	50	30	50
Benthic community analysis	–	20	20	20	20
CDF groundwater dioxins (no./yr)[2]	–	10	10	10	10
Invasive species control (acres)	–	11 (Option 7b)	5 (Option 8b)	5 (Options a, d, e) 18 (Option b)	23 (all options)

[1] Includes 2 days for downriver sampling.
[2] Long-term monitoring for upland CDF (Option a) and nearshore CDF (Option b) only.
[3] Fish tissue monitoring for dioxin/furans, pesticides, PCBs and PAHs.
[4] Includes 10 downstream samples.

Table J-13 Lyman Mill Reach Stream Sediment and Floodplain Soil (Oxbow) Action Area Long-Term Monitoring Field and Lab Assumptions			
Activity	Alternative 1 No Action	Alternative 3 Targeted Excavation, Enhanced Natural Recovery, and Disposal and/or Treatment	Alternative 5 Partial Excavation, Enhanced Natural Cover and Disposal and/or Treatment
Soil sampling (days/yr)	–	5	5
Physical survey (days/yr)	2	2	2
Biota sampling (days/yr)	–	2	2
CDF Physical (days/yr)[1]	–	2	2
Water dioxins (no./yr)	–	10	10
Animal tissue dioxins (no./yr)	–	10	10
Soil dioxin and physical properties (no./yr)	–	20	20
Groundwater dioxins (no.) [1]	–	10	10
Invasive species control (acres)	–	29	29

[1]Long-term monitoring for upland CDF (Option a) and nearshore CDF (Option b) only

Table J-14 Source Area Soil Action Area Long-Term Monitoring Field and Lab Assumptions			
Activity	Alternative 1 No Action	Alternative 3e Targeted Excavation, Upgrade and Maintain Existing Surfaces, and Disposal and/or Treatment	Alternative 4e Targeted Excavation, Convert to RCRA Cap and Maintain, and Disposal and/or Treatment
Physical survey (days/yr)	2	2	2
Invasive species control (acres)	–	4.3	4.3

Table J-15 Source Area Groundwater Action Area Long-Term Monitoring Field and Lab Assumptions			
Activity	Alternative 1 No Action[1]	Alternative 2 Excavation/ Dewatering	Alternative 5 In-Situ Chemical Oxidation
Groundwater sampling (days/yr)	5	5	2
Groundwater analyses (no./yr)	25	25	10

[1]Costs for five-year reviews are covered under the Source Area soil alternatives.

References

U.S. Army Corps of Engineers (USACE). 2011. *Review and Evaluation of Cleanup Alternatives for Impacts Upon Historic Properties, Centredale Manor Restoration Project Superfund Site, North Providence, Rhode Island*. New England District, Concord, MA. June.

Appendix J Cost Estimates

Allendale and Lyman Mill Sediment Alternatives

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Present Worth Costs
Allendale and Lyman Mill Reach Sediment Alternatives

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	**Allendale and Lyman Mill Reach Sediment Alternatives**												
2			ALT 1 No Action	ALT 7a Excavation, Upland CDF	ALT 7d Excavation, On-site Incinerate	ALT 7e Excavation, Off-site Disposal	ALT 7b Excavation, Nearshore CDF	ALT 8a Partial Excavation, Isolation Capping, Upland CDF	ALT 8b Partial Excavation, Isolation Capping, Nearshore CDF	ALT 8d Partial Excavation, Isolation Capping, On-site Incinerate	ALT 8e Partial Excavation, Isolation Capping, Off-site Disposal	ALT 10b Dam Replacement, Excavation, Nearshore CDF	ALT 11f Dam Replacement, Partial Excavation, Isolation Capping, On-site Consolidation
3	**Remediation Area:**	**38.9**	**Acres**										
4	**Remediation Volume**	**155,800**	**Cubic Yards**										
5	**Construction Cost (Excludes Disposal)**		$0	$13,719,578	$13,719,578	$13,719,578	$11,058,586	$15,541,067	$13,939,307	$15,541,067	$15,541,067	$10,760,313	$21,797,903
6	Disposal			$27,806,490	$84,237,219	$61,289,415	$19,953,129	$12,809,778	$7,662,133	$35,241,178	$25,608,182	$22,559,380	
7	Design costs		$0	$1,528,979	$1,528,979	$1,528,979	$1,507,379	$1,528,979	$1,528,979	$1,528,979	$1,528,979	$1,507,379	$1,354,379
8	Oversight & QC costs		$0	$2,622,370	$2,901,220	$2,901,220	$2,419,895	$2,118,438	$2,118,438	$2,232,838	$2,232,838	$2,419,895	$1,141,099
9	**Contingencies**												
10	Excavation (25%)	25%	$0	$5,067,732	$4,537,444	$4,537,444	$3,746,465	$5,397,121	$4,396,681	$4,825,721	$4,825,721	$3,671,897	$6,073,345
11	Disposal (25% for a,b; 10% for d,e)			$6,951,622	$8,423,722	$6,128,942	$4,988,282	$3,202,445	$1,915,533	$3,524,118	$2,560,818	$5,639,845	
12			$0										
13	**CAPITAL COSTS**												
14													
15	**TOTAL**		**$0**	**$57,700,000**	**$115,300,000**	**$90,100,000**	**$43,700,000**	**$40,600,000**	**$31,600,000**	**$62,900,000**	**$52,300,000**	**$46,600,000**	**$30,400,000**
16													
17	Annual Monitoring & Maintenance Years		$36,206	$200,333	$200,333	$200,333	$211,333	$342,267	$347,267	$342,267	$342,267	$218,333	$365,267
18	Disposal Monitoring			$23,330			$23,330	$23,330	$23,330			$23,330	
19	**TOTAL PRESENT WORTH COSTS (a)**												
20	**TOTAL**		**$449,280**	**$60,500,000**	**$118,000,000**	**$93,000,000**	**$46,600,000**	**$45,100,000**	**$36,200,000**	**$67,000,000**	**$57,000,000**	**$49,600,000**	**$34,900,000**
21													
22	Notes:												
23	Present worth factors for 7% discount factor												
24	Years 1 to 30	12.409											
25	Costs for upland CDFs includes property acquisition												
26	Costs for Options 10a, 10d, and 10e would be same as Alternative 7, except that the capital and present worth costs would increase by about $1 million for dam replacement and mitigation.												
27	Costs costs for Options 11a, 11d, and 11e would be about $3 million less than Alternative 8, because the capital and present worth costs would increase for costs associated with dam replacement and mitigation and decrease for reduction in cap material volume. The same is true for Option 11b, except that the total costs would increase overall by about $500,000 for additional mitigation.												
28	(a) The present worth costs for Alternatives 7, 8, 10, and 11 could increase by approximately $210,000 to $350,000 (or more) if a Stage IB cultural resource survey (archaeological survey testing and excavation) and additional mitigation measures are required to comply with the National Historic Preservation Act (USACE, 2011).												

Construction Costs
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M	N
1	**Description**	**Quantity**	**Units**	**Daily**	**Unit Costs**				**Costs**				
2					**Labor**	**Equipment**	**Materials**	**Subcontract**	**Labor**	**Equipment**	**Materials**	**Subcontract**	**TOTAL**
3	**CONSTRUCTION COSTS**												
4													
5													
6	**ALT 7a, 7d, 7e EXCAVATION (without disposal)**												
7	Mobilization and Demobilize	30	days		$5,734	$3,410	$520	$0	$172,013	$102,300	$15,600	$0	$289,913
8	Mobilize and demob excavators	15	days		$5,734	$3,410	$520	$0	$86,007	$51,150	$7,800	$0	$144,957
9	Mobilize pile driving	10	days		$3,817	$4,240			$38,173	$42,400	$0	$0	$80,573
10	Rebuild Lyman Mill Dam Gate	1	ls					$750,000	$0	$0	$0	$750,000	$750,000
11	Divert Allendale Water	5	days		$5,734	$3,410	$520	$0	$28,669	$17,050	$2,600	$0	$48,319
12	Drain Lyman Mill Water	10	days		$5,734	$3,410	$520	$0	$57,338	$34,100	$5,200	$0	$96,638
13	Temp road gravel	9,778	cy	400	$8.43	$2.08	$52.50	$0	$82,407	$20,289	$513,333	$0	$616,029
14	Geomembrane for temp roads	264,000	sf					$0.86	$0	$0	$0	$227,040	$227,040
15	Work area gravel	2,222	cy	400	$8.43	$2.08	$52.50	$0	$18,729	$4,611	$116,667	$0	$140,007
16	Work area geomembrane	120,000	sf					$0.86	$0	$0	$0	$103,200	$103,200
17	Work area asphalt	120,000	sf					$1.00	$0	$0	$0	$120,000	$120,000
18	Remove haul roads	12,000	cy		$8.43	$2.08			$101,135	$24,900	$0	$0	$126,035
19	Hydroseed work areas	384,000	sf					$0.05	$0	$0	$0	$17,664	$17,664
20	Purchase sheet pile	54,000	sf				$14.90		$0	$0	$804,600	$0	$804,600
21	Install and remove sheet pile	144,000	sf		$6.36	$7.07			$916,142	$1,017,600	$0	$0	$1,933,742
22	Excavate sediment	155,799	cy	400	$11.33	$8.53	$1.30	$0	$1,765,897	$1,328,189	$202,539	$0	$3,296,625
23	Backfill	47,100	tons	500	$14.27	$8.22	$31.48	$0	$672,068	$387,166	$1,482,722	$0	$2,541,956
24	Aquatic habitat enhancement	39	Ac					$4,000	$0	$0	$0	$155,704	$155,704
25	Re-stock fish	1	ls					$25,000	$0	$0	$0	$25,000	$25,000
26	Superintendent & field engr	449	days		$1,920				$863,036	$0	$0	$0	$863,036
27	Project manager	449	days		$1,200				$539,398	$0	$0	$0	$539,398
28	Safety Officer	449	days		$600				$269,699	$0	$0	$0	$269,699
29	Officer	449	days		$600				$269,699	$0	$0	$0	$269,699
30	Clerk	449	days		$360				$161,819	$0	$0	$0	$161,819
31	Field office, utilities, vehicles	21.4	mo			$4,575			$0	$97,926	$0	$0	$97,926
32													
33	**ALT 7a, 7d, 7e EXCAVATION (without disposal) CONSTRUCTION COST**								**$6,042,229**	**$3,127,681**	**$3,151,061**	**$1,398,608**	**$13,719,578**
34													

Construction Costs
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M	N
1	**Description**	**Quantity**	**Units**	**Daily**	**Unit Costs**				**Costs**				
2					**Labor**	**Equipment**	**Materials**	**Subcontract**	**Labor**	**Equipment**	**Materials**	**Subcontract**	**TOTAL**
3	**CONSTRUCTION COSTS**												
35	**Excavation OPTION 7a Upland CDF**												
36	Excavate existing soil	26,289	cy	600	$10.69	$5.82	$0	$0	$281,089	$152,914	$0	$0	$434,003
37	Clear trees and vegetation	260,000	sf	12,000	$0.44	$0.19	$0.00	$0.00	$113,838	$50,050	$0	$0	$163,888
38	Sand liner base	6,756	cy	400	$8.43	$2.08	$52.50	$0.00	$56,935	$14,018	$354,667	$0	$425,620
39	Install base liner	182,400	sf					$0.86	$0	$0	$0	$156,864	$156,864
40	Sand drain layer	6,756	cy	400	$8.43	$2.08	$52.50	$0.00	$56,935	$14,018	$354,667	$0	$425,620
41	Perimeter berms	34,264	cy	600	$7.79	$3.65	$52.50	$0.00	$266,770	$125,062	$1,798,839	$0	$2,190,671
42	Soil over sediment	8,133	cy	400	$8.43	$2.08	$52.50	$0.00	$68,547	$16,877	$427,000	$0	$512,424
43	Cover membrane	219,600	sf					$0.86	$0	$0	$0	$188,856	$188,856
44	Drain gravel over membrane	8,133	cy	400	$8.43	$2.08	$52.50	$0.00	$68,547	$16,877	$427,000	$0	$512,424
45	Protective soil	8,133	cy	400	$8.43	$2.08	$52.50	$0.00	$68,547	$16,877	$427,000	$0	$512,424
46	Topsoil and plantings	219,600	sf	7,400	$0.63	$0.13	$0.74	$1.00	$138,630	$29,527	$162,667	$219,600	$550,424
47	Load and place in CDF	101,610	tons		$13.95	$10.31	$1.92	$0.00	$1,417,859	$1,047,365	$195,404	$0	$2,660,628
48	Mobilize dewater system	15	days		$5,972	$8,410			$89,577	$126,150	$0	$0	$215,727
49	Dewater sediment	155,799	cy	400	$14.93	$21.03	$9.35	$0	$2,326,012	$3,275,679	$1,456,723	$0	$7,058,414
50	Water treatment at site	389	days		$1,300	$1,740	$270	$20	$506,472	$677,727	$105,164	$7,790	$1,297,153
51	Water treatment set-up	5	days		$6,848	$1,530	$50	$0	$34,241	$7,650	$250	$0	$42,141
52	Off-site Incineration	11,290	tons		$7.24	$1.54	$0.77	$880	$81,760	$17,369	$8,685	$9,935,200	$10,043,014
53	Superintendent & field engr	113	days		$1,920				$216,097	$0	$0	$0	$216,097
54	Project manager	113	days		$1,200				$135,061	$0	$0	$0	$135,061
55	Clerk	113	days		$360				$40,518	$0	$0	$0	$40,518
56	Field office, utilities, vehicles	5.4	mo			$4,575			$0	$24,520	$0	$0	$24,520
57									**$5,967,437**	**$5,612,679**	**$5,718,065**	**$10,508,310**	**$27,806,490**
58													
59													
60	**Excavation Option 7d On-Site Incineration**												
61	On-site incineration	112,900	tons		$7.24	$1.54	$1.04	$600	$817,601	$173,692	$117,242	$67,761,712	$68,870,247
62	Solid waste landfill	112,900	tons		$7.24	$1.54	$1.04	$50	$817,601	$173,692	$117,242	$5,645,000	$6,753,536
63	Mobilize dewater system	15	days		$5,972	$8,410			$89,577	$126,150	$0	$0	$215,727
64	Dewater sediment	155,799	cy	400	$14.93	$21.03	$9.35	$0	$2,326,012	$3,275,679	$1,456,723	$0	$7,058,414
65	Water treatment at site	389	days		$1,300	$1,740	$270	$20	$506,472	$677,727	$105,164	$7,790	$1,297,153
66	Water treatment set-up	5	days		$6,848	$1,530	$50	$0	$34,241	$7,650	$250	$0	$42,141
67													
68									**$4,591,504**	**$4,434,591**	**$1,796,622**	**$73,414,502**	**$84,237,219**
69													

Construction Costs
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M	N
1	**Description**	**Quantity**	**Units**	**Daily**	**Unit Costs**				**Costs**				
2					**Labor**	**Equipment**	**Materials**	**Subcontract**	**Labor**	**Equipment**	**Materials**	**Subcontract**	**TOTAL**
3	**CONSTRUCTION COSTS**												
70	**Excavation Option 7e Off-site Disposal**												
71	Off-site Incineration	11,290	tons		$7.24	$1.54	$0.77	$880	$81,760	$17,369	$8,685	$9,935,200	$10,043,014
72	Hazardous Waste Landfill	101,610	tons		$7.24	$1.54	$0.77	$410	$735,841	$156,323	$78,162	$41,662,640	$42,632,966
73	Mobilize dewater system	15	days		$5,972	$8,410			$89,577	$126,150	$0	$0	$215,727
74	Dewater sediment	155,799	cy	400	$14.93	$21.03	$9.35	$0	$2,326,012	$3,275,679	$1,456,723	$0	$7,058,414
75	Water treatment at site	389	days		$1,300	$1,740	$270	$20	$506,472	$677,727	$105,164	$7,790	$1,297,153
76	Water treatment set-up	5	days		$6,848	$1,530	$50	$0	$34,241	$7,650	$250	$0	$42,141
77													
78													
79									**$3,773,903**	**$4,260,899**	**$1,648,984**	**$51,605,630**	**$61,289,415**
80													
81	**ALT 7b EXCAVATION (without disposal)**												
82	Mobilization and Demobilize	30	days		$5,734	$3,410	$520	$0	$172,013	$102,300	$15,600	$0	$289,913
83	Mobilize and demob excavators	15	days		$5,734	$3,410	$520	$0	$86,007	$51,150	$7,800	$0	$144,957
84	Mobilize pile driving	10	days		$3,817	$4,240			$38,173	$42,400	$0	$0	$80,573
85	Rebuild Lyman Mill Dam Gate	1	ls					$750,000	$0	$0	$0	$750,000	$750,000
86	Divert Allendale Water	5	days		$5,734	$3,410	$520	$0	$28,669	$17,050	$2,600	$0	$48,319
87	Drain Lyman Mill Water	10	days		$5,734	$3,410	$520	$0	$57,338	$34,100	$5,200	$0	$96,638
88	Temp road gravel	8,533	cy	400	$8.43	$2.08	$52.50	$0	$71,918	$17,707	$448,000	$0	$537,625
89	Geomembrane for temp roads	230,400	sf					$0.86	$0	$0	$0	$198,144	$198,144
90	Work area gravel	2,222	cy	400	$8.43	$2.08	$52.50	$0	$18,729	$4,611	$116,667	$0	$140,007
91	Work area geomembrane	120,000	sf					$0.86	$0	$0	$0	$103,200	$103,200
92	Purchase sheet pile	54,000	sf				$14.90		$0	$0	$804,600	$0	$804,600
93	Install and remove sheet pile	144,000	sf		$6.36	$7.07			$916,142	$1,017,600	$0	$0	$1,933,742
94	Remove haul roads	10,756	cy		$8.43	$2.08			$90,647	$22,318	$0	$0	$112,965
95	Hydroseed work areas	350,400	sf					$0.05	$0	$0	$0	$16,118	$16,118
96	Excavate & stockpile sediment	123,519	cy	500	$11.40	$6.82	$2.38	$0	$1,407,840	$842,400	$293,975	$0	$2,544,215
97	Backfill	36,728	tons	500	$14.27	$8.22	$31.48	$0	$524,058	$301,900	$1,156,182	$0	$1,982,140
98	Aquatic habitat enhancement	28	Ac					$4,000	$0	$0	$0	$111,704	$111,704
99	Re-stock fish	1	ls					$25,000	$0	$0	$0	$25,000	$25,000
100	Superintendent & field engr	307	days		$1,920				$589,513	$0	$0	$0	$589,513
101	Project manager	307	days		$1,200				$368,446	$0	$0	$0	$368,446
102	Clerk	307	days		$360				$110,534	$0	$0	$0	$110,534
103	Field office, utilities, vehicles	15	mo			$4,575			$0	$70,235	$0	$0	$70,235
104													
105	**ALT 7b EXCAVATION (without disposal) CONSTRUCTION COST**								**$4,480,026**	**$2,523,770**	**$2,850,624**	**$1,204,166**	**$11,058,586**
106													

Construction Costs
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M	N
1	**Description**	**Quantity**	**Units**	**Daily**	**Unit Costs**				**Costs**				
2					**Labor**	**Equipment**	**Materials**	**Subcontract**	**Labor**	**Equipment**	**Materials**	**Subcontract**	**TOTAL**
3	**CONSTRUCTION COSTS**												
107	**Excavation OPTION 7b Nearshore CDF**												
108	Clear Shoreline	1	ls	1				$50,000	$0	$0	$0	$50,000	$50,000
109	Excavate for wall footings	10,667	cy	600	$11.40	$6.82	$2.38	$0	$121,576	$72,747	$25,387	$0	$219,709
110	Install, remove sheet piles	108,000	sf	600	$6.36	$7.07			$687,107	$763,200	$0	$0	$1,450,307
111	Support piles	720	ea	20				$1,260	$0	$0	$0	$907,200	$907,200
112	Footing forms	21,600	sf	1,400				$8.70	$0	$0	$0	$187,920	$187,920
113	Wall forms	100,800	sf	1,040				$13.50	$0	$0	$0	$1,360,800	$1,360,800
114	Footing concrete	8,000	cy	150				$165	$0	$0	$0	$1,320,000	$1,320,000
115	Wall concrete	3,733	cy	95				$195	$0	$0	$0	$728,000	$728,000
116	Reinforcing steel	176	tons	2.3				$2,200	$0	$0	$0	$387,200	$387,200
117	Gravel behind wall	4,680	tons		$14.27	$8.22	$31.48		$66,778	$38,470	$147,326	$0	$252,574
118	Soil over sediment	17,747	cy	400	$8.43	$2.08	$52.50	$0.00	$149,568	$36,824	$931,700	$0	$1,118,092
119	Cover membrane	479,160	sf	1				$0.86	$0	$0	$0	$412,078	$412,078
120	Drain gravel over membrane	17,747	cy	400	$8.43	$2.08	$52.50	$0.00	$149,568	$36,824	$931,700	$0	$1,118,092
121	Protective soil	17,747	cy	400	$8.43	$2.08	$52.50	$0.00	$149,568	$36,824	$931,700	$0	$1,118,092
122	Topsoil and plantings	479,160	sf	7,400	$0.63	$0.13	$0.74	$1.00	$302,486	$64,428	$354,933	$479,160	$1,201,007
123	CDF mitigation	11	Ac					$608,205	$0	$0	$0	$6,690,258	$6,690,258
124	Water treatment at site	105	days	1	$1,300	$1,740	$270	$20	$136,224	$182,286	$28,286	$2,095	$348,891
125	Water treatment set-up	5	days	1	$6,848	$1,530	$50	$0	$34,241	$7,650	$250	$0	$42,141
126	Superintendent & field engr	281	days	1	$1,920				$540,387	$0	$0	$0	$540,387
127	Project manager	281	days		$1,200				$337,742	$0	$0	$0	$337,742
128	Clerk	281	days		$360				$101,323	$0	$0	$0	$101,323
129	Field office, utilities, vehicles	13.4	mo			$4,575			$0	$61,316	$0	$0	$61,316
130	(formwork based on four crews = 110 work days)												
131													
132									**$2,776,567**	**$1,300,569**	**$3,351,282**	**$12,524,711**	**$19,953,129**
133													

Construction Costs
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M	N
1	**Description**	**Quantity**	**Units**	**Daily**	**Unit Costs**				**Costs**				
2					**Labor**	**Equipment**	**Materials**	**Subcontract**	**Labor**	**Equipment**	**Materials**	**Subcontract**	**TOTAL**
3	**CONSTRUCTION COSTS**												
134	**ALT 8a, 8d, 8e PARTIAL EXCAVATION (without disposal)**												
135	Mobilization and Demobilize	30	days		$5,734	$3,410	$520	$0	$172,013	$102,300	$15,600	$0	$289,913
136	Mobilize and demob excavators	15	days		$5,734	$3,410	$520	$0	$86,007	$51,150	$7,800	$0	$144,957
137	Rebuild Lyman Mill Dam Gate	1	ls					$750,000	$0	$0	$0	$750,000	$750,000
138	Divert Allendale Water	5	days		$5,734	$3,410	$520	$0	$28,669	$17,050	$2,600	$0	$48,319
139	Drain Lyman Mill Water	10	days		$5,734	$3,410	$520	$0	$57,338	$34,100	$5,200	$0	$96,638
140	Temp road gravel	6,222	cy		$8.43	$2.08	$52.50	$0	$52,441	$12,911	$326,667	$0	$392,018
141	Geomembrane for temp roads	168,000	sf					$0.86	$0	$0	$0	$144,480	$144,480
142	Work area gravel	2,222	cy	400	$8.43	$2.08	$52.50	$0	$18,729	$4,611	$116,667	$0	$140,007
143	Work area geomembrane	120,000	sf					$0.86	$0	$0	$0	$103,200	$103,200
144	Work area asphalt	120,000	sf					$1.00	$0	$0	$0	$120,000	$120,000
145	Excavate sediment	64,400	cy	400	$11.33	$8.53	$1.30	$0	$729,938	$549,010	$83,720	$0	$1,362,668
146	Cap after excavation	123,420	tons	1,000	$14.27	$8.22	$31.48	$0	$1,761,059	$1,014,512	$3,885,262	$0	$6,660,833
147	Cap unexcavated (hydraulic)	64,982	tons	1,000	$9.07	$13.08	$31.64	$0	$589,551	$849,962	$2,056,023	$0	$3,495,536
148	Remove haul roads	8,444	cy		$8.43	$2.08			$71,169	$17,522	$0	$0	$88,692
149	Hydroseed work areas	288,000	sf					$0.05	$0	$0	$0	$13,248	$13,248
150	Aquatic habitat enhancement	39	Ac					$4,000	$0	$0	$0	$155,704	$155,704
151	Re-stock fish	1.0	ls					$25,000	$0	$0	$0	$25,000	$25,000
152	Superintendent & field engr	409	days		$1,920				$786,051	$0	$0	$0	$786,051
153	Project manager	409	days		$1,200				$491,282	$0	$0	$0	$491,282
154	Clerk	409	days		$360				$147,385	$0	$0	$0	$147,385
155	Field office, utilities, vehicles	19	mo			$4,575			$0	$85,137	$0	$0	$85,137
156									$0	$0	$0	$0	$0
157													
158	**ALT 8a, 8d, 8e PARTIAL EXCAVATION (without disposal) CONSTRUCTION COST**								**$4,991,631**	**$2,738,265**	**$6,499,538**	**$1,311,632**	**$15,541,067**
159													

Construction Costs
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M	N
1	**Description**	**Quantity**	**Units**	**Daily**	**Unit Costs**				**Costs**				
2					**Labor**	**Equipment**	**Materials**	**Subcontract**	**Labor**	**Equipment**	**Materials**	**Subcontract**	**TOTAL**
3	**CONSTRUCTION COSTS**												
160	**Partial Excavation OPTION 8a Upland CDF**												
161	Clear trees and vegetation	152,000	sf	12,000	$0.44	$0.19	$0.00	$0.00	$66,551	$29,260	$0	$0	$95,811
162	Sand liner base	3,556	cy	400	$8.43	$2.08	$52.50	$0.00	$29,966	$7,378	$186,667	$0	$224,010
163	Install base liner	96,000	sf					$0.86	$0	$0	$0	$82,560	$82,560
164	Sand drain layer	3,556	cy	400	$8.43	$2.08	$52.50	$0.00	$29,966	$7,378	$186,667	$0	$224,010
165	Perimeter berms	23,527	cy	600	$7.79	$3.65	$52.50	$0.00	$183,175	$85,873	$1,235,155	$0	$1,504,203
166	Soil over sediment	4,533	cy	400	$8.43	$2.08	$52.50	$0.00	$38,207	$9,407	$238,000	$0	$285,613
167	Cover membrane	122,400	sf					$0.86	$0	$0	$0	$105,264	$105,264
168	Drain gravel over membrane	4,533	cy	400	$8.43	$2.08	$52.50	$0.00	$38,207	$9,407	$238,000	$0	$285,613
169	Protective soil	4,533	cy	400	$8.43	$2.08	$52.50	$0.00	$38,207	$9,407	$238,000	$0	$285,613
170	Topsoil and planting	122,400	SF	7,400	$0.63	$0.13	$0.74	$1.00	$77,269	$16,458	$90,667	$122,400	$306,794
171	Load and place in CDF	42,654	tons		$13.95	$10.31	$1.92	$0.00	$595,187	$439,661	$82,026	$0	$1,116,874
172	Dewater sediment	64,400	cy	400	$14.93	$21.03	$9.35	$0	$961,463	$1,354,010	$602,140	$0	$2,917,613
173	Water treatment at site	161	days		$1,300	$1,740	$270	$20	$209,352	$280,140	$43,470	$3,220	$536,182
174	Water treatment set-up	5	days		$6,848	$1,530	$50	$0	$34,241	$7,650	$250	$0	$42,141
175	Off-site Incineration	4,739	tons		$7.24	$1.54	$0.77	$880	$34,321	$7,291	$3,646	$4,170,584	$4,215,842
176	Superintendent & field engr	57	days		$6,848	$1,530	$50	$0	$390,273	$87,193	$2,849	$0	$480,316
177	Project manager	57	days		$1,200				$68,387	$0	$0	$0	$68,387
178	Clerk	57	days		$360				$20,516	$0	$0	$0	$20,516
179	Field office, utilities, vehicles	2.7	mo			$4,575			$0	$12,415	$0	$0	$12,415
180									**$2,815,287**	**$2,362,927**	**$3,147,537**	**$4,484,028**	**$12,809,778**
181													
182													
183	**Partial Excavation Option 8d On-Site Incineration**												
184	On-site incineration	47,393	tons		$7.24	$1.54	$1.04	$600	$343,211	$72,912	$49,216	$28,444,914	$28,910,254
185	Solid waste landfill	47,393	tons		$7.24	$1.54	$1.04	$50	$343,211	$72,912	$49,216	$2,369,650	$2,834,989
186	Mobilize dewater system	15	days		$5,972	$8,410							
187	Dewater sediment	64,400	cy	400	$14.93	$21.03	$9.35	$0	$961,463	$1,354,010	$602,140	$0	$2,917,613
188	Water treatment at site	161	days		$1,300	$1,740	$270	$20	$209,352	$280,140	$43,470	$3,220	$536,182
189	Water treatment set-up	5	days		$6,848	$1,530	$50	$0	$34,241	$7,650	$250	$0	$42,141
190									**$1,891,478**	**$1,787,625**	**$744,292**	**$30,817,784**	**$35,241,178**
191													
192	**Partial Excavation Option 8e Off-site Disposal**												
193	Off-site Incineration	4,739	tons		$7.24	$1.54	$0.77	$880	$34,321	$7,291	$3,646	$4,170,584	$4,215,842
194	Hazardous Waste Landfill	42,654	tons		$7.24	$1.54	$0.77	$410	$308,890	$65,621	$32,811	$17,489,083	$17,896,405
195	Mobilize dewater system	15	days		$5,972	$8,410							
196	Dewater sediment	64,400	cy	400	$14.93	$21.03	$9.35	$0	$961,463	$1,354,010	$602,140	$0	$2,917,613
197	Water treatment at site	161	days		$1,300	$1,740	$270	$20	$209,352	$280,140	$43,470	$3,220	$536,182
198	Water treatment set-up	5	days		$6,848	$1,530	$50	$0	$34,241	$7,650	$250	$0	$42,141
199									**$1,548,266**	**$1,714,712**	**$682,316**	**$21,662,887**	**$25,608,182**
200													
201													

Construction Costs
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M	N
1	**Description**	**Quantity**	**Units**	**Daily**	**Unit Costs**				**Costs**				
2					**Labor**	**Equipment**	**Materials**	**Subcontract**	**Labor**	**Equipment**	**Materials**	**Subcontract**	**TOTAL**
3	**CONSTRUCTION COSTS**												
202	**ALT 8b EXCAVATION (without disposal)**												
203	Mobilization and Demobilize	30	days		$5,734	$3,410	$520	$0	$172,013	$102,300	$15,600	$0	$289,913
204	Mobilize and demob excavators	15	days		$5,734	$3,410	$520	$0	$86,007	$51,150	$7,800	$0	$144,957
205	Mobilize pile driving	10	days		$3,817	$4,240			$38,173	$42,400	$0	$0	$80,573
206	Rebuild Lyman Mill Dam Gate	1	ls					$750,000	$0	$0	$0	$750,000	$750,000
207	Divert Allendale Water	5	days		$5,734	$3,410	$520	$0	$28,669	$17,050	$2,600	$0	$48,319
208	Drain Lyman Mill Water	10	days		$5,734	$3,410	$520	$0	$57,338	$34,100	$5,200	$0	$96,638
209	Temp road gravel	8,533	cy	400	$8.43	$2.08	$52.50	$0	$71,918	$17,707	$448,000	$0	$537,625
210	Geomembrane for temp roads	230,400	sf					$0.86	$0	$0	$0	$198,144	$198,144
211	Work area gravel	2,222	cy	400	$8.43	$2.08	$52.50	$0	$18,729	$4,611	$116,667	$0	$140,007
212	Work area geomembrane	120,000	sf					$0.86	$0	$0	$0	$103,200	$103,200
213	Purchase sheet pile	54,000	sf				$14.90		$0	$0	$804,600	$0	$804,600
214	Install and remove sheet pile	144,000	sf		$6.36	$7.07			$916,142	$1,017,600	$0	$0	$1,933,742
215	Excavate & stockpile sediment	56,528	cy	500	$11.40	$6.82	$2.38	$0	$644,292	$385,521	$134,537	$0	$1,164,350
216	Remove haul roads	10,756	cy		$8.43	$2.08			$90,647	$22,318	$0	$0	$112,965
217	Hydroseed work areas	350,400	sf					$0.05	$0	$0	$0	$16,118	$16,118
218	Aquatic habitat enhancement	34	Ac					$4,000	$0	$0	$0	$136,619	$136,619
219	Re-stock fish	1	ls					$25,000	$0	$0	$0	$25,000	$25,000
220	Backfill	124,418	tons	500	$14.27	$8.22	$31.48	$0	$1,775,305	$1,022,719	$3,916,691	$0	$6,714,716
221	Superintendent & field engr	173	days		$1,920				$332,268	$0	$0	$0	$332,268
222	Project manager	173	days		$1,200				$207,667	$0	$0	$0	$207,667
223	Clerk	173	days		$360				$62,300	$0	$0	$0	$62,300
224	Field office, utilities, vehicles	9	mo			$4,575			$0	$39,587	$0	$0	$39,587
225													
226	**ALT 8b EXCAVATION (without disposal) CONSTRUCTION COST**								**$4,501,468**	**$2,757,062**	**$5,451,695**	**$1,229,082**	**$13,939,307**
227													

Construction Costs
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M	N
1	**Description**	**Quantity**	**Units**	**Daily**	**Unit Costs**				**Costs**				
2					**Labor**	**Equipment**	**Materials**	**Subcontract**	**Labor**	**Equipment**	**Materials**	**Subcontract**	**TOTAL**
3	**CONSTRUCTION COSTS**												
228	**Partial Excavation Option 8b Nearshore CDF**												
229	Clear Shoreline	1	ls	1				$50,000	$0	$0	$0	$50,000	$50,000
230	Excavate for wall footings	3,259	cy	600	$11.40	$6.82	$2.38	$0	$37,148	$22,228	$7,757	$0	$67,133
231	Install, remove sheet piles	33,000	sf	600	$6.36	$7.07			$209,949	$233,200	$0	$0	$443,149
232	Support piles	220	ea	20				$1,260	$0	$0	$0	$277,200	$277,200
233	Footing forms	6,600	sf	1,400				$8.70	$0	$0	$0	$57,420	$57,420
234	Wall forms	28,600	sf	1,040				$13.50	$0	$0	$0	$386,100	$386,100
235	Footing concrete	2,444	cy	150				$165	$0	$0	$0	$403,333	$403,333
236	Wall concrete	1,059	cy	95				$195	$0	$0	$0	$206,556	$206,556
237	Reinforcing steel	53	tons	2.3				$2,200	$0	$0	$0	$115,622	$115,622
238	Gravel behind wall	1,430	tons		$14.27	$8.22	$31.48		$20,404	$11,755	$45,016	$0	$77,175
239	Soil over sediment	7,698	cy	400	$8.43	$2.08	$52.50	$0.00	$64,874	$15,972	$404,119	$0	$484,965
240	Cover membrane	207,833	sf	1				$0.86	$0	$0	$0	$178,736	$178,736
241	Drain gravel over membrane	7,698	cy	400	$8.43	$2.08	$52.50	$0.00	$64,874	$15,972	$404,119	$0	$484,965
242	Protective soil	7,698	cy	400	$8.43	$2.08	$52.50	$0.00	$64,874	$15,972	$404,119	$0	$484,965
243	Topsoil and plantings	207,833	sf	7,400	$0.63	$0.13	$0.74	$1.00	$131,201	$27,945	$153,950	$207,833	$520,929
244	CDF Mitigation	5	Ac					$608,205	$0	$0	$0	$2,901,855	$2,901,855
245	Water treatment at site	32	days	1	$1,300	$1,740	$270	$20	$41,624	$55,698	$8,643	$640	$106,605
246	Water treatment set-up	5	days	1	$6,848	$1,530	$50	$0	$34,241	$7,650	$250	$0	$42,141
247	Superintendent & field engr	101	days	1	$1,920				$193,815	$0	$0	$0	$193,815
248	Project manager	101	days		$1,200				$121,135	$0	$0	$0	$121,135
249	Clerk	101	days		$360				$36,340	$0	$0	$0	$36,340
250	Field office, utilities, vehicles	4.8	mo			$4,575			$0	$21,992	$0	$0	$21,992
251	(formwork based on four crews = 110 work days)												
252													
253									**$1,020,481**	**$428,385**	**$1,427,973**	**$4,785,295**	**$7,662,133**
254													
255													
256													
257													

Construction Costs
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M	N
1	**Description**	**Quantity**	**Units**	**Daily**	**Unit Costs**				**Costs**				
2					**Labor**	**Equipment**	**Materials**	**Subcontract**	**Labor**	**Equipment**	**Materials**	**Subcontract**	**TOTAL**
3	**CONSTRUCTION COSTS**												
258	**ALT 10b EXCAVATION (without disposal)**												
259	Mobilization and Demobilize	30	days		$5,734	$3,410	$520	$0	$172,013	$102,300	$15,600	$0	$289,913
260	Mobilize and demob excavators	15	days		$5,734	$3,410	$520	$0	$86,007	$51,150	$7,800	$0	$144,957
261	Mobilize pile driving	10	days		$3,817	$4,240			$38,173	$42,400	$0	$0	$80,573
262	Excavate next to dams	10	days		$5,734	$3,410	$520	$0	$57,338	$34,100	$5,200	$0	$96,638
263	Remove dam structures	20	days		$5,734	$3,410	$520	$0	$114,676	$68,200	$10,400	$0	$193,276
264	Off-site disposal dam debris	2,034	tons		$7.24	$1.54	$0.77	$50	$14,733	$3,130	$1,565	$101,719	$121,146
265	Install new weir structure	3,744	tons		$14.27	$8.22	$31.48		$53,423	$30,776	$117,861	$0	$202,059
266	Divert Allendale Water	5	days		$5,734	$3,410	$520	$0	$28,669	$17,050	$2,600	$0	$48,319
267	Drain Lyman Mill Water	10	days		$5,734	$3,410	$520	$0	$57,338	$34,100	$5,200	$0	$96,638
268	Temp road gravel	8,533	cy	400	$8.43	$2.08	$52.50	$0	$71,918	$17,707	$448,000	$0	$537,625
269	Geomembrane for temp roads	230,400	sf					$0.86	$0	$0	$0	$198,144	$198,144
270	Work area gravel	2,222	cy	400	$8.43	$2.08	$52.50	$0	$18,729	$4,611	$116,667	$0	$140,007
271	Work area geomembrane	120,000	sf					$0.86	$0	$0	$0	$103,200	$103,200
272	Purchase sheet pile	54,000	sf				$14.90		$0	$0	$804,600	$0	$804,600
273	Install and remove sheet pile	144,000	sf		$6.36	$7.07			$916,142	$1,017,600	$0	$0	$1,933,742
274	Excavate & stockpile sediment	111,829	cy	500	$11.40	$6.82	$2.38	$0	$1,274,600	$762,674	$266,153	$0	$2,303,427
275	Excavate clean sediment	40,474	cy	500	$11.40	$6.82	$2.38	$0	$461,313	$276,033	$96,328	$0	$833,674
276	Remove haul roads	10,756	cy		$8.43	$2.08			$90,647	$22,318	$0	$0	$112,965
277	Hydroseed work areas	350,400	sf					$0.05	$0	$0	$0	$16,118	$16,118
278	Aquatic plant restoration	21	Ac					$4,000	$0	$0	$0	$84,000	$84,000
279	Re-stock fish	1	ls					$25,000	$0	$0	$0	$25,000	$25,000
280	Trees/shrubs	5	ac					$42,551	$0	$0	$0	$195,737	$195,737
281	Backfill	21,245	tons	500	$14.27	$8.22	$31.48	$0	$303,134	$174,630	$668,777	$0	$1,146,541
282	Superintendent & field engr	284	days		$1,920				$544,623	$0	$0	$0	$544,623
283	Project manager	284	days		$1,200				$340,390	$0	$0	$0	$340,390
284	Clerk	284	days		$360				$102,117	$0	$0	$0	$102,117
285	Field office, utilities, vehicles	14	mo			$4,575			$0	$64,887	$0	$0	$64,887
286	**ALT 10b EXCAVATION (without disposal) CONSTRUCTION COST**								**$4,745,981**	**$2,723,664**	**$2,566,751**	**$723,918**	**$10,760,313**
287													

Construction Costs
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M	N
1	**Description**	**Quantity**	**Units**	**Daily**	**Unit Costs**				**Costs**				
2					**Labor**	**Equipment**	**Materials**	**Subcontract**	**Labor**	**Equipment**	**Materials**	**Subcontract**	**TOTAL**
3	**CONSTRUCTION COSTS**												
288	**Excavation OPTION 10b Nearshore CDF**												
289	Clear Shoreline	1	ls	1				$50,000	$0	$0	$0	$50,000	$50,000
290	Excavate for wall footings	10,667	cy	600	$11.40	$6.82	$2.38	$0	$121,576	$72,747	$25,387	$0	$219,709
291	Install, remove sheet piles	108,000	sf	600	$6.36	$7.07			$687,107	$763,200	$0	$0	$1,450,307
292	Support piles	720	ea	20				$1,260	$0	$0	$0	$907,200	$907,200
293	Footing forms	21,600	sf	1,400				$8.70	$0	$0	$0	$187,920	$187,920
294	Wall forms	100,800	sf	1,040				$13.50	$0	$0	$0	$1,360,800	$1,360,800
295	Footing concrete	8,000	cy	150				$165	$0	$0	$0	$1,320,000	$1,320,000
296	Wall concrete	3,733	cy	95				$195	$0	$0	$0	$728,000	$728,000
297	Reinforcing steel	176	tons	2.3				$2,200	$0	$0	$0	$387,200	$387,200
298	Gravel behind wall	4,680	tons		$14.27	$8.22	$31.48		$66,778	$38,470	$147,326	$0	$252,574
299	Soil over sediment	21,554	cy	400	$8.43	$2.08	$52.50	$0.00	$181,652	$44,724	$1,131,559	$0	$1,357,934
300	Cover membrane	581,945	sf	1				$0.86	$0	$0	$0	$500,472	$500,472
301	Drain gravel over membrane	21,554	cy	400	$8.43	$2.08	$52.50	$0.00	$181,652	$44,724	$1,131,559	$0	$1,357,934
302	Protective soil	21,554	cy	400	$8.43	$2.08	$52.50	$0.00	$181,652	$44,724	$1,131,559	$0	$1,357,934
303	Topsoil and plantings	581,945	sf	7,400	$0.63	$0.13	$0.74	$1.00	$367,372	$78,248	$431,070	$581,945	$1,458,634
304	CDF Mitigation	13	Ac					$608,205	$0	$0	$0	$8,125,384	$8,125,384
305	Water treatment at site	105	days	1	$1,300	$1,740	$270	$20	$136,224	$182,286	$28,286	$2,095	$348,891
306	Water treatment set-up	5	days	1	$6,848	$1,530	$50	$0	$34,241	$7,650	$250	$0	$42,141
307	Superintendent & field engr	310	days	1	$1,920				$595,206	$0	$0	$0	$595,206
308	Project manager	310	days		$1,200				$372,003	$0	$0	$0	$372,003
309	Clerk	310	days		$360				$111,601	$0	$0	$0	$111,601
310	Field office, utilities, vehicles	14.8	mo			$4,575			$0	$67,536	$0	$0	$67,536
311	(formwork based on four crews = 110 work days)								**$3,037,063**	**$1,344,307**	**$4,026,995**	**$14,151,016**	**$22,559,380**
312													

Construction Costs
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M	N
1	**Description**	**Quantity**	**Units**	**Daily**	**Unit Costs**				**Costs**				
2					**Labor**	**Equipment**	**Materials**	**Subcontract**	**Labor**	**Equipment**	**Materials**	**Subcontract**	**TOTAL**
3	**CONSTRUCTION COSTS**												
313	**ALT 11f PARTIAL EXCAVATION and CONSOLIDATION**												
314	Mobilization and Demobilize	30	days		$5,734	$3,410	$520	$0	$172,013	$102,300	$15,600	$0	$289,913
315	Mobilize and demob excavators	15	days		$5,734	$3,410	$520	$0	$86,007	$51,150	$7,800	$0	$144,957
316	Mobilize pile driving	10	days		$3,817	$4,240			$38,173	$42,400	$0	$0	$80,573
317	Excavate next to dams	10	days		$5,734	$3,410	$520	$0	$57,338	$34,100	$5,200	$0	$96,638
318	Remove dam structures	20	days		$5,734	$3,410	$520	$0	$114,676	$68,200	$10,400	$0	$193,276
319	Off-site disposal dam debris	2,034	tons		$7.24	$1.54	$0.77	$50	$14,733	$3,130	$1,565	$101,719	$121,146
320	Install new weir structure	3,744	tons		$14.27	$8.22	$31.48		$53,423	$30,776	$117,861	$0	$202,059
321	Divert Allendale Water	5	days		$5,734	$3,410	$520	$0	$28,669	$17,050	$2,600	$0	$48,319
322	Drain Lyman Mill Water	10	days		$5,734	$3,410	$520	$0	$57,338	$34,100	$5,200	$0	$96,638
323	Temp road gravel	8,533	cy	400	$8.43	$2.08	$52.50	$0	$71,918	$17,707	$448,000	$0	$537,625
324	Geomembrane for temp roads	230,400	sf					$0.86	$0	$0	$0	$198,144	$198,144
325	Work area gravel	2,222	cy	400	$8.43	$2.08	$52.50	$0	$18,729	$4,611	$116,667	$0	$140,007
326	Work area geomembrane	120,000	sf					$0.86	$0	$0	$0	$103,200	$103,200
327	Purchase sheet pile	54,000	sf				$14.90		$0	$0	$804,600	$0	$804,600
328	Install and remove sheet pile	144,000	sf		$6.36	$7.07			$916,142	$1,017,600	$0	$0	$1,933,742
329	Excavate & sediment	59,785	cy	500	$11.40	$6.82	$2.38	$0	$681,413	$407,732	$142,288	$0	$1,231,433
330	Consolidate sediment	59,785	cy		$10.38	$8.18	$0.98	$0.00	$620,508	$489,239	$58,788	$0	$1,168,535
331	Backfill	19,815	tons	500	$14.27	$8.22	$31.48	$0	$282,737	$162,879	$623,776	$0	$1,069,392
332	Soil over sediment	37,613	cy	400	$8.43	$2.08	$52.50	$0.00	$317,000	$78,047	$1,974,683	$0	$2,369,730
333	Remove haul roads	10,756	cy		$8.43	$2.08			$90,647	$22,318	$0	$0	$112,965
334	Hydroseed work areas	350,400	sf					$0.05	$0	$0	$0	$16,118	$16,118
335	Aquatic habitat enhancement	16	Ac					$4,000	$0	$0	$0	$63,258	$63,258
336	Floodplain planting	11	Ac					$60,177	$0	$0	$0	$667,968	$667,968
337	Re-stock fish	1	ls					$25,000					
338	Superintendent & field engr	180	days		$1,920				$344,774	$0	$0	$0	$344,774
339	Project manager	180	days		$1,200				$215,484	$0	$0	$0	$215,484
340	Clerk	180	days		$360				$64,645	$0	$0	$0	$64,645
341	Field office, utilities, vehicles	9	mo			$4,575			$0	$41,077	$0	$0	$41,077
342	Consolidation area mitigation	12	Ac					$608,205	$0	$0	$0	$7,055,181	$7,055,181
343	**SUBTOTAL**								**$4,246,364**	**$2,624,415**	**$4,335,028**	**$8,205,588**	**$19,411,396**
344	**Upgrade to RCRA cover**												
345	Cover membrane	507,776	sf	1				$0.86	$0	$0	$0	$436,687	$436,687
346	Drain gravel over membrane	18,807	cy	400	$8.43	$2.08	$52.50	$0.00	$158,500	$39,023	$987,341	$0	$1,184,865
347	Topsoil	507,776	sf	7,400	$0.63	$0.13	$0.74		$320,550	$68,275	$376,130	$0	$764,955
348													
349	**ALT 11f EXCAVATION (without disposal) CONSTRUCTION COST**								**$4,725,414**	**$2,731,714**	**$5,698,499**	**$8,642,275**	**$21,797,903**

Design Costs
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M
3	**Description**	**Quantity**	**Units**	**Unit Costs**				**Costs**				
4				**Labor**	**Equipment**	**Materials**	**Subcontract**	**Labor**	**Equipment**	**Materials**	**Subcontract**	**TOTAL**
5	**DESIGN COSTS**											
6												
7												
8	**ALT 7b EXCAVATE & NEARSHORE CDF**											
9	Physical survey	4	days	$6,640	$1,500	$750	$0	$26,560	$6,000	$3,000	$0	$35,560
10	Sediment survey	20	days	$5,608	$1,925	$550	$0	$112,160	$38,500	$11,000	$0	$161,660
11	Ecologic survey	4	days	$6,640	$1,850	$750	$0	$26,560	$7,400	$3,000	$0	$36,960
12	Water samples	15	each				$715				$10,725	$10,725
13	Sediment samples	160	each				$1,806				$289,008	$289,008
14	Sediment samples (geotechnical)	20	each				$1,050				$21,000	$21,000
15	Sediment background samples	20	each				$1,806				$36,126	$36,126
16	Benthic Community Analysis	22	each				$600				$13,200	$13,200
17	Fish samples	20	each				$1,507				$30,140	$30,140
18	Design report	2,500	hours	$90				$225,000	$0	$0	$0	$225,000
19	Drawings - 40 sheets	3,200	hours	$90				$288,000	$0	$0	$0	$288,000
20	Specifications	2,000	hours	$90				$180,000	$0	$0	$0	$180,000
21	Work plans	2,000	hours	$90				$180,000	$0	$0	$0	$180,000
22	**ALT 7b EXCAVATE DESIGN COST**							**$1,038,280**	**$51,900**	**$17,000**	**$400,199**	**$1,507,379**
23												
24	**ALT 7a, 7d, 7e EXCAVATE & UPLAND CDF, OFF-SITE DISPOSAL OR ON-SITE INCINERATION**											
25	Physical survey	4	days	$6,640	$1,500	$750	$0	$26,560	$6,000	$3,000	$0	$35,560
26	Sediment survey	20	days	$5,608	$1,925	$550	$0	$112,160	$38,500	$11,000	$0	$161,660
27	Ecologic survey	4	days	$6,640	$1,850	$750	$0	$26,560	$7,400	$3,000	$0	$36,960
28	Water samples	15	each				$715				$10,725	$10,725
29	Sediment samples	160	each				$1,806				$289,008	$289,008
30	Sediment samples (geotechnical)	20	each				$1,050				$21,000	$21,000
31	Sediment background samples	20	each				$1,806				$36,126	$36,126
32	Fish samples	20	each				$1,507				$30,140	$30,140
33	Benthic Community Analysis	22	each				$600				$13,200	$13,200
34	Dewatering testing	1	ls				$21,600				$21,600	$21,600
35											$0	$0
36	Design report	2,500	hours	$90				$225,000	$0	$0	$0	$225,000
37	Drawings - 40 sheets	3,200	hours	$90				$288,000	$0	$0	$0	$288,000
38	Specifications	2,000	hours	$90				$180,000	$0	$0	$0	$180,000
39	Work plans	2,000	hours	$90				$180,000	$0	$0	$0	$180,000
40	**ALT 7a, 7d, 7e DESIGN COST**							**$1,038,280**	**$51,900**	**$17,000**	**$421,799**	**$1,528,979**
41												

Design Costs
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M
3	**Description**	**Quantity**	**Units**	**Unit Costs**				**Costs**				
4				**Labor**	**Equipment**	**Materials**	**Subcontract**	**Labor**	**Equipment**	**Materials**	**Subcontract**	**TOTAL**
5	**DESIGN COSTS**											
42	**ALT 8a, 8b, 8d, 8e PARTIAL EXCAVATE & ON-SITE CDF, OFF-SITE DISPOSAL OR ON-SITE INCINERATION**											
43	Physical survey	4	days	$6,640	$1,500	$750	$0	$26,560	$6,000	$3,000	$0	$35,560
44	Sediment survey	20	days	$5,608	$1,925	$550	$0	$112,160	$38,500	$11,000	$0	$161,660
45	Ecologic survey	4	days	$6,640	$1,850	$750	$0	$26,560	$7,400	$3,000	$0	$36,960
46	Water samples	15	each				$715				$10,725	$10,725
47	Sediment samples	160	each				$1,806				$289,008	$289,008
48	Sediment samples (geotechnical)	20	each				$1,050				$21,000	$21,000
49	Sediment background samples	20	each				$1,806				$36,126	$36,126
50	Fish samples	20	each				$1,507				$30,140	$30,140
51	Benthic Community Analysis	22	each				$600				$13,200	$13,200
52	Dewatering tests	1	ls				$21,600				$21,600	$21,600
53											$0	$0
54	Design report	2,500	hours	$90				$225,000	$0	$0	$0	$225,000
55	Drawings - 40 sheets	3,200	hours	$90				$288,000	$0	$0	$0	$288,000
56	Specifications	2,000	hours	$90				$180,000	$0	$0	$0	$180,000
57	Work plans	2,000	hours	$90				$180,000	$0	$0	$0	$180,000
58	**ALT 8a,8b, 8d, 8e DESIGN COST**							**$1,038,280**	**$51,900**	**$17,000**	**$421,799**	**$1,528,979**
59												
60	**ALT 10b EXCAVATE & NEARSHORE CDF**											
61	Physical survey	4	days	$6,640	$1,500	$750	$0	$26,560	$6,000	$3,000	$0	$35,560
62	Sediment survey	20	days	$5,608	$1,925	$550	$0	$112,160	$38,500	$11,000	$0	$161,660
63	Ecologic survey	4	days	$6,640	$1,850	$750	$0	$26,560	$7,400	$3,000	$0	$36,960
64	Water samples	15	each				$715				$10,725	$10,725
65	Sediment samples	160	each				$1,806				$289,008	$289,008
66	Sediment samples (geotechnical)	20	each				$1,050				$21,000	$21,000
67	Sediment background samples	20	each				$1,806				$36,126	$36,126
68	Fish samples	20	each				$1,507				$30,140	$30,140
69	Benthic Community Analysis	22	each				$600				$13,200	$13,200
70											$0	$0
71	Design report	2,500	hours	$90				$225,000	$0	$0	$0	$225,000
72	Drawings - 40 sheets	3,200	hours	$90				$288,000	$0	$0	$0	$288,000
73	Specifications	2,000	hours	$90				$180,000	$0	$0	$0	$180,000
74	Work plans	2,000	hours	$90				$180,000	$0	$0	$0	$180,000
75	**ALT 10b EXCAVATE DESIGN COST**							**$1,038,280**	**$51,900**	**$17,000**	**$400,199**	**$1,507,379**
76												

Design Costs
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M
3	**Description**	**Quantity**	**Units**	**Unit Costs**				**Costs**				
4				**Labor**	**Equipment**	**Materials**	**Subcontract**	**Labor**	**Equipment**	**Materials**	**Subcontract**	**TOTAL**
5	**DESIGN COSTS**											
77	**ALT 11f PARTIAL EXCAVATION & CONSOLIDATION**											
78	Physical survey	4	days	$6,640	$1,500	$750	$0	$26,560	$6,000	$3,000	$0	$35,560
79	Sediment survey	20	days	$5,608	$1,925	$550	$0	$112,160	$38,500	$11,000	$0	$161,660
80	Ecologic survey	4	days	$6,640	$1,850	$750	$0	$26,560	$7,400	$3,000	$0	$36,960
81	Water samples	15	each				$715				$10,725	$10,725
82	Sediment samples	160	each				$1,806				$289,008	$289,008
83	Sediment samples (geotechnical)	20	each				$1,050				$21,000	$21,000
84	Sediment background samples	20	each				$1,806				$36,126	$36,126
85	Fish samples	20	each				$1,507				$30,140	$30,140
86	Fish tissue samples	0	each				$1,507				$0	$0
87	Benthic Community Analysis	22	each				$600				$13,200	$13,200
88											$0	$0
89	Design report & calculations	2,000	hours	$90				$180,000	$0	$0	$0	$180,000
90	Drawings - 30 sheets	2,400	hours	$90				$216,000	$0	$0	$0	$216,000
91	Specifications	2,000	hours	$90				$180,000	$0	$0	$0	$180,000
92	Work plans	1,600	hours	$90				$144,000	$0	$0	$0	$144,000
93	**ALT 11f DESIGN COST**							**$885,280**	**$51,900**	**$17,000**	**$400,199**	**$1,354,379**

Construction Oversight Costs
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M
1	**Description**	**Quantity**	**Units**	**Unit Costs**				**Costs**				
2				**Labor**	**Equipment**	**Materials**	**Subcontract**	**Labor**	**Equipment**	**Materials**	**Subcontract**	**TOTAL**
3	**CONSTRUCTION OVERSIGHT COSTS**											
4												
5												
6	**ALT 7b EXCAVATION & NEARSHORE CDF**											
7	Project manager	596	days	$1,200				$715,200	$0	$0	$0	$715,200
8	Resident engineer	596	days	$960				$572,160	$0	$0	$0	$572,160
9	Water quality crew	50	days	$3,240	$1,500	$750		$162,000	$75,000	$37,500	$0	$274,500
10	Survey crew	50	days	$1,440	$350	$680		$72,000	$17,500	$34,000	$0	$123,500
11	Sediment sample crew	50	days	$1,440	$350	$680		$72,000	$17,500	$34,000	$0	$123,500
12	Admin support	596	days	$360				$214,560	$0	$0	$0	$214,560
13	Field office	27	months		$1,075			$0	$29,123	$0	$0	$29,123
14	Vehicles	27	months		$2,500			$0	$67,727	$0	$0	$67,727
15	Cell phones, radios	27	months		$750			$0	$20,318	$0	$0	$20,318
16	Utilities	27	months		$250			$0	$6,773	$0	$0	$6,773
17	Water samples	50	each				$715	$0	$0	$0	$35,750	$35,750
18	Biota sample crew	2	days	$1,440	$350	$680		$2,880	$700	$1,360	$0	$4,940
19	Fish samples	20	each				$1,507	$0	$0	$0	$30,140	$30,140
20	Confirmation Sediment samples	160	each				$358	$0	$0	$0	$57,200	$57,200
21	Designation sediment samples		each				$715	$0	$0	$0	$0	$0
22	Downriver sediment Pre-con.	40	each				$1,806	$0	$0	$0	$72,252	$72,252
23	Downriver sediment post-con.	40	each				$1,806	$0	$0	$0	$72,252	$72,252
24	**ALT 7b OVERSIGHT COST**							**$1,810,800**	**$234,641**	**$106,860**	**$267,594**	**$2,419,895**

Construction Oversight Costs
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M
1	**Description**	**Quantity**	**Units**	**Unit Costs**				**Costs**				
2				**Labor**	**Equipment**	**Materials**	**Subcontract**	**Labor**	**Equipment**	**Materials**	**Subcontract**	**TOTAL**
3	**CONSTRUCTION OVERSIGHT COSTS**											
4												
25	**ALT 7d, 7e EXCAVATE & OFF-SITE OR ON-SITE INCINERATION**											
26	Project manager	564	days	$1,200				$676,800	$0	$0	$0	$676,800
27	Resident engineer	564	days	$960				$541,440	$0	$0	$0	$541,440
28	Water quality crew	76	days	$3,240	$1,500	$750		$246,240	$114,000	$57,000	$0	$417,240
29	Survey crew	76	days	$1,440	$350	$680		$109,440	$26,600	$51,680	$0	$187,720
30	Sediment sample crew	76	days	$1,440	$350	$680		$109,440	$26,600	$51,680	$0	$187,720
31	Admin support	564	days	$360				$203,040	$0	$0	$0	$203,040
32	Field office	26	months		$1,075			$0	$27,559	$0	$0	$27,559
33	Vehicles	26	months		$2,500			$0	$64,091	$0	$0	$64,091
34	Cell phones, radios	26	months		$750			$0	$19,227	$0	$0	$19,227
35	Utilities	26	months		$250			$0	$6,409	$0	$0	$6,409
36	Biota sample crew	2	days	$1,440	$350	$680		$2,880	$700	$1,360	$0	$4,940
37	Fish samples	20	each				$1,507	$0	$0	$0	$30,140	$30,140
38	Water samples	76	each				$715	$0	$0	$0	$54,340	$54,340
39	Confirmation Sediment samples	160	each				$358	$0	$0	$0	$57,200	$57,200
40	Designation sediment samples	390	each				$715	$0	$0	$0	$278,850	$278,850
41	Downriver sediment Pre-con.	40	each				$1,806	$0	$0	$0	$72,252	$72,252
42	Downriver sediment post-con.	40	each				$1,806	$0	$0	$0	$72,252	$72,252
43	**ALT 7d, 7e OVERSIGHT COST**							**$1,889,280**	**$285,186**	**$161,720**	**$565,034**	**$2,901,220**
44												
45	**Alt 7a EXCAVATE AND UPLAND CDF**											
46	Delete Designation samples	(390)	each									($278,850)
47	**ALT 7A OVERSIGHT COST**											**$2,622,370**

Construction Oversight Costs
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M
1	**Description**	**Quantity**	**Units**	**Unit Costs**				**Costs**				
2				**Labor**	**Equipment**	**Materials**	**Subcontract**	**Labor**	**Equipment**	**Materials**	**Subcontract**	**TOTAL**
3	**CONSTRUCTION OVERSIGHT COSTS**											
4												
48	**ALT 8d, 8e PARTIAL EXCAVATE & OFF-SITE OR ON-SITE INCINERATION**											
49	Project manager	580	days	$1,200				$696,000	$0	$0	$0	$696,000
50	Resident engineer	580	days	$960				$556,800	$0	$0	$0	$556,800
51	Water quality crew	32	days	$3,240	$1,500	$750		$103,680	$48,000	$24,000	$0	$175,680
52	Survey crew	32	days	$1,440	$350	$680		$46,080	$11,200	$21,760	$0	$79,040
53	Sediment sample crew	32	days	$1,440	$350	$680		$46,080	$11,200	$21,760	$0	$79,040
54	Admin support	580	days	$360				$208,800	$0	$0	$0	$208,800
55	Field office	26	months		$1,075			$0	$28,341	$0	$0	$28,341
56	Vehicles	26	months		$2,500			$0	$65,909	$0	$0	$65,909
57	Cell phones, radios	26	months		$750			$0	$19,773	$0	$0	$19,773
58	Utilities	26	months		$250			$0	$6,591	$0	$0	$6,591
59	Biota sample crew	2	days	$1,440	$350	$680		$2,880	$700	$1,360	$0	$4,940
60	Fish samples	20	each				$1,507	$0	$0	$0	$30,140	$30,140
61	Water samples	32	each				$715	$0	$0	$0	$22,880	$22,880
62	Confirmation Sediment samples		each				$358	$0	$0	$0	$0	$0
63	Designation sediment samples	160	each				$715	$0	$0	$0	$114,400	$114,400
64	Downriver sediment Pre-con.	40	each				$1,806	$0	$0	$0	$72,252	$72,252
65	Downriver sediment post-con.	40	each				$1,806	$0	$0	$0	$72,252	$72,252
66	**ALT 8a, 8d, 8e OVERSIGHT COST**							**$1,660,320**	**$191,714**	**$68,880**	**$311,924**	**$2,232,838**
67	**Alt 8a, 8b PARTIAL EXCAVATE & ON SITE CDF**											
68	Delete Designation samples	(160)	each									($114,400)
69	**Alt 8a, 8b OVERSIGHT COST**											**$2,118,438**
70												

Construction Oversight Costs
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M
1	**Description**	**Quantity**	**Units**	**Unit Costs**				**Costs**				
2				**Labor**	**Equipment**	**Materials**	**Subcontract**	**Labor**	**Equipment**	**Materials**	**Subcontract**	**TOTAL**
3	**CONSTRUCTION OVERSIGHT COSTS**											
4												
71	**ALT 10b EXCAVATE & NEARSHORE CDF**											
72	Project manager	596	days	$1,200				$715,200	$0	$0	$0	$715,200
73	Resident engineer	596	days	$960				$572,160	$0	$0	$0	$572,160
74	Water quality crew	50	days	$3,240	$1,500	$750		$162,000	$75,000	$37,500	$0	$274,500
75	Survey crew	50	days	$1,440	$350	$680		$72,000	$17,500	$34,000	$0	$123,500
76	Sediment sample crew	50	days	$1,440	$350	$680		$72,000	$17,500	$34,000	$0	$123,500
77	Admin support	596	days	$360				$214,560	$0	$0	$0	$214,560
78	Field office	27	months		$1,075			$0	$29,123	$0	$0	$29,123
79	Vehicles	27	months		$2,500			$0	$67,727	$0	$0	$67,727
80	Cell phones, radios	27	months		$750			$0	$20,318	$0	$0	$20,318
81	Utilities	27	months		$250			$0	$6,773	$0	$0	$6,773
82	Biota sample crew	2	days	$1,440	$350	$680		$2,880	$700	$1,360	$0	$4,940
83	Fish samples	20	each				$1,507	$0	$0	$0	$30,140	$30,140
84	Water samples	50	each				$715	$0	$0	$0	$35,750	$35,750
85	Confirmation Sediment samples	160	each				$358	$0	$0	$0	$57,200	$57,200
86	Designation sediment samples		each				$715	$0	$0	$0	$0	$0
87	Downriver sediment Pre-con.	40	each				$1,806	$0	$0	$0	$72,252	$72,252
88	Downriver sediment post-con.	40	each				$1,806	$0	$0	$0	$72,252	$72,252
89	**ALT 10b OVERSIGHT COST**							**$1,810,800**	**$234,641**	**$106,860**	**$267,594**	**$2,419,895**
90												

Construction Oversight Costs
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M
1	**Description**	**Quantity**	**Units**	**Unit Costs**				**Costs**				
2				**Labor**	**Equipment**	**Materials**	**Subcontract**	**Labor**	**Equipment**	**Materials**	**Subcontract**	**TOTAL**
3	**CONSTRUCTION OVERSIGHT COSTS**											
4												
91	**ALT 11f PARTIAL EXCAVATION & CONSOLIDATION**											
92	Project manager	180	days	$1,200				$216,000	$0	$0	$0	$216,000
93	Resident engineer	180	days	$960				$172,800	$0	$0	$0	$172,800
94	Water quality crew	36	days	$3,240	$1,500	$750		$116,640	$54,000	$27,000	$0	$197,640
95	Survey crew	36	days	$1,440	$350	$680		$51,840	$12,600	$24,480	$0	$88,920
96	Sediment sample crew	36	days	$1,440	$350	$680		$51,840	$12,600	$24,480	$0	$88,920
97	Admin support	180	days	$360				$64,800	$0	$0	$0	$64,800
98	Field office	18	months		$1,075			$0	$19,350	$0	$0	$19,350
99	Vehicles	18	months		$2,500			$0	$45,000	$0	$0	$45,000
100	Cell phones, radios	19	months		$750			$0	$14,250	$0	$0	$14,250
101	Utilities	18	months		$250			$0	$4,500	$0	$0	$4,500
102	Biota sample crew	2	days	$1,440	$350	$680		$2,880	$700	$1,360	$0	$4,940
103	Fish samples	20	each				$1,507	$0	$0	$0	$30,140	$30,140
104	Water samples	36	each				$715	$0	$0	$0	$25,740	$25,740
105	Confirmation Sediment samples	66	each				$358	$0	$0	$0	$23,595	$23,595
106	Designation sediment samples		each				$715	$0	$0	$0	$0	$0
107	Downriver sediment Pre-con.	40	each				$1,806	$0	$0	$0	$72,252	$72,252
108	Downriver sediment post-con.	40	each				$1,806	$0	$0	$0	$72,252	$72,252
109	**ALT 11f OVERSIGHT COST**							**$676,800**	**$163,000**	**$77,320**	**$223,979**	**$1,141,099**

Long-term Monitoring Costs
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M
1				Unit Costs				Costs				
2		Quantity	Units	Labor	Equipment	Materials	Subcontract	Labor	Equipment	Materials	Subcontract	TOTAL
3	**MONITORING COSTS**											
4												
5												
6	**PARTIAL EXCAVATION ALTERNATIVE - POND MONITORING**											
7	**A. Annual work years 1 to 30**											
8	Sediment chemistry	12	days	$5,608	$1,925	$550		$67,296	$23,100	$6,600	$0	$96,996
9	Physical survey	4	days	$6,640	$1,500	$750		$26,560	$6,000	$3,000	$0	$35,560
10	Ecologic survey (biota sampling)	2	days	$6,640	$1,850	$750		$13,280	$3,700	$1,500	$0	$18,480
11	Water chemistry	20					$715	$0	$0	$0	$14,300	$14,300
12	Fish tissue chemistry	20					$1,507	$0	$0	$0	$30,140	$30,140
13	Sediment chemistry	50					$890	$0	$0	$0	$44,500	$44,500
14	Benthic Community Analysis	20					$600	$0	$0	$0	$12,000	$12,000
15	Five year review	0.2	events	$13,280				$2,656	$0	$0	$0	$2,656
16	**TOTAL ANNUAL MONITORING IN YEARS 1 TO 30**											**$254,632**
17												
18												
19	**B. Annual maintenance**											
20	Assume repair of 1/2 acres cap and plantings per year =											
21	Cap repair	807	tons				$53.97	$0	$0	$0	$43,535	$43,535
22	Plantings	21,780	sf				$1.00	$0	$0	$0	$21,780	$21,780
23	Dam Maintenance	2	each				$11,160.00	$0	$0	$0	$22,320	$22,320
24	**ANNUAL MAINTENANCE**							$0	$0	$0	$0	**$87,635**
25												
26	**UPLAND OR NEARSHORE CDF MONITORING**											
27	**A. Annual work years 1 to 30**											
28	Sediment chemistry							$0	$0	$0	$0	$0
29	Physical survey	2	days	$6,640	$700	$750		$13,280	$1,400	$1,500	$0	$16,180
30	Ecologic survey (biota sampling)							$0	$0	$0	$0	$0
31	Groundwater chemistry	10	each				$715	$0	$0	$0	$7,150	$7,150
32	Fish tissue chemistry							$0	$0	$0	$0	$0
33	Sediment chemistry							$0	$0	$0	$0	$0
34	**TOTAL ANNUAL MONITORING IN YEARS 1 TO 30**											**$23,330**
35												
36												
37												
38												$0
39	**C. Annual maintenance**											$0
40												$0
41								$0	$0	$0	$0	$0
42	Plantings		sf				$1.00	$0	$0	$0	$0	$0
43	**ANNUAL MAINTENANCE**							$0	$0	$0	$0	**$0**
44												

Long-term Monitoring Costs
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M
1				Unit Costs				Costs				
2		Quantity	Units	Labor	Equipment	Materials	Subcontract	Labor	Equipment	Materials	Subcontract	TOTAL
3	**MONITORING COSTS**											
4												
45	**EXCAVATION ALTERNATIVE -POND MONITORING**											
46	**A. Annual work years 1 to 30**											
47	Sediment chemistry	7	days	$5,608	$1,925	$550		$39,256	$13,475	$3,850	$0	$56,581
48	Physical survey	2	days	$6,640	$1,500	$750		$13,280	$3,000	$1,500	$0	$17,780
49	Ecologic survey (biota sampling)	2	days	$6,640	$1,850	$750		$13,280	$3,700	$1,500	$0	$18,480
50	Water chemistry	20					$715	$0	$0	$0	$14,300	$14,300
51	Fish tissue chemistry	20					$1,507	$0	$0	$0	$30,140	$30,140
52	Sediment chemistry	30					$890	$0	$0	$0	$26,700	$26,700
53	Benthic Community Analysis	20					$600	$0	$0	$0	$12,000	$12,000
54	Five year review	0.2	events	$13,280				$2,656	$0	$0	$0	$2,656
55	**TOTAL ANNUAL MONITORING IN YEARS 1 TO 30**											**$178,637**
56												
57												$0
58	**B. Annual maintenance**											$0
59	Assume repair of 1/4 acres cap and plantings per year =											$0
60	Cap repair	403	tons				$53.79	$0	$0	$0	$21,696	$21,696
61	Plantings	10,890	sf				$0.00	$0	$0	$0	$0	$0
62								$0	$0	$0	$0	$0
63	**ANNUAL MAINTENANCE**							$0	$0	$0	$0	**$21,696**
64												
65	**NO ACTION ALTERNATIVE -POND MONITORING**											
66	**A. Annual work years 1 to 30**											
67	Sediment chemistry		days	$5,608	$1,925	$550		$0	$0	$0	$0	$0
68	Physical survey		days	$6,640	$1,500	$750		$0	$0	$0	$0	$0
69	Ecologic survey (biota sampling)	2	days	$6,640	$1,850	$750		$13,280	$3,700	$1,500	$0	$18,480
70	Water chemistry						$715	$0	$0	$0	$0	$0
71	Fish tissue chemistry	10					$1,507	$0	$0	$0	$15,070	$15,070
72	Sediment chemistry						$890	$0	$0	$0	$0	$0
73	Five year review	0.2	events	$13,280				$2,656	$0	$0	$0	$2,656
74	**TOTAL ANNUAL MONITORING IN YEARS 1 TO 30**											**$36,206**
75												
76	**INVASIVE SPECIES CONTROL**											
77	Alt 7a, 7d, 7e	0	ac				$1,000				$0	$0
78	Alt 7b	11	ac				$1,000				$11,000	$11,000
79	Alt 8a, 8d, 8e	0	ac				$1,000				$0	$0
80	Alt 8b	5	ac				$1,000				$5,000	$5,000
81	Alt 10b	18	ac				$1,000				$18,000	$18,000
82	Alt 11f	23	ac				$1,000				$23,000	$23,000

Unit Costs
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H
1	**Excavate Sediment with Low-ground Pressure Long-reach Excavators for Dewatering**						
2	**Estimated duration:**	400	cy	divided by	400	icy/day production with 1 excavators	
3		**1.0**	**days**			icy =	in-situ cubic yards
4	**Craft Labor**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
5	Foreman	1.0	day	$771	$771	$96	per hour
6	Equip operator	1.0	day	$1,436	$1,436	$90	2 total on excavators
7	Truck driver	1.0	day	$1,163	$1,163	$73	2 total
8	Laborer	1.0	day	$1,165	$1,165	$73	2 total
9	Safety officer		day	$600	$0	$75	per hour
10	QC officer		day	$600	$0	$75	per hour
11	Subtotal Cost			$5,734	$4,534		Rates confirmed with Means Building Costs
12	**Labor Unit Cost**				**11.33**	**Per Cy**	
13							
14	**Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
15	Low-ground pressure excavator	1.0	day	$890	$890	$890	www.machinerytrader Cat 345BL $3,000 per
16	Rehandling excavators	1.0	day	$680	$680	$680	1.5 cy Means p 20
17	Off-road trucks	1.0	day	$1,840	$1,840	$920	(2) off-road trucks 25 ton Means p 22
18					$0		
19	Subtotal Cost			$3,410	$3,410		
20	**Equipment Unit Cost**				**$8.53**	**Per Cy**	
21							
22	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
23	Health and safety equip	1.0	Days	$300	$300		6 crew x $50/day
24	Per diem	1.0	Days	$120	$120		1 crew x $120/day
25	Small Tools	1.0	day	$100	$100		
26					$0		
27	Subtotal Cost				$520		
28	**Material Unit Cost**				**$1.30**	**Per Cy**	
29							
30	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
31							
32	Subtotal Cost				**$0**	**Per cy**	
33							
34	**TOTAL UNIT COST**				**$21.16**	**Per Cy**	
35							
36	**Mechanical Dewater Dredged Material**						
37	Estimated duration:	400	cy	divided by	400	icy/day production	
38		1.0	Days	(time for dredging and excavation for Dredge alternative)			
39	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
40	Foreman	1.0	day	$771	$771	$96	
41	Equip operator	1.0	day	$1,436	$1,436	$90	2 total
42	Press operator	1.0	day	$1,436	$1,436	$90	2 total
43	Laborer	1.0	day	$2,330	$2,330	$73	4 total
44	QC officer		day	$600	$0	$75	
45	Safety officer		day	$600	$0	$75	per hour
46	Subtotal Cost			$7,172	$5,972		
47	**Labor Unit Cost**				**$14.93**	**Per Cy**	
48							
49	Equipment	**Units**		**Unit Rate**	**Total Cost**		**Comments**
50	Screen	1.0	day	$500	$500	$500	Slurry flow 220,000 gal per day @ 15%
51	Mix tank (4)	1.0	day	$2,000	$2,000	$500	Supernatant 170,000 gal per day = 120 gpm
52	Feed pump system	1.0	day	$1,000	$1,000	$1,000	(includes slurry preparation)
53	Belt filter press (4)	1.0	day	$4,000	$4,000	$1,000	
54	Excavator	1.0	day	$490	$490	$490	1.0 cy excavator Means p 19
55	Loader	1.0	day	$240	$240	$240	1.5 cy wheel loader Means p 21
56	100 KW generator	1.0	day	$180	$180	$180	Means p 23
57	Subtotal Cost			$8,410	$8,410		
58	**Equipment Unit Cost**				**$21.03**	**Per CY**	
59							
60	Materials	**Units**		**Unit Rate**	**Total Cost**		**Comments**
61	Small tools & supplies	1.0	Days	$100	$100		
62	Health and safety equip	1.0	Days	$400	$400		8 crew x $50/day
63	Per diem	1.0	Days	$240	$240		2 crew x $120/day
64	Polymer	1,600	Lb	1.88	$3,000		Assume 4 lb/icy
65	Subtotal Cost				$3,740		
66	**Material Unit Cost**				**$9.35**	**Per CY**	
67							

Unit Costs
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H
68	Subcontract	**Units**		**Unit Rate**	**Total Cost**		**Comments**
69					$0		
70	Subtotal Cost				$0		
71	**Subcontract Unit Cost**				$0	Per CY	
72							
73	**TOTAL UNIT COST**				**$45.30**	**Per CY**	
74							
75	**Load and Place Dewatered Sediment in CDF**						
76	**Estimated duration:**	260	Tons	divided by	260	tn/day production	
77		**1.0**	**days**				400 icy x 0.65 dewatered tons/cy
78	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
79							
80	Equip operator	1.0	day	$718	$718	$90	1 total (split between dozer, compactor)
81	Truck driver	1.0	day	$1,163	$1,163	$73	2 total
82	Laborer	1.0	day	$1,748	$1,748	$73	3 total
83							
84	Subtotal Costs				$3,628		
85	**Labor Unit Costs**				**$13.95**	**Per Ton**	
86							
87	Equipment	**Units**		**Unit Rate**	**Total Cost**		**Comments**
88							
89	Decontamination system	1.0	day	$100	$100	$100	
90	Highway trucks (2)	1.0	day	$960	$960	$480	16 ton truck Means p 22
91	Dozer	1.0	day	$860	$860	$860	200 HP crawler Mean p 21
92	Compactor	1.0	day	$760	$760	$760	Mean p 20
93							
94	Subtotal Cost				$2,680		
95	**Equipment Unit Costs**				**$10.31**	**Per Ton**	
96							
97	Materials	**Units**		**Unit Rate**	**Total Cost**		**Comments**
98	Health and safety equip	1.0	Days	$500	$500		10 crew x $50/day
99	Per diem		Days	$1,200	$0		
100	Subtotal Cost				$500		
101	**Material Unit Cost**				**$1.92**	**Per Ton**	
102							
103	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
104			tons		$0		
105			tons		$0		
106							
107	Subtotal Cost				$0		
108	**Subcontract Unit Costs**				**$0.00**	**Per Ton**	
109							
110	**TOTAL UNIT COST**				**$26.18**	**Per Ton**	
111							
112	**Load and Off-site Disposal**						
113	**Estimated duration:**	260	Tons	divided by	260	tn/day production	
114		**1.0**	**days**				
115	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
116	Equip operator	1.0	day	$718	$718	$90	1 total
117	Laborer	1.0	day	$1,165	$1,165	$73	2 total
118	QC officer		day	$600	$0	$75	
119							
120	Subtotal Costs				$1,883		
121	**Labor Unit Costs**				**$7.24**	**Per Ton**	
122							
123	Equipment	**Units**		**Unit Rate**	**Total Cost**		**Comments**
124	Loader	1.0	day	$300	$300		3 cy wheel loader Means p 21
125	Decontamination system	1.0	day	$100	$100		
126							
127	Subtotal Cost				$400		
128	**Equipment Unit Costs**				**$1.54**	**Per Ton**	
129							
130	Materials	**Units**		**Unit Rate**	**Total Cost**		**Comments**
131	Health and safety equip	1.0	Days	$200	$200		4 crew x $50/day
132	Per diem		Days	$240	$0		
133	Subtotal Cost				$200		
134	**Material Unit Cost**				**$0.77**		**Per Ton**
135							

	B	C	D	E	F	G	H
136	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
137	Hazardous waste landfill	260	tons	$391	$101,530		Clean Harbors $355 per ton plus 10% markup
138	Debris	13	tons	$391	$5,077		for dioxins less than 10 time UTS
139	Subtotal Cost				$106,607		
140	**Subcontract Unit Costs**				**$410**	**Per Ton**	
141							
142	**TOTAL UNIT COST - HAZARDOUS WASTE LANDFILL**				**$420**	**Per Ton**	
143	Incineration	260	tons	$880	$228,800		Clean Harbors $800 per ton plus 10%
144	**Subcontract Unit Cost**				**$880**	**Per Ton**	
145	**TOTAL UNIT COST - OFF-SITE INCINERATION**				**$890**	**Per Ton**	
146							
147	**On-site Incineration**						
148	**Estimated duration:**	260	Tons	divided by	260	tn/day production	
149		**1.0**	**days**				
150	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
151	Equip operator	1.0	day	$718	$718	$90	1 total
152	Laborer	1.0	day	$1,165	$1,165	$73	2 total
153	QC officer		day	$600	$0	$75	
154							
155	Subtotal Costs				$1,883		
156	**Labor Unit Costs**				**$7.24**	**Per Ton**	
157							
158	Equipment	**Units**		**Unit Rate**	**Total Cost**		**Comments**
159	Loader	1.0	day	$300	$300		3 cy wheel loader Means p 21
160	Decontamination system	1.0	day	$100	$100		
161							
162	Subtotal Cost				$400		
163	**Equipment Unit Costs**				**$1.54**	**Per Ton**	
164							
165	Materials	**Units**		**Unit Rate**	**Total Cost**		**Comments**
166	Health and safety equip	1.0	Days	$150	$150		13crew x $50/day
167	Per diem	1.0	Days	$120	$120		1 crew x $120/day
168	Subtotal Cost				$270		
169	**Material Unit Cost**				**$1.04**	**Per Ton**	
170							
171	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
172	Incinerate dredged material	260	tons	600.00	$156,000		Ref: Incineration cost summary table.
173	**Solid waste landfill of ash**	1	tons	50.00	$50		Range $264 to $1,087 per ton for soil
174							Use $600 per ton
175	Subtotal Cost				$156,050		
176	**Subcontract Unit Costs**				**$600**	**Per Ton**	
177							
178	**TOTAL UNIT COST**				**$610**	**Per Ton**	
179							
180	**Isolation-Cap (Land)**						
181	**Estimated duration:**	500	Tons	divided by	500	tn/day production	
182		**1.0**	**days**				
183	**Craft Labor**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
184	Foreman	1.0	day	$771	$771	$96	per hour
185	Equip operator	1.0	day	$2,871	$2,871	$90	4 total
186	Truck driver	1.0	day	$1,163	$1,163	$73	2 total
187	QC technician		day	$581	$0	$73	per hour
188	Laborer	1.0	day	$2,330	$2,330	$73	4 total
189	Safety officer		day	$600	$0	$75	per hour
190							
191	Subtotal Cost			$8,315	$7,134		
192	**Labor Unit Cost**				**$14.27**	**Per Ton**	
193							
194							
195	**Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
196	Loader	1.0	day	$300	$300		3 cy wheel loader Means p 21
197	Grader	1.0	day	$430	$430		Road grader Means p 596
198	Off-road trucks	1.0	day	$1,840	$1,840	$920	(2) off-road trucks 25 ton Means p 22
199	Excavator	1.0	day	$680	$680		1.5 cy excavator Means p 20
200	Dozer to spread	1.0	day	$860	$860		200 hp dozer Means p 21
201					$0		
202	Subtotal Cost			$4,110	$4,110		
203	**Equipment Unit Cost**				**$8.22**	**Per Ton**	
204							

	B	C	D	E	F	G	H
205	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
206	Sand for cap	500	tons	$30	$15,000		Truck delivery to site at $24 per ton +25%
207	Health and safety equip	1.0	Days	$500	$500		10 crew x $50/day
208	Per diem	1.0	Days	$240	$240		2 crew x $120/day
209	Subtotal Cost				$15,740		
210	**Material Unit Cost**				**$31.48**	**Per Ton**	
211							
212	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
213					$0		
214					$0		
215	**Subtotal Cost**				$0		
216	**TOTAL UNIT COST**				**$53.97**	**Per Ton**	
217							
218	**Place Cap from Amphibious Barges**						
219	**Estimated duration:**	500	tons	divided by	500	tons/day production	
220		**1.0**	**days**				
221	**Craft Labor**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
222	Foreman	1.0	day	$771	$771	$96	per hour
223	Amphibious operator	1.0	day	$0	$0	$0	2 total
224	Equip operator	1.0	day	$1,436	$1,436	$90	2 total on shore
225	Safety officer		day	$600	$0	$75	per hour
226	Deck hand	1.0	day	$0	$0	$0	4 total
227	Laborer	1.0	day	$2,330	$2,330	$73	4 total
228	Subtotal Cost			$5,136	$4,536		Rates confirmed with Means Building Costs
229	**Labor Unit Cost**				**$9.07**	**Per ton**	
230							
231	**Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
232	Slurry and pump system	1.0	day	$2,500	$2,000		Pump, hopper, crane on shore
233	Amphibious spreader	1.0	day	$1,780	$1,780	$890	Use twice 2.0 cy long-reach costs
234	Amphibious tug	1.0	day	$2,500	$1,780		
235	Excavator on shore	1.0	day	$680	$680		1.5 cy Means p 20
236	Loader on shore	1.0	day	$300	$300		3 cy wheel loader Means p 21
237							
238	Subtotal Cost			$7,760	$6,540		
239	**Equipment Unit Cost**				**$13.08**	**Per ton**	
240							
241	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
242	Sand for cap	500	tons	$30	$15,000		Truck delivery to site at $24 per ton
243	Small Tools	1.0	day	$100	$100		Add 25% for markup and profit
244	Health and safety equip	1.0	Days	$600	$600		12 crew x $50/day
245	Per diem	1.0	Days	$120	$120		1 crew x $120/day
246	Subtotal Cost				$15,820		
247	**Material Unit Cost**				**$31.64**	**Per ton**	
248							
249	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
250							
251	Subtotal Cost				**$0**	**Per ton**	
252	**TOTAL UNIT COST**				**$53.79**	**Per Ton**	
253							
254	**Clear Trees, Chip Vegetation, Grind Stumps**						
255	**Estimated duration:**	12,000	sf	divided by	12,000	sf/day production	
256		**1.0**	**Days**				Means p 39 0.3 AC per day heavy trees
257	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
258	Equip operator	1.0	day	$2,153	$2,153	$90	3 total
259	Laborer	1.0	day	$2,330	$2,330	$73	4 total
260	Foreman	1.0	day	$771	$771	$96	
261							
262	Subtotal Cost			$5,254	$5,254		
263	**Labor Unit Cost**				**$0.44**	**Per sf**	
264							
265	**Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
266	Excavator	1.0	day	$890	$890		2.0 cy excavator Means p 20
267	Loader	1.0	day	$300	$300		3 cy wheel loader Means p 21
268	Dozer	1.0	day	$860	$860		200 hp dozer Means p 21
269	Chipper	1.0	day	$165	$165		Means p 588
270	Stump grinder	1.0	day	$95	$95		Means p 588
271	Subtotal Cost			$2,310	$2,310		
272	**Equipment Unit Cost**				**$0.19**	**Per sf**	
273							

	B	C	D	E	F	G	H
274	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
275					$0		
276					$0		
277	Subtotal Cost				$0		
278	**Material Unit Cost**				**$0.00**	**Per sf**	
279							
280	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
281							
282							
283	Subtotal Cost				$0		
284	**Subcontract Unit Cost**				$0		
285	**TOTAL UNIT COST**				**$0.63**	**Per sf**	
286							
287	**Soil over sediment or membrane (also for drainage sand)**						
288	**Estimated duration:**	400	cy	divided by	400	cy/day production	
289		**1.0**	**Days**				
290	**Craft Labor**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
291	Foreman	1.0	day	$771	$771	$96	per hour
292	Equip operator	1.0	day	$1,436	$1,436	$90	2 total
293	Laborer	1.0	day	$1,165	$1,165	$73	2 total
294	Subtotal Cost				$3,371		
295	**Labor Unit Cost**				**$8.43**	**Per CY**	
296							
297	**Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
298	Dozer	1.0	day	$480	$480		100 hp dozer
299	Grader	1.0	day	$350	$350		Small grader to spread
300	Subtotal Cost				$830		
301	**Equipment Unit Cost**				**$2.08**	**Per CY**	
302							
303	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
304					$0		
305	Bank run cover soil	700	Tons	$30	$21,000		$24 per ton plus markup
306	Subtotal Cost				$21,000		
307	**Material Unit Cost**				**$52.50**	**Per CY**	
308							
309	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
310							
311							
312	Subtotal Cost				$0		
313	**Subcontract Unit Cost**				**$0.00**	**Per Cy**	
314	**TOTAL UNIT COST**				**$63.00**	**Per Cy**	
315							
316	**Construct Perimeter Berms**						
317	**Estimated duration:**	600	cy	divided by	600	cy/day production	
318		**1.0**	**Days**				
319	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
320	Foreman	1.0	day	$771	$771	$96	per hour
321	Equip operator	1.0	day	$2,153	$2,153	$90	3 total
322	Laborer	1.0	day	$1,748	$1,748	$73	3 total
323			day				
324			day		$0		
325	Subtotal Cost				$4,671		
326	**Labor Unit Cost**				**$7.79**	**Per CY**	
327							
328	Equipment	**Units**		**Unit Rate**	**Total Cost**		**Comments**
329	Dozer	1.0	day	$860	$860		200 hp dozer Means p 21
330	Excavator	1.0	day	$890	$890		2.0 cy excavator Means p 20
331	Compactor	1.0	day	$440	$440		Means p 21
332							
333							(Means crew B-32)
334	Subtotal Cost				$2,190		
335	**Equipment Unit Cost**				**$3.65**	**Per CY**	
336							
337	Materials	**Units**		**Unit Rate**	**Total Cost**		**Comments**
338					$0		Use 1.75 tons per cy
339	Bank run gravel	1,050	Tons	$30	$31,500		$24 per ton plus markup
340							
341							
342	Subtotal Cost				$31,500		
343	**Material Unit Cost**				**$52.50**	**Per CY**	
344							

	B	C	D	E	F	G	H
345	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
346							
347							
348	Subtotal Cost				$0		
349	**Subcontract Unit Cost**				**$0.00**	**Per Cy**	
350	**TOTAL UNIT COST**				**$63.94**	**Per cy**	
351							
352	**Excavate, Haul, Stockpile Existing Soil**						
353	**Estimated duration:**	600	cy	divided by	600	cy/day production	
354		**1.0**	**Days**				
355	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
356	Foreman	1.0	day	$771	$771	$96	per hour
357	Equip operator	1.0	day	$2,153	$2,153	$90	3 total
358	Laborer	1.0	day	$1,748	$1,748	$73	3 total
359	Truck driver	1.0	day	$1,744	$1,744	$73	3 total
360			day		$0		
361	Subtotal Cost				$6,415		
362	**Labor Unit Cost**				**$10.69**	**Per CY**	
363							
364	Equipment	**Units**		**Unit Rate**	**Total Cost**		**Comments**
365	Dozer	1.0	day	$860	$860		200 hp dozer Means p 21
366	Excavator	1.0	day	$890	$890		2.0 cy excavator Means p 20
367	Loader	1.0	day	$300	$300		3 cy wheel loader Means p 21
368	Highway trucks (3)	1.0	day	$1,440	$1,440	$480	16 ton truck Means p 22
369							
370	Subtotal Cost				$3,490		
371	**Equipment Unit Cost**				**$5.82**	**Per CY**	
372							
373	Materials	**Units**		**Unit Rate**	**Total Cost**		**Comments**
374					$0		PPE not needed for work on clean soil.
375			Tons	$30	$0		
376							
377							
378	Subtotal Cost				$0		
379	**Material Unit Cost**				**$0.00**	**Per CY**	
380							
381	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
382							
383							
384	Subtotal Cost				$0		
385	**Subcontract Unit Cost**				**$0.00**	**Per Cy**	
386	**TOTAL UNIT COST**				**$16.51**	**Per cy**	
387							
388	**Sheet pile for river diversion**						
389	**Estimated duration:**	600	sf	divided by	600	f/day production install and remove	
390		**1.0**	**Days**				
391	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
392	Foreman	1.0	day	$771	$771	$96	per hour
393	Equip operator	1.0	day	$718	$718	$90	1 total
394	Laborer	1.0	day	$1,748	$1,748	$73	3 total
395	Truck driver	1.0	day	$581	$581	$73	1 total
396			day		$0		
397	Subtotal Cost				$3,817		
398	**Labor Unit Cost**				**$6.36**	**Per sf**	
399							
400	Equipment	**Units**		**Unit Rate**	**Total Cost**		**Comments**
401	Crane 40 ton	1.0	day	$1,000	$1,000		Means p 596
402	Vibratory hammer	1.0	day	$1,500	$1,500		Means p 596
403	Off-road truck	1.0	day	$300	$300		Means p 22
404		1.0	day	$1,440	$1,440	$480	
405							
406	Subtotal Cost				$4,240		
407	**Equipment Unit Cost**				**$7.07**	**Per sf**	
408							
409	Materials	**Units**		**Unit Rate**	**Total Cost**		**Comments**
410	Purchase sheets	12,000	lb	$0.72	$8,640		Assume AZ=12 20 psf
411	Health and safety equip	1.0	Days	$300	$300		6 crew x $50/day
412							
413							
414	Subtotal Cost				$8,940		
415	**Material Unit Cost**				**$14.90**	**Per sf**	
416							

	B	C	D	E	F	G	H
417	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
418							
419							
420	Subtotal Cost				$0		
421	**Subcontract Unit Cost**				**$0.00**	**Per sf**	
422	**TOTAL UNIT COST**				**$28.33**	**Per sf**	
423	**Excavate Sediment with Low-ground Pressure Long-reach Excavators Into Nearshore CDF**						
424	**Estimated duration:**	500	cy	divided by	500	icy/day production with 1 excavators	
425		**1.0**	**days**			icy =	in-situ cubic yards
426	**Craft Labor**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
427	Foreman	1.0	day	$771	$771	$96	per hour
428	Equip operator	1.0	day	$1,436	$1,436	$90	2 total on excavators
429	Truck driver	1.0	day	$1,163	$1,163	$73	2 total
430	Laborer	1.0	day	$2,330	$2,330	$73	4 total
431	Safety officer		day	$600	$0	$75	per hour
432	QC officer		day	$600	$0	$75	per hour
433	Subtotal Cost			$6,899	$5,699		Rates confirmed with Means Building Costs
434	**Labor Unit Cost**				**11.40**	**Per Cy**	
435							
436	**Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
437	Low-ground pressure excavator	1.0	day	$890	$890	$890	www.machinerytrader Cat 345BL $3,000 per
438	Rehandling excavators	1.0	day	$680	$680	$680	1.5 cy Means p 20
439	Trucks to stockpile	1.0	day	$1,840	$1,840	$920	(2) off-road trucks 25 ton Means p 22
440					$0		
441	Subtotal Cost			$3,410	$3,410		
442	**Equipment Unit Cost**				**$6.82**	**Per Cy**	
443							
444	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
445	Health and safety equip	1.0	Days	$850	$850		8 crew x $50/day
446	Per diem	1.0	Days	$240	$240		2 crew x $120/day
447	Small Tools	1.0	day	$100	$100		
448					$0		
449	Subtotal Cost				$1,190		
450	**Material Unit Cost**				**$2.38**	**Per Cy**	
451							
452	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
453							
454	Subtotal Cost				**$0**	**Per cy**	
455							
456	**TOTAL UNIT COST**				**$20.60**	**Per Cy**	
457							
458	**Load and Place Wet Sediment Into Nearshore CDF**						
459	**Estimated duration:**	600	cy	divided by	600	cy/day production	
460		**1.0**	**days**				
461	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
462							
463	Equip operator	1.0	day	$2,153	$2,153	$90	3 total
464	Truck driver	1.0	day	$1,744	$1,744	$73	3 total
465	Laborer	1.0	day	$2,330	$2,330	$73	4 total
466	QC officer		day	$600	$0	$75	
467	Subtotal Costs				$6,227		
468	**Labor Unit Costs**				**$10.38**	**Per cy**	
469							
470	Equipment	**Units**		**Unit Rate**	**Total Cost**		**Comments**
471	Loader	1.0	day	$300	$300	$300	3 cy wheel loader Means p 21
472	Decontamination system	1.0	day	$100	$100	$100	
473	Trucks to process area (3)	1.0	day	$2,760	$2,760	$920	(3) off-road trucks 25 ton Means p 22
474	Dozer	1.0	day	$860	$860	$860	200 HP crawler Mean p 21
475	Long-reach rehandle excavator	1.0	day	$890	$890	$890	
476							
477	Subtotal Cost				$4,910		
478	**Equipment Unit Costs**				**$8.18**	**Per cy**	
479							
480	Materials	**Units**		**Unit Rate**	**Total Cost**		**Comments**
481	Health and safety equip	1.0	Days	$350	$350		7 crew x $50/day
482	Per diem	1.0	Days	$240	$240		2 crew x $120/day
483	Subtotal Cost				$590		
484	**Material Unit Cost**				**$0.98**	**Per cy**	
485							

	B	C	D	E	F	G	H
486	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
487			tons		$0		
488			tons		$0		
489							
490	Subtotal Cost				$0		
491	**Subcontract Unit Costs**				**$0.00**	**Per cy**	
492							
493	**TOTAL UNIT COST**				**$19.55**	**Per cy**	
494	**Topsoil and Plantings**						
495	**Estimated duration:**	219,600	sf	divided by	7400	sf/day production	
496		4,067	cy		137	cy/day	
497		29.7	days				Topsoil Means p 85 7,400 sf/day
498	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
499	Foreman	29.7	day	$771	$22,866	$96	
500		29.7					
501	Equip operator	29.7	day	$2,153	$63,901	$90	3 total
502	Laborer	29.7	day	$1,748	$51,863	$73	3 total
503	Subtotal Cost				$138,630		
504	**Labor Unit cost**				**$0.63**	**Per sf**	
505					**$34.09**	**Per Cy**	
506							
507	Equipment	**Units**		**Unit Rate**	**Total Cost**		**Comments**
508	Loader	29.7	day	$165	$4,896		1.5 cy wheel loader Means p 590
509	Dozer	29.7	day	$480	$14,244		100 hp dozer
510	Grader	29.7	day	$350	$10,386		Small grader to spread
511			day		$0		
512			day		$0		
513	Subtotal Cost				$29,527		
514	**Labor unit cost**				**$0.13**	**Per sf**	
515					**$7.26**	**Per Cy**	
516							
517	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
518					$0		
519	Top Soil	4,067	cy	$40	$162,667		$32 per cy plus markup
520					$0		
521	Wetland plantings		ea		$0		
522	Subtotal Cost				$162,667		
523	**Material Unit cost**				**$0.74**	**Per sf**	
524					**$40**	**Per cy**	
525							
526	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
527	Plantings	219,600	sf	$1.00	$219,600		From New Bedford estimate $40,000 per acre
528							
529	Subtotal Cost				$219,600		
530	**Subcontract Unit Cost**				**$1.00**	**Per sf**	
531	**TOTAL UNIT COST**				**$2.51**	**Per sf**	
532							
533							
534	**Water Treatment During Mechanical Dewatering**						
535	**Estimated duration:**	400	CY	divided by	400	icy/day	
536		**1.0**	**days**				
537	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
538							
539	Equip operator	1.0	day	$718	$718	$90	1 total
540	Laborer	1.0	day	$583	$583	$73	1 total
541							
542							
543	Subtotal Costs				$1,300		
544	**Labor Unit Costs**				**$1,300**	**Per day**	
545							
546	Equipment	**Units**		**Unit Rate**	**Total Cost**		**Comments**
547	COWS 250 Oil/water separator	1.0	day	$100	$100		Flow 120 gpm
548	MPC 28 sand filter	1.0	day	$600	$600		Carbon Air 10/30/06 email
549	PC 50 GAC (10,000 lb each)	1.0	day	$600	$600		$67,500 for 60 work day = $1,125 per day
550	bag filter skid	1.0	day	$100	$100		Use $1,400 per day for system w/markup
551	forklift	1.0	day	340	$340		Rough terrain forklift Means p 23
552					$0		
553	Subtotal Cost				$1,740		
554	**Equipment Unit Costs**				**$1,740**	**Per day**	
555							

Unit Costs
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H
556	Materials	**Units**		**Unit Rate**	**Total Cost**		**Comments**
557	Utilities	1.0	day	$50	$50		
558	Health and safety equip	1.0	Days	$100	$100		2 crew x $50/day
559	Per diem	1.0	Days	$120	$120		1 crew x $120/day
560	Subtotal Cost				$270		
561	**Materials Unit Cost**				**$270**	**Per day**	
562							
563	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
564	Sludge disposal	20	lb	1.00	$20		Assume 20 lb/cy
565					$0		
566					$0		
567	Subtotal Cost				$20		
568	**Subcontract Unit Costs**				**$20**	**Per day**	
569	**TOTAL UNIT COSTS**				**$3,330**	**Per day**	
570							
571							
572	**Water Treatment Set Up**						
573	**Estimated duration:**		CY	divided by			
574		**1.0**	**days**				
575	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
576	Pipefitter	1.0	day	$1,518	$1,518	$95	2 total
577	Equip operator	1.0	day	$1,436	$1,436	$90	2 total
578	Laborer	1.0	day	$1,748	$1,748	$73	3 total
579	Foreman	1.0	day	$771	$771	$96	
580	Electrician	1.0	day	$1,377	$1,377	$86	2 total
581	Subtotal Costs				$6,848		
582	**Labor Unit Costs**				**$6,848.21**	**Per day**	
583							
584	Equipment	**Units**		**Unit Rate**	**Total Cost**		**Comments**
585	Oil/water separator	1.0	day	$100	$100		
586	20,000 gallon tank	1.0	day	$100	$100		
587	sand filter	1.0	day	$100	$100		
588	forklift	1.0	day	340	$340		Rough terrain forklift Means p 23
589	Excavator	1.0	day	$890	$890		2.0 cy excavator Means p 20
590	Subtotal Cost				$1,530		
591	**Equipment Unit Costs**				**$1,530.00**	**Per day**	
592							
593	Materials	**Units**		**Unit Rate**	**Total Cost**		**Comments**
594	Utilities	1	day	$50	$50		
595	sand replacement		lb	$0.10	$0		
596					$0		
597							
598	Subtotal Cost				$50		
599	**Materials Unit Cost**				**$50**	**Per day**	
600							
601	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
602	Sludge disposal		lb	1.00	$0		
603					$0		
604					$0		
605	Subtotal Cost				$0		
606	**Subcontract Unit Costs**				**$0.00**	**Per day**	
607	**TOTAL UNIT COSTS**				**$8,428**	**Per day**	
608							
609	**SUBCONTRACT CONSTRUCTION COSTS**						
610							
611	**Solidify sediment from river**				**$50.00**	**cy**	Allowance based on experience
612	**Liner System**						
613	Geocomposite	1	SF				Means Environmental Costs
614	Labor	1	SF	0.18			
615	Equipment	1	SF	0.10			
616	Material	1	SF	0.58			
617	Unit Cost				**$0.86**	**SF**	
618							
619	**Rebuild Lyman Mill Dam Gate Structure**						
620	Rebuild Lyman Mill Dam Gate	1	ls		**$750,000**		Costs reported by LEA for Allendale Dam
621							repair was $828,000. This included
622							concrete dam 10 ft high and new gate structure
623							
624	Cost for On-site CDF	112,900	tons		**$5,639,214**		
625					**$49.95**	**Per Ton**	
626							
627	**Asphalt Pavement**				**$1.00**	**sf**	
628							

Unit Costs
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H
629	**Annual Dam Maintenance**						
630	Gate Operation	2	days	$880	$1,760	$55	2 person crew for one day
631	Visual Inspection	2	days	$880	$1,760	$55	2 person crew for one day
632	Vegetation cutting	4	days	$1,760	$7,040	$55	2 person crew for 2 days
633	Truck and power tools	3	days	200	$600		
634	Total Dam Maintenance				**$11,160**	**Per each**	
635							
636	**Shallow-water plantings**				**$100,000**	**ac**	Allowance based on experience
637	**Wetland enhancement**				**$100,000**	**ac**	Allowance based on experience
638							
639	**Concrete Containment Dike for CDF**						Means 2007 Heavy Construction Costs
640							Add 50% to labor for difficult site access
641	Support piles		ea	20 per day		$1,260	p. 237 30 ft x $42 per lf for HP 12x74
642	Footing forms		sf	350 sf/day per crew		$8.70	p. 46 edge forms $5.80 +50%
643	Wall forms		sf	260 sf/day per crew		$13.50	p. 48 retaining wall 8'-16' $9.00 +50%
644	Footing concrete		cy	150 cy/day		$165	p. 65, 64 $31+50% and $120
645	Wall concrete		cy	95 cy/day		$195	p. 65, 64 $50.00+50% and $120
646	Reinforcing steel		ton	2.3 ton/day		$2,200	p. 59 $1,900 + $300
647	**Rebuild Dams**						
648	Excavate next to dams						
649	Off-site disposal of dam debris						
650	Install new weir structure						
651	Remove dam structures						
652							
653	**Oversight**						
654	**Craft Labor**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
655	Project manager	1.0	day	$1,200	$1,200	$150	per hr
656	Resident engineer	1.0	day	$960	$960	$120	per hr
657	Superintendent	1.0	day	$823	$823	$103	per hr
658	Safety officer	1.0	day	$600	$600	$75	
659	QC officer	1.0	day	$600	$600	$75	
660	Sample crew	1.0	day	$1,440	$1,440	$90	2 staff
661	Survey crew	1.0	day	$1,200	$1,200	$75	2 staff
662	Admin support	1.0	day	$360	$360	$45	
663	**Labor Daily Costs**				**$7,183**	**Per day**	
664							
665	**Monthly Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
666					$0		
667	Field office	1.0	mo	$1,075	$1,075		trailer, copier, fax, water, chemical toilets
668	Vehicles	1.0	mo	$2,500	$2,500		2 trucks and fuel
669	Cell phones, radios	1.0	mo	$750	$750		4 phones, 3 radios
670	Utilities	1.0	mo	$250	$250		
671	**Equipment Monthly Cost**			4,575	**$4,575**	**Per Month**	
672							
673	**Daily Equipment**						
674	Vehicles	1	day	150	$150		
675	Cell phones, radios	1.0	day	$50	$50		
676	dGPS	1.0	day	$100	$100		
677	Computer and survey software	1.0	day	$50	$50		
678							
679	**Daily Equipment Cost**				**$350**	**Per Day**	
680							
681	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
682	Per diem	1.0	day	$480.00	$480		4 field crew x $120/day
683	PPE, office supplies	1.0	day	$200	$200		4 field crew x $50/day
684	**Subtotal Cost**			**680**	**$680**	**Per day**	
685							
686	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
687	Sediment - dioxins (8290)	1.0	ea	$715	$715		Columbia 11/8/06 estimate +10% markup
688	Sediment grain size, TOC, solids	1.0	ea	$175	$175		
689	Sediment - 2,3,7,8 TCDD (8290)	1.0	ea	$358	$358		Columbia + 10%
690	TCLP (131)	1.0	ea	$94	$94		
691	Metals (6020)	1.0	ea	$185	$185		
692	Pesticides (8081A)	1.0	ea	$176	$176		
693	Volatiles (8260B)	1.0	ea	$138	$138		
694	Semivolatiles (8270C)	1.0	ea	$325	$325		
695	**Subtotal - dioxins and TCLP**	**1.0**	**ea**		**$1,806**		**All above except 2,3,7,8 TCDD**

	B	C	D	E	F	G	H
696					$0		
697	Benthic Community Analysis	1.0	ea	$600	$600		
698	Sediment geotechnical engr	1.0	ea	$1,050	$1,050		Triaxial shear and consolidation
699	lipids	3.0	ea	$39	$116		Cost for each procedure
700	Animal tissue dioxins	1.0	ea	$715	$715		
701	**Subtotal animal tissue**				**$1,507**		**dioxins and 3 processing steps, PAHs, PCB, Pesticides**
702	Water - dioxins	1.0	ea	$715	$715		
703	**Subtotal Cost**						
704							
705	**Sediment chemistry monitoring event**						
706	**Estimated duration:**					5	days to mobilize and sample
707			**days**				
708	**Craft Labor**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
709	Project manager	2.0	day	$1,200	$2,400	$150	per hr
710	Senior scientist	2.0	day	$960	$1,920	$120	per hr
711	Sample crew	5.0	day	$3,240	$16,200	$90	3 staff x 12 hr/day
712	Data analysis and report	5.0	day	$1,280	$6,400	$80	2 staff
713	GIS, production	2.0	day	$560	$1,120	$70	per hour
714	**Subtotal Costs**				**$28,040**	**Per event**	
715	**Labor Daily Cost**				$5,608	Per day	
716							
717	**Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
718	Vehicles	5.0	day	$150	$750		van and fuel
719	Cell phones, radios	5.0	day	$50	$250		
720	dGPS	5.0	day	$100	$500		
721	Sample vessel	5.0	day	$1,000	$5,000		
722	Computer and survey software	5.0	day	$50	$250		
723	Fathometer	5.0	day	$100	$500		
724	Tide gauge	5.0	day	$50	$250		
725	Turbidity, DO, pH meter	5.0	day	$75	$375		
726	Sediment profile camera	5.0	day	$200	$1,000		
727	Core equipment	5.0	day	$150	$750		
728	**Subtotal Cost**				**$9,625**	**Per event**	
729	**Equipment Daily Cost**				$1,925	Per day	
730	**Equipment costs ON LAND**				**$2,250**	**Per Event**	
731							
732							
733	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
734	Per diem	15.0	day	$100.00	$1,500		
735	PPE, office supplies	5.0	day	$50	$250		
736	Shipping equipment, sample	1.0	ea	$1,000	$1,000		
737	**Subtotal Cost**				**$2,750**	**Per event**	
738	**Materials Daily Cost**				$550	Per day	
739							
740	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
741							
742	**Subtotal Cost**				**$0**		
743							
744	**TOTAL COST**				**$40,415.00**	**Per Event**	
745	**TOTAL DAILY COST**				**$8,083.00**	**Per Day**	
746	**Physical survey monitoring event**						
747	**Estimated duration:**					2	days field time
748	**Craft Labor**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
749	Project manager	1.0	day	$1,200	$1,200	$150	per hr
750	Senior scientist	1.0	day	$960	$960	$120	per hr
751	Survey crew	2.0	day	$1,800	$3,600	$75	2 staff x 12 hr/day
752	Data analysis and report	5.0	day	$1,280	$6,400	$80	2 staff
753	GIS, production	2.0	day	$560	$1,120	$70	per hour
754	**Subtotal Costs**				**$13,280**	**Per event**	
755	**Labor Daily Cost**				$6,640	Per day	
756							

Unit Costs
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H
757	**Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
758	Vehicles	2.0	day	$150	$300		van and fuel
759	Cell phones, radios	2.0	day	$50	$100		
760	dGPS	2.0	day	$100	$200		
761	Computer and survey software	2.0	day	$50	$100		
762	Sample vessel	2.0	day	$1,000	$2,000		
763	Fathometer	2.0	day	$100	$200		
764	Tide gauge	2.0	day	$50	$100		
765	**Subtotal Cost**				$3,000	Per event	
766	**Equipment Daily Cost**				**$1,500**	**Per day**	
767	**Equipment cost ON LAND**				**$700**	**Per Event**	
768							
769							
770	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
771	Per diem	4.0	day	$100.00	$400		
772	PPE, office supplies	2.0	day	$50	$100		
773	Shipping equipment, supplies	1.0	ea	$1,000	$1,000		
774	**Subtotal Cost**				$1,500	Per event	
775	**Materials Daily Cost**				**$750**	**Per day**	
776							
777	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
778							
779							
780	Subtotal Cost				**$0**		
781							
782	TOTAL COST				**$17,780**	Per Event	
783	TOTAL DAILY COST				**$8,890**	Per Day	
784	**Ecologic survey monitoring event**						
785	**Estimated duration:**		stations			2	days field time concurrent with sediment
786			**days**				
787	**Craft Labor**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
788	Project manager	1.0	day	$1,200	$1,200	$150	per hr
789	Senior scientist	1.0	day	$960	$960	$120	per hr
790	Survey crew	2.0	day	$1,800	$3,600	$75	2 staff x 12 hr/day
791	Data analysis and report	5.0	day	$1,280	$6,400	$80	2 staff
792	GIS, production	2.0	day	$560	$1,120	$70	per hour
793							
794	**Subtotal Costs**				**$13,280**	**Per event**	
795	**Labor Daily Cost**				$6,640	Per day	
796							
797	**Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
798	Vehicles	2.0	day	$150	$300		van and fuel
799	Cell phones, radios	2.0	day	$50	$100		
800	dGPS	2.0	day	$100	$200		
801	Computer and survey software	2.0	day	$50	$100		
802	Sample vessel	2.0	day	$1,000	$2,000		
803	Fathometer	2.0	day	$100	$200		
804	Tide gauge	2.0	day	$50	$100		
805	Sediment profile camera	2.0	day	$200	$400		
806	Core equipment	2.0	day	$150	$300		
807	**Subtotal Cost**				**$3,700**	**Per event**	
808	**Equipment Daily Cost**				$1,850	Per day	
809	**Equipment cost ON LAND**				**$700**	**Per Event**	
810							
811							
812	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
813	Per diem	4.0	day	$100.00	$400		
814	PPE, office supplies	2.0	day	$50	$100		
815	Shipping equipment, samples	1.0	ea	$1,000	$1,000		
816	**Subtotal Cost**				**$1,500**	**Per event**	
817	**Materials Daily Cost**				$750	Per day	
818							
819	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
820							
821	Subtotal Cost				**$0**		
822							
823	**TOTAL COST**				**$18,480**	**Per Event**	
824	**TOTAL DAILY COST**				**$9,240**	**Per Day**	
825							

Unit Costs
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H
826							
827	Project manager			$1,200		$150	per hour
828	Senior engineer			$960		$120	per hour
829	Staff engineers			$1,800		$75	per hour
830	CAD			$600		$75	per hour
831	Tech support			$480		$60	per hour
832	Labor total			$5,040			
833	**Labor unit cost per hour**				**$90.00**		per day.
834							
835	Dewatering tests					$ 21,600	2 weeks for 3 persons = 240 hr
836	**Restoration and Mitigation Unit Costs**						Tables L-1 to L-4 from Washington State Cost Estimating guidance
837							USACE Technical Report EL-97-8
838		**Units**		**Unit Rate**	**Total Cost**		
839	Aquatic restoration in ponds	10	ea	$400	$4,000	Ac	Large wood $200 to $300 per Table L-1
840							Assume 10 per acre
841	Containerized shrub						
842	plant material	4840	ea	$10	$48,400		Plant $8 to $14 Table L-3
843	Install	161	hr	$73	$11,777		Plant rate 20 to 40 per hour per USACE
844					**$60,177**	**Ac**	
845	Containerized tree						
846	plant material	435	ea	$50	$21,750		Tree $20 Table L-3, Means $50 to $200
847	Install	43.5	hr	$73	$3,176		Plant rate 10 per hour
848					**$24,926**	**Ac**	
849							
850	Re-stock fish				**$25,000**	**Is**	Allowance
851							
852	CDF mitigation						
853	Excavate & haul soil	8075	cy	$17	$133,318		Assume 5 ft depth
854	Soil disposal	12920	tn	$25	$323,000		Assume debris landfill disposal
855	Topsoil and seeding	43560	cy	$2.51	$109,336		
856	Plantings	1	ac	$42,551	$42,551		50/50 mix of shrubs/trees
857					**$608,205**	**Ac**	
858							
859	Hydroseeding	43560	sf	$0.046	$2,004	Ac	Means $46/1,000 sf

Volume Estimates
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H	I
1	**Description**	**No.**	**Length**	**Width**	**Thickness**	**Quantity calc.**	**Quantity**	**Units**
2			**Ft.**	**Ft.**	**Ft.**	**(LF/SF/CF)**		
3								
4	**EXCAVATION OF RIVER SEDIMENTS (all alternatives, except those with Nearshore CDFs)**						**0.75**	**Acres**
5								
6	Contaminated sediment	1.0	32,500	1.0	1.0	32,500	1,200	cy
7	Overdredge allowance	1.0	32,500	1.0	1.0	32,500	1,200	cy
8	TOTAL						**2,400**	**cy**
9		Use unit weight of 1.5 tons per cy						
10							**3,600**	**tons**
11								
12								
13							**38.9**	**Acres**
14		Allendale Pond				641,116	**14.72**	
15		Lyman Mill Pond				1,022,000	**23.46**	
16		Woonasquatucket River				32,500	**0.75**	
17								
18		14.72	43,560	1.0	0.0	0	0	cy
19		23.46	43,560	1.0	0.0	0	0	cy
20							0	cy
21		Use unit weight of 1.5 tons per cy						
22							**0**	**tons**
23	Clear work areas	Assume 200 by 300 ft at each pond and in upland processing (i.e. 2 areas at each pond)						
24	Allendale	2.0	300	200	1.0	120,000	120,000	sf
25	Lyman Mill	2.0	300	200	1.0	120,000	120,000	sf
26	Total area						**240,000**	**sf**
27	Gravel for pond sites	240,000	1.0	1.0	0.5	120,000	**4,444**	**cy**
28	Geomembrane for pond sites	240,000					**240,000**	**sf**
29								
30	Area where existing water depth is less than 2.0 feet			Allendale Pond			1.3	ac
31	(this is were future grade would be above normal pond			Lyman Mill Pond			5.8	ac
32	elevation after capping).			TOTAL			**7.1**	**AC**
33								
34	Wetland enhancement for mitigation						**7.1**	**AC**
35	Shallow water plantings (assume area equal to area less than 2.0 feet)						**7.1**	**AC**
36								
37	**TEMPORARY SHEET PILE FOR WATER DIVERSION (all excavation alternatives)**							
38	Allendale	1,800	liner feet					
39	Lyman Mill	3,000	liner feet					
40	Total length	4,800						
41	Assume	30	feet long					
42	Total quantity	144,000	square feet					
43	Assume purchase for Allendale	54,000	sf					
44								
45								
46								
47	**ALT 7d and 7e EXCAVATION & OFF-SITE DISPOSAL with DAMS**						**155,799**	**CY**
48	Removal volume	Allendale Pond					52,936	cy
49		Lyman Mill Pond					100,463	cy
50		Woonasquatucket River					2,400	cy
51							**155,799**	**cy**
52	Sediment Volume after dewatering						97,731	cy
53	Sediment Weight after dewatering						112,900	tons
54	For both ponds about 1/2 of the samples contained dioxins above UTS and 10% above treatment standard of 10x UTS							
55	Assume 10% to incineration for On-site CDF							
56								
57	Off-site Incineration						**11,290**	**tons**
58	For off-site disposal, use 10% incineration and 90% landfill							
59	Incineration						**11,290**	**tons**
60	Landfill						**101,610**	**tons**
61								

Volume Estimates
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H	I
1	**Description**	**No.**	**Length**	**Width**	**Thickness**	**Quantity calc.**	**Quantity**	**Units**
2			**Ft.**	**Ft.**	**Ft.**	**(LF/SF/CF)**		
3								
62	**ALT 7 a EXCAVATION & UPLAND CDF with DAMS**						**38.9**	**Acres**
63	Allendale excavation	Allendale Pond					52,936	cy
64	Centredale excavation	Lyman Mill Pond					100,463	cy
65	Woonasquatucket River						2,400	cy
66	Total excavation						**155,799**	**cy**
67								
68	Backfill in ponds	38.93	43,560	1	0.5	847,808	31,400	cy
69		Use 1.5 tons per cy					**47,100**	**tons**
70	Lower water in Allendale	1.00	641,116	1.0	4.0	2,564,464	cf	
71	Lower water in Lyman Mill	1.00	1,022,000	1.0	4.0	4,088,000	cf	
72		Normal river flow (annual average 74 cfs)				74	6,393,600	cf/day
73							33,211	gpm
74	Flow capacity from QEA 9/7/06 calculations							
75	feet)	Flow (cfs)	Drawdown time (hr)					
76	0.5	41						
77	1	80						
78	1.5	120	40 - 50					
79	2	150	30 - 40					
80	2.5	190	18					
81	3	22	10					
82	3.5	250	7					
83	4	280	6					
84								
85								
86	Rebuild Lyman Mill Gate Structure						1	ls
87								
88	Clear work areas	Assume 200 by 300 ft at each pond and in upland processing						
89	Allendale	2.0	300	200	1.0	120,000	120,000	sf
90	Lyman Mill	2.0	300	200	1.0	120,000	120,000	sf
91	Total area						**240,000**	**sf**
92	Gravel for pond sites	120,000	1.0	1.0	0.5	60,000	**2,222**	**cy**
93	Geomembrane for pond sites	120,000					**120,000**	**sf**
94	Asphalt for process area	120,000	1.0	1.0	1.0	120,000	**120,000**	**sf**
95								
96	Mobilize Mechanical dewatering	1.0					1	ls
97	Mobilize water treatment	1.0					1	ls
98								
99	Gravel haul roads in ponds							
100	Allendale	2.0	1,800	24	1.0	86,400	3,200	cy
101	Lyman Mill	2.0	3,000	24	1.0	144,000	5,333	cy
102	Between ponds	1.0	1,400	24	1.0	33,600	1,244	cy
103	Total road gravel						9,778	cy
104	Geotextile for roads	2.0	1,800	24	1	86,400	86,400	sf
105		2.0	3,000	24	1	144,000	144,000	sf
106		1.0	1,400	24	1	33,600	33,600	sf
107	Total geotextile						264,000	sf
108								
109	Sediment Volume after dewatering						97,731	cy
110	Sediment Weight after dewatering						112,900	tons
111								
112								
113								
114	CDF area needed for:	97,731	cy of contaminated sediment					
115	Cube Area needed:	439,790	sf		6.0	2,638,737	97,731	cy
116								

Volume Estimates
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H	I
1	**Description**	**No.**	**Length**	**Width**	**Thickness**	**Quantity calc.**	**Quantity**	**Units**
2			**Ft.**	**Ft.**	**Ft.**	**(LF/SF/CF)**		
3								
117	**CAPACITY AND MATERIAL VOLUMES FOR NORTH OXBOW WITH HIGHEST CAP AT ELEV. 105 FT.**							
118	Capacity =	Volume inside a prismatoid space						
119		Volume =	$1/6h(B_1+4M+B_2)$					
120		B1 = area of lower base: B2 = area of upper base: M = area of midsection: and h = height						
121	Northwest lower portion	Height			12.0			
122		Bottom	320	570		182,400	sf	
123		Midsection	340	590		200,600	sf	
124		Top	360	610		219,600	sf	
125		Capacity				2,408,800	89,215	cy
126						0	0	cy
127	**TOTAL CAPACITY**						**89,215**	**CY**
128								
129	Slope ratio (inside - outside)		2	3				
130	Clear trees & vegetation	1.0	400	650	1.0	260,000	260,000	sf
131	Sand base for liner	1.0	320	570	1.0	182,400	6,756	cy
132	Install base liner	1.0	320	570	1.0	182,400	182,400	sf
133	Sand drain layer	1.0	320	570	1.0	182,400	6,756	cy
134								
135	East berm core	1.0	368	10.0	12.0	44,160		
136	inside slope	0.5	362	24.0	12.0	52,128		
137	outside slope	0.5	392	36.0	12.0	84,672		
138	South berm core	1.0	642	10.0	12.0	77,040		
139	inside slope	0.5	628	24.0	12.0	90,432		
140	outside sloe	0.5	666	36.0	12.0	143,856		
141	North berm core	1.0	356	10.0	9.0	32,040		
142	inside slope	0.5	354	18.0	9.0	28,674		
143	outside slope	0.5	379	27.0	9.0	46,049		
144	West berm core	1.0	624	10.0	9.0	56,160		
145	inside slope	0.5	616	18.0	9.0	49,896		
146	outside sloe	0.5	647	27.0	9.0	78,611		
147	South overexcavation	1.0	642	70.0	2.0	89,880		
148	East overexcavation	1.0	368	70.0	2.0	51,520		
149	**Total berms**					**925,117**	**34,264**	**cy**
150								
151	Region 1 RCRA-equivalent cap							
152	Low-permeability soils < 10-4 cm/sec				1.0			
153	60 mil geomembrane							
154	Drain layer >0.1 cm/sec				1.0			
155	Protective soil and topsoil				1.0			
156								
157	CDF size at top	1	360	610	1	219,600		sf
158	Soil over sediment	1.0	219,600	1.0	1.0	219,600	8,133	cy
159	Install cover membrane	1.0	219,600	1.0	1.0	219,600	219,600	sf
160	Drain gravel over membrane	1.0	219,600	1.0	1.0	219,600	8,133	cy
161	Protective soil and topsoil	1.0	219,600	1.0	1.0	219,600	8,133	cy
162	Excavate existing soil - northwest	1.0	360	260.0	5.0	468,000	17,333	cy
163	Excavate existing soil - northeast	1.00	310	260.0	3.0	241,800	8,956	cy
164	**Total excavate existing soil**						**26,289**	**cy**
165								
166								
167								
168	Lower water in Allendale	1.00	0	1.0	4.0	0	cf	
169	Lower water in Lyman Mill	1.00	0	1.0	4.0	0	cf	
170		Normal river flow (annual average 74 cfs)				74	6,393,600	cf/day
171							33,211	gpm

Volume Estimates
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H	I
1	**Description**	**No.**	**Length**	**Width**	**Thickness**	**Quantity calc.**	**Quantity**	**Units**
2			**Ft.**	**Ft.**	**Ft.**	**(LF/SF/CF)**		
3								
172	Flow capacity from QEA 9/7/06 calculations							
173	feet)	Flow (cfs)	Drawdown time (hr)					
174	0.5	41						
175	1	80						
176	1.5	120	40 - 50					
177	2	150	30 - 40					
178	2.5	190	18					
179	3	22	10					
180	3.5	250	7					
181	4	280	6					
182								
183								
184	Rebuild Lyman Mill Gate Structure						1	ls
185								
186	Clear work areas	Assume 200 by 300 ft at each pond						
187	Allendale	1.0	300	200	1.0	60,000	60,000	sf
188	Lyman Mill	1.0	300	200	1.0	60,000	60,000	sf
189	Total area						**120,000**	**sf**
190	Gravel for pond sites	120,000	1.0	1.0	0.5	60,000	**2,222**	**cy**
191	Geomembrane for pond sites	120,000					**120,000**	**sf**
192								
193								
194	Mobilize Mechanical dewatering	Not needed for Nearshore CDF in pond footprints					1	ls
195	Mobilize water treatment	1.0					1	ls
196								
197	Gravel haul roads in ponds							
198	Allendale	2.0	1,800	24	1.0	86,400	3,200	cy
199	Lyman Mill	2.0	3,000	24	1.0	144,000	5,333	cy
200	Between ponds	1.0		24	1.0	0	0	cy
201	Total road gravel						**8,533**	**cy**
202	Geotextile for roads	2.0	1,800	24	1	86,400	86,400	sf
203		2.0	3,000	24	1	144,000	144,000	sf
204		1.0		24	1	0	0	sf
205	Total geotextile						**230,400**	**sf**
206								
207	**Alternative 10b and 11f REBUILD DAMS**							
208								
209	Excavate next to dams						**10**	**days**
210	Off-site disposal of dam debris	2.0					**2**	**tons**
211	Allendale concrete	1.0	115	25	2	5,750	**474**	**tons**
212	Lyman Mill debris	1.0	120	20	10	24,000	**1,560**	**tons**
213	Install new weir structure	2.0	120	40	6	57,600	**3,744**	**tons**
214	Remove dam structures						**20**	**days**
215								
216								
217								
218								
219								
220	**Removal Volumes do not need to remove sediment inside CDF area**							
221	**ALT 7b FULL EXCAVATION With DAMs**							
222		Excavation Volume (cy)	Sand cover volume (cy)	sand cover (tons)				
223	Allendale	44,319	9,600			Volumes from AutoCad drawings		
224	Lyman Mill	76,800	14,885			includes 0.25 ft over-excavation		
225	Woonasquatucket	2,400				cover 6 inches thick		
226	**TOTAL**	**123,519**	24,485	**36,727.50**				
227	Back-calculate area from sand		661,095		0.5	1,322,190	square feet	
228						30.4	acres	

Volume Estimates
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H	I
1	**Description**	**No.**	**Length**	**Width**	**Thickness**	**Quantity calc.**	**Quantity**	**Units**
2			**Ft.**	**Ft.**	**Ft.**	**(LF/SF/CF)**		
3								
229	Pond - CDF Area					27.9		
230	**Alt 7b Nearshore CDF Volumes and Capacity**							
231		Capacity (cy)	(cy)					
232	Allendale	42,911.00	13,028			Volumes from AutoCad drawings		
233	Lyman Mill Upper	34,924.00	9,571			cover 2.0 feet thick		
234	Lyman Mill Lower	47,443.00	14,310					
235		125,278	36,909					
236	CDF Top Area		996,543			479,160		
237	Back-calculate CDF size from Cover volume					11.0	acres	
238								
239								
240	Soil over sediment	479,160.0	1	1.0	1.0	479,160	**17,747**	**cy**
241	Install cover membrane	479,160.0	1	1.0	1.0	479,160	**479,160**	**sf**
242	Drain gravel over membrane	479,160.0	1	1.0	1.0	479,160	**17,747**	**cy**
243	Protective soil and topsoil	479,160.0	1	1.0	1.0	479,160	**17,747**	**cy**
244								
245	Concrete containment wall					0		
246	Allendale Walls	2	1,400	14.0	1.0	39,200	sf	
247	Lyman Mill North Walls	2	1,100	15.0	1.0	33,000	sf	
248	Lyman Mill South Walls	2	1,100	13.0	1.0	28,600	sf	
249	**TOTAL WALL FORMS**		3,600			**100,800**	**SF**	
250	**Footing Forms**	2	3,600	3.0	1.0	**21,600**	**SF**	
251	Allendale wall concrete	1	1,400	14.0	2.0	39,200	1,452	cy
252	Lyman Mill North Concrete	1	1,100	15.0	2.0	33,000	1,222	cy
253	Lyman Mill South Concrete	1	1,100	13.0	2.0	28,600	1,059	cy
254	**TOTAL WALL CONCRETE**		3,600			100,800	**3,733**	**cy**
255	**Footing Concrete**	1	3,600	20.0	3.0	216,000	**8,000**	**cy**
256	Reinforcing steel	Use New Bedford VE study value of 30 lb/cy					**176**	**tons**
257	Gravel backfill behind wall	1	3,600	2.0	10.0	**72,000**	**4,680**	**tons**
258								
259	Install and remove sheet pile		3,600	30			**108,000**	**sf**
260								
261	Footing excavation		3,600	20	4.0	**288,000**	**10,667**	**cy**
262								
263	Support piling	Assume 2 piles at 10 foot spacing 20 feet long						
264		360				**2**	**720**	**each**
265								
266	**ALT 8a, 8d, 8e PARTIAL EXCAVATION & UPLAND CDF OR OFF-SITE DISPOSAL**						**38.9**	**Acres**
267		CAP AREA					**25.5**	**Acres**
268	Removal volume	Allendale Pond					23,000	cy
269	Lyman Mill Pond						39,000	cy
270	Woonasquatucket River						2,400	cy
271	TOTAL REMOVAL						**64,400**	**cy**
272								
273	Sediment Volume after dewatering						41,223	cy
274	Sediment Weight after dewatering						**47,393**	**tons**
275								
276	Assume 10% to incineration for on-site CDF alternatives							
277								
278	Off-site Incineration						**4,739**	**tons**
279	For off-site disposal, assume 10% incineration							
280	Incineration						**4,739**	**tons**
281	Landfill						**42,654**	**tons**
282								
283	Shallow water plantings (same as cap alternative)						**7.1**	**AC**
284		Cap over excavated Areas						
285		25.5	43,560	1.0	2.0	2,221,560	82,280	CY
286		Use unit weight of 1.5 tons per cy						

Volume Estimates
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H	I
1	**Description**	**No.**	**Length**	**Width**	**Thickness**	**Quantity calc.**	**Quantity**	**Units**
2			**Ft.**	**Ft.**	**Ft.**	**(LF/SF/CF)**		
3								
287							**123,420**	**tons**
288								
289		Cap over unexcavated areas						
290		13.4	43,560	1.0	2.0	1,169,672	43,321	CY
291		Use unit weight of 1.5 tons per cy						
292							**64,982**	**tons**
293	Clear work areas	Assume 200 by 300 ft at each pond and in upland processing (i.e. 2 areas near each pond)						
294	Allendale	2.0	300	200	1.0	120,000	120,000	sf
295	Lyman Mill	2.0	300	200	1.0	120,000	120,000	sf
296	Total area						**240,000**	**sf**
297	Gravel for pond sites	120,000	1.0	1.0	0.5	60,000	**2,222**	**cy**
298	Geomembrane for pond sites	120,000					**120,000**	**sf**
299	Asphalt for process area	120,000	1.0	1.0	1.0	120,000	**120,000**	**sf**
300	Gravel haul roads in ponds							
301	Allendale	2.0	1,800	24	1.0	86,400	3,200	cy
302	Lyman Mill	2.0	1,000	24	1.0	48,000	1,778	cy
303	Between ponds	1.0	1,400	24	1.0	33,600	1,244	cy
304	Total road gravel						**6,222**	**cy**
305	Geotextile for roads	2.0	1,800	24	1	86,400	86,400	sf
306		2.0	1,000	24	1	48,000	48,000	sf
307		1.0	1,400	24	1	33,600	33,600	sf
308	Total geotextile						**168,000**	**sf**
309								
310	**ALT 8a CAPACITY AND MATERIAL VOLUMES FOR NORTH OXBOW**							
311	Capacity =	Volume inside a prismatoid space						
312		Volume =	$1/6h(B_1+4M+B_2)$					
313		B1 = area of lower base: B2 = area of upper base: M = area of midsection: and h = height						
314		Height	**Northwest not needed for partial excavation alternative**					
315	Northeast portion	Height			10.0			
316		Bottom	320	300		96,000	sf	
317		Midsection	340	320		108,800	sf	
318		Top	360	340		122,400	sf	
319		Capacity				1,089,333	40,346	cy
320	**TOTAL CAPACITY**						**40,346**	**CY**
321	Slope ratio (inside - outside)		2	3				
322	Clear trees & vegetation	1.0	400	380	1.0	152,000	152,000	sf
323	Sand base for liner	1.0	320	300	1.0	96,000	3,556	cy
324	Install base liner	1.0	320	300	1.0	96,000	96,000	sf
325	Sand drain layer	1.0	320	300	1.0	96,000	3,556	cy
326	East berm core	1.0	372	10.0	13.0	48,360	(9.0 + 4.0 overexcavate)	
327	inside slope	0.5	365	26.0	13.0	61,629		
328	outside slope	0.5	396	39.0	13.0	100,471		
329	South berm core	1.0	378	10.0	13.0	49,140	(9.0 + 4.0 overexcavate)	
330	inside slope	0.5	362	26.0	13.0	61,178		
331	outside sloe	0.5	402	39.0	13.0	101,992		
332	North berm core	1.0	356	10.0	9.0	32,040		
333	inside slope	0.5	354	18.0	9.0	28,674		
334	outside slope	0.5	379	27.0	9.0	46,049		
335	West berm core	1.0	354	10.0	9.0	31,860		
336	inside slope	0.5	346	18.0	9.0	28,026		
337	outside sloe	0.5	377	27.0	9.0	45,806		
338	**Total berms**					**635,223**	**23,527**	**cy**

Volume Estimates
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H	I
1	**Description**	**No.**	**Length**	**Width**	**Thickness**	**Quantity calc.**	**Quantity**	**Units**
2			**Ft.**	**Ft.**	**Ft.**	**(LF/SF/CF)**		
3								
339	Region 1 RCRA-equivalent cap							
340	Low-permeability soils < 10-4 cm/sec				1.0			
341	60 mil geomembrane							
342	Drain layer >0.1 cm/sec				1.0			
343	Protective soil and topsoil				1.0			
344	CDF size at top	1	360	340	1	122,400		sf
345	Soil over sediment	1.0	122,400	1.0	1.0	122,400	4,533	cy
346	Install cover membrane	1.0	122,400	1.0	1.0	122,400	122,400	sf
347	Drain gravel over membrane	1.0	122,400	1.0	1.0	122,400	4,533	cy
348	Protective soil and topsoil	1.0	122,400	1.0	1.0	122,400	4,533	cy
349								
350	**Removal Volumes do not need to remove sediment inside CDF area**							
351	**ALT 8b FULL EXCAVATION With DAMs**							
352		Excavation Volume (cy)	2.0 'Cap cover volume (cy)	1.5 ' cover volume (cy)	Cover weight (tn)			
353	Allendale	23,065	46,130	34,598	53,626	Volumes from AutoCad drawings		
354	Lyman Mill	31,063	62,124	46,593	69,890	includes 0.25 ft over-excavation		
355	Woonasquatucket	2,400		602	903			
356	**TOTAL**	**56,528**	**108,254**	**81,792**	**124,418**			
357								
358								
359	**Alt 8b Nearshore CDF Volumes and Capacity**							
360		Capacity (cy)	Cover volume (cy)					
361						Volumes from AutoCad drawings		
362	Allendale					cover 2.0 feet thick		
363	Lyman Mill Lower	57,750	15,395					
364		57,750	15,395					
365	CDF Top Area		415,665		2.0	207,833	square feet	
366	Back-calculate CDF size from Cover volume					4.8	acres	
367								
368								
369	Soil over sediment	207,832.5	1	1.0	1.0	207,833	**7,698**	**cy**
370	Install cover membrane	207,832.5	1	1.0	1.0	207,833	**207,833**	**sf**
371	Drain gravel over membrane	207,832.5	1	1.0	1.0	207,833	**7,698**	**cy**
372	Protective soil and topsoil	207,832.5	1	1.0	1.0	207,833	**7,698**	**cy**
373								
374	Concrete containment wall					0		
375						0	sf	
376						0	sf	
377	Lyman Mill Walls	2	1,100	13.0	1.0	28,600	sf	
378	**TOTAL WALL FORMS**		1,100			**28,600**	**SF**	
379	**Footing Forms**	2	1,100	3.0	1.0	**6,600**	**SF**	
380	Allendale wall concrete			14.0	2.0	0	0	cy
381	Lyman Mill North Concrete			15.0	2.0	0	0	cy
382	Lyman Mill Concrete	1	1,100	13.0	2.0	28,600	1,059	cy
383	**TOTAL WALL CONCRETE**		1,100			28,600	**1,059**	**cy**
384	**Footing Concrete**	1	1,100	20.0	3.0	66,000	**2,444**	**cy**
385	Reinforcing steel	Use New Bedford VE study value of 30 lb/cy					**53**	**tons**
386	Gravel backfill behind wall	1	1,100	2.0	10.0	**22,000**	**1,430**	**tons**
387								
388	Install and remove sheet pile		1,100	30			**33,000**	**sf**
389								
390	Footing excavation		1,100	20	4.0	**88,000**	**3,259**	**cy**
391								
392	Support piling	Assume 2 piles at 10 foot spacing 20 feet long						
393		110				**2**	**220**	**each**
394								

Volume Estimates
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H	I
1	**Description**	**No.**	**Length**	**Width**	**Thickness**	**Quantity calc.**	**Quantity**	**Units**
2			**Ft.**	**Ft.**	**Ft.**	**(LF/SF/CF)**		
3								
395	**Summary of new areas**					5	CDF	
396						34	Open water	
397						0	Floodplain	
398						39		
399								
400								
401	**Removal Volumes do not need to remove sediment inside CDF area**							
402	**ALT 10b FULL EXCAVATION Without DAMs**							
403		Excavation Volume (cy)	Sand cover volume (cy)	sand cover (tons)	clean sediment (cy)			
404	Allendale	35,388	3,863		17,633	Volumes from AutoCad drawings		
405	Lyman Mill	74,041	10,300		22,841	includes 0.25 ft over-excavation		
406	Woonasquatucket	2,400				cover 6 inches thick		
407	**TOTAL**	**111,829**	14,163	**21,245**	**40,474**			
408	Back-calculate area from sand		382,401		0.5	764,802	square feet	
409						17.6	acres	
410								
411	**Summary of new areas**					13	CDF	
412						21	Open water	
413						5	Floodplain	
414						39		
415	**Alt 10b Nearshore CDF Volumes and Capacity**							
416		Capacity (cy)	(cy)					
417	Allendale	41,877.00	18,608			Volumes from AutoCad drawings		
418	Lyman Mill Upper	29,105.00	9,901			cover 2.0 feet thick		
419	Lyman Mill Lower	42,800.00	14,598					
420		113,782	43,107					
421	CDF Top Area		1,163,889		2.0	581,945	square feet	
422	Back-calculate CDF size from Cover volume					13.4	acres	
423								
424								
425	Soil over sediment	581,944.5	1	1.0	1.0	581,945	**21,554**	**cy**
426	Install cover membrane	581,944.5	1	1.0	1.0	581,945	**581,945**	**sf**
427	Drain gravel over membrane	581,944.5	1	1.0	1.0	581,945	**21,554**	**cy**
428	Protective soil and topsoil	581,944.5	1	1.0	1.0	581,945	**21,554**	**cy**
429								
430	**ALT 11f PARTIAL EXCAVATION AND ON-SITE CONSOLIDATION NO DAMS**							
431								
451	**Revised based on April 13, 2010 LEA Figure 5-24**							
452		Excavation Volume (cy)	Sand cover volume (cy)	sand cover (tons)				
453	Allendale	20,692	5,600					
454	Lyman Mill	36,692	7,610					
455	Woonasquatucket	2,400						
456	**TOTAL**	**59,785**	13,210	**19,815**				
457	Back-calculate area from sand		356,670		0.5	713,340	square feet	
458						16.4	acres	
459	Consolidation Cover							
460	Allendale	16,530		cover (tons				
461	Lyman Mill	21,083						
462	Total	**37,613**		**56,419.5**				
463	Back-calculate area from cover	1,015,551			2.0	507,776	square feet	
464						11.7	acres	
465								
466	Armored Slope	length						
467	Allendale	1,200						
468	Lyman Mill	1,700						
469	Total	2,900	25.00	3.00		8,056	cy	

Volume Estimates
Allendale and Lyman Mill Reach Sediment Alternatives

	B	C	D	E	F	G	H	I
1	**Description**	**No.**	**Length**	**Width**	**Thickness**	**Quantity calc.**	**Quantity**	**Units**
2			**Ft.**	**Ft.**	**Ft.**	**(LF/SF/CF)**		
3								
470						**14,097**	**tons**	
471	Upgrade to RCRA Cap							
472	Geomembrane					**507,776**	**sf**	
473	Topsoil	507,776			0.5	**9,403**	**cy**	
474						14,105	tons	
475	Drain Layer	507,776			1.0	**18,807**	**cy**	
476						32,911	tons	
477								
478	**Summary of new areas**					12	Upland	
479						16	Open water	
480						11	Floodplain	
481						39		

Removal Volumes - Full Removal
Allendale and Lyman Mill Reach Sediment Alternatives

	A	B	C	D	E	F	G	H	I	J	K
1											
2											
3	**Centredale Manor Sediment Removal Volumes - Alternatives 7a, 7d, 7e, 10a, 10d, and 10e**										
4	Action Area		Surface Area (sf)	Theoretical Removal Volume (cy)	Average cut thickness (ft)	Over-dredge thickness (ft)	Over-dredge Allowance (cy)	**Estimated Dredge Volume (cy)**	Over-excavation thickness (ft)	Over-excavation allowance (cy)	**Estimated Excavation Volume (cy)**
5	Allendale Pond	14.7	641,116	47,000	1.98	1.0	23,745	**70,745**	0.25	5,936	**52,936**
6	Woonasqua-tucket River.	0.7	32,500	1,200	1.0	1.0	1,200	**2,400**	dredge only		**2,400**
7	Lyman Mill Pond	23.5	1,022,000	91,000	2.40	1.0	37,852	**128,852**	0.25	9,463	**100,463**
8											
9											
10											
11											
12	**Centredale Manor Ponds Dredge Quantities**										
13	Action Area										
14			Dredge Volume	Average Solids Content (%)	Average Dry Weight (solids concentration, pcf)	Dry Weight (tons)	In-Situ Weight (tons)	Dewatered Solids Content (%)	Dewatered Dry Weight (solids concentration, pcf)	**Dewatered Weight (tons)**	**Dewatered Volume (cy)**
15	Allendale Pond		70,745	39.7	31.2	29,798	75,057	50	42.1	**60,000**	**52,429**
16	Woonasqua-tucket River.		2,400	50.0	44.0	1,426	2,851	50	44.0	**2,900**	**2,400**
17	Lyman Mill Pond		128,852	31.6	23.9	41,574	131,564	50	42.8	**83,000**	**72,000**
18	TOTAL		201,997			72,797	209,472			**145,900**	**126,829**
19											
20	**Centredale Manor Ponds Excavation Quantities - Alternatives 7a, 7d, 7e, 10a, 10d, and 10e**										
21	Action Area										
22			Excavation Volume	Average Solids Content (%)	Average Dry Weight (solids concentration, pcf)	Dry Weight (tons)	In-Situ Weight (tons)	Dewatered Solids Content (%)	Dewatered Dry Weight (solids concentration, pcf)	**Dewatered Weight (tons)**	**Dewatered Volume (cy)**
23	Allendale Pond		52,936	39.7	31.2	22,297	56,163	50	42.1	**45,000**	**39,231**
24	Woonasqua-tucket River.		2,400	50.0	44.0	1,426	2,851	50	44.0	**2,900**	**2,400**
25	Lyman Mill Pond		100,463	31.6	23.9	32,414	102,577	50	42.8	**65,000**	**56,100**
26	TOTAL		155,799			56,137	161,591			**112,900**	**97,731**
27											
28											

Removal Volumes - Partial Removal
Allendale and Lyman Mill Reach Sediment Alternatives

	A	B	C	D	E	F	G	H	I	J
1										
2										
3	**Centredale Manor Sediment Partial Removal Volumes - Alternatives 8a, 8d, and 8e**									
4	Action Area	Partial Removal Area (sf)	Average Dredge Cut Thickness (ft)	Partial Dredge Volume (cy)		Average Excavation Cut Thickness (ft)	**Partial Excavation Volume (cy)**			
5	Allendale Pond	410,000	2.0	30,000		1.5	23,000			
6	Woonasqua-tucket River.	32,500	2.0	2,400		2.0	2,400			
7	Lyman Mill Pond	700,000	2.0	52,000		1.5	39,000			
8		1,142,500								
9		26.2	Acres							
10										
11	**Centredale Manor Ponds Partial Dredge Quantities**									
12	Action Area									
13		Dredge Volume	Average Solids Content (%)	Average Dry Weight (solids concentration, pcf)	Dry Weight (tons)	In-Situ Weight (tons)	Dewatered Solids Content (%)	Dewatered Dry Weight (solids concentration, pcf)	**Dewatered Weight (tons)**	**Dewatered Volume (cy)**
14	Allendale Pond	30,000	39.7	31.2	12,636	31,829	50	42.1	**25,272**	**22,233**
15	Woonasqua-tucket River.	2,400	50.0	44.0	1,426	2,851	50	44.0	**2,851**	**2,400**
16	Lyman Mill Pond	52,000	31.6	23.9	16,778	53,094	50	42.8	**33,556**	**29,037**
17	TOTAL	84,400			30,839	87,774			**61,679**	**53,670**
18										
19	**Centrelale Manor Ponds Partial Excavation Quantities - Alternatives 8a, 8d, and 8e**									
20	Action Area									
21		Dredge Volume	Average Solids Content (%)	Average Dry Weight (solids concentration, pcf)	Dry Weight (tons)	In-Situ Weight (tons)	Dewatered Solids Content (%)	Dewatered Dry Weight (solids concentration, pcf)	**Dewatered Weight (tons)**	**Dewatered Volume (cy)**
22	Allendale Pond	23,000	39.7	31.2	9,688	24,402	50	42.1	**19,375**	**17,045**
23	Woonasqua-tucket River.	2,400	50.0	44.0	1,426	2,851	50	44.0	**2,851**	**2,400**
24	Lyman Mill Pond	39,000	31.6	23.9	12,583	39,821	50	42.8	**25,167**	**21,778**
25	TOTAL	64,400			23,697	67,074			**47,393**	**41,223**

Appendix J Cost Estimates

Lyman Mill Reach Stream Sediment and Floodplain Soil Alternatives

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Present Worth Costs
Lyman Mill Reach Stream Sediment and Floodplain Soil (Including Oxbow) Alternatives

	A	B	C	D	E	F	G	H	I	J	K
1	**Lyman Mill Stream Sediment and Floodplain Soil (including Oxbow) Alternatives**										
2			ALT 1 No Action	ALT 3a Targeted Excavation, ENR, Upland CDF	ALT 3b Targeted Excavation, ENR, Nearshore CDF	ALT3d Targeted Excavation, ENR, On-site Incinerate	ALT 3e Targeted Excavation, ENR, Off-site Disposal	ALT 5a Partial Excavation, ENR, Upland CDF	ALT 5b Partial Excavation, ENR, Nearshore CDF	ALT 5d Partial Excavation, ENR, On-site Incinerate	ALT 5e Partial Excavation, ENR, Off-site Disposal
3	**Remediation Area:**	**28.7**	**Acres**								
4											
5	**Construction Cost (Excludes Disposal)**		$0	$5,070,922	$5,070,922	$5,070,922	$5,070,922	$9,017,353	$9,017,353	$9,017,353	$9,017,353
6	Disposal			$4,795,862	$2,647,809	$21,087,934	$14,485,030	$12,486,715	$6,575,613	$52,370,119	$35,972,358
7	Design costs		$0	$503,239	$503,239	$503,239	$503,239	$552,954	$552,954	$552,954	$552,954
8	Oversight & QC costs		$0	$475,240	$475,240	$509,560	$509,560	$915,885	$915,885	$1,013,125	$1,013,125
9	**Contingencies**										
10	Excavation (25%)	25%	$0	$1,512,350	$1,512,350	$1,520,930	$1,520,930	$2,621,548	$2,621,548	$2,645,858	$2,645,858
11	Disposal (25% for a,b; 10% for d,e)			$1,198,966	$661,952	$2,108,793	$1,448,503	$3,121,679	$1,643,903	$5,237,012	$3,597,236
12			$0								
13	**CAPITAL COSTS**										
14	Base Alternative			$7,600,000	$7,600,000	$7,600,000	$7,600,000	$13,100,000	$13,100,000	$13,200,000	$13,200,000
15	**TOTAL**		**$0**	**$13,600,000**	**$10,900,000**	**$30,800,000**	**$23,500,000**	**$28,700,000**	**$21,300,000**	**$70,800,000**	**$52,800,000**
16	Annual Monitoring & Maintenance Years		$20,436	$203,234	$203,234	$203,234	$203,234	$203,234	$203,234	$203,234	$203,234
17	Disposal Monitoring			$24,930	$24,930	$0	$0	$24,930	$24,930	$0	$0
18	**COSTS**										
19	**TOTAL (a)**		**$253,590**	**$16,400,000**	**$13,700,000**	**$33,300,000**	**$26,000,000**	**$31,500,000**	**$24,100,000**	**$73,300,000**	**$55,300,000**
20	Notes:										
21	Present worth factors for 7% discount factor										
22	Years 1 to 30	12.409									
23											
24	(a) The present worth costs for Alternatives 3 and 5 could increase by approximately $290,000 to $350,000 (or more) if a Stage IB cultural resource survey (archaeological survey testing and excavation) and additional mitigation measures are required to comply with the National Historic Preservation Act (USACE, 2011).										

Construction Costs
Lyman Mill Reach Stream Sediment and Floodplain Soil (Including Oxbow) Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M	N
1	**Description**	**Quantity**	**Units**	**Daily**	**Unit Costs**				**Costs**				
2					**Labor**	**Equipment**	**Materials**	**Subcontract**	**Labor**	**Equipment**	**Materials**	**Subcontract**	**TOTAL**
3	**CONSTRUCTION COSTS**												
4													
5													
6	**TARGETED EXCAVATION (without disposal)**												
7	Mobilization and Demobilize	10	days		$6,873	$3,410	$1,630	$0	$68,732	$34,100	$16,300	$0	$119,132
8	Mobilize and demob excavators	5	days		$6,873	$3,410	$1,630	$0	$34,366	$17,050	$8,150	$0	$59,566
9	Clear vegetation	281,642	sf		$0.49	$0.19	$0.00	$0	$136,940	$54,216	$0	$0	$191,156
10	Excavate sediment/soil	20,502	cy	200	$34.37	$17.05	$8.15	$0	$704,569	$349,559	$167,091	$0	$1,221,220
11	Backfill excavated area	15,647	tons	500	$15.76	$4.54	$33.40	$0	$246,550	$71,036	$522,602	$0	$840,189
12	Slurry placement thin cap	13,468	tons	70	$74.02	$16.07	$36.43	$0	$996,948	$216,457	$490,636	$0	$1,704,042
13	Flow control structure	1	ls					$6,360	$0	$0	$0	$6,360	$6,360
14	Narrow Streambank restoration	1,613	lf					$10	$0	$0	$0	$16,130	$16,130
15	Shrub/tree plantings	1.0	ac					$42,551	$0	$0	$0	$42,551	$42,551
16	Tree plantings	2.73	ac					$24,926	$0	$0	$0	$68,117	$68,117
17	Shrub plantings	2.73	ac					$60,177	$0	$0	$0	$164,453	$164,453
18	Seeding in thin cap	22.3	ac					$2,004	$0	$0	$0	$44,607	$44,607
19	Superintendent & field engr	160	days		$1,920				$307,200	$0	$0	$0	$307,200
20	Project manager	160	days		$1,200				$192,000	$0	$0	$0	$192,000
21	Clerk	160	days		$360				$57,600	$0	$0	$0	$57,600
22	Field office, utilities, vehicles	8	mo			$4,575			$0	$36,600	$0	$0	$36,600
23									$0	$0	$0	$0	$0
24	**TARGET EXCAVATION (without disposal) CONSTRUCTION COST**								**$2,744,905**	**$779,019**	**$1,204,780**	**$342,218**	**$5,070,922**
25													
26	**Target Excavation OPTION A Upland CDF**												
27													
28	Construct and Fill CDF	27,678	tons					$75.50	$0	$0	$0	$2,089,598	$2,089,598
29	Off-site Incineration	3,075	tons					$880	$0	$0	$0	$2,706,264	$2,706,264
30									**$0**	**$0**	**$0**	**$4,795,862**	**$4,795,862**
31													
32	**Target Excavation Option B Nearshore CDF**												
33									$0	$0	$0	$0	$0
34	Construct and Fill CDF	30,753	tons					$86.10	$0	$0	$0	$2,647,809	$2,647,809
35									**$0**	**$0**	**$0**	**$2,647,809**	**$2,647,809**
36													
37	**Target Excavation Option D On-Site Incineration**												
38	On-site incineration	30,753	tons		$9.99	$1.48	$6.30	$600	$307,205	$45,560	$193,630	$18,457,495	$19,003,890
39	Solid waste landfill	30,753	tons		$9.99	$1.48	$6.30	$50	$307,205	$45,560	$193,630	$1,537,650	$2,084,045
40									**$614,409**	**$91,120**	**$387,260**	**$19,995,145**	**$21,087,934**
41													
42	**Target Excavation Option E Off-site Disposal**												
43													
44	Off-site Incineration	3,075	tons		$9.99	$1.48	$2.52	$880	$30,720	$4,556	$7,745	$2,706,264	$2,749,286
45	Hazardous Waste Landfill	27,678	tons		$9.99	$1.48	$2.52	$410	$276,484	$41,004	$69,707	$11,348,549	$11,735,744
46									**$307,205**	**$45,560**	**$77,452**	**$14,054,813**	**$14,485,030**

Construction Costs
Lyman Mill Reach Stream Sediment and Floodplain Soil (Including Oxbow) Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M	N
1	**Description**	**Quantity**	**Units**	**Daily**	**Unit Costs**				**Costs**				
2					**Labor**	**Equipment**	**Materials**	**Subcontract**	**Labor**	**Equipment**	**Materials**	**Subcontract**	**TOTAL**
3	**CONSTRUCTION COSTS**												
4													
47													
48	**PARTIAL EXCAVATION (without disposal)**												
49	Mobilization and Demobilize	10	days		$6,873	$3,410	$1,630	$0	$68,732	$34,100	$16,300	$0	$119,132
50	Mobilize and demob excavators	5	days		$6,873	$3,410	$1,630	$0	$34,366	$17,050	$8,150	$0	$59,566
51	Clear vegetation	851,426	sf		$0.49	$0.19	$0.00	$0	$413,982	$163,900	$0	$0	$577,881
52	Excavate sediment/soil	50,915	cy	200	$34.37	$17.05	$8.15	$0	$1,749,739	$868,101	$414,957	$0	$3,032,797
53	Backfill excavated area	47,301	tons	500	$15.76	$4.54	$33.40	$0	$745,340	$214,749	$1,579,868	$0	$2,539,957
54	Slurry placement thin cap	5,555	tons	70	$74.02	$16.07	$36.43	$0	$411,170	$89,273	$202,353	$0	$702,796
55	Flow control structure	1	ls					$6,360	$0	$0	$0	$6,360	$6,360
56	Narrow Streambank restoration	1,613	lf					$10	$0	$0	$0	$16,130	$16,130
57	Shrub/tree plantings	1.0	ac					$42,551	$0	$0	$0	$42,551	$42,551
58	Tree plantings	9.3	ac					$24,926	$0	$0	$0	$231,135	$231,135
59	Shrub plantings	9.3	ac					$60,177	$0	$0	$0	$558,026	$558,026
60	Seeding in thin cap	9.2	ac					$2,004	$0	$0	$0	$18,397	$18,397
61	Superintendent & field engr	300	days		$1,920				$576,000	$0	$0	$0	$576,000
62	Project manager	300	days		$1,200				$360,000	$0	$0	$0	$360,000
63	Clerk	300	days		$360				$108,000	$0	$0	$0	$108,000
64	Field office, utilities, vehicles	15	mo			$4,575			$0	$68,625	$0	$0	$68,625
65	**PARTIAL EXCAVATION (without disposal) CONSTRUCTION COST**								**$4,467,328**	**$1,455,797**	**$2,221,628**	**$872,600**	**$9,017,353**
66													
67	**Partial Excavation OPTION A Upland CDF**												
68	Excavate existing soil	0	cy	600	$11.85	$5.82	$0	$0	$0	$0	$0	$0	$0
69	Clear trees and vegetation	91,124	sf	12,000	$0.49	$0.19	$0.00	$0.00	$44,306	$17,541	$0	$0	$61,848
70	Sand liner base	3,375	cy	400	$9.34	$2.08	$52.50	$0.00	$31,535	$7,003	$177,186	$0	$215,724
71	Install base liner	91,124	sf					$0.77	$0	$0	$0	$69,710	$69,710
72	Sand drain layer	3,375	cy	400	$9.34	$2.08	$52.50	$0.00	$31,535	$7,003	$177,186	$0	$215,724
73	Perimeter berms	16,207	cy	600	$8.64	$3.65	$52.50	$0.00	$140,005	$59,157	$850,889	$0	$1,050,051
74	Soil over sediment	5,800	cy	400	$9.34	$2.08	$52.50	$0.00	$54,194	$12,035	$304,500	$0	$370,729
75	Cover membrane	156,600	sf					$0.77	$0	$0	$0	$119,799	$119,799
76	Drain gravel over membrane	5,800	cy	400	$9.34	$2.08	$52.50	$0.00	$54,194	$12,035	$304,500	$0	$370,729
77	Protective soil	5,800	cy	400	$9.34	$2.08	$52.50	$0.00	$54,194	$12,035	$304,500	$0	$370,729
78	Topsoil and plantings	156,600	sf	7,400	$0.31	$0.13	$0.74	$1.00	$48,505	$21,056	$116,000	$156,600	$342,161
79	Load and place in CDF	76,373	tons		$20.10	$9.26	$4.41	$0.00	$1,534,976	$707,153	$336,605	$0	$2,578,733
80	Off-site incineration	7,637	tons					$880	$0	$0	$0	$6,720,780	$6,720,780
81													
82									**$1,993,443**	**$855,019**	**$2,571,365**	**$7,066,889**	**$12,486,715**
83													

Construction Costs
Lyman Mill Reach Stream Sediment and Floodplain Soil (Including Oxbow) Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M	N
1	**Description**	**Quantity**	**Units**	**Daily**	**Unit Costs**				**Costs**				
2					**Labor**	**Equipment**	**Materials**	**Subcontract**	**Labor**	**Equipment**	**Materials**	**Subcontract**	**TOTAL**
3	**CONSTRUCTION COSTS**												
4													
84	**Partial Excavation Option B Nearshore CDF**												
85									$0	$0	$0	$0	$0
86	Construct and Fill CDF	76,373	tons					$86.10	$0	$0	$0	$6,575,613	$6,575,613
87									**$0**	**$0**	**$0**	**$6,575,613**	**$6,575,613**
88													
89													
90	**Partial Excavation Option D On-Site Incineration**												
91	On-site incineration	76,373	tons		$9.99	$1.48	$6.30	$600	$762,917	$113,144	$480,864	$45,837,643	$47,194,569
92	Solid waste landfill	76,373	tons		$9.99	$1.48	$6.30	$50	$762,917	$113,144	$480,864	$3,818,625	$5,175,550
93									**$1,525,834**	**$226,289**	**$961,728**	**$49,656,268**	**$52,370,119**
94													
95	**Partial Excavation Option E Off-site Disposal**												
96													
97	Off-site Incineration	7,637	tons		$9.99	$1.48	$2.52	$880	$76,292	$11,314	$19,235	$6,720,780	$6,827,621
98	Hazardous Waste Landfill	68,735	tons		$9.99	$1.48	$2.52	$410	$686,625	$101,830	$173,111	$28,183,171	$29,144,737
99									**$762,917**	**$113,144**	**$192,346**	**$34,903,951**	**$35,972,358**

Design Costs
Lyman Mill Reach Stream Sediment and Floodplain Soil (Including Oxbow) Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M
1	**DESIGN COSTS**											
2	**Description**	**Quantity**	**Units**		**Unit Costs**				**Costs**			
3				**Labor**	**Equipment**	**Materials**	**Subcontract**	**Labor**	**Equipment**	**Materials**	**Subcontract**	**TOTAL**
4												
5												
6	**TARGETED EXCAVATION - ALL DISPOSAL OPTIONS**											
7	Physical survey	2	days	$6,640	$1,500	$750	$0	$13,280	$3,000	$1,500	$0	$17,780
8	Sediment/soil chemistry	5	days	$5,608	$1,925	$550	$0	$28,040	$9,625	$2,750	$0	$40,415
9	Ecologic survey	2	days	$6,640	$1,850	$750	$0	$13,280	$3,700	$1,500	$0	$18,480
10	Water samples	10	each				$715				$7,150	$7,150
11	Sediment/soil samples	80	each				$1,806				$144,504	$144,504
12	Background samples	20	each				$1,806				$36,126	$36,126
13	Animal tissue samples	10	each				$1,507				$15,070	$15,070
14											$0	$0
15	Design report	400	hours	$124				$49,714	$0	$0	$0	$49,714
16	Drawings - 10 sheets	800	hours	$124				$99,429	$0	$0	$0	$99,429
17	Specifications	400	hours	$124				$49,714	$0	$0	$0	$49,714
18	Work plans	200	hours	$124				$24,857	$0	$0	$0	$24,857
19	**TARGETED EXCAVATION DESIGN COST**							**$278,314**	**$16,325**	**$5,750**	**$202,850**	**$503,239**
20												
21	**OPTIONS**											
22	Physical survey	2	days	$6,640	$1,500	$750	$0	$13,280	$3,000	$1,500	$0	$17,780
23	Sediment/soil chemistry	5	days	$5,608	$1,925	$550	$0	$28,040	$9,625	$2,750	$0	$40,415
24	Ecologic survey	2	days	$6,640	$1,850	$750	$0	$13,280	$3,700	$1,500	$0	$18,480
25	Water samples	10	each				$715				$7,150	$7,150
26	Sediment/soil samples	80	each				$1,806				$144,504	$144,504
27	Background samples	20	each				$1,806				$36,126	$36,126
28	Animal tissue samples	10	each				$1,507				$15,070	$15,070
29											$0	$0
30	Design report	400	hours	$124				$49,714	$0	$0	$0	$49,714
31	Drawings - 15 sheets	1,200	hours	$124				$149,143	$0	$0	$0	$149,143
32	Specifications	400	hours	$124				$49,714	$0	$0	$0	$49,714
33	Work plans	200	hours	$124				$24,857	$0	$0	$0	$24,857
34	**PARTIAL EXCAVATION DESIGN COST**							**$328,029**	**$16,325**	**$5,750**	**$202,850**	**$552,954**

Construction Oversight Costs
Lyman Mill Reach Stream Sediment and Floodplain Soil (Including Oxbow) Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M
1	**Description**	**Quantity**	**Units**	**Unit Costs**				**Costs**				
2				**Labor**	**Equipment**	**Materials**	**Subcontract**	**Labor**	**Equipment**	**Materials**	**Subcontract**	**TOTAL**
3	**CONSTRUCTION OVERSIGHT COSTS**											
4												
5												
6	**TARGETED EXCAVATION - ALT 3d, 3e**											
7	Project manager	160	days	$1,200				$192,000	$0	$0	$0	$192,000
8	Resident engineer	160	days	$960				$153,600	$0	$0	$0	$153,600
9	Water quality crew	0	days	$3,240	$1,500	$750		$0	$0	$0	$0	$0
10	Survey crew	4	days	$1,440	$350	$680		$5,760	$1,400	$2,720	$0	$9,880
11	Sediment/soil sample crew	10	days	$1,440	$350	$680		$14,400	$3,500	$6,800	$0	$24,700
12	Admin support	160	days	$360				$57,600	$0	$0	$0	$57,600
13	Field office	6	months		$1,075			$0	$6,450	$0	$0	$6,450
14	Vehicles	6	months		$2,500			$0	$15,000	$0	$0	$15,000
15	Cell phones, radios	6	months		$750			$0	$4,500	$0	$0	$4,500
16	Utilities	6	months		$250			$0	$1,500	$0	$0	$1,500
17	Water samples	0	each				$715	$0	$0	$0	$0	$0
18	Confirmation Sediment/soil samples	28	each				$358	$0	$0	$0	$10,010	$10,010
19	Designation sediment/soil samples	48	each				$715	$0	$0	$0	$34,320	$34,320
20	Animal tissue samples	0	each				$1,507	$0	$0	$0	$0	$0
21												
22	**TARGETED EXCAVATION OVERSIGHT COST Alt 3d, 3e**							**$423,360**	**$32,350**	**$9,520**	**$44,330**	**$509,560**
23												
24	**Targeted Excavation Oversight Alt 3a, 3b**											**$475,240**
25												
26	**PARTIAL EXCAVATION - Alt 5d, 5e**											
27	Project manager	300	days	$1,200				$360,000	$0	$0	$0	$360,000
28	Resident engineer	300	days	$960				$288,000	$0	$0	$0	$288,000
29	Water quality crew	0	days	$3,240	$1,500	$750		$0	$0	$0	$0	$0
30	Survey crew	10	days	$1,440	$350	$680		$14,400	$3,500	$6,800	$0	$24,700
31	Sediment/soil sample crew	20	days	$1,440	$350	$680		$28,800	$7,000	$13,600	$0	$49,400
32	Admin support	300	days	$360				$108,000	$0	$0	$0	$108,000
33	Field office	15	months		$1,075			$0	$16,125	$0	$0	$16,125
34	Vehicles	15	months		$2,500			$0	$37,500	$0	$0	$37,500
35	Cell phones, radios	15	months		$750			$0	$11,250	$0	$0	$11,250
36	Utilities	15	months		$250			$0	$3,750	$0	$0	$3,750
37	Water samples	0	each				$715	$0	$0	$0	$0	$0
38	Confirmation Sediment/soil samples	48	each				$358	$0	$0	$0	$17,160	$17,160
39	Designation sediment/soil samples	136	each				$715	$0	$0	$0	$97,240	$97,240
40	Animal tissue samples	0	each				$1,507	$0	$0	$0	$0	$0
41												
42	**PARTIAL EXCAVATION OVERSIGHT COST Alt 5d, 5e**							**$799,200**	**$79,125**	**$20,400**	**$114,400**	**$1,013,125**
43												
44	Partial Excavation Oversight Alt 5a, 5b											$915,885

Long-term Monitoring Costs
Lyman Mill Reach Stream Sediment and Floodplain Soil (Including Oxbow) Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M
1				Unit Costs				Costs				
2		Quantity	Units	Labor	Equipment	Materials	Subcontract	Labor	Equipment	Materials	Subcontract	TOTAL
3	**MONITORING COSTS**											
4												
5												
6	**TARGETED EXCAVATION, PARTIAL EXCAVATION MONITORING**											
7	**A. Annual work years 1**											
8	Sediment/soil chemistry	5	days	$5,608	$1,925	$550		$28,040	$9,625	$2,750	$0	$40,415
9	Physical survey	2	days	$6,640	$1,500	$750		$13,280	$3,000	$1,500	$0	$17,780
10	Ecology survey	2	days	$6,640	$1,850	$750		$13,280	$3,700	$1,500	$0	$18,480
11	Water chemistry	10					$715	$0	$0	$0	$7,150	$7,150
12	Animal tissue chemistry	10					$831	$0	$0	$0	$8,305	$8,305
13	Sediment/soil chemistry	20					$890	$0	$0	$0	$17,800	$17,800
14	Five-year review	0.2	events	$13,280				$2,656	$0	$0	$0	$2,656
15	**TOTAL ANNUAL MONITORING IN YEARS 1 TO 30**											**$112,586**
16												
17												$0
18	**B. Annual maintenance**											$0
19	Assume repair of 1/4 acres cap and plantings per year =											$0
20	Cap repair	403	tons				$126.52	$0	$0	$0	$51,030	$51,030
21	Plantings	10,890	sf				$1.00	$0	$0	$0	$10,890	$10,890
22	Invasive species control	28.7	ac				$1,000	$0	$0	$0	$28,728	$28,728
23	**ANNUAL MAINTENANCE**							$0	$0	$0	$0	**$90,648**
24												
25	**UPLAND OR NEARSHORE CDF MONITORING**											
26	**A. Annual work years 1**											
27	Sediment/soil chemistry							$0	$0	$0	$0	$0
28	Physical survey	2	days	$6,640	$1,500	$750		$13,280	$3,000	$1,500	$0	$17,780
29	Ecology survey							$0	$0	$0	$0	$0
30	Groundwater chemistry	10	each				$715	$0	$0	$0	$7,150	$7,150
31	Animal tissue chemistry							$0	$0	$0	$0	$0
32	Sediment/soil chemistry							$0	$0	$0	$0	$0
33	**TOTAL ANNUAL MONITORING IN YEARS 1 TO 30**											**$24,930**
34												
35												
36												
37												$0
38	**C. Annual maintenance**											$0
39												$0
40								$0	$0	$0	$0	$0
41	Plantings		sf				$1.00	$0	$0	$0	$0	$0
42	**ANNUAL MAINTENANCE**							$0	$0	$0	$0	**$0**
43												

Long-term Monitoring Costs
Lyman Mill Reach Stream Sediment and Floodplain Soil (Including Oxbow) Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M
44												
45	**NO ACTION**											
46	**A. Annual work years 1**											
47	Sediment/soil chemistry		each	$5,608	$1,925	$550		$0	$0	$0	$0	$0
48	Physical survey	2	each	$6,640	$1,500	$750		$13,280	$3,000	$1,500	$0	$17,780
49	Ecology survey		each	$6,640	$1,850	$750		$0	$0	$0	$0	$0
50	Water chemistry						$715	$0	$0	$0	$0	$0
51	Animal tissue chemistry						$831	$0	$0	$0	$0	$0
52	Sediment/soil chemistry						$890	$0	$0	$0	$0	$0
53	Five-year review	0.2	events	$13,280				$2,656	$0	$0	$0	$2,656
54	**TOTAL ANNUAL MONITORING IN YEARS 1 TO 3(**											**$20,436**

Unit Costs
Lyman Mill Reach Stream Sediment and Floodplain Soil (Including Oxbow) Alternatives

	B	C	D	E	F	G	H
1	**Excavate Sediment with Low-ground Pressure Long-reach Excavators**						
2	**Estimated duration:**	200	cy	divided by	200	icy/day production with 1 excavator	
3		**1.0**	**days**			icy =	in-situ cubic yards
4	**Craft Labor**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
5	Foreman	1.0	day	$847	$847	$106	per hour
6	Equip operator	1.0	day	$1,588	$1,588	$99	2 total on excavators
7	Truck driver	1.0	day	$1,284	$1,284	$80	2 total
8	Laborer	1.0	day	$1,955	$1,955	$81	3 total
9	Safety officer	1.0	day	$600	$600	$75	per hour
10	QC officer	1.0	day	$600	$600	$75	per hour
11	Subtotal Cost			$6,873	$6,873		Rates confirmed with Means Building Costs
12	**Labor Unit Cost**				**34.37**	**Per Cy**	
13							
14	**Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
15	Low-ground pressure excavator	1.0	day	$890	$890	$890	www.machinerytrader Cat 345BL $3,000 per
16	Rehandling excavator	1.0	day	$680	$680	$680	1.5 cy Means p 20
17	Trucks to process area (2)	1.0	day	$1,840	$1,840	$920	(2) off-road trucks 25 ton Means p 22
18					$0		
19	Subtotal Cost			$3,410	$3,410		
20	**Equipment Unit Cost**				**$17.05**	**Per Cy**	
21							
22	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
23	Health and safety equip	1.0	Days	$450	$450		9 crew x $50/day
24	Per diem	1.0	Days	$1,080	$1,080		9 crew x $120/day
25	Small Tools	1.0	day	$100	$100		
26					$0		
27	Subtotal Cost				$1,630		
28	**Material Unit Cost**				**$8.15**	**Per Cy**	
29							
30	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
31							
32	Subtotal Cost				**$0**	**Per cy**	
33							
34	**TOTAL UNIT COST**				**$59.57**	**Per Cy**	
35							
36	**Load and Place Sediment in CDF**						
37	**Estimated duration:**	270	Tons	divided by	270	tn/day production	
38		**1.0**	**days**				200 icy x 1.35 tons/cy
39	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
40							
41	Equip operator	1.0	day	$1,588	$1,588	$99	2 total
42	Truck driver	1.0	day	$1,284	$1,284	$80	2 total
43	Laborer	1.0	day	$1,955	$1,955	$81	3 total
44	QC officer	1.0	day	$600	$600	$75	
45	Subtotal Costs				$5,427		
46	**Labor Unit Costs**				**$20.10**	**Per Ton**	
47							
48	Equipment	**Units**		**Unit Rate**	**Total Cost**		**Comments**
49	Loader	1.0	day	$300	$300	$300	3 cy wheel loader Means p 21
50	Decontamination system	1.0	day	$100	$100	$100	
51	Highway truck	1.0	day	$480	$480	$480	16 ton truck Means p 22
52	Dozer	1.0	day	$860	$860	$860	200 HP crawler Mean p 21
53	Compactor	1.0	day	$760	$760	$760	Mean p 20
54							
55	Subtotal Cost				$2,500		
56	**Equipment Unit Costs**				**$9.26**	**Per Ton**	
57							
58	Materials	**Units**		**Unit Rate**	**Total Cost**		**Comments**
59	Health and safety equip	1.0	Days	$350	$350		7 crew x $50/day
60	Per diem	1.0	Days	$840	$840		7 crew x $120/day
61	Subtotal Cost				$1,190		
62	**Material Unit Cost**				**$4.41**	**Per Ton**	
63							

Unit Costs
Lyman Mill Reach Stream Sediment and Floodplain Soil (Including Oxbow) Alternatives

	B	C	D	E	F	G	H
64	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
65			tons		$0		
66			tons		$0		
67							
68	Subtotal Cost				$0		
69	**Subcontract Unit Costs**				**$0.00**	**Per Ton**	
70							
71	**TOTAL UNIT COST**				**$33.77**	**Per Ton**	
72							
73	**Load and Off-site Disposal**						
74	**Estimated duration:**	270	Tons	divided by	270	tn/day production	
75		**1.0**	**days**				
76	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
77	Equip operator	1.0	day	$794	$794	$99	1 total
78	Laborer	1.0	day	$1,303	$1,303	$81	2 total
79	QC officer	1.0	day	$600	$600	$75	
80							
81	Subtotal Costs				$2,697		
82	**Labor Unit Costs**				**$9.99**	**Per Ton**	
83							
84	Equipment	**Units**		**Unit Rate**	**Total Cost**		**Comments**
85	Loader	1.0	day	$300	$300		3 cy wheel loader Means p 21
86	Decontamination system	1.0	day	$100	$100		
87							
88	Subtotal Cost				$400		
89	**Equipment Unit Costs**				**$1.48**	**Per Ton**	
90							
91	Materials	**Units**		**Unit Rate**	**Total Cost**		**Comments**
92	Health and safety equip	1.0	Days	$200	$200		4 crew x $50/day
93	Per diem	1.0	Days	$480	$480		4 crew x $120/day
94	Subtotal Cost				$680		
95	**Material Unit Cost**				**$2.52**		**Per Ton**
96							
97	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
98	Hazardous waste landfill	270	tons	$391	$105,435		Clean Harbors $355 per ton plus 10% markup
99	Debris	14	tons	$391	$5,272		for dioxins less than 10 time UTS
100	Subtotal Cost				$110,707		
101	**Subcontract Unit Costs**				**$410**	**Per Ton**	
102							
103	**TOTAL UNIT COST - HAZARDOUS WASTE LANDFILL**				**$424**	**Per Ton**	
104	Incineration	270	tons	$880	$237,600		Clean Harbors $800 per ton plus 10%
105	**Subcontract Unit Cost**				**$880**	**Per Ton**	
106	**TOTAL UNIT COST - OFF-SITE INCINERATION**				**$894**	**Per Ton**	
107							
108	**On-site Incineration**						
109	**Estimated duration:**	270	Tons	divided by	270	tn/day production	
110		**1.0**	**days**				
111	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
112	Equip operator	1.0	day	$794	$794	$99	1 total
113	Laborer	1.0	day	$1,303	$1,303	$81	2 total
114	QC officer	1.0	day	$600	$600	$75	
115							
116	Subtotal Costs				$2,697		
117	**Labor Unit Costs**				**$9.99**	**Per Ton**	
118							
119	Equipment	**Units**		**Unit Rate**	**Total Cost**		**Comments**
120	Loader	1.0	day	$300	$300		3 cy wheel loader Means p 21
121	Decontamination system	1.0	day	$100	$100		
122							
123	Subtotal Cost				$400		
124	**Equipment Unit Costs**				**$1.48**	**Per Ton**	
125							
126	Materials	**Units**		**Unit Rate**	**Total Cost**		**Comments**
127	Health and safety equip	1.0	Days	$500	$500		10 crew x $50/day
128	Per diem	1.0	Days	$1,200	$1,200		10 crew x $120/day
129	Subtotal Cost				$1,700		
130	**Material Unit Cost**				**$6.30**	**Per Ton**	

Unit Costs
Lyman Mill Reach Stream Sediment and Floodplain Soil (Including Oxbow) Alternatives

	B	C	D	E	F	G	H
131							
132	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
133	Incinerate dredged material	270	tons	600.00	$162,000		Ref: Incineration cost summary table.
134	**Solid waste landfill of ash**	1	tons	50.00	$50		Range $264 to $1,087 per ton for soil
135							Use $600 per ton
136	Subtotal Cost				$162,050		
137	**Subcontract Unit Costs**				**$600**	**Per Ton**	
138							
139	**TOTAL UNIT COST**				**$618**	**Per Ton**	
140							
141	**Backfill**						
142	**Estimated duration:**	500	Tons	divided by	500	tn/day production	
143		**1.0**	**days**				
144	**Craft Labor**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
145	Foreman	1.0	day	$847	$847	$106	per hour
146	Equip operator	1.0	day	$3,175	$3,175	$99	4 total
147	QC technician	1.0	day	$650	$650	$81	per hour
148	Laborer	1.0	day	$2,607	$2,607	$81	4 total
149	Safety officer	1.0	day	$600	$600	$75	per hour
150							
151	Subtotal Cost			$7,879	$7,879		
152	**Labor Unit Cost**				**$15.76**	**Per Ton**	
153							
154							
155	**Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
156	Loader	1.0	day	$300	$300		3 cy wheel loader Means p 21
157	Grader	1.0	day	$430	$430		Road grader Means p 596
158	Excavator	1.0	day	$680	$680		1.5 cy excavator Means p 20
159	Dozer to spread	1.0	day	$860	$860		200 hp dozer Means p 21
160					$0		
161	Subtotal Cost			$2,270	$2,270		
162	**Equipment Unit Cost**				**$4.54**	**Per Ton**	
163							
164	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
165	Loam	500	tons	$30	$15,000		Truck delivery to site at $24 per ton +25%
166	Health and safety equip	1.0	Days	$500	$500		10 crew x $50/day
167	Per diem	1.0	Days	$1,200	$1,200		10 crew x $120/day
168	Subtotal Cost				$16,700		
169	**Material Unit Cost**				**$33.40**	**Per Ton**	
170							
171	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
172					$0		
173					$0		
174	**Subtotal Cost**				$0		
175	**TOTAL UNIT COST**				**$53.70**	**Per Ton**	
176							
177	**Enhanced Natural Recovery cap (Land-spray application)**						
178	**Estimated duration:**	70	Tons	divided by	70	tn/day production	
179		**1.0**	**days**				
180	**Craft Labor**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
181	Foreman	1.0	day	$847	$847	$106	per hour
182	Equip operator	1.0	day	$2,381	$2,381	$99	3 total
183	QC technician	1.0	day	$650	$650	$81	per hour
184	Laborer	1.0	day	$1,303	$1,303	$81	2 total
185							
186							
187	Subtotal Cost			$5,181	$5,181		
188	**Labor Unit Cost**				**$74.02**	**Per Ton**	
189							
190							
191	**Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
192	Loader	1.0	day	$240	$240		1.5 cy wheel loader Means p 21
193	Slurry pump on truck	1.0	day	$455	$455		Truck and hydromulch Means p 600
194	Dozer for truck access	1.0	day	$430	$430		100 hp dozer Means p 21
195					$0		
196	Subtotal Cost			$1,125	$1,125		
197	**Equipment Unit Cost**				**$16.07**	**Per Ton**	

Unit Costs
Lyman Mill Reach Stream Sediment and Floodplain Soil (Including Oxbow) Alternatives

	B	C	D	E	F	G	H
198							
199	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
200	Loam	70	tons	$30	$2,100		Truck delivery to site at $24 per ton +25%
201	Health and safety equip	1.0	Days	$450	$450		9 crew x $50/day
202	Per diem		Days		$0		Use local crew
203	Subtotal Cost				$2,550		
204	**Material Unit Cost**				**$36.43**	**Per Ton**	
205							
206	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
207							Use 4-inch dia. hose 752 cy slurry per day
208							Pumps 70 tn per day.
209							See mass balance calculations worksheet
210					$0		
211					$0		
212	**Subtotal Cost**				$0		
213	**TOTAL UNIT COST**				**$126.52**	**Per Ton**	
214							
215	**Clear Trees, Chip Vegetation, Grind Stumps**						
216	**Estimated duration:**	12,000	sf	divided by	12,000	sf/day production	
217		**1.0**	**Days**				Means p 39 0.3 AC per day heavy trees
218	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
219	Equip operator	1.0	day	$2,381	$2,381	$99	3 total
220	Laborer	1.0	day	$2,607	$2,607	$81	4 total
221	Foreman	1.0	day	$847	$847	$106	
222							
223	Subtotal Cost			$5,835	$5,835		
224	**Labor Unit Cost**				**$0.49**	**Per sf**	
225							
226	**Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
227	Excavator	1.0	day	$890	$890		2.0 cy excavator Means p 20
228	Loader	1.0	day	$300	$300		3 cy wheel loader Means p 21
229	Dozer	1.0	day	$860	$860		200 hp dozer Means p 21
230	Chipper	1.0	day	$165	$165		Means p 588
231	Stump girder	1.0	day	$95	$95		Means p 588
232	Subtotal Cost			$2,310	$2,310		
233	**Equipment Unit Cost**				**$0.19**	**Per sf**	
234							
235	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
236					$0		
237					$0		
238	Subtotal Cost				$0		
239	**Material Unit Cost**				**$0.00**	**Per sf**	
240							
241	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
242							
243							
244	Subtotal Cost				$0		
245	**Subcontract Unit Cost**				$0		
246	**TOTAL UNIT COST**				**$0.68**	**Per sf**	
247							
248	**Soil over sediment or membrane (also for drainage sand)**						
249	**Estimated duration:**	400	cy	divided by	400	cy/day production	
250		**1.0**	**Days**				
251	**Craft Labor**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
252	Foreman	1.0	day	$847	$847	$106	per hour
253	Equip operator	1.0	day	$1,588	$1,588	$99	2 total
254	Laborer	1.0	day	$1,303	$1,303	$81	2 total
255	Subtotal Cost				$3,738		
256	**Labor Unit Cost**				**$9.34**	**Per CY**	
257							
258	**Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
259	Dozer	1.0	day	$480	$480		100 hp dozer
260	Grader	1.0	day	$350	$350		Small grader to spread
261	Subtotal Cost				$830		
262	**Equipment Unit Cost**				**$2.08**	**Per CY**	
263							

Unit Costs
Lyman Mill Reach Stream Sediment and Floodplain Soil (Including Oxbow) Alternatives

	B	C	D	E	F	G	H
264	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
265					$0		
266	Processed gravel	700	Tons	$30	$21,000		$24 per ton plus markup
267	Subtotal Cost				$21,000		
268	**Material Unit Cost**				**$52.50**	**Per CY**	
269							
270	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
271							
272							
273	Subtotal Cost				$0		
274	**Subcontract Unit Cost**				**$0.00**	**Per Cy**	
275	**TOTAL UNIT COST**				**$63.92**	**Per Cy**	
276							
277	**Construct Perimeter Berms**						
278	**Estimated duration:**	600	cy	divided by	600	cy/day production	
279		**1.0**	**Days**				
280	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
281	Foreman	1.0	day	$847	$847	$106	per hour
282	Equip operator	1.0	day	$2,381	$2,381	$99	3 total
283	Laborer	1.0	day	$1,955	$1,955	$81	3 total
284			day				
285			day		$0		
286	Subtotal Cost				$5,183		
287	**Labor Unit Cost**				**$8.64**	**Per CY**	
288							
289	Equipment	**Units**		**Unit Rate**	**Total Cost**		**Comments**
290	Dozer	1.0	day	$860	$860		200 hp dozer Means p 21
291	Excavator	1.0	day	$890	$890		2.0 cy excavator Means p 20
292	Compactor	1.0	day	$440	$440		Means p 21
293							
294							(Means crew B-32)
295	Subtotal Cost				$2,190		
296	**Equipment Unit Cost**				**$3.65**	**Per CY**	
297							
298	Materials	**Units**		**Unit Rate**	**Total Cost**		**Comments**
299					$0		Use 1.75 tons per cy
300	Bank run gravel	1,050	Tons	$30	$31,500		$24 per ton plus markup
301							
302							
303	Subtotal Cost				$31,500		
304	**Material Unit Cost**				**$52.50**	**Per CY**	
305							
306	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
307							
308							
309	Subtotal Cost				$0		
310	**Subcontract Unit Cost**				**$0.00**	**Per Cy**	
311	**TOTAL UNIT COST**				**$64.79**	**Per cy**	
312							
313	**Excavate, Haul, Stockpile Existing Soil**						
314	**Estimated duration:**	600	cy	divided by	600	cy/day production	
315		**1.0**	**Days**				
316	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
317	Foreman	1.0	day	$847	$847	$106	per hour
318	Equip operator	1.0	day	$2,381	$2,381	$99	3 total
319	Laborer	1.0	day	$1,955	$1,955	$81	3 total
320	Truck driver	1.0	day	$1,926	$1,926	$80	3 total
321			day		$0		
322	Subtotal Cost				$7,109		
323	**Labor Unit Cost**				**$11.85**	**Per CY**	
324							

Unit Costs
Lyman Mill Reach Stream Sediment and Floodplain Soil (Including Oxbow) Alternatives

	B	C	D	E	F	G	H
325	Equipment	**Units**		**Unit Rate**	**Total Cost**		**Comments**
326	Dozer	1.0	day	$860	$860		200 hp dozer Means p 21
327	Excavator	1.0	day	$890	$890		2.0 cy excavator Means p 20
328	Loader	1.0	day	$300	$300		3 cy wheel loader Means p 21
329	Highway trucks (3)	1.0	day	$1,440	$1,440	$480	16 ton truck Means p 22
330							
331	Subtotal Cost				$3,490		
332	**Equipment Unit Cost**				**$5.82**	**Per CY**	
333							
334	Materials	**Units**		**Unit Rate**	**Total Cost**		**Comments**
335					$0		PPE not needed for work on clean soil.
336			Tons	$30	$0		
337							
338							
339	Subtotal Cost				$0		
340	**Material Unit Cost**				**$0.00**	**Per CY**	
341							
342	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
343							
344							
345	Subtotal Cost				$0		
346	**Subcontract Unit Cost**				**$0.00**	**Per Cy**	
347	**TOTAL UNIT COST**				**$17.66**	**Per cy**	
348							
349	**Topsoil and Plantings**						
350	**Estimated duration:**	7,400	sf	divided by	7400	sf/day production	
351		137	cy		137	cy/day	
352		1.0	days				Topsoil Means p 85 7,400 sf/day
353	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
354	Foreman	1.0	day	$847	$847	$106	
355	Equip operator	1.0	day	$794	$794	$99	3 total
356	Laborer	1.0	day	$652	$652	$81	3 total
357	Subtotal Cost				$2,292		
358	**Labor Unit cost**				**$0.31**	**Per sf**	
359					**$16.73**	**Per Cy**	
360							
361	Equipment	**Units**		**Unit Rate**	**Total Cost**		**Comments**
362	Loader	1.0	day	$165	$165		1.5 cy wheel loader Means p 590
363	Dozer	1.0	day	$480	$480		100 hp dozer
364	Grader	1.0	day	$350	$350		Small grader to spread
365			day		$0		
366			day		$0		
367	Subtotal Cost				$995		
368	**Labor unit cost**				**$0.13**	**Per sf**	
369					**$7.26**	**Per Cy**	
370							
371	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
372					$0		
373	Screened loam	137	cy	$40	$5,481		$32 per cy plus markup
374					$0		
375	Wetland plantings		ea		$0		
376	Subtotal Cost				$5,481		
377	**Material Unit cost**				**$0.74**	**Per sf**	
378					**$40**	**Per cy**	
379							
380	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
381	Plantings	7,400	sf	$1.00	$7,400		From New Bedford estimate $40,000 per acre
382							
383	Subtotal Cost				$7,400		
384	**Subcontract Unit Cost**				**$1.00**	**Per sf**	
385	**TOTAL UNIT COST**				**$2.18**	**Per sf**	
386							
387							

Unit Costs
Lyman Mill Reach Stream Sediment and Floodplain Soil (Including Oxbow) Alternatives

	B	C	D	E	F	G	H
388	**SUBCONTRACT CONSTRUCTION COSTS**						
389							
390	**Liner System**						
391	**Estimated duration:**		SF				
392	Geocomposite	1	SF				Means Environmental Costs
393	Labor	1	SF	0.18			
394	Equipment	1	SF	0.10			
395	Material	1	SF	0.58			
396	Unit Cost				**$0.86**	**SF**	
397							
398	**60 Mil Geomembrane**				**$0.77**	**SF**	$0.51 plus 25% sub markup + 25 % prime
399							
400							
401							
402							
403							
404							
405							
406	**Asphalt Pavement**				**$1.00**	**sf**	
407							
408	On-site CDF	$5,765,935		76,373	**$75.50**	**Per Ton**	
409	Nearshore CDF	$3,443,969		40,000	**$86.10**	**Per Ton**	Based on costs for Pond Sediment
410							Partial Excavation Alternative
411							without dewatering.
412							
413							
414							
415	**Oversight**						
416	**Craft Labor**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
417	Project manager	1.0	day	$1,200	$1,200	$150	per hr
418	Resident engineer	1.0	day	$960	$960	$120	per hr
419	Superintendent	1.0	day	$899	$899	$112	per hr
420	Sample crew	1.0	day	$1,440	$1,440	$90	2 staff
421	Survey crew	1.0	day	$1,200	$1,200	$75	2 staff
422	Admin support	1.0	day	$360	$360	$45	
423	**Labor Daily Costs**				**$6,059**	**Per day**	
424							
425	**Monthly Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
426					$0		
427	Field office	1.0	mo	$1,075	$1,075		trailer, copier, fax, water, chemical toilets
428	Vehicles	1.0	mo	$2,500	$2,500		2 trucks and fuel
429	Cell phones, radios	1.0	mo	$750	$750		4 phones, 3 radios
430	Utilities	1.0	mo	$250	$250		
431	**Equipment Monthly Cost**			4,575	**$4,575**	**Per Month**	
432							
433	**Daily Equipment**						
434	Vehicles	1	day	150	$150		
435	Cell phones, radios	1.0	day	$50	$50		
436	dGPS	1.0	day	$100	$100		
437	Computer and survey software	1.0	day	$50	$50		
438							
439	**Daily Equipment Cost**				**$350**	**Per Day**	
440							
441	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
442	Per diem	1.0	day	$480.00	$480		4 field crew x $120/day
443	PPE, office supplies	1.0	day	$200	$200		4 field crew x $50/day
444	**Subtotal Cost**			**680**	**$680**	**Per day**	
445							
446	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
447	Sediment - dioxins (8290)	1.0	ea	$715	$715		Columbia 11/8/06 estimate +10% markup
448	Sediment grain size, TOC, solids	1.0	ea	$175	$175		
449	Sediment - 2,3,7,8 TCDD (8290)	1.0	ea	$358	$358		Columbia + 10%
450	TCLP (131)	1.0	ea	$94	$94		
451	Metals (6020)	1.0	ea	$185	$185		
452	Pesticides (8081A)	1.0	ea	$176	$176		
453	Volatiles (8260B)	1.0	ea	$138	$138		
454	Semivolatiles (8270C)	1.0	ea	$325	$325		

	B	C	D	E	F	G	H
455	**Subtotal - dioxins and all TCLP**	**1.0**	**ea**		**$1,806**		**All above except 2,3,7,8 TCDD**
456					$0		
457	Animal - freeze dry, homogenize, lipids	3.0	ea	$39	$116		Cost for each procedure
458	Animal tissue dioxins	1.0	ea	$715	$715		
459	**Subtotal animal tissue**				**$1,507**		**dioxins, PAHs, PCBs, pesticiess and 3 processing steps**
460	Water - dioxins	1.0	ea	$715	$715		
461	**Subtotal Cost**						
462							
463	**Sediment chemistry monitoring event**						
464	**Estimated duration:**					5	days to mobilize and sample
465			**days**				
466	**Craft Labor**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
467	Project manager	2.0	day	$1,200	$2,400	$150	per hr
468	Senior scientist	2.0	day	$960	$1,920	$120	per hr
469	Sample crew	5.0	day	$3,240	$16,200	$90	3 staff x 12 hr/day
470	Data analysis and report	5.0	day	$1,280	$6,400	$80	2 staff
471	GIS, production	2.0	day	$560	$1,120	$70	per hour
472	**Subtotal Costs**				**$28,040**	**Per event**	
473	**Labor Daily Cost**				$5,608	Per day	
474							
475	**Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
476	Vehicles	5.0	day	$150	$750		van and fuel
477	Cell phones, radios	5.0	day	$50	$250		
478	dGPS	5.0	day	$100	$500		
479	Sample vessel	5.0	day	$1,000	$5,000		
480	Computer and survey software	5.0	day	$50	$250		
481	Fathometer	5.0	day	$100	$500		
482	Tide gauge	5.0	day	$50	$250		
483	Turbidity, DO, pH meter	5.0	day	$75	$375		
484	Sediment profile camera	5.0	day	$200	$1,000		
485	Core equipment	5.0	day	$150	$750		
486	**Subtotal Cost**				**$9,625**	**Per event**	
487	**Equipment Daily Cost**				$1,925	Per day	
488	**Equipment costs ON LAND**				**$2,250**	**Per Event**	
489							
490							
491	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
492	Per diem	15.0	day	$100.00	$1,500		
493	PPE, office supplies	5.0	day	$50	$250		
494	Shipping equipment, sample	1.0	ea	$1,000	$1,000		
495	**Subtotal Cost**				**$2,750**	**Per event**	
496	**Materials Daily Cost**				$550	Per day	
497							
498	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
499							
500	**Subtotal Cost**				**$0**		
501							
502	**TOTAL COST**				**$40,415.00**	**Per Event**	
503	**TOTAL DAILY COST**				**$8,083.00**	**Per Day**	
504	**Physical survey monitoring event**						
505	**Estimated duration:**					2	days field time
506	**Craft Labor**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
507	Project manager	1.0	day	$1,200	$1,200	$150	per hr
508	Senior scientist	1.0	day	$960	$960	$120	per hr
509	Survey crew	2.0	day	$1,800	$3,600	$75	2 staff x 12 hr/day
510	Data analysis and report	5.0	day	$1,280	$6,400	$80	2 staff
511	GIS, production	2.0	day	$560	$1,120	$70	per hour
512	**Subtotal Costs**				**$13,280**	**Per event**	
513	**Labor Daily Cost**				$6,640	Per day	
514							
515	**Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
516	Vehicles	2.0	day	$150	$300		van and fuel
517	Cell phones, radios	2.0	day	$50	$100		
518	dGPS	2.0	day	$100	$200		
519	Computer and survey software	2.0	day	$50	$100		

Unit Costs
Lyman Mill Reach Stream Sediment and Floodplain Soil (Including Oxbow) Alternatives

	B	C	D	E	F	G	H
520	Sample vessel	2.0	day	$1,000	$2,000		
521	Fathometer	2.0	day	$100	$200		
522	Tide gauge	2.0	day	$50	$100		
523	**Subtotal Cost**				$3,000	Per event	
524	**Equipment Daily Cost**				**$1,500**	**Per day**	
525	**Equipment cost ON LAND**				**$700**	**Per Event**	
526							
527							
528	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
529	Per diem	4.0	day	$100.00	$400		
530	PPE, office supplies	2.0	day	$50	$100		
531	Shipping equipment, supplies	1.0	ea	$1,000	$1,000		
532	**Subtotal Cost**				$1,500	Per event	
533	**Materials Daily Cost**				**$750**	**Per day**	
534							
535	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
536							
537							
538	Subtotal Cost				**$0**		
539							
540	TOTAL COST				**$17,780**	Per Event	
541	TOTAL DAILY COST				**$8,890**	Per Day	
542	**Ecologic survey monitoring event**						
543	**Estimated duration:**		stations			2	days field time concurrent with sediment
544			**days**				
545	**Craft Labor**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
546	Project manager	1.0	day	$1,200	$1,200	$150	per hr
547	Senior scientist	1.0	day	$960	$960	$120	per hr
548	Survey crew	2.0	day	$1,800	$3,600	$75	2 staff x 12 hr/day
549	Data analysis and report	5.0	day	$1,280	$6,400	$80	2 staff
550	GIS, production	2.0	day	$560	$1,120	$70	per hour
551							
552	**Subtotal Costs**				**$13,280**	**Per event**	
553	**Labor Daily Cost**				$6,640	Per day	
554							
555	**Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
556	Vehicles	2.0	day	$150	$300		van and fuel
557	Cell phones, radios	2.0	day	$50	$100		
558	dGPS	2.0	day	$100	$200		
559	Computer and survey software	2.0	day	$50	$100		
560	Sample vessel	2.0	day	$1,000	$2,000		
561	Fathometer	2.0	day	$100	$200		
562	Tide gauge	2.0	day	$50	$100		
563	Sediment profile camera	2.0	day	$200	$400		
564	Core equipment	2.0	day	$150	$300		
565	**Subtotal Cost**				**$3,700**	**Per event**	
566	**Equipment Daily Cost**				$1,850	Per day	
567	**Equipment cost ON LAND**				**$700**	**Per Event**	
568							
569							
570	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
571	Per diem	4.0	day	$100.00	$400		
572	PPE, office supplies	2.0	day	$50	$100		
573	Shipping equipment, samples	1.0	ea	$1,000	$1,000		
574	**Subtotal Cost**				**$1,500**	**Per event**	
575	**Materials Daily Cost**				$750	Per day	
576							
577	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
578							
579	Subtotal Cost				**$0**		
580							
581	**TOTAL COST**				**$18,480**	**Per Event**	
582	**TOTAL DAILY COST**				**$9,240**	**Per Day**	
583							
584							

Unit Costs
Lyman Mill Reach Stream Sediment and Floodplain Soil (Including Oxbow) Alternatives

	B	C	D	E	F	G	H
585	Project manager			$1,200		$150	per hour
586	Senior engineer			$960		$120	per hour
587	Staff engineers			$2,880		$120	per hour
588	CAD			$960		$120	per hour
589	Tech support			$960		$120	per hour
590	Labor total			$6,960			
591	**Labor unit cost per hour**				**$124.29**		per day.
592							
593	**Restoration and Mitigation Unit Costs**						Estimating guidance
594							USACE Technical Report EL-97-8
595		**Units**		**Unit Rate**	**Total Cost**		
596	Aquatic restoration in ponds	10	ea	$400	$4,000	Ac	Large wood $200 to $300 per Table L-1
597							Assume 10 per acre
598	Containerized shrub						
599	plant material	4840	ea	$10	$48,400		Plant $8 to $14 Table L-3
600	Install	161	hr	$73	$11,777		Plant rate 20 to 40 per hour per USACE
601					**$60,177**	**Ac**	
602	Containerized tree						
603	plant material	435	ea	$50	$21,750		Tree $20 Table L-3, Means $50 to $200
604	Install	43.5	hr	$73	$3,176		Plant rate 10 per hour
605					**$24,926**	**Ac**	
606							
607	Mix shrubs/trees				**$42,551**	**Ac**	
608							
609	Re-stock fish				**$25,000**	**Is**	Allowance
610							
611	Hydroseeding	43560	sf	$0.046	$2,004	Ac	Means $46/1,000 sf
612							
613							
614							
615							
616							
617							
618	Stream Bank						
619							USACE $15 to $104 per linear foot.
620	Log toes						$20 to $60/lf Table L-4
621	Coir logs						$8 to $30/lf
622	Fascines						$8 to $120/lf
623	Wide bank (25 ft)				$30	lf	
624	Narrow bank (5 ft)				$10	lf	
625							
626	Flow control structure	120	tn	53		6360	Assume gravel water control/diversion
627							50 ' x 3' high by 12' wide

Volume Estimates
Lyman Mill Reach Stream Sediment and Floodplain Soil (Including Oxbow) Alternatives

	B	C	D	E	F	G	H	I
1	**Description**	**No.**	**Length**	**Width**	**Thickness**	**Quantity calc.**	**Quantity**	**Units**
2			**Ft.**	**Ft.**	**Ft.**	**(LF/SF/CF)**		
3								
4								
5		Lyman Mill stream sediment and floodplain soil				1,251,370	**28.7**	**Acres**
6								
7	Clear work areas	None - assume work done concurrently with Lyman Mill pond remediation						
8								
9								
10	**TARGET EXCAVATION & DISPOSAL**					281,642	**6.5**	**Acres**
11		Areas and volume from 7/18/11 spreadsheet by D.Dahlen						
12	Removal volume						20,502	cy
13								
14								
15	Sediment Volume (no dewatering)						20,502	cy
16	Sediment Weight (no dewatering)					1.5 tn/cy	**30,753**	**tons**
17								
18								
19								
20								
21	For upland CDF, assume 10% of total requires off-site incineration							
22	Incineration					0.10	3,075	tons
23	CDF						27,678	tons
24								
25		Cap over excavated Areas						
26		281,642.00	1.0	1.0	1.0	281,642	10,431	CY
27		Use unit weight of 1.5 tons per cy						
28							**15,647**	**tons**
29		Assume average of 3 inches of thin cap over unexcavated area						
30		969,728.00	1.0	1.0	0.25	242,432	8,979	cy
31		Use unit weight of 1.5 tons per cy					**13,468**	**tons**
32								
33	**PARTIAL EXCAVATION & DISPOSAL**					851,426	**19.5**	**Acres**
34		Areas and volume from 7/18/11 spreadsheet by D.Dahlen						
35	Removal volume						50,915	cy
36								
37								
38	Sediment Volume (no dewatering)						50,915	cy
39	Sediment Weight (no dewatering)					1.5 tn/cy	**76,373**	**tons**
40								
41								
42								
43								
44	For upland CDF, assume 10% of total requires off-site incineration							
45	Incineration					0.10	7,637	tons
46	CDF						68,735	tons
47								
48		Cap over excavated Areas						
49		851,426	1.0	1.0	1.0	851,426	31,534	CY
50		Use unit weight of 1.5 tons per cy						
51							**47,301**	**tons**
52		Assume average of 3 inches of thin cap over unexcavated area						
53		399,944	1.0	1.0	0.25	99,986	3,703	cy
54		Use unit weight of 1.5 tons per cy					**5,555**	**tons**
55								
56								

Volume Estimates
Lyman Mill Reach Stream Sediment and Floodplain Soil (Including Oxbow) Alternatives

	B	C	D	E	F	G	H	I
1	**Description**	**No.**	**Length**	**Width**	**Thickness**	**Quantity calc.**	**Quantity**	**Units**
2			**Ft.**	**Ft.**	**Ft.**	**(LF/SF/CF)**		
57	**CAPACITY AND MATERIAL VOLUMES FOR TYPICAL UPLAND CDF**							
58	Capacity =	Volume inside a prismatoid space						
59		Volume =	$1/6h(B_1+4M+B_2)$					
60		B1 = area of lower base: B2 = area of upper base: M = area of midsection: and h = height						
61	Northwest lower portion	Height			10.0			
62		Bottom inside	500	250		125,000	sf	
63		Midsection	520	270		140,400	sf	
64		Top inside	540	290		156,600	sf	
65		Capacity				1,405,333	**52,049**	**cy**
66	Slope ratio (inside - outside)		2	2				
67	Clear trees & vegetation	1.0	418	218	1.0	91,124	91,124	sf
68	Sand base for liner	1.0	418	218	1.0	91,124	3,375	cy
69	Install base liner	1.0	418	218	1.0	91,124	91,124	sf
70	Sand drain layer	1.0	418	218	1.0	91,124	3,375	cy
71								
72	East berm core	1.0	458	10.0	10.0	45,800		
73	inside slope	0.5	455	20.0	10.0	45,467		
74	outside slope	0.5	481	20.0	10.0	48,133		
75	South berm core	1.0	258	10.0	10.0	25,800		
76	inside slope	0.5	255	20.0	10.0	25,467		
77	outside sloe	0.5	281	20.0	10.0	28,133		
78	North berm core	1.0	458	10.0	10.0	45,800		
79	inside slope	0.5	455	20.0	10.0	45,467		
80	outside slope	0.5	481	20.0	10.0	48,133		
81	West berm core	1.0	258	10.0	10.0	25,800		
82	inside slope	0.5	255	20.0	10.0	25,467		
83	outside sloe	0.5	281	20.0	10.0	28,133		
84	**Total berms**					**437,600**	**16,207**	**cy**
85								
86	CDF size at top	1	540	290	1	156,600		sf
87	Soil over sediment	1.0	156,600	1.0	1.0	156,600	**5,800**	**cy**
88	Install cover membrane	1.0	156,600	1.0	1.0	156,600	**156,600**	**sf**
89	Drain gravel over membrane	1.0	156,600	1.0	1.0	156,600	**5,800**	**cy**
90	Protective soil and topsoil	1.0	156,600	1.0	1.0	156,600	**5,800**	**cy**
91	Possible existing soil removal	1.0	418	218	4.0	364,496	13,500	cy

Appendix J Cost Estimates

Source Area Soil Alternatives

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Present Worth Costs
Source Area Soil Alternatives

	A	B	C	D	E
1	**Source Area Soil Alternatives**				
2			ALT 1 No Action	ALT 3e Targeted Excavation, Upgrade and Maintain Existing Surfaces, Off-site Disposal	ALT 4 Targeted Excavation, Convert to RCRA Caps and Maintain, Off-site Disposal
3	**Remediation Area:**	**4.3**	**Acres Soil Caps**		
4		**2.1**	**Acres Parking Lots**		
5		**1.4**	**Acres Cap Extension**		
6	New Utilities				$702,416
7	Cap Extension			$1,224,023	$1,354,539
8	Soil Cap Areas			$1,015,564	$3,094,691
9	Pavement Areas			$10,230	$1,660,407
10	Soil Excavation and Disposal			$15,849,427	$8,449,482
11	**Construction Cost**		**$0**	**$18,099,244**	**$15,261,535**
12	Design costs		$0	$545,062	$458,500
13	Oversight & QC costs		$0	$489,220	$917,540
14	Contingency	25%	$0	$4,783,381	$4,159,394
15	Post-construction Monitoring		$0		
16	**CAPITAL COSTS**		**$0**	**$23,900,000**	**$20,800,000**
17					
18	Annual Monitoring & Maintenance		$13,772	$36,814	$37,697
19	**TOTAL PRESENT WORTH COSTS (a)**		**$170,000**	**$24,400,000**	**$21,300,000**
20					
21	Notes:				
22	Present worth factors for 7% discount factor				
23	Years 1 to 30	12.409			
24					
25	(a) The present worth costs for Alternatives 3 and 5 could increase by approximately $120,000 to $135,000 (or more) if a Stage IB cultural resource survey (archaeological survey testing and excavation) and additional mitigation measures are required to comply with the National Historic Preservation Act (USACE, 2011).				

Construction Costs
Source Area Soil Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M	N
1	**Description**	**Quantity**	**Units**	**Daily output**	**Unit Costs**				**Costs**				
2					**Labor**	**Equipment**	**Materials**	**Subcontract**	**Labor**	**Equipment**	**Materials**	**Subcontract**	**TOTAL**
3	**CONSTRUCTION COSTS**												
4													
5	**Alt 3e Upgrade and Maintain Existing Surfaces - Soil Excavation and Disposal**												
6	Excavate PTW, TSCA/GB, GA	14,300	cy	400	$7.36	$2.23	$1.38		$105,238	$31,818	$19,663	$0	$156,718
7	Backfill	23,166	tn	500	$11.71	$3.18	$33.06		$271,160	$73,668	$765,868	$0	$1,110,696
8	PTW off-site incineration	8,910	tn		$10.37	$1.54	$1.69	$880	$92,429	$13,708	$15,078	$7,840,800	$7,962,015
9	TSCA/GB incineration	697	tn		$10.37	$1.54	$1.69	$880	$7,226	$1,072	$1,179	$613,008	$622,485
10	TSCA/GB landfill	6,269	tn		$10.37	$1.54	$1.69	$410	$65,036	$9,645	$10,610	$2,570,611	$2,655,902
11	GA incineration	729	tn		$10.37	$1.54	$1.69	$880	$7,562	$1,122	$1,234	$641,520	$651,438
12	GA landfill	6,561	tn					$410	$0	$0	$0	$2,690,174	$2,690,174
13	Subtotal - Soil Excavation and Disposal								$548,652	$131,032	$813,631	$14,356,113	$15,849,427
14	**Alt 3 Upgrade and Maintain Existing Surfaces - Soil Cap Areas**												
15	Mobilization and Demobilize	10	days		$5,853	$1,590	$1,530		$58,525	$15,900	$15,300	$0	$89,725
16	Clear vegetation	186,000	sf	40,000	$0.13	$0.06	$0.00		$24,431	$10,742	$0	$0	$35,173
17	Area 1 fill	2,550	tons	500	$11.71	$3.18	$33.06		$29,848	$8,109	$84,303	$0	$122,260
18	Area 2 fill	1,440	tons	500	$11.71	$3.18	$33.06		$16,855	$4,579	$47,606	$0	$69,041
19	Area 3 fill	1,590	tons	500	$11.71	$3.18	$33.06		$18,611	$5,056	$52,565	$0	$76,233
20	Topsoil and planting	186,000	sf	7,400	$0.44	$0.13	$0.74	$0.04	$82,443	$25,009	$137,778	$7,027	$252,257
21	Superintendent & field engr	100	days		$1,920				$192,000	$0	$0	$0	$192,000
22	Project manager	100	days		$1,200				$120,000	$0	$0	$0	$120,000
23	Clerk	100	days		$360				$36,000	$0	$0	$0	$36,000
24	Field office, utilities, vehicles	5	mo			$4,575			$0	$22,875	$0	$0	$22,875
25	Subtotal Soil Cap Areas								$578,714	$92,270	$337,553	$7,027	$1,015,564
26													
27	**Alt 3 Upgrade and Maintain Existing Surfaces - Paved Areas**												
28	Seal asphalt	93,000	sf					$0.11	$0	$0	$0	$10,230	$10,230
29													
30	**Alt 3 Extend Cap Area**												
31	Excavation	1,120	cy		$10.69	$5.82	$0.00		$11,979	$6,517	$0	$0	$18,496
32	Soil disposal	1,793	tn		$10.37	$1.54	$1.69	$410	$18,596	$2,758	$3,034	$735,008	$759,395
33	Silt base layer	1,815	tons	500	$11.71	$3.18	$33.06		$21,245	$5,772	$60,004	$0	$87,020
34	Geotextile	60,500	sf					$0.26	$0	$0	$0	$15,999	$15,999
35	Earth fill	5,445	tons	500	$11.71	$3.18	$33.06		$63,734	$17,315	$180,012	$0	$261,061

Construction Costs
Source Area Soil Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M	N
1	**Description**	**Quantity**	**Units**	**Daily output**	**Unit Costs**				**Costs**				
2					**Labor**	**Equipment**	**Materials**	**Subcontract**	**Labor**	**Equipment**	**Materials**	**Subcontract**	**TOTAL**
36	Topsoil and planting	60,500	sf	7,400	$0.44	$0.13	$0.74	$0.04	$26,816	$8,135	$44,815	$2,286	$82,051
37	Subtotal Extend Cap Area								$142,370	$40,496	$287,864	$753,292	$1,224,023
38													
39	**ALT 3e UPGRADE AND MAINTAIN EXISTING SURFACES - TOTAL CONSTRUCTION**								**$1,269,736**	**$263,798**	**$1,439,048**	**$15,126,662**	**$18,099,244**
40													
41													
42	**ALT 4 UPGRADE TO RCRA CAPS**												
43	Mobilization and Demobilize	10	days		$5,853	$1,590	$1,530		$58,525	$15,900	$15,300	$0	$89,725
44	Clear vegetation	186,000	sf	40,000	$0.13	$0.06	$0.00		$24,431	$10,742	$0	$0	$35,173
45	Area 1 fill	12,750	tons	500	$11.71	$3.18	$33.06		$149,240	$40,545	$421,515	$0	$611,300
46	Area 2 fill	2,160	tons	500	$11.71	$3.18	$33.06		$25,283	$6,869	$71,410	$0	$103,561
47	Area 3 fill	0	tons	500	$11.71	$3.18	$33.06		$0	$0	$0	$0	$0
48	Topsoil and planting	186,000	sf	7,400	$0.44	$0.13	$0.74	$0.04	$82,443	$25,009	$137,778	$7,027	$252,257
49	Geomembrane	186,000	sf					$0.86	$0	$0	$0	$159,960	$159,960
50	Drain layer	12,090	tons	400	$14.63	$2.83	$37.50		$176,893	$34,154	$453,375	$0	$664,422
51	Geotextile	186,000	sf					$0.26	$0	$0	$0	$49,187	$49,187
52	Protective soil	12,090	tons	500	$11.71	$3.18	$33.06		$141,514	$38,446	$399,695	$0	$579,656
53	Superintendent & field engr	150	days		$1,920				$288,000	$0	$0	$0	$288,000
54	Project manager	150	days		$1,200				$180,000	$0	$0	$0	$180,000
55	Clerk	150	days		$360				$54,000	$0	$0	$0	$54,000
56	Field office, utilities, vehicles	6	mo			$4,575			$0	$27,450	$0	$0	$27,450
57													
58	**CONVERT TO RCRA CAPS AND MAINTAIN - SOIL CAP AREA**								$1,180,330	$199,115	$1,499,073	$216,173	$3,094,691
59													

Construction Costs
Source Area Soil Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M	N
1	**Description**	**Quantity**	**Units**	**Daily output**	**Unit Costs**				**Costs**				
2					**Labor**	**Equipment**	**Materials**	**Subcontract**	**Labor**	**Equipment**	**Materials**	**Subcontract**	**TOTAL**
60	**Alt 4 CONVERT TO RCRA CAPS AND MAINTAIN - PAVEMENT AREAS**												
61	Demolish asphalt	93,000	sf					$1.16	$0	$0	$0	$107,467	$107,467
62	Fill	6,045	tons	500	$11.71	$3.18	$33.06		$70,757	$19,223	$199,848	$0	$289,828
63	Geomembrane	93,000	sf					$0.86	$0	$0	$0	$79,980	$79,980
64	Drain layer	6,045	tons	400	$14.63	$2.83	$37.50		$88,446	$17,077	$226,688	$0	$332,211
65	Geotextile	93,000	sf					$0.26	$0	$0	$0	$24,593	$24,593
66	Gravel base	6,045	tons	500	$11.71	$3.18	$33.06		$70,757	$19,223	$199,848	$0	$289,828
67	New Asphalt	93,000	sf					$0.98	$0	$0	$0	$91,450	$91,450
68	Superintendent & field engr	120	days		$1,920				$230,400	$0	$0	$0	$230,400
69	Project manager	120	days		$1,200				$144,000	$0	$0	$0	$144,000
70	Clerk	120	days		$360				$43,200	$0	$0	$0	$43,200
71	Field office, utilities, vehicles	6	mo			$4,575			$0	$27,450	$0	$0	$27,450
72													
73	**CONVERT TO RCRA CAPS AND MAINTAIN PAVEMENT AREA**								$647,561	$82,973	$626,383	$303,490	$1,660,407
74													
75	**Remove and replace utilities**												
76	Sanitary sewer	280	lf	100	$45.35	$15.00	$122.40		$12,698	$4,200	$34,272	$0	$51,170
77	Water lines	820	lf	160	$28.34	$7.91	$37.94		$23,242	$6,483	$31,109	$0	$60,834
78	Gas lines	820	lf	160	$28.34	$7.91	$37.94		$23,242	$6,483	$31,109	$0	$60,834
79	Electric power lines	820	lf	150	$30.23	$8.43	$30.13		$24,791	$6,915	$24,709	$0	$56,416
80	Telephone lines	820	lf	150	$30.23	$8.43	$30.13		$24,791	$6,915	$24,709	$0	$56,416
81	Communication cables	820	lf	150	$30.23	$8.43	$30.13		$24,791	$6,915	$24,709	$0	$56,416
82	Storm drains	2,520	lf	160	$28.34	$7.91	$37.94		$71,427	$19,924	$95,603	$0	$186,953
83	Lighting conduits	2,520	lf	150	$30.23	$8.43	$30.13		$76,188	$21,252	$75,936	$0	$173,376
84													
85	**New utilities**								$281,172	$79,088	$342,156	$0	$702,416
86													

Construction Costs
Source Area Soil Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M	N
1	**Description**	**Quantity**	**Units**	**Daily output**	**Unit Costs**				**Costs**				
2					**Labor**	**Equipment**	**Materials**	**Subcontract**	**Labor**	**Equipment**	**Materials**	**Subcontract**	**TOTAL**
87	**Alt 4 Extend Cap Area**												
88	Excavation	1,120	cy		$10.69	$5.82	$0.00		$11,979	$6,517	$0	$0	$18,496
89	Soil disposal	1,793	tn		$10.37	$1.54	$1.69	$410	$18,596	$2,758	$3,034	$735,008	$759,395
90	Silt base layer	1,815	tons	500	$11.71	$3.18	$33.06		$21,245	$5,772	$60,004	$0	$87,020
91	Geotextile	60,500	sf					$0.26	$0	$0	$0	$15,999	$15,999
92	Geomembrane	60,500	sf					$0.86	$0	$0	$0	$52,030	$52,030
93	Drain layer	3,933	tons	400	$14.63	$2.83	$37.50		$57,538	$11,109	$147,469	$0	$216,116
94	Geotextile	60,500	sf					$0.26	$0	$0	$0	$15,999	$15,999
95	Protective soil	2,241	tons	500	$11.71	$3.18	$33.06		$26,228	$7,126	$74,079	$0	$107,432
96	Topsoil and planting	60,500	sf	7,400	$0.44	$0.13	$0.74	$0.04	$26,816	$8,135	$44,815	$2,286	$82,051
97	Subtotal Extend Cap Area								$162,402	$41,416	$329,400	$821,321	$1,354,539
98													
99	**Alt 4 Upgrade and Maintain Existing Surfaces - Soil Excavation and Disposal**												
100	Excavate PTW	5,500	cy	400	$7.36	$2.23	$1.38		$40,476	$12,238	$7,563	$0	$60,276
101	Backfill	8,910	tn	500	$11.71	$3.18	$33.06		$104,292	$28,334	$294,565	$0	$427,191
102	PTW off-site incineration	8,910	tn		$10.37	$1.54	$1.69	$880	$92,429	$13,708	$15,078	$7,840,800	$7,962,015
103									$237,197	$54,279	$317,206	$7,840,800	$8,449,482
104													
105	**CONVERT TO RCRA CAPS AND MAINTAIN TOTAL**								**$2,508,661**	**$456,872**	**$3,114,217**	**$9,181,784**	**$15,261,535**
106													
107													

Design Costs
Source Area Soil Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M
3	**Description**	**Quantity**	**Units**	**Unit Costs**				**Costs**				
4				**Labor**	**Equipment**	**Materials**	**Subcontract**	**Labor**	**Equipment**	**Materials**	**Subcontract**	**TOTAL**
5	**DESIGN COSTS**											
6												
7	**ALT 3 UPGRADE AND MAINTAIN EXISTING SURFACES**											
8	Physical survey	2	day	$4,720	$350	$800	$0	$9,440	$700	$1,600	$0	$11,740
9	Chemical sampling (32 borings)	16	day	$5,080	$1,550	$800	$0	$81,280	$24,800	$12,800	$0	$118,880
10	Chemical testing	32	ea				$1,806	$0	$0	$0	$57,802	$57,802
11	Dioxin testing	96	ea				$715	$0	$0	$0	$68,640	$68,640
12	Design report & calculations	800	hours	$90				$72,000	$0	$0	$0	$72,000
13	Drawings - 20 sheets	1,600	hours	$90				$144,000	$0	$0	$0	$144,000
14	Specifications	400	hours	$90				$36,000	$0	$0	$0	$36,000
15	Work plans	400	hours	$90				$36,000	$0	$0	$0	$36,000
16	**ALT 3 UPGRADE AND MAINTAIN EXISTING SURFACES DESIGN COST**							**$378,720**	**$25,500**	**$14,400**	**$126,442**	**$545,062**
17												
18												
19												
20	**ALT 4 CONVERT TO RCRA CAPS AND MAINTAIN**											
21	Physical survey	2	days	$4,720	$350	$800	$0	$9,440	$700	$1,600	$0	$11,740
22	Chemical sampling (8 borings)	5	day	$5,080	$1,550	$800	$0	$25,400	$7,750	$4,000	$0	$37,150
23	Chemical testing	8	ea				$1,806	$0	$0	$0	$14,450	$14,450
24	Dioxin testing	24	ea				$715	$0	$0	$0	$17,160	$17,160
25	Design report	1,600	hours	$90				$144,000	$0	$0	$0	$144,000
26	Drawings - 20 sheets	1,600	hours	$90				$144,000	$0	$0	$0	$144,000
27	Specifications	600	hours	$90				$54,000	$0	$0	$0	$54,000
28	Work plans	400	hours	$90				$36,000	$0	$0	$0	$36,000
29								**$412,840**	**$8,450**	**$5,600**	**$31,610**	**$458,500**
30	**ALT 4 CONVERT TO RCRA CAPS AND MAINTAIN DESIGN COST**											

Construction Oversight Costs
Source Area Soil Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M
1	**Description**	**Quantity**	**Units**	**Unit Costs**				**Costs**				
2				**Labor**	**Equipment**	**Materials**	**Subcontract**	**Labor**	**Equipment**	**Materials**	**Subcontract**	**TOTAL**
3	**CONSTRUCTION OVERSIGHT COSTS**											
4												
5												
6	**ALT 3 UPGRADE AND MAINTAIN EXISTING SURFACES**											
7	Project manager	150	days	$1,200				$180,000	$0	$0	$0	$180,000
8	Resident engineer	150	days	$960				$144,000	$0	$0	$0	$144,000
9	Survey crew	20	days	$1,200	$350	$680		$24,000	$7,000	$13,600	$0	$44,600
10	Admin support	150	days	$360				$54,000	$0	$0	$0	$54,000
11	Soil sample	2	days	$5,080	$1,550	$800		$10,160	$3,100	$1,600	$0	$14,860
12	Field office	6	months		$1,075			$0	$6,450	$0	$0	$6,450
13	Vehicles	6	months		$2,500			$0	$15,000	$0	$0	$15,000
14	Cell phones, radios	6	months		$750			$0	$4,500	$0	$0	$4,500
15	Utilities	6	months		$250			$0	$1,500	$0	$0	$1,500
16	Confirmation samples	10	ea				$715	$0	$0	$0	$7,150	$7,150
17	Designation samples	24	ea				$715	$0	$0	$0	$17,160	$17,160
18	**ALT 3 UPGRADE AND MAINTAIN EXISTING SURFACES (**							**$412,160**	**$37,550**	**$15,200**	**$24,310**	**$489,220**
19												
20	**ALT 4 CONVERT TO RCRA CAPS AND MAINTAIN**											
21	Project manager	300	days	$1,200				$360,000	$0	$0	$0	$360,000
22	Resident engineer	300	days	$960				$288,000	$0	$0	$0	$288,000
23	Survey crew	40	days	$1,200	$350	$680		$48,000	$14,000	$27,200	$0	$89,200
24	Admin support	300	days	$360				$108,000	$0	$0	$0	$108,000
25	Soil sample	1	days	$5,080	$1,550	$800		$5,080	$1,550	$800	$0	$7,430
26	Field office	12	months		$1,075			$0	$12,900	$0	$0	$12,900
27	Vehicles	12	months		$2,500			$0	$30,000	$0	$0	$30,000
28	Cell phones, radios	12	months		$750			$0	$9,000	$0	$0	$9,000
29	Utilities	12	months		$250			$0	$3,000	$0	$0	$3,000
30	Confirmation samples		ea				$715	$0	$0	$0	$0	$0
31	Designation samples	14	ea				$715	$0	$0	$0	$10,010	$10,010
32	**ALT 4 CONVERT TO RCRA CAPS AND MAINTAIN OVERSIGHT COST**							**$809,080**	**$70,450**	**$28,000**	**$10,010**	**$917,540**

Long-term Monitoring Costs
Source Area Soil Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M
1				Unit Costs				Costs				
2		Quantity	Units	Labor	Equipment	Materials	Subcontract	Labor	Equipment	Materials	Subcontract	TOTAL
3	**MONITORING COSTS**											
4												
5	**ALT 3 UPGRADE and MAINTAIN EXISTING CAPS**											
6	**A. Annual work years 1 to 30**											
7	Groundwater sampling		days	$5,080	$1,550	$800		$0	$0	$0	$0	$0
8	Physical survey	2	days	$4,720	$350	$800		$9,440	$700	$1,600	$0	$11,740
9	Ecology survey		days	$4,720	$300	$800		$0	$0	$0	$0	$0
10	Water chemistry						$715	$0	$0	$0	$0	$0
11	Fish tissue chemistry						$715	$0	$0	$0	$0	$0
12	Soil chemistry						$715	$0	$0	$0	$0	$0
13	Five year review	0.2	events	$10,160				$2,032	$0	$0	$0	$2,032
14	**TOTAL ANNUAL MONITORING IN YEARS 1 TO 30**											**$13,772**
15												
16												
17	**B. Annual maintenance**											
18	Assume repair of 1/10 acres cap and seeding per year and sealing once every 5 years.											
19	Cap repair	283	tons				$47.95	$0	$0	$0	$13,575	$13,575
20	Seeding	4,356	sf				$0.038	$0	$0	$0	$165	$165
21	Pavement sealing	18,600	sf				$0.110	$0	$0	$0	$2,046	$2,046
22	Drain cleaning	1	ea				$2,400	$0	$0	$0	$2,400	$2,400
23	Mowing	186,000	sf				$0.003	$0	$0	$0	$586	$586
24	Invasive species control	4.3					$1,000.000				$4,270	$4,270
25	**ANNUAL MAINTENANCE**							$0	$0	$0	$0	**$23,042**
26												
27												
28	**CONVERT TO RCRA CAPS**											
29	**A. Annual work years 1 to 30**											
30	Soil chemistry		days	$5,080	$1,550	$800		$0	$0	$0	$0	$0
31	Physical survey	2	days	$4,720	$350	$800		$9,440	$700	$1,600	$0	$11,740
32	Ecology survey		days	$4,720	$300	$800		$0	$0	$0	$0	$0
33	Five year review	0.2	events	$10,160				$2,032	$0	$0	$0	$2,032
34	**TOTAL ANNUAL MONITORING IN YEARS 1 TO 30**											**$13,772**
35												
36												$0
37	**B. Annual maintenance**											$0
38	Assume repair of 1/10 acres cap and seeding per year. Asphalt sealing not required for this alternative.											$0
39	Cap repair	283	tons				$47.95	$0	$0	$0	$13,575	$13,575
40	Seeding	4,356	sf				$0.038	$0	$0	$0	$165	$165
41	Drain cleaning	1	ea				$2,400	$0	$0	$0	$2,400	$2,400
42	Mowing	1,116,000	sf				$0.003	$0	$0	$0	$3,515	$3,515
43	Invasive species control	4.3					$1,000.000				$4,270	$4,270

Long-term Monitoring Costs
Source Area Soil Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M
44	**ANNUAL MAINTENANCE**							$0	$0	$0	$0	**$23,925**
45												
46	**No Action**											
47	**A. Annual work years 1 to 30**											
48	Soil chemistry		days	$5,080	$1,550	$800		$0	$0	$0	$0	$0
49	Physical survey	2	days	$4,720	$350	$800		$9,440	$700	$1,600	$0	$11,740
50	Ecology survey		days	$4,720	$300	$800		$0	$0	$0	$0	$0
51	Five year review	0.2	events	$10,160				$2,032	$0	$0	$0	$2,032
52	**TOTAL ANNUAL MONITORING IN YEARS 1 TO 30**											**$13,772**

Unit Costs
Source Area Soil Alternatives

	B	C	D	E	F	G	H
1							
2	**Imported Fill - Site Grading and Protective Layer**						
3	**Estimated duration:**	500	Tons	divided by	500	tn/day production	
4		**1.0**	**days**				
5	**Craft Labor**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
6	Foreman	1.0	day	$771	$771	$96	per hour
7	Equip operator	1.0	day	$2,153	$2,153	$90	3 total
8	QC technician	1.0	day	$581	$581	$73	per hour
9	Laborer	1.0	day	$1,748	$1,748	$73	3 total
10	Safety officer	1.0	day	$600	$600	$75	per hour
11							
12	Subtotal Cost			$5,853	$5,853		
13	**Labor Unit Cost**				**$11.71**	**Per Ton**	
14							
15							
16	**Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
17	Loader	1.0	day	$300	$300		3 cy wheel loader Means p 21
18	Grader	1.0	day	$430	$430		Road grader Means p 596
19	Dozer to spread	1.0	day	$860	$860		200 hp dozer Means p 21
20					$0		
21	Subtotal Cost			$1,590	$1,590		
22	**Equipment Unit Cost**				**$3.18**	**Per Ton**	
23							
24	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
25	Sand for cap	500	tons	$30	$15,000		Truck delivery to site at $24 per ton +25%
26	Health and safety equip	1.0	Days	$450	$450		9 crew x $50/day
27	Per diem	1.0	Days	$1,080	$1,080		9 crew x $120/day
28	Subtotal Cost				$16,530		
29	**Material Unit Cost**				**$33.06**	**Per Ton**	
30							
31	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
32					$0		
33					$0		
34	**Subtotal Cost**				$0		
35	**TOTAL UNIT COST**				**$47.95**	**Per Ton**	
36							
37	**Drain Layer over Membrane**						
38	**Estimated duration:**	400	tn	divided by	400	tn/day production	
39		**1.0**	**Days**				
40	**Craft Labor**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
41	Foreman	1.0	day	$771	$771	$96	per hour
42	Equip operator	1.0	day	$2,153	$2,153	$90	3 total
43	QC technician	1.0	day	$581	$581	$73	per hour
44	Safety officer	1.0	day	$600	$600	$75	per hour
45	Laborer	1.0	day	$1,748	$1,748	$73	3 total
46	Subtotal Cost				$5,853		
47	**Labor Unit Cost**				**$14.63**	**Per Ton**	
48							
49	**Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
50	Dozer	1.0	day	$480	$480		100 hp dozer
51	Grader	1.0	day	$350	$350		Small grader to spread
52	Loader to deliver material	1.0	day	$300	$300		3 cy wheel loader Means p 21
53	Subtotal Cost				$1,130		
54	**Equipment Unit Cost**				**$2.83**	**Per Ton**	
55							
56	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
57					$0		
58	Drain gravel	400	Tons	$38	$15,000		$30 per ton plus markup
59	Subtotal Cost				$15,000		
60	**Material Unit Cost**				**$37.50**	**Per Ton**	
61							
62	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
63							
64							

Unit Costs
Source Area Soil Alternatives

	B	C	D	E	F	G	H
65	Subtotal Cost				$0		
66	**Subcontract Unit Cost**				**$0.00**	**Per Ton**	
67	**TOTAL UNIT COST**				**$54.96**	**Per Ton**	
68							
69	**Clear vegetation**						
70	**Estimated duration:**	40,000	sf	divided by	40,000	sf/day production	
71		**1.0**	**Days**				Means p 39 1.0 AC per day light trees
72	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
73	Equip operator	1.0	day	$2,153	$2,153	$90	3 total
74	Laborer	1.0	day	$2,330	$2,330	$73	4 total
75	Foreman	1.0	day	$771	$771	$96	
76							
77	Subtotal Cost			$5,254	$5,254		
78	**Labor Unit Cost**				**$0.13**	**Per sf**	
79							
80	**Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
81	Excavator	1.0	day	$890	$890		2.0 cy excavator Means p 20
82	Loader	1.0	day	$300	$300		3 cy wheel loader Means p 21
83	Dozer	1.0	day	$860	$860		200 hp dozer Means p 21
84	Chipper	1.0	day	$165	$165		Means p 588
85	Stump grinder	1.0	day	$95	$95		Means p 588
86	Subtotal Cost			$2,310	$2,310		
87	**Equipment Unit Cost**				**$0.06**	**Per sf**	
88							
89	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
90					$0		
91					$0		
92	Subtotal Cost				$0		
93	**Material Unit Cost**				**$0.00**	**Per sf**	
94							
95	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
96							
97							
98	Subtotal Cost				$0		
99	**Subcontract Unit Cost**				$0		
100	**TOTAL UNIT COST**				**$0.19**	**Per sf**	
101							
102	**Clean Corridor - Sanitary Sewer**						
103	**Estimated duration:**	100	lf	divided by	100	lf/day production	
104		**1.0**	**Days**				
105	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
106	Foreman	1.0	day	$771	$771	$96	Trench excavation/ backfill Mean p. 51
107	Equip operator	1.0	day	$1,436	$1,436	$90	4' W x 10' D = 1.5 cy/lf
108	Laborer	1.0	day	$1,748	$1,748	$73	24" concrete pipe Mean p 61 100 lf/day
109	Truck driver	1.0	day	$581	$581	$73	
110			day		$0		
111	Subtotal Cost				$4,535		
112	**Labor Unit Cost**				**$45.35**	**Per lf**	
113							
114	Equipment	**Units**		**Unit Rate**	**Total Cost**		**Comments**
115	Compactor	1.0	day	$105	$105		Compactor on loader Mean p 20
116	Excavator	1.0	day	$680	$680		1.5 cy excavator Means p 20
117	Loader	1.0	day	$235	$235		1.5 cy wheel loader Means p 21
118	Highway trucks (1)	1.0	day	$480	$480	$480	16 ton truck Means p 22
119							
120	Subtotal Cost				$1,500		
121	**Equipment Unit Cost**				**$15.00**	**Per lf**	
122							
123	Materials	**Units**		**Unit Rate**	**Total Cost**		**Comments**
124	Health and safety equip	1.0	Days	$350	$350		7 crew x $50/day
125	Per diem	1.0	Days	$840	$840		7 crew x $120/day
126	24" pipe	100	lf	$13	$1,300		Mean p 51
127	Imported backfill	260	tons	$38	$9,750		$30 per ton plus markup
128					$0		

	B	C	D	E	F	G	H
129					$0		
130	Subtotal Cost				$12,240		
131	**Material Unit Cost**				**$122.40**	**Per lf**	
132							
133	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
134					$0		Place excavated soil under landfill cover
135							
136	Subtotal Cost				$0		
137	**Subcontract Unit Cost**				**$0.00**	**Per lf**	
138	**TOTAL UNIT COST**				**$182.75**	**Per lf**	
139							
140	**Clean Corridor - Water or Gas Lines or Storm drains**						
141	**Estimated duration:**	160	lf	divided by	160	lf/day production	
142		**1.0**	**Days**				
143	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
144	Foreman	1.0	day	$771	$771	$96	Trench excavation/ backfill Mean p. 50
145	Equip operator	1.0	day	$1,436	$1,436	$90	2' W x 4' D = 0.3 cy/lf
146	Laborer	1.0	day	$1,748	$1,748	$73	6" DIP pipe Mean p 59 160 lf/day
147	Truck driver	1.0	day	$581	$581	$73	3" gas Means p 64 400 lf/dy
148			day		$0		
149	Subtotal Cost				$4,535		
150	**Labor Unit Cost**				**$28.34**	**Per lf**	
151							
152	Equipment	**Units**		**Unit Rate**	**Total Cost**		**Comments**
153	Compactor	1.0	day	$105	$105		Compactor on loader Mean p 20
154	Excavator	1.0	day	$490	$490		1.0 cy excavator Means p 19
155	Loader	1.0	day	$190	$190		1.0 cy wheel loader Means p 21
156	Highway trucks (1)	1.0	day	$480	$480	$480	16 ton truck Means p 22
157							
158	Subtotal Cost				$1,265		
159	**Equipment Unit Cost**				**$7.91**	**Per lf**	
160							
161	Materials	**Units**		**Unit Rate**	**Total Cost**		**Comments**
162	Health and safety equip	1.0	Days	$350	$350		7 crew x $50/day
163	Per diem	1.0	Days	$840	$840		7 crew x $120/day
164	6" DIP or 3" gas pipe	160	lf	$11	$1,760		Mean p 59 or 64
165	Imported backfill	83	tons	$38	$3,120		$30 per ton plus markup
166					$0		
167					$0		
168	Subtotal Cost				$6,070		
169	**Material Unit Cost**				**$37.94**	**Per lf**	
170							
171	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
172					$0		Place excavated soil under landfill cover
173							
174	Subtotal Cost				$0		
175	**Subcontract Unit Cost**				**$0.00**	**Per lf**	
176	**TOTAL UNIT COST**				**$74.19**	**Per lf**	
177							
178	**Clean Corridor - Electrical or communication utilities**						
179	**Estimated duration:**	150	lf	divided by	150	lf/day production	
180		**1.0**	**Days**				
181	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
182	Foreman	1.0	day	$771	$771	$96	Trench excavation/ backfill Mean p. 50
183	Equip operator	1.0	day	$1,436	$1,436	$90	2' W x 4' D = 0.3 cy/lf
184	Laborer	1.0	day	$1,748	$1,748	$73	2" conduit in trench Means p 469 150 lf/dy
185	Truck driver	1.0	day	$581	$581	$73	
186			day		$0		
187	Subtotal Cost				$4,535		
188	**Labor Unit Cost**				**$30.23**	**Per lf**	
189							
190	Equipment	**Units**		**Unit Rate**	**Total Cost**		**Comments**
191	Compactor	1.0	day	$105	$105		Compactor on loader Mean p 20
192	Excavator	1.0	day	$490	$490		1.0 cy excavator Means p 19

Unit Costs
Source Area Soil Alternatives

	B	C	D	E	F	G	H
193	Loader	1.0	day	$190	$190		1.0 cy wheel loader Means p 21
194	Highway trucks (1)	1.0	day	$480	$480	$480	16 ton truck Means p 22
195							
196	Subtotal Cost				$1,265		
197	**Equipment Unit Cost**				**$8.43**	**Per lf**	
198							
199	Materials	**Units**		**Unit Rate**	**Total Cost**		**Comments**
200	Health and safety equip	1.0	Days	$350	$350		7 crew x $50/day
201	Per diem	1.0	Days	$840	$840		7 crew x $120/day
202	Conduit	150	lf	$5.00	$750		Mean p 59 or 64
203	wires	150	lf	$4.20	$630		(3) 4/0 Means p 467
204	Imported backfill	52	tons	$38	$1,950		$30 per ton plus markup
205					$0		
206					$0		
207	Subtotal Cost				$4,520		
208	**Material Unit Cost**				**$30.13**	**Per lf**	
209							
210	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
211					$0		Place excavated soil under landfill cover
212							
213	Subtotal Cost				$0		
214	**Subcontract Unit Cost**				**$0.00**	**Per lf**	
215	**TOTAL UNIT COST**				**$68.80**	**Per lf**	
216							
217	**Excavate, Haul, Stockpile Existing Soil**						
218	**Estimated duration:**	600	cy	divided by	600	cy/day production	
219		**1.0**	**Days**				
220	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
221	Foreman	1.0	day	$771	$771	$96	per hour
222	Equip operator	1.0	day	$2,153	$2,153	$90	3 total
223	Laborer	1.0	day	$1,748	$1,748	$73	3 total
224	Truck driver	1.0	day	$1,744	$1,744	$73	3 total
225					$0		
226	Subtotal Cost				$6,415		
227	**Labor Unit Cost**				**$10.69**	**Per CY**	
228							
229	Equipment	**Units**		**Unit Rate**	**Total Cost**		**Comments**
230	Dozer	1.0	day	$860	$860		200 hp dozer Means p 21
231	Excavator	1.0	day	$890	$890		2.0 cy excavator Means p 20
232	Loader	1.0	day	$300	$300		3 cy wheel loader Means p 21
233	Highway trucks (3)	1.0	day	$1,440	$1,440	$480	16 ton truck Means p 22
234							
235	Subtotal Cost				$3,490		
236	**Equipment Unit Cost**				**$5.82**	**Per CY**	
237							
238	Materials	**Units**		**Unit Rate**	**Total Cost**		**Comments**
239					$0		PPE not needed for work on clean soil.
240			Tons	$30	$0		
241					$0		
242					$0		
243	Subtotal Cost				$0		
244	**Material Unit Cost**				**$0.00**	**Per CY**	
245							
246	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
247							
248							
249	Subtotal Cost				$0		
250	**Subcontract Unit Cost**				**$0.00**	**Per Cy**	
251	**TOTAL UNIT COST**				**$16.51**	**Per cy**	
252							

Unit Costs
Source Area Soil Alternatives

	B	C	D	E	F	G	H
253	**Topsoil and Plantings**						
254	**Estimated duration:**	7,400	sf	divided by	7400	sf/day production	
255		137	cy		137	cy/day	
256		1.0	days				Topsoil Means p 85 7,400 sf/day
257	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
258	Foreman	1.0	day	$640	$640	$96	
259		1.0					
260	Equip operator	1.0	day	$1,560	$1,560	$90	3 total
261	Laborer	1.0	day	$1,080	$1,080	$73	3 total
262	Subtotal Cost				$3,280		
263	**Labor Unit cost**				**$0.44**	**Per sf**	
264					**$23.94**	**Per Cy**	
265							
266	Equipment	**Units**		**Unit Rate**	**Total Cost**		**Comments**
267	Loader	1.0	day	$165	$165		1.5 cy wheel loader Means p 590
268	Dozer	1.0	day	$480	$480		100 hp dozer
269	Grader	1.0	day	$350	$350		Small grader to spread
270			day		$0		
271			day		$0		
272	Subtotal Cost				$995		
273	**Labor unit cost**				**$0.13**	**Per sf**	
274					**$7.26**	**Per Cy**	
275							
276	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
277					$0		
278	Top Soil	137	cy	$40	$5,481		$32 per cy plus markup
279					$0		
280							
281	Subtotal Cost				$5,481		
282	**Material Unit cost**				**$0.74**	**Per sf**	
283					**$40**	**Per cy**	
284							
285	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
286	Hydroseed	7,400	sf	$0.038	$280		Mean p 85 $0.34 per sy
287							
288	Subtotal Cost				$280		
289	**Subcontract Unit Cost**				**$0.04**	**Per sf**	
290	**TOTAL UNIT COST**				**$1.36**	**Per sf**	
291							
292							
293	**SUBCONTRACT CONSTRUCTION COSTS**						
294							
295	60 mil geomembrane	1	SF				
296	Labor	1	SF				Layfield Plastics 2000 0.38/sf installed
297	Equipment	1	SF				
298	Material	1	SF				Means Environmental Costs p 9-85 $1.34/sf
299	Unit Cost				**$0.86**	**sf**	
300							
301	Geotextile - 16 oz						Means Environmental p 9-84
302	Labor	1	sy	0.71			
303	Equipment	1	sy	0.03			
304	Material	1	sy	1.64			
305					**$0.26**	**sf**	
306							
307	Asphalt Pavement				$6.50	sy	Means p 69 2 in. binder course
308					$2.35	sy	1 in wearing course
309					**$0.98**	**sf**	
310	Asphalt seal coat				$0.86	sy	Means p 73 petroleum resistant
311	Prepare surface				$0.13	sy	
312	**Total**				**$0.11**	**sf**	
313	Remove pavement				$3.90	sy	Means p 37 3 in. thick
314	Off-site disposal/recycling				$6.50	sy	145 pcf x 2.25 cf/sy x $ 40 per ton
315	**Total**				**$1.16**	**sf**	
316							

Unit Costs
Source Area Soil Alternatives

	B	C	D	E	F	G	H
317	Mowing grass				$0.0032	sf	Means p 249 $3.15 per 1,000 sf
318							
319	Drain cleaning				$2,400	ea	Means Vac-truck crew A-13 $1,173 per day
320							assume 2 days per event
321							
322							
323							
324	**Oversight**						
325	**Craft Labor**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
326	Project manager	1.0	day	$1,200	$1,200	$150	per hr
327	Resident engineer	1.0	day	$960	$960	$120	per hr
328	Superintendent	1.0	day	$823	$823	$103	per hr
329	Sample crew	1.0	day	$1,440	$1,440	$90	2 staff
330	Survey crew	1.0	day	$1,200	$1,200	$75	2 staff
331	Admin support	1.0	day	$360	$360	$45	
332	**Labor Daily Costs**				**$5,983**	**Per day**	
333							
334	**Monthly Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
335	Field office	1.0	mo	$1,075	$1,075		trailer, copier, fax, water, chemical toilets
336	Vehicles	1.0	mo	$2,500	$2,500		2 trucks and fuel
337	Cell phones, radios	1.0	mo	$750	$750		4 phones, 3 radios
338	Utilities	1.0	mo	$250	$250		
339	**Equipment Monthly Cost**			4,575	**$4,575**	**Per Month**	
340							
341	**Daily Equipment**						
342	Vehicles	1	day	150	$150		
343	Cell phones, radios	1.0	day	$50	$50		
344	dGPS	1.0	day	$100	$100		
345	Computer and survey software	1.0	day	$50	$50		
346							
347	**Daily Equipment Cost**				**$350**	**Per Day**	
348							
349	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
350	Per diem	1.0	day	$480.00	$480		4 field crew x $120/day
351	PPE, office supplies	1.0	day	$200	$200		4 field crew x $50/day
352	**Subtotal Cost**			**680**	**$680**	**Per day**	
353							
354	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
355	Sediment - dioxins (8290)	1.0	ea	$715	$715		Columbia 11/8/06 estimate +10% markup
356	Sediment grain size, TOC, solids	1.0	ea	$175	$175		
357	Sediment - 2,3,7,8 TCDD (8290)	1.0	ea	$358	$358		Columbia + 10%
358	TCLP (131)	1.0	ea	$94	$94		
359	Metals (6020)	1.0	ea	$185	$185		
360	Pesticides (8081A)	1.0	ea	$176	$176		
361	Volatiles (8260B)	1.0	ea	$138	$138		
362	Semivolatiles (8270C)	1.0	ea	$325	$325		
363	**Subtotal - dioxins and all TCLP**	**1.0**	**ea**		**$1,806**		**All above except 2,3,7,8 TCDD**
364	Animal - freeze dry, homogenize, lipids	3.0	ea	$39	$116		Cost for each procedure
365	Animal tissue dioxins	1.0	ea	$715	$715		
366	**Subtotal animal tissue**				**$831**		**dioxins and 3 processing steps**
367	Water - dioxins	1.0	ea	$715	$715		
368	**Subtotal Cost**						
369							

Unit Costs
Source Area Soil Alternatives

	B	C	D	E	F	G	H
370	**Soil chemistry monitoring event**						
371	**Estimated duration:**					2	days to mobilize and sample
372			**days**				
373	**Craft Labor**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
374	Project manager	1.0	day	$1,200	$1,200	$150	per hr
375	Senior scientist	1.0	day	$960	$960	$120	per hr
376	Sample crew	2.0	day	$2,160	$4,320	$90	2 staff x 12 hr/day
377	Data analysis and report	2.0	day	$1,280	$2,560	$80	2 staff
378	GIS, production	2.0	day	$560	$1,120	$70	per hour
379	**Subtotal Costs**				**$10,160**	**Per event**	
380	**Labor Daily Cost**				$5,080	Per day	
381							
382	**Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
383	Vehicles	2.0	day	$150	$300		van and fuel
384	Cell phones, radios	2.0	day	$50	$100		
385	dGPS	2.0	day	$100	$200		
386	Computer and survey software	2.0	day	$50	$100		
387	Soil boring equipment	2.0	day	$1,200	$2,400		
388							
389	**Subtotal Cost**				**$3,100**	**Per event**	
390	**Equipment Daily Cost**				$1,550	Per day	
391							
392	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
393	Per diem	4.0	day	$100.00	$400		
394	PPE, office supplies	4.0	day	$50	$200		
395	Shipping equipment, sample	1.0	ea	$1,000	$1,000		
396	**Subtotal Cost**				**$1,600**	**Per event**	
397	**Materials Daily Cost**				$800	Per day	
398							
399	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
400							
401	**Subtotal Cost**				**$0**		
402							
403	**TOTAL COST**				**$14,860.00**	**Per Event**	
404	**TOTAL DAILY COST**				**$7,430.00**	**Per Day**	
405	**Physical survey monitoring event**						
406	**Estimated duration:**					2	days field time
407	**Craft Labor**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
408	Project manager	1.0	day	$1,200	$1,200	$150	per hr
409	Senior scientist	1.0	day	$960	$960	$120	per hr
410	Survey crew	2.0	day	$1,800	$3,600	$75	2 staff x 12 hr/day
411	Data analysis and report	2.0	day	$1,280	$2,560	$80	2 staff
412	GIS, production	2.0	day	$560	$1,120	$70	per hour
413	**Subtotal Costs**				**$9,440**	**Per event**	
414	**Labor Daily Cost**				$4,720	Per day	
415							
416	**Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
417	Vehicles	2.0	day	$150	$300		van and fuel
418	Cell phones, radios	2.0	day	$50	$100		
419	dGPS	2.0	day	$100	$200		
420	Computer and survey software	2.0	day	$50	$100		
421							
422	**Subtotal Cost**				$700	Per event	
423	**Equipment Daily Cost**				**$350**	**Per day**	
424							
425	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
426	Per diem	4.0	day	$100.00	$400		
427	PPE, office supplies	4.0	day	$50	$200		
428	Shipping equipment, supplies	1.0	ea	$1,000	$1,000		
429	**Subtotal Cost**				$1,600	Per event	
430	**Materials Daily Cost**				**$800**	**Per day**	
431							

Unit Costs
Source Area Soil Alternatives

	B	C	D	E	F	G	H
432	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
433							
434							
435	Subtotal Cost				**$0**		
436							
437	TOTAL COST				**$11,740**	Per Event	
438	TOTAL DAILY COST				**$5,870**	Per Day	
439	**Ecologic survey monitoring event**						
440	**Estimated duration:**		stations			2	days field time concurrent with sediment
441			**days**				
442	**Craft Labor**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
443	Project manager	1.0	day	$1,200	$1,200	$150	per hr
444	Senior scientist	1.0	day	$960	$960	$120	per hr
445	Survey crew	2.0	day	$1,800	$3,600	$75	2 staff x 12 hr/day
446	Data analysis and report	2.0	day	$1,280	$2,560	$80	2 staff
447	GIS, production	2.0	day	$560	$1,120	$70	per hour
448							
449	**Subtotal Costs**				**$9,440**	**Per event**	
450	**Labor Daily Cost**				$4,720	Per day	
451							
452	**Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
453	Vehicles	2.0	day	$150	$300		van and fuel
454	Cell phones, radios	2.0	day	$50	$100		
455	dGPS	2.0	day	$100	$200		
456							
457	**Subtotal Cost**				**$600**	**Per event**	
458	**Equipment Daily Cost**				$300	Per day	
459							
460							
461							
462	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
463	Per diem	4.0	day	$100.00	$400		
464	PPE, office supplies	4.0	day	$50	$200		
465	Shipping equipment, samples	1.0	ea	$1,000	$1,000		
466	**Subtotal Cost**				**$1,600**	**Per event**	
467	**Materials Daily Cost**				$800	Per day	
468							
469	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
470							
471	Subtotal Cost				**$0**		
472							
473	**TOTAL COST**				**$11,640**	**Per Event**	
474	**TOTAL DAILY COST**				**$5,820**	**Per Day**	
475							
476	**DESIGN COSTS**						
477							
478	Project manager			$1,200		$150	per hour
479	Senior engineer			$960		$120	per hour
480	Staff engineers			$1,800		$75	per hour
481	CAD			$600		$75	per hour
482	Tech support			$480		$60	per hour
483	Labor total			$5,040			
484	**Labor unit cost per hour**				**$90.00**		7 person office staff working 56 labor hours per day.
485							

Unit Costs
Source Area Soil Alternatives

	B	C	D	E	F	G	H
486	**Load and Off-site Disposal**						
487	**Estimated duration:**	260	Tons	divided by	260	tn/day production	
488		**1.0**	**days**				
489	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
490	Equip operator	1.0	day	$794	$794	$99	1 total
491	Laborer	1.0	day	$1,303	$1,303	$81	2 total
492	QC officer	1.0	day	$600	$600	$75	
493							
494	Subtotal Costs				$2,697		
495	**Labor Unit Costs**				**$10.37**	**Per Ton**	
496							
497	Equipment	**Units**		**Unit Rate**	**Total Cost**		**Comments**
498	Loader	1.0	day	$300	$300		3 cy wheel loader Means p 21
499	Decontamination system	1.0	day	$100	$100		
500							
501	Subtotal Cost				$400		
502	**Equipment Unit Costs**				**$1.54**	**Per Ton**	
503							
504	Materials	**Units**		**Unit Rate**	**Total Cost**		**Comments**
505	Health and safety equip	1.0	Days	$200	$200		4 crew x $50/day
506	Per diem	1.0	Days	$240	$240		2 crew x $120/day
507	Subtotal Cost				$440		
508	**Material Unit Cost**				**$1.69**		**Per Ton**
509							
510	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
511	Hazardous waste landfill	260	tons	$391	$101,530		Clean Harbors $355 per ton plus 10% markup
512	Debris	13	tons	$391	$5,077		for dioxins less than 10 time UTS
513	Subtotal Cost				$106,607		
514	**Subcontract Unit Costs**				**$410**	**Per Ton**	
515							
516	**TOTAL UNIT COST - HAZARDOUS WASTE LANDFILL**				**$424**	**Per Ton**	
517	Incineration	260	tons	$880	$228,800		Clean Harbors $800 per ton plus 10%
518	**Subcontract Unit Cost**				**$880**	**Per Ton**	
519	**TOTAL UNIT COST - OFF-SITE INCINERATION**				**$894**	**Per Ton**	
520							
521	**On-site Incineration**						
522	**Estimated duration:**	260	Tons	divided by	260	tn/day production	
523		**1.0**	**days**				
524	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
525	Equip operator	1.0	day	$794	$794	$99	1 total
526	Laborer	1.0	day	$1,303	$1,303	$81	2 total
527	QC officer	1.0	day	$600	$600	$75	
528							
529	Subtotal Costs				$2,697		
530	**Labor Unit Costs**				**$10.37**	**Per Ton**	
531							
532	Equipment	**Units**		**Unit Rate**	**Total Cost**		**Comments**
533	Loader	1.0	day	$300	$300		3 cy wheel loader Means p 21
534	Decontamination system	1.0	day	$100	$100		
535							
536	Subtotal Cost				$400		
537	**Equipment Unit Costs**				**$1.54**	**Per Ton**	
538							

Unit Costs
Source Area Soil Alternatives

	B	C	D	E	F	G	H
539	Materials	**Units**		**Unit Rate**	**Total Cost**		**Comments**
540	Health and safety equip	1.0	Days	$500	$500		10 crew x $50/day
541	Per diem	1.0	Days	$480	$480		4 crew x $120/day
542	Subtotal Cost				$980		
543	**Material Unit Cost**				**$3.77**	**Per Ton**	
544							
545	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
546	Incinerate dredged material	260	tons	600.00	$156,000		Ref: Incineration cost summary table.
547	**Solid waste landfill of ash**	1	tons	50.00	$50		Range $264 to $1,087 per ton for soil
548							Use $600 per ton
549	Subtotal Cost				$156,050		
550	**Subcontract Unit Costs**				**$600**	**Per Ton**	
551							
552	**TOTAL UNIT COST**				**$616**	**Per Ton**	
553							
554	**Excavate Soil**						
555	**Estimated duration:**	400	cy	divided by	400	icy/day	production with 1 excavators
556		**1.0**	**days**			icy =	in-situ cubic yards
557	**Craft Labor**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
558	Foreman	1.0	day	$847	$847	$106	per hour
559	Equip operator	1.0	day	$794	$794	$99	1 total on excavators
560							
561	Laborer	1.0	day	$1,303	$1,303	$81	2 total
562							
563							
564	Subtotal Cost			$2,944	$2,944		Rates confirmed with Means Building Costs
565	**Labor Unit Cost**				**7.36**	**Per Cy**	
566							
567	**Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
568	Low-ground pressure excavator	1.0	day	$890	$890	$890	2.0 cy excavator Means p 20 & www.machinerytrader Cat 345BL $3,000 per week
569							
570							
571					$0		
572	Subtotal Cost			$890	$890		
573	**Equipment Unit Cost**				**$2.23**	**Per Cy**	
574							
575	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
576	Health and safety equip	1.0	Days	$450	$450		3 crew x $50/day
577							
578	Small Tools	1.0	day	$100	$100		
579					$0		
580	Subtotal Cost				$550		
581	**Material Unit Cost**				**$1.38**	**Per Cy**	
582							

Unit Costs
Source Area Soil Alternatives

	B	C	D	E	F	G	H
583	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
584							
585	Subtotal Cost				**$0**	**Per cy**	
586							
587	**TOTAL UNIT COST**				**$10.96**	**Per Cy**	
588							
589	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
590	Sediment - dioxins (8290)	1.0	ea	$715	$715		Columbia 11/8/06 estimate +10% markup
591	Sediment grain size, TOC, solids	1.0	ea	$175	$175		
592	Sediment - 2,3,7,8 TCDD (8290)	1.0	ea	$358	$358		Columbia + 10%
593	TCLP (131)	1.0	ea	$94	$94		
594	Metals (6020)	1.0	ea	$185	$185		
595	Pesticides (8081A)	1.0	ea	$176	$176		
596	Volatiles (8260B)	1.0	ea	$138	$138		
597	Semivolatiles (8270C)	1.0	ea	$325	$325		
598	**Subtotal - dioxins and TCLP**	**1.0**	**ea**		**$1,806**		**All above except 2,3,7,8 TCDD**

Volume Estimates
Source Area Soil Alternatives

	B	C	D	E	F	G	H	I
1	**Description**	**No.**	**Length**	**Width**	**Thickness**	**Quantity calc.**	**Quantity**	**Units**
2			**Ft.**	**Ft.**	**Ft.**	**(LF/SF/CF)**		
3								
4								
5	**CAP EXTENSION**							
6	Excavation	1.0	60,500	1.0	2.5	151,250	5,602	cy
7	Silt base layer	1.0	60,500	1.0	0.5	30,250	1,815	tons
8	Geotextile	1.0	60,500	1.0	1	60,500	60,500	sf
9	Earth fill	1.0	60,500	1.0	1.5	90,750	5,445	tons
10	Topsoil and planting	1.0	60,500	1.0	1	60,500	60,500	sf
11								
12								
13								
14	**ALT 3 UPGRADE AND MAINTAIN EXISTING SURFACES**						**6.4**	**Acres**
15								
16	Cap Area 1		85,000					
17	Cap Area 2		48,000					
18	Cap Area 3		53,000					
19	Parking - Southwest Centredale Manor		34,000					
20	Parking - North Centredale Manor		27,000					
21	Parking - South Brook Village		32,000					
22	Total Cap Areas		186,000			186,000	4.3	Acres
23	Total Parking Lot Areas		93,000			93,000	2.1	Acres
24	Cap Extension Area		60,500			60,500	1.4	Acres
25								
26	Clear existing vegetation							
27	Cap areas	1.0	186,000	1	1	186,000		sf
28								
29	Area 1 - fill 0.5 ft	1.0	85,000	1	0.5	42,500	2,550	tons
30	Area 2 - fill 0.5 ft	1.0	48,000	1	0.5	24,000	1,440	tons
31	Area 3 - fill average of 0.5 ft	1	53,000	1	0.5	26,500	1,590	tons
32	Total grading fill						5,580	tons
33								
34								
35	Topsoil and plantings						**186,000**	**sf**
36								
37	Seal asphalt						**93,000**	**sf**
38	**CAP EXTENTION**							
39								
40	Excavation	1.0	60,500	1.0	0.5	30,250	1,120	cy
41	Silt base layer	1.0	60,500	1.0	0.5	30,250	1,815	tons
42	Geotextile	1.0	60,500	1.0	1	60,500	60,500	sf
43	Earth fill	1.0	60,500	1.0	1.5	90,750	5,445	tons
44	Topsoil and planting	1.0	60,500	1.0	1	60,500	60,500	sf
45								
46	Principal Threat Waste						**5,500**	**cy**
47	TSCA/GB Soil Excavation						**4,300**	**cy**
48	GA Soil Excavation	Volume from 7/18/11 spreadsheet by D. Dahlen					**4,500**	**cy**
49	Soil disposal	In-place density			120	pcf		**tons**
50	PTW						**8,910**	**tons**
51	TSCA/GB Soil						**6,966**	**tons**
52	GA Soil Excavation						**7,290**	**tons**

Volume Estimates
Source Area Soil Alternatives

	B	C	D	E	F	G	H	I
1	**Description**	**No.**	**Length**	**Width**	**Thickness**	**Quantity calc.**	**Quantity**	**Units**
2			**Ft.**	**Ft.**	**Ft.**	**(LF/SF/CF)**		
53		Assume 100% of the PTW soils require incineration						
54		Assume 10% of the TSCA/GB requires incineration.						
55		Asssume 10% of GA soils require incineration						
56	TSCA/GB Incineration	10%					**697**	**tons**
57	TSCA/GB landfill	90%					**6,269**	**tons**
58	GA Incineration	10%					**729**	**tons**
59	GA landfill	90%					**6,561**	**tons**
60								
61	Backfill						**23,166**	**tons**
62								
63	**ALT 4 CONVERT TO RCRA CAPS AND MAINTAIN**						**6.4**	**Acres**
64	Cap Area 1		85,000					
65	Cap Area 2		48,000					
66	Cap Area 3		53,000					
67	Parking - Southwest Centredale Manor		34,000					
68	Parking - North Centredale Manor		27,000					
69	Parking - South Brook Village		32,000					
70	Total Cap Areas		186,000			186,000	4.3	Acres
71	Total Parking Lot Areas		93,000			93,000	2.1	Acres
72								
73	Use unit weight of 130 pcf for cap soils				1.76	tons per cy		
74	**1. CAP AREAS**							
75	Clear existing vegetation							
76	Cap areas	1.0	186,000	1	1	186,000		sf
77	Fill to create 3% slope							
78	Area 1 - fill 5 ft at center	1.0	85,000	1	2.5	212,500	12,750	tons
79	Area 2 - fill 1.5 ft at center	1.0	48,000	1	0.8	36,000	2,160	tons
80	Area 3 - no fill needed							
81	Total grading fill					248,500	14,910	tons
82								
83								
84	Geomembrane						**186,000**	**sf**
85	Drain layer	1.0	186,000	1	1.0	186,000	6,889	cy
86							**12,090**	**tons**
87	Geotextile						**186,000**	**sf**
88	Protective soil layer	1.0	186,000	1	1.0	186,000	6,889	cy
89							**12,090**	**tons**
90	Topsoil (price with vegetation)							
91								
92	**2. PAVEMENT AREAS**							
93	Demolish asphalt						**93,000**	**sf**
94	Fill for 3% slope - assume 1.0 ft	1.0	93,000	1	1.0	93,000	3,444	cy
95							**6,045**	**tons**
96	Geomembrane						**93,000**	**sf**
97	Drain layer	1.0	93,000	1	1.0	93,000	3,444	cy
98							**6,045**	**tons**
99	Geotextile						**93,000**	**sf**
100	Gravel base	1.0	93,000	1	1.0	93,000	3,444	cy
101							**6,045**	**tons**
102	Asphalt pavement						**93,000**	**sf**
103								

Volume Estimates
Source Area Soil Alternatives

	B	C	D	E	F	G	H	I
1	**Description**	**No.**	**Length**	**Width**	**Thickness**	**Quantity calc.**	**Quantity**	**Units**
2			**Ft.**	**Ft.**	**Ft.**	**(LF/SF/CF)**		
104	**Utility clean corridors**							
105	Smith to Centredale Manor						720	lf
106	Smith to Brook Village						180	lf
107	Centredale to Steere Ave						100	lf
108	Total						1000	lf
109	Sewer lines						**280**	**lf**
110	Water lines						**820**	**lf**
111	Gas lines						**820**	**lf**
112	Power lines						**820**	**lf**
113	Telephone lines						**820**	**lf**
114	Communication cable						820	**lf**
115	Storm drains in parking lots	1	1200	1	1	1,200		
116		4	120	1	1	480		
117		2	180	1	1	360		
118		2	240	1	1	480		
119	Storm drains					**2,520**		**lf**
120	parking lot lighting - use same as storm drain							
121	Lighting conduits					**2,520**		**lf**
122								
123	**CAP EXTENTION**							
124								
125	Excavation	1.0	60,500	1.0	0.5	30,250	**1,120**	**cy**
126	Silt base layer	1.0	60,500	1.0	0.5	30,250	**1,815**	**tons**
127	Geotextile	1.0	60,500	1.0	1	60,500	**60,500**	**sf**
128	Geomembrane	1	60,500	1.0	1	60,500	**60,500**	**sf**
129	Drain layer	1.0	60,500	1.0	1.0	60,500	2,241	cy
130							**3,933**	**tons**
131	Geotextile						**60,500**	**sf**
132	Protective soil layer	1.0	60,500	1.0	1.0	60,500	2,241	cy
133								
134								
135	Topsoil and planting	1.0	60,500	1.0	1	60,500	**60,500**	**sf**

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Appendix J Cost Estimates

Source Area Groundwater Alternatives

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Present Worth Costs
Source Area Groundwater Alternatives

	A	B	C	D	E
1	**Source Area Groundwater Alternatives**				
2			ALT 1 No Action	ALT 2 Excavation/ Dewatering	ALT 5 In-Situ Chemical Oxidation
3	**Remdiation Area:**	**0.1**	**Acres Groundwater Area**		
4	**Remediation Volume**	**1,300**	**Cubic Yards**		
5					
6	**Construction Cost**		$0	$1,826,193	$374,412
7	Design costs		$0	$240,997	$230,692
8	Oversight & QC costs		$0	$113,721	$98,580
9	Contingency	25%	$0	$545,228	$175,921
10	Post-construction Monitoring		$0		
11	**CAPITAL COSTS**		**$0**	**$2,730,000**	**$880,000**
12					
13	Annual Monitoring & Maintenance Years		$21,605	$70,626	$26,563
14	**TOTAL PRESENT WORTH COSTS**		**$268,000**	**$3,610,000**	**$1,210,000**
15					
16	Notes:				
17	Present worth factors for 7% discout factor				
18	Years 1 to 30	12.409			
19	Costs for 5-year reviews covered under Source Area soil alternatives.				

Construction Costs
Source Area Groundwater Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M	N
1	**Description**	**Quantity**	**Units**	**Daily output**	**Unit Costs**				**Costs**				
2					**Labor**	**Equipment**	**Materials**	**Subcontract**	**Labor**	**Equipment**	**Materials**	**Subcontract**	**TOTAL**
3	**CONSTRUCTION COSTS**												
4													
5	**ALT 2 Excavation/ Dewatering**												
6	Demolish asphalt	4,400	sf					$1.16	$0	$0	$0	$5,084	$5,084
7	Sheet wall	5,700	sf	2,000	$1,965.52	$8,000.00	$17.50	$0.00	$11,203	$8,000	$99,750	$0	$118,953
8	Fill	1,716	tons	500	$12.87	$3.57	$33.06		$22,079	$6,126	$56,731	$0	$84,936
9	Geomembrane	4,400	sf					$0.88	$0	$0	$0	$3,850	$3,850
10	Drain layer	286	tons	400	$17.13	$2.59	$37.50		$4,898	$742	$10,725	$0	$16,365
11	Geotextile	4,400	sf					$0.38	$0	$0	$0	$1,650	$1,650
12	Gravel base	286	tons	500	$12.87	$3.57	$33.06		$3,680	$1,021	$9,455	$0	$14,156
13	New Asphalt	4,400	sf					$1.59	$0	$0	$0	$6,985	$6,985
14	Remove and replace utilities												
15	Sanitary sewer	180	lf	100	$50.31	$16.45	$122.40		$9,056	$2,961	$22,032	$0	$34,049
16	Water lines	0	lf	160	$31.45	$7.97	$35.58		$0	$0	$0	$0	$0
17	Gas lines	0	lf	160	$31.45	$7.97	$35.58		$0	$0	$0	$0	$0
18	Electric power lines	0	lf	150	$33.54	$8.83	$30.13		$0	$0	$0	$0	$0
19	Telephone lines	0	lf	150	$33.54	$8.83	$30.13		$0	$0	$0	$0	$0
20	Communication cables	0	lf	150	$33.54	$8.83	$30.13		$0	$0	$0	$0	$0
21	Storm drains	1,200	lf	160	$31.45	$7.97	$35.58		$37,735	$9,563	$42,694	$0	$89,991
22	Lighting conduits	1,200	lf	150	$33.54	$8.83	$30.13		$40,250	$10,600	$36,160	$0	$87,010
23	Superintentent & field engr	20	days		$1,920				$38,400	$0	$0	$0	$38,400
24	Project manager	20	days		$1,200				$24,000	$0	$0	$0	$24,000
25	Clerk	20	days		$360				$7,200	$0	$0	$0	$7,200
26	Field office, utilities, vehicles	1	mo			$4,575	$680		$0	$4,575	$680	$0	$5,255
27	**Excavation Off-site Disposal**												
28	Off-site Incineration	458	tons		$20.75	$4.58	$5.23	$880	$9,494	$2,094	$2,394	$402,688	$416,670
29	Hazardous Waste Landfill	1,830	tons		$20.75	$4.58	$5.23	$410	$37,977	$8,378	$9,574	$750,510	$806,438
30	**Wastewater Treatment**												
31	Dewatering	1	LS		$0	$0	$8,000	$57,200	$0	$0	$8,000	$57,200	$65,200
32													
33	**EXCAVATION/DEWATERING -- TOTAL CONSTRUCTION COST**								**$245,972**	**$54,059**	**$298,195**	**$1,227,967**	**$1,826,193**
34													
35													
36	**ALT 5 In-Situ Chemical Oxidation**												
37	ISCO Cool-Ox	2,222	CY	250				$68	$0	$0	$0	$151,018	$151,018
38	Superintentent & field engr	9	days		$1,920				$17,067	$0	$0	$0	$17,067
39	Project manager	9	days		$1,200				$10,667	$0	$0	$0	$10,667
40	Clerk	9	days		$360				$3,200	$0	$0	$0	$3,200
41	Field office, utilities, vehicles	1	mo			$4,575	$680		$0	$4,575	$680	$0	$5,255
42	*2nd Injection*												
43	ISCO Cool-Ox	2,222	CY	250				$68	$0	$0	$0	$151,018	$151,018
44	Superintentent & field engr	9	days		$1,920				$17,067	$0	$0	$0	$17,067
45	Project manager	9	days		$1,200				$10,667	$0	$0	$0	$10,667
46	Clerk	9	days		$360				$3,200	$0	$0	$0	$3,200
47	Field office, utilities, vehicles	1.0	mo			$4,575	$680		$0	$4,575	$680	$0	$5,255
48													
49	**PRB (BIOWALL) -- TOTAL CONSTRUCTION COST**								**$61,867**	**$9,150**	**$1,360**	**$302,036**	**$374,412**

Design Costs
Source Area Groundwater Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M
3	**Description**	**Quantity**	**Units**	**Unit Costs**				**Costs**				
4				**Labor**	**Equipment**	**Materials**	**Subcontract**	**Labor**	**Equipment**	**Materials**	**Subcontract**	**TOTAL**
5	**DESIGN COSTS**											
6												
7												
8	**ALT 2 Excavation/ Dewatering**											
9	Physical survey	2	day	$4,720	$350	$800	$0	$9,440	$700	$1,600	$0	$11,740
10	Soil borings		day	$0	$2,400	$0	$0	$0	$0	$0	$0	$0
11	Well installation	240	LF	$24	$5	$4	$0	$5,842	$1,200	$840	$0	$7,882
12	Groundwater monitoring	5	day	$7,000	$500	$800	$0	$35,000	$2,500	$4,000	$0	$41,500
13	Groundwater samples	25	each				$715				$17,875	$17,875
14	Soil samples		each				$853				$0	$0
15	Wastewater samples		each				$1,722				$0	$0
16											$0	$0
17	Design report & calculations	400	hours	$90				$36,000	$0	$0	$0	$36,000
18	Drawings - 10 sheets	800	hours	$90				$72,000	$0	$0	$0	$72,000
19	Specifications	200	hours	$90				$18,000	$0	$0	$0	$18,000
20	Work plans	400	hours	$90				$36,000	$0	$0	$0	$36,000
21	**EXCAVATION/ DEWATERING DESIGN COST**							**$212,282**	**$4,400**	**$6,440**	**$17,875**	**$240,997**
22												
23												
24	**ALT 5 In-Situ Chemical Oxidation**											
25	Physical survey	2	day	$4,720	$350	$800	$0	$9,440	$700	$1,600	$0	$11,740
26	Soil borings	5	day	$0	$2,400	$0	$0	$0	$12,000	$0	$0	$12,000
27	Well installation	100	LF	$24	$5	$4	$0	$2,434	$500	$350	$0	$3,284
28	Groundwater monitoring	2	day	$7,000	$500	$800	$0	$14,000	$1,000	$1,600	$0	$16,600
29	Groundwater samples	14	each				$715				$10,010	$10,010
30	Soil samples	75	each				$853				$63,938	$63,938
31	Wastewater samples		each				$1,722				$0	$0
32	Soil oxidant demand tests	5	each	$5,040			$600	$5,040			$3,000	$8,040
33	Treatability Test	2	days	$5,040			$16,000	$10,080			$32,000	$42,080
34											$0	$0
35	Design report & calculations	150	hours	$90				$13,500	$0	$0	$0	$13,500
36	Drawings - 3 sheets	300	hours	$90				$27,000	$0	$0	$0	$27,000
37	Specifications	100	hours	$90				$9,000	$0	$0	$0	$9,000
38	Work plans	150	hours	$90				$13,500	$0	$0	$0	$13,500
39	**IN SITU CHEMICAL OXIDATION DESIGN COST**							**$103,994**	**$14,200**	**$3,550**	**$108,948**	**$230,692**
40												

Construction Oversight Costs
Source Area Groundwater Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M
1	**Description**	**Quantity**	**Units**	**Unit Costs**				**Costs**				
2				**Labor**	**Equipment**	**Materials**	**Subcontract**	**Labor**	**Equipment**	**Materials**	**Subcontract**	**TOTAL**
3	**CONSTRUCTION OVERSIGHT COSTS**											
4												
5	**ALT 2 Excavation/ Dewatering**											
6	Project manager	20	days	$1,200				$24,000	$0	$0	$0	$24,000
7	Resident engineer	20	days	$960				$19,200	$0	$0	$0	$19,200
8	Water quality crew	2	days	$2,160	$350	$800		$4,320	$700	$1,600	$0	$6,620
9	Survey crew	3	days	$1,440	$350	$680		$4,320	$1,050	$2,040	$0	$7,410
10	Soil sample crew	0	days	$1,440	$350	$680		$0	$0	$0	$0	$0
11	Admin support	20	days	$360				$7,200	$0	$0	$0	$7,200
12	Field office	1	months		$1,075			$0	$1,075	$0	$0	$1,075
13	Vehicles	1	months		$2,500			$0	$2,500	$0	$0	$2,500
14	Cell phones, radios	1	months		$750			$0	$750	$0	$0	$750
15	Utilities	1	months		$250			$0	$250	$0	$0	$250
16	Well installation	360	LF	$24	$5	$4	$0	$8,763	$1,800	$1,260	$0	$11,823
17	Soil confirmation samples	10	each				$853	$0	$0	$0	$8,525	$8,525
18	Groundwater samples	10	each				$715	$0	$0	$0	$7,150	$7,150
19	Wastewater samples	10	each				$1,722	$0	$0	$0	$17,218	$17,218
20												
21	**EXCAVATION/ DEWATERING OVERSIGHT COST**							**$67,803**	**$8,125**	**$4,900**	**$32,893**	**$113,721**
22												
23	**ALT 5 In-Situ Chemical Oxidation**											
24	Project manager	9	days	$1,200				$10,667	$0	$0	$0	$10,667
25	Resident engineer	9	days	$960				$8,533	$0	$0	$0	$8,533
26	Water quality crew	2	days	$2,160	$350	$800		$4,320	$700	$1,600	$0	$6,620
27	Survey crew	3	days	$1,440	$350	$680		$4,320	$1,050	$2,040	$0	$7,410
28	Soil sample crew	2	days	$1,440	$350	$680		$2,880	$700	$1,360	$0	$4,940
29	Admin support	9	days	$360				$3,200	$0	$0	$0	$3,200
30	Field office	1	months		$1,075			$0	$1,075	$0	$0	$1,075
31	Vehicles	1	months		$2,500			$0	$2,500	$0	$0	$2,500
32	Cell phones, radios	1	months		$750			$0	$750	$0	$0	$750
33	Utilities	1	months		$250			$0	$250	$0	$0	$250
34	Soil confirmation samples	50	each				$853	$0	$0	$0	$42,625	$42,625
35	Groundwater samples	14	each				$715	$0	$0	$0	$10,010	$10,010
36	Wastewater samples	0	each				$1,722	$0	$0	$0	$0	$0
37												
38	**PRB (Biowall) OVERSIGHT COST**							**$33,920**	**$7,025**	**$5,000**	**$52,635**	**$98,580**
39												

Long-term Monitoring Costs
Source Area Groundwater Alternatives

	B	C	D	E	F	G	H	I	J	K	L	M
3	**MONITORING COSTS**											
4												
5												
6	**ALT 2 Excavation/ Dewatering**											
7	**A. Annual work years 1 to 30**											
8	Groundwater monitoring	5	days	$7,000	$500	$800		$35,000	$2,500	$4,000	$0	$41,500
9	Physical survey		days	$4,720	$350	$800		$0	$0	$0	$0	$0
10	Groundwater chemistry	25					$715	$0	$0	$0	$17,875	$17,875
11	Water chemistry						$1,722	$0	$0	$0	$0	$0
12	Soil chemistry						$715	$0	$0	$0	$0	$0
13	**TOTAL ANNUAL MONITORING IN YEARS 1 TO 30**											**$59,375**
14												
15												
16	**B. Annual maintenace**											
17	Assume redevelopment of groundwater monitoring wells once every 5 years.											
18	Redevelopment	20	wells				$562.54	$0	$0	$0	$11,251	$11,251
19	**ANNUAL MAINTENANCE**							$0	$0	$0	$0	**$11,251**
20												
21												
22	**ALT 5 In-Situ Chemical Oxidation**											
23	**A. Annual work years 1 to 30**											
24	Groundwater monitoring	2	days	$7,000	$500	$800		$14,000	$1,000	$1,600	$0	$16,600
25	Physical survey		days	$4,720	$350	$800		$0	$0	$0	$0	$0
26	Groundwater chemistry	10					$715	$0	$0	$0	$7,150	$7,150
27	Water chemistry						$1,722	$0	$0	$0	$0	$0
28	Soil chemistry						$715	$0	$0	$0	$0	$0
29	**TOTAL ANNUAL MONITORING IN YEARS 1 TO 30**											**$23,750**
30												
31												$0
32	**B. Annual maintenace**											$0
33	Assume redevelopment of groundwater monitoring wells once every 5 years.											
34	Redevelopment	5	wells				$562.54	$0	$0	$0	$2,813	$2,813
35	**ANNUAL MAINTENANCE**							$0	$0	$0	$0	**$2,813**
36												
37	**No Further Action**											
38	**A. Annual work years 1 to 30**											
39	Groundwater monitoring	2	days	$7,000	$500	$800		$14,000	$1,000	$1,600	$0	$16,600
40	Physical survey		days	$4,720	$350	$800		$0	$0	$0	$0	$0
41	Groundwater chemistry	7					$715	$0	$0	$0	$5,005	$5,005
42	Water chemistry						$715	$0	$0	$0	$0	$0
43	Soil chemistry						$715	$0	$0	$0	$0	$0
44	**TOTAL ANNUAL MONITORING IN YEARS 1 TO 30**											**$21,605**
45												
46	Costs for 5-year reviews covered under Source Area soil alternatives											

Unit Costs
Source Area Groundwater Alternatives

	B	C	D	E	F	G	H
1							
2	**Imported Fill - Site Grading and Protective Layer**						
3	**Estimated duration:**	500	Tons	divided by	500	tn/day production	
4		**1.0**	**days**				
5	**Craft Labor**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
6	Foreman	1.0	day	$847	$847	$106	per hour
7	Equip operators	1.0	day	$2,382	$2,382	$99	3 total
8	QC technician	1.0	day	$650	$650	$81	per hour
9	Laborer	1.0	day	$1,955	$1,955	$81	3 total
10	Safety officer	1.0	day	$600	$600	$75	per hour
11							
12	Subtotal Cost			$6,433	$6,433		
13	**Labor Unit Cost**				**$12.87**	**Per Ton**	
14							
15							
16	**Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
17	Loader	1.0	day	$495	$495		3 cy wheel loader; Sunbelt Rentals 6/3/09
18	Grader	1.0	day	$430	$430		Road grader Means p 596
19	Dozer to spread	1.0	day	$860	$860		200 hp dozer Means p 21
20					$0		
21	Subtotal Cost			$1,785	$1,785		
22	**Equipment Unit Cost**				**$3.57**	**Per Ton**	
23							
24	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
25	Sand for cap	500	tons	$30	$15,000		Truck delivery to site at $24 per ton +25%
26	Health and safety equip	1.0	Days	$450	$450		9 crew x $50/day
27	Per diem	1.0	Days	$1,080	$1,080		9 crew x $120/day
28	Subtotal Cost				$16,530		
29	**Material Unit Cost**				**$33.06**	**Per Ton**	
30							
31	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
32					$0		
33					$0		
34	**Subtotal Cost**				$0		
35	**TOTAL UNIT COST**				**$49.50**	**Per Ton**	
36							
37	**Drain Layer over Membrane**						
38	**Estimated duration:**	300	tn	divided by	400	tn/day production	
39		**0.8**	**Days**				
40	**Craft Labor**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
41	Foreman	0.8	day	$847	$635	$106	per hour
42	Equip operators	0.8	day	$2,382	$1,786	$99	3 total
43	QC technician	1.0	day	$650	$650	$81	per hour
44	Safety officer	1.0	day	$600	$600	$75	per hour
45	Laborers	0.8	day	$1,955	$1,466	$81	3 total
46	Subtotal Cost				$5,138		
47	**Labor Unit Cost**				**$17.13**	**Per Ton**	
48							
49	**Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
50	Dozer	0.8	day	$688	$516		100 hp dozer; Sunbelt Rentals 6/3/09
51	Grader	0.8	day	$350	$263		Small grader to spread
52	Loader to deliver material	0.8	day	$495	$371		3 cy wheel loader; Sunbelt Rentals 6/3/09
53	Subtotal Cost				$778		
54	**Equipment Unit Cost**				**$2.59**	**Per Ton**	
55							
56	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
57					$0		
58	Drain gravel	300	Tons	$38	$11,250		$30 per ton plus markup
59	Subtotal Cost				$11,250		
60	**Material Unit Cost**				**$37.50**	**Per Ton**	
61							
62	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
63							
64							
65	Subtotal Cost				$0		
66	**Subcontract Unit Cost**				**$0.00**	**Per Ton**	
67	**TOTAL UNIT COST**				**$57.22**	**Per Ton**	
68							

	B	C	D	E	F	G	H
69	**Clean Corridor - Sanitary Sewer**						
70	**Estimated duration:**	100	lf	divided by	100	lf/day production	
71		**1.0**	**Days**				
72	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
73	Foreman	1.0	day	$847	$847	$106	Trench excavation/ backfill Mean p. 51
74	Equip operators	1.0	day	$1,588	$1,588	$99	4' W x 10' D = 1.5 cy/lf
75	Laborers	1.0	day	$1,955	$1,955	$81	24" concrete pipe Mean p 61 100 lf/day
76	Truck driver	1.0	day	$642	$642	$80	
77			day		$0		
78	Subtotal Cost				$5,031		
79	**Labor Unit Cost**				**$50.31**	**Per lf**	
80							
81	Equipment	**Units**		**Unit Rate**	**Total Cost**		**Comments**
82		1.0	day	$105	$105		Compactor on loader Mean p 20
83	Excavator	1.0	day	$825	$825		1.5 cy excavator; Sunbelt Rentals 6/3/09
84	Loader	1.0	day	$235	$235		1.5 cy wheel loader Means p 21
85	Highway trucks (1)	1.0	day	$480	$480		16 ton truck Means p 22
86							
87	Subtotal Cost				$1,645		
88	**Equipment Unit Cost**				**$16.45**	**Per lf**	
89							
90	Materials	**Units**		**Unit Rate**	**Total Cost**		**Comments**
91	Health and safety equip	1.0	Days	$350	$350		7 crew x $50/day
92	Per diem	1.0	Days	$840	$840		7 crew x $120/day
93	24" pipe	100	lf	$13	$1,300		Mean p 51
94	Imported backfill	260	tons	$38	$9,750		$30 per ton plus markup
95					$0		
96					$0		
97	Subtotal Cost				$12,240		
98	**Material Unit Cost**				**$122.40**	**Per lf**	
99							
100	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
101					$0		Place excavated soil under landfill cover
102							
103	Subtotal Cost				$0		
104	**Subcontract Unit Cost**				**$0.00**	**Per lf**	
105	**TOTAL UNIT COST**				**$189.16**	**Per lf**	
106							
107	**Clean Corridor - Water or Gas Lines or Storm drains**						
108	**Estimated duration:**	160	lf	divided by	160	lf/day production	
109		**1.0**	**Days**				
110	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
111	Foreman	1.0	day	$847	$847	$106	Trench excavation/ backfill Mean p. 50
112	Equip operators	1.0	day	$1,588	$1,588	$99	2' W x 4' D = 0.3 cy/lf
113	Laborers	1.0	day	$1,955	$1,955	$81	6" DIP pipe Mean p 59 160 lf/day
114	Truck driver	1.0	day	$642	$642	$80	
115			day		$0		
116	Subtotal Cost				$5,031		
117	**Labor Unit Cost**				**$31.45**	**Per lf**	
118							
119	Equipment	**Units**		**Unit Rate**	**Total Cost**		**Comments**
120		1.0	day	$105	$105		Compactor on loader Mean p 20
121	Excavator	1.0	day	$550	$500		1.0 cy excavator; Sunbelt Rentals 6/3/09
122	Loader	1.0	day	$190	$190		1.0 cy wheel loader Means p 21
123	Highway trucks (1)	1.0	day	$480	$480		16 ton truck Means p 22
124							
125	Subtotal Cost				$1,275		
126	**Equipment Unit Cost**				**$7.97**	**Per lf**	
127							
128	Materials	**Units**		**Unit Rate**	**Total Cost**		**Comments**
129	Health and safety equip	1.0	Days	$350	$350		7 crew x $50/day
130	Per diem	1.0	Days	$840	$840		7 crew x $120/day
131	6" DIP or 3" gas pipe	160	lf	$21	$3,300		Seekonk Supply 6/1/09
132	Imported backfill	52	tons	$23	$1,203		$18.50 per ton plus markup; quote Pascale 6/1/09
133					$0		
134					$0		
135	Subtotal Cost				$5,693		
136	**Material Unit Cost**				**$35.58**	**Per lf**	
137							

	B	C	D	E	F	G	H
138	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
139					$0		Place excavated soil under landfill cover
140							
141	Subtotal Cost				$0		
142	**Subcontract Unit Cost**				**$0.00**	**Per lf**	
143	**TOTAL UNIT COST**				**$74.99**	**Per lf**	
144							
145	**Clean Corridor - Electrical or communication utilities**						
146	**Estimated duration:**	150	lf	divided by	150	lf/day production	
147		**1.0**	**Days**				
148	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
149	Foreman	1.0	day	$847	$847	$106	Trench excavation/ backfill Mean p. 50
150	Equip operators	1.0	day	$1,588	$1,588	$99	2' W x 4' D = 0.3 cy/lf
151	Laborers	1.0	day	$1,955	$1,955	$81	2" conduit in trench Means p 469 150 lf/dy
152	Truck driver	1.0	day	$642	$642	$80	
153			day		$0		
154	Subtotal Cost				$5,031		
155	**Labor Unit Cost**				**$33.54**	**Per lf**	
156							
157	Equipment	**Units**		**Unit Rate**	**Total Cost**		**Comments**
158		1.0	day	$105	$105		Compactor on loader Mean p 20
159	Excavator	1.0	day	$550	$550		1.0 cy excavator; Sunbelt Rentals 6/3/09
160	Loader	1.0	day	$190	$190		1.0 cy wheel loader Means p 21
161	Highway trucks (1)	1.0	day	$480	$480		16 ton truck Means p 22
162							
163	Subtotal Cost				$1,325		
164	**Equipment Unit Cost**				**$8.83**	**Per lf**	
165							
166	Materials	**Units**		**Unit Rate**	**Total Cost**		**Comments**
167	Health and safety equip	1.0	Days	$350	$350		7 crew x $50/day
168	Per diem	1.0	Days	$840	$840		7 crew x $120/day
169	Conduit	150	lf	$5.00	$750		Mean p 59 or 64
170	wires	150	lf	$4.20	$630		(3) 4/0 Means p 467
171	Imported backfill	52	tons	$38	$1,950		$30 per ton plus markup
172					$0		
173					$0		
174	Subtotal Cost				$4,520		
175	**Material Unit Cost**				**$30.13**	**Per lf**	
176							
177	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
178					$0		Place excavated soil under landfill cover
179							
180	Subtotal Cost				$0		
181	**Subcontract Unit Cost**				**$0.00**	**Per lf**	
182	**TOTAL UNIT COST**				**$72.51**	**Per lf**	
183							
184							
185							
186	**Excavate, Haul, Stockpile Existing Soil**						
187	**Estimated duration:**	600	cy	divided by	600	cy/day production	
188		**1.0**	**Days**				
189	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
190	Foreman	1.0	day	$847	$847	$106	per hour
191	Equip operators	1.0	day	$2,382	$2,382	$99	3 total
192	Laborers	1.0	day	$1,955	$1,955	$81	3 total
193	Truck drivers	1.0	day	$1,926	$1,926	$80	3 total
194					$0		
195	Subtotal Cost				$7,109		
196	**Labor Unit Cost**				**$11.85**	**Per CY**	
197							
198	Equipment	**Units**		**Unit Rate**	**Total Cost**		**Comments**
199	Dozer	1.0	day	$860	$860		200 hp dozer Means p 21
200	Excavator	1.0	day	$890	$890		2.0 cy excavator Means p 20
201	Loader	1.0	day	$495	$495		3 cy wheel loader; Hillview Equipment 6/1/09
202	Highway trucks (3)	1.0	day	$1,440	$1,440		16 ton truck Means p 22
203							
204	Subtotal Cost				$3,685		
205	**Equipment Unit Cost**				**$6.14**	**Per CY**	
206							

Unit Costs
Source Area Groundwater Alternatives

	B	C	D	E	F	G	H
207	Materials	**Units**		**Unit Rate**	**Total Cost**		**Comments**
208					$0		PPE not needed for work on clean soil.
209			Tons	$30	$0		
210					$0		
211					$0		
212	Subtotal Cost				$0		
213	**Material Unit Cost**				**$0.00**	**Per CY**	
214							
215	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
216							
217							
218	Subtotal Cost				$0		
219	**Subcontract Unit Cost**				**$0.00**	**Per Cy**	
220	**TOTAL UNIT COST**				**$17.99**	**Per cy**	
221							
222							
223	**SUBCONTRACT CONSTRUCTION COSTS**						
224				**Unit Rate**	**Total Cost**		
225	60 mil geomembrane						
226	Labor	1	SF	0.13	$0.13	sf	US Fabrics 6/1/09 0.10/sf installed
227	Equipment	1	SF	0.25	$0	sf	Estimate
228	Material	1	SF	0.50	$0.50	sf	US Fabrics 6/1/09 $0.40/sf
229	Unit Cost				**$0.88**	**sf**	
230							
231	Geotextile - 16 oz						
232	Labor	1	sy	0.13	$0.13	sf	US Fabrics 6/1/09 0.10/sf installed
233	Equipment	1	sy				
234	Material	1	sy	0.25	$0.25	sf	US Fabrics 6/1/09 $0.20/sf
235					**$0.38**	**sf**	
236							
237	Asphalt Pavement				$1.05	sf	Binder--Narrangansett Improvement 6/1/09
238	Asphalt seal coat				$0.54	sf	Top--Narrangansett Improvement 6/1/09
239	**Total**				**$1.59**	**sf**	
240							
241	Remove pavement				$3.90	sy	Means p 37 3 in. thick
242	Off-site disposal/recycling				$6.50	sy	145 pcf x 2.25 cf/sy x $ 40 per ton
243	**Total**				**$1.16**	**sf**	
244							
245	**Load and Off-site Disposal**						
246	**Estimated duration:**	130	Tons	divided by	130	tn/day production	
247		**1.0**	**days**				
248	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
249	Equip operators	1.0	day	$794	$794	$99	1 total
250	Laborer	1.0	day	$1,303	$1,303	$81	2 total
251	QC officer	1.0	day	$600	$600	$75	
252							
253	Subtotal Costs				$2,697		
254	**Labor Unit Costs**				**$20.75**	**Per Ton**	
255							
256	Equipment	**Units**		**Unit Rate**	**Total Cost**		**Comments**
257	Loader	1.0	day	$495	$495		3 cy wheel loader; Sunbelt Rentals 6/3/09
258	Decontamination system	1.0	day	$100	$100		
259							
260	Subtotal Cost				$595		
261	**Equipment Unit Costs**				**$4.58**	**Per Ton**	
262							
263	Materials	**Units**		**Unit Rate**	**Total Cost**		**Comments**
264	Health and safety equip	1.0	Days	$200	$200		4 crew x $50/day
265	Per diem	1.0	Days	$480	$480		4 crew x $120/day
266	Subtotal Cost				$680		
267	**Material Unit Cost**				**$5.23**		**Per Ton**
268							
269	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
270	Hazardous waste landfill	130	tons	$391	$50,765		Clean Harbors $355 per ton plus 10% markup
271	Debris	7	tons	$391	$2,538		for dioxins less than 10 time UTS
272	Subtotal Cost				$53,303		
273	**Subcontract Unit Costs**				**$410**	**Per Ton**	
274							
275	**TOTAL UNIT COST - HAZARDOUS WASTE LANDFILL**				**$441**	**Per Ton**	
276	Incineration	130	tons	$880	$114,400		Clean Harbors $800 per ton plus 10%
277	**Subcontract Unit Cost**				**$880**	**Per Ton**	
278	**TOTAL UNIT COST - OFF-SITE INCINERATION**				**$911**	**Per Ton**	

	B	C	D	E	F	G	H
279							
280							
281	**Dewatering**						
282	**Estimated duration:**	1	LS	divided by	1	LS production	
283		**1.0**	**days**				
284	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
285	Equip operators	1.0	day	$0	$0	$99	1 total
286	Laborer	1.0	day	$0	$0	$81	2 total
287	QC officer	1.0	day	$0	$0	$75	
288							
289	Subtotal Costs				$0		
290	**Labor Unit Costs**				**$0.00**	**Per Job**	
291							
292	Equipment	**Units**		**Unit Rate**	**Total Cost**		**Comments**
293		1.0	day	$0	$0		
294		1.0	day	$0	$0		
295							
296	Subtotal Cost				$0		
297	**Equipment Unit Costs**				**$0.00**	**Per Job**	
298							
299	Materials	**Units**		**Unit Rate**	**Total Cost**		**Comments**
300	Misc. hoses, pumps	1.0	Days	$8,000	$8,000		
301	Subtotal Cost				$8,000		
302	**Material Unit Cost**				**$8,000.00**		**Per Job**
303							
304	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
305	Treatment equipment	1	LS	$57,200	$57,200		CleanHarbor; HighlandTanks $52,000 plus 10% markup
306	Subtotal Cost				$57,200		
307	**Subcontract Unit Costs**				**$57,200**	**Per Job**	
308							
309	**TOTAL UNIT COST - DEWATERING**				**$65,200**	**Per Job**	
310							
311							
312	**Sheet Wall Installation**						
313	**Estimated duration:**	1	sf	divided by	2,000	sf/day production	
314		**0.0**	**days**				
315	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
316	Equip operators	1.0	day	$794	$794	$99	incl. below
317	Laborer	1.0	day	$652	$652	$81	2 total
318	QC officer	1.0	day	$520	$520	$75	
319							
320	Subtotal Costs				$1,966		
321	**Labor Unit Costs**				**$1,965.52**	**Per Day or Per 1,000 sf**	
322							
323	Equipment	**Units**		**Unit Rate**	**Total Cost**		**Comments**
324	Mobilization	1.0	LS	$8,000	$8,000		Specialized equipment
325		1.0	LS	$0	$0		
326							
327	Subtotal Cost				$8,000		
328	**Equipment Unit Costs**				**$8,000.00**	**LS**	
329							
330	Materials	**Units**		**Unit Rate**	**Total Cost**		**Comments**
331		1.0	sf	$17.50	$17.50		Custom Metal Fabricating 6/1/09
332	Subtotal Cost				$18		
333	**Material Unit Cost**				**$17.50**		**Per SF**
334							
335	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
336	Sheet wall	1.0	sf	$0.00	$0.00		
337	Subtotal Cost				$0		
338	**Subcontract Unit Costs**				**$0**	**Per sf**	
339							
340	**TOTAL UNIT COST - SHEET WALL**						
341							
342							

	B	C	D	E	F	G	H
343	**ISCO**						
344	**Estimated duration:**	250	CY	divided by	250	CY/day	production
345		**1.0**	**days**				
346	Craft Labor	**Units**		**Unit Rate**	**Total Cost**		**Comments**
347	Equip operators	1.0	day	$0	$0	$99	
348	Laborer	1.0	day	$0	$0	$81	
349	QC officer	1.0	day	$0	$0	$75	
350							
351	Subtotal Costs				$0		
352	**Labor Unit Costs**				**$0.00**	**Per CY**	
353							
354	Equipment	**Units**		**Unit Rate**	**Total Cost**		**Comments**
355	Loader	1.0	day	$0	$0		
356	Decontamination system	1.0	day	$0	$0		
357							
358	Subtotal Cost				$0		
359	**Equipment Unit Costs**				**$0.00**	**Per CY**	
360							
361	Materials	**Units**		**Unit Rate**	**Total Cost**		**Comments**
362	Health and safety equip	1.0	Days	$0	$0		Incl.
363	Subtotal Cost				$0		
364	**Material Unit Cost**				**$0.00**		**Per CY**
365							
366	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
367	Cool-Ox	250	cy	$68	$16,990		Deep Earth Tech $61.78 per cy plus 10% markup
368	Subtotal Cost				$16,990		
369	**Subcontract Unit Costs**				**$68**	**Per CY**	
370							
371	**TOTAL UNIT COST - HAZARDOUS WASTE LANDFILL**				**$68**	**Per CY**	
372							
373							
374							
375	**Soil Boring**						
376	**Estimated duration:**	100	LF	divided by	100	LF/day	production
377		**1.0**	**days**				
378	**Craft Labor--incl.**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
379	Foreman	1.0	day	$847		$106	per hour
380	Equip operators	1.0	day	$1,588		$99	2 total
381							
382	Subtotal Cost			$2,434	$0		
383	**Labor Unit Cost**				**$0.00**	**Per LF**	
384							
385							
386	**Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
387	Drill rig and crew	1.0	day	$2,400	$2,400		Means CPT rig
388					$0		
389	Subtotal Cost			$2,400	$2,400		
390	**Equipment Unit Cost**				**$24.00**	**Per LF**	
391							
392	**Materials--incl.**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
393	Sand; grout	1.0	LS	$30	$0		included
394	Health and safety equip	1.0	Days	$450	$0		9 crew x $50/day
395	Per diem	1.0	Days	$1,080	$0		local crew
396	Subtotal Cost				$0		
397	**Material Unit Cost**				**$0.00**	**Per LF**	
398							
399	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
400					$0		
401					$0		
402	**Subtotal Cost**				$0		
403	**TOTAL UNIT COST**				**$2,400.00**	**Per Day**	
404	**TOTAL UNIT COST**				**$24.00**	**Per LF**	
405							
406							
407							

	B	C	D	E	F	G	H
408	**Well Installation**						
409	**Estimated duration:**	100	LF	divided by	100	LF/day production	
410		**1.0**	**days**				
411	**Craft Labor--incl.**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
412	Foreman	1.0	day	$847	$847	$106	per hour
413	Equip operators	1.0	day	$1,588	$1,588	$99	2 total
414							
415	Subtotal Cost			$2,434	$2,434		
416	**Labor Unit Cost**				**$24.34**	**Per LF**	
417							
418							
419	**Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
420	Drill rig	1.0	day	$500	$500		Means CPT rig
421					$0		
422	Subtotal Cost			$500	$500		
423	**Equipment Unit Cost**				**$5.00**	**Per LF**	
424							
425	**Materials--incl.**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
426	Piping; Sand; grout	100	LF	$2	$200		LF
427	Health and safety equip	1.0	day	$150	$150		3 crew x $50/day
428	Per diem	1.0	day	$360	$0		local crew
429	Subtotal Cost				$350		
430	**Material Unit Cost**				**$3.50**	**Per LF**	
431							
432	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
433					$0		
434					$0		
435	**Subtotal Cost**				$0		
436	**TOTAL UNIT COST**				**$32.84**	**Per LF**	
437							
438							
439							
440	**Well Development**						
441	**Estimated duration:**	5	wells	divided by	5	wells/day production	
442		**1.0**	**days**				
443	**Craft Labor--incl.**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
444	Equip operators	1.0	day	$1,588	$1,588	$99	2 total
445							
446	Subtotal Cost			$1,588	$1,588		
447	**Labor Unit Cost**				**$317.54**	**Per well**	
448							
449							
450	**Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
451	Development rig	1.0	day	$300	$300		Quote
452					$0		
453	Subtotal Cost			$300	$300		
454	**Equipment Unit Cost**				**$60.00**	**Per well**	
455							
456	**Materials--incl.**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
457	Drums	5	LF	$35	$175		
458	Health and safety equip	1.0	day	$100	$100		2 crew x $50/day
459	Per diem	1.0	day	$360	$0		local crew
460	Subtotal Cost				$275		
461	**Material Unit Cost**				**$55.00**	**Per well**	
462							
463	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
464	Water disposal	2	drum	$150	$300		Assume hazardous
465	Transportation	1	LS	350.00	$350		
466	Subtotal Cost				$650		
467	**Subcontractor Unit Cost**				**$130.00**	**Per well**	
468							
469							
470	**Subtotal Cost**				$2,813		
471	**TOTAL UNIT COST**				**$562.54**	**Per well**	
472							
473							
474							
475							
476							
477							
478							
479							

Unit Costs
Source Area Groundwater Alternatives

	B	C	D	E	F	G	H
480	**Oversight**						
481	**Craft Labor**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
482	Project manager	1.0	day	$1,200	$1,200	$150	per hr
483	Resident engineer	1.0	day	$960	$960	$120	per hr
484	Superintendent	1.0	day	$899	$899	$112	per hr
485	Sample crew	1.0	day	$1,440	$1,440	$90	2 staff
486	Survey crew	1.0	day	$1,200	$1,200	$75	2 staff
487	Admin support	1.0	day	$360	$360	$45	
488	**Labor Daily Costs**				**$6,059**	**Per day**	
489							
490	**Monthly Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
491					$0		
492	Field office	1.0	mo	$1,075	$1,075		trailer, copier, fax, water, chemical toilets
493	Vehicles	1.0	mo	$2,500	$2,500		2 trucks and fuel
494	Cell phones, radios	1.0	mo	$750	$750		4 phones, 3 radios
495	Utilities	1.0	mo	$250	$250		
496	**Equipment Monthly Cost**			4,575	**$4,575**	**Per Month**	
497							
498	**Daily Equipment**						
499	Vehicles	1	day	150	$150		
500	Cell phones, radios	1.0	day	$50	$50		
501	dGPS	1.0	day	$100	$100		
502	Computer and survey software	1.0	day	$50	$50		
503							
504	**Daily Equipment Cost**				**$350**	**Per Day**	
505							
506	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
507	Per diem	1.0	day	$480.00	$480		4 field crew x $120/day
508	PPE, office supplies	1.0	day	$200	$200		4 field crew x $50/day
509	**Subtotal Cost**			**680**	**$680**	**Per day**	
510							
511	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
512	Soil - dioxins (8290)	1.0	ea	$715	$715		Columbia 11/8/06 estimate +10% markup
513	Soil grain size, TOC, solids	1.0	ea	$175	$175		
514	Soil - 2,3,7,8 TCDD (8290)	1.0	ea	$358	$358		Columbia + 10%
515	TCLP (131)	1.0	ea	$94	$94		
516	Metals (6020)	1.0	ea	$185	$185		
517	Pesticides (8081A)	1.0	ea	$176	$176		
518	Volatiles (8260B)	1.0	ea	$138	$138		
519	Semivolatiles (8270C)	1.0	ea	$325	$325		
520	**Subtotal - dioxins and all TCLP**	**1.0**	**ea**		**$1,806**		**All above except 2,3,7,8 TCDD**
521	**Subtotal - 2,3,7,8 TCDD and VOC**	**1.0**	**ea**		**$853**		2,3,7,8-TCDD and VOCs only
522							
523	BOD	1.0	ea	$52	$52		Means
524	Oil & grease	1.0	ea	$39	$39		Means
525	TCLP (131)	1.0	ea	$94	$94		
526	Metals (6020)	1.0	ea	$185	$185		
527	Pesticides (8081A)	1.0	ea	$176	$176		
528	Volatiles (8260B)	1.0	ea	$138	$138		
529	Semivolatiles (8270C)	1.0	ea	$325	$325		
530	Water - dioxins	1.0	ea	$715	$715		
531	**Subtotal water chemistry**				**$1,722**		
532							
533	Water - dioxins	1.0	ea	$715	$715		
534	**Subtotal Cost**				**$4,243**		
535							
536	**Groundwater monitoring event**						
537	**Estimated duration:**					2	days to mobilize and sample
538			**days**				
539	**Craft Labor**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
540	Project manager	1.0	day	$1,200	$1,200	$150	per hr
541	Senior scientist	1.0	day	$960	$960	$120	per hr
542	Groundwater sample crew	2.0	day	$2,160	$4,320	$90	2 staff x 12 hr/day
543	Data analysis and report	5.0	day	$1,280	$6,400	$80	2 staff
544	GIS, production	2.0	day	$560	$1,120	$70	per hour
545	**Subtotal Costs**				**$14,000**	**Per event**	
546	**Labor Daily Cost**				$7,000	Per day	
547							

Unit Costs
Source Area Groundwater Alternatives

	B	C	D	E	F	G	H
548	**Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
549	Vehicles	2.0	day	$150	$300		van and fuel
550	Cell phones, radios	2.0	day	$50	$100		
551	dGPS	2.0	day	$100	$200		
552	Computer and survey software	2.0	day	$50	$100		
553	Core equipment	2.0	day	$150	$300		
554							
555	**Subtotal Cost**				**$1,000**	**Per event**	
556	**Equipment Daily Cost**				$500	Per day	
557							
558	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
559	Per diem	4.0	day	$100.00	$400		
560	PPE, office supplies	4.0	day	$50	$200		
561	Shipping equipment, sample	1.0	ea	$1,000	$1,000		
562	**Subtotal Cost**				**$1,600**	**Per event**	
563	**Materials Daily Cost**				$800	Per day	
564							
565	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
566							
567	**Subtotal Cost**				**$0**		
568							
569	**TOTAL COST**				**$16,600.00**	**Per Event**	
570	**TOTAL DAILY COST**				**$8,300.00**	**Per Day**	
571	**Physical survey monitoring event**						
572	**Estimated duration:**					2	days field time
573	**Craft Labor**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
574	Project manager	1.0	day	$1,200	$1,200	$150	per hr
575	Senior scientist	1.0	day	$960	$960	$120	per hr
576	Survey crew	2.0	day	$1,800	$3,600	$75	2 staff x 12 hr/day
577	Data analysis and report	2.0	day	$1,280	$2,560	$80	2 staff
578	GIS, production	2.0	day	$560	$1,120	$70	per hour
579	**Subtotal Costs**				**$9,440**	**Per event**	
580	**Labor Daily Cost**				$4,720	Per day	
581							
582	**Equipment**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
583	Vehicles	2.0	day	$150	$300		van and fuel
584	Cell phones, radios	2.0	day	$50	$100		
585	dGPS	2.0	day	$100	$200		
586	Computer and survey software	2.0	day	$50	$100		
587							
588	**Subtotal Cost**				$700	Per event	
589	**Equipment Daily Cost**				**$350**	**Per day**	
590							
591	**Materials**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
592	Per diem	4.0	day	$100.00	$400		
593	PPE, office supplies	4.0	day	$50	$200		
594	Shipping equipment, supplies	1.0	ea	$1,000	$1,000		
595	**Subtotal Cost**				$1,600	Per event	
596	**Materials Daily Cost**				**$800**	**Per day**	
597							
598	**Subcontract**	**Units**		**Unit Rate**	**Total Cost**		**Comments**
599							
600							
601	Subtotal Cost				**$0**		
602							
603	TOTAL COST				**$11,740**	Per Event	
604	TOTAL DAILY COST				**$5,870**	Per Day	
605							
606	**DESIGN COSTS**						
607							
608	Project manager			$1,200		$150	per hour
609	Senior engineer			$960		$120	per hour
610	Staff engineers			$1,800		$75	per hour
611	CAD			$600		$75	per hour
612	Tech support			$480		$60	per hour
613	Labor total			$5,040			
614	**Labor unit cost per hour**				**$90.00**		7 person office staff working 56 labor hours per day.

Volume Estimates
Source Area Groundwater Alternatives

	A	B	C	D	E	F	G	H	I
1		**Description**	**No.**	**Length**	**Width**	**Thickness**	**Quantity calc.**	**Quantity**	**Units**
2				**Ft.**	**Ft.**	**Ft.**	**(LF/SF/CF)**		
3									
4		**EXCAVATION**							
5		Length along river		86	50	8			
6		Length near MW-03S		90					
7		Total Area					4,400	0.1	Acres
8		Total Volume						1,304	cy
9			Use unit weight of 130 pcf for cap soil			1.76	tons per cy		
10		Demolish asphalt						**4,400**	**sf**
11		Fill for 3% slope - assume 1.0 ft	1.0	4,400	1	6.0	26,400	978	cy
12								**1,716**	**tons**
13		Geomembrane						**4,400**	**sf**
14		Drain layer	1.0	4,400	1	1.0	4,400	163	cy
15								**286**	**tons**
16		Geotextile						**4,400**	**sf**
17		Gravel base	1.0	4,400	1	1.0	4,400	163	cy
18								**286**	**tons**
19		Asphalt pavement						**4,400**	**sf**
20									
21		Utility clean corridors							
22		Smith to Centredale Manor						0	lf
23		Smith to Brook Village						180	lf
24		Centredale to Steere Ave						0	lf
25		Total						180	lf
26		Sewer lines						**180**	**lf**
27		Water lines						**0**	**lf**
28		Gas lines						**0**	**lf**
29		Power lines						**0**	**lf**
30		Telephone lines						**0**	**lf**
31		Communication cable						0	**lf**
32		Storm drains in parking lots	1	1200	1	1	1,200		
33		Storm drains					**1,200**		**lf**
34		parking lot lighting - use same as storm drain							
35		Lighting conduits					**1,200**		**lf**
36									

Volume Estimates
Source Area Groundwater Alternatives

	A	B	C	D	E	F	G	H	I
1		**Description**	**No.**	**Length**	**Width**	**Thickness**	**Quantity calc.**	**Quantity**	**Units**
2				**Ft.**	**Ft.**	**Ft.**	**(LF/SF/CF)**		
37		**SHEET WALL**							
38		Length to surround source area		350	60	2			
39		Cross-Section Area					21,000		sf
40		Saw-cut Area					700		sf
41		Total Volume					42,000	1,556	cy
42			Use unit weight of 130 pcf for cap soil			1.76	tons per cy		
43		Demolish asphalt						**700**	**sf**
44		Sheet or slurry wall	1.0	350	60	2.0	42,000	1,556	cy
45								**2,730**	**tons**
46		Geotextile						**700**	**sf**
47		Asphalt pavement						**700**	**sf**
48									
49		Sewer lines						**18**	**lf**
50		Water lines						**0**	**lf**
51		Gas lines						**0**	**lf**
52		Power lines						**0**	**lf**
53		Telephone lines						**0**	**lf**
54		Communication cable						0	**lf**
55		Storm drains					**20**		**lf**
56		parking lot lighting - use same as storm drain							
57		Lighting conduits					**20**		**lf**
58									
59		Length along base of source area		190	30	2.0			
60		Cross-Section Area					5,700		sf
61									
62		**IN SITU CHEMICAL OXIDATION**							
63		Application Area		100	50		5,000		sf
64		Total Volume				12.0	60,000	2,222	cy

APPENDIX M
(Revised from the 2010 Feasibility Study)

Comparative Net Risk Analysis for Floodplain Soil Alternatives

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M.1 Introduction

Appendix M[1] presents the comparative analysis of the floodplain soil remedial alternatives and contains the technical details and calculations for the relative human health and ecological risk/hazard associated with each of the remedial alternatives selected for detailed analysis in Section 6.0 of the feasibility study (FS). These remedial alternatives are proposed for 1.5 acres of floodplain soil in the Allendale reach of the Woonasquatucket River (Table 6-20 of the 2010 FS), including floodplain areas abutting Allendale Pond, and 28.7 acres of stream sediment and floodplain soil in the Lyman Mill reach of the Woonasquatucket River (Table 6-28), which includes the stream channel and old mill raceway connecting Allendale and Lyman Mill Ponds, the Oxbow, a forested wetland southwest of Allendale Dam, and floodplain areas abutting Lyman Mill Pond (Figure 1-3 of the 2010 FS). No actionable human health risks were identified for the Allendale reach floodplain soil action area, so the objective of remedial actions is to eliminate unacceptable risks to ecological receptors. In the Lyman Mill reach stream sediment and floodplain soil action area, remedial actions focus on eliminating unacceptable risks to both human and ecological receptors.

The floodplain soil alternatives retained for the Allendale reach include:

- Alternative 1: No Action (Section 6.4.1 of the 2010 FS)
- Alternative 5: Excavation and Disposal and/or Treatment - Contaminated floodplain soils that present an exposure hazard would be removed using conventional excavation techniques, replaced with clean fill, and the floodplain habitat restored (Section 6.4.2 of the 2010 FS).

The floodplain soil alternatives retained for the Lyman Mill reach include:

- Alternative 1: No Action (Section 6.1.1)
- Alternative 3: Targeted Excavation, Enhanced Natural Recovery, and Disposal and/or Treatment – This alternative includes excavation with disposal and/or treatment combined with enhanced natural recovery (ENR). Areas within the remedial footprint with contaminant concentrations in excess of the ARARs for residential direct exposure or the U.S. Environmental Protection Agency's (EPA's) recommended residential level for dioxin in soil would be remediated using excavation. After excavation, these areas would be backfilled with clean material and the site restored. A three-inch thin-layer cover (ENR) would be placed over the remaining areas within the remedial footprint to accelerate the natural recovery processes (Section 6.1.2).
- Alternative 5: Partial Excavation, Enhanced Natural Recovery, and Disposal and/or Treatment – This alternative includes more extensive excavation and removal of contaminated sediment and floodplain soil at areas with contaminant concentrations in excess of ARARs or EPA's dioxin requirements (same as Alternative 3), as well as from areas with the highest potential for future erosion, from low-lying channels where contaminated sediment has accumulated, and from areas with the most frequent human exposure. After excavation, these areas would be backfilled with clean material and the site restored. Also similar to Alternative 3, a three-inch thin-layer cover (ENR) would be applied to areas within the remedial footprint that were not remediated using excavation (Section 6.1.3)

[1] This appendix was revised since the Interim Final FS (Battelle, 2010) to account for changes to key features of the Lyman Mill reach stream sediment and floodplain soil alternatives (e.g., cleanup areas, excavation areas, and ENR areas) that were updated as a result of the supplemental site activities that are described in this Addendum. Although there were no changes to the Allendale floodplain soil evaluation presented in the Interim Final FS, it is also included herein for the sake of completeness.

The mitigative measures that can be taken to address unavoidable habitat losses associated with the alternatives selected for detailed analysis in Section 6.0 are discussed in Section M.2, and the short-term risks associated with remedy implementation are discussed in Section M.3. Section M.4 presents a summary of the residual risks consistent with Record of Decision (ROD) specifications along with additional supporting material.

The Remedial Action Objectives (RAOs; Section 3.1) established for the Allendale reach floodplain soil action area would be achieved immediately following implementation of the action-based remedy (i.e., Alternative 5). For the Lyman Mill reach sediment and floodplain soil action area, human health exposures following remedy implementation would result in risks falling within the EPA excess lifetime carcinogenic risk (ELCR) range (i.e., one in one million [1E-06] to one in ten thousand [1E-04]) and below a target hazard index (HI) of 1. However, ecological risks would remain at the completion of the implementation phase of all active remedies being evaluated and the human health total ELCR would fall slightly above the range specified in the RAO for Allendale and Lyman Mill reach floodplain soil (i.e., 1E-06 to 1E-05)[2]. Although only low magnitude ecological risk from exposure to dioxin is expected to remain following active remediation of floodplain soils within the Allendale reach (hazard quotient [HQ] = 0.46; Table 6-21b in the 2010 FS), ecological risks from several contaminants following active remediation of the Oxbow are expected to be higher (HQs ranging from 4 to 10 for wildlife receptors; Table 6-29d). However, post-remedy implementation ecological risks for the various alternatives are expected to decline over time with soil degradation of the organic contaminants and episodic deposition of sediment with contaminant concentrations at background levels.

In order to evaluate the relative reduction in risks for the proposed remedial alternatives over time, an environmental fate model was developed to estimate exposure concentrations remaining after remedial action for each of the alternatives (Section M.5). Exposure concentrations remaining were calculated for five-year increments over a 250-year period post-construction. The environmental fate model was used to evaluate the timeframe for achieving human health and ecological RAOs (Sections M.6 and M.7, respectively) and was one line of evidence for comparing the relative risk-reduction benefits among the alternatives. Overall conclusions are provided in Section M.8.

M.2 Mitigation for Unavoidable Impacts

Section K.3 in Appendix K of the Interim Final FS (Battelle, 2010) provides an overview of mitigation requirements and guidance, as well as a strategy to address issues related to invasive plants. This section (M.2) focuses on specific issues associated with the remediation of contaminated floodplain soils within the Allendale and Lyman Mill reaches.

Figures 6-5 through 6-7 (Section 6.0 of the Interim Final FS (Battelle, 2010) show the proposed mitigation for unavoidable wetland and floodplain impacts for Alternative 5 for the Allendale reach and Alternatives 3 and 5 for the Lyman Mill reach, respectively. The active remedial alternatives for floodplain soil associated with the Allendale and Lyman Mill reaches would involve the destruction of some existing forested and/or scrub/shrub habitat structure, as well as federally jurisdictional wetland within the Oxbow. In addition, soil excavation and application of a soil cover would either eliminate (soil excavation) or potentially degrade (thin-layer cover) the floodplain soil community. Where contaminated floodplain soil was excavated, the proposed mitigation would consist of back-filling with a clean soil of appropriate humic content to facilitate infaunal recolonization. After grading, shrub and tree species could be planted and a wetland herbaceous seed mix applied to rapidly stabilize the soils.

[2] The Rhode Island Site Remediation Regulations define acceptable carcinogenic risk as within the range of 10^{-6} to 10^{-5}.

The Lyman Mill action area also includes remediation of the free-running (lotic) reach of the Woonasquatucket River between Allendale Dam and the impounded portion of Lyman Mill Dam. Similar to the sediment alternatives described in Appendix K of the Interim Final FS (Battelle, 2010), remediation of this reach would result in the complete loss of benthos and benthic habitat structure. In addition, soil excavation would destroy a portion of the adjacent riverbank including some of the riparian vegetation and tree root system.

Possible mitigation for impacts associated with the sediment remediation could include back-filling with soil of similar composition to existing substrate to emulate current benthic habitat structure (and provide similar soil stability). A focused restoration of the toe and side slope of the river bank along the entire portion of the Woonasquatucket River affected by the sediment excavation activities could be conducted under both Alternatives 3 and 5. Restoration of the entire section of riverbank could include use of techniques to ensure bank stability (e.g., installation of "Biolog" or equivalent technology at the toe of the slope and a biodegradable erosion control blanket) along with shrub plantings to compensate for loss riparian vegetation.

All excavation alternatives include an on-site disposal option (i.e., Option "b" of the alternatives) to contain sediment and soil on-site in a nearshore CDF constructed in the pond footprint, and mitigation for the incremental loss of aquatic habitat involved could be provided by the same measures described for the sediment alternatives (i.e., preservation of upland habitat and/or wetland restoration) (see Appendix K of the Interim Final FS (Battelle, 2010).

All active sediment and floodplain soil alternatives also include an on-site disposal option (i.e., Option "a" of the alternatives) that would involve the containerization of contaminated sediment or floodplain soil in an upland CDF. Figure 5-6 in the 2010 FS presents the locations of three potential upland CDFs. As discussed in Section 6.2.2.1 (of the Interim Final FS (Battelle, 2010), some of the potential upland CDFs are located in areas with established hardwood forest (northern CDF) or which contain low-value wetland (CDF south of the abandoned channel), and use of these areas would result in destruction of ecological habitat. During the design phase, potential upland CDF locations would be evaluated with respect to the environmental services each provided. Assuming that other critical project requirements will be met and mitigation could be provided for any impacts to wetlands protected under federal or state statutes, selection of the area with the lowest demonstrated functions and values will be preferred.

If the upland CDF selected included jurisdictional wetland habitat (either federal or state) then compensation will also have to be provided for any impacts attributable to the intended project use. Potential mitigation options include preservation (using other upland habitat) or wetland restoration. It is also possible that some mitigation could be provided by enhancement of existing state Riverbank Wetland along the western shore of Lyman Mill Pond (and potentially Allendale Pond). Depending on criteria that will have to be determined by a state wetland scientist, this state resource area extends either 50 or 200 feet from the bank of the Woonasquatucket River in these reaches (RIDEM, 2007).

M.3 Short-Term Risks

Short-term human health risks for floodplain soils in the Oxbow and ecological risks for floodplain soils in both Allendale and Lyman Mill reaches that remedy implementation may pose have been evaluated qualitatively[3]. The human health evaluation considered remedy-associated risks to remedial workers and also to the neighboring population (people living and working in the nearby area). Consistent with RAGS

[3] The Baseline Human Health Risk Assessment (MACTEC, 2004) determined that existing conditions for Allendale floodplain soil does not pose an actionable risk to human receptors.

– Part C (EPA, 1991), the potential exposure conditions evaluated are associated with the releases that result from the implementation of the remedial technologies.

From a human health perspective, the contaminants in floodplain soil that are the focus of the remedial action are, in general terms, persistent, low-volatility organic compounds (i.e., 2,3,7,8-tetrachlorodibenzo-*p*-dioxin [TCDD] and benzo[a]pyrene) and arsenic. This is also true for the ecological contaminants of concern (COCs)[4], which include 2,3,7,8-TCDD[5], 4,4'-DDE, and 4,4'-DDT, along with antimony and copper. The technologies that are a component of most of the remedial alternatives under consideration include excavation with on-site or off-site disposal combined with enhanced natural recovery (ENR). During implementation of alternatives involving these technologies, if soils are moist or wet, potential releases of contaminants to the environment would be limited. If soils are dry at the time of remedial action, the most likely release mechanism for contaminants would be via generation of dust and subsequent release of soil or sediment particulates to the air.

Assessment of short-term risks for the community. Release of vapors would not be a concern during remedy implementation because the COCs are not highly volatile. Engineering controls (e.g., dust suppression) would be a component of the excavation-based alternatives and would be used in conjunction with work area and site perimeter monitoring for air particulates. With those measures in place, releases of contaminants beyond the work zone at levels of concern for the community would not be permitted to occur. People working and living in the neighboring area would not have access to the work zone during excavation or soil cover application activities. In addition to the excavation technologies, off-site disposal of soil would involve off-site transport. Transport vehicles would need to be contained, and any off-site transport would be done in a manner that does not remove impacted sediment and/or soil from the work area except in a containerized manner. For the alternatives that include an on-site thermal treatment facility, the approved technology would be constructed and implemented consistent with approved designs and permits that would require that the air emissions of contaminants or additional by-products produced during treatment be within acceptable levels. In conclusion, the short-term risks to the community for all three active remedial alternatives are considered to be low.

Assessment of short-term risks for remedial workers. Risks for the on-site remedial workers associated with implementation of the remedial technologies are the same as has been described for the community. The Worker Protection Standards for Hazardous Waste under 40 CFR 311 and 29 CFR 1910.120 specify requirements for worker protection at Superfund Sites. Workers are protected by health and safety plans, emergency response plans, the proper application of engineering controls, and personal protective equipment as needed. During planned on-site remedial activities, the potential for exposure to hazardous substances by remedial workers would be addressed and controlled by all of these. The excavation technology would have risks of potential injury from physical hazards that are associated with construction activities. These hazards are addressed in the plans and measures for worker protection. Potential exposures to contaminants during emergency responses associated with remedy failure would be minimal since the technologies are well proven and controllable. Therefore, short-term risks are low for the on-site remedial worker from the potential release of contaminants during implementation of remedies involving excavation or thin-layer cover application and on-site or off-site disposal/treatment. By definition, there are no short-term risks associated with the No Action alternative at both Allendale and Lyman Mill reaches.

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[4] Table 13 of the Addendum to the Interim Final Preliminary Remediation Goals Report: Oxbow Area (Part II – Ecological; MACTEC and Battelle, 2011b) presents ecological risk-based cleanup goals for ecological COCs. Due to elevated uncertainties associated with the characterization of risks to soil invertebrates, only contaminants posing a risk to wildlife were carried forward into the detailed alternatives analysis.

[5] This is the sole contaminant for the Allendale reach floodplain soil action area.

Assessment of short-term risks for ecological receptors. The No Action alternative would pose no short-term risks to ecological receptors. In contrast, the active remedial alternatives that include excavation and backfilling (Alternative 5 for the Allendale reach and Alternatives 3 and 5 for the Lyman Mill reach) would involve the loss of the floodplain soil invertebrate community and herbaceous plant cover in the excavated areas. By removing a portion of the root system of nearby trees and shrubs, excavation techniques could also impact woody vegetation adjacent to the excavation area, impacting cover and foraging habitat for both invertebrates and wildlife. The second remedial technology considered for the active remediation alternatives (Lyman Mill reach only) consists of the placement of a thin-layer (three inch) cover over a portion of the floodplain surface. Although some disturbance to the floodplain would occur during the application process, these impacts would be relatively minor, and it is unlikely that the soil community would be completely destroyed by the additional cover material. In terms of the relative magnitude of the short-term risks, the alternatives for the Lyman Mill reach (including the Oxbow) would be ranked as follows: Alternative 5 > Alternative 3 > No Action.

Besides the short-terms risks associated with remedy implementation, the time required to fully implement a remedy and achieve the remedial objectives may be an important consideration in evaluating the effectiveness of one or more remedial alternatives (see Section M.6). The remedies for the Oxbow may require decades of natural recovery prior to achievement of the identified cleanup goals. During the time course of those remedial alternatives, the ecological risks still associated with direct or indirect exposure to floodplain soils in the Oxbow would be gradually decreasing. The remedial alternatives for the Oxbow have been designed to minimize the short-term risks to ecological receptors and the wetland environment that might be associated with more aggressive, intrusive remedial activities that have not been proposed. In so doing, the reduction in short-term risks to the environment is achieved by a reduced rate of long-term risk reduction for ecological receptors. Consequently, although the implementation of the remedial alternative for the Oxbow would not result in greater releases of contaminants than other alternatives, the rate of reduction of long-term risks associated with the site would be slower than for Lyman Mill Pond sediments. The installation of boardwalks along the riverbank in the Oxbow, in conjunction with other institutional controls (ICs), would complement the proposed remedial technologies and provide further protection of human health during the expanded period of performance of the proposed remedial alternatives until RAOs are fully achieved.

M.4 Risk/Hazard Reduction Estimates

Human health risks and hazards are calculated either as cancer or non-cancer health hazards and are calculated as the ratio of the exposure dose to a reference or no-effects dose. Ecological risks and hazards are calculated as HQs and HIs. HQs are the ratio of the exposure concentration or dose to known no-observed-adverse-effects levels (NOAELs) for each chemical exposure. HIs are the sum of all HQs for a given exposure area and ecological receptor. There is a potential for unacceptable adverse effects when human health cancer risks exceed EPA's acceptable risk range of 1E-06 to 1E-04 and when human non-cancer health hazards and ecological HQs exceed 1. The residual risks to human and ecological receptors following attainment of the RAOs are summarized below and presented in Tables 6-21a and 6-21b in the 2010 FS (Allendale reach – ecological risks only) and 6-29a through 6-29d in this Addendum (Lyman Mill reach – both human health and ecological risks). The residual risks are based on anticipated contaminant exposures immediately following attainment of the cleanup objectives.

Allendale Reach. Tables 6-21a and 6-21b (2010 FS) present the calculated residual ecological risks associated with the two alternatives (Alternative 1, No Action and Alternative 5, Excavation and Disposal and/or Treatment, respectively) considered under this analysis. Dioxin is the only contaminant posing unacceptable risk for Allendale reach floodplain soil, and the short-tailed shrew (insectivorous wildlife) is the primary receptor of concern. The active remedial alternative would cause an order of magnitude reduction in the residual risk relative to the No Action alternative (HI is 0.5 versus 20, respectively).

Lyman Mill Reach. Tables 6-29a through 6-29d present the calculated residual risks to human and ecological receptors for the three alternatives (Alternative 1, No Action [Tables 6-29a and 6-29c], Alternative 3, Targeted Excavation and ENR, and Alternative 5, Partial Excavation and ENR [Tables 6-29b and 6-29d]). The residual risks for the active alternatives are presented together because they are equivalent and in most cases are considerably less than the No Action alternative.

Under the No Action alternative, the human health residual risk for carcinogenic effects is 6.E-05 (Table 6-29a), which exceeds the risk range established in the RAO (i.e., ELCR] not to exceed 1. E-05). For each active remedial alternative, the residual carcinogenic risk to humans is 1.E-05 (Table 6-29b), which is well within EPA's cancer risk range and a six-fold factor less than residual risks under the No Action alternative (Table 6-29a). Noncarcinogenic hazards for the kidney and skin target organs are less than 1 under all remedial alternatives (Tables 6-29a and 6-29b).

Under the No Action alternative, residual risks to vermivorous birds and mammals[6] are 70 and 100 respectively (Table 6-29c). 2,3,7,8-TCDD (as dioxin TEQs) is the primary risk driver followed by 4,4'-DDE, antimony and copper For the action alternatives (Alternatives 3 and 5) residual risks for birds and mammals are 4 and 10, respectively (Table 6-29d) and are substantially reduced compared to the No Action alternative. HQs in excess of 1.0 (exposure of birds to 4,4'-DDE and mammals to antimony and copper) are due to the cleanup goals being based on background conditions rather than the more protective risk-based Preliminary Remediation Goals (PRGs) presented in Appendix F.

M.5 Environmental Fate Model

Environmental fate modeling was performed for each of the proposed remedial alternatives for the Oxbow[7] to determine when or whether RAOs would be achieved under the various alternatives. The following table summarizes the technologies and alternatives for remediating the 28.7 acres of floodplain soils that were retained for detailed analysis. Detailed discussion of each of the alternatives is provided in Section 6.0 of the FS.

[6] Two of the four categories of ecological receptors evaluated in the Supplemental BERA (MACTEC and Battelle, 2011a). Risks to omnivorous mammals were determined to be negligible and residual risk estimates were not developed to support the detailed comparative analysis of alternatives (Section 6.1 of this Addendum) due to the relatively large uncertainties associated with the soil invertebrate TRVs.

[7] This analysis was not necessary for the Allendale reach floodplain action area because the only action-based remedy (Alternative 5) is anticipated to achieve the RAOs immediately following remedy implementation.

Remedial Technology	Remedial Alternative	Description	Assumptions
No Action	MNR	No active treatment.	Sediment deposition assumed to be 20% of average within pond value (0.048 inches/year assumed).
Excavation and ENR (Thin-Layer Cover)	Targeted Excavation and ENR	23% (6.5 acres) of the remedial footprint area would be excavated to one foot below ground surface (bgs) and then backfilled with clean soil. A thin-layer (3 inch) soil cover would be applied to the remainder of the remedial footprint area (77% or 22.2 acres).	Backfill for excavation area and thin-layer soil cover would contain contaminants at average background concentrations; active remedies include engineering structures to enhance sediment deposition (0.24 inches/year assumed).
Excavation and ENR (Thin-Layer Cover)	Partial Excavation and ENR	68% (19.5 acres) of the remedial footprint area would be excavated to one foot below ground surface (bgs) and then backfilled with clean soil. A thin-layer (3 inch) soil cover would be applied to the remainder of the remedial footprint area.	Backfill for excavated area and thin-layer soil cover would contain contaminants at average background concentrations; active remedies include engineering structures to enhance sediment deposition (0.24 inches/year assumed).

Dioxin (i.e., 2,3,7,8-TCDD) was the primary focus for the fate modeling because it poses the greatest risk to wildlife receptors. It is also assumed that overall RAOs would be achieved when residual concentrations in the Oxbow are at or below the cleanup goal given its presumed widespread distribution throughout the Oxbow at concentrations exceeding the ecological cleanup goal. Copper[8] was selected as a second ecological contaminant for fate modeling to evaluate the relative contribution of soil degradation on the risk reduction time course and contrast the anticipated risk reduction rates for wildlife and soil invertebrates. The fate model was also used to estimate the reduction in human health risks associated with exposure to dioxin TEQ, benzo(a)pyrene, and arsenic under each of the remedial alternatives evaluated.

Risk reduction estimates were performed in three steps. First, soil concentrations were estimated for each of the remedial technologies described in the table above. Average exposure concentrations across the remedial footprint area for target years following implementation were then calculated based on the three remedial alternatives being evaluated (i.e., No Action, Targeted Excavation and ENR, and Partial Excavation and ENR) for estimating risk to ecological receptors. Finally, risks to the two surrogate wildlife receptors, the short-tailed shrew and American woodcock, and soil invertebrates were modeled. The following assumptions were employed in the development of the environmental fate model:

- Only contaminant exposures to the top 1 foot of floodplain soil are ecologically relevant (*i.e.*, ecological exposure zone); it was also assumed that this depth is relevant from a human perspective as well.
- Both backfilled soil (excavation treatment) and newly deposited soil (from future flooding events) are assumed to contain contaminants at current background concentrations.
- A set of assumptions regarding the future deposition rate of floodplain soil were modeled to estimate a potential range of risk reduction timeframes. The FS determined that the typical deposition rate for new sediment in the Allendale and Lyman Mill Ponds is on the order of 1 foot

[8] Copper was the only inorganic contaminant that was shown to pose unacceptable risks to both soil invertebrates and wildlife (MACTEC and Battelle, 2011a); antimony was a COC for wildlife only.

every 50 years (±10 years) and estimated that the deposition rate in the Oxbow could be up to 10 times less than the in pond rate. Model estimates for ecological receptors exposed to soil in the Oxbow were derived assuming annual deposition rates 2x, 5x, and 10x less than the in pond rate of 1 foot/50 years.[9]

- The soil degradation half life for 2,3,7,8-TCDD was assumed to be 4,720 days (12.9 years). This was used as the starting point for the three models and is the arithmetic mean of twelve reported values from the California Technical Support Document for Exposure Assessment and Stochastic Analysis (available at http://oehha.ca.gov/air/hot_spots/pdf/apeng.pdf). Exposure model output for the two ecological receptors was also generated for assumed 2,3,7,8-TCDD soil degradation half lives of 2x and 4x slower than this average (i.e., 25.9 and 51.7 years). The TCDD half life value was also used to estimate future exposures of the dioxin TEQ parameter (Section M.6)
- The soil degradation half life for benzo(a)pyrene was assumed to be 570 days (1.6 years), which is the average of available data for various polycyclic aromatic hydrocarbons as compiled in the above reference.
- The risk calculations assume that the daughter products formed by chemical degradation are not toxicologically relevant.
- No degradation was assumed for arsenic or copper.

For each remedial alternative, the floodplain soil concentration of a given contaminant remaining in the exposure zone after 0 - 250 years is the sum of the relative contribution of contamination from the remaining original floodplain soil, the backfill or cover material, and the newly deposited sediment in the ecological exposure zone. Calculations are for five-year increments. Over time, organic contaminants may degrade, and newly deposited sediment will bury the original floodplain soil, thereby reducing contaminant concentrations in the exposure zone naturally. The excavation of contaminated material, replacement with backfill, and placement of a thin-layer cover (ENR) in areas not remediated using excavation all serve to accelerate the decrease in contaminant concentrations within the exposure zone.

The weighted concentration of an organic contaminant in the remaining original floodplain soil matrix within the exposure zone at time *n* was modeled using the following equation:

$$[C_o]_n = \frac{(D_e - D_c - (Y_n * R))}{D_e} * \left(C_o * 2^{\left(-Y_n / t_{0.5} \right)} \right) \qquad \text{Equation 1}$$

Where:

$[C_o]_n$	=	Contaminant concentration in the original floodplain soil matrix remaining within the ecological exposure zone at time increment *n*, weighted by the fraction that this material represents of the entire exposure zone; units in ug g^{-1}.
D_e	=	Depth of the presumptive ecological exposure zone within the floodplain soil column; units in inches.
D_c	=	Depth of backfill material following excavation of contaminated soil within the soil column or depth of thin layer cover; units in inches.
Y_n	=	Number of years (in 5-year increments) following remedy implementation; unit in years.

[9] It is likely that depositional rates vary within the Oxbow, with higher rates anticipated in lower lying areas (e.g., emergent marsh/scrub-shrub swamp) and lower rates in the forested areas in the northern section. Microscale variability in deposition rates associated with local topography (e.g., "borrow" pits) is also anticipated.

R	=	Annual deposition rate of new sediment onto remediated surface; unit in inches per year.
C_o	=	Average contaminant concentration in the original floodplain soil matrix; units in ug g^{-1}.
$t_{0.5}$	=	Half-life of organic contaminant in floodplain soil matrix; units in years.

The weighted concentration of the backfill (excavation application only) or thin-layer cover material within the ecological exposure zone was modeled using the following equation:

$$[C_b]_n = \frac{(D_c)}{D_e} * \left(C_f * 2^{\left(-Y_n / t_{0.5}\right)} \right) \qquad \text{Equation 2}$$

Where:

$[C_b]_n$	=	Contaminant concentration in the backfilled soil remaining within the ecological exposure zone at time increment *n*, weighted by the fraction that this material represents of the entire exposure zone; units in ug g^{-1}.
D_c	=	Depth of backfill material following excavation of contaminated soil within the soil column; units in inches.
C_f	=	Average contaminant concentration in background floodplain soil; units in ug g^{-1}.
$t_{0.5}$	=	Half-life of organic contaminant in floodplain soil matrix; units in years.

The weighted concentration of the floodplain soil deposited after remedy implementation within the ecological exposure zone was modeled using the following equation:

$$[C_f]_n = \frac{(Y_n * R)}{D_e} * \left(C_f * 2^{\left(-Y_n / t_{0.5}\right)} \right) \qquad \text{Equation 3}$$

Where:

$[C_f]_n$	=	Contaminant concentration in the background floodplain soil deposited following remedy implementation within the ecological exposure zone at time increment *n*, weighted by the fraction that this material represents of the entire exposure zone; units in ug g^{-1}.
D_e	=	Depth of the presumptive ecological exposure zone within the floodplain soil column; units in inches.
Y_n	=	Number of years (in 5-year increments) following remedy implementation; unit in years.
R	=	Annual deposition rate of new sediment onto remediated surface; unit in inches per year.
C_f	=	Average contaminant concentration in background floodplain soil; units in ug g^{-1}.
$t_{0.5}$	=	Half-life of organic contaminant in floodplain soil matrix; units in years.

To model the decrease in inorganic concentrations (arsenic or copper), the same equations were used without the environmental degradation term:

$$\left(C_x * 2^{\left(-Y_n / t_{0.5}\right)} \right)$$

where C_x represents either the concentration of the original floodplain soil matrix (C_o), the soil laid down as part of the remedial action (i.e., thin-layer cover or backfill) (C_b), or the soil deposited subsequent to the remedy implementation phase (C_f). When the thickness of the backfill layer, deposition layer, or thin layer cover and deposition layer equals 12 inches, complete remediation of the ecological exposure zone has been achieved.

For each remedial technology (*i.e.*, excavation/backfill, thin-layer cover, and MNR), the average concentration in the integrated ecological exposure zone at time increment *n* was calculated as:

$$[C_i]_n = [C_o]_n + [C_b]_n + \sum_0^n [C_f]_n \qquad \text{Equation 4}$$

Where:

$[C_i]_n$	=	Average contaminant concentration within the ecological exposure zone at time increment *n* for the *i*th technology; units in ug g^{-1}.
$[C_o]_n$	=	Contaminant concentration of the original floodplain soil matrix remaining within the ecological exposure zone at time increment *n*, weighted by the fraction that this material represents of the entire exposure zone; units in ug g^{-1}.
$[C_b]_n$	=	Contaminant concentration of the backfilled soil remaining within the ecological exposure zone at time increment *n*, weighted by the fraction that this material represents of the entire exposure zone; units in ug g^{-1}
$[C_f]_n$	=	Contaminant concentration of the soil matrix deposited following completion of remedial construction activities that remains within the ecological exposure zone at time increment *n*, weighted by the fraction that this material represents of the entire exposure zone; units in ug g^{-1}.

To help identify the best remedial alternative for the Oxbow to meet the ecological RAOs, soil exposure concentrations were calculated for each alternative. The technology-specific exposure concentration was the average soil concentration within the ecological exposure zone across the area to which the technology would be applied at each 5-year time increment, calculated as described in Equations 1 - 4. The alternative-specific concentration for the remedial area was then calculated as the weighted average of the estimated "technology-specific" soil concentrations, weighting based on the relative area for excavation/backfill, thin-layer cover, and MNR using the following equation:

$$[C_j]_n = \left(\sum_1^i \left((C_i)_n * a_i\right)\right) \Big/ \sum_1^i a_i \qquad \text{Equation 5}$$

Where:

$[C_j]_n$	=	Average contaminant concentration within the ecological exposure zone at time increment *n* for the *j*th alternative scenario; units in ug g^{-1}.
$[C_i]_n$	=	Average contaminant concentration within the ecological exposure zone at time increment *n* for the *i*th technology; units in ug g^{-1}.
a_i	=	Alternative-specific areal extent of the ith technology; units in acres.

Based on the proposed remedial footprints for each of the above remedies, these alternatives would employ the following combination of treatment types:

Remedial Alternative	Remedial Technology		
	Excavation	ENR (Thin-Layer Cover)	MNR[a]
No Action	0%	0%	100%
Targeted Excavation and ENR	23%	77%	0%
Partial Excavation and ENR	68%	32%	0%

[a] Natural recovery processes (including chemical degradation of organic chemicals of interest) are anticipated to occur under all remedial alternatives. The percentage values presented refer to the percentage of the footprint where no other technology would be applied during the remedy implementation phase.

M.6. Evaluation of Post-Construction Risk Estimates for Human and Ecological Receptors

To better evaluate the remedy effectiveness and specifically protectiveness of the different alternatives to human and ecological receptors, the residual hazards were calculated based on estimated floodplain soil exposures following the completion of the remedy implementation phase. These "post-construction" risk estimates are distinct from the residual risk estimates that are calculated based on exposures anticipated following achievement of the RAOs and are used to evaluate long-term protectiveness (see Section M.7). Consistent with standard risk assessment protocols, the derivation of residual risk estimates is based on comparing a calculated exposure concentration (the clean-up goal) to a toxicological benchmark. For post-construction risk estimates, the same toxicological benchmarks employed in the baseline risk assessment were used, and the environmental concentration for each target year depends on the scenario assumptions. In the case of residual risks, which by definition are based on environmental exposures once the RAOs have been achieved, the presumed exposure term is the contaminant-specific cleanup goals (either risk-based or background concentrations). To estimate the environmental concentration term immediately following remedy implementation (i.e., post-construction), the floodplain soil concentration term was estimated using the following assumptions:

- No Action Alternative –The average concentration of each COC was used to estimate human health risks for this analysis, rather than the more conservative 95% upper confidence level (UCL) on the average value used in the Supplemental Baseline Human Health Risk Assessment for the Oxbow (Supplemental BHHERA; MACTEC and Battelle, 2011a), in order to be consistent with the risk estimates for the active remedies.
- Alternative 3 – Under this alternative, 23 percent (6.5/28.7 acres) of the remedial footprint would be excavated to the bottom of the vadose zone and then backfilled to design grade to address exceedances of the ARARs for residential direct exposure and EPA's recommended residential level for dioxin in soil. A thin-layer cover (3 inches) would be applied to the remaining area (i.e., 77% or 22.2/28.7 acres). Following remedy implementation, surface soil concentrations (0-12 inches) in the excavated area would be equivalent to the contaminant background concentrations (i.e., assumed concentrations in the backfill material). Surface soil concentrations in the ENR (thin-layer cover) areas would be equivalent to the weighted[11] average of background concentrations (in the cover material) and arithmetic mean contaminant concentration under existing conditions. The overall exposures following remedy implementation were calculated as the weighted average of the concentrations in the excavated and thin-layer cover areas, with the weighting based on the relative proportion of the overall footprint (i.e., 23% and 77%, respectively) contributed by each.

[11] Each weighted by the fraction comprised of the 12 inch exposure zone (i.e., 25% and 75%, respectively).

- Alternative 5 – Post-construction floodplain soil concentrations were calculated similar to that described above for Alternative 3, but using 68% (19.5/28.7 acres) and 37% (8.1/21.6 acres) for the excavated and thin-layer cover areas, respectively.

Tables M-1 through M-3 present the estimated 2,3,7,8-TCDD concentrations in Oxbow floodplain soils for each of the three technology scenarios (i.e., excavation/backfill, ENR, and MNR, respectively) for 5-year time increments between 0 and 250 years post remedy implementation. Tables M-4a through M-6a present the estimated floodplain soil concentrations and human health risks immediately following completion of remedial actions (i.e., "post-construction" risks) anticipated under the No Action, Alternative 3 and Alternative 5, respectively; Tables M-4b through M-6b present the corresponding information for ecological receptors.

- No Action alternative – The post-construction ELCR from dioxin TEQ (based on average exposure concentrations) would be 3.E-05 (Table M-4a); this is one half of the current risk estimated in the Supplemental BHHERA (MACTEC and Battelle, 2011a and presented in Table 6-29a) using the 95% Upper Confidence Level (UCL) on the arithmetic mean concentration. This risk is within EPA's acceptable risk range (1E-06 to 1E-04) but exceeds the 10-5 ELCR threshold included in the human health-based RAO. Non-cancer hazards risk estimates are 0.00003 and 0.02 for kidney and skin target organs, respectively) (Table M-4a); both of these are below the threshold HI of 1.

  Table M-4b presents the post-construction risks to ecological receptors for this alternative. Risk estimates for soil invertebrates, vermivorous birds and mammals are 40, 20, and 50 respectively and all HIs exceed the threshold HI of 1. For wildlife, 2,3,7,8-TCDD and 4,4'-DDE (birds) and 2,3,7,8-TCDD (mammals) contribute most substantially to the HI values; pesticides (4,4'-DDT and 4,4'-DDE) are the primary contributors to the post-construction risk estimates for soil invertebrates under the No Action alternative.

- Alternative 3 (Targeted Excavation and ENR) – The post-construction ELCR estimate would be 2.E-05 (Table M-5a), which is within EPA's risk range but exceeds the 10-5 ELCR threshold included in the human health-based RAO. The non-cancer hazard estimates under Alternative 3 are 0.00005 and 0.02 for kidney and skin target organs, respectively (Table M-5a); both of these are below the threshold HI of 1.

  Table M-5b presents the post-construction risks to ecological receptors for this alternative. Risk estimates for soil invertebrates, vermivorous birds and mammals are 30, 10, and 30 respectively and all HIs exceed the threshold HI of 1. For wildlife, 2,3,7,8-TCDD and 4,4'-DDE (birds) and 2,3,7,8-TCDD (mammals) contribute most substantially to the HI values; pesticides (4,4'-DDT and 4,4'-DDE) are the primary contributors to the post-construction risk estimates for soil invertebrates under Alternative 3.

- Alternative 5 (Partial Excavation and ENR) – The post-construction ELCR estimate would be 2.E-05 (Table M-6a), which is also within EPA's risk range but exceeds the 10-5 ELCR threshold included in the human health-based RAO. The non-cancer hazard risk estimates are 0.0001 and 0.02 for kidney and skin target organs, respectively; both of these are below the threshold HI of 1.

  Table M-6b presents the post-construction risks to ecological receptors for this alternative. Risk estimates for soil invertebrates, vermivorous birds and mammals are 20, 10, and 20 respectively and all HIs exceed the threshold of 1. For wildlife, 4,4'-DDE (birds) and 2,3,7,8-TCDD and copper (mammals) contribute most substantially to the HI values; pesticides (4,4'-DDT and 4,4'-

DDE) are the primary contributors to the post-construction risk estimates for soil invertebrates under Alternative 5.

In summary at the conclusion of the remedy implementation phase under both action-based alternatives:

- Human health total ELCR estimates would be within EPA's risk range but exceed the RAO 1E-05 threshold;
- HI estimates for vermivorous wildlife receptors and soil invertebrates exceed the target risk of 1;
- Target organ-specific non-cancer HI estimates for human receptors would all be below 1; and,
- Contaminant concentrations in surface soil would be below EPA's recommended residential level for dioxin of 0.001 mg/kg (EPA, 1998), and cancer risk associated with benzo(a)pyrene and arsenic would be below the RIDEM direct exposure criteria (1.E-5).

Time to achieve the human health RAOs. The RAOs for human health (Section 3.1), which are based on achieving a total ELCR within the RIDEM acceptable carcinogenic risk range (i.e., 1E-06 to 1E-05), would not be achieved until natural degradation and sediment deposition processes had further reduced residual dioxin exposures. To estimate the time to achieve the human health RAO, the contaminant fate model described in Section M.5 was used to estimate the soil concentration in the surficial exposure zone for each of the three alternatives for dioxin/furan TEQ, benzo(a)pyrene, and arsenic through 250 years post construction. Estimated floodplain soil concentrations were multiplied by 1E-06 and divided by the human health PRG and the cancer risk estimates for the individual COCs were then combined to estimate the ELCR. Table M-7a summarizes the anticipated ELCR estimates in Oxbow surface soils following remedy implementation; the post-construction risk data are plotted in Figure M-1a. Estimated durations until the human health 10-5 total ELCR RAO for floodplain soils is achieved under the No Action, Targeted Excavation and Partial Excavation alternatives are approximately 12, 4, and 0.5 years, respectively (Figure M-1a). The model estimates presented in Table M-7a included the assumption that organic contaminants in floodplain soil would naturally degrade over time. The soil degradation rates used for dioxin TEQ and benzo(a)pyrene were derived using available data for upland soils and may or may not be directly applicable to the physiochemical conditions associated floodplain soils (e.g., redox, anaerobic). Floodplain soil conditions may result in slower degradation rates and due to the importance of this model parameter[12], the analysis was also conducted assuming that no degradation of organic contaminants occurs. Table M-7b summarizes the anticipated ELCR estimates in Oxbow surface soils following remedy implementation with the assumption that dioxin TEQ and benzo(a)pyrene concentrations do not naturally degrade in Oxbow floodplain soils; the post-construction risk data are plotted in Figure M-1b. Estimated durations until the human health 10-5 total ELCR RAO for floodplain soils is achieved under the No Action, Targeted Excavation and Partial Excavation alternatives are approximately 210, 27, and 12 years, respectively (Figure M-1b). The importance of soil degradative processes on the time necessary to achieve the human health RAO is clear from this analysis. As discussed above, the time to achieve the human health RAO under the No Action alternative strongly depends on the degree of soil degradation (varying from approximately 12 to over 200 years). For the active remedial alternatives, the best estimates (i.e., approximately 4 and 0.5 years for the Targeted Excavation and Partial Excavation alternatives, respectively) are presented in Figure M-1a, which were derived using reasonable assumptions regarding deposition and degradation (organic contaminants only)

[12] This is particularly the case for the No Action alternative, which does not include a monitoring component necessary to verify model assumptions and identify the need to take corrective action, if warranted. The model also includes a soil deposition rate term that would not be able to be verified under the No Action alternative; however this parameter is considered to be less uncertain because ongoing depositional processes have been quantified (in Allendale and Lyman Mill Ponds) and freshly deposited soil has been observed in the Oxbow following flooding events.

rates. Monitoring to evaluate progress towards achieving the RAO is a component of the active remedies and additional actions could be implemented if it were determined that floodplain soil concentrations in the Oxbow were not decreasing as quickly as predicted.

M.7. Long-Term Ecological Risk/Hazard Reduction Estimates

As discussed previously, Tables M-1 through M-3 present the estimated 2,3,7,8-TCDD concentrations in Oxbow floodplain soils for each of the three technology scenarios (i.e., excavation/backfill, ENR, and MNR, respectively) for 5-year time increments between 0 and 250 years post remedy implementation. Tables M-8 and M-9 (shrew and woodcock, respectively) present the estimated average floodplain soil concentrations and ecological exposure risk from 2,3,7,8-TCDD for each of the remedial alternatives at five-year time intervals between 0 and 250 years post-remedy implementation. Similarly, Tables M-10 through M-12 present estimated copper concentrations for each of the three scenarios. Tables M-13 and M-14 present the estimated average floodplain soil concentrations and ecological exposure risk from copper (soil invertebrates and shrew, respectively).

HQs were estimated for each ecological receptor and remedial alternative by dividing the average soil concentration for a given remedial alternative by the receptor-specific ecological PRGs (MACTEC and Battelle, 2011b). Wildlife receptors were determined to be most sensitive to elevated concentrations of 2,3,7,8-TCDD in floodplain soil, and risk reduction curves were derived for both wildlife receptors considered in the BERA (i.e., short-tailed shrew and American woodcock). Vermivorous mammal receptors were determined to be four times more sensitive to copper than soil invertebrates (MACTEC and Battelle, 2011a).

Figure M-2 presents the hazard reduction time course curves for 2,3,7,8-TCDD for each of the remedial alternatives. The curves presented in Figure M-2 are based on the most reasonable estimates[13] for soil deposition within the floodplain (i.e., one foot/50 years) and for the 2,3,7,8-TCDD degradation rate in soil (i.e., $t_{0.5}$ = 12.9 years). In the case of both wildlife receptors, the partial excavation alternative achieves the ecological cleanup goal, based on no unacceptable risk (HQ<1), in the shortest duration (approximately 25 years for the shrew and 7 years for the woodcock). For the targeted excavation alternative, 2,3,7,8-TCDD concentrations are predicted to decrease to the shrew and woodcock PRGs approximately 5-10 years later than under the partial excavation alternative). It is estimated that the No Action alternative would require approximately 40 more years to achieve the ecological RAOs compared to the partial excavation alternative.

Figures M-3 and M-4 demonstrate the effects of varying assumptions regarding the contaminant degradation and deposition rates, respectively, on the time to achieve the target hazards for the shrew receptor. As anticipated, decreasing the rate at which organic contaminants are naturally degraded in soil, increases the amount of time required to achieve the cleanup goals. A doubling and quadrupling of the assumed 2,3,7,8-TCDD half life in soil (holding the deposition rate constant) results in the active alternatives not achieving the 2,3,7,8-TCDD cleanup goal until approximately 40 years post-construction (Figure M-3). A 5-fold and 10-fold decrease in the annual deposition rate term results in the alternatives not achieving the 2,3,7,8-TCDD cleanup goal until approximately 40-55 years post-construction (Figure M-4). The relative amount of time that the various alternatives are projected to achieve ecological cleanup goals are consistently ordered as follows: partial excavation < targeted excavation < No Action. Overall, the time to achieve the 2,3,7,8-TCDD cleanup goal appears relatively insensitive to the

[13] With incorporation into the action-based remedial alternatives of engineering structures designed to direct floodwaters into the Oxbow and retard flow through this wetland, the assumption of a typical deposition rate equivalent to that estimated for the ponds themselves seems reasonable. The estimated 2,3,7,8-TCDD half-life is based on an average of literature results.

degradation rate term and somewhat sensitive to the deposition rate term. The synergistic effects of these two factors result in a dramatic increase in the time to achieve ecological cleanup goals as deposition and degradation rates decrease in combination (Table M-15).

Figures M-5 and M-6 shows that the rate of risk reduction for exposure to copper. Because the average concentration of copper in background samples is higher than in the Oxbow[14], post-construction risks for all receptors are projected to increase over time as the relative influence of background conditions increases. In this analysis, the time to achieve the residual risks associated with "equilibrium" conditions is inversely related to the assumed deposition rates (e.g., contrast the risk curves for the shrew in Figures M-5 and M-6). The post-construction risks associated with the No Action alternative are lower throughout the time period evaluated because the active alternatives have the consequence of making the exposures in the Oxbow more similar to background conditions (i.e., higher and larger risk estimates) quicker although the model would predict that the time courses for all alternatives would asymptote to the same HQ given sufficient time.

Table M-15 summarizes the timeframes to achieve the cleanup goal for 2,3,7,8-TCDD for the shrew, which is the most sensitive receptor for this contaminant. Depending on the annual floodplain soil deposition and chemical biodegradation rates achieved, the time to achieve the 2,3,7,8-TCDD cleanup goal could range from approximately 20 to greater than 250 years[15]. The benefits of selecting an active remedial alternative increase as the deposition and biodegradation rates decrease, either independently or in combination. In the case of organic contaminants such as 2,3,7,8-TCDD, the model suggests that the risk reduction trajectories are more sensitive to assumptions regarding chemical degradation rates than to floodplain soil deposition rates. This is consistent with the findings of the sensitivity analysis for the time to achieve the human health RAO described in Section M.6.

M.8. Conclusions

Human health risks associated with contact with contaminated floodplain soil will be reduced to acceptable levels quickly following implementation of either active alternative being considered for the Lyman Mill reach. Estimated durations until the human health 10-5 total ELCR RAO for floodplain soils is achieved under the No Action, Targeted Excavation and Partial Excavation alternatives are approximately12, 4, and 0.5 years, respectively (Figure M-1a). Ecological risks will be reduced to acceptable levels in the Allendale reach immediately following implementation of the active remedy, however, elevated risks to ecological receptors in the Oxbow will remain for some time following implementation of any of the remedial alternatives evaluated in this FS. Post-construction risks to ecological receptors in the Oxbow are expected to be reduced most quickly for the partial excavation remedial alternative. The estimated timeframes to achieve the 2,3,7,8-TCDD cleanup goal for the best estimates of floodplain soil deposition and 2,3,7,8-TCDD degradation rates are 25, 30 and 70 years for the partial excavation, targeted excavation and No Action alternatives, respectively based on risks to vermivorous mammals (Table M-15). It is important to consider the elevated ecological risks associated with extended exposures to floodplain soil contaminants in the context of the various short-term impacts associated with active remediation. The remedy that is most effective in reducing ecological risks quickly (partial excavation and ENR) also would have the most elevated short-term risks due to the more substantial habitat related impacts to the forest community found in the Oxbow.

[14] (i.e., 205 versus 110 mg/kg). It is surprising that the background concentrations of copper are higher on average compared to the Oxbow and additional sampling may be conducted during final design to verify existing data.
[15] Under conservative assumptions regarding the annual deposition and 2,3,7,8-TCDD degradation rates, RAOs might not be achieved within the full 250 year period evaluated.

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Figure M-1a. Anticipated Time to Achieve Human Health 1E-05 ELCR RAO for Lyman Mill Floodplain Soil Action Area in Oxbow Floodplain Soil Following Remedy Implementation
(assumes organic contaminants naturally degrade over time)

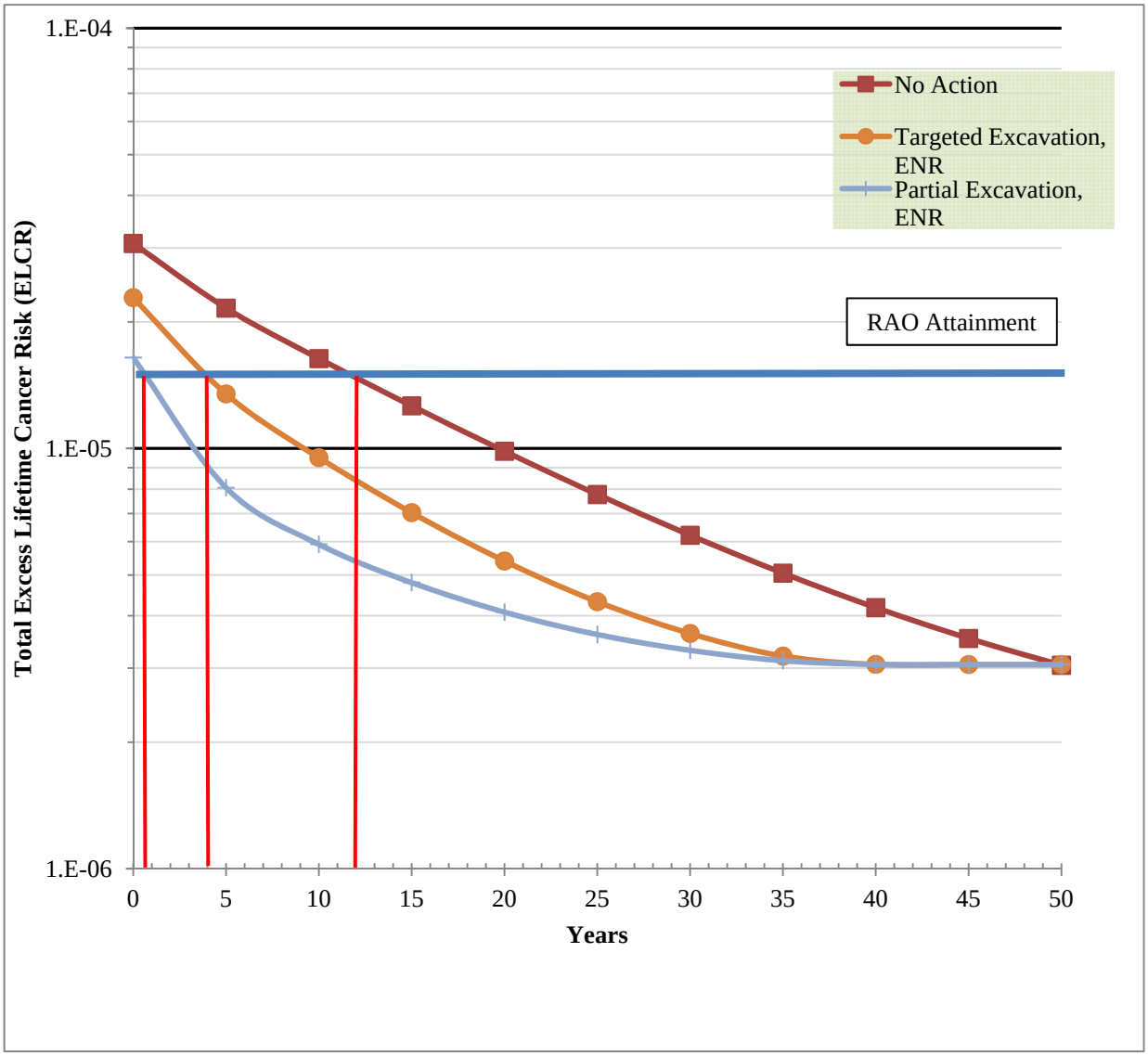


Figure M-1b. Anticipated Time to Achieve Human Health 1E-05 ELCR RAO for Lyman Mill Floodplain Soil Action Area in Oxbow Floodplain Soil Following Remedy Implementation
(assumes no degradation of organic contaminants over time)

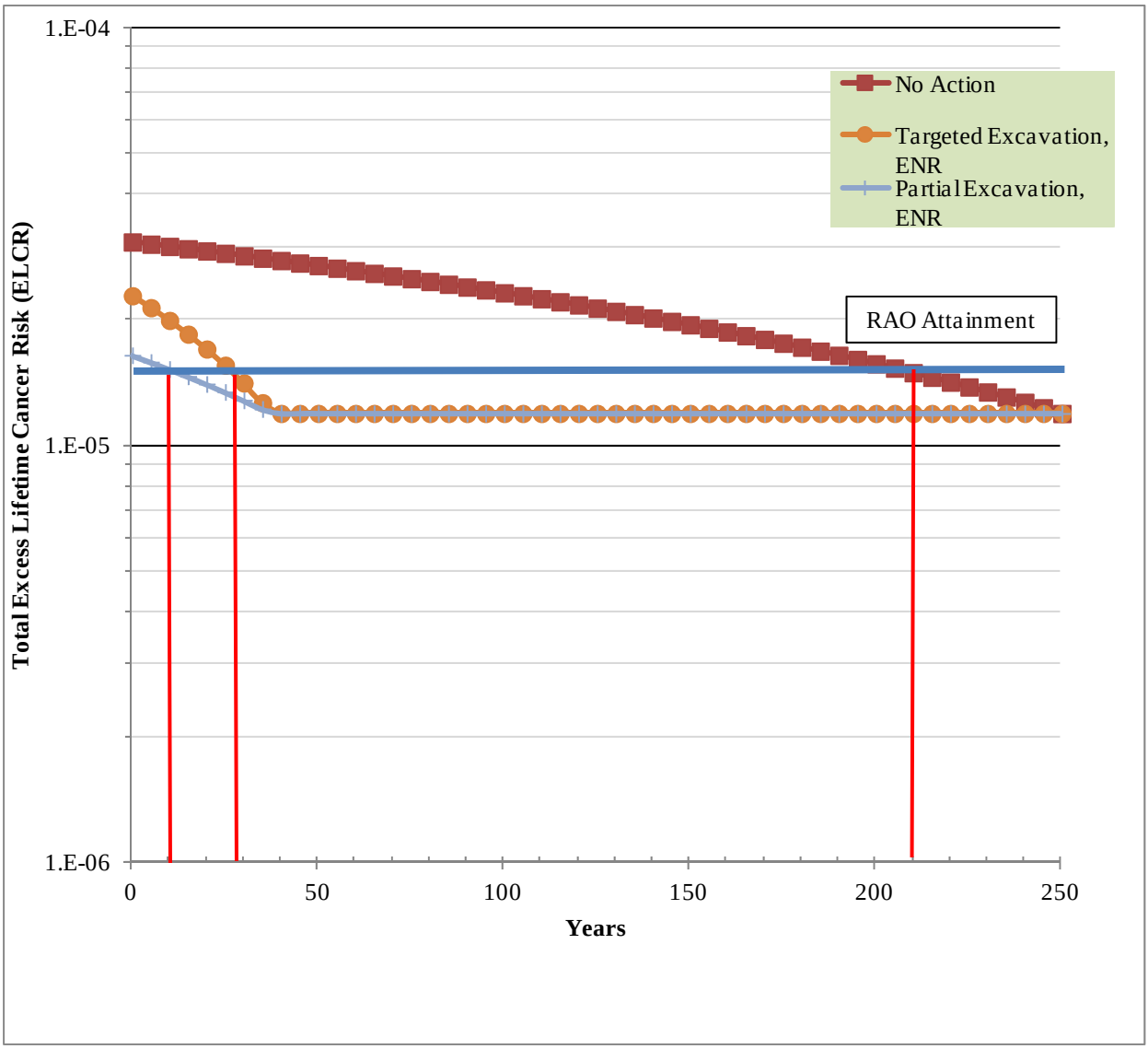


Figure M-2
Post-Construction Hazard Reduction Time Course Curves - 2,3,7,8-TCDD
(shrew and woodcock receptors)

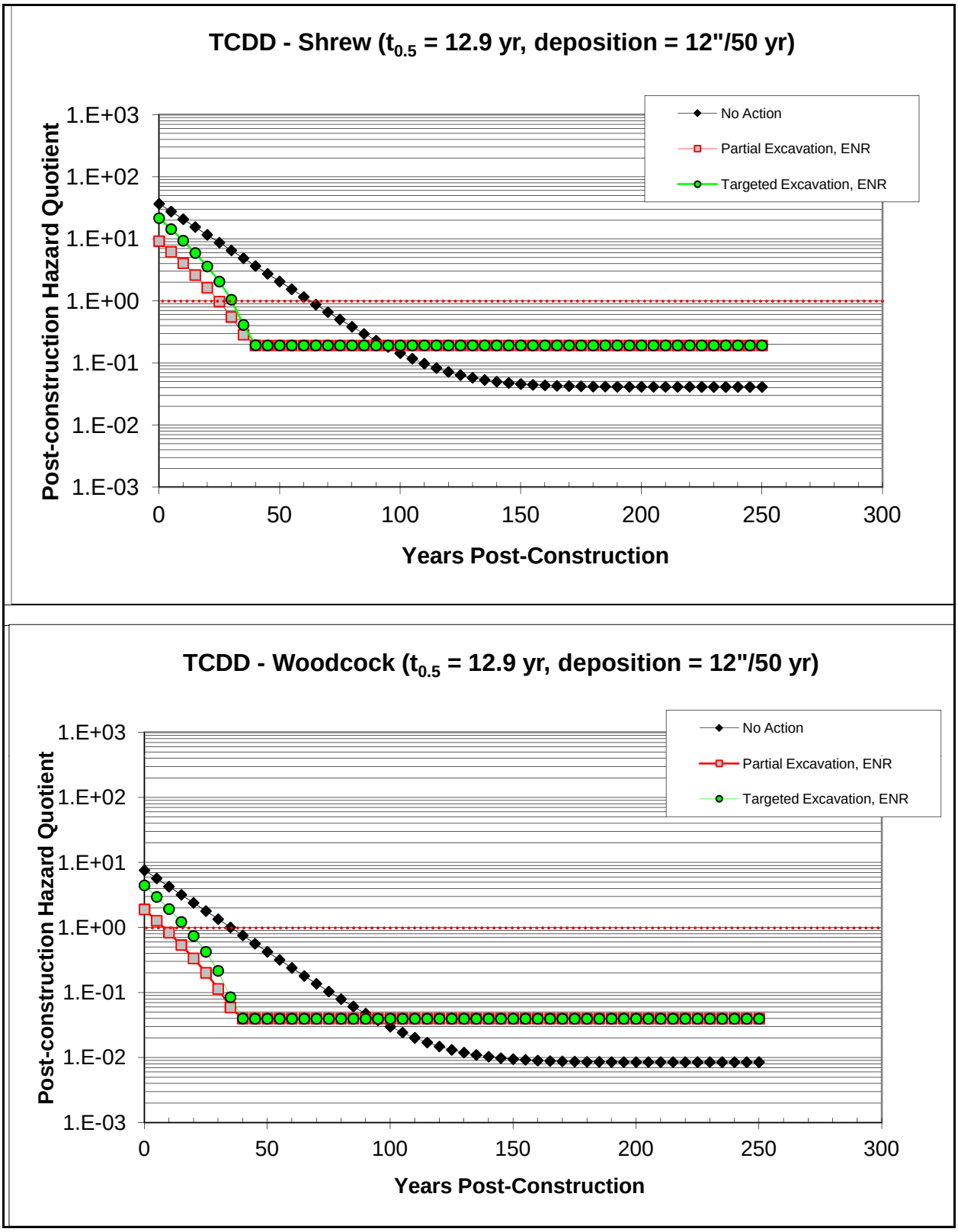
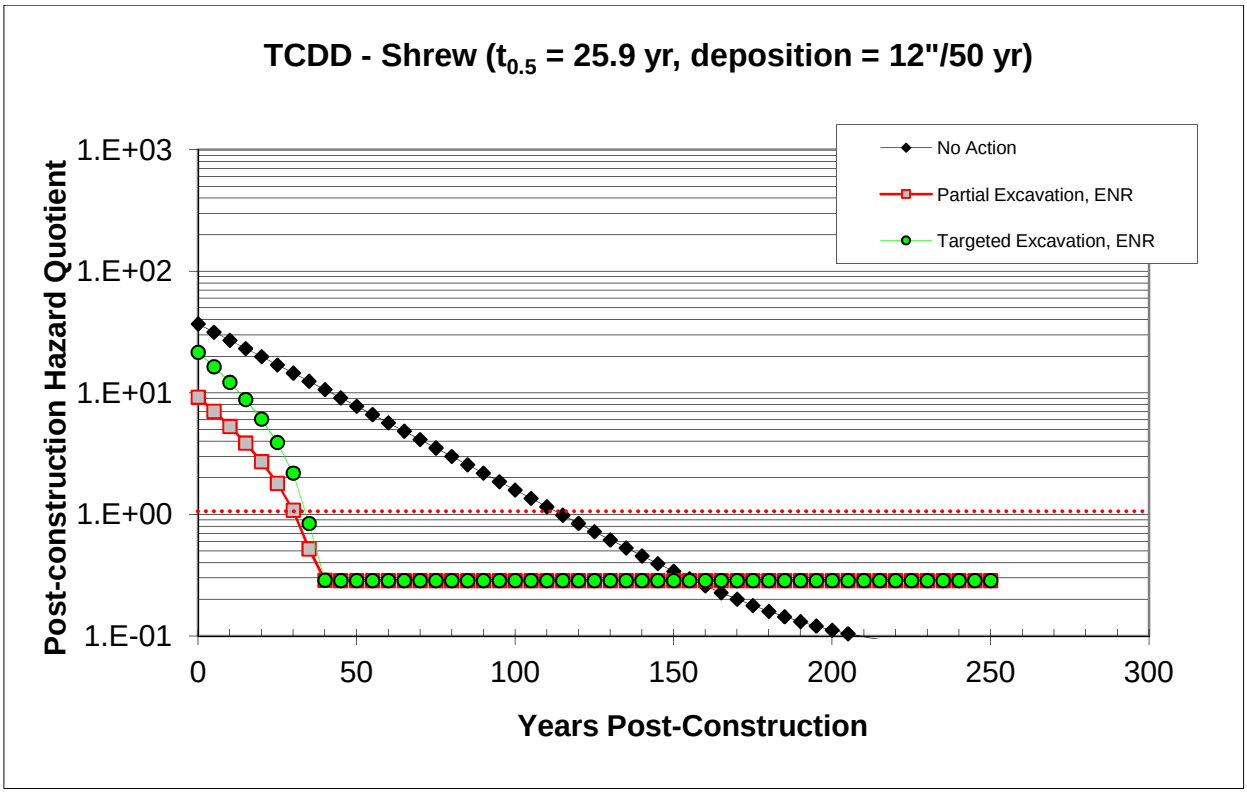


Figure M-3
Post-Construction Hazard Reduction Time Course Curves - 2,3,7,8-TCDD
(effect of varying degradation rates on shrew receptor)



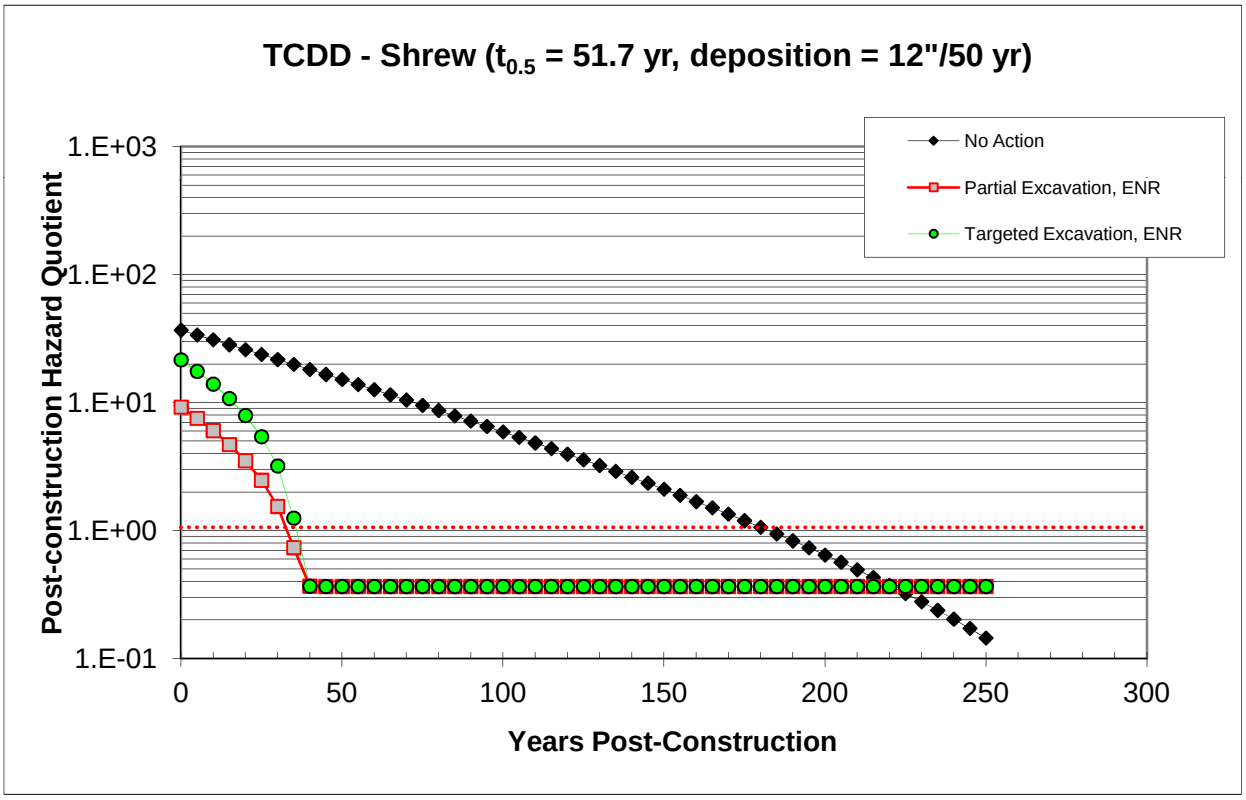
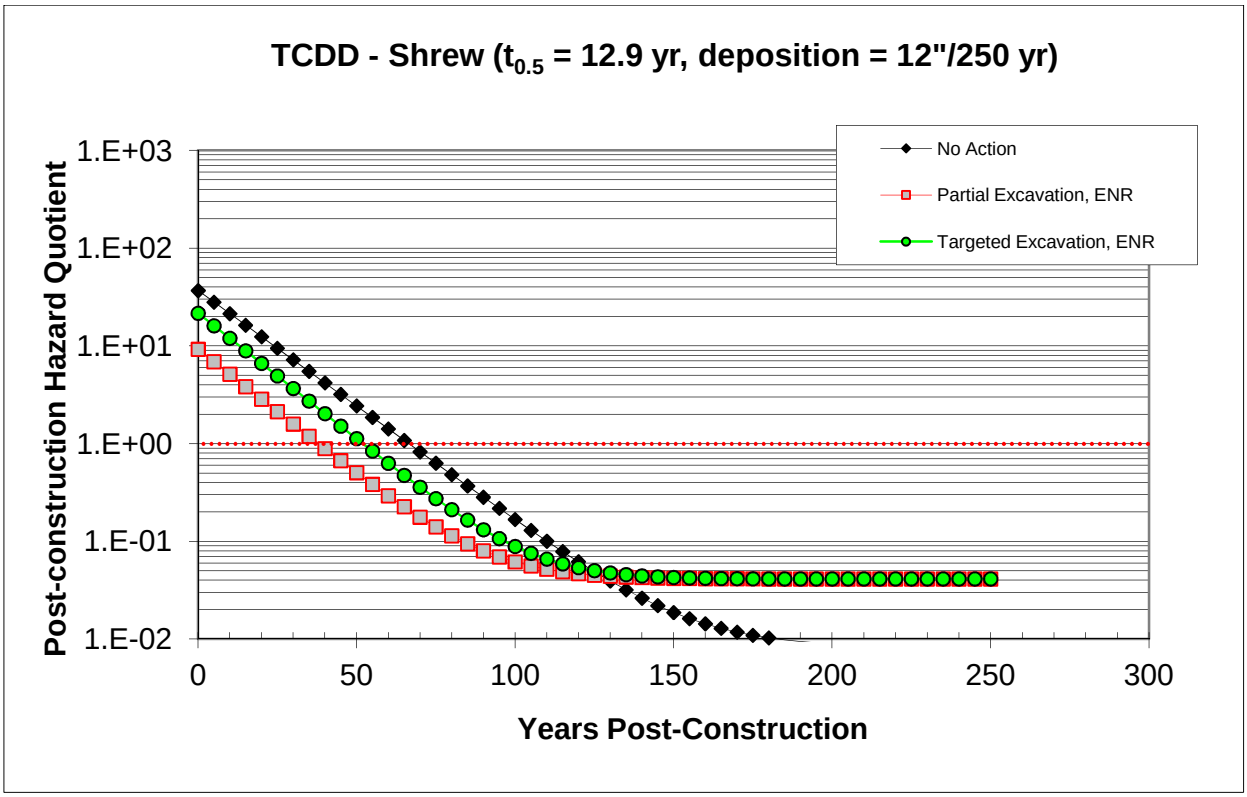


Figure M-4
Post-Construction Hazard Reduction Time Course Curves - 2,3,7,8-TCDD
(effect of varying deposition rates on shrew receptor)



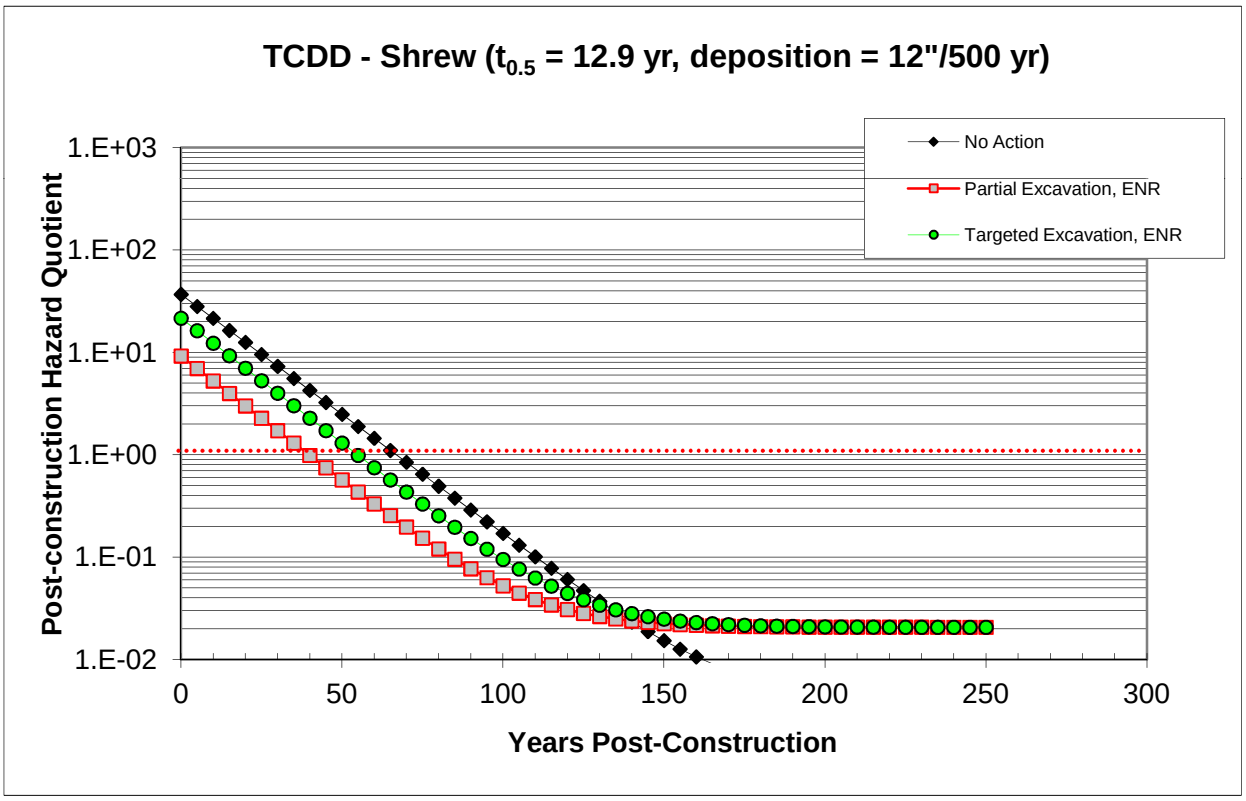
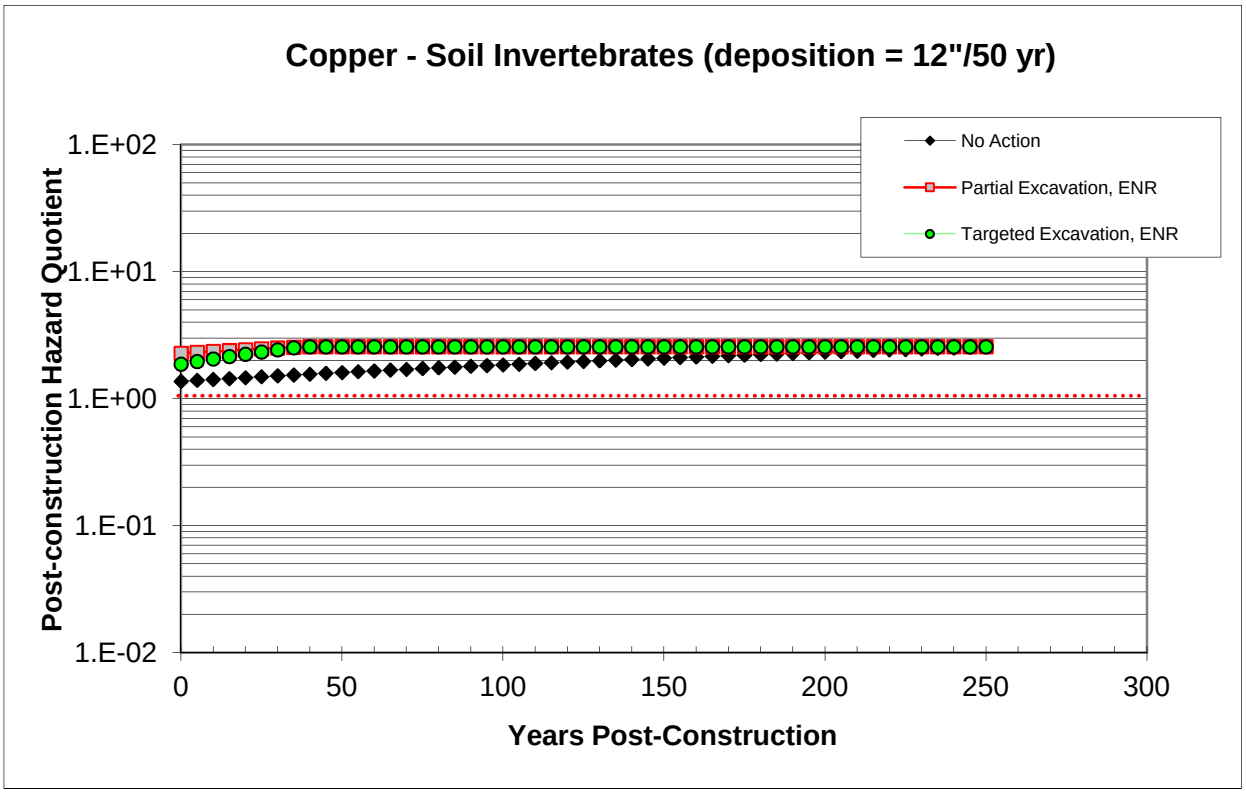


Figure M-5
Post-Construction Hazard Reduction Time Course Curves - Copper
(soil invertebrate and woodcock receptors)



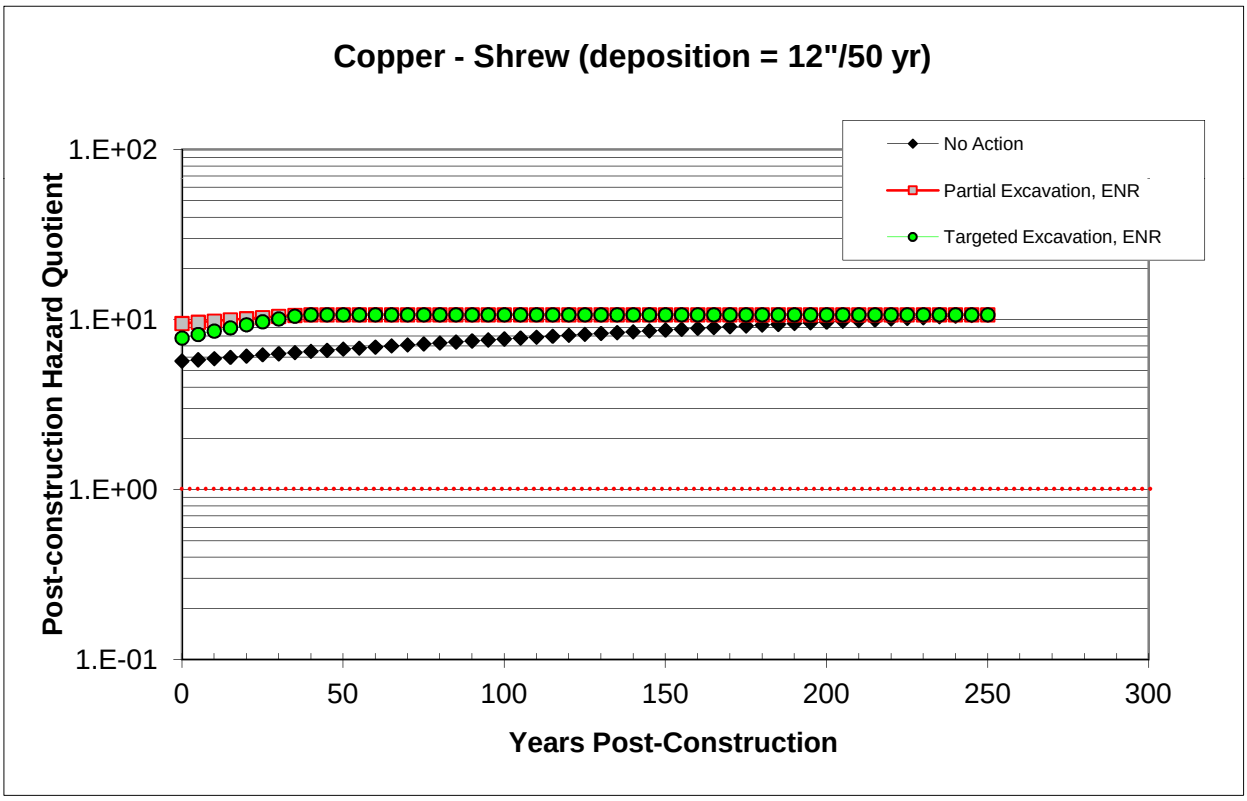
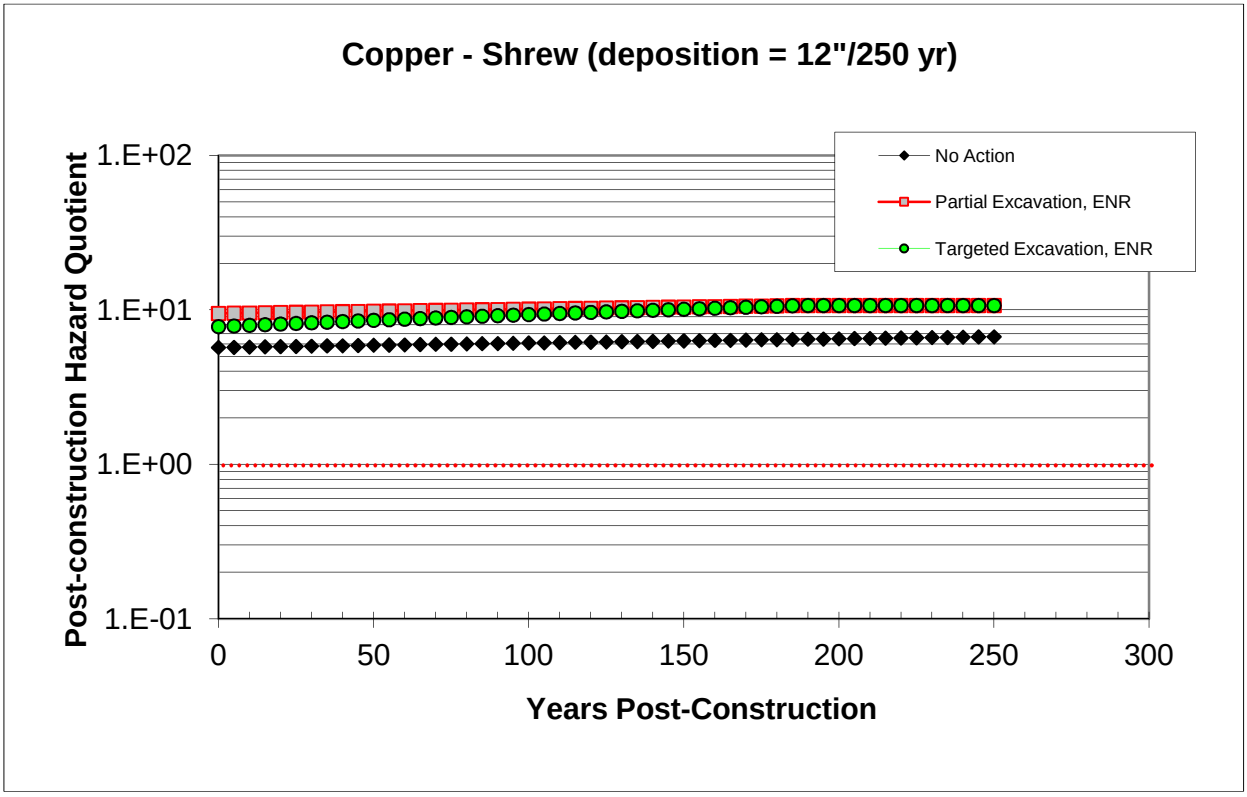


Figure M-6
Post-Construction Hazard Reduction Time Course Curves - Copper
(effect of varying deposition rates on woodcock receptor)



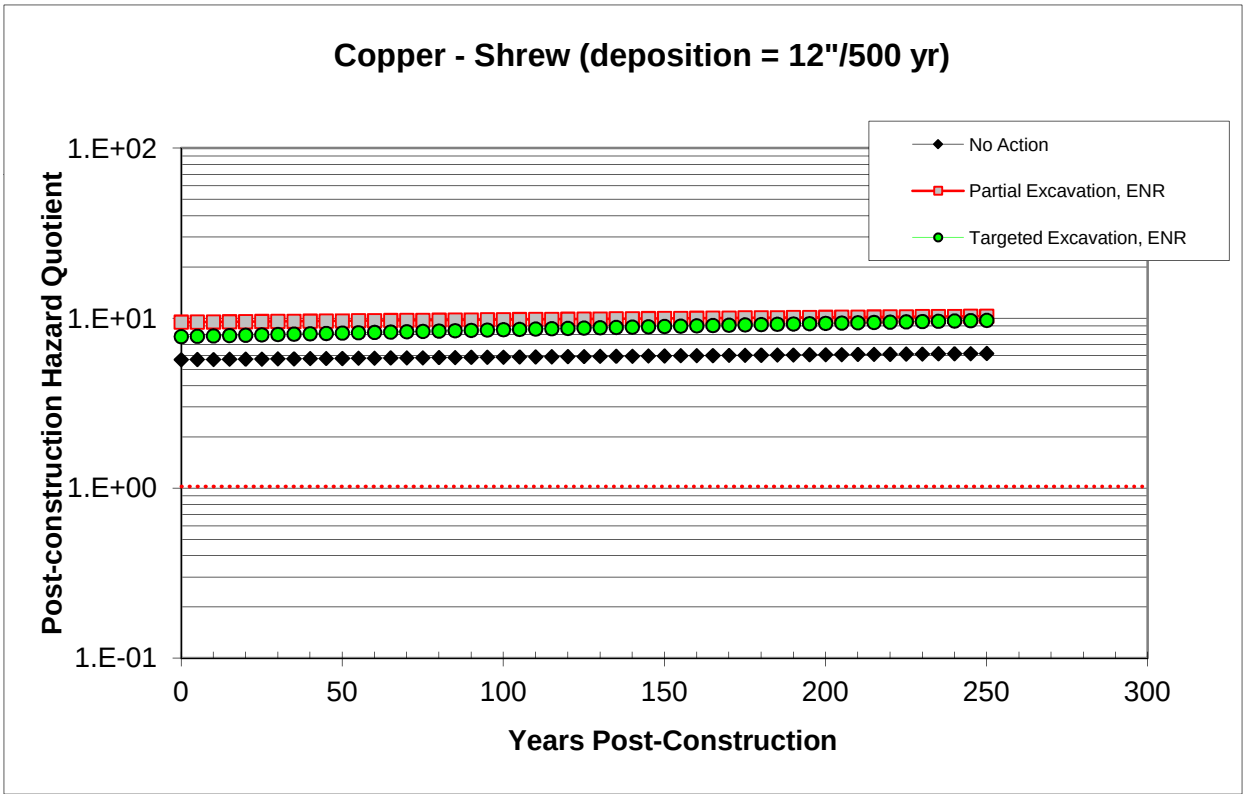


Table M-1
Estimated Average 2,3,7,8-TCDD Concentration in Floodplain Soil Following Remediation - Excavation/Backfill

				Half-decadal Deposition Concentration Increment[d]																						
Year	Average Concentration[a]	Original Floodplain Soil[b]	Backfill/ Thin Layer Cover[c]	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120
0	0.0000170	0.0000000	0.0000170																								
5	0.0000134	0.0000000	0.0000117	1.7E-06																							
10	0.0000110	0.0000000	0.0000080	1.3E-06	1.7E-06																						
15	0.0000093	0.0000000	0.0000053	9.9E-07	1.3E-06	1.7E-06																					
20	0.0000082	0.0000000	0.0000035	7.6E-07	9.9E-07	1.3E-06	1.7E-06																				
25	0.0000076	0.0000000	0.0000022	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06																			
30	0.0000071	0.0000000	0.0000014	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06																		
35	0.0000069	0.0000000	0.0000008	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06																	
40	0.0000068	0.0000000	0.0000004	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06																
45	0.0000067	0.0000000	0.0000002	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06															
50	0.0000067	0.0000000	0.0000000	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06														
55	0.0000067	0.0000000	0.0000000	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06													
60	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06												
65	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06											
70	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06										
75	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06									
80	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06								
85	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06							
90	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06						
95	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06					
100	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06				
105	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06			
110	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06		
115	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06	
120	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06
125	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06
130	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07
135	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07
140	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07
145	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07
150	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07
155	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07
160	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07
165	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07
170	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
175	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
180	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
185	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
190	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
195	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
200	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
205	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
210	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
215	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
220	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
225	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
230	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
235	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
240	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
245	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
250	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Presumed exposure zone thickness	12	inches
Thickness of thin layer cover	0	inches
Backfill thickness	12	inches
Original concentration	**1.3E-03**	ug/g
Background concentration	**1.7E-05**	ug/g
Soil half life	**12.9**	years
Deposition rate	**0.240**	inches/year
Increment	5	years

Notes:
a. Average concentration in the ecological exposure zone as sum of weighted concentrations for original unremediated soil, backfill/thin layer cover, and river sediment deposited post-construction. Units in ug/g.
b. Contaminant concentration of the original floodplain soil matrix remaining within the ecological exposure zone at time increment n, weighted by the fraction that this material represents of the entire exposure column. Units in ug/g.
c. Contaminant concentration of the backfilled (or thin-layer cover) soil matrix remaining within the ecological exposure zone at time increment n, weighted by the fraction that this material represents of the entire exposure column. Units in ug/g.
d. Contaminant concentration of the floodplain soil deposited following remedy implementation within the ecological exposure zone at time interval n, weighted by the fraction that this material represents of the overall exposure zone. Units in ug/g.

Table M-1
Estimated Average 2,3,7,8-TCDD Concentration in Floodplain Soil Following Remediation - Excavation/Backfill

Year	Average Concentration[a]	Half-decadal Concentration Increment[d]																									
		125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250
0	0.0000170																										
5	0.0000134																										
10	0.0000110																										
15	0.0000093																										
20	0.0000082																										
25	0.0000076																										
30	0.0000071																										
35	0.0000069																										
40	0.0000068																										
45	0.0000067																										
50	0.0000067																										
55	0.0000067																										
60	0.0000067																										
65	0.0000067																										
70	0.0000067																										
75	0.0000067																										
80	0.0000067																										
85	0.0000067																										
90	0.0000067																										
95	0.0000067																										
100	0.0000067																										
105	0.0000067																										
110	0.0000067																										
115	0.0000067																										
120	0.0000067																										
125	0.0000067	1.7E-06																									
130	0.0000067	1.3E-06	1.7E-06																								
135	0.0000067	9.9E-07	1.3E-06	1.7E-06																							
140	0.0000067	7.6E-07	9.9E-07	1.3E-06	1.7E-06																						
145	0.0000067	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06																					
150	0.0000067	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06																				
155	0.0000067	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06																			
160	0.0000067	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06																		
165	0.0000067	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06																	
170	0.0000067	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06																
175	0.0000067	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06															
180	0.0000067	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06														
185	0.0000067	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06													
190	0.0000067	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06												
195	0.0000067	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06											
200	0.0000067	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06										
205	0.0000067	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06									
210	0.0000067	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06								
215	0.0000067	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06							
220	0.0000067	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06						
225	0.0000067	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06					
230	0.0000067	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06				
235	0.0000067	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06			
240	0.0000067	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06		
245	0.0000067	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06	
250	0.0000067	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06

Pres

Table M-2
Estimated Average 2,3,7,8-TCDD Concentration in Floodplain Soil Following Remediation - ENR (Thin Layer Cover)

				Half-decadal Deposition Concentration Increment[d]																						
Year	Average Concentration[a]	Original Floodplain Soil[b]	Backfill/ Thin Layer Cover[c]	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120
0	0.0009718	0.0009675	0.0000043																								
5	0.0006463	0.0006414	0.0000033	1.7E-06																							
10	0.0004206	0.0004151	0.0000025	1.3E-06	1.7E-06																						
15	0.0002657	0.0002598	0.0000019	9.9E-07	1.3E-06	1.7E-06																					
20	0.0001608	0.0001546	0.0000015	7.6E-07	9.9E-07	1.3E-06	1.7E-06																				
25	0.0000909	0.0000844	0.0000011	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06																			
30	0.0000454	0.0000388	0.0000009	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06																		
35	0.0000167	0.0000099	0.0000007	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06																	
40	0.0000068	0.0000000	0.0000004	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06																
45	0.0000067	0.0000000	0.0000002	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06															
50	0.0000067	0.0000000	0.0000000	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06														
55	0.0000067	0.0000000	0.0000000	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06													
60	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06												
65	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06											
70	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06										
75	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06									
80	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06								
85	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06							
90	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06						
95	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06					
100	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06				
105	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06			
110	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06		
115	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06	
120	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06
125	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06
130	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07
135	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07
140	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07
145	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07
150	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07
155	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07
160	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07
165	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07
170	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
175	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
180	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
185	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
190	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
195	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
200	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
205	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
210	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
215	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
220	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
225	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
230	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
235	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
240	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
245	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
250	0.0000067	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Presumed exposure zone thickness	12	inches
Thickness of thin layer cover	3	inches
Backfill thickness	0	inches
Original concentration	**1.3E-03**	ug/g
Background concentration	**1.7E-05**	ug/g
Soil half life	**12.9**	years
Deposition rate	**0.24**	inches/year
Increment	5	years

Notes:
a. Average concentration in the ecological exposure zone as sum of weighted concentrations for original unremediated soil, backfill/thin layer cover, and river sediment deposited post-construction. Units in ug/g.
b. Contaminant concentration of the original floodplain soil matrix remaining within the ecological exposure zone at time increment n, weighted by the fraction that this material represents of the entire exposure column. Units in ug/g.
c. Contaminant concentration of the backfilled (or thin-layer cover) soil matrix remaining within the ecological exposure zone at time increment n, weighted by the fraction that this material represents of the entire exposure column. Units in ug/g.
d. Contaminant concentration of the floodplain soil deposited following remedy implementation within the ecological exposure zone at time interval n, weighted by the fraction that this material represents of the overall exposure zone. Units in ug/g.

Table M-2
Estimated Average 2,3,7,8-TCDD Concentration in Floodplain Soil Following Remediation - ENR (Thin Layer Cover)

Year	Average Concentration[a]	Half-decadal Concentration Increment[d]																									
		125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250
0	0.0009718																										
5	0.0006463																										
10	0.0004206																										
15	0.0002657																										
20	0.0001608																										
25	0.0000909																										
30	0.0000454																										
35	0.0000167																										
40	0.0000068																										
45	0.0000067																										
50	0.0000067																										
55	0.0000067																										
60	0.0000067																										
65	0.0000067																										
70	0.0000067																										
75	0.0000067																										
80	0.0000067																										
85	0.0000067																										
90	0.0000067																										
95	0.0000067																										
100	0.0000067																										
105	0.0000067																										
110	0.0000067																										
115	0.0000067																										
120	0.0000067																										
125	0.0000067	1.7E-06																									
130	0.0000067	1.3E-06	1.7E-06																								
135	0.0000067	9.9E-07	1.3E-06	1.7E-06																							
140	0.0000067	7.6E-07	9.9E-07	1.3E-06	1.7E-06																						
145	0.0000067	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06																					
150	0.0000067	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06																				
155	0.0000067	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06																			
160	0.0000067	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06																		
165	0.0000067	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06																	
170	0.0000067	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06																
175	0.0000067	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06															
180	0.0000067	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06														
185	0.0000067	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06													
190	0.0000067	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06												
195	0.0000067	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06											
200	0.0000067	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06										
205	0.0000067	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06									
210	0.0000067	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06								
215	0.0000067	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06							
220	0.0000067	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06						
225	0.0000067	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06					
230	0.0000067	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06				
235	0.0000067	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06			
240	0.0000067	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06		
245	0.0000067	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06	
250	0.0000067	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-07	2.0E-07	2.6E-07	3.4E-07	4.5E-07	5.8E-07	7.6E-07	9.9E-07	1.3E-06	1.7E-06

Pres

Table M-3
Estimated Average 2,3,7,8-TCDD Concentration in Floodplain Soil Following Remediation - Monitored Natural Recovery

Year	Average Concentration[a]	Original Floodplain Soil[b]	Backfill/ Thin Layer Cover[c]	Half-decadal Deposition Concentration Increment[d]																						
				5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120
0	0.0012900	0.0012900	0.0000000																								
5	0.0009673	0.0009670	0.0000000	3.4E-07																							
10	0.0007252	0.0007246	0.0000000	2.6E-07	3.4E-07																						
15	0.0005435	0.0005427	0.0000000	2.0E-07	2.6E-07	3.4E-07																					
20	0.0004072	0.0004063	0.0000000	1.5E-07	2.0E-07	2.6E-07	3.4E-07																				
25	0.0003051	0.0003040	0.0000000	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07																			
30	0.0002285	0.0002274	0.0000000	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07																		
35	0.0001712	0.0001700	0.0000000	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07																	
40	0.0001283	0.0001270	0.0000000	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07																
45	0.0000961	0.0000948	0.0000000	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07															
50	0.0000721	0.0000708	0.0000000	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07														
55	0.0000541	0.0000528	0.0000000	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07													
60	0.0000407	0.0000393	0.0000000	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07												
65	0.0000307	0.0000293	0.0000000	1.4E-08	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07											
70	0.0000232	0.0000218	0.0000000	1.0E-08	1.4E-08	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07										
75	0.0000176	0.0000162	0.0000000	8.0E-09	1.0E-08	1.4E-08	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07									
80	0.0000135	0.0000120	0.0000000	6.1E-09	8.0E-09	1.0E-08	1.4E-08	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07								
85	0.0000104	0.0000089	0.0000000	4.7E-09	6.1E-09	8.0E-09	1.0E-08	1.4E-08	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07							
90	0.0000081	0.0000066	0.0000000	3.6E-09	4.7E-09	6.1E-09	8.0E-09	1.0E-08	1.4E-08	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07						
95	0.0000064	0.0000049	0.0000000	2.7E-09	3.6E-09	4.7E-09	6.1E-09	8.0E-09	1.0E-08	1.4E-08	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07					
100	0.0000051	0.0000036	0.0000000	2.1E-09	2.7E-09	3.6E-09	4.7E-09	6.1E-09	8.0E-09	1.0E-08	1.4E-08	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07				
105	0.0000041	0.0000027	0.0000000	1.6E-09	2.1E-09	2.7E-09	3.6E-09	4.7E-09	6.1E-09	8.0E-09	1.0E-08	1.4E-08	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07			
110	0.0000034	0.0000020	0.0000000	1.2E-09	1.6E-09	2.1E-09	2.7E-09	3.6E-09	4.7E-09	6.1E-09	8.0E-09	1.0E-08	1.4E-08	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07		
115	0.0000029	0.0000015	0.0000000	9.3E-10	1.2E-09	1.6E-09	2.1E-09	2.7E-09	3.6E-09	4.7E-09	6.1E-09	8.0E-09	1.0E-08	1.4E-08	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07	
120	0.0000025	0.0000011	0.0000000	7.2E-10	9.3E-10	1.2E-09	1.6E-09	2.1E-09	2.7E-09	3.6E-09	4.7E-09	6.1E-09	8.0E-09	1.0E-08	1.4E-08	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07
125	0.0000022	0.0000008	0.0000000	5.5E-10	7.2E-10	9.3E-10	1.2E-09	1.6E-09	2.1E-09	2.7E-09	3.6E-09	4.7E-09	6.1E-09	8.0E-09	1.0E-08	1.4E-08	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07
130	0.0000020	0.0000006	0.0000000	4.2E-10	5.5E-10	7.2E-10	9.3E-10	1.2E-09	1.6E-09	2.1E-09	2.7E-09	3.6E-09	4.7E-09	6.1E-09	8.0E-09	1.0E-08	1.4E-08	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07
135	0.0000019	0.0000004	0.0000000	3.2E-10	4.2E-10	5.5E-10	7.2E-10	9.3E-10	1.2E-09	1.6E-09	2.1E-09	2.7E-09	3.6E-09	4.7E-09	6.1E-09	8.0E-09	1.0E-08	1.4E-08	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07
140	0.0000018	0.0000003	0.0000000	2.4E-10	3.2E-10	4.2E-10	5.5E-10	7.2E-10	9.3E-10	1.2E-09	1.6E-09	2.1E-09	2.7E-09	3.6E-09	4.7E-09	6.1E-09	8.0E-09	1.0E-08	1.4E-08	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07
145	0.0000017	0.0000002	0.0000000	1.9E-10	2.4E-10	3.2E-10	4.2E-10	5.5E-10	7.2E-10	9.3E-10	1.2E-09	1.6E-09	2.1E-09	2.7E-09	3.6E-09	4.7E-09	6.1E-09	8.0E-09	1.0E-08	1.4E-08	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08
150	0.0000016	0.0000002	0.0000000	1.4E-10	1.9E-10	2.4E-10	3.2E-10	4.2E-10	5.5E-10	7.2E-10	9.3E-10	1.2E-09	1.6E-09	2.1E-09	2.7E-09	3.6E-09	4.7E-09	6.1E-09	8.0E-09	1.0E-08	1.4E-08	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08
155	0.0000016	0.0000001	0.0000000	1.1E-10	1.4E-10	1.9E-10	2.4E-10	3.2E-10	4.2E-10	5.5E-10	7.2E-10	9.3E-10	1.2E-09	1.6E-09	2.1E-09	2.7E-09	3.6E-09	4.7E-09	6.1E-09	8.0E-09	1.0E-08	1.4E-08	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08
160	0.0000015	0.0000001	0.0000000	8.4E-11	1.1E-10	1.4E-10	1.9E-10	2.4E-10	3.2E-10	4.2E-10	5.5E-10	7.2E-10	9.3E-10	1.2E-09	1.6E-09	2.1E-09	2.7E-09	3.6E-09	4.7E-09	6.1E-09	8.0E-09	1.0E-08	1.4E-08	1.8E-08	2.3E-08	3.0E-08	4.0E-08
165	0.0000015	0.0000001	0.0000000	6.4E-11	8.4E-11	1.1E-10	1.4E-10	1.9E-10	2.4E-10	3.2E-10	4.2E-10	5.5E-10	7.2E-10	9.3E-10	1.2E-09	1.6E-09	2.1E-09	2.7E-09	3.6E-09	4.7E-09	6.1E-09	8.0E-09	1.0E-08	1.4E-08	1.8E-08	2.3E-08	3.0E-08
170	0.0000015	0.0000000	0.0000000	4.9E-11	6.4E-11	8.4E-11	1.1E-10	1.4E-10	1.9E-10	2.4E-10	3.2E-10	4.2E-10	5.5E-10	7.2E-10	9.3E-10	1.2E-09	1.6E-09	2.1E-09	2.7E-09	3.6E-09	4.7E-09	6.1E-09	8.0E-09	1.0E-08	1.4E-08	1.8E-08	2.3E-08
175	0.0000015	0.0000000	0.0000000	3.8E-11	4.9E-11	6.4E-11	8.4E-11	1.1E-10	1.4E-10	1.9E-10	2.4E-10	3.2E-10	4.2E-10	5.5E-10	7.2E-10	9.3E-10	1.2E-09	1.6E-09	2.1E-09	2.7E-09	3.6E-09	4.7E-09	6.1E-09	8.0E-09	1.0E-08	1.4E-08	1.8E-08
180	0.0000015	0.0000000	0.0000000	2.9E-11	3.8E-11	4.9E-11	6.4E-11	8.4E-11	1.1E-10	1.4E-10	1.9E-10	2.4E-10	3.2E-10	4.2E-10	5.5E-10	7.2E-10	9.3E-10	1.2E-09	1.6E-09	2.1E-09	2.7E-09	3.6E-09	4.7E-09	6.1E-09	8.0E-09	1.0E-08	1.4E-08
185	0.0000015	0.0000000	0.0000000	2.2E-11	2.9E-11	3.8E-11	4.9E-11	6.4E-11	8.4E-11	1.1E-10	1.4E-10	1.9E-10	2.4E-10	3.2E-10	4.2E-10	5.5E-10	7.2E-10	9.3E-10	1.2E-09	1.6E-09	2.1E-09	2.7E-09	3.6E-09	4.7E-09	6.1E-09	8.0E-09	1.0E-08
190	0.0000015	0.0000000	0.0000000	1.7E-11	2.2E-11	2.9E-11	3.8E-11	4.9E-11	6.4E-11	8.4E-11	1.1E-10	1.4E-10	1.9E-10	2.4E-10	3.2E-10	4.2E-10	5.5E-10	7.2E-10	9.3E-10	1.2E-09	1.6E-09	2.1E-09	2.7E-09	3.6E-09	4.7E-09	6.1E-09	8.0E-09
195	0.0000015	0.0000000	0.0000000	1.3E-11	1.7E-11	2.2E-11	2.9E-11	3.8E-11	4.9E-11	6.4E-11	8.4E-11	1.1E-10	1.4E-10	1.9E-10	2.4E-10	3.2E-10	4.2E-10	5.5E-10	7.2E-10	9.3E-10	1.2E-09	1.6E-09	2.1E-09	2.7E-09	3.6E-09	4.7E-09	6.1E-09
200	0.0000015	0.0000000	0.0000000	9.8E-12	1.3E-11	1.7E-11	2.2E-11	2.9E-11	3.8E-11	4.9E-11	6.4E-11	8.4E-11	1.1E-10	1.4E-10	1.9E-10	2.4E-10	3.2E-10	4.2E-10	5.5E-10	7.2E-10	9.3E-10	1.2E-09	1.6E-09	2.1E-09	2.7E-09	3.6E-09	4.7E-09
205	0.0000015	0.0000000	0.0000000	7.5E-12	9.8E-12	1.3E-11	1.7E-11	2.2E-11	2.9E-11	3.8E-11	4.9E-11	6.4E-11	8.4E-11	1.1E-10	1.4E-10	1.9E-10	2.4E-10	3.2E-10	4.2E-10	5.5E-10	7.2E-10	9.3E-10	1.2E-09	1.6E-09	2.1E-09	2.7E-09	3.6E-09
210	0.0000014	0.0000000	0.0000000	5.7E-12	7.5E-12	9.8E-12	1.3E-11	1.7E-11	2.2E-11	2.9E-11	3.8E-11	4.9E-11	6.4E-11	8.4E-11	1.1E-10	1.4E-10	1.9E-10	2.4E-10	3.2E-10	4.2E-10	5.5E-10	7.2E-10	9.3E-10	1.2E-09	1.6E-09	2.1E-09	2.7E-09
215	0.0000014	0.0000000	0.0000000	4.4E-12	5.7E-12	7.5E-12	9.8E-12	1.3E-11	1.7E-11	2.2E-11	2.9E-11	3.8E-11	4.9E-11	6.4E-11	8.4E-11	1.1E-10	1.4E-10	1.9E-10	2.4E-10	3.2E-10	4.2E-10	5.5E-10	7.2E-10	9.3E-10	1.2E-09	1.6E-09	2.1E-09
220	0.0000014	0.0000000	0.0000000	3.4E-12	4.4E-12	5.7E-12	7.5E-12	9.8E-12	1.3E-11	1.7E-11	2.2E-11	2.9E-11	3.8E-11	4.9E-11	6.4E-11	8.4E-11	1.1E-10	1.4E-10	1.9E-10	2.4E-10	3.2E-10	4.2E-10	5.5E-10	7.2E-10	9.3E-10	1.2E-09	1.6E-09
225	0.0000014	0.0000000	0.0000000	2.6E-12	3.4E-12	4.4E-12	5.7E-12	7.5E-12	9.8E-12	1.3E-11	1.7E-11	2.2E-11	2.9E-11	3.8E-11	4.9E-11	6.4E-11	8.4E-11	1.1E-10	1.4E-10	1.9E-10	2.4E-10	3.2E-10	4.2E-10	5.5E-10	7.2E-10	9.3E-10	1.2E-09
230	0.0000014	0.0000000	0.0000000	2.0E-12	2.6E-12	3.4E-12	4.4E-12	5.7E-12	7.5E-12	9.8E-12	1.3E-11	1.7E-11	2.2E-11	2.9E-11	3.8E-11	4.9E-11	6.4E-11	8.4E-11	1.1E-10	1.4E-10	1.9E-10	2.4E-10	3.2E-10	4.2E-10	5.5E-10	7.2E-10	9.3E-10
235	0.0000014	0.0000000	0.0000000	1.5E-12	2.0E-12	2.6E-12	3.4E-12	4.4E-12	5.7E-12	7.5E-12	9.8E-12	1.3E-11	1.7E-11	2.2E-11	2.9E-11	3.8E-11	4.9E-11	6.4E-11	8.4E-11	1.1E-10	1.4E-10	1.9E-10	2.4E-10	3.2E-10	4.2E-10	5.5E-10	7.2E-10
240	0.0000014	0.0000000	0.0000000	1.2E-12	1.5E-12	2.0E-12	2.6E-12	3.4E-12	4.4E-12	5.7E-12	7.5E-12	9.8E-12	1.3E-11	1.7E-11	2.2E-11	2.9E-11	3.8E-11	4.9E-11	6.4E-11	8.4E-11	1.1E-10	1.4E-10	1.9E-10	2.4E-10	3.2E-10	4.2E-10	5.5E-10
245	0.0000014	0.0000000	0.0000000	8.8E-13	1.2E-12	1.5E-12	2.0E-12	2.6E-12	3.4E-12	4.4E-12	5.7E-12	7.5E-12	9.8E-12	1.3E-11	1.7E-11	2.2E-11	2.9E-11	3.8E-11	4.9E-11	6.4E-11	8.4E-11	1.1E-10	1.4E-10	1.9E-10	2.4E-10	3.2E-10	4.2E-10
250	0.0000014	0.0000000	0.0000000	6.7E-13	8.8E-13	1.2E-12	1.5E-12	2.0E-12	2.6E-12	3.4E-12	4.4E-12	5.7E-12	7.5E-12	9.8E-12	1.3E-11	1.7E-11	2.2E-11	2.9E-11	3.8E-11	4.9E-11	6.4E-11	8.4E-11	1.1E-10	1.4E-10	1.9E-10	2.4E-10	3.2E-10

Presumed exposure zone thickness	12	inches
Thickness of thin layer cover	0	inches
Backfill thickness	0	inches
Original concentration	**1.3E-03**	ug/g
Background concentration	**1.7E-05**	ug/g
Soil half life	**12.9**	years
Deposition rate	**0.0480**	inches/year
Increment	5	years

Notes:
a. Average concentration in the ecological exposure zone as sum of weighted concentrations for original unremediated soil, backfill/thin layer cover, and river sediment deposited post-construction. Units in ug/g.
b. Contaminant concentration of the original floodplain soil matrix remaining within the ecological exposure zone at time increment n, weighted by the fraction that this material represents of the entire exposure column. Units in ug/g.
c. Contaminant concentration of the backfilled (or thin-layer cover) soil matrix remaining within the ecological exposure zone at time increment n, weighted by the fraction that this material represents of the entire exposure column. Units in ug/g.
d. Contaminant concentration of the floodplain soil deposited following remedy implementation within the ecological exposure zone at time interval n, weighted by the fraction that this material represents of the overall exposure zone. Units in ug/g.

Table M-3
Estimated Average 2,3,7,8-TCDD Concentration in Floodplain Soil Following Remediation - Monitored Natural Recovery

Year	Average Concentration[a]	Half-decadal Concentration Increment[d]																									
		125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250
0	0.0012900																										
5	0.0009673																										
10	0.0007252																										
15	0.0005435																										
20	0.0004072																										
25	0.0003051																										
30	0.0002285																										
35	0.0001712																										
40	0.0001283																										
45	0.0000961																										
50	0.0000721																										
55	0.0000541																										
60	0.0000407																										
65	0.0000307																										
70	0.0000232																										
75	0.0000176																										
80	0.0000135																										
85	0.0000104																										
90	0.0000081																										
95	0.0000064																										
100	0.0000051																										
105	0.0000041																										
110	0.0000034																										
115	0.0000029																										
120	0.0000025																										
125	0.0000022	3.4E-07																									
130	0.0000020	2.6E-07	3.4E-07																								
135	0.0000019	2.0E-07	2.6E-07	3.4E-07																							
140	0.0000018	1.5E-07	2.0E-07	2.6E-07	3.4E-07																						
145	0.0000017	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07																					
150	0.0000016	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07																				
155	0.0000016	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07																			
160	0.0000015	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07																		
165	0.0000015	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07																	
170	0.0000015	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07																
175	0.0000015	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07															
180	0.0000015	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07														
185	0.0000015	1.4E-08	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07													
190	0.0000015	1.0E-08	1.4E-08	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07												
195	0.0000015	8.0E-09	1.0E-08	1.4E-08	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07											
200	0.0000015	6.1E-09	8.0E-09	1.0E-08	1.4E-08	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07										
205	0.0000015	4.7E-09	6.1E-09	8.0E-09	1.0E-08	1.4E-08	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07									
210	0.0000014	3.6E-09	4.7E-09	6.1E-09	8.0E-09	1.0E-08	1.4E-08	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07								
215	0.0000014	2.7E-09	3.6E-09	4.7E-09	6.1E-09	8.0E-09	1.0E-08	1.4E-08	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07							
220	0.0000014	2.1E-09	2.7E-09	3.6E-09	4.7E-09	6.1E-09	8.0E-09	1.0E-08	1.4E-08	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07						
225	0.0000014	1.6E-09	2.1E-09	2.7E-09	3.6E-09	4.7E-09	6.1E-09	8.0E-09	1.0E-08	1.4E-08	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07					
230	0.0000014	1.2E-09	1.6E-09	2.1E-09	2.7E-09	3.6E-09	4.7E-09	6.1E-09	8.0E-09	1.0E-08	1.4E-08	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07				
235	0.0000014	9.3E-10	1.2E-09	1.6E-09	2.1E-09	2.7E-09	3.6E-09	4.7E-09	6.1E-09	8.0E-09	1.0E-08	1.4E-08	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07			
240	0.0000014	7.2E-10	9.3E-10	1.2E-09	1.6E-09	2.1E-09	2.7E-09	3.6E-09	4.7E-09	6.1E-09	8.0E-09	1.0E-08	1.4E-08	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07		
245	0.0000014	5.5E-10	7.2E-10	9.3E-10	1.2E-09	1.6E-09	2.1E-09	2.7E-09	3.6E-09	4.7E-09	6.1E-09	8.0E-09	1.0E-08	1.4E-08	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07	
250	0.0000014	4.2E-10	5.5E-10	7.2E-10	9.3E-10	1.2E-09	1.6E-09	2.1E-09	2.7E-09	3.6E-09	4.7E-09	6.1E-09	8.0E-09	1.0E-08	1.4E-08	1.8E-08	2.3E-08	3.0E-08	4.0E-08	5.2E-08	6.8E-08	8.9E-08	1.2E-07	1.5E-07	2.0E-07	2.6E-07	3.4E-07

Pres

Table M-4a
Post-Construction Risks (Hazards) for Floodplain Soil Contact by Human Receptors - Oxbow Area
Alternative 1 - No Action

Compounds of Concern[a]	Current Conditions[b] Maximum	Arithmetic Mean	Background[c]	Floodplain Soil Cleanup Goal[d]	Basis	Soil Concentration[e]	RME Residual Risk Cancer Risk		Hazard Risk	
Dioxin/furan (TEQ)	0.0064	0.0014	0.000050	0.000053	Human Health Recreational User	1.4E-03	3.E-05	A	-	B
Benzo(a)pyrene	2.8	0.65	2.0	2.0	Background	6.5E-01	3.E-06	A	0.00003	A
Arsenic	13.3	5.8	7.7	7.7	Background	5.8E+00	1.E-06	A	0.02	A
						Sum of Carcinogenic Risk	**3.E-05**		**-**	
						HI Kidney	**-**		**0.00003**	
						HI Skin	**-**		**0.02**	

Notes
Units in ug/g (microgram per gram or parts per million).
a. Comprehensive list of all floodplain soil COCs for which PRGs were developed are summarized in Table 3-4 of the FS Addendum.
b. From Table 3.1 in the Supplemental Baseline Human Health Risk Assessment: Oxbow Area Floodplain Soil and Sediment (MACTEC and Battelle, 2011a).
c. Background soil concentrations are arithmetic mean values for floodplain soil samples from Greystone Mill Pond as presented in Addendum to the Interim Final Preliminary Remediation Goals Report: Oxbow Area (MACTEC and Battelle, 2011b). Value for benzo(a)pyrene based on upstream samples from Esmond Dam south to Route 44 (Date source: Battelle, 2005).
d. Floodplain soil cleanup goals are summarized in Table 3-4 of the FS Addendum.
e. Under the No Action alternative, anticipated exposure would remain unchanged; current conditions represented by arithmetic mean concentrations.

Key
A - Residual cancer risk and/or hazard index for direct contact.
B - RME Residual Hazard Index not calculated for this compound due to lack of noncarcinogenic toxicity data.
HI - Hazard Index
RME - Reasonable Maximum Exposure

Table M-4b
Post-Construction Risks for Soil Contact and Prey Consumption by Ecological Receptors - Oxbow Area
Alternative 1 - No Action

Compounds of Concern[a]	Current Conditions[b] Maximum	Current Conditions[b] Arithmetic Mean	Background[c]	Floodplain Soil Remediation Goal[d]	Basis	Soil Concentration[e]	Residual Hazard Quotients[f] Soil Invertebrates[g]		Residual Hazard Quotients[f] Vermivorous Wildlife[h]		Residual Hazard Quotients[f] Vermivorous Wildlife[i]	
2,3,7,8-TCDD	0.015	0.0013	0.000017	0.000035	Shrew	1.3E-03	-		7.6	C	37	F
4,4'-DDT	1.3	0.051	0.0085	0.10	Woodcock	5.1E-02	20	B	0.51	D	-	
4.4'-DDE	1.0	0.036	0.013	0.013	Background	3.6E-02	15	B	7.9	C	-	
Antimony	38.2	1.9	0.62	0.62	Background	1.9E+00	-		-		4.3	F
Copper	2350	110	205	205	Background	1.1E+02	1.4	B	-		5.7	F
						HI	**40**		**20**		**50**	

Notes
Units in ug/g (microgram per gram or parts per million).
a. Comprehensive list of all floodplain soil COCs for which PRGs were developed are summarized in Table 3-4 of the FS Addendum.
b. From Table 2a of the Supplemental BERA for the Oxbow Area (MACTEC and Battelle, 2011a).
c. Background soil concentrations are arithmetic mean values for floodplain soil samples from Greystone Mill Pond as presented in Table 67 in the Baseline Ecological Risk Assessment (BERA; MACTEC, 2004).
d. Floodplain soil cleanup goals are summarized in Table 3-4 of the FS Addendum.
e. Under the No Action alternative, anticipated exposure would remain unchanged; current conditions represented by arithmetic mean concentrations.
f. Calculated by dividing the soil concentration by the PRG for the most sensitive measurement endpoint for each receptor category.
g. Floodplain soil concentrations protective of soil invertebrates were derived using: (A) soil screening benchmarks and (B) USEPA Soil Screening Levels (EcoSSLs); the basis (*i.e.* , most protective of available PRGs) for the residual hazard calculation indicated.
h. Floodplain soil concentrations protective of vermivorous wildlife (birds) were derived using: (C) literature-derived CBRs and (D) dietary exposure modeling. The American woodcock is the representative receptor species for this assessment endpoint.
i. Floodplain soil concentrations protective of vermivorous wildlife (mammals) were derived using: (E) literature-derived CBRs and (F) dietary exposure modeling; the basis (*i.e.* , most protective of available PRGs) for the residual hazard calculation indicated. The short-tailed shrew is the representative receptor species for this assessment endpoint.
HI - Hazard Index

Table M-5a
Post-Construction Risks for Floodplain Soil Contact by Human Receptors - Oxbow Area
Alternative 3 - Targeted Excavation, Enhanced Natural Recovery and Disposal and/or Treatment

Compounds of Concern[a]	Current Conditions[b]		Background[c]	Floodplain Soil Cleanup Goal[d]	Basis	Post-Construction Weighted Soil Concentration[e]	RME Residual Risk			
	Maximum	Arithmetic Mean					Cancer Risk		Hazard Risk	
Dioxin/furan (TEQ)	0.0064	0.0014	0.000050	0.000053	Human Health Recreational User	8.3E-04	2.E-05	A	-	B
Benzo(a)pyrene	2.8	0.65	2.0	2.0	Background	1.2E+00	6.E-06	A	0.00005	A
Arsenic	13.3	5.8	7.7	7.7	Background	6.6E+00	1.E-06	A	0.02	A
						Sum of Carcinogenic Risk	**2.E-05**		**-**	
						HI Kidney	**-**		**0.00005**	
						HI Skin	**-**		**0.02**	

Notes
Units in ug/g (microgram per gram or parts per million).
a. Comprehensive list of all floodplain soil COCs for which PRGs were developed are summarized in Table 3-4 of the FS Addendum.
b. From Table 3.1 in the Supplemental Baseline Human Health Risk Assessment: Oxbow Area Floodplain Soil and Sediment (MACTEC and Battelle, 2011a).
c. Background soil concentrations are arithmetic mean values for floodplain soil samples from Greystone Mill Pond as presented in Addendum to the Interim Final Preliminary Remediation Goals Report: Oxbow Area (MACTEC and Battelle, 2011b). Value for benzo(a)pyrene based on upstream samples from Esmond Dam south to Route 44 (Date source: Battelle, 2005).
d. Floodplain soil cleanup goals are summarized in Table 3-4 of the FS Addendum.
e. Under the Enhanced Natural Recovery alternative, 23% (6.5/28.7 acres) would be excavated and backfilled with clean soil and a 3 inch cover would be placed over the remaining area (i.e., 77% or 22.2/28.7 acres). The post-construction exposure term is the weighted average of background (22% + 25% * 77%) and existing conditions (75% * 77%). Due to targeted excavation, the arithmetic mean (or EPA residential cleanup guideline for dioxin/furan TEQ) concentrations used to estimate non-background exposures.

Key
A - Residual cancer risk and/or hazard index for direct contact.
B - RME Residual Hazard Index not calculated for this compound due to lack of noncarcinogenic toxicity data.
HI - Hazard Index
RME - Reasonable Maximum Exposure

Table M-5b
Post-Construction Risks for Soil Contact/ Prey Consumption by Ecological Receptors - Oxbow Area
Alternative 3 - Targeted Excavation, Enhanced Natural Recovery and Disposal and/or Treatment

Compounds of Concern[a]	Current Conditions[b]		Background[c]	Floodplain Soil Remediation Goal[d]	Basis	Post-Construction Weighted Soil Concentration[e]	Residual Hazard Quotients[f]					
	Maximum	Arithmetic Mean					Soil Invertebrates[g]		Vermivorous Wildlife[h]		Vermivorous Wildlife[i]	
2,3,7,8-TCDD	0.015	0.0013	0.000017	0.000035	Shrew	7.6E-04	-		4.5	C	22	F
4,4'-DDT	1.3	0.051	0.0085	0.10	Woodcock	3.3E-02	13.3	B	0.33	D	-	
4.4'-DDE	1.0	0.036	0.013	0.013	Background	2.7E-02	10.6	B	5.8	C	-	
Antimony	38.2	1.9	0.62	0.62	Background	1.3E+00	-		-		3.1	F
Copper	2350	110	205	205	Background	1.5E+02	1.9	B	-		7.8	F
						HI	**30**		**10**		**30**	

Notes
Units in ug/g (microgram per gram or parts per million).
a. Comprehensive list of all floodplain soil COCs for which PRGs were developed are summarized in Table 3-4 of the FS Addendum.
b. From Table 2a of the Supplemental BERA for the Oxbow Area (MACTEC and Battelle, 2011a).
c. Background soil concentrations are arithmetic mean values for floodplain soil samples from Greystone Mill Pond as presented in Table 67 in the Baseline Ecological Risk Assessment (BERA; MACTEC, 2004).
d. Floodplain soil cleanup goals are summarized in Table 3-4 of the FS Addendum.
e. Under the Enhanced Natural Recovery alternative, 23% (6.5/28.7 acres) would be excavated and backfilled with clean soil and a 3 inch cover would be placed over the remaining area (i.e., 77% or 22.2/28.7 acres). The post-construction exposure term is the weighted average of background (22% + 25% * 77%) and existing conditions (75% * 77%). Due to targeted excavation, the arithmetic mean used for non-background exposures.
f. Calculated by dividing the weighted soil concentration by the PRG for the most sensitive measurement endpoint for each receptor category.
g. Floodplain soil concentrations protective of soil invertebrates were derived using: (A) soil screening benchmarks and (B) USEPA Soil Screening Levels (EcoSSLs); the basis (*i.e.* , most protective of available PRGs) for the residual hazard calculation indicated.
h. Floodplain soil concentrations protective of vermivorous wildlife (birds) were derived using: (C) literature-derived CBRs and (D) dietary exposure modeling. The American woodcock is the representative receptor species for this assessment endpoint.
i. Floodplain soil concentrations protective of vermivorous wildlife (mammals) were derived using: (E) literature-derived CBRs and (F) dietary exposure modeling; the basis (*i.e.* , most protective of available PRGs) for the residual hazard calculation indicated.
The short-tailed shrew is the representative receptor species for this assessment endpoint.
HI - Hazard Index

Table M-6a
Post-Construction Risks for Floodplain Soil Contact by Human Receptors - Oxbow Area
Alternative 5 - Partial Excavation, Enhanced Natural Recovery and Disposal and/or Treatment

Compounds of Concern[a]	Current Conditions[b] Maximum	Current Conditions[b] Arithmetic Mean	Background[c]	Floodplain Soil Cleanup Goal[d]	Basis	Post-Construction Weighted Soil Concentration[e]	RME Residual Risk Cancer Risk		RME Residual Risk Hazard Risk	
Dioxin/furan (TEQ)	0.0064	0.0014	0.000050	0.000053	Human Health Recreational User	3.7E-04	7.E-06	A	-	B
Benzo(a)pyrene	2.8	0.65	2.0	2.0	Background	1.6E+00	8.E-06	A	0.00007	A
Arsenic	13.3	5.8	7.7	7.7	Background	7.2E+00	2.E-06	A	0.025	A
						Sum of Carcinogenic Risk	**2.E-05**		**-**	
						HI Kidney	**-**		**0.0001**	
						HI Skin	**-**		**0.02**	

Notes
Units in ug/g (microgram per gram or parts per million).
a. Comprehensive list of all floodplain soil COCs for which PRGs were developed are summarized in Table 3-4 of the FS Addendum.
b. From Table 3.1 in the Supplemental Baseline Human Health Risk Assessment: Oxbow Area Floodplain Soil and Sediment (MACTEC and Battelle, 2011a).
c. Background soil concentrations are arithmetic mean values for floodplain soil samples from Greystone Mill Pond as presented in Addendum to the Interim Final Preliminary Remediation Goals Report: Oxbow Area (MACTEC and Battelle, 2011b). Value for benzo(a)pyrene based on upstream samples from Esmond Dam south to Route 44 (Date source: Battelle, 2005).
d. Floodplain soil cleanup goals are summarized in Table 3-4 of the FS Addendum.
e. Under the Partial Excavation alternative, 68% (19.5/28.7 acres) would be excavated and backfilled with clean soil and a 3 inch cover would be placed over the remaining area (32%, 9.2/28.7 acres). The post-construction exposure term is the weighted average of background and existing conditions. Due to targeted excavation, the arithmetic mean (or EPA residential cleanup guideline for dioxin/furan TEQ) concentrations used to estimate non-background exposures.

Key
A - Residual cancer risk and/or hazard index for direct contact.
B - RME Residual Hazard Index not calculated for this compound due to lack of noncarcinogenic toxicity data.
HI - Hazard Index
RME - Reasonable Maximum Exposure

Table M-6b
Post-Construction Risks for Soil Contact and Prey Consumption by Ecological Receptors - Oxbow Area
Alternative 5 - Partial Excavation, Enhanced Natural Recovery and Disposal and/or Treatment

Compounds of Concern[a]	Current Conditions[b]		Background[c]	Floodplain Soil Remediation Goal[d]	Basis	Post-Construction Weighted Soil Concentration[e]	Residual Hazard Quotients[f]					
	Maximum	Arithmetic Mean					Soil Invertebrates[g]		Vermivorous Wildlife[h]		Vermivorous Wildlife[i]	
2,3,7,8-TCDD	0.015	0.0013	0.000017	0.000035	Shrew	3.2E-04	-		1.9	C	9.0	F
4,4'-DDT	1.3	0.051	0.0085	0.10	Woodcock	1.9E-02	7.5	B	0.19	D	-	
4.4'-DDE	1.0	0.036	0.013	0.013	Background	1.9E-02	7.4	B	4.1	C	-	
Antimony	38.2	1.9	0.62	0.62	Background	9.2E-01	-		-		2.1	F
Copper	2350	110	205	205	Background	1.8E+02	2.3	B	-		9.5	F
						HI	**20**		**10**		**20**	

Notes
Units in ug/g (microgram per gram or parts per million).
a. Comprehensive list of all floodplain soil COCs for which PRGs were developed are summarized in Table 3-4 of the FS Addendum.
b. From Table 2a of the Supplemental BERA for the Oxbow Area (MACTEC and Battelle, 2011a).
c. Background soil concentrations are arithmetic mean values for floodplain soil samples from Greystone Mill Pond as presented in Table 67 in the Baseline Ecological Risk Assessment (BERA; MACTEC, 2004).
d. Floodplain soil cleanup goals are summarized in Table 3-4 of the FS Addendum.
e. Under the Partial Excavation alternative, 68% (19.5/28.7 acres) would be excavated and backfilled with clean soil and a 3 inch cover would be placed over the remaining area (32%, 9.2/28.7 acres). The post-construction exposure term is the weighted average of background and existing conditions. Due to targeted excavation, the arithmetic mean concentrations used to estimate non-background exposures.
f. Calculated by dividing the weighted soil concentration by the PRG for the most sensitive measurement endpoint for each receptor category.
g. Floodplain soil concentrations protective of soil invertebrates were derived using: (A) soil screening benchmarks and (B) USEPA Soil Screening Levels (EcoSSLs); the basis (*i.e.* , most protective of available PRGs) for the residual hazard calculation indicated.
h. Floodplain soil concentrations protective of vermivorous wildlife (birds) were derived using: (C) literature-derived CBRs and (D) dietary exposure modeling. The American woodcock is the representative receptor species for this assessment endpoint.
i. Floodplain soil concentrations protective of vermivorous wildlife (mammals) were derived using: (E) literature-derived CBRs and (F) dietary exposure modeling; the basis (*i.e.* , most protective of available PRGs) for the residual hazard calculation indicated.
The short-tailed shrew is the representative receptor species for this assessment endpoint.
HI - Hazard Index

Table M-7a
Post-Construction Cancer Risk Estimates for Human Health COCs in Oxbow Floodplain Soils - with Biodegradation

	Average Soil Concentration for Oxbow Area[b,c] (ug/g)					
	Dioxin/furan TEQ			Benzo(aPpyrene		
Year[a]	No Action	Targeted Excavation, ENR	Partial Excavation, ENR	No Action	Targeted Excavation, ENR	Partial Excavation, ENR
0	1.4E-03	8.3E-04	3.7E-04	6.5E-01	1.2E+00	1.6E+00
5	1.1E-03	5.6E-04	2.5E-04	1.1E-01	3.2E-01	3.6E-01
10	7.9E-04	3.7E-04	1.7E-04	5.1E-02	2.3E-01	2.3E-01
15	5.9E-04	2.4E-04	1.1E-04	4.5E-02	2.2E-01	2.2E-01
20	4.4E-04	1.5E-04	7.6E-05	4.4E-02	2.2E-01	2.2E-01
25	3.3E-04	9.1E-05	5.1E-05	4.4E-02	2.2E-01	2.2E-01
30	2.5E-04	5.2E-05	3.4E-05	4.4E-02	2.2E-01	2.2E-01
35	1.9E-04	2.8E-05	2.4E-05	4.4E-02	2.2E-01	2.2E-01
40	1.4E-04	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
45	1.1E-04	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
50	8.1E-05	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
55	6.1E-05	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
60	4.7E-05	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
65	3.6E-05	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
70	2.8E-05	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
75	2.2E-05	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
80	1.7E-05	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
85	1.4E-05	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
90	1.1E-05	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
95	9.6E-06	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
100	8.2E-06	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
105	7.2E-06	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
110	6.4E-06	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
115	5.8E-06	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
120	5.4E-06	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
125	5.1E-06	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
130	4.9E-06	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
135	4.7E-06	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
140	4.6E-06	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
145	4.5E-06	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
150	4.4E-06	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
155	4.4E-06	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
160	4.3E-06	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
165	4.3E-06	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
170	4.3E-06	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
175	4.3E-06	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
180	4.3E-06	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
185	4.3E-06	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
190	4.3E-06	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
195	4.3E-06	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
200	4.3E-06	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
205	4.3E-06	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
210	4.3E-06	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
215	4.3E-06	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
220	4.3E-06	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
225	4.3E-06	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
230	4.3E-06	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
235	4.3E-06	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
240	4.3E-06	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
245	4.3E-06	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01
250	4.3E-06	2.0E-05	2.0E-05	4.4E-02	2.2E-01	2.2E-01

Table M-7a
Post-Construction Cancer Risk Estimates for Human Health COCs in Oxbow Floodplain Soils - with Biodegradation

	Average Soil Concentration[b,c]			Post-Construction Risks[d]		
	Arsenic					
Year	No Action	Targeted Excavation, ENR	Partial Excavation, ENR	No Action	Targeted Excavation, ENR	Partial Excavation, ENR
0	5.8E+00	6.6E+00	7.2E+00	3.1E-05	2.3E-05	1.6E-05
5	5.8E+00	6.7E+00	7.3E+00	2.2E-05	1.3E-05	8.1E-06
10	5.9E+00	6.9E+00	7.4E+00	1.6E-05	9.5E-06	5.9E-06
15	5.9E+00	7.0E+00	7.4E+00	1.3E-05	7.0E-06	4.8E-06
20	6.0E+00	7.2E+00	7.5E+00	9.8E-06	5.4E-06	4.1E-06
25	6.0E+00	7.3E+00	7.5E+00	7.8E-06	4.3E-06	3.6E-06
30	6.0E+00	7.5E+00	7.6E+00	6.2E-06	3.6E-06	3.3E-06
35	6.1E+00	7.6E+00	7.7E+00	5.0E-06	3.2E-06	3.1E-06
40	6.1E+00	7.7E+00	7.7E+00	4.2E-06	3.1E-06	3.1E-06
45	6.1E+00	7.7E+00	7.7E+00	3.5E-06	3.1E-06	3.1E-06
50	6.2E+00	7.7E+00	7.7E+00	3.0E-06	3.1E-06	3.1E-06
55	6.2E+00	7.7E+00	7.7E+00	2.7E-06	3.1E-06	3.1E-06
60	6.3E+00	7.7E+00	7.7E+00	2.4E-06	3.1E-06	3.1E-06
65	6.3E+00	7.7E+00	7.7E+00	2.2E-06	3.1E-06	3.1E-06
70	6.3E+00	7.7E+00	7.7E+00	2.1E-06	3.1E-06	3.1E-06
75	6.4E+00	7.7E+00	7.7E+00	2.0E-06	3.1E-06	3.1E-06
80	6.4E+00	7.7E+00	7.7E+00	1.9E-06	3.1E-06	3.1E-06
85	6.4E+00	7.7E+00	7.7E+00	1.8E-06	3.1E-06	3.1E-06
90	6.5E+00	7.7E+00	7.7E+00	1.8E-06	3.1E-06	3.1E-06
95	6.5E+00	7.7E+00	7.7E+00	1.8E-06	3.1E-06	3.1E-06
100	6.6E+00	7.7E+00	7.7E+00	1.8E-06	3.1E-06	3.1E-06
105	6.6E+00	7.7E+00	7.7E+00	1.7E-06	3.1E-06	3.1E-06
110	6.6E+00	7.7E+00	7.7E+00	1.7E-06	3.1E-06	3.1E-06
115	6.7E+00	7.7E+00	7.7E+00	1.7E-06	3.1E-06	3.1E-06
120	6.7E+00	7.7E+00	7.7E+00	1.7E-06	3.1E-06	3.1E-06
125	6.8E+00	7.7E+00	7.7E+00	1.7E-06	3.1E-06	3.1E-06
130	6.8E+00	7.7E+00	7.7E+00	1.7E-06	3.1E-06	3.1E-06
135	6.8E+00	7.7E+00	7.7E+00	1.8E-06	3.1E-06	3.1E-06
140	6.9E+00	7.7E+00	7.7E+00	1.8E-06	3.1E-06	3.1E-06
145	6.9E+00	7.7E+00	7.7E+00	1.8E-06	3.1E-06	3.1E-06
150	6.9E+00	7.7E+00	7.7E+00	1.8E-06	3.1E-06	3.1E-06
155	7.0E+00	7.7E+00	7.7E+00	1.8E-06	3.1E-06	3.1E-06
160	7.0E+00	7.7E+00	7.7E+00	1.8E-06	3.1E-06	3.1E-06
165	7.1E+00	7.7E+00	7.7E+00	1.8E-06	3.1E-06	3.1E-06
170	7.1E+00	7.7E+00	7.7E+00	1.8E-06	3.1E-06	3.1E-06
175	7.1E+00	7.7E+00	7.7E+00	1.8E-06	3.1E-06	3.1E-06
180	7.2E+00	7.7E+00	7.7E+00	1.8E-06	3.1E-06	3.1E-06
185	7.2E+00	7.7E+00	7.7E+00	1.8E-06	3.1E-06	3.1E-06
190	7.2E+00	7.7E+00	7.7E+00	1.8E-06	3.1E-06	3.1E-06
195	7.3E+00	7.7E+00	7.7E+00	1.8E-06	3.1E-06	3.1E-06
200	7.3E+00	7.7E+00	7.7E+00	1.8E-06	3.1E-06	3.1E-06
205	7.4E+00	7.7E+00	7.7E+00	1.9E-06	3.1E-06	3.1E-06
210	7.4E+00	7.7E+00	7.7E+00	1.9E-06	3.1E-06	3.1E-06
215	7.4E+00	7.7E+00	7.7E+00	1.9E-06	3.1E-06	3.1E-06
220	7.5E+00	7.7E+00	7.7E+00	1.9E-06	3.1E-06	3.1E-06
225	7.5E+00	7.7E+00	7.7E+00	1.9E-06	3.1E-06	3.1E-06
230	7.5E+00	7.7E+00	7.7E+00	1.9E-06	3.1E-06	3.1E-06
235	7.6E+00	7.7E+00	7.7E+00	1.9E-06	3.1E-06	3.1E-06
240	7.6E+00	7.7E+00	7.7E+00	1.9E-06	3.1E-06	3.1E-06
245	7.7E+00	7.7E+00	7.7E+00	1.9E-06	3.1E-06	3.1E-06
250	7.7E+00	7.7E+00	7.7E+00	1.9E-06	3.1E-06	3.1E-06

Table M-7a
Post-Construction Cancer Risk Estimates for Human Health COCs in Oxbow Floodplain Soils - with Biodegradation

Inputs

COC Dioxin/Furan TEQ

Receptor Human
Risk-based PRG[e] 0.000053 ug/g
Basis Recreational Visitor

Concentration[f] (ug/g)

Maximum	Average	Background	PRG	Basis
0.0064	0.0014	0.00005	0.000053	Recreational Visitor

Cover thickness[g] 3 inches
Deposition rate[h] 0.24 inches/year
Soil half life[i] 12.9 years

COC Benzo(a)pyrene
Receptor Human Health
Risk-based PRG[e] 0.21 ug/g
Basis Recreational Visitor

Concentration[f] (ug/g)

Maximum	Average	Background[j]	PRG	Basis
2.8	0.65	2.0	0.21	Recreational Visitor

Cover thickness[g] 3 inches
Deposition rate[h] 0.24 inches/year
Soil half life[i] 1.6 years

COC Arsenic
Receptor Human Health
Risk-based PRG[e] 4.7 ug/g
Basis Recreational Visitor

Concentration[f] (ug/g)

Maximum	Average	Background	PRG	Basis
13.3	5.8	7.7	4.7	Recreational Visitor

Cover thickness[g] 3 inches
Deposition rate[h] 0.24 inches/year
Soil half life n/a years

Acres affected[k]

	Excavated	Cover	MNR	Total Acreage
No Action	0	0	28.7	28.7
Targeted Excavation	6.5	22.2	0	28.7
Partial Excavation	19.5	9.2	0	28.7

Table M-7a
Post-Construction Cancer Risk Estimates for Human Health COCs in Oxbow Floodplain Soils - with Biodegradation

Notes

a. Number of years following completion of the selected remedy.

b. Average surficial soil concentation in the top 1 foot of soil for each of three remedial technologies (i.e., excavation with backfill with "clean" soil to design grade; cover with 3 inches of clean soil; Monitored Natural Recovery [MNR]); technologies described in detail in Section 6.1. All three technologies assume that "clean" material (equivalent to average background) will be deposited at a rate of 0.24 inches per year; however, the rate is 80% less under the No Action alternative.

c. Average surficial soil concentration in the Oxbow for each of the three remedial alternatives; remedial alternatives are described in detail in Section 6.1.

d. Post-Construction Risks estimated as the sum of the ratios of COC soil concentration divided by the PRG and multiplied by 1E-06. Post-construction risks estimates bounding the RAO threshold criterion (i.e., 1E-05) are shaded.

e. From Table 3-4 of the FS Addendum.

f. Current soil exposure concentrations are presented in the Supplemental BHHRA for the Oxbow Area (MACTEC and Battelle, 2011a).

g. A cover thickness of 3 inches is assumed.

h. Deposition of clean (i.e., consistent with background conditions) floodplain soil is assumed to equal to that measured in the ponds (i.e., 1 foot per 50 years ± 10 years) following installation of engineering structures to direct floodwaters onto the floodplain and prevent "short-circuting" through the Oxbow Area.

i. The TEQ value is based on the arithmetic mean of twelve reported values (i.e., 4,720 days) for 2,3,7,8-TCDD; the value for benzo(a)pyrene is the average of high and low estimates for various PAHs (range 24-1,524 day (range 24-1,524 days); both from the California Technical Support Document for Exposure Assessment and Stochastic Analysis; available at http://oehha.ca.gov/air/hot_spots/pdf/apeng.pdf.

j. Estimated regional background values based on upstream background samples from Esmond Dam south to Route 44 (Data source: Battelle, 2005).

k. Refer to Section 6.1 for details on the Oxbow floodplain soil remedial alternatives.

Table M-7b
Post-Construction Cancer Risk Estimates for Human Health COCs in Oxbow Floodplain Soils - without Biodegradation

	Average Soil Concentration for Oxbow Area[b,c] (ug/g)					
	Dioxin/furan TEQ			Benzo(aPpyrene		
Year[a]	No Action	Targeted Excavation, ENR	Partial Excavation, ENR	No Action	Targeted Excavation, ENR	Partial Excavation, ENR
0	1.4E-03	8.3E-04	3.7E-04	6.5E-01	1.2E+00	1.6E+00
5	1.4E-03	7.3E-04	3.3E-04	6.8E-01	1.3E+00	1.7E+00
10	1.3E-03	6.2E-04	2.9E-04	7.0E-01	1.4E+00	1.7E+00
15	1.3E-03	5.2E-04	2.4E-04	7.3E-01	1.5E+00	1.8E+00
20	1.3E-03	4.2E-04	2.0E-04	7.6E-01	1.6E+00	1.8E+00
25	1.3E-03	3.1E-04	1.6E-04	7.8E-01	1.7E+00	1.9E+00
30	1.2E-03	2.1E-04	1.1E-04	8.1E-01	1.8E+00	1.9E+00
35	1.2E-03	1.0E-04	7.2E-05	8.3E-01	1.9E+00	1.9E+00
40	1.2E-03	5.0E-05	5.0E-05	8.6E-01	2.0E+00	2.0E+00
45	1.2E-03	5.0E-05	5.0E-05	8.9E-01	2.0E+00	2.0E+00
50	1.1E-03	5.0E-05	5.0E-05	9.1E-01	2.0E+00	2.0E+00
55	1.1E-03	5.0E-05	5.0E-05	9.4E-01	2.0E+00	2.0E+00
60	1.1E-03	5.0E-05	5.0E-05	9.7E-01	2.0E+00	2.0E+00
65	1.0E-03	5.0E-05	5.0E-05	9.9E-01	2.0E+00	2.0E+00
70	1.0E-03	5.0E-05	5.0E-05	1.0E+00	2.0E+00	2.0E+00
75	9.9E-04	5.0E-05	5.0E-05	1.0E+00	2.0E+00	2.0E+00
80	9.7E-04	5.0E-05	5.0E-05	1.1E+00	2.0E+00	2.0E+00
85	9.4E-04	5.0E-05	5.0E-05	1.1E+00	2.0E+00	2.0E+00
90	9.1E-04	5.0E-05	5.0E-05	1.1E+00	2.0E+00	2.0E+00
95	8.9E-04	5.0E-05	5.0E-05	1.1E+00	2.0E+00	2.0E+00
100	8.6E-04	5.0E-05	5.0E-05	1.2E+00	2.0E+00	2.0E+00
105	8.3E-04	5.0E-05	5.0E-05	1.2E+00	2.0E+00	2.0E+00
110	8.1E-04	5.0E-05	5.0E-05	1.2E+00	2.0E+00	2.0E+00
115	7.8E-04	5.0E-05	5.0E-05	1.3E+00	2.0E+00	2.0E+00
120	7.5E-04	5.0E-05	5.0E-05	1.3E+00	2.0E+00	2.0E+00
125	7.3E-04	5.0E-05	5.0E-05	1.3E+00	2.0E+00	2.0E+00
130	7.0E-04	5.0E-05	5.0E-05	1.3E+00	2.0E+00	2.0E+00
135	6.7E-04	5.0E-05	5.0E-05	1.4E+00	2.0E+00	2.0E+00
140	6.4E-04	5.0E-05	5.0E-05	1.4E+00	2.0E+00	2.0E+00
145	6.2E-04	5.0E-05	5.0E-05	1.4E+00	2.0E+00	2.0E+00
150	5.9E-04	5.0E-05	5.0E-05	1.4E+00	2.0E+00	2.0E+00
155	5.6E-04	5.0E-05	5.0E-05	1.5E+00	2.0E+00	2.0E+00
160	5.4E-04	5.0E-05	5.0E-05	1.5E+00	2.0E+00	2.0E+00
165	5.1E-04	5.0E-05	5.0E-05	1.5E+00	2.0E+00	2.0E+00
170	4.8E-04	5.0E-05	5.0E-05	1.5E+00	2.0E+00	2.0E+00
175	4.6E-04	5.0E-05	5.0E-05	1.6E+00	2.0E+00	2.0E+00
180	4.3E-04	5.0E-05	5.0E-05	1.6E+00	2.0E+00	2.0E+00
185	4.0E-04	5.0E-05	5.0E-05	1.6E+00	2.0E+00	2.0E+00
190	3.7E-04	5.0E-05	5.0E-05	1.6E+00	2.0E+00	2.0E+00
195	3.5E-04	5.0E-05	5.0E-05	1.7E+00	2.0E+00	2.0E+00
200	3.2E-04	5.0E-05	5.0E-05	1.7E+00	2.0E+00	2.0E+00
205	2.9E-04	5.0E-05	5.0E-05	1.7E+00	2.0E+00	2.0E+00
210	2.7E-04	5.0E-05	5.0E-05	1.8E+00	2.0E+00	2.0E+00
215	2.4E-04	5.0E-05	5.0E-05	1.8E+00	2.0E+00	2.0E+00
220	2.1E-04	5.0E-05	5.0E-05	1.8E+00	2.0E+00	2.0E+00
225	1.9E-04	5.0E-05	5.0E-05	1.8E+00	2.0E+00	2.0E+00
230	1.6E-04	5.0E-05	5.0E-05	1.9E+00	2.0E+00	2.0E+00
235	1.3E-04	5.0E-05	5.0E-05	1.9E+00	2.0E+00	2.0E+00
240	1.0E-04	5.0E-05	5.0E-05	1.9E+00	2.0E+00	2.0E+00
245	7.7E-05	5.0E-05	5.0E-05	1.9E+00	2.0E+00	2.0E+00
250	5.0E-05	5.0E-05	5.0E-05	2.0E+00	2.0E+00	2.0E+00

Table M-7b
Post-Construction Cancer Risk Estimates for Human Health COCs in Oxbow Floodplain Soils - without Biodegradation

	Average Soil Concentration[b,c]			Post-Construction Risks[d]		
	Arsenic					
Year	No Action	Targeted Excavation, ENR	Partial Excavation, ENR	No Action	Targeted Excavation, ENR	Partial Excavation, ENR
0	5.8E+00	6.6E+00	7.2E+00	3.1E-05	2.3E-05	1.6E-05
5	5.8E+00	6.7E+00	7.3E+00	3.0E-05	2.1E-05	1.6E-05
10	5.9E+00	6.9E+00	7.4E+00	3.0E-05	2.0E-05	1.5E-05
15	5.9E+00	7.0E+00	7.4E+00	3.0E-05	1.8E-05	1.5E-05
20	6.0E+00	7.2E+00	7.5E+00	2.9E-05	1.7E-05	1.4E-05
25	6.0E+00	7.3E+00	7.5E+00	2.9E-05	1.6E-05	1.3E-05
30	6.0E+00	7.5E+00	7.6E+00	2.8E-05	1.4E-05	1.3E-05
35	6.1E+00	7.6E+00	7.7E+00	2.8E-05	1.3E-05	1.2E-05
40	6.1E+00	7.7E+00	7.7E+00	2.8E-05	1.2E-05	1.2E-05
45	6.1E+00	7.7E+00	7.7E+00	2.7E-05	1.2E-05	1.2E-05
50	6.2E+00	7.7E+00	7.7E+00	2.7E-05	1.2E-05	1.2E-05
55	6.2E+00	7.7E+00	7.7E+00	2.7E-05	1.2E-05	1.2E-05
60	6.3E+00	7.7E+00	7.7E+00	2.6E-05	1.2E-05	1.2E-05
65	6.3E+00	7.7E+00	7.7E+00	2.6E-05	1.2E-05	1.2E-05
70	6.3E+00	7.7E+00	7.7E+00	2.5E-05	1.2E-05	1.2E-05
75	6.4E+00	7.7E+00	7.7E+00	2.5E-05	1.2E-05	1.2E-05
80	6.4E+00	7.7E+00	7.7E+00	2.5E-05	1.2E-05	1.2E-05
85	6.4E+00	7.7E+00	7.7E+00	2.4E-05	1.2E-05	1.2E-05
90	6.5E+00	7.7E+00	7.7E+00	2.4E-05	1.2E-05	1.2E-05
95	6.5E+00	7.7E+00	7.7E+00	2.4E-05	1.2E-05	1.2E-05
100	6.6E+00	7.7E+00	7.7E+00	2.3E-05	1.2E-05	1.2E-05
105	6.6E+00	7.7E+00	7.7E+00	2.3E-05	1.2E-05	1.2E-05
110	6.6E+00	7.7E+00	7.7E+00	2.2E-05	1.2E-05	1.2E-05
115	6.7E+00	7.7E+00	7.7E+00	2.2E-05	1.2E-05	1.2E-05
120	6.7E+00	7.7E+00	7.7E+00	2.2E-05	1.2E-05	1.2E-05
125	6.8E+00	7.7E+00	7.7E+00	2.1E-05	1.2E-05	1.2E-05
130	6.8E+00	7.7E+00	7.7E+00	2.1E-05	1.2E-05	1.2E-05
135	6.8E+00	7.7E+00	7.7E+00	2.1E-05	1.2E-05	1.2E-05
140	6.9E+00	7.7E+00	7.7E+00	2.0E-05	1.2E-05	1.2E-05
145	6.9E+00	7.7E+00	7.7E+00	2.0E-05	1.2E-05	1.2E-05
150	6.9E+00	7.7E+00	7.7E+00	1.9E-05	1.2E-05	1.2E-05
155	7.0E+00	7.7E+00	7.7E+00	1.9E-05	1.2E-05	1.2E-05
160	7.0E+00	7.7E+00	7.7E+00	1.9E-05	1.2E-05	1.2E-05
165	7.1E+00	7.7E+00	7.7E+00	1.8E-05	1.2E-05	1.2E-05
170	7.1E+00	7.7E+00	7.7E+00	1.8E-05	1.2E-05	1.2E-05
175	7.1E+00	7.7E+00	7.7E+00	1.8E-05	1.2E-05	1.2E-05
180	7.2E+00	7.7E+00	7.7E+00	1.7E-05	1.2E-05	1.2E-05
185	7.2E+00	7.7E+00	7.7E+00	1.7E-05	1.2E-05	1.2E-05
190	7.2E+00	7.7E+00	7.7E+00	1.6E-05	1.2E-05	1.2E-05
195	7.3E+00	7.7E+00	7.7E+00	1.6E-05	1.2E-05	1.2E-05
200	7.3E+00	7.7E+00	7.7E+00	1.6E-05	1.2E-05	1.2E-05
205	7.4E+00	7.7E+00	7.7E+00	1.5E-05	1.2E-05	1.2E-05
210	7.4E+00	7.7E+00	7.7E+00	1.5E-05	1.2E-05	1.2E-05
215	7.4E+00	7.7E+00	7.7E+00	1.5E-05	1.2E-05	1.2E-05
220	7.5E+00	7.7E+00	7.7E+00	1.4E-05	1.2E-05	1.2E-05
225	7.5E+00	7.7E+00	7.7E+00	1.4E-05	1.2E-05	1.2E-05
230	7.5E+00	7.7E+00	7.7E+00	1.3E-05	1.2E-05	1.2E-05
235	7.6E+00	7.7E+00	7.7E+00	1.3E-05	1.2E-05	1.2E-05
240	7.6E+00	7.7E+00	7.7E+00	1.3E-05	1.2E-05	1.2E-05
245	7.7E+00	7.7E+00	7.7E+00	1.2E-05	1.2E-05	1.2E-05
250	7.7E+00	7.7E+00	7.7E+00	1.2E-05	1.2E-05	1.2E-05

Table M-7b
Post-Construction Cancer Risk Estimates for Human Health COCs in Oxbow Floodplain Soils - without Biodegradation

Inputs

COC Dioxin/Furan TEQ

Receptor Human
Risk-based PRG[e] 0.000053 ug/g
Basis Recreational Visitor

Concentration[f] (ug/g)

Maximum	Average	Background	PRG	Basis
0.0064	0.0014	0.00005	0.000053	Recreational Visitor

Cover thickness[g] 3 inches
Deposition rate[h] 0.24 inches/year
Soil half life[i] n/a years

COC Benzo(a)pyrene
Receptor Human Health
Risk-based PRG[e] 0.21 ug/g
Basis Recreational Visitor

Concentration[f] (ug/g)

Maximum	Average	Background[j]	PRG	Basis
2.8	0.65	2.0	0.21	Recreational Visitor

Cover thickness[g] 3 inches
Deposition rate[h] 0.24 inches/year
Soil half life[i] n/a years

COC Arsenic
Receptor Human Health
Risk-based PRG[e] 4.7 ug/g
Basis Recreational Visitor

Concentration[f] (ug/g)

Maximum	Average	Background	PRG	Basis
13.3	5.8	7.7	4.7	Recreational Visitor

Cover thickness[g] 3 inches
Deposition rate[h] 0.24 inches/year
Soil half life n/a years

Acres affected[k]

	Excavated	Cover	MNR	Total Acreage
No Action	0	0	28.7	28.7
Targeted Excavation	6.5	22.2	0	28.7
Partial Excavation	19.5	9.2	0	28.7

Table M-7b
Post-Construction Cancer Risk Estimates for Human Health COCs in Oxbow Floodplain Soils - without Biodegradation

Notes

a. Number of years following completion of the selected remedy.

b. Average surficial soil concentation in the top 1 foot of soil for each of three remedial technologies (i.e., excavation with backfill with "clean" soil to design grade; cover with 3 inches of clean soil; Monitored Natural Recovery [MNR]); technologies described in detail in Section 6.1. All three technologies assume that "clean" material (equivalent to average background) will be deposited at a rate of 0.24 inches per year; however, the rate is 80% less under the No Action alternative.

c. Average surficial soil concentration in the Oxbow for each of the three remedial alternatives; remedial alternatives are described in detail in Section 6.1.

d. Post-Construction Risks estimated as the sum of the ratios of COC soil concentration divided by the PRG and multiplied by 1E-06. Post-construction risks estimates bounding the RAO threshold criterion (i.e., 1E-05) are shaded.

e. From Table 3-4 of the FS Addendum.

f. Current soil exposure concentrations are presented in the Supplemental BHHRA for the Oxbow Area (MACTEC and Battelle, 2011a).

g. A cover thickness of 3 inches is assumed.

h. Deposition of clean (i.e., consistent with background conditions) floodplain soil is assumed to equal to that measured in the ponds (i.e., 1 foot per 50 years ± 10 years) following installation of engineering structures to direct floodwaters onto the floodplain and prevent "short-circuting" through the Oxbow Area.

i. The TEQ value is based on the arithmetic mean of twelve reported values (i.e., 4,720 days) for 2,3,7,8-TCDD; the value for benzo(a)pyrene is the average of high and low estimates for various PAHs (range 24-1,524 day (range 24-1,524 days); both from the California Technical Support Document for Exposure Assessment and Stochastic Analysis; available at http://oehha.ca.gov/air/hot_spots/pdf/apeng.pdf.

j. Estimated regional background values based on upstream background samples from Esmond Dam south to Route 44 (Data source: Battelle, 2005).

k. Refer to Section 6.1 for details on the Oxbow floodplain soil remedial alternatives.

Table M-8
Post-Construction Hazards for 2,3,7,8-TCDD in Oxbow Floodplain Soils - Short-tailed Shrew

	Technology-specific Soil Concentration[b] (ug/g)			Average Soil Concentration for Oxbow Area[c] (ug/g)			Residual Hazard Quotient[d]		
Year[a]	Excavation	ENR (Thin Layer Cover)	MNR	No Action	Targeted Excavation, ENR	Partial Excavation, ENR	No Action	Targeted Excavation, ENR	Partial Excavation, ENR
0	1.7E-05	9.7E-04	1.3E-03	1.3E-03	7.6E-04	3.2E-04	**3.7E+01**	**2.2E+01**	**9.2E+00**
5	1.3E-05	6.5E-04	9.7E-04	9.7E-04	5.0E-04	2.2E-04	**2.8E+01**	**1.4E+01**	**6.2E+00**
10	1.1E-05	4.2E-04	7.3E-04	7.3E-04	3.3E-04	1.4E-04	**2.1E+01**	**9.4E+00**	**4.1E+00**
15	9.3E-06	2.7E-04	5.4E-04	5.4E-04	2.1E-04	9.2E-05	**1.6E+01**	**5.9E+00**	**2.6E+00**
20	8.2E-06	1.6E-04	4.1E-04	4.1E-04	1.3E-04	5.7E-05	**1.2E+01**	**3.6E+00**	**1.6E+00**
25	7.6E-06	9.1E-05	3.1E-04	3.1E-04	7.2E-05	3.4E-05	**8.7E+00**	**2.1E+00**	9.8E-01
30	7.1E-06	4.5E-05	2.3E-04	2.3E-04	3.7E-05	1.9E-05	**6.5E+00**	**1.0E+00**	5.5E-01
35	6.9E-06	1.7E-05	1.7E-04	1.7E-04	1.4E-05	1.0E-05	**4.9E+00**	4.1E-01	2.9E-01
40	6.8E-06	6.8E-06	1.3E-04	1.3E-04	6.8E-06	6.8E-06	**3.7E+00**	1.9E-01	1.9E-01
45	6.7E-06	6.7E-06	9.6E-05	9.6E-05	6.7E-06	6.7E-06	**2.7E+00**	1.9E-01	1.9E-01
50	6.7E-06	6.7E-06	7.2E-05	7.2E-05	6.7E-06	6.7E-06	**2.1E+00**	1.9E-01	1.9E-01
55	6.7E-06	6.7E-06	5.4E-05	5.4E-05	6.7E-06	6.7E-06	**1.5E+00**	1.9E-01	1.9E-01
60	6.7E-06	6.7E-06	4.1E-05	4.1E-05	6.7E-06	6.7E-06	**1.2E+00**	1.9E-01	1.9E-01
65	6.7E-06	6.7E-06	3.1E-05	3.1E-05	6.7E-06	6.7E-06	8.8E-01	1.9E-01	1.9E-01
70	6.7E-06	6.7E-06	2.3E-05	2.3E-05	6.7E-06	6.7E-06	6.6E-01	1.9E-01	1.9E-01
75	6.7E-06	6.7E-06	1.8E-05	1.8E-05	6.7E-06	6.7E-06	5.0E-01	1.9E-01	1.9E-01
80	6.7E-06	6.7E-06	1.3E-05	1.3E-05	6.7E-06	6.7E-06	3.8E-01	1.9E-01	1.9E-01
85	6.7E-06	6.7E-06	1.0E-05	1.0E-05	6.7E-06	6.7E-06	3.0E-01	1.9E-01	1.9E-01
90	6.7E-06	6.7E-06	8.1E-06	8.1E-06	6.7E-06	6.7E-06	2.3E-01	1.9E-01	1.9E-01
95	6.7E-06	6.7E-06	6.4E-06	6.4E-06	6.7E-06	6.7E-06	1.8E-01	1.9E-01	1.9E-01
100	6.7E-06	6.7E-06	5.1E-06	5.1E-06	6.7E-06	6.7E-06	1.5E-01	1.9E-01	1.9E-01
105	6.7E-06	6.7E-06	4.1E-06	4.1E-06	6.7E-06	6.7E-06	1.2E-01	1.9E-01	1.9E-01
110	6.7E-06	6.7E-06	3.4E-06	3.4E-06	6.7E-06	6.7E-06	9.8E-02	1.9E-01	1.9E-01
115	6.7E-06	6.7E-06	2.9E-06	2.9E-06	6.7E-06	6.7E-06	8.3E-02	1.9E-01	1.9E-01
120	6.7E-06	6.7E-06	2.5E-06	2.5E-06	6.7E-06	6.7E-06	7.2E-02	1.9E-01	1.9E-01
125	6.7E-06	6.7E-06	2.2E-06	2.2E-06	6.7E-06	6.7E-06	6.4E-02	1.9E-01	1.9E-01
130	6.7E-06	6.7E-06	2.0E-06	2.0E-06	6.7E-06	6.7E-06	5.8E-02	1.9E-01	1.9E-01
135	6.7E-06	6.7E-06	1.9E-06	1.9E-06	6.7E-06	6.7E-06	5.3E-02	1.9E-01	1.9E-01
140	6.7E-06	6.7E-06	1.8E-06	1.8E-06	6.7E-06	6.7E-06	5.0E-02	1.9E-01	1.9E-01
145	6.7E-06	6.7E-06	1.7E-06	1.7E-06	6.7E-06	6.7E-06	4.8E-02	1.9E-01	1.9E-01
150	6.7E-06	6.7E-06	1.6E-06	1.6E-06	6.7E-06	6.7E-06	4.6E-02	1.9E-01	1.9E-01
155	6.7E-06	6.7E-06	1.6E-06	1.6E-06	6.7E-06	6.7E-06	4.5E-02	1.9E-01	1.9E-01
160	6.7E-06	6.7E-06	1.5E-06	1.5E-06	6.7E-06	6.7E-06	4.4E-02	1.9E-01	1.9E-01
165	6.7E-06	6.7E-06	1.5E-06	1.5E-06	6.7E-06	6.7E-06	4.3E-02	1.9E-01	1.9E-01
170	6.7E-06	6.7E-06	1.5E-06	1.5E-06	6.7E-06	6.7E-06	4.3E-02	1.9E-01	1.9E-01
175	6.7E-06	6.7E-06	1.5E-06	1.5E-06	6.7E-06	6.7E-06	4.2E-02	1.9E-01	1.9E-01
180	6.7E-06	6.7E-06	1.5E-06	1.5E-06	6.7E-06	6.7E-06	4.2E-02	1.9E-01	1.9E-01
185	6.7E-06	6.7E-06	1.5E-06	1.5E-06	6.7E-06	6.7E-06	4.2E-02	1.9E-01	1.9E-01
190	6.7E-06	6.7E-06	1.5E-06	1.5E-06	6.7E-06	6.7E-06	4.2E-02	1.9E-01	1.9E-01
195	6.7E-06	6.7E-06	1.5E-06	1.5E-06	6.7E-06	6.7E-06	4.2E-02	1.9E-01	1.9E-01
200	6.7E-06	6.7E-06	1.5E-06	1.5E-06	6.7E-06	6.7E-06	4.1E-02	1.9E-01	1.9E-01
205	6.7E-06	6.7E-06	1.5E-06	1.5E-06	6.7E-06	6.7E-06	4.1E-02	1.9E-01	1.9E-01
210	6.7E-06	6.7E-06	1.4E-06	1.4E-06	6.7E-06	6.7E-06	4.1E-02	1.9E-01	1.9E-01
215	6.7E-06	6.7E-06	1.4E-06	1.4E-06	6.7E-06	6.7E-06	4.1E-02	1.9E-01	1.9E-01
220	6.7E-06	6.7E-06	1.4E-06	1.4E-06	6.7E-06	6.7E-06	4.1E-02	1.9E-01	1.9E-01
225	6.7E-06	6.7E-06	1.4E-06	1.4E-06	6.7E-06	6.7E-06	4.1E-02	1.9E-01	1.9E-01
230	6.7E-06	6.7E-06	1.4E-06	1.4E-06	6.7E-06	6.7E-06	4.1E-02	1.9E-01	1.9E-01
235	6.7E-06	6.7E-06	1.4E-06	1.4E-06	6.7E-06	6.7E-06	4.1E-02	1.9E-01	1.9E-01
240	6.7E-06	6.7E-06	1.4E-06	1.4E-06	6.7E-06	6.7E-06	4.1E-02	1.9E-01	1.9E-01
245	6.7E-06	6.7E-06	1.4E-06	1.4E-06	6.7E-06	6.7E-06	4.1E-02	1.9E-01	1.9E-01
250	6.7E-06	6.7E-06	1.4E-06	1.4E-06	6.7E-06	6.7E-06	4.1E-02	1.9E-01	1.9E-01

Table M-8
Post-Construction Hazards for 2,3,7,8-TCDD in Oxbow Floodplain Soils - Short-tailed Shrew

Year[a]	Technology-specific Soil Concentration[b] (ug/g)			Average Soil Concentration for Oxbow Area[c] (ug/g)			Residual Hazard Quotient[d]		
	Excavation	ENR (Thin Layer Cover)	MNR	No Action	Targeted Excavation, ENR	Partial Excavation, ENR	No Action	Targeted Excavation, ENR	Partial Excavation, ENR

Inputs

COC TCDD
Receptor Short-tailed Shrew (vermivorous wildlife)

Risk-based PRG[e]	0.000035	ug/g
Basis	Shrew Diet	

	Concentration[f] (ug/g)					
	Maximum	Average	Background	TBC	PRG	Basis
	0.015	0.0013	0.000017	0.001	0.000035	Shrew Diet

Cover thickness[g]	3	inches
Deposition rate[h]	0.24	inches/year
Soil half life[i]	12.9	years

Deposition rate[h]
Soil half life[i]

	Acres affected[j]				Percentage of total affected		
	Excavated	Thin Layer Cover	MNR	Total Acreage	Excavated	Thin Layer Cover	MNR
No Action	0	0	28.7	28.7	0%	0%	100%
Targeted Excavation	6.5	22.2	0	28.7	23%	77%	0%
Partial Excavation	19.5	9.2	0	28.7	68%	32%	0%

Notes

a. Number of years following completion of the selected remedy.

b. Average surficial soil concentation in the top 1 foot of soil for each of three remedial technologies (i.e., excavation with backfill with "clean" soil to design grade; cover with 3 inches of clean soil; Monitored Natural Recovery [MNR]); technologies described in detail in Section 6.1. All three technologies assume that "clean" material (equivalent to average background) will be deposited at a rate of 0.24 inches per year; however, the rate is 80% less under the No Action alternative.

c. Average surficial soil concentration in the Oxbow for each of the three remedial alternatives; remedial alternatives are described in detail in Section 6.1.

d. Residual Hazard Quotient (HQ) estimates as the ratio of the average Oxbow floodplain soil concentration divided by the receptor-specific PRG (i.e., 0.000035 ug/g). See Table 13 of the Addendum to the Interim Final Preliminary Remediation Goals Report: Oxbow Area (MACTEC and Battelle, 2011b). Residual HQs exceeding one are bolded.

e. Table 13 in the Addendum to the Interim Final Preliminary Remediation Goals Report: Oxbow Area (MACTEC and Battelle, 2011b) summarizes the ecological PRGs.

f. Current soil exposure concentrations are presented in the Addendum to the Interim Final Preliminary Remediation Goals Report: Oxbow Area (MACTEC and Battelle, 2011b).

g. A cover thickness of 3 inches is assumed.

h. Deposition of clean (i.e., consistent with background conditions) floodplain soil is assumed to equal to that measured in the ponds (i.e., 1 foot per 50 years ± 10 years) following installation of engineering structures to direct floodwaters onto the floodplain and prevent "short-circuting" through the Oxbow Area.

i. The arithmetic mean of twelve reported values (i.e., 4,720 days) from the California Technical Support Document for Exposure Assessment and Stochastic Analysis; available at http://www.oehha.ca.gov/air/hot_spots/.

j. Refer to Section 6.1 for details on the Oxbow floodplain soil remedial alternatives.

TBC - To Be Considered criteria (EPA's recommended residential level for dioxin in soil)

Table M-9
Post-Construction Hazards for 2,3,7,8-TCDD in Oxbow Floodplain Soils - American Woodcock

	Technology-specific Soil Concentration[b] (ug/g)			Average Soil Concentration for Oxbow Area[c] (ug/g)			Residual Hazard Quotient[d]		
Year[a]	Excavation	ENR (Thin Layer Cover)	MNR	No Action	Targeted Excavation, ENR	Partial Excavation, ENR	No Action	Targeted Excavation, ENR	Partial Excavation, ENR
0	1.7E-05	9.7E-04	1.3E-03	1.3E-03	7.6E-04	3.2E-04	**7.6E+00**	**4.4E+00**	**1.9E+00**
5	1.3E-05	6.5E-04	9.7E-04	9.7E-04	5.0E-04	2.2E-04	**5.7E+00**	**3.0E+00**	**1.3E+00**
10	1.1E-05	4.2E-04	7.3E-04	7.3E-04	3.3E-04	1.4E-04	**4.3E+00**	**1.9E+00**	8.4E-01
15	9.3E-06	2.7E-04	5.4E-04	5.4E-04	2.1E-04	9.2E-05	**3.2E+00**	**1.2E+00**	5.4E-01
20	8.2E-06	1.6E-04	4.1E-04	4.1E-04	1.3E-04	5.7E-05	**2.4E+00**	7.4E-01	3.4E-01
25	7.6E-06	9.1E-05	3.1E-04	3.1E-04	7.2E-05	3.4E-05	**1.8E+00**	4.2E-01	2.0E-01
30	7.1E-06	4.5E-05	2.3E-04	2.3E-04	3.7E-05	1.9E-05	**1.3E+00**	2.2E-01	1.1E-01
35	6.9E-06	1.7E-05	1.7E-04	1.7E-04	1.4E-05	1.0E-05	**1.0E+00**	8.5E-02	5.9E-02
40	6.8E-06	6.8E-06	1.3E-04	1.3E-04	6.8E-06	6.8E-06	7.5E-01	4.0E-02	4.0E-02
45	6.7E-06	6.7E-06	9.6E-05	9.6E-05	6.7E-06	6.7E-06	5.7E-01	4.0E-02	4.0E-02
50	6.7E-06	6.7E-06	7.2E-05	7.2E-05	6.7E-06	6.7E-06	4.2E-01	4.0E-02	4.0E-02
55	6.7E-06	6.7E-06	5.4E-05	5.4E-05	6.7E-06	6.7E-06	3.2E-01	4.0E-02	4.0E-02
60	6.7E-06	6.7E-06	4.1E-05	4.1E-05	6.7E-06	6.7E-06	2.4E-01	4.0E-02	4.0E-02
65	6.7E-06	6.7E-06	3.1E-05	3.1E-05	6.7E-06	6.7E-06	1.8E-01	4.0E-02	4.0E-02
70	6.7E-06	6.7E-06	2.3E-05	2.3E-05	6.7E-06	6.7E-06	1.4E-01	4.0E-02	4.0E-02
75	6.7E-06	6.7E-06	1.8E-05	1.8E-05	6.7E-06	6.7E-06	1.0E-01	4.0E-02	4.0E-02
80	6.7E-06	6.7E-06	1.3E-05	1.3E-05	6.7E-06	6.7E-06	7.9E-02	4.0E-02	4.0E-02
85	6.7E-06	6.7E-06	1.0E-05	1.0E-05	6.7E-06	6.7E-06	6.1E-02	4.0E-02	4.0E-02
90	6.7E-06	6.7E-06	8.1E-06	8.1E-06	6.7E-06	6.7E-06	4.7E-02	4.0E-02	4.0E-02
95	6.7E-06	6.7E-06	6.4E-06	6.4E-06	6.7E-06	6.7E-06	3.7E-02	4.0E-02	4.0E-02
100	6.7E-06	6.7E-06	5.1E-06	5.1E-06	6.7E-06	6.7E-06	3.0E-02	4.0E-02	4.0E-02
105	6.7E-06	6.7E-06	4.1E-06	4.1E-06	6.7E-06	6.7E-06	2.4E-02	4.0E-02	4.0E-02
110	6.7E-06	6.7E-06	3.4E-06	3.4E-06	6.7E-06	6.7E-06	2.0E-02	4.0E-02	4.0E-02
115	6.7E-06	6.7E-06	2.9E-06	2.9E-06	6.7E-06	6.7E-06	1.7E-02	4.0E-02	4.0E-02
120	6.7E-06	6.7E-06	2.5E-06	2.5E-06	6.7E-06	6.7E-06	1.5E-02	4.0E-02	4.0E-02
125	6.7E-06	6.7E-06	2.2E-06	2.2E-06	6.7E-06	6.7E-06	1.3E-02	4.0E-02	4.0E-02
130	6.7E-06	6.7E-06	2.0E-06	2.0E-06	6.7E-06	6.7E-06	1.2E-02	4.0E-02	4.0E-02
135	6.7E-06	6.7E-06	1.9E-06	1.9E-06	6.7E-06	6.7E-06	1.1E-02	4.0E-02	4.0E-02
140	6.7E-06	6.7E-06	1.8E-06	1.8E-06	6.7E-06	6.7E-06	1.0E-02	4.0E-02	4.0E-02
145	6.7E-06	6.7E-06	1.7E-06	1.7E-06	6.7E-06	6.7E-06	9.8E-03	4.0E-02	4.0E-02
150	6.7E-06	6.7E-06	1.6E-06	1.6E-06	6.7E-06	6.7E-06	9.5E-03	4.0E-02	4.0E-02
155	6.7E-06	6.7E-06	1.6E-06	1.6E-06	6.7E-06	6.7E-06	9.2E-03	4.0E-02	4.0E-02
160	6.7E-06	6.7E-06	1.5E-06	1.5E-06	6.7E-06	6.7E-06	9.0E-03	4.0E-02	4.0E-02
165	6.7E-06	6.7E-06	1.5E-06	1.5E-06	6.7E-06	6.7E-06	8.9E-03	4.0E-02	4.0E-02
170	6.7E-06	6.7E-06	1.5E-06	1.5E-06	6.7E-06	6.7E-06	8.8E-03	4.0E-02	4.0E-02
175	6.7E-06	6.7E-06	1.5E-06	1.5E-06	6.7E-06	6.7E-06	8.7E-03	4.0E-02	4.0E-02
180	6.7E-06	6.7E-06	1.5E-06	1.5E-06	6.7E-06	6.7E-06	8.6E-03	4.0E-02	4.0E-02
185	6.7E-06	6.7E-06	1.5E-06	1.5E-06	6.7E-06	6.7E-06	8.6E-03	4.0E-02	4.0E-02
190	6.7E-06	6.7E-06	1.5E-06	1.5E-06	6.7E-06	6.7E-06	8.6E-03	4.0E-02	4.0E-02
195	6.7E-06	6.7E-06	1.5E-06	1.5E-06	6.7E-06	6.7E-06	8.6E-03	4.0E-02	4.0E-02
200	6.7E-06	6.7E-06	1.5E-06	1.5E-06	6.7E-06	6.7E-06	8.5E-03	4.0E-02	4.0E-02
205	6.7E-06	6.7E-06	1.5E-06	1.5E-06	6.7E-06	6.7E-06	8.5E-03	4.0E-02	4.0E-02
210	6.7E-06	6.7E-06	1.4E-06	1.4E-06	6.7E-06	6.7E-06	8.5E-03	4.0E-02	4.0E-02
215	6.7E-06	6.7E-06	1.4E-06	1.4E-06	6.7E-06	6.7E-06	8.5E-03	4.0E-02	4.0E-02
220	6.7E-06	6.7E-06	1.4E-06	1.4E-06	6.7E-06	6.7E-06	8.5E-03	4.0E-02	4.0E-02
225	6.7E-06	6.7E-06	1.4E-06	1.4E-06	6.7E-06	6.7E-06	8.5E-03	4.0E-02	4.0E-02
230	6.7E-06	6.7E-06	1.4E-06	1.4E-06	6.7E-06	6.7E-06	8.5E-03	4.0E-02	4.0E-02
235	6.7E-06	6.7E-06	1.4E-06	1.4E-06	6.7E-06	6.7E-06	8.5E-03	4.0E-02	4.0E-02
240	6.7E-06	6.7E-06	1.4E-06	1.4E-06	6.7E-06	6.7E-06	8.5E-03	4.0E-02	4.0E-02
245	6.7E-06	6.7E-06	1.4E-06	1.4E-06	6.7E-06	6.7E-06	8.5E-03	4.0E-02	4.0E-02
250	6.7E-06	6.7E-06	1.4E-06	1.4E-06	6.7E-06	6.7E-06	8.5E-03	4.0E-02	4.0E-02

Table M-9
Post-Construction Hazards for 2,3,7,8-TCDD in Oxbow Floodplain Soils - American Woodcock

	Technology-specific Soil Concentration[b] (ug/g)			Average Soil Concentration for Oxbow Area[c] (ug/g)			Residual Hazard Quotient[d]		
Year[a]	Excavation	ENR (Thin Layer Cover)	MNR	No Action	Targeted Excavation, ENR	Partial Excavation, ENR	No Action	Targeted Excavation, ENR	Partial Excavation, ENR

Inputs

COC TCDD
Receptor American woodcock (vermivorous wildlife)
Risk-based PRG[e] 0.00017 ug/g
Basis CBR

	Concentration[f] (ug/g)					
	Maximum	Average	Background	TBC	PRG	Basis
	0.015	0.0013	0.000017	0.001	0.000035	Shrew Diet

Cover thickness[g] 3 inches
Deposition rate[h] 0.24 inches/year
Soil half life[i] 12.9 years

Deposition rate[h]
Soil half life[i]

	Acres affected[j]				Percentage of total affected		
	Excavated	Thin Layer Cover	MNR	Total Acreage	Excavated	Thin Layer Cover	MNR
No Action	0	0	28.7	28.7	0%	0%	100%
Targeted Excavation	6.5	22.2	0	28.7	23%	77%	0%
Partial Excavation	19.5	9.2	0	28.7	68%	32%	0%

Notes
a. Number of years following completion of the selected remedy.
b. Average surficial soil concentation in the top 1 foot of soil for each of three remedial technologies (i.e., excavation with backfill with "clean" soil to design grade; cover with 3 inches of clean soil; Monitored Natural Recovery [MNR]); technologies described in detail in Section 6.1. All three technologies assume that "clean" material (equivalent to average background) will be deposited at a rate of 0.24 inches per year; however, the rate is 80% less under the No Action alternative.
c. Average surficial soil concentration in the Oxbow for each the three remedial alternatives; remedial alternatives are described in detail in Section 6.1.
d. Residual Hazard Quotient (HQ) estimates as the ratio of the average Oxbow floodplain soil concentration divided by the receptor-specific PRG (i.e., 0.00017 ug/g). See Table 13 of the Addendum to the Interim Final Preliminary Remediation Goals Report: Oxbow Area (MACTEC and Battelle, 2011b). Residual HQs exceeding one are bolded.
e. Table 13 in the Addendum to the Interim Final Preliminary Remediation Goals Report: Oxbow Area (MACTEC and Battelle, 2011b) summarizes the ecological PRGs.
f. Current soil exposure concentrations are presented in the Addendum to the Interim Final Preliminary Remediation Goals Report: Oxbow Area (MACTEC and Battelle, 2011b).
g. A cover thickness of 3 inches is assumed.
h. Deposition of clean (i.e., consistent with background conditions) floodplain soil is assumed to equal to that measured in the ponds (i.e., 1 foot per 50 years ± 10 years) following installation of engineering structures to direct floodwaters onto the floodplain and prevent "short-circuting" through the Oxbow Area.
i. The arithmetic mean of twelve reported values (i.e., 4,720 days) from the California Technical Support Document for Exposure Assessment and Stochastic Analysis; available at http://www.oehha.ca.gov/air/hot_spots/.
j. Refer to Section 6.1 for details on the Oxbow Area remedial alternatives.

TBC - To Be Considered criteria (EPA's recommended residential level for dioxin in soil)

Table M-10
Estimated Average Copper Concentration in Floodplain Soil Following Remediation - Excavation/Backfill

				Half-decadal Deposition Concentration Increment[d]																						
Year	Average Concentration[a]	Original Floodplain Soil[b]	Backfill/ Thin Layer Cover[c]	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120
0	205.0000000	0.0000000	205.0000000																								
5	205.0000000	0.0000000	184.5000000	2.1E+01																							
10	205.0000000	0.0000000	164.0000000	2.1E+01	2.1E+01																						
15	205.0000000	0.0000000	143.5000000	2.1E+01	2.1E+01	2.1E+01																					
20	205.0000000	0.0000000	123.0000000	2.1E+01	2.1E+01	2.1E+01	2.1E+01																				
25	205.0000000	0.0000000	102.5000000	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01																			
30	205.0000000	0.0000000	82.0000000	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01																		
35	205.0000000	0.0000000	61.5000000	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01																	
40	205.0000000	0.0000000	41.0000000	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01																
45	205.0000000	0.0000000	20.5000000	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01															
50	205.0000000	0.0000000	0.0000000	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01														
55	205.0000000	0.0000000	0.0000000	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01													
60	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01												
65	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01											
70	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01										
75	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01									
80	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01								
85	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01							
90	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01						
95	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01					
100	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01				
105	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01			
110	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01		
115	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	
120	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01
125	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01
130	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01
135	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01
140	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01
145	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01
150	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01
155	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01
160	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01
165	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01
170	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
175	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
180	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
185	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
190	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
195	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
200	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
205	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
210	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
215	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
220	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
225	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
230	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
235	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
240	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
245	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
250	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Presumed exposure zone thickness	12	inches
Thickness of thin layer cover	0	inches
Backfill thickness	12	inches
Original concentration	**110**	ug/g
Background concentration	**205**	ug/g
Soil half life	**0**	years
Deposition rate	**0.24**	inches/year
Increment	5	years

Notes:
a. Average concentration in the ecological exposure zone as sum of weighted concentrations for original unremediated soil, backfill/thin layer cover, and river sediment deposited post-construction. Units in ug/g.
b. Contaminant concentration of the original floodplain soil matrix remaining within the ecological exposure zone at time increment n, weighted by the fraction that this material represents of the entire exposure column. Units in ug/g.
c. Contaminant concentration of the backfilled (or thin-layer cover) soil matrix remaining within the ecological exposure zone at time increment n, weighted by the fraction that this material represents of the entire exposure column. Units in ug/g.
d. Contaminant concentration of the floodplain soil deposited following remedy implementation within the ecological exposure zone at time interval n, weighted by the fraction that this material represents of the overall exposure zone. Units in ug/g.

Table M-10
Estimated Average Copper Concentration in Floodplain Soil Following Remediation - Excavation/Backfill

Year	Average Concentration[a]	Half-decadal Concentration Increment[d]																									
		125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250
0	205.0000000																										
5	205.0000000																										
10	205.0000000																										
15	205.0000000																										
20	205.0000000																										
25	205.0000000																										
30	205.0000000																										
35	205.0000000																										
40	205.0000000																										
45	205.0000000																										
50	205.0000000																										
55	205.0000000																										
60	205.0000000																										
65	205.0000000																										
70	205.0000000																										
75	205.0000000																										
80	205.0000000																										
85	205.0000000																										
90	205.0000000																										
95	205.0000000																										
100	205.0000000																										
105	205.0000000																										
110	205.0000000																										
115	205.0000000																										
120	205.0000000																										
125	205.0000000	2.1E+01																									
130	205.0000000	2.1E+01	2.1E+01																								
135	205.0000000	2.1E+01	2.1E+01	2.1E+01																							
140	205.0000000	2.1E+01	2.1E+01	2.1E+01	2.1E+01																						
145	205.0000000	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01																					
150	205.0000000	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01																				
155	205.0000000	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01																			
160	205.0000000	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01																		
165	205.0000000	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01																	
170	205.0000000	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01																
175	205.0000000	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01															
180	205.0000000	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01														
185	205.0000000	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01													
190	205.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01												
195	205.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01											
200	205.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01										
205	205.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01									
210	205.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01								
215	205.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01							
220	205.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01						
225	205.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01					
230	205.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01				
235	205.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01			
240	205.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01		
245	205.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	
250	205.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01

Pres

Table M-11
Estimated Average Copper Concentration in Floodplain Soil Following Remediation - Thin Layer Cover

Year	Average Concentration[a]	Original Floodplain Soil[b]	Backfill/ Thin Layer Cover[c]	Half-decadal Deposition Concentration Increment[d]																						
				5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120
0	133.4050000	82.1550000	51.2500000																								
5	142.9510000	71.2010000	51.2500000	2.1E+01																							
10	152.4970000	60.2470000	51.2500000	2.1E+01	2.1E+01																						
15	162.0430000	49.2930000	51.2500000	2.1E+01	2.1E+01	2.1E+01																					
20	171.5890000	38.3390000	51.2500000	2.1E+01	2.1E+01	2.1E+01	2.1E+01																				
25	181.1350000	27.3850000	51.2500000	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01																			
30	190.6810000	16.4310000	51.2500000	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01																		
35	200.2270000	5.4770000	51.2500000	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01																	
40	205.0000000	0.0000000	41.0000000	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01																
45	205.0000000	0.0000000	20.5000000	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01															
50	205.0000000	0.0000000	0.0000000	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01														
55	205.0000000	0.0000000	0.0000000	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01													
60	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01												
65	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01											
70	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01										
75	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01									
80	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01								
85	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01							
90	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01						
95	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01					
100	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01				
105	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01			
110	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01		
115	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	
120	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01
125	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01
130	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01
135	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01
140	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01
145	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01
150	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01
155	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01
160	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01
165	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01
170	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
175	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
180	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
185	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
190	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
195	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
200	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
205	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
210	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
215	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
220	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
225	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
230	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
235	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
240	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
245	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
250	205.0000000	0.0000000	0.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Presumed exposure zone thickness	12	inches
Thickness of thin layer cover	3	inches
Backfill thickness	0	inches
Original concentration	**110**	ug/g
Background concentration	**205**	ug/g
Soil half life	**0**	years
Deposition rate	**0.24**	inches/year
Increment	5	years

Notes:
a. Average concentration in the ecological exposure zone as sum of weighted concentrations for original unremediated soil, backfill/thin layer cover, and river sediment deposited post-construction. Units in ug/g.
b. Contaminant concentration of the original floodplain soil matrix remaining within the ecological exposure zone at time increment n, weighted by the fraction that this material represents of the entire exposure column. Units in ug/g.
c. Contaminant concentration of the backfilled (or thin-layer cover) soil matrix remaining within the ecological exposure zone at time increment n, weighted by the fraction that this material represents of the entire exposure column. Units in ug/g.
d. Contaminant concentration of the floodplain soil deposited following remedy implementation within the ecological exposure zone at time interval n, weighted by the fraction that this material represents of the overall exposure zone. Units in ug/g.

Table M-11
Estimated Average Copper Concentration in Floodplain Soil Following Remediation - Thin Layer Cover

Year	Average Concentration[a]	Half-decadal Concentration Increment[d]																									
		125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250
0	133.4050000																										
5	142.9510000																										
10	152.4970000																										
15	162.0430000																										
20	171.5890000																										
25	181.1350000																										
30	190.6810000																										
35	200.2270000																										
40	205.0000000																										
45	205.0000000																										
50	205.0000000																										
55	205.0000000																										
60	205.0000000																										
65	205.0000000																										
70	205.0000000																										
75	205.0000000																										
80	205.0000000																										
85	205.0000000																										
90	205.0000000																										
95	205.0000000																										
100	205.0000000																										
105	205.0000000																										
110	205.0000000																										
115	205.0000000																										
120	205.0000000																										
125	205.0000000	2.1E+01																									
130	205.0000000	2.1E+01	2.1E+01																								
135	205.0000000	2.1E+01	2.1E+01	2.1E+01																							
140	205.0000000	2.1E+01	2.1E+01	2.1E+01	2.1E+01																						
145	205.0000000	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01																					
150	205.0000000	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01																				
155	205.0000000	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01																			
160	205.0000000	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01																		
165	205.0000000	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01																	
170	205.0000000	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01																
175	205.0000000	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01															
180	205.0000000	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01														
185	205.0000000	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01													
190	205.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01												
195	205.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01											
200	205.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01										
205	205.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01									
210	205.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01								
215	205.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01							
220	205.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01						
225	205.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01					
230	205.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01				
235	205.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01			
240	205.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01		
245	205.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	
250	205.0000000	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01

Pres

Table M-12
Estimated Average Copper Concentration in Floodplain Soil Following Remediation - Monitored Natural Recovery

Year	Average Concentration[a]	Original Floodplain Soil[b]	Backfill/ Thin Layer Cover[c]	Half-decadal Depositional Concentration Increment[d]																						
				5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120
0	109.5400000	109.5400000	0.0000000																								
5	111.4492000	107.3492000	0.0000000	4.1E+00																							
10	113.3584000	105.1584000	0.0000000	4.1E+00	4.1E+00																						
15	115.2676000	102.9676000	0.0000000	4.1E+00	4.1E+00	4.1E+00																					
20	117.1768000	100.7768000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00																				
25	119.0860000	98.5860000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00																			
30	120.9952000	96.3952000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00																		
35	122.9044000	94.2044000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00																	
40	124.8136000	92.0136000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00																
45	126.7228000	89.8228000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00															
50	128.6320000	87.6320000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00														
55	130.5412000	85.4412000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00													
60	132.4504000	83.2504000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00												
65	134.3596000	81.0596000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00											
70	136.2688000	78.8688000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00										
75	138.1780000	76.6780000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00									
80	140.0872000	74.4872000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00								
85	141.9964000	72.2964000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00							
90	143.9056000	70.1056000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00						
95	145.8148000	67.9148000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00					
100	147.7240000	65.7240000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00				
105	149.6332000	63.5332000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00			
110	151.5424000	61.3424000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00		
115	153.4516000	59.1516000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	
120	155.3608000	56.9608000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00
125	157.2700000	54.7700000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00
130	159.1792000	52.5792000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00
135	161.0884000	50.3884000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00
140	162.9976000	48.1976000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00
145	164.9068000	46.0068000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00
150	166.8160000	43.8160000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00
155	168.7252000	41.6252000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00
160	170.6344000	39.4344000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00
165	172.5436000	37.2436000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00
170	174.4528000	35.0528000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00
175	176.3620000	32.8620000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00
180	178.2712000	30.6712000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00
185	180.1804000	28.4804000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00
190	182.0896000	26.2896000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00
195	183.9988000	24.0988000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00
200	185.9080000	21.9080000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00
205	187.8172000	19.7172000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00
210	189.7264000	17.5264000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00
215	191.6356000	15.3356000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00
220	193.5448000	13.1448000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00
225	195.4540000	10.9540000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00
230	197.3632000	8.7632000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00
235	199.2724000	6.5724000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00
240	201.1816000	4.3816000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00
245	203.0908000	2.1908000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00
250	205.0000000	0.0000000	0.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00

Presumed exposure zone thickness	12	inches
Thickness of thin layer cover	0	inches
Backfill thickness	0	inches
Original concentration	**110**	ug/g
Background concentration	**205**	ug/g
Soil half life	**0**	years
Deposition rate	**0.048**	inches/year
Increment	5	years

Notes:
a. Average concentration in the ecological exposure zone as sum of weighted concentrations for original unremediated soil, backfill/thin layer cover, and river sediment deposited post-construction. Units in ug/g.
b. Contaminant concentration of the original floodplain soil matrix remaining within the ecological exposure zone at time increment n, weighted by the fraction that this material represents of the entire exposure column. Units in ug/g.
c. Contaminant concentration of the backfilled (or thin-layer cover) soil matrix remaining within the ecological exposure zone at time increment n, weighted by the fraction that this material represents of the entire exposure column. Units in ug/g.
d. Contaminant concentration of the floodplain soil deposited following remedy implementation within the ecological exposure zone at time interval n, weighted by the fraction that this material represents of the overall exposure zone. Units in ug/g.

Table M-12
Estimated Average Copper Concentration in Floodplain Soil Following Remediation - Monitored Natural Recovery

Year	Average Concentration[a]	Half-decadal Concentration Increment[d]																									
		125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250
0	109.5400000																										
5	111.4492000																										
10	113.3584000																										
15	115.2676000																										
20	117.1768000																										
25	119.0860000																										
30	120.9952000																										
35	122.9044000																										
40	124.8136000																										
45	126.7228000																										
50	128.6320000																										
55	130.5412000																										
60	132.4504000																										
65	134.3596000																										
70	136.2688000																										
75	138.1780000																										
80	140.0872000																										
85	141.9964000																										
90	143.9056000																										
95	145.8148000																										
100	147.7240000																										
105	149.6332000																										
110	151.5424000																										
115	153.4516000																										
120	155.3608000																										
125	157.2700000	4.1E+00																									
130	159.1792000	4.1E+00	4.1E+00																								
135	161.0884000	4.1E+00	4.1E+00	4.1E+00																							
140	162.9976000	4.1E+00	4.1E+00	4.1E+00	4.1E+00																						
145	164.9068000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00																					
150	166.8160000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00																				
155	168.7252000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00																			
160	170.6344000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00																		
165	172.5436000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00																	
170	174.4528000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00																
175	176.3620000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00															
180	178.2712000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00														
185	180.1804000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00													
190	182.0896000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00												
195	183.9988000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00											
200	185.9080000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00										
205	187.8172000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00									
210	189.7264000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00								
215	191.6356000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00							
220	193.5448000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00						
225	195.4540000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00					
230	197.3632000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00				
235	199.2724000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00			
240	201.1816000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00		
245	203.0908000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	
250	205.0000000	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00	4.1E+00

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Table M-13
Post-Construction Hazards for Copper in Oxbow Floodplain Soils - Soil Invertebrates

	Technology-specific Soil Concentration[b] (ug/g)			Average Soil Concentration for Oxbow Area[c] (ug/g)			Residual Hazard Quotient[d]		
Year[a]	Excavation	ENR (Thin Layer Cover)	MNR	No Action	Targeted Excavation, ENR	Partial Excavation, ENR	No Action	Targeted Excavation, ENR	Partial Excavation, ENR
0	2.1E+02	1.3E+02	1.1E+02	1.1E+02	1.5E+02	1.8E+02	**1.4E+00**	**1.9E+00**	**2.3E+00**
5	2.1E+02	1.4E+02	1.1E+02	1.1E+02	1.6E+02	1.9E+02	**1.4E+00**	**2.0E+00**	**2.3E+00**
10	2.1E+02	1.5E+02	1.1E+02	1.1E+02	1.6E+02	1.9E+02	**1.4E+00**	**2.1E+00**	**2.4E+00**
15	2.1E+02	1.6E+02	1.2E+02	1.2E+02	1.7E+02	1.9E+02	**1.4E+00**	**2.1E+00**	**2.4E+00**
20	2.1E+02	1.7E+02	1.2E+02	1.2E+02	1.8E+02	1.9E+02	**1.5E+00**	**2.2E+00**	**2.4E+00**
25	2.1E+02	1.8E+02	1.2E+02	1.2E+02	1.9E+02	2.0E+02	**1.5E+00**	**2.3E+00**	**2.5E+00**
30	2.1E+02	1.9E+02	1.2E+02	1.2E+02	1.9E+02	2.0E+02	**1.5E+00**	**2.4E+00**	**2.5E+00**
35	2.1E+02	2.0E+02	1.2E+02	1.2E+02	2.0E+02	2.0E+02	**1.5E+00**	**2.5E+00**	**2.5E+00**
40	2.1E+02	2.1E+02	1.2E+02	1.2E+02	2.1E+02	2.1E+02	**1.6E+00**	**2.6E+00**	**2.6E+00**
45	2.1E+02	2.1E+02	1.3E+02	1.3E+02	2.1E+02	2.1E+02	**1.6E+00**	**2.6E+00**	**2.6E+00**
50	2.1E+02	2.1E+02	1.3E+02	1.3E+02	2.1E+02	2.1E+02	**1.6E+00**	**2.6E+00**	**2.6E+00**
55	2.1E+02	2.1E+02	1.3E+02	1.3E+02	2.1E+02	2.1E+02	**1.6E+00**	**2.6E+00**	**2.6E+00**
60	2.1E+02	2.1E+02	1.3E+02	1.3E+02	2.1E+02	2.1E+02	**1.7E+00**	**2.6E+00**	**2.6E+00**
65	2.1E+02	2.1E+02	1.3E+02	1.3E+02	2.1E+02	2.1E+02	**1.7E+00**	**2.6E+00**	**2.6E+00**
70	2.1E+02	2.1E+02	1.4E+02	1.4E+02	2.1E+02	2.1E+02	**1.7E+00**	**2.6E+00**	**2.6E+00**
75	2.1E+02	2.1E+02	1.4E+02	1.4E+02	2.1E+02	2.1E+02	**1.7E+00**	**2.6E+00**	**2.6E+00**
80	2.1E+02	2.1E+02	1.4E+02	1.4E+02	2.1E+02	2.1E+02	**1.8E+00**	**2.6E+00**	**2.6E+00**
85	2.1E+02	2.1E+02	1.4E+02	1.4E+02	2.1E+02	2.1E+02	**1.8E+00**	**2.6E+00**	**2.6E+00**
90	2.1E+02	2.1E+02	1.4E+02	1.4E+02	2.1E+02	2.1E+02	**1.8E+00**	**2.6E+00**	**2.6E+00**
95	2.1E+02	2.1E+02	1.5E+02	1.5E+02	2.1E+02	2.1E+02	**1.8E+00**	**2.6E+00**	**2.6E+00**
100	2.1E+02	2.1E+02	1.5E+02	1.5E+02	2.1E+02	2.1E+02	**1.8E+00**	**2.6E+00**	**2.6E+00**
105	2.1E+02	2.1E+02	1.5E+02	1.5E+02	2.1E+02	2.1E+02	**1.9E+00**	**2.6E+00**	**2.6E+00**
110	2.1E+02	2.1E+02	1.5E+02	1.5E+02	2.1E+02	2.1E+02	**1.9E+00**	**2.6E+00**	**2.6E+00**
115	2.1E+02	2.1E+02	1.5E+02	1.5E+02	2.1E+02	2.1E+02	**1.9E+00**	**2.6E+00**	**2.6E+00**
120	2.1E+02	2.1E+02	1.6E+02	1.6E+02	2.1E+02	2.1E+02	**1.9E+00**	**2.6E+00**	**2.6E+00**
125	2.1E+02	2.1E+02	1.6E+02	1.6E+02	2.1E+02	2.1E+02	**2.0E+00**	**2.6E+00**	**2.6E+00**
130	2.1E+02	2.1E+02	1.6E+02	1.6E+02	2.1E+02	2.1E+02	**2.0E+00**	**2.6E+00**	**2.6E+00**
135	2.1E+02	2.1E+02	1.6E+02	1.6E+02	2.1E+02	2.1E+02	**2.0E+00**	**2.6E+00**	**2.6E+00**
140	2.1E+02	2.1E+02	1.6E+02	1.6E+02	2.1E+02	2.1E+02	**2.0E+00**	**2.6E+00**	**2.6E+00**
145	2.1E+02	2.1E+02	1.6E+02	1.6E+02	2.1E+02	2.1E+02	**2.1E+00**	**2.6E+00**	**2.6E+00**
150	2.1E+02	2.1E+02	1.7E+02	1.7E+02	2.1E+02	2.1E+02	**2.1E+00**	**2.6E+00**	**2.6E+00**
155	2.1E+02	2.1E+02	1.7E+02	1.7E+02	2.1E+02	2.1E+02	**2.1E+00**	**2.6E+00**	**2.6E+00**
160	2.1E+02	2.1E+02	1.7E+02	1.7E+02	2.1E+02	2.1E+02	**2.1E+00**	**2.6E+00**	**2.6E+00**
165	2.1E+02	2.1E+02	1.7E+02	1.7E+02	2.1E+02	2.1E+02	**2.2E+00**	**2.6E+00**	**2.6E+00**
170	2.1E+02	2.1E+02	1.7E+02	1.7E+02	2.1E+02	2.1E+02	**2.2E+00**	**2.6E+00**	**2.6E+00**
175	2.1E+02	2.1E+02	1.8E+02	1.8E+02	2.1E+02	2.1E+02	**2.2E+00**	**2.6E+00**	**2.6E+00**
180	2.1E+02	2.1E+02	1.8E+02	1.8E+02	2.1E+02	2.1E+02	**2.2E+00**	**2.6E+00**	**2.6E+00**
185	2.1E+02	2.1E+02	1.8E+02	1.8E+02	2.1E+02	2.1E+02	**2.3E+00**	**2.6E+00**	**2.6E+00**
190	2.1E+02	2.1E+02	1.8E+02	1.8E+02	2.1E+02	2.1E+02	**2.3E+00**	**2.6E+00**	**2.6E+00**
195	2.1E+02	2.1E+02	1.8E+02	1.8E+02	2.1E+02	2.1E+02	**2.3E+00**	**2.6E+00**	**2.6E+00**
200	2.1E+02	2.1E+02	1.9E+02	1.9E+02	2.1E+02	2.1E+02	**2.3E+00**	**2.6E+00**	**2.6E+00**
205	2.1E+02	2.1E+02	1.9E+02	1.9E+02	2.1E+02	2.1E+02	**2.3E+00**	**2.6E+00**	**2.6E+00**
210	2.1E+02	2.1E+02	1.9E+02	1.9E+02	2.1E+02	2.1E+02	**2.4E+00**	**2.6E+00**	**2.6E+00**
215	2.1E+02	2.1E+02	1.9E+02	1.9E+02	2.1E+02	2.1E+02	**2.4E+00**	**2.6E+00**	**2.6E+00**
220	2.1E+02	2.1E+02	1.9E+02	1.9E+02	2.1E+02	2.1E+02	**2.4E+00**	**2.6E+00**	**2.6E+00**
225	2.1E+02	2.1E+02	2.0E+02	2.0E+02	2.1E+02	2.1E+02	**2.4E+00**	**2.6E+00**	**2.6E+00**
230	2.1E+02	2.1E+02	2.0E+02	2.0E+02	2.1E+02	2.1E+02	**2.5E+00**	**2.6E+00**	**2.6E+00**
235	2.1E+02	2.1E+02	2.0E+02	2.0E+02	2.1E+02	2.1E+02	**2.5E+00**	**2.6E+00**	**2.6E+00**
240	2.1E+02	2.1E+02	2.0E+02	2.0E+02	2.1E+02	2.1E+02	**2.5E+00**	**2.6E+00**	**2.6E+00**
245	2.1E+02	2.1E+02	2.0E+02	2.0E+02	2.1E+02	2.1E+02	**2.5E+00**	**2.6E+00**	**2.6E+00**
250	2.1E+02	2.1E+02	2.1E+02	2.1E+02	2.1E+02	2.1E+02	**2.6E+00**	**2.6E+00**	**2.6E+00**

Table M-13
Post-Construction Hazards for Copper in Oxbow Floodplain Soils - Soil Invertebrates

	Technology-specific Soil Concentration[b] (ug/g)			Average Soil Concentration for Oxbow Area[c] (ug/g)			Residual Hazard Quotient[d]		
Year[a]	Excavation	ENR (Thin Layer Cover)	MNR	No Action	Targeted Excavation, ENR	Partial Excavation, ENR	No Action	Targeted Excavation, ENR	Partial Excavation, ENR

Inputs

COC	Copper	
Receptor	Soil Invertebrates	
Risk-based PRG[e]	80	ug/g
Basis	SSL	

	Concentration[f] (ug/g)				
	Maximum	Average	Background	PRG	Basis
	2350	110	205	80	Background
Cover thickness[g]	3	inches			
Deposition rate[h]	0.24	inches/year			Deposition rate[h]
Soil half life[i]	n/a	years			Soil half life[i]

	Acres affected[j]				Percentage of total affected		
	Excavated	Thin Layer Cover	MNR	Total Acreage	Excavated	Thin Layer Cover	MNR
No Action	0	0	28.7	28.7	0%	0%	100%
Targeted Excavation	6.5	22.2	0	28.7	23%	77%	0%
Partial Excavation	19.5	9.2	0	28.7	68%	32%	0%

Notes

a. Number of years following completion of the selected remedy.

b. Average surficial soil concentation in the top 1 foot of soil for each of three remedial technologies (i.e., excavation with backfill with "clean" soil to design grade; cover with 3 inches of clean soil; Monitored Natural Recovery [MNR]); technologies described in detail in Section 6.1. All three technologies assume that "clean" material (equivalent to average background) will be deposited at a rate of 0.24 inches per year; however, the rate is 80% less under the No Action alternative.

c. Average surficial soil concentration in the Oxbow for each of the three remedial alternatives; remedial alternatives are described in detail in Section 6.1.

d. Residual Hazard Quotient (HQ) estimates as the ratio of the average Oxbow floodplain soil concentration divided by the receptor-specific PRG (i.e., 80 ug/g). See Table 13 of the Addendum to the Interim Final Preliminary Remediation Goals Report: Oxbow Area (MACTEC and Battelle, 2011b). Residual HQs exceeding one are bolded.

e. Table 13 in the Addendum to the Interim Final Preliminary Remediation Goals Report: Oxbow Area (MACTEC and Battelle, 2011b) summarizes the ecological PRGs.

f. Current soil exposure concentrations are presented in the Addendum to the Interim Final Preliminary Remediation Goals Report: Oxbow Area (MACTEC and Battelle, 2011b).

g. A cover thickness of 3 inches is assumed.

h. Deposition of clean (i.e., consistent with background conditions) floodplain soil is assumed to equal to that measured in the ponds (i.e., 1 foot per 50 years ± 10 years) following installation of engineering structures to direct floodwaters onto the floodplain and prevent "short-circuting" through the Oxbow Area.

i. The arithmetic mean of twelve reported values (i.e., 4,720 days) from the California Technical Support Document for Exposure Assessment and Stochastic Analysis; available at http://www.oehha.ca.gov/air/hot_spots/.

j. Refer to Section 6.1 for details on the Oxbow Area remedial alternatives.

Table M-14
Post-Construction Hazards for Copper in Oxbow Floodplain Soils - American woodcock

	Technology-specific Soil Concentration[b] (ug/g)			Average Soil Concentration for Oxbow Area[c] (ug/g)			Residual Hazard Quotient[d]		
Year[a]	Excavation	ENR (Thin Layer Cover)	MNR	No Action	Targeted Excavation, ENR	Partial Excavation, ENR	No Action	Targeted Excavation, ENR	Partial Excavation, ENR
0	2.1E+02	1.3E+02	1.1E+02	1.1E+02	1.5E+02	1.8E+02	**5.7E+00**	**7.8E+00**	**9.5E+00**
5	2.1E+02	1.4E+02	1.1E+02	1.1E+02	1.6E+02	1.9E+02	**5.8E+00**	**8.2E+00**	**9.6E+00**
10	2.1E+02	1.5E+02	1.1E+02	1.1E+02	1.6E+02	1.9E+02	**5.9E+00**	**8.6E+00**	**9.8E+00**
15	2.1E+02	1.6E+02	1.2E+02	1.2E+02	1.7E+02	1.9E+02	**6.0E+00**	**8.9E+00**	**1.0E+01**
20	2.1E+02	1.7E+02	1.2E+02	1.2E+02	1.8E+02	1.9E+02	**6.1E+00**	**9.3E+00**	**1.0E+01**
25	2.1E+02	1.8E+02	1.2E+02	1.2E+02	1.9E+02	2.0E+02	**6.2E+00**	**9.7E+00**	**1.0E+01**
30	2.1E+02	1.9E+02	1.2E+02	1.2E+02	1.9E+02	2.0E+02	**6.3E+00**	**1.0E+01**	**1.0E+01**
35	2.1E+02	2.0E+02	1.2E+02	1.2E+02	2.0E+02	2.0E+02	**6.4E+00**	**1.0E+01**	**1.1E+01**
40	2.1E+02	2.1E+02	1.2E+02	1.2E+02	2.1E+02	2.1E+02	**6.5E+00**	**1.1E+01**	**1.1E+01**
45	2.1E+02	2.1E+02	1.3E+02	1.3E+02	2.1E+02	2.1E+02	**6.6E+00**	**1.1E+01**	**1.1E+01**
50	2.1E+02	2.1E+02	1.3E+02	1.3E+02	2.1E+02	2.1E+02	**6.7E+00**	**1.1E+01**	**1.1E+01**
55	2.1E+02	2.1E+02	1.3E+02	1.3E+02	2.1E+02	2.1E+02	**6.8E+00**	**1.1E+01**	**1.1E+01**
60	2.1E+02	2.1E+02	1.3E+02	1.3E+02	2.1E+02	2.1E+02	**6.9E+00**	**1.1E+01**	**1.1E+01**
65	2.1E+02	2.1E+02	1.3E+02	1.3E+02	2.1E+02	2.1E+02	**7.0E+00**	**1.1E+01**	**1.1E+01**
70	2.1E+02	2.1E+02	1.4E+02	1.4E+02	2.1E+02	2.1E+02	**7.1E+00**	**1.1E+01**	**1.1E+01**
75	2.1E+02	2.1E+02	1.4E+02	1.4E+02	2.1E+02	2.1E+02	**7.2E+00**	**1.1E+01**	**1.1E+01**
80	2.1E+02	2.1E+02	1.4E+02	1.4E+02	2.1E+02	2.1E+02	**7.3E+00**	**1.1E+01**	**1.1E+01**
85	2.1E+02	2.1E+02	1.4E+02	1.4E+02	2.1E+02	2.1E+02	**7.4E+00**	**1.1E+01**	**1.1E+01**
90	2.1E+02	2.1E+02	1.4E+02	1.4E+02	2.1E+02	2.1E+02	**7.5E+00**	**1.1E+01**	**1.1E+01**
95	2.1E+02	2.1E+02	1.5E+02	1.5E+02	2.1E+02	2.1E+02	**7.6E+00**	**1.1E+01**	**1.1E+01**
100	2.1E+02	2.1E+02	1.5E+02	1.5E+02	2.1E+02	2.1E+02	**7.7E+00**	**1.1E+01**	**1.1E+01**
105	2.1E+02	2.1E+02	1.5E+02	1.5E+02	2.1E+02	2.1E+02	**7.8E+00**	**1.1E+01**	**1.1E+01**
110	2.1E+02	2.1E+02	1.5E+02	1.5E+02	2.1E+02	2.1E+02	**7.9E+00**	**1.1E+01**	**1.1E+01**
115	2.1E+02	2.1E+02	1.5E+02	1.5E+02	2.1E+02	2.1E+02	**8.0E+00**	**1.1E+01**	**1.1E+01**
120	2.1E+02	2.1E+02	1.6E+02	1.6E+02	2.1E+02	2.1E+02	**8.1E+00**	**1.1E+01**	**1.1E+01**
125	2.1E+02	2.1E+02	1.6E+02	1.6E+02	2.1E+02	2.1E+02	**8.2E+00**	**1.1E+01**	**1.1E+01**
130	2.1E+02	2.1E+02	1.6E+02	1.6E+02	2.1E+02	2.1E+02	**8.3E+00**	**1.1E+01**	**1.1E+01**
135	2.1E+02	2.1E+02	1.6E+02	1.6E+02	2.1E+02	2.1E+02	**8.4E+00**	**1.1E+01**	**1.1E+01**
140	2.1E+02	2.1E+02	1.6E+02	1.6E+02	2.1E+02	2.1E+02	**8.5E+00**	**1.1E+01**	**1.1E+01**
145	2.1E+02	2.1E+02	1.6E+02	1.6E+02	2.1E+02	2.1E+02	**8.6E+00**	**1.1E+01**	**1.1E+01**
150	2.1E+02	2.1E+02	1.7E+02	1.7E+02	2.1E+02	2.1E+02	**8.7E+00**	**1.1E+01**	**1.1E+01**
155	2.1E+02	2.1E+02	1.7E+02	1.7E+02	2.1E+02	2.1E+02	**8.8E+00**	**1.1E+01**	**1.1E+01**
160	2.1E+02	2.1E+02	1.7E+02	1.7E+02	2.1E+02	2.1E+02	**8.9E+00**	**1.1E+01**	**1.1E+01**
165	2.1E+02	2.1E+02	1.7E+02	1.7E+02	2.1E+02	2.1E+02	**9.0E+00**	**1.1E+01**	**1.1E+01**
170	2.1E+02	2.1E+02	1.7E+02	1.7E+02	2.1E+02	2.1E+02	**9.1E+00**	**1.1E+01**	**1.1E+01**
175	2.1E+02	2.1E+02	1.8E+02	1.8E+02	2.1E+02	2.1E+02	**9.2E+00**	**1.1E+01**	**1.1E+01**
180	2.1E+02	2.1E+02	1.8E+02	1.8E+02	2.1E+02	2.1E+02	**9.3E+00**	**1.1E+01**	**1.1E+01**
185	2.1E+02	2.1E+02	1.8E+02	1.8E+02	2.1E+02	2.1E+02	**9.4E+00**	**1.1E+01**	**1.1E+01**
190	2.1E+02	2.1E+02	1.8E+02	1.8E+02	2.1E+02	2.1E+02	**9.5E+00**	**1.1E+01**	**1.1E+01**
195	2.1E+02	2.1E+02	1.8E+02	1.8E+02	2.1E+02	2.1E+02	**9.6E+00**	**1.1E+01**	**1.1E+01**
200	2.1E+02	2.1E+02	1.9E+02	1.9E+02	2.1E+02	2.1E+02	**9.7E+00**	**1.1E+01**	**1.1E+01**
205	2.1E+02	2.1E+02	1.9E+02	1.9E+02	2.1E+02	2.1E+02	**9.8E+00**	**1.1E+01**	**1.1E+01**
210	2.1E+02	2.1E+02	1.9E+02	1.9E+02	2.1E+02	2.1E+02	**9.9E+00**	**1.1E+01**	**1.1E+01**
215	2.1E+02	2.1E+02	1.9E+02	1.9E+02	2.1E+02	2.1E+02	**1.0E+01**	**1.1E+01**	**1.1E+01**
220	2.1E+02	2.1E+02	1.9E+02	1.9E+02	2.1E+02	2.1E+02	**1.0E+01**	**1.1E+01**	**1.1E+01**
225	2.1E+02	2.1E+02	2.0E+02	2.0E+02	2.1E+02	2.1E+02	**1.0E+01**	**1.1E+01**	**1.1E+01**
230	2.1E+02	2.1E+02	2.0E+02	2.0E+02	2.1E+02	2.1E+02	**1.0E+01**	**1.1E+01**	**1.1E+01**
235	2.1E+02	2.1E+02	2.0E+02	2.0E+02	2.1E+02	2.1E+02	**1.0E+01**	**1.1E+01**	**1.1E+01**
240	2.1E+02	2.1E+02	2.0E+02	2.0E+02	2.1E+02	2.1E+02	**1.0E+01**	**1.1E+01**	**1.1E+01**
245	2.1E+02	2.1E+02	2.0E+02	2.0E+02	2.1E+02	2.1E+02	**1.1E+01**	**1.1E+01**	**1.1E+01**
250	2.1E+02	2.1E+02	2.1E+02	2.1E+02	2.1E+02	2.1E+02	**1.1E+01**	**1.1E+01**	**1.1E+01**

Table M-14
Post-Construction Hazards for Copper in Oxbow Floodplain Soils - American woodcock

	Technology-specific Soil Concentration[b] (ug/g)			Average Soil Concentration for Oxbow Area[c] (ug/g)			Residual Hazard Quotient[d]		
Year[a]	Excavation	ENR (Thin Layer Cover)	MNR	No Action	Targeted Excavation, ENR	Partial Excavation, ENR	No Action	Targeted Excavation, ENR	Partial Excavation, ENR

Inputs

COC	Copper	
Receptor	Short-tailed Shrew	
Risk-based PRG[e]	19.2	ug/g
Basis	Dose	

	Concentration[f] (ug/g)				
	Maximum	Average	Background	PRG	Basis
	2350	110	205	19.2	Background

Cover thickness[g]	3	inches		
Deposition rate[h]	0.24	inches/year		Deposition rate[h]
Soil half life[i]	n/a	years		Soil half life[i]

	Acres affected[j]				Percentage of total affected		
	Excavated	Thin Layer Cover	MNR	Total Acreage	Excavated	Thin Layer Cover	MNR
No Action	0	0	28.7	28.7	0%	0%	100%
Targeted Excavation	6.5	22.2	0	28.7	23%	77%	0%
Partial Excavation	19.5	9.2	0	28.7	68%	32%	0%

Notes

a. Number of years following completion of the selected remedy.

b. Average surficial soil concentation in the top 1 foot of soil for each of three remedial technologies (i.e., excavation with backfill with "clean" soil to design grade; cover with 3 inches of clean soil; Monitored Natural Recovery [MNR]); technologies described in detail in Section 6.1. All three technologies assume that "clean" material (equivalent to average background) will be deposited at a rate of 0.24 inches per year; however, the rate is 80% less under the No Action alternative.

c. Average surficial soil concentration in the Oxbow for each of the three remedial alternatives; remedial alternatives are described in detail in Section 6.1.

d. Residual Hazard Quotient (HQ) estimates as the ratio of the average Oxbow floodplain soil concentration divided by the receptor-specific PRG (i.e., 19.2 ug/g). See Table 13 of the Addendum to the Interim Final Preliminary Remediation Goals Report: Oxbow Area (MACTEC and Battelle, 2011b). Residual HQs exceeding one are bolded.

e. Table 13 in the Addendum to the Interim Final Preliminary Remediation Goals Report: Oxbow Area (MACTEC and Battelle, 2011b) summarizes the ecological PRGs.

f. Current soil exposure concentrations are presented in the Addendum to the Interim Final Preliminary Remediation Goals Report: Oxbow Area (MACTEC and Battelle, 2011b).

g. A cover thickness of 3 inches is assumed.

h. Deposition of clean (i.e., consistent with background conditions) floodplain soil is assumed to equal to that measured in the ponds (i.e., 1 foot per 50 years ± 10 years) following installation of engineering structures to direct floodwaters onto the floodplain and prevent "short-circuting" through the Oxbow Area.

i. The arithmetic mean of twelve reported values (i.e., 4,720 days) from the California Technical Support Document for Exposure Assessment and Stochastic Analysis; available at http://www.oehha.ca.gov/air/hot_spots/.

j. Refer to Section 6.1 for details on the Oxbow Area remedial alternatives.

Table M-15. Years to Achieve Target Hazard for Short-tailed Shrew under Various Combinations of Assumed Deposition and 2,3,7,8-TCDD Degradation Rates for Lyman Mill Reach Stream Sediment and Floodplain Soil Alternatives

Assumed Deposition Rate[a] (inches/ year)	Assumed Degradation Rate[b] ($t_{0.5}$) (years)	Remedial Alternative[c]			Differential	
		No Action[d]	Targeted Excavation, Enhanced Natural Recovery	Partial Excavation, Enhanced Natural Recovery	Targeted Excavation vs No Action	12.9 yrs Versus Other Loss Rates[e]
0.24	6.5	35	25	20	-10	+5
	12.9	65	30	25	-25	-
	25.9	115	35	35	-80	-5
	51.7	185	40	35	-145	-10
	none	250	40	40	-210	-10
0.12	6.5	35	25	20	-10	+20
	12.9	65	45	35	-20	-
	25.9	125	60	50	-65	-15
	51.7	230	70	65	-160	-25
	none	-	75	75	>175	-30
0.048	6.5	35	30	20	-5	+15
	12.9	70	55	40	-15	-
	25.9	130	95	70	-35	-40
	51.7	-	140	110	>110	-85
	none	-	185	180	>65	-130
0.024	6.5	35	30	20	-5	+25
	12.9	70	55	40	-15	-
	25.9	135	105	75	-20	-50
	51.7	-	185	135	>65	-130
	none	-	-	-	-	>-195
none	6.5	35	30	25	-5	+30
	12.9	70	60	45	-10	-
	25.9	135	115	85	-20	-55
	51.7	-	230	165	>20	-170
	none	-	-	-	-	>-190

Notes:

Grey cells indicate model scenarios where the Target Hazard (Hazard Quotient = 1.0) was not achieved over the 250 year assessment period. The model approach, assumptions, and output are described in Appendix M. The most likely outcomes for the remedial alternatives are identified in light green.

a. Deposition rates (in inches per year) of newly deposited sediment in Allendale and Lyman Mill Ponds is assumed to be on the order of 1 inch in 50 years (i.e., 0.24 inches/year); best estimate for current conditions in the Oxbow Area is that the deposition rate is 5 fold less or 0.048 inches/year. Flow diversion structures along the river bank and baffles within the remnant channel would be components of both action-based alternatives and would be designed to increase sediment deposition within the Oxbow Area to rates comparable to the pond average. No flow diversion would occur under the No Action alternative and the best estimate for when the target hazard (one) would be achieved is 70 years (based on an assumed deposition rate of 0.048 inches/year). Newly deposited material is assumed to contain COCs (including 2,3,7,8-TCDD) at background concentrations.

b. Time (in years) for *in-situ* 2,3,7,8-TCDD mass to be reduced by 50 percent by chemical and biological degradative processes. It is assumed that breakdown products are non-toxic. Best estimate of the soil

degradation rate of 2,3,7,8-TCDD is the arithmetic mean of twelve reported values (i.e., 4,720 days or 12.9 years) from the California Technical Support Document for Exposure Assessment and Stochastic Analysis; available at http://oehha.ca.gov/air/hot_spots/pdf/apeng.pdf. Model output was also generated for assumed TCDD soil degradation half lives of 0.5x, 2x and 4x this average (i.e., 6.5, 25.9 and 51.7 years).

c. Remedial alternatives as described in Section 5 of the Interim Final Feasibility Study (Battelle, 2010).
d. Year estimates for the No Action alternative are based on the assumption that no diversion structures would be in place to enhance sediment deposition; consequently, the assumed deposition rates are one fifth of the value indicated in the first column.
e. Based on the Targeted Excavation, Enhanced Natural Cover remedial alternative.

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APPENDIX O

Alternative-Specific Detailed Analysis and ARAR and TBC Criteria Tables (Revised from the 2010 Feasibility Study) for

Allendale and Lyman Mill Sediment Alternatives, Allendale Reach Floodplain Soil Alternatives, and Groundwater Alternatives (ARAR Tables Only)

(Select Section 6 Tables revised from the 2010 FS, table numbers maintained from the 2010 FS report)

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Table 6-1. Detailed Analysis of Allendale and Lyman Mill Sediment Alternative 1, No Action

EVALUATION CRITERIA	ALTERNATIVE ALLENDALE AND LYMAN MILL SEDIMENT-1: NO ACTION
OVERALL PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT	
Human Health Protection and Environment	Contaminated sediment would remain on site unaddressed and continue to present a risk to human health and the environment. The existing controls (perimeter fence at Allendale Pond and fishing advisories) would not effectively limit exposure to human and ecological receptors.
COMPLIANCE WITH ARARS	
Chemical-, Location-, and Action-Specific	See Table 6-2.
LONG-TERM EFFECTIVENESS AND PERMANENCE	
Magnitude of Residual Risk	Existing risk will remain because no action would be taken to isolate or destroy the contaminated sediment or prevent the erosion and migration of contaminated sediment downstream. Migration of contaminated sediment downstream may increase future risk in these areas. Natural recovery processes may decrease risk from contaminated sediment in the very long term.
Adequacy and Reliability of Controls	This alternative does not include measures to maintain and enforce access restrictions or control physical disturbance of the sediment to minimize exposure to contaminants in the long term. There are no controls to require maintenance of the privately owned dams along the river, and downstream transport of contaminated sediment could occur in the event of a dam breach.
REDUCTION OF TOXICITY, MOBILITY, OR VOLUME	
Treatment Process Used and Materials Treated	None proposed for this alternative.
Amount Destroyed or Treated	None anticipated.
Degree of Expected Reductions of Toxicity, Mobility, or Volume Through Treatment	No reductions in toxicity, mobility, or volume of contamination is anticipated for this alternative.
Degree to Which Treatment is Irreversible	Not applicable.
Type and Quantity of Residuals Remaining After Treatment	There would be no residuals because no treatment is planned for this alternative.
SHORT-TERM EFFECTIVENESS	
Protection of Community During Remedial Action	Not applicable, as no remedial actions are proposed for this alternative.

Table 6-1. (continued)

EVALUATION CRITERIA	ALTERNATIVE ALLENDALE AND LYMAN MILL SEDIMENT-1: NO ACTION
SHORT-TERM EFFECTIVENESS	
Protection of Workers During Remedial Action	Not applicable, as no remedial actions are proposed for this alternative.
Environmental Impacts	Not applicable, as no remedial actions are proposed for this alternative
Time Until Remedial Action Objectives are Achieved	While some reduction in risk is possible due to natural deposition, it is unknown if or when cleanup objectives would be reached. (Based on estimated rates, it would take 40 to 60 years for a one-foot thick layer of new sediment to be deposited in the ponds and not all areas may be covered.)
IMPLEMENTABILITY	
Ability to Construct and Operate the Technology	Not applicable, as no remedial technology is implemented under this alternative.
Reliability of the Technology	Not applicable, as no remedial technology is implemented under this alternative.
Ease of Undertaking Additional Remedial Actions, If Necessary	This alternative does not preclude future remedial activities.
Ability to Monitor the Effectiveness of Remedy	Five-year reviews and periodic monitoring, triggered by severe weather events, are incorporated into this alternative. Periodic monitoring would include routine testing and could be easily implemented.
Ability to Obtain Approvals and Coordinate with Other Agencies	Not applicable, as no activities requiring approval are planned for this alternative.
Availability of Off-Site Treatment, Storage, and Disposal Services and Capacity	Not applicable for this alternative.
Availability of Necessary Equipment and Specialists	Not applicable for this alternative.
Availability of Technology	Not applicable for this alternative.
COST[1]	
Capital Cost	$0
Present Worth of Long-term Monitoring and Maintenance	$450,000 (includes costs for periodic monitoring and five-year reviews)
Total Present Worth Cost	$450,000

Notes:
[1]Detailed cost estimates provided in Appendix J of the 2010 FS (Battelle, 2010).

Table 6-2. Potential Applicable or Relevant and Appropriate Requirements (ARARs) and To Be Considered (TBC) Criteria for Allendale and Lyman Mill Sediment Alternative 1, No Action[1]

Requirement	Status	Synopsis	Action to be Taken to Attain Requirement
Chemical-Specific ARARs			
Federal Requirements			
Clean Water Act Federal Water Quality Criteria, Section 304(a) 40 CFR 131.11	R & A	Ambient Water Quality Criteria (AWQC) are provided by EPA for chemicals for both the protection of human health and the protection of aquatic life.	Contributions of contaminants from sediment that result in exceedances of AWQC in the Woonasquatucket River will not be minimized to the maximum extent practical.
Guidelines for Carcinogenic Risk Assessment, EPA/630/P-03/001F	TBC	These guidelines provide guidance on conducting risk assessments involving carcinogens.	Alternative would not prevent exposure to contaminants considered under this guidance.
Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens, EPA/630/R-03/003F	TBC	These guidelines provide guidance on conducting risk assessments involving carcinogens.	Alternative would not prevent exposure to contaminants potentially considered under this guidance.
EPA Risk Reference Doses (RfDs)	TBC	RfDs are estimates of a daily exposure concentration that is likely to be without appreciable risk of deleterious effects during a lifetime exposure.	Alternative would not prevent exposure to contaminants potentially considered under this guidance.
Human Health Assessment Cancer Slope Factors (CSFs)	TBC	CSFs are estimates of the upper-bound probability of an individual developing cancer as a result of a lifetime exposure to a particular concentration of a potential carcinogen.	Alternative would not prevent exposure to contaminants potentially considered under this assessment.
EPA Health Advisories	TBC	EPA publishes contaminant-specific health advisories that indicate the non-carcinogenic risks associated with consuming contaminated drinking water.	Alternative would not prevent exposure to contaminants potentially considered under these advisories.
EPA Carcinogenic Assessment Group Potency Factors	TBC	These factors are used to evaluate an acceptable risk from a carcinogen.	Alternative would not prevent exposure to contaminants potentially considered under this assessment.

Table 6-2. (continued)[1]

Requirement	Status	Synopsis	Action to be Taken to Attain Requirement
Chemical-Specific ARARs			
State Requirements			
RIDEM Water Quality Regulations	R & A	Provides water classification for surface waters in Rhode Island and sets ambient water quality criteria for toxic substances and governs water quality impacts associated with site activities.	Contributions of contaminants from sediment that result in exceedances of water quality standards in the Woonasquatucket River will not be minimized to the maximum extent practical.

Notes:
[1] With no action, there are no location- or action-specific ARARs.

Key:
R & A – Relevant and Appropriate; TBC – To Be Considered

Table 6-4. Detailed Analysis of Allendale and Lyman Mill Sediment Alternative 7, Excavation and Disposal and/or Treatment

EVALUATION CRITERIA	ALTERNATIVE ALLENDALE AND LYMAN MILL SEDIMENT-7: EXCAVATION AND DISPOSAL AND/OR TREATMENT
OVERALL PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT	
Human Health Protection and Environment	The excavation and removal of sediments would provide high overall protection to human health and the environment by quickly reducing human health and ecological risk to acceptable levels. In addition, the removal of resident fish from the ponds would effectively reduce the fish consumption risks to humans and piscivorous wildlife. Removal of the sediment would prevent contaminant migration downstream due to erosion for Options 7a (upland CDF), 7d (on-site thermal treatment) and 7e (off-site disposal and/or treatment). However, contamination would remain in the floodplain for Option 7b (nearshore CDF) which would reduce its overall protection.
COMPLIANCE WITH ARARS	
Chemical-, Location-, and Action-Specific	ARARs specific to Alternative 7 are summarized in Table 6-5. Assuming that excavation involves more than a *deminimis*/ incidental discharge to surface water, Clean Water Act Section 404 requirements are triggered by excavation. In addition, the thin cover (all options), dewatering (all options except 7b), nearshore CDF (Option 7b), and possibly the upland CDF (Option 7a) also trigger Section 404 requirements. As a result, these actions must be evaluated to determine the least damaging practicable alternative. State wetlands requirements will also need to be addressed. Under Option 7a (upland CDF), selection of the CDF that contains low-quality wetlands would result in the destruction of the wetlands. Option 7b (nearshore CDF) would impact wetlands and floodplains and include a discharge of dredged and/or fill material to waters of the US. In addition, a portion of the nearshore CDF would require the permanent occupancy and modification of the floodplain. According to Executive Order 11988, a determination would need to be made that there was no other practicable alternative before selecting this option as the preferred remedy. Flood storage capacity would be reduced under Option 7b. Under Options 7a and 7e, some of the excavated material could require treatment if it exceeds the alternative treatment standards set forth in the LDRs. As long as the sediment is not dewatered first, or otherwise treated ex-situ, the sediment does not need to meet the treatment standards in the LDRs prior to disposal in a nearshore CDF (Option 7b) that is within the area of contamination.

Table 6-4. (continued)

EVALUATION CRITERIA	ALTERNATIVE ALLENDALE AND LYMAN MILL SEDIMENT-7: EXCAVATION AND DISPOSAL AND/OR TREATMENT
LONG-TERM EFFECTIVENESS AND PERMANENCE	
Magnitude of Residual Risk	Excavation would remove contaminated sediment from the river/ponds to provide a very high level of risk reduction and low residual risk. In order to meet the RAOs, a thin-layer cover would be placed on top of the sediment if post-excavation contaminant concentrations exceeded the cleanup goals in some locations. Inherent hazard would be further reduced for Options 7d and 7e because sediment would be incinerated on site or taken off site for disposal or treatment. Inherent hazard would be somewhat higher for Option 7a (upland CDF) because the contamination would remain on site, although in a secure upland disposal facility. The highest inherent hazard will remain for Option 7b (nearshore CDF) because the contamination would remain in the floodplain, adjacent to the river, although also in a controlled disposal facility.
Adequacy and Reliability of Controls	Excavation would be effective in the long term because the contaminated sediment would be removed and either contained on site, destroyed, or shipped off site for disposal or treatment. This alternative can be reliable as long as long-term monitoring, maintenance and ICs are implemented for any type of on-site disposal facility (Options 7a and 7b). Maintenance, monitoring, and ICs are particularly important for Option 7b (nearshore CDF) because the inherent hazard remains in the floodplain adjacent to the river. Dam maintenance would also be critical for the effectiveness of Alternative 7 for any options where inherent hazard remains in the river or floodplain.
REDUCTION OF TOXICITY, MOBILITY, OR VOLUME	
Treatment Process Used and Materials Treated	Options 7a and 7e assume some material will require treatment to meet LDRs. Option 7d includes on-site incineration.
Amount Destroyed or Treated	Under Options 7a and 7e, approximately 9,800 cy of dewatered material would be treated (10% of the total dewatered volume). Under Option 7d, approximately 155,800 cy of sediment would be excavated, dewatered, and treated.

Table 6-4. (continued)

EVALUATION CRITERIA	ALTERNATIVE ALLENDALE AND LYMAN MILL SEDIMENT-7: EXCAVATION AND DISPOSAL AND/OR TREATMENT
REDUCTION OF TOXICITY, MOBILITY, OR VOLUME	
Degree of Expected Reductions of Toxicity, Mobility, or Volume Through Treatment	There would be a reduction of toxicity, mobility, or volume of contamination from incineration under Options 7a, 7d, and 7e. There would be no treatment under Option 7b, although the mobility of the contaminated sediment particles would be reduced by the disposal facility.
Degree to Which Treatment is Irreversible	For sediments that undergo thermal treatment (Options 7a, 7d, and 7e), the process is irreversible.
Type and Quantity of Residuals Remaining After Treatment	Excavation would produce no residuals. Air emissions of contaminants or additional by-products produced during on- or off-site thermal treatment (Options 7a, 7d, and 7e) would be at levels below regulatory standards. After incineration, the volume of inorganic sediment particles would be nearly the same as the pre-treatment volume, but concentrations of chemical contaminants would be below detection limits.
SHORT-TERM EFFECTIVENESS	
Protection of Community During Remedial Action	All of the options would result in limited impacts to the community from construction. Access to the work zone during construction activities would be prohibited, and engineering controls, dust suppression techniques, and site perimeter air (dust) monitoring will mitigate risks to the community. An on-site incinerator under Option 7d would result in air emissions which would be monitored to ensure that they are below regulatory standards.
Protection of Workers During Remedial Action	Health and safety plans, emergency response plans, engineering controls (dust suppression), and personal protective equipment will be used during site activities, mitigating risks to workers.
Environmental Impacts	Excavation would result in destruction of the existing benthic habitat in both ponds and the elimination of the fish communities. In addition, aquatic-dependent wildlife populations would be adversely affected until primary and secondary productivity in the ponds becomes re-established, which could take two to five years. During pond lowering, there is the potential for downstream migration of contaminated sediment. Up to an acre of floodplain habitat would be impacted during the remedial construction phase.
Time Until Remedial Action Objectives are Achieved	RAOs are achieved immediately upon completion of remedy implementation, which is estimated to take approximately two years.

Table 6-4. (continued)

EVALUATION CRITERIA	ALTERNATIVE ALLENDALE AND LYMAN MILL SEDIMENT-7: EXCAVATION AND DISPOSAL AND/OR TREATMENT
IMPLEMENTABILITY	
Ability to Construct and Operate the Technology	For all options, the very soft surface sediments would require the use of low-ground pressure equipment and hydraulic excavators. Temporary haul roads would need to be constructed to provide access. For Options 7a, 7d and 7e, an upland land area is required for sediment dewatering. For Option 7a, additional land is needed for a disposal facility and Option 7d requires land for an incinerator. These properties may need to be acquired from private parties. Increased monitoring would be needed for Options 7a, 7b and 7d relative to Option 7e.
Reliability of the Technology	Excavation of soft sediments after lowering over-lying surface water is a proven technology and has been successfully implemented at other contaminated sediment sites. CDFs are widely used and CDF construction and thermal treatment are proven technologies. However, a nearshore CDF under Option 7b could present additional reliability concerns given that it would be located partially in the river.
Ease of Undertaking Additional Remedial Actions, If Necessary	This alternative would not preclude additional future remedial actions.
Ability to Monitor the Effectiveness of Remedy	The effectiveness of excavation and water quality protection measures could be monitored with routine testing. Confirmation sampling would be performed at the completion of construction activities to determine if the cleanup goals were achieved. A thin-layer cover would be placed over areas where contamination is above the cleanup goals, even after excavation. Long-term monitoring would be required to assess recovery of biological communities, assess the impact of the remedial action on downstream areas, and determine if additional evaluations or clean-ups are warranted. Increased monitoring would be needed for the on-site containment (Options 7a and 7b) and on-site treatment (Option 7d) options. However, these monitoring programs would not present any unusual issues.

Table 6-4. (continued)

EVALUATION CRITERIA	ALTERNATIVE ALLENDALE AND LYMAN MILL SEDIMENT-7: EXCAVATION AND DISPOSAL AND/OR TREATMENT	
IMPLEMENTABILITY		
Ability to Obtain Approvals and Coordinate with Other Agencies	For those components with wetlands/404 impacts, these actions must be evaluated to determine the least damaging practicable alternative. For Option 7a, some low-value wetlands could be destroyed depending on the location of the CDF. For Option 7b, a portion of the CDF would require the permanent occupancy and modification of the floodplain, and a determination would need to be made concluding that there is no other practicable alternative before selecting this option. Coordination with U.S. Department of Interior (DOI) would be required if during remedial design or remedial action, it is determined that this alternative may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archaeological data. Coordination with adjacent property owners, and appropriate federal, state, and local agencies would be required to implement ICs.	
Availability of Off-Site Treatment, Storage, and Disposal Services and Capacity	Off-site landfill and treatment options are readily available. Samples of dewatered sediment could be tested to determine if the material could be taken to a hazardous waste landfill without treatment.	
Availability of Necessary Equipment and Specialists	Excavation and CDF construction contractors and equipment are readily available. Thermal treatment equipment is commercially available.	
Availability of Technology	Technology is common enough that required equipment and materials would be readily available.	
COST[1]		
Capital Cost	Option 7a, On-site Upland CDF	$58,000,000
	Option 7b, On-site Nearshore CDF	$44,000,000
	Option 7d, On-site Thermal Treatment	$115,000,000
	Option 7e, Off-site Disposal and/or Treatment	$90,000,000
Present Worth of Long-term Monitoring and Maintenance	Option 7a, On-site Upland CDF	$2,800,000
	Option 7b, On-site Nearshore CDF	$2,900,000
	Option 7d, On-site Thermal Treatment	$2,700,000
	Option 7e, Off-site Disposal and/or Treatment	$2,900,000
Total Present Worth Cost	Option 7a, On-site Upland CDF	$61,000,000
	Option 7b, On-site Nearshore CDF	$47,000,000
	Option 7d, On-site Thermal Treatment	$118,000,000
	Option 7e, Off-site Disposal and/or Treatment	$93,000,000

Notes:
[1]Detailed cost estimates provided in Appendix J of the 2010 FS (Battelle, 2010). Costs could increase by approximately $210,000 to $240,000 for compliance with the National Historic Preservation Act (NHPA) (USACE, 2011).

Table 6-5. Potential Applicable or Relevant and Appropriate Requirements (ARARs) and To Be Considered (TBC) Criteria for Allendale and Lyman Mill Sediment Alternative 7, Excavation and Disposal and/or Treatment

Requirement	Status	Synopsis	Action to be Taken to Attain Requirement
Chemical-Specific ARARs			
Federal Requirements			
Clean Water Act Federal Water Quality Criteria, Section 304(a) 40 CFR 131.11	R & A	Ambient Water Quality Criteria (AWQC) are provided by EPA for chemicals for both the protection of human health and the protection of aquatic life.	Contaminants that could result in exceedances of AWQC in the Woonasquatucket River will be minimized to the maximum extent practical.
Guidelines for Carcinogenic Risk Assessment, EPA/630/P-03/001F	TBC	These guidelines provide guidance on conducting risk assessments involving carcinogens.	Guidelines used to evaluate all risk assessments on carcinogenicity.
Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens, EPA/630/R-03/003F	TBC	These guidelines provide guidance on conducting risk assessments involving carcinogens.	Guidelines used to evaluate all risk assessments on carcinogenicity in children.
EPA Risk Reference Doses (RfDs)	TBC	RfDs are estimates of a daily exposure concentration that is likely to be without appreciable risk of deleterious effects during a lifetime exposure.	RfDs used to characterize human health risks due to non-carcinogens in site media.
Human Health Assessment Cancer Slope Factors (CSFs)	TBC	CSFs are estimates of the upper-bound probability of an individual developing cancer as a result of a lifetime exposure to a particular concentration of a potential carcinogen.	CSFs used to compute the individual incremental cancer risk resulting from exposure to carcinogens in site media.
EPA Carcinogenic Assessment Group Potency Factors	TBC	These factors are used to evaluate an acceptable risk from a carcinogen.	Used to evaluate carcinogenicity of dioxin.
EPA Health Advisories	TBC	EPA publishes contaminant-specific health advisories that indicate the non-carcinogenic risks associated with consuming contaminated drinking water.	Health Advisories used to establish criteria in the absence of other standards.
State Requirements			
RIDEM Water Quality Regulations	R & A	Provides water classification for surface waters in Rhode Island and sets ambient water quality criteria for toxic substances and governs water quality impacts associated with site activities.	Contributions of contaminants from sediment that could result in exceedances of water quality standards in the Woonasquatucket River will be minimized to the maximum extent practical.

Table 6-5. (continued)

Requirement	Status	Synopsis	Action to be Taken to Attain Requirement
Location-Specific ARARs			
Federal Requirements			
Fish and Wildlife Coordination Act 16 U.S.C. 661, Fish and Wildlife Protection (40 CFR Section 6.302(g))	Applicable	Requires that a federal agency take action to prevent, mitigate, or compensate for project-related losses of fish and wildlife resources. Encourages that any federal agency proposing to modify a body of water to consult with the U.S. Fish and Wildlife Service, National Marine Fisheries Service, and other related state agencies.	Construction activities under this alternative in the Woonasquatucket River are subject to these requirements. Actions will be taken in accordance with these requirements.
Clean Water Act, Section 404 Guidelines for discharge of dredged or fill material into waters of US (40 CFR Parts 230 and 231, 33 CFR Parts 320-323, and 33 CFR Part 332)	Applicable	Outlines requirements for the discharge of dredged or fill materials into surface waters, including wetlands. Such discharges are not allowed if there are practicable alternatives with less adverse impact. Sets standards for restoration and mitigation required as a result of unavoidable impacts to aquatic resources.	Excavation, thin cover, dewatering, and nearshore CDF (and potentially upland CDF) subject to these requirements. Activities must be conducted in accordance with these requirements including but not limited to mitigation and/or restoration. Alternative must be evaluated to determine least damaging practicable alternative before it can be selected.
Rivers and Harbors Act Section 10 (33 U.S.C. Section 403)	Applicable	Sets forth criteria for placing dams/structures in navigable waters of the U.S.	Thin cover and nearshore CDF subject to these requirements. Activities must be conducted in accordance with these requirements.
Archaeological and Historical Preservation Act of 1974 Public Law 93-291	Potentially applicable	When a Federal agency finds, or is notified, that its activities in connection with a Federal construction project may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archeological data, such agency shall notify DOI. Such agency may request DOI to undertake the preservation of such data or it may undertake such activities.	If during remedial design or remedial action, it is determined that this alternative may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archaeological data, EPA will notify DOI and comply with these requirements.
Protection of Wetlands (Executive Order 11990)	TBC	Federal agencies are required to avoid adversely impacting wetlands unless there is no practicable alternative and the proposed action includes all practicable measures to minimize harm to wetlands that may result from such use.	An upland CDF containing wetlands can only be selected if there is no practicable alternative to destruction of wetlands.

Table 6-5. (continued)

Requirement	Status	Synopsis	Action to be Taken to Attain Requirement
***Location-Specific ARARs* (cont)**			
Federal Requirements (cont)			
National Historic Preservation Act 16 USC 470 36 CFR Part 800	Applicable	A federal agency must take into account the project's effect on properties included or eligible for inclusion in the National Register of Historic Places.	Work conducted will take into account the project's effect on properties included or eligible for inclusion in the National Register of Historic Places as required under this law.
Floodplain Management (Executive Order 11988)	TBC	Federal agencies are required to avoid impacts associated with the occupancy and modification of a floodplain and avoid support of floodplain development wherever there is a practicable alternative.	Nearshore CDF can only be selected if there is no practicable alternative to occupancy and modification of floodplain.
State Requirements			
RIDEM Rules and Regulations for Hazardous Waste Management – Section 8 Location Standards for Hazardous Waste Facilities	R & A: Nearshore CDF	Rhode Island is delegated to administer the federal RCRA statute through its state regulations. The standards of 40 CFR 264.18(b), with some exceptions, are incorporated by reference. Certain facilities located in 100-yr floodplain must be designed, constructed, operated and maintained to prevent washout of any hazardous waste by 100-yr flood, unless demonstrate no adverse effects on human health or environment will result from washout.	Nearshore CDF must be constructed in accordance with these requirements.
Rhode Island Historic Preservation Act – Rhode Island General Laws 42-45 et seq.	Applicable	Regulations that address the project's effect on properties included or eligible for inclusion in the State/National Registers of Historic Places.	Will take into account the project's effect on properties included or eligible for inclusion in the National/State Registers of Historic Places in accordance with these requirements.
RIDEM Rules and Regulations Governing the Enforcement of the Freshwater Wetlands Act	Applicable	Sets requirements to prevent the undesirable drainage, excavation, filling, alteration, encroachment, or any other form of disturbance or destruction to a wetland.	Activities required by RIDEM for remediation will be conducted in accordance with these requirements.

Table 6-5. (continued)

Requirement	Status	Synopsis	Action to be Taken to Attain Requirement
Action-Specific ARARs			
Federal Requirements			
Clean Water Act Federal Water Quality Criteria, Section 304(a) 40 CFR 131.11	Applicable	Ambient Water Quality Criteria (AWQC) are provided by EPA for chemicals for both the protection of human health and the protection of aquatic life.	Excavation, dewatering, thin cover, and nearshore CDF must be conducted so that there are no exceedances of AWQC.
RCRA (40 CFR 264, Subpart AA)	Applicable: On-site Incineration	Air emission standards for process vents apply to process vents that manage hazardous wastes with organic concentrations of at least 10 parts per million by weight (ppmw).	Should incinerator operations manage hazardous wastes with organic concentrations of at least 10 ppm by weight, vents operated as part of the system will comply with these requirements.
RCRA (40 CFR 264, Subpart BB)	Applicable: On-site Incineration	Air emission standards for equipment leaks apply to equipment that contains or contacts hazardous wastes with organic concentrations of at least 10 percent by weight.	Should equipment used in incineration come into contact with hazardous wastes containing organic concentrations of at least 10 percent by weight, these regulations will be followed.
RCRA (40 CFR 264, Subpart CC)	Applicable: Upland CDF On-site Incineration	Air emission standards for tanks, surface impoundments, and containers used to manage hazardous waste. Emission controls required if tanks, surface impoundments, and containers used to manage hazardous waste have greater than 500 ppmw of volatile organics.	If tanks, surface impoundments, and containers used to manage hazardous waste have greater than 500 ppmw of volatile organics then these requirements will be met.
CAA National Emissions Standards for Hazardous Air Pollutants: Site remediation (40 CFR 63, Subpart GGGGG)	Applicable: On-site Incineration	Applicable to major sources of hazardous air pollutants conducting site remediation.	On-site thermal treatment must meet these substantive requirements.
RCRA Land Disposal Restrictions (40 CFR 268)	Applicable: Upland CDF	These regulations identify treatment standards for hazardous wastes and specify requirements that generators, transporters, and owners or operators of treatment, storage, and disposal facilities that manage restricted wastes destined for land disposal must meet.	Material subject to these regulations placed in upland CDF must be treated to meet these requirements.
Invasive Species (Executive Order 13112)	TBC	Federal agencies are directed to prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause when requiring actions that impact the environment.	Actions will be taken to address invasive species consistent with the Executive Order.

Table 6-5. (continued)

Requirement	Status	Synopsis	Action to be Taken to Attain Requirement
***Action-Specific ARARs* (cont)**			
State Requirements			
RIDEM Rules and Regulations for Hazardous Waste Management Identification and Listing of Hazardous Wastes	Applicable: Upland CDF On-site Incineration Off-site Disposal	Rhode Island is delegated to administer the federal RCRA statute through its regulations. The standards of 40 Part 261 of RCRA are incorporated by reference. Sets forth requirements for hazardous waste determination according to federal (40 CFR 262.11) and RI State (Rule 5.8) definitions.	Used to determine appropriate disposal for contaminated sediment.
RIDEM Rules and Regulations for Hazardous Waste Management, Section 8 – Operation Requirements for Treatment, Storage, and Disposal Facilities	Applicable: Upland CDF On-site incineration R & A: Nearshore CDF	Outlines operational requirements for all hazardous waste treatment, storage, and disposal facilities, including general waste analyses, security procedures, inspections, safety, groundwater monitoring etc. Sets design, construction, and operational requirements for hazardous waste containers and tanks, and closure requirements for hazardous waste facilities.	Substantive requirements related to land disposal, on-site incineration, closure, etc. must be met.
RIDEM Rules and Regulations for Hazardous Waste Management, Section 8 – Land Disposal Facilities	Applicable: Upland CDF R & A Nearshore CDF	Outlines design, operational, and closure requirements for land disposal facilities.	Substantive requirements related to land disposal, closure, etc. must be met for CDFs constructed on site.
RIDEM Rules and Regulations for Hazardous Waste Management, Section 8 – Incinerators	Applicable: On-site Incineration	Outlines design, operational, and closure requirements for incinerator facilities.	On-site incineration must be conducted to meet these substantive requirements.
RIDEM Water Quality Regulations	Applicable	Provides water classification for surface waters in Rhode Island and sets ambient water quality criteria for toxic substances and governs water quality impacts associated with site activities.	Excavation, thin cover, dewatering (discharge of dredged return water) and nearshore CDF must be conducted so that there are no exceedances of water quality standards.
RI Air Pollution Control Regulation #1: Visible Emissions	Applicable	Establishes opacity limitations for contaminant emissions.	Remediation will be conducted to meet the standards for visible emissions.
RI Air Pollution Control Regulation #5: Fugitive Dust	Applicable	Requires that reasonable precaution be taken to prevent particulate matter from becoming airborne.	Actions will be taken to prevent particulate matter from becoming airborne in accordance with these regulations.
RI Air Pollution Control Regulation #7: Emissions Detrimental to Persons or Property	Applicable	Prohibits emissions of contaminants which may be injurious to human, plant, or animal life or cause damage to property or which unreasonably interfere with the enjoyment of life and property.	Any potential emissions subject to these requirements will meet these standards.

Table 6-5. (continued)

Requirement	Status	Synopsis	Action to be Taken to Attain Requirement
***Action-Specific ARARs* (cont)**			
State Requirements (cont)			
RI Air Pollution Control Regulation #15: Control of Organic Solvent Emissions	Applicable: On-site incineration	Limits the amount of organic solvents emitted to the atmosphere	Any emissions of organic solvents will be controlled to ensure that the standards are met.
RI Air Pollution Control Regulation #22: Air Toxics, Air Toxics Guideline, and Air Modeling Guidelines	Applicable: On-site incineration	Prohibits the emissions of specified contaminants that result in ground level concentrations greater than ambient level concentrations.	Remediation will be conducted so that these requirements are met.

Key:
R & A – Relevant and Appropriate; TBC – To Be Considered

Table 6-7. Detailed Analysis of Allendale and Lyman Mill Sediment Alternative 8, Partial Excavation, Isolation Capping and Disposal and/or Treatment

EVALUATION CRITERIA	ALTERNATIVE ALLENDALE AND LYMAN MILL SEDIMENT- 8: PARTIAL EXCAVATION, ISOLATION CAPPING, AND DISPOSAL AND/OR TREATMENT
OVERALL PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT	
Human Health Protection and Environment	The removal of sediment from shallow areas and areas with high erosion potential would provide some protection by reducing concentrations in areas where exposure is most likely and reducing the risk of potential cap erosion. Capping sediments would isolate the remaining contaminants from the environment and restrict potential contaminant migration. The removal of resident fish from the ponds would effectively reduce the fish consumption risks to humans and piscivorous wildlife.
COMPLIANCE WITH ARARS	
Chemical-, Location-, and Action-Specific	ARARs specific to Alternative 8 are summarized in Table 6-8. Assuming that excavation involves more than a *deminimis*/ incidental discharge to surface water, Section 404 requirements are triggered by excavation. In addition, the isolation cap (all options), the nearshore CDF (Option 8b) and possibly the upland CDF (Option 8a) also trigger Section 404 requirements. As a result, these actions must be evaluated to determine the least damaging practicable alternative. State wetlands requirements will also need to be addressed. In addition, isolation capping and the nearshore CDF (Option 8b) would require the permanent occupancy and modification of the floodplain. According to Executive Order 11988, a determination would need to be made that there was no other practicable alternative before selecting this option as the preferred remedy. Under Options 8a and 8e, some of the excavated material could require treatment if it exceeds the alternative treatment standards set forth in the LDRs. As long as the sediment is not dewatered first, or otherwise treated ex-situ, the sediment does not need to meet the treatment standards in the LDRs prior to disposal in a nearshore CDF (Option 8b) that is within the area of contamination.

Table 6-7. (continued)

EVALUATION CRITERIA	ALTERNATIVE ALLENDALE AND LYMAN MILL SEDIMENT- 8: PARTIAL EXCAVATION, ISOLATION CAPPING, AND DISPOSAL AND/OR TREATMENT
LONG-TERM EFFECTIVENESS AND PERMANENCE	
Magnitude of Residual Risk	Residual risk after the contaminated sediment is excavated and a cap is installed will be reduced, provided the cap is designed, constructed and maintained to provide long-term isolation of contaminants. Where contamination remains under the cap in the river and contained on site in a controlled disposal facility (Options 8a and 8b), inherent hazard of waste also remains. Partial excavation would provide some risk reduction because sediment in the areas most susceptible to erosion or sediment with highest contamination would be removed and either contained in an engineered facility or treated by incineration.
Adequacy and Reliability of Controls	Reliability of a cap over contaminated sediment would be dependent upon monitoring, maintenance and ICs. In addition, the cap is in a relatively stable depositional area and would provide reliable chemical isolation with the top layer of the cap designed to withstand erosion, although there are some reliability concerns because contamination is still located in the river/ponds. Long-term monitoring, maintenance, including maintenance of the dams, and ICs would be critical to control physical disturbances and protect the integrity of the cap or any type of on-site disposal facility (Options 8a and 8b) for the long-term effectiveness of this alternative.
REDUCTION OF TOXICITY, MOBILITY, OR VOLUME	
Treatment Process Used and Materials Treated	Options 8a and 8e assume some material will require treatment to meet LDRs. Option 8d includes on-site incineration.
Amount Destroyed or Treated	Under Options 8a and 8e, approximately 4,100 cy of dewatered material would be treated (10% of the total dewatered volume). Under Option 8d, approximately 64,400 cy of sediment would be excavated, dewatered, and treated.
Degree of Expected Reductions of Toxicity, Mobility, or Volume Through Treatment	There would be a reduction of toxicity, mobility, or volume of contamination by incineration under Options 8a (upland CDF), 8d (on-site thermal treatment), and Option 8e (off-site disposal and/or treatment). There would be no reduction of toxicity, mobility, or volume of contamination through treatment under Option 8b, although the mobility of the contaminated sediment particles would be reduced by the isolation cap in both ponds and the disposal facility.
Degree to Which Treatment is Irreversible	For material that undergoes thermal treatment (Options 8a, 8d, and 8e), the process is irreversible.

Table 6-7. (continued)

EVALUATION CRITERIA	ALTERNATIVE ALLENDALE AND LYMAN MILL SEDIMENT- 8: PARTIAL EXCAVATION, ISOLATION CAPPING, AND DISPOSAL AND/OR TREATMENT
REDUCTION OF TOXICITY, MOBILITY, OR VOLUME	
Type and Quantity of Residuals Remaining After Treatment	Excavation would produce no residuals. For sediments that remain on site under the cap, there would be no residuals. Air emissions of contaminants or additional by-products produced during on- or off-site thermal treatment (Options 8a, 8d and 8e) would be at levels below regulatory standards. After incineration, the volume of inorganic sediment particles would be nearly the same as the pre-treatment volume, but concentrations of chemical contaminants would be below detection limits.
SHORT-TERM EFFECTIVENESS	
Protection of Community During Remedial Action	All of the options would present limited impacts to the community from construction. Access to the work zone during excavation and capping activities would be prohibited, and engineering controls, dust suppression techniques, and site perimeter air (dust) monitoring will mitigate risks to the community. An on-site incinerator under Option 8d would result in air emissions which would be monitored to ensure that they are below regulatory standards.
Protection of Workers During Remedial Action	Health and safety plans, emergency response plans, engineering controls (dust suppression), and personal protective equipment will be used during construction activities, mitigating risks to workers.
Environmental Impacts	Excavation and capping would result in destruction of the existing benthic habitat in both ponds and the elimination of the fish communities. In addition, aquatic-dependent wildlife populations would be adversely affected until primary and secondary productivity in the ponds had become re-established which could take two to five years. During pond lowering, there is the potential for downstream migration of contaminated sediment. Cap placement could increase non-contaminated suspending solids.
Time Until Remedial Action Objectives are Achieved	RAOs are achieved immediately upon completion of remedy implementation, which is estimated to take approximately two years.
IMPLEMENTABILITY	
Ability to Construct and Operate the Technology	For all options, the very soft surface sediments would require the use of low-ground pressure equipment and hydraulic excavators. Temporary haul roads would need to be constructed to provide access. For Options 8a, 8d and 8e, an upland land area is required for sediment dewatering and water treatment. Additional land is needed for a disposal facility under Option 8a. Option 8d requires land for an incinerator. These properties may need to be acquired from private parties.

Table 6-7. (continued)

EVALUATION CRITERIA	ALTERNATIVE ALLENDALE AND LYMAN MILL SEDIMENT- 8: PARTIAL EXCAVATION, ISOLATION CAPPING, AND DISPOSAL AND/OR TREATMENT
IMPLEMENTABILITY	
Reliability of the Technology	Excavation and capping technologies are field proven technologies. Sand caps have been successfully placed over soft sediment similar to those found at this site. However, habitat restoration activities have historically had variable success rates. CDFs are widely used and CDF construction and thermal treatment are proven technologies although they have greater reliability when located outside of floodplain areas.
Ease of Undertaking Additional Remedial Actions, If Necessary	This alternative would not preclude additional future remedial actions.
Ability to Monitor the Effectiveness of Remedy	The effectiveness of excavation and water quality protection measures could be monitored with routine testing. A physical survey would be conducted at the completion of construction activities to confirm that the isolation cap was placed over the entire pond bottom and meets the design thickness. Long-term monitoring would be required to assess cap performance and recovery of biological communities, assess the impact of the remedial action on downstream areas, and determine if additional evaluations or clean-ups are warranted. It can be more difficult to monitor in a subaqueous environment. The implementation of a long-term monitoring program and enforcement of ICs are critical to the success of this alternative. Increased monitoring programs would be needed for the on-site containment (Options 8a and 8b) and treatment (Option 8d) options.
Ability to Obtain Approvals and Coordinate with Other Agencies	For those components with wetlands/404 impacts, these actions must be evaluated to determine the least damaging practicable alternative. In addition, capping (all options) and the nearshore CDF (Option 8b) would take place in the waterway and would require the permanent occupancy and modification of the floodplain. Thus, a determination must first be made concluding that there is no other practicable alternative. For Option 8a, some low-value wetlands could be destroyed depending on the location of the CDF. Coordination with DOI would be required if during remedial design or remedial action, it is determined that this alternative may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archaeological data. Coordination with adjacent property owners, and appropriate federal, state, and local agencies would be required to implement ICs.

Table 6-7. (continued)

EVALUATION CRITERIA	ALTERNATIVE ALLENDALE AND LYMAN MILL SEDIMENT- 8: PARTIAL EXCAVATION, ISOLATION CAPPING, AND DISPOSAL AND/OR TREATMENT	
IMPLEMENTABILITY		
Availability of Off-Site Treatment, Storage, and Disposal Services and Capacity	Off-site landfill and treatment options are readily available Samples of dewatered sediment could be tested to determine if the material could be taken to a hazardous waste landfill without treatment.	
Availability of Necessary Equipment and Specialists	Construction equipment and personnel are readily available. Thermal treatment equipment is commercially available.	
Availability of Technology	Technology is common enough that required equipment and materials would be readily available.	
COST[1]		
Capital Cost	Option 8a, On-site Upland CDF	$41,000,000
	Option 8b, On-site Nearshore CDF	$32,000,000
	Option 8d, On-site Thermal Treatment	$63,000,000
	Option 8e, Off-site Disposal and/or Treatment	$52,000,000
Present Worth of Long-term Monitoring and Maintenance	Option 8a, On-site Upland CDF	$4,500,000
	Option 8b, On-site Nearshore CDF	$4,600,000
	Option 8d, On-site Thermal Treatment	$4,100,000
	Option 8e, Off-site Disposal and/or Treatment	$4,700,000
Total Present Worth Cost	Option 8a, On-site Upland CDF	$45,000,000
	Option 8b, On-site Nearshore CDF	$36,000,000
	Option 8d, On-site Thermal Treatment	$67,000,000
	Option 8e, Off-site Disposal and/or Treatment	$57,000,000

Notes:
[1]Detailed cost estimates provided in Appendix J of the 2010 FS (Battelle, 2010). Costs could increase by approximately $210,000 to $240,000 for compliance with the National Historic Preservation Act (NHPA) (USACE, 2011).

Table 6-8. Potential Applicable or Relevant and Appropriate Requirements (ARARs) and To Be Considered (TBC) Criteria for Allendale and Lyman Mill Sediment Alternative 8, Partial Excavation, Isolation Capping and Disposal and/or Treatment

Requirement	Status	Synopsis	Action to be Taken to Attain Requirement
Chemical-Specific ARARs			
Federal Requirements			
Clean Water Act Federal Water Quality Criteria, Section 304(a) 40 CFR 131.11	R & A	Ambient Water Quality Criteria (AWQC) are provided by EPA for chemicals for both the protection of human health and the protection of aquatic life.	Contaminants that could result in exceedances of AWQC in the Woonasquatucket River will be minimized to the maximum extent practical.
Guidelines for Carcinogenic Risk Assessment, EPA/630/P-03/001F	TBC	These guidelines provide guidance on conducting risk assessments involving carcinogens.	Guidelines used to evaluate all risk assessments on carcinogenicity.
Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens, EPA/630/R-03/003F	TBC	These guidelines provide guidance on conducting risk assessments involving carcinogens.	Guidelines used to evaluate all risk assessments on carcinogenicity in children.
EPA Risk Reference Doses (RfDs)	TBC	RfDs are estimates of a daily exposure concentration that is likely to be without appreciable risk of deleterious effects during a lifetime exposure.	RfDs used to characterize human health risks due to non-carcinogens in site media.
Human Health Assessment Cancer Slope Factors (CSFs)	TBC	CSFs are estimates of the upper-bound probability of an individual developing cancer as a result of a lifetime exposure to a particular concentration of a potential carcinogen.	CSFs used to compute the individual incremental cancer risk resulting from exposure to carcinogens in site media.
EPA Carcinogenic Assessment Group Potency Factors	TBC	These factors are used to evaluate an acceptable risk from a carcinogen.	Used to evaluate carcinogenicity of dioxin.
EPA Health Advisories	TBC	EPA publishes contaminant-specific health advisories that indicate the non-carcinogenic risks associated with consuming contaminated drinking water.	Used to establish criteria in the absence of other standards.
State Requirements			
RIDEM Water Quality Regulations	R & A	Provides water classification for surface waters in Rhode Island and sets ambient water quality criteria for toxic substances and governs water quality impacts associated with site activities.	Contributions of contaminants from sediment that could result in exceedances of water quality standards in the Woonasquatucket River will be minimized to the maximum extent practical.

Table 6-8. (continued)

Requirement	Status	Synopsis	Action to be Taken to Attain Requirement
Location-Specific ARARs			
Federal Requirements			
Fish and Wildlife Coordination Act 16 U.S.C. 661, Fish and Wildlife Protection (40 CFR Section 6.302(g))	Applicable	Requires that a federal agency take action to prevent, mitigate, or compensate for project-related losses of fish and wildlife resources. Encourages that any federal agency proposing to modify a body of water to consult with the U.S. Fish and Wildlife Service, National Marine Fisheries Service, and other related state agencies.	Construction activities under this alternative in Woonasquatucket River are subject to these requirements. Actions will be taken in accordance with these requirements.
Clean Water Act, Section 404 Guidelines for discharge of dredged or fill material into waters of US (40 CFR Parts 230 and 231, 33 CFR Parts 320-323, and 33 CFR Part 332)	Applicable	Outlines requirements for the discharge of dredged or fill materials into surface waters, including wetlands. Such discharges are not allowed if there are practicable alternatives with less adverse impact. Sets standards for restoration and mitigation required as a result of unavoidable impacts to aquatic resources.	Excavation, isolation capping, dewatering and nearshore CDF (and potentially upland CDF) subject to these requirements. Activities must be conducted in accordance with these requirements including but not limited to mitigation and/or restoration. Alternative must be evaluated to determine least damaging practicable alternative before it can be selected.
Archaeological and Historical Preservation Act of 1974 Public Law 93-291	Potentially applicable	When a Federal agency finds, or is notified, that its activities in connection with a Federal construction project may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archeological data, such agency shall notify DOI. Such agency may request DOI to undertake the preservation of such data or it may undertake such activities.	If during remedial design or remedial action, it is determined that this alternative may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archaeological data, EPA will notify DOI and comply with these requirements.
National Historic Preservation Act 16 USC 470 36 CFR Part 800	Applicable	A federal agency must take into account the project's effect on properties included or eligible for inclusion in the National Register of Historic Places.	Work conducted will take into account the project's effect on properties included or eligible for inclusion in the National Register of Historic Places as required under this law.

Table 6-8. (continued)

Requirement	Status	Synopsis	Action to be Taken to Attain Requirement
Location-Specific ARARs (cont)			
Federal Requirements (cont)			
Rivers and Harbors Act Section 10 (33 U.S.C. Section 403)	Applicable	Sets forth criteria for placing dams/structures in navigable waters of the U.S.	Isolation capping and nearshore CDF subject to these requirements. Activities must be conducted in accordance with these requirements
Protection of Wetlands (Executive Order 11990)	TBC	Federal agencies are required to avoid adversely impacting wetlands unless there is no practicable alternative and the proposed action includes all practicable measures to minimize harm to wetlands that may result from such use.	Alternatives that impact wetlands can only be selected if there is no practicable alternative to destruction of wetlands. Activities must be conducted in accordance with these requirements.
Floodplain Management (Executive Order 11988)	TBC	Federal agencies are required to avoid impacts associated with the occupancy and modification of a floodplain and avoid support of floodplain development wherever there is a practicable alternative.	Nearshore CDF can only be selected if there is no practicable alternative to occupancy and modification of floodplain.
State Requirements			
RIDEM Rules and Regulations Governing the Enforcement of the Freshwater Wetlands Act	Applicable	Sets requirements to prevent the undesirable drainage, excavation, filling, alteration, encroachment, or any other form of disturbance or destruction to a wetland.	Activities required by RIDEM for remediation will be conducted in accordance with these requirements.
Rhode Island Historic Preservation Act – Rhode Island General Laws 42-45 et seq.	Applicable	Regulations that address the project's effect on properties included or eligible for inclusion in the State/National Registers of Historic Places.	Will take into account the project's effect on properties included or eligible for inclusion in the National/State Registers of Historic Places in accordance with these requirements.
RIDEM Rules and Regulations for Hazardous Waste Management, Section 8 – Location Standards for Hazardous Waste Facilities	R & A	Rhode Island is delegated to administer the federal RCRA statute through its state regulations. The standards of 40 CFR 264.18(b), with some exceptions, are incorporated by reference. Certain facilities located in 100-yr floodplain must be designed, constructed, operated and maintained to prevent washout of any hazardous waste by 100-yr flood, unless demonstrate no adverse effects on human health or environment will result from washout.	Isolation cap and nearshore CDF must be constructed in accordance with these requirements.

Table 6-8. (continued)

Requirement	Status	Synopsis	Action to be Taken to Attain Requirement
Action-Specific ARARs			
Federal Requirements			
Clean Water Act Federal Water Quality Criteria, Section 304(a) 40 CFR 131.11	Applicable	Ambient Water Quality Criteria (AWQC) are provided by EPA for chemicals for both the protection of human health and the protection of aquatic life.	Excavation, placement of cap, dewatering, and nearshore CDF must be conducted so that there are no exceedances of AWQC.
RCRA (40 CFR 264, Subpart AA)	Applicable: On-site Incineration	Air emission standards for process vents apply to process vents that manage hazardous wastes with organic concentrations of at least 10 parts per million by weight (ppmw).	Should incinerator operations manage hazardous wastes with organic concentrations of at least 10 ppm by weight, vents operated as part of the system will comply with these requirements.
RCRA (40 CFR 264, Subpart BB)	Applicable: On-site Incineration	Air emission standards for equipment leaks apply to equipment that contains or contacts hazardous wastes with organic concentrations of at least 10 percent by weight.	Should equipment used in incineration come into contact with hazardous wastes containing organic concentrations of at least 10 percent by weight, these regulations will be followed.
RCRA (40 CFR 264, Subpart CC)	Applicable: Upland CDF On-site Incineration	Air emission standards for tanks, surface impoundments, and containers used to manage hazardous waste. Emission controls required if tanks, surface impoundments, and containers used to manage hazardous waste have greater than 500 ppmw of volatile organics.	If tanks, surface impoundments, and containers used to manage hazardous waste have greater than 500 ppmw of volatile organics then these requirements will be met.
CAA National Emissions Standards for Hazardous Air Pollutants: Site remediation (40 CFR 63, Subpart GGGGG)	Applicable: On-site Incineration	Applicable to major sources of hazardous air pollutants conducting site remediation.	On-site thermal treatment must meet these substantive requirements.
RCRA Land Disposal Restrictions (40 CFR 268)	Applicable: Upland CDF	These regulations identify treatment standards for hazardous wastes and specify requirements that generators, transporters, and owners or operators of treatment, storage, and disposal facilities that manage restricted wastes destined for land disposal must meet.	Material subject to these regulations placed in upland CDF must be treated to meet these requirements.
Invasive Species (Executive Order 13112)	TBC	Federal agencies are directed to prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause when requiring actions that impact the environment.	Actions will be taken to address invasive species consistent with the Executive Order.

Table 6-8. (continued)

Requirement	Status	Synopsis	Action to be Taken to Attain Requirement
***Action-Specific ARARs* (cont)**			
State Requirements			
RIDEM Rules and Regulations for Hazardous Waste Management Identification and Listing of Hazardous Wastes	Applicable: Upland CDF On-site incineration Off-site disposal	Rhode Island is delegated to administer the federal RCRA statute through its regulations. The standards of 40 Part 261 of RCRA are incorporated by reference. Sets forth requirements for hazardous waste determination according to federal (40 CFR 262.11) and RI State (Rule 5.8) definitions.	Used to determine appropriate treatment and or disposal.
RIDEM Rules and Regulations for Hazardous Waste Management, Section 8 – Operation Requirements for Treatment, Storage, and Disposal Facilities	Applicable: Upland CDF On-site incineration R & A: Nearshore CDF	Outlines operational requirements for all hazardous waste treatment, storage, and disposal facilities, including general waste analyses, security procedures, inspections, safety, groundwater monitoring etc. Sets design, construction, and operational requirements for hazardous waste containers and tanks, and closure requirements for hazardous waste facilities.	Substantive requirements related to land disposal, incineration, closure, etc. must be met.
RIDEM Rules and Regulations for Hazardous Waste Management, Section 8 – Land Disposal Facilities	Applicable: Upland CDF R & A: Nearshore CDF	Outlines design, operational, and closure requirements for land disposal facilities.	Substantive requirements related to land disposal/closure, etc. must be met for CDFs constructed on site.
RIDEM Rules and Regulations for Hazardous Waste Management, Section 8 – Incinerators	Applicable: On-site incineration	Outlines design, operational, and closure requirements for incinerator facilities.	On-site thermal treatment must meet these substantive requirements.
RIDEM Water Quality Regulations	Applicable	Provides water classification for surface waters in Rhode Island and sets ambient water quality criteria for toxic substances and governs water quality impacts associated with site activities.	Excavation, placement of cap, dewatering (discharge of dredged return water) and nearshore CDF must be conducted so that there are no exceedances of water quality standards.
RI Air Pollution Control Regulation #1: Visible Emissions	Applicable	Establishes opacity limitations for contaminant emissions.	Remediation will be conducted to meet the standards for visible emissions.
RI Air Pollution Control Regulation #5: Fugitive Dust	Applicable	Requires that reasonable precaution be taken to prevent particulate matter from becoming airborne.	Actions will be taken to prevent particulate matter from becoming airborne in accordance with these regulations.
RI Air Pollution Control Regulation #7: Emissions Detrimental to Persons or Property	Applicable	Prohibits emissions of contaminants which may be injurious to human, plant, or animal life or cause damage to property or which unreasonably interfere with the enjoyment of life and property.	Any potential emissions subject to these requirements will meet these standards.

Table 6-8. (continued)

Requirement	Status	Synopsis	Action to be Taken to Attain Requirement
***Action-Specific ARARs* (cont)**			
State Requirements (cont)			
RI Air Pollution Control Regulation #15: Control of Organic Solvent Emissions	Applicable: On-site incineration	Limits the amount of organic solvents emitted to the atmosphere	Any emissions of organic solvents will be controlled to ensure that the standards are met.
RI Air Pollution Control Regulation #22: Air Toxics, Air Toxics Guideline, and Air Modeling Guidelines	Applicable: On-site incineration	Prohibits the emissions of specified contaminants that result in ground level concentrations greater than ambient level concentrations.	Remediation will be conducted so that these requirements are met.

Key:
R & A – Relevant and Appropriate; TBC – To Be Considered

Table 6-9. Detailed Analysis of Allendale and Lyman Mill Sediment Alternative 10, Dam Replacement, Excavation and Disposal and/or Treatment

EVALUATION CRITERIA	ALTERNATIVE ALLENDALE AND LYMAN MILL SEDIMENT- 10: DAM REPLACEMENT, EXCAVATION, AND DISPOSAL AND/OR TREATMENT
OVERALL PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT	
Human Health Protection and Environment	The excavation and removal of sediments would provide high overall protection to human health and the environment by quickly reducing human health and ecological risk to acceptable levels. In addition, the removal of resident fish from the ponds would effectively reduce the fish consumption risks to humans and piscivorous wildlife. Removal of the sediment would prevent contaminant migration downstream due to erosion for Options 10a (upland CDF), 10d (on-site thermal treatment) and 10e (off-site disposal and/or treatment). However, contamination would remain in the floodplain for Option 10b (nearshore CDF) which would reduce its overall protection.
COMPLIANCE WITH ARARS	
Chemical-, Location-, and Action-Specific	ARARs specific to Alternative 10 are summarized in Table 6-10. Assuming that excavation involves more than a *deminimis*/incidental discharge to surface water, Section 404 requirements are triggered by excavation. In addition, the nearshore CDF (Option 10a) and possibly upland CDF (Option 10b), dam replacement and thin cover (all options) also trigger wetlands/Section 404 requirements. As a result, these actions must be evaluated to determine the least damaging practicable alternative. State wetlands requirements will also need to be addressed. Under Option 10b (on-site confinement in a nearshore CDF) a portion of the nearshore CDF would require the permanent occupancy and modification of the floodplain. According to Executive Order 11988, a determination would need to be made that there was no other practicable alternative before selecting this option as the preferred remedy. Under Options 10a and 10e, some of the excavated material could require treatment if it exceeds the alternative treatment standards set forth in the LDRs. As long as the sediment is not dewatered first, or otherwise treated ex-situ, the sediment does not need to meet the treatment standards in the LDRs prior to disposal in a nearshore CDF (Option 10b) that is within the area of contamination.

Table 6-9. (continued)

EVALUATION CRITERIA	ALTERNATIVE ALLENDALE AND LYMAN MILL SEDIMENT- 10: DAM REPLACEMENT, EXCAVATION, AND DISPOSAL AND/OR TREATMENT
LONG-TERM EFFECTIVENESS AND PERMANENCE	
Magnitude of Residual Risk	Excavation would remove contaminated sediment from the river to provide a very high level of risk reduction. In order to meet the RAOs, a thin-layer cover may be placed on top of the sediment if post-excavation contaminant concentrations exceed the cleanup goals in some locations. Inherent hazards would be further reduced for Options 10d and 10e because sediment would be incinerated on site or taken off site for disposal or treatment. Inherent hazard would be somewhat higher for Option 10a because the contamination would remain on site, although in a secure upland disposal facility. The inherent hazard would be highest for Option 10b because the contamination would remain in the floodplain, adjacent to the river, although also in a controlled disposal facility.
Adequacy and Reliability of Controls	Excavation would be effective in the long term because the contaminated sediment would be removed and either contained on site, destroyed, or shipped off site for disposal or treatment. This alternative can be reliable as long as long-term monitoring, maintenance and ICs are implemented for any type of on-site disposal facility (Options 10a and 10b). Maintenance, monitoring, and ICs are particularly important for Option 10b because the inherent hazard remains in the floodplain adjacent to the river. Inspections and long-term maintenance of the weir structure would also be required for Alternative 10 for any options where inherent hazard remains in the river or floodplain.
REDUCTION OF TOXICITY, MOBILITY, OR VOLUME	
Treatment Process Used and Materials Treated	Options 10a and 10e assume some material will require treatment to meet LDRs. Option 10d includes an on-site incineration option.
Amount Destroyed or Treated	Under Options 10a and 10e, approximately 9,800 cy of excavated material would be treated (10% of the total dewatered volume). Under Option 10d, approximately 155,800 cy of sediment would be excavated, dewatered, and treated.
Degree of Expected Reductions of Toxicity, Mobility, or Volume Through Treatment	There would be a reduction in the toxicity, mobility, or volume of contamination from incineration under Options 10a, 10d, and 10e. There would no treatment under Option 10b, although the mobility of the contaminated sediment particles would be reduced by the disposal facility.
Degree to Which Treatment is Irreversible	For material that undergoes thermal treatment (Options 10a, 10d and 10e), the process is irreversible.

Table 6-9. (continued)

EVALUATION CRITERIA	ALTERNATIVE ALLENDALE AND LYMAN MILL SEDIMENT- 10: DAM REPLACEMENT, EXCAVATION, AND DISPOSAL AND/OR TREATMENT
REDUCTION OF TOXICITY, MOBILITY, OR VOLUME	
Type and Quantity of Residuals Remaining After Treatment	Excavation would produce no residuals. Air emissions of contaminants or additional by-products produced during on-site or off-site thermal treatment (Options 10a, 10d and 10e) would be at levels below regulatory standards. After incineration, the volume of inorganic sediment particles would be nearly the same as the pre-treatment volume, but concentrations of chemical contaminants would be below detection limits.
SHORT-TERM EFFECTIVENESS	
Protection of Community During Remedial Action	This alternative would permanently reduce the size of the waterbodies bordering adjacent property owners along the eastern shore of both ponds. Depending on the specific disposal option selected, open water habitat would be replaced with either floodplain or an engineered containment structure. All of the options would present limited impacts to the community from construction. Access to the work zone during excavation activities would be prohibited, and engineering controls, dust suppression techniques, and site perimeter air (dust) monitoring will mitigate risks to the community. An on-site incinerator under Option 10d would result in air emissions which would be monitored to ensure that they are below regulatory standards.
Protection of Workers During Remedial Action	Health and safety plans, emergency response plans, engineering controls (dust suppression), and personal protective equipment will be used during construction activities, mitigating risks to workers.
Environmental Impacts	Excavation would result in destruction of the existing benthic habitat in both ponds and the elimination of the fish communities. In addition, aquatic-dependent wildlife populations would be adversely affected until primary and secondary productivity in the ponds becomes re-established which could take two to five years. During pond lowering and dam replacement, there is the potential for downstream migration of contaminated sediment. Replacing the dams with a smaller weir structure would permanently reduce the size of the lacustrine (i.e., lake) habitat, increase the river riparian habitat and convert some aquatic habitat to floodplain habitat. It may be difficult to predict fully the impact of replacement of the dams.
Time Until Remedial Action Objectives are Achieved	RAOs are achieved immediately upon completion of remedy implementation, which is estimated to take approximately two years.

Table 6-9. (continued)

EVALUATION CRITERIA	ALTERNATIVE ALLENDALE AND LYMAN MILL SEDIMENT- 10: DAM REPLACEMENT, EXCAVATION, AND DISPOSAL AND/OR TREATMENT
IMPLEMENTABILITY	
Ability to Construct and Operate the Technology	Replacement of the dams with weir structures involves standard construction equipment and civil engineering considerations. However, public opposition would have to be addressed. For all options, the very soft surface sediments would require the use of low-ground pressure equipment and hydraulic excavators. Temporary haul roads would need to be constructed to provide access. For Options 10a, 10d and 10e, an upland land area is required for sediment dewatering. For Option 10a, additional land is needed for a disposal facility and Option 10d requires land for an incinerator. These properties may need to be acquired from private parties. Increased monitoring would be needed for Options 10a, 10b and 10d relative to Option 10e.
Reliability of the Technology	Dam construction, excavation, and CDF construction technologies are field proven. Excavation of soft sediments after lowering over-lying surface water has been successfully implemented at other contaminated sediment sites. CDFs are widely used and CDF construction and thermal treatment are proven technologies. However, a nearshore CDF under Option 10b could present additional reliability concerns given that it would be located partially in the river.
Ease of Undertaking Additional Remedial Actions, If Necessary	This alternative would not preclude additional future remedial actions.
Ability to Monitor the Effectiveness of Remedy	The effectiveness of excavation and water quality protection measures could be monitored with routine testing. Confirmation sampling would be performed at the completion of construction activities to determine if the cleanup goals were achieved. A thin-layer cover would be placed over areas where contamination is above the cleanup goals, even after excavation. Long-term monitoring would be required to assess recovery of biological communities, assess the impact of the remedial action on downstream areas, and determine if additional evaluations or clean-ups are warranted. Increased monitoring would be needed for the on-site containment options (Options 10a and 10b) and on-site treatment (Option 10d). However, these monitoring programs would not present any unusual issues.

Table 6-9. (continued)

EVALUATION CRITERIA	ALTERNATIVE ALLENDALE AND LYMAN MILL SEDIMENT- 10: DAM REPLACEMENT, EXCAVATION, AND DISPOSAL AND/OR TREATMENT
IMPLEMENTABILITY	
Ability to Obtain Approvals and Coordinate with Other Agencies	Potential public opposition to replacing the dams with smaller weir structures would need to be addressed. Local residents that live along the river may express concerns regarding replacing the dams, especially if it would result in a reduction of open water area (Option 10b). For those components with wetlands/404 impacts, these actions must be evaluated to determine the least damaging practicable alternative. For Option 10a, some low-value wetlands could be destroyed depending on the location of the CDF. For Option 10b, a portion of the CDF would require the permanent occupancy and modification of the floodplain, and a determination would need to be made concluding that there is no other practicable alternative before selecting this option. Coordination with DOI would be required if during remedial design or remedial action, it is determined that this alternative may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archaeological data. Coordination with adjacent property owners, and appropriate federal, state, and local agencies would be required to implement ICs.
Availability of Off-Site Treatment, Storage, and Disposal Services and Capacity	Off-site landfill and treatment options are readily available. Samples of the dewatered sediment could be tested to determine if the material could be taken to a hazardous waste landfill without treatment.
Availability of Necessary Equipment and Specialists	Excavation and CDF construction contractors and equipment are readily available. Thermal treatment equipment is commercially available.
Availability of Technology	All materials, equipment, personnel, and services required to construct and operate this alternative are readily available.

Table 6-9. (continued)

EVALUATION CRITERIA	ALTERNATIVE ALLENDALE AND LYMAN MILL SEDIMENT- 10: DAM REPLACEMENT, EXCAVATION, AND DISPOSAL AND/OR TREATMENT	
COST[1]		
Capital Cost	Option 10a, On-site Upland CDF	$59,000,000
	Option 10b, On-site Nearshore CDF	$47,000,000
	Option 10d, On-site Thermal Treatment	$116,000,000
	Option 10e, Off-site Disposal and/or Treatment	$91,000,000
Present Worth of Long-term Monitoring and Maintenance	Option 10a, On-site Upland CDF	$2,800,000
	Option 10b, On-site Nearshore CDF	$3,000,000
	Option 10d, On-site Thermal Treatment	$2,700,000
	Option 10e, Off-site Disposal and/or Treatment	$2,900,000
Total Present Worth Cost	Option 10a, On-site Upland CDF	$62,000,000
	Option 10b, On-site Nearshore CDF	$50,000,000
	Option 10d, On-site Thermal Treatment	$119,000,000
	Option 10e, Off-site Disposal and/or Treatment	$94,000,000

Notes:
[1]Detailed cost estimates provided in Appendix J of the 2010 FS (Battelle, 2010). Costs could increase by approximately $290,000 to $350,000 for compliance with the National Historic Preservation Act (NHPA) (USACE, 2011).

Table 6-10. Potential Applicable or Relevant and Appropriate Requirements (ARARs) and To Be Considered (TBC) Criteria for Allendale and Lyman Mill Sediment Alternative 10, Dam Replacement, Excavation and Disposal and/or Treatment

Requirement	Status	Synopsis	Action to be Taken to Attain Requirement
Chemical-Specific ARARs			
Federal Requirements			
Clean Water Act Federal Water Quality Criteria, Section 304(a) 40 CFR 131.11	R & A	Ambient Water Quality Criteria (AWQC) are provided by EPA for chemicals for both the protection of human health and the protection of aquatic life.	Contaminants that could result in exceedances of AWQC in the Woonasquatucket River will be minimized to the maximum extent practical.
Guidelines for Carcinogenic Risk Assessment, EPA/630/P-03/001F	TBC	These guidelines provide guidance on conducting risk assessments involving carcinogens.	Guidelines used to evaluate all risk assessments on carcinogenicity.
Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens, EPA/630/R-03/003F	TBC	These guidelines provide guidance on conducting risk assessments involving carcinogens.	Guidelines used to evaluate all risk assessments on carcinogenicity in children.
EPA Risk Reference Doses (RfDs)	TBC	RfDs are estimates of a daily exposure concentration that is likely to be without appreciable risk of deleterious effects during a lifetime exposure.	RfDs used to characterize human health risks due to non-carcinogens in site media.
Human Health Assessment Cancer Slope Factors (CSFs)	TBC	CSFs are estimates of the upper-bound probability of an individual developing cancer as a result of a lifetime exposure to a particular concentration of a potential carcinogen.	CSFs used to compute the individual incremental cancer risk resulting from exposure to carcinogens in site media.
EPA Carcinogenic Assessment Group Potency Factors	TBC	These factors are used to evaluate an acceptable risk from a carcinogen.	Used to evaluate carcinogenicity of dioxin.
EPA Health Advisories	TBC	EPA publishes contaminant-specific health advisories that indicate the non-carcinogenic risks associated with consuming contaminated drinking water.	Health Advisories used to establish criteria in the absence of other standards.
State Requirements			
RIDEM Water Quality Regulations	R & A	Provides water classification for surface waters in Rhode Island and sets ambient water quality criteria for toxic substances and governs water quality impacts associated with site activities.	Contributions of contaminants from sediment that could result in exceedances of water quality standards in the Woonasquatucket River will be minimized to the maximum extent practical.

Table 6-10. (continued)

Requirement	Status	Synopsis	Action to be Taken to Attain Requirement
Location-Specific ARARs			
Federal Requirements			
Fish and Wildlife Coordination Act 16 U.S.C. 661, Fish and Wildlife Protection (40 CFR Section 6.302(g))	Applicable	Requires that a federal agency take action to prevent, mitigate, or compensate for project-related losses of fish and wildlife resources. Encourages that any federal agency proposing to modify a body of water to consult with the U.S. Fish and Wildlife Service, National Marine Fisheries Service, and other related state agencies.	Construction activities under this alternative in the Woonasquatucket River are subject to these requirements. Actions will be taken in accordance with these requirements.
Clean Water Act, Section 404 Guidelines for discharge of dredged or fill material into waters of US (40 CFR Parts 230 and 231, 33 CFR Parts 320-323, and 33 CFR Part 332)	Applicable	Outlines requirements for the discharge of dredged or fill materials into surface waters, including wetlands. Such discharges are not allowed if there are practicable alternatives with less adverse impact. Sets standards for restoration and mitigation required as a result of unavoidable impacts to aquatic resources.	Dam replacement, excavation, thin cover, dewatering, and nearshore CDF (and potentially upland CDF) are subject to these requirements. Activities must be conducted in accordance with these requirements including but not limited to mitigation and/or restoration. Alternative must be evaluated to determine least damaging practicable alternative before it can be selected.
Rivers and Harbors Act Section 10 (33 U.S.C. Section 403)	Applicable	Sets forth criteria for placing dams/structures in navigable waters of the U.S.	Dam replacement, thin cover and nearshore CDF subject to these requirements. Activities must be conducted in accordance with these requirements.
Protection of Wetlands (Executive Order 11990)	TBC	Federal agencies are required to avoid adversely impacting wetlands unless there is no practicable alternative and the proposed action includes all practicable measures to minimize harm to wetlands that may result from such use.	This alternative can only be selected if there is no practicable alternative to destruction of wetlands. Activities must be conducted in accordance with these requirements.
Archaeological and Historical Preservation Act of 1974 Public Law 93-291	Potentially applicable	When a Federal agency finds, or is notified, that its activities in connection with a Federal construction project may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archeological data, such agency shall notify DOI. Such agency may request DOI to undertake the preservation of such data or it may undertake such activities.	If during remedial design or remedial action, it is determined that this alternative may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archaeological data, EPA will notify DOI and comply with these requirements.

Table 6-10. (continued)

Requirement	Status	Synopsis	Action to be Taken to Attain Requirement
***Location-Specific ARARs* (cont)**			
Federal Requirements (cont)			
National Historic Preservation Act 16 USC 470 36 CFR Part 800	Applicable	A federal agency must take into account the project's effect on properties included or eligible for inclusion in the National Register of Historic Places.	Work conducted will take into account the project's effect on properties included or eligible for inclusion in the National Register of Historic Places as required under this law.
Floodplain Management (Executive Order 11988)	TBC	Federal agencies are required to avoid impacts associated with the occupancy and modification of a floodplain and avoid support of floodplain development wherever there is a practicable alternative.	Nearshore CDF can only be selected if there is no practicable alternative to occupancy and modification of floodplain.
State Requirements			
RIDEM Rules and Regulations for Hazardous Waste Management – Section 8 Location Standards for Hazardous Waste Facilities	R & A: Nearshore CDF	Rhode Island is delegated to administer the federal RCRA statute through its state regulations. The standards of 40 CFR 264.18(b), with some exceptions, are incorporated by reference. Certain facilities located in 100-yr floodplain must be designed, constructed, operated and maintained to prevent washout of any hazardous waste by 100-yr flood, unless demonstrate no adverse effects on human health or environment will result from washout.	Nearshore CDF must be constructed in accordance with these requirements.
Rhode Island Historic Preservation Act - Rhode Island General Laws 42-45 et seq.	Applicable	Regulations that address the project's effect on properties included or eligible for inclusion in the State/National Registers of Historic Places.	Will take into account the project's effect on properties included or eligible for inclusion in the National/State Registers of Historic Places in accordance with these requirements.
RIDEM Rules and Regulations Governing the Enforcement of the Freshwater Wetlands Act	Applicable	Sets requirements to prevent the undesirable drainage, excavation, filling, alteration, encroachment, or any other form of disturbance or destruction to a wetland.	Activities required by RIDEM for remediation will be conducted in accordance with these requirements.

Table 6-10. (continued)

Requirement	Status	Synopsis	Action to be Taken to Attain Requirement
Action-Specific ARARs			
Federal Requirements			
Clean Water Act Federal Water Quality Criteria, Section 304(a) 40 CFR 131.11	Applicable	Ambient Water Quality Criteria (AWQC) are provided by EPA for chemicals for both the protection of human health and the protection of aquatic life.	Dam replacement, excavation, dewatering, thin cover, and nearshore CDF must be conducted so that there are no exceedances of AWQC.
RCRA (40 CFR 264, Subpart AA)	Applicable: On-site Incineration	Air emission standards for process vents apply to process vents that manage hazardous wastes with organic concentrations of at least 10 parts per million by weight (ppmw).	Should incinerator operations manage hazardous wastes with organic concentrations of at least 10 ppm by weight, vents operated as part of the system will comply with these requirements.
RCRA (40 CFR 264, Subpart BB)	Applicable: On-site Incineration	Air emission standards for equipment leaks apply to equipment that contains or contacts hazardous wastes with organic concentrations of at least 10 percent by weight.	Should equipment used in incineration come into contact with hazardous wastes containing organic concentrations of at least 10 percent by weight, these regulations will be followed.
RCRA (40 CFR 264, Subpart CC)	Applicable: Upland CDF On-site Incineration	Air emission standards for tanks, surface impoundments, and containers used to manage hazardous waste. Emission controls required if tanks, surface impoundments, and containers used to manage hazardous waste have greater than 500 ppmw of volatile organics.	If tanks, surface impoundments, and containers used to manage hazardous waste have greater than 500 ppmw of volatile organics then these requirements will be met.
CAA National Emissions Standards for Hazardous Air Pollutants: Site remediation (40 CFR 63, Subpart GGGGG)	Applicable: On-site Incineration	Applicable to major sources of hazardous air pollutants conducting site remediation.	On-site thermal treatment must meet these substantive requirements.
RCRA Land Disposal Restrictions (40 CFR 268)	Applicable: Upland CDF	These regulations identify treatment standards for hazardous wastes and specify requirements that generators, transporters, and owners or operators of treatment, storage, and disposal facilities that manage restricted wastes destined for land disposal must meet.	Material subject to these regulations placed in upland CDF must be treated to meet these requirements.

Table 6-10. (continued)

Requirement	Status	Synopsis	Action to be Taken to Attain Requirement
***Action-Specific ARARs* (cont)**			
Federal Requirements (cont)			
Invasive Species (Executive Order 13112)	TBC	Federal agencies are directed to prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause when requiring actions that impact the environment.	Actions will be taken to address invasive species consistent with the Executive Order.
State Requirements			
RIDEM Rules and Regulations for Hazardous Waste Management Identification and Listing of Hazardous Wastes	Applicable: Upland CDF On-site Incineration Off-site Disposal	Rhode Island is delegated to administer the federal RCRA statute through its regulations. The standards of 40 Part 261 of RCRA are incorporated by reference. Sets forth requirements for hazardous waste determination according to federal (40 CFR 262.11) and RI State (Rule 5.8) definitions.	Used to determine appropriate disposal for contaminated sediment.
RIDEM Rules and Regulations for Hazardous Waste Management, Section 8 – Operation Requirements for Treatment, Storage, and Disposal Facilities	Applicable: Upland CDF On-site incineration R & A: Nearshore CDF	Outlines operational requirements for all hazardous waste treatment, storage, and disposal facilities, including general waste analyses, security procedures, inspections, safety, groundwater monitoring etc. Sets design, construction, and operational requirements for hazardous waste containers and tanks, and closure requirements for hazardous waste facilities.	Substantive requirements related to land disposal, on-site incineration, closure, etc. must be met.
RIDEM Rules and Regulations for Hazardous Waste Management, Section 8 – Land Disposal Facilities	Applicable: Upland CDF R & A: Nearshore CDF	Outlines design, operational, and closure requirements for land disposal facilities.	Substantive requirements related to land disposal/closure, etc. must be met for CDFs constructed on site.
RIDEM Rules and Regulations for Hazardous Waste Management, Section 8 – Incinerators	Applicable: On-site Incineration	Outlines design, operational, and closure requirements for incinerator facilities.	On-site incineration must be conducted to meet these substantive requirements.
RIDEM Water Quality Regulations	Applicable	Provides water classification for surface waters in Rhode Island and sets ambient water quality criteria for toxic substances and governs water quality impacts associated with site activities.	Dam replacement, excavation, thin cover, dewatering (discharge of dredged return water) and nearshore CDF must be conducted so that there are no exceedances of water quality standards.
RI Air Pollution Control Regulation #1: Visible Emissions	Applicable	Establishes opacity limitations for contaminant emissions.	Remediation will be conducted to meet the standards for visible emissions.
RI Air Pollution Control Regulation #5: Fugitive Dust	Applicable	Requires that reasonable precaution be taken to prevent particulate matter from becoming airborne.	Actions will be taken to prevent particulate matter from becoming airborne in accordance with these regulations.

Table 6-10. (continued)

Requirement	Status	Synopsis	Action to be Taken to Attain Requirement
***Action-Specific ARARs* (cont)**			
State Requirements (cont)			
RI Air Pollution Control Regulation #7: Emissions Detrimental to Persons or Property	Applicable	Prohibits emissions of contaminants which may be injurious to human, plant, or animal life or cause damage to property or which unreasonably interfere with the enjoyment of life and property.	Any potential emissions subject to these requirements will meet these standards.
RI Air Pollution Control Regulation #15: Control of Organic Solvent Emissions	Applicable: On-site incineration	Limits the amount of organic solvents emitted to the atmosphere.	Any emissions of organic solvents will be controlled to ensure that the standards are met.
RI Air Pollution Control Regulation #22: Air Toxics Air Toxics Guideline, and Air Modeling Guidelines	Applicable: On-site incineration	Prohibits the emissions of specified contaminants that result in ground level concentrations greater than ambient level concentrations.	Remediation will be conducted so that these requirements are met.

Key:
R & A – Relevant and Appropriate; TBC – To Be Considered

Table 6-11. Detailed Analysis of Allendale and Lyman Mill Sediment Alternative 11, Dam Replacement, Partial Excavation, Isolation Capping and Disposal and/or Treatment

EVALUATION CRITERIA	ALTERNATIVE ALLENDALE AND LYMAN MILL SEDIMENT- 11: DAM REPLACEMENT, PARTIAL EXCAVATION, ISOLATION CAPPING, AND DISPOSAL AND/OR TREATMENT
OVERALL PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT	
Human Health Protection (and Environment)	The partial excavation of sediment from areas that would form the new smaller ponds and areas with high erosion potential would provide some protection by reducing concentrations in areas where erosion is more likely. Capping sediments would isolate the remaining contaminants from the environment and reduce potential contaminant migration. Option 11f would be less protective overall because contamination would be capped in place. In addition, the removal of resident fish from the ponds would effectively reduce the fish consumption risks to humans and piscivorous wildlife.
COMPLIANCE WITH ARARS	
Chemical-, Location-, and Action-Specific	ARARs specific to Alternative 11 are summarized in Table 6-12. Assuming that excavation involves more than a *deminimis*/incidental discharge to surface water, Section 404 requirements are triggered by excavation. In addition, dam replacement, the isolation cap, the nearshore CDF (Option 11b), consolidation (Option 11f) and possibly the upland CDF (Option 11) also trigger Section 404 requirements. As a result, these actions must be evaluated to determine the least damaging practicable alternative. State wetlands requirements will also need to be addressed. In addition, isolation capping (all options), the nearshore CDF (Option 11b) and consolidation (Option 11f) would require the permanent occupancy and modification of the floodplain. According to Executive Order 11988, a determination would need to be made that there was no other practicable alternative before selecting this option as the preferred remedy. Under Options 11a and 11e, some of the excavated material could require treatment if it exceeds the alternative treatment standards set forth in the LDRs. As long as the sediment is not dewatered first, or otherwise treated ex-situ, the sediment does not need to meet the treatment standards in the LDRs prior to disposal in a nearshore CDF (Option 11b) that is within the area of contamination. The same would be true for the on-site consolidation option (Option 11f).

Table 6-11. (continued)

EVALUATION CRITERIA	ALTERNATIVE ALLENDALE AND LYMAN MILL SEDIMENT- 11: DAM REPLACEMENT, PARTIAL EXCAVATION, ISOLATION CAPPING, AND DISPOSAL AND/OR TREATMENT
LONG-TERM EFFECTIVENESS AND PERMANENCE	
Magnitude of Residual Risk	Residual risk after the contaminated sediment is partially excavated and a cap is installed will be low, provided the cap is designed, constructed and maintained to provide long-term isolation of contaminants. Sediment would be removed from areas with the highest potential for erosion and the cap would provide chemical isolation. However, the inherent hazard would remain because most of the sediment would remain in the river and newly formed floodplain areas under the cap. Partial excavation would provide some risk reduction because sediment in the areas most susceptible to erosion would be removed and either contained in an engineered facility or treated by incineration.
Adequacy and Reliability of Controls	Reliability of a cap over contaminated sediment would be dependent upon monitoring, maintenance and ICs. In addition, the cap is in a relatively stable depositional area and would provide reliable chemical isolation with the top layer of the cap designed to withstand erosion, although there are some reliability concerns because contamination is still located in the floodplain. Long-term monitoring, maintenance and ICs would be required to protect integrity of the cap, maintain any type of on-site disposal facility, and prevent other activities that could result in a release of contamination that remains in-place. Inspections and long-term maintenance of the weir structure would also be required for Alternative 11.
REDUCTION OF TOXICITY, MOBILITY, OR VOLUME	
Treatment Process Used and Materials Treated	Options 11a and 11e assume some material will require treatment to meet LDRs. Option 11d includes on-site incineration.
Amount Destroyed or Treated	Under Options 11a and 11e, approximately 3,800 cy of excavated material would be treated (10% of the total dewatered volume). Under Option 11d, approximately 59,800 cy of sediment would be excavated, dewatered, and treated.
Degree of Expected Reductions of Toxicity, Mobility, or Volume Through Treatment	There would be a reduction of toxicity, mobility, or volume of contamination by incineration under Options 11a, 11d, and 11e. There would be no reduction of toxicity, mobility, or volume of contamination through treatment for Options 11b and 11f; however, the mobility of the contaminated sediment particles would be reduced by the isolation cap (all options) and disposal facility.

Table 6-11. (continued)

EVALUATION CRITERIA	ALTERNATIVE ALLENDALE AND LYMAN MILL SEDIMENT- 11: DAM REPLACEMENT, PARTIAL EXCAVATION, ISOLATION CAPPING, AND DISPOSAL AND/OR TREATMENT
REDUCTION OF TOXICITY, MOBILITY, OR VOLUME	
Degree to Which Treatment is Irreversible	For material that undergoes thermal treatment (Options 11a, 11d and 11e), the process is irreversible.
Type and Quantity of Residuals Remaining After Treatment	Excavation would produce no residuals. For sediments that remain on site under the cap, there would be no residuals. Air emissions of contaminants or additional by-products produced during on-site or off-site thermal treatment (Options 11a, 11d and 11e) would be at levels below regulatory standards. After incineration, the volume of inorganic sediment particles would be nearly the same as the pre-treatment volume, but concentrations of chemical contaminants would be below detection limits.
SHORT-TERM EFFECTIVENESS	
Protection of Community During Remedial Action	This alternative would permanently reduce the size of the waterbodies bordering adjacent property owners along the eastern shore of both ponds. Depending on the specific disposal option selected, open water habitat would be replaced with either floodplain or an engineered containment structure. All of the options would present limited impacts to the community from construction. Access to the work zone during excavation and capping activities would be prohibited, and engineering controls, dust suppression techniques, and site perimeter air (dust) monitoring will mitigate risks to the community. An on-site incinerator under Option 11d would result in air emissions which would be monitored to ensure that they are below regulatory standards.
Protection of Workers During Remedial Action	Health and safety plans, emergency response plans, engineering controls (dust suppression), and personal protective equipment will be used during construction activities, mitigating risks to workers.
Environmental Impacts	Excavation would result in destruction of the existing benthic habitat in both ponds and the elimination of the fish communities. In addition, aquatic-dependent wildlife populations would be adversely affected until primary and secondary productivity in the ponds has become re-established which could take two to five years. During dam replacement and pond lowering, there is the potential for downstream migration of contaminated sediment. Replacing the dams with a smaller weir structure would permanently reduce the size of the lacustrine (i.e., lake) habitat, increase the river riparian habitat and convert some aquatic habitat to floodplain habitat. It may be difficult to predict fully the impact of replacement of the dams.

Table 6-11. (continued)

EVALUATION CRITERIA	ALTERNATIVE ALLENDALE AND LYMAN MILL SEDIMENT- 11: DAM REPLACEMENT, PARTIAL EXCAVATION, ISOLATION CAPPING, AND DISPOSAL AND/OR TREATMENT
SHORT-TERM EFFECTIVENESS	
Time Until Remedial Action Objectives are Achieved	RAOs are achieved immediately upon completion of remedy implementation, which is estimated to take approximately one year for Option 11f (on-site consolidation) and upwards of two years for Options 11a, 11b, 11d, and 11e.
IMPLEMENTABILITY	
Ability to Construct and Operate the Technology	Replacement of the dams with weir structures involves standard construction equipment and civil engineering considerations. However, public opposition would have to be addressed. For all options, the very soft surface sediments would require the use of low-ground pressure equipment and hydraulic excavators. Temporary haul roads would need to be constructed to provide access. For Options 11a, 11d and 11e, an upland land area is required for the sediment dewatering. For Option 11a, additional land is needed for a disposal facility and Option 11d requires land for an incinerator. These properties may need to be acquired from private parties. Increased monitoring would be needed for Options 11a, 11b, 11d, and 11f relative to Option 11e.
Reliability of the Technology	Dam construction, excavation and capping technologies are field proven. Sand caps have been successfully placed over soft sediment similar to those found at this site. However, habitat restoration activities have historically had variable success rates. CDFs are widely used and CDF construction and thermal treatment are proven technologies. However, a nearshore CDF (Option 11b) and on-site consolidation (Option 11f) could present additional reliability concerns given that it would be located partially in the river/floodplain.
Ease of Undertaking Additional Remedial Actions, If Necessary	This alternative would not preclude additional future remedial actions.

Table 6-11. (continued)

EVALUATION CRITERIA	ALTERNATIVE ALLENDALE AND LYMAN MILL SEDIMENT- 11: DAM REPLACEMENT, PARTIAL EXCAVATION, ISOLATION CAPPING, AND DISPOSAL AND/OR TREATMENT
IMPLEMENTABILITY	
Ability to Monitor the Effectiveness of Remedy	The effectiveness of excavation and water quality protection measures could be monitored with routine testing. A physical survey would be conducted at the completion of construction activities to confirm that the isolation cap was placed over the entire pond bottom and meets the design thickness. Long-term monitoring would be required to assess cap performance and recovery of biological communities, monitor the impact of the remedial action on downstream areas, and determine if additional evaluations or clean-ups are warranted. It can be more difficult to monitor in a subaqueous environment. The implementation of a long-term monitoring program and enforcement of ICs are critical to the success of this alternative but should not present any unusual issues. Increased monitoring programs would be needed for the on-site containment (Options 11a, 11b and 11f) and treatment (Option 11d) options.
Ability to Obtain Approvals and Coordinate with Other Agencies	Potential public opposition to replacing the dams with smaller weir structures would need to be addressed. Local residents that live along the river may express concerns regarding replacing the dams, especially because this would result in a reduction of open water area. For those components with wetlands/404 impacts, these actions must be evaluated to determine the least damaging practicable alternative. In addition, capping (all options) and the nearshore CDF and consolidation options (Options 11b and 11f) would constitute a permanent occupancy of the floodplain, and thus a determination must first be made concluding that there is no other practicable alternative. For Option 11a, some low-value wetlands could be destroyed depending on the location of the CDF. Coordination with DOI would be required if during remedial design or remedial action, it is determined that this alternative may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archaeological data. Coordination with adjacent property owners, and appropriate federal, state, and local agencies would be required to implement ICs.

Table 6-11. (continued)

EVALUATION CRITERIA	ALTERNATIVE ALLENDALE AND LYMAN MILL SEDIMENT- 11: DAM REPLACEMENT, PARTIAL EXCAVATION, ISOLATION CAPPING, AND DISPOSAL AND/OR TREATMENT	
IMPLEMENTABILITY		
Availability of Off-Site Treatment, Storage, and Disposal Services and Capacity	Off-site landfill and treatment options are readily available. It is assumed that the dewatered sediment could be tested to determine if the material could be taken to a hazardous waste landfill without treatment.	
Availability of Necessary Equipment and Specialists	Construction equipment and personnel are readily available. Thermal treatment equipment is commercially available.	
Availability of Technology	All materials, equipment, personnel, and services required to construct and operate this alternative are readily available.	
COST[1]		
Capital Cost	Option 11a, On-site Upland CDF	$38,000,000
	Option 11b, On-site Nearshore CDF	$32,000,000
	Option 11d, On-site Thermal Treatment	$60,000,000
	Option 11e, Off-site Disposal and/or Treatment	$49,000,000
	Option 11f, On-site Consolidation	$30,000,000
Present Worth of Long-term Monitoring and Maintenance	Option 11a, On-site Upland CDF	$4,500,000
	Option 11b, On-site Nearshore CDF	$4,600,000
	Option 11d, On-site Thermal Treatment	$4,100,000
	Option 11e, Off-site Disposal and/or Treatment	$4,700,000
	Option 11f, On-site Consolidation	$4,500,000
Total Present Worth Cost	Option 11a, On-site Upland CDF	$42,000,000
	Option 11b, On-site Nearshore CDF	$37,000,000
	Option 11d, On-site Thermal Treatment	$64,000,000
	Option 11e, Off-site Disposal and/or Treatment	$54,000,000
	Option 11f, On-site Consolidation	$35,000,000

Notes:
[1]Detailed cost estimates provided in Appendix J of the 2010 FS (Battelle, 2010). Costs could increase by approximately $290,000 to $350,000 for compliance with the National Historic Preservation Act (NHPA) (USACE, 2011).

Table 6-12. Potential Applicable or Relevant and Appropriate Requirements (ARARs) and To Be Considered (TBC) Criteria for Allendale and Lyman Mill Sediment Alternative 11, Dam Replacement, Partial Excavation, Isolation Capping and Disposal and/or Treatment

Requirement	Status	Synopsis	Action to be Taken to Attain Requirement
Chemical-Specific ARARs			
Federal Requirements			
Clean Water Act Federal Water Quality Criteria, Section 304(a) 40 CFR 131.11	R & A	Ambient Water Quality Criteria (AWQC) are provided by EPA for chemicals for both the protection of human health and the protection of aquatic life.	Contaminants that could results in exceedances of AWQC in the Woonasquatucket River will be minimized to the maximum extent practical.
Guidelines for Carcinogenic Risk Assessment, EPA/630/P-03/001F	TBC	These guidelines provide guidance on conducting risk assessments involving carcinogens.	Guidelines used to evaluate all risk assessments on carcinogenicity.
Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens, EPA/630/R-03/003F	TBC	These guidelines provide guidance on conducting risk assessments involving carcinogens.	Guidelines used to evaluate all risk assessments on carcinogenicity in children.
EPA Risk Reference Doses (RfDs)	TBC	RfDs are estimates of a daily exposure concentration that is likely to be without appreciable risk of deleterious effects during a lifetime exposure.	RfDs used to characterize human health risks due to non-carcinogens in site media.
Human Health Assessment Cancer Slope Factors (CSFs)	TBC	CSFs are estimates of the upper-bound probability of an individual developing cancer as a result of a lifetime exposure to a particular concentration of a potential carcinogen.	CSFs used to compute the individual incremental cancer risk resulting from exposure to carcinogens in site media.
EPA Carcinogenic Assessment Group Potency Factors	TBC	These factors are used to evaluate an acceptable risk from a carcinogen.	Used to evaluate carcinogenicity of dioxin.
EPA Health Advisories	TBC	EPA publishes contaminant-specific health advisories that indicate the non-carcinogenic risks associated with consuming contaminated drinking water.	Used to establish criteria in the absence of other standards.
State Requirements			
RIDEM Water Quality Regulations	R & A	Provides water classification for surface waters in Rhode Island and sets ambient water quality criteria for toxic substances and governs water quality impacts associated with site activities.	Contributions of contaminants from sediment that could result in exceedances of water quality standards in the Woonasquatucket River will be minimized to the maximum extent practical.

Table 6-12. (continued)

Requirement	Status	Synopsis	Action to be Taken to Attain Requirement
Location-Specific ARARs			
Federal Requirements			
Fish and Wildlife Coordination Act 16 U.S.C. 661, Fish and Wildlife Protection (40 CFR Section 6.302(g))	Applicable	Requires that a federal agency take action to prevent, mitigate, or compensate for project-related losses of fish and wildlife resources. Encourages that any federal agency proposing to modify a body of water to consult with the U.S. Fish and Wildlife Service, National Marine Fisheries Service, and other related state agencies.	Construction activities under this alternative in Woonasquatucket River are subject to these requirements. Actions will be taken in accordance with these requirements.
Clean Water Act, Section 404 Guidelines for discharge of dredged or fill material into waters of US (40 CFR Parts 230 and 231, 33 CFR Parts 320-323, and 33 CFR Part 332)	Applicable	Outlines requirements for the discharge of dredged or fill materials into surface waters, including wetlands. Such discharges are not allowed if there are practicable alternatives with less adverse impact. Sets standards for restoration and mitigation required as a result of unavoidable impacts to aquatic resources.	Dam replacement, excavation, isolation capping, dewatering, nearshore CDF (and potentially upland CDF), and consolidation subject to these requirements. Activities must be conducted in accordance with these requirements including but not limited to mitigation and/or restoration. Alternative must be evaluated to determine least damaging practicable alternative before it can be selected.
Rivers and Harbors Act Section 10 (33 U.S.C. Section 403)	Applicable	Sets forth criteria for placing dams/structures in navigable waters of the U.S.	Dam replacement, isolation capping, and nearshore CDF subject to these requirements. Activities must be conducted in accordance with these requirements.
Protection of Wetlands (Executive Order 11990)	TBC	Federal agencies are required to avoid adversely impacting wetlands unless there is no practicable alternative and the proposed action includes all practicable measures to minimize harm to wetlands that may result from such use.	This alternative can only be selected if there is no practicable alternative to destruction of wetlands. Activities must be conducted in accordance with these requirements.
Archaeological and Historical Preservation Act of 1974 Public Law 93-291	Potentially applicable	When a Federal agency finds, or is notified, that its activities in connection with a Federal construction project may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archeological data, such agency shall notify DOI. Such agency may request DOI to undertake the preservation of such data or it may undertake such activities	If during remedial design or remedial action, it is determined that this alternative may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archaeological data, EPA will notify DOI and comply with these requirements.

Table 6-12. (continued)

Requirement	Status	Synopsis	Action to be Taken to Attain Requirement
Location-Specific ARARs (cont)			
Federal Requirements (cont)			
National Historic Preservation Act 16 USC 470 36 CFR Part 800	Applicable	A federal agency must take into account the project's effect on properties included or eligible for inclusion in the National Register of Historic Places.	Work conducted will take into account the project's effect on properties included or eligible for inclusion in the National Register of Historic Places as required under this law.
Floodplain Management (Executive Order 11988)	TBC	Federal agencies are required to avoid impacts associated with the occupancy and modification of a floodplain and avoid support of floodplain development wherever there is a practicable alternative.	This alternative and nearshore CDF can only be selected if there is no practicable alternative to occupancy and modification of floodplain.
State Requirements			
RIDEM Rules and Regulations Governing the Enforcement of the Freshwater Wetlands Act	Applicable	Sets requirements to prevent the undesirable drainage, excavation, filling, alteration, encroachment, or any other form of disturbance or destruction to a wetland.	Activities required by RIDEM for remediation will be conducted in accordance with these requirements.
Rhode Island Historic Preservation Act - Rhode Island General Laws 42-45 et seq.	Applicable	Regulations that address the project's effect on properties included or eligible for inclusion in the State/National Registers of Historic Places.	Will take into account the project's effect on properties included or eligible for inclusion in the National/State Registers of Historic Places in accordance with these requirements.
RIDEM Rules and Regulations for Hazardous Waste Management – Section 8 Location Standards for Hazardous Waste Facilities	R & A	Rhode Island is delegated to administer the federal RCRA statute through its state regulations. The standards of 40 CFR 264.18(b), with some exceptions, are incorporated by reference. Certain facilities located in 100-yr floodplain must be designed, constructed, operated and maintained to prevent washout of any hazardous waste by 100-yr flood, unless demonstrate no adverse effects on human health or environment will result from washout.	Isolation cap and nearshore CDF must be constructed in accordance with these requirements.

Table 6-12. (continued)

Requirement	Status	Synopsis	Action to be Taken to Attain Requirement
Action-Specific ARARs			
Federal Requirements			
Clean Water Act Federal Water Quality Criteria, Section 304(a) 40 CFR 131.11	Applicable	Ambient Water Quality Criteria (AWQC) are provided by EPA for chemicals for both the protection of human health and the protection of aquatic life.	Dam replacement, excavation, placement of cap, nearshore CDF, and consolidation must be conducted so that there are no exceedances of AWQC.
RCRA (40 CFR 264, Subpart AA)	Applicable: On-site Incineration	Air emission standards for process vents apply to process vents that manage hazardous wastes with organic concentrations of at least 10 parts per million by weight (ppmw).	Should incinerator operations manage hazardous wastes with organic concentrations of at least 10 ppm by weight, vents operated as part of the system will comply with these requirements.
RCRA (40 CFR 264, Subpart BB)	Applicable: On-site Incineration	Air emission standards for equipment leaks apply to equipment that contains or contacts hazardous wastes with organic concentrations of at least 10 percent by weight.	Should equipment used in incineration come into contact with hazardous wastes containing organic concentrations of at least 10 percent by weight, these regulations will be followed.
RCRA (40 CFR 264, Subpart CC)	Applicable: Upland CDF On-site Incineration	Air emission standards for tanks, surface impoundments, and containers used to manage hazardous waste. Emission controls required if tanks, surface impoundments, and containers used to manage hazardous waste have greater than 500 ppmw of volatile organics.	If tanks, surface impoundments, and containers used to manage hazardous waste have greater than 500 ppmw of volatile organics then these requirements will be met.
CAA National Emissions Standards for Hazardous Air Pollutants: Site remediation (40 CFR 63, Subpart GGGGG)	Applicable: On-site Incineration	Applicable to major sources of hazardous air pollutants conducting site remediation.	On-site thermal treatment must meet these substantive requirements.
RCRA Land Disposal Restrictions (40 CFR 268)	Applicable: Upland CDF	These regulations identify treatment standards for hazardous wastes and specify requirements that generators, transporters, and owners or operators of treatment, storage, and disposal facilities that manage restricted wastes destined for land disposal must meet.	Material subject to these regulations placed in upland CDF must be treated to meet these requirements.

Table 6-12. (continued)

Requirement	Status	Synopsis	Action to be Taken to Attain Requirement
***Action-Specific ARARs* (cont)**			
Federal Requirements (cont)			
Invasive Species (Executive Order 13112)	TBC	Federal agencies are directed to prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause when requiring actions that impact the environment.	Actions will be taken to address invasive species consistent with the Executive Order.
State Requirements			
RIDEM Rules and Regulations for Hazardous Waste Management Identification and Listing of Hazardous Wastes	Applicable: Upland CDF On-site incineration Off-site disposal	Rhode Island is delegated to administer the federal RCRA statute through its regulations. The standards of 40 Part 261 of RCRA are incorporated by reference. Sets forth requirements for hazardous waste determination according to federal (40 CFR 262.11) and RI State (Rule 5.8) definitions.	Used to determine appropriate treatment and or disposal.
RIDEM Rules and Regulations for Hazardous Waste Management, Section 8 – Operation Requirements for Treatment, Storage, and Disposal Facilities	Applicable: Upland CDF On-site incineration R & A: Nearshore CDF Consolidation Isolation Capping	Outlines operational requirements for all hazardous waste treatment, storage, and disposal facilities, including general waste analyses, security procedures, inspections, safety, groundwater monitoring, etc. Sets design, construction, and operational requirements for hazardous waste containers and tanks, and closure requirements for hazardous waste facilities.	Substantive requirements related to land disposal, incineration, closure, etc. must be met.
RIDEM Rules and Regulations for Hazardous Waste Management, Section 8 – Land Disposal Facilities	Applicable: Upland CDF R & A: Nearshore CDF Consolidation Isolation Capping	Outlines design, operational, and closure requirements for land disposal facilities.	Substantive requirements related to land disposal, incineration, closure, etc. must be met.
RIDEM Rules and Regulations for Hazardous Waste Management, Section 8 – Incinerators	Applicable: On-site incineration	Outlines design, operational, and closure requirements for incinerator facilities.	On-site thermal treatment must meet these substantive requirements.
RIDEM Water Quality Regulations	Applicable	Provides water classification for surface waters in Rhode Island and sets ambient water quality criteria for toxic substances and governs water quality impacts associated with site activities.	Dam replacement, excavation, placement of cap, dewatering (discharge of dredged return water), nearshore CDF, and consolidation must be conducted so that there are no exceedances of water quality standards.
RI Air Pollution Control Regulation #1: Visible Emissions	Applicable	Establishes opacity limitations for contaminant emissions.	Remediation will be conducted to meet the standards for visible emissions.
RI Air Pollution Control Regulation #5: Fugitive Dust	Applicable	Requires that reasonable precaution be taken to prevent particulate matter from becoming airborne.	Actions will be taken to prevent particulate matter from becoming airborne in accordance with these regulations.

Table 6-12. (continued)

Requirement	Status	Synopsis	Action to be Taken to Attain Requirement
***Action-Specific ARARs* (cont)**			
State Requirements (cont)			
RI Air Pollution Control Regulation #7: Emissions Detrimental to Persons or Property	Applicable	Prohibits emissions of contaminants which may be injurious to human, plant, or animal life or cause damage to property or which unreasonably interfere with the enjoyment of life and property.	Any potential emissions subject to these requirements will meet these standards.
RI Air Pollution Control Regulation #15: Control of Organic Solvent Emissions	Applicable: On-site incineration	Limits the amount of organic solvents emitted to the atmosphere.	Any emissions of organic solvents will be controlled to ensure that the standards are met.
RI Air Pollution Control Regulation #22: Air Toxics, Air Toxics Guideline, and Air Modeling Guidelines	Applicable: On-site incineration	Prohibits the emissions of specified contaminants that result in ground level concentrations greater than ambient level concentrations.	Remediation will be conducted so that these requirements are met.

Key:
R & A – Relevant and Appropriate; TBC – To Be Considered

Table 6-16. Detailed Analysis of Allendale Reach Floodplain Soil Alternative 1, No Action

EVALUATION CRITERIA	ALTERNATIVE ALLENDALE REACH FLOODPLAIN SOIL-1: NO ACTION
OVERALL PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT	
Human Health Protection and the Environment	Contaminated floodplain soil exceeds State residential criteria and EPA's recommended residential level for dioxin in soil. Under this alternative, the contaminated floodplain soil would remain in place and could be transported downstream, especially during flooding or high flow events. Contaminated soil would remain on site unaddressed and continue to pose an exposure hazard to ecological receptors. The existing controls (perimeter fence at Allendale Pond) would not effectively limit exposure to human and ecological receptors.
COMPLIANCE WITH ARARS	
Chemical-, Location-, and Action-Specific	See Table 6-17. This alternative will not comply with ARARs for residential direct exposure or EPA's recommended residential level for dioxin in soil (EPA, 1998b).
LONG-TERM EFFECTIVENESS AND PERMANENCE	
Magnitude of Residual Risk	The residual risk is high because no actions are taken to address the contaminated floodplain soil or reduce the risk of erosion and migration downstream.
Adequacy and Reliability of Controls	There would be no controls in place to adequately and/or reliably prevent exposure in the long term.
REDUCTION OF TOXICITY, MOBILITY, OR VOLUME	
Treatment Process Used and Materials Treated	None proposed for this alternative.
Amount Destroyed or Treated	None anticipated.
Degree of Expected Reductions of Toxicity, Mobility, or Volume Through Treatment	No reductions in toxicity, mobility, or volume of contamination are anticipated for this alternative.
Degree to Which Treatment is Irreversible	Not applicable.
Type and Quantity of Residuals Remaining After Treatment	There would be no residuals because treatment is not planned for this alternative.
SHORT-TERM EFFECTIVENESS	
Protection of Community During Remedial Action	Not applicable, as no remedial actions are proposed for this alternative.
Protection of Workers During Remedial Action	Not applicable, as no remedial actions are proposed for this alternative.
Environmental Impacts	Not applicable, as no remedial actions are proposed for this alternative

Table 6-16. (continued)

EVALUATION CRITERIA	ALTERNATIVE ALLENDALE REACH FLOODPLAIN SOIL-1: NO ACTION
SHORT-TERM EFFECTIVENESS	
Time Until Remedial Action Objectives are Achieved	While some reduction in risk is possible due to natural deposition, it is unknown if or when cleanup objectives would be achieved. (Based on estimated rates, it could take 50 – 100 years for a one foot thick layer of new sediment to be deposited on top of existing soil.)
IMPLEMENTABILITY	
Ability to Construct and Operate the Technology	Not applicable, as no remedial technology is implemented under this alternative.
Reliability of the Technology	Not applicable, as no remedial technology is implemented under this alternative.
Ease of Undertaking Additional Remedial Actions, If Necessary	This alternative does not preclude future remedial activities.
Ability to Monitor the Effectiveness of Remedy	Five-year reviews and periodic monitoring, triggered by severe weather events, are incorporated into this alternative. Periodic monitoring would include routine testing and could be easily implemented.
Ability to Obtain Approvals and Coordinate with Other Agencies	Not applicable, as no activities requiring approval are planned for this alternative.
Availability of Off-Site Treatment, Storage, and Disposal Services and Capacity	Not applicable for this alternative.
Availability of Necessary Equipment and Specialists	Not applicable for this alternative.
Availability of Technology	Not applicable for this alternative.
COST[1]	
Capital Cost	$0
Present Worth of Long-term Monitoring and Maintenance	$0 (costs for periodic monitoring and five-year reviews are covered under the sediment No Action alternative, Table 6-1)
Total Present Worth Cost	$0

Notes:
[1]Detailed costs estimates provided in Appendix J of the 2010 FS (Battelle, 2010).

Table 6-17. Potential Applicable or Relevant and Appropriate Requirements (ARARs) and To Be Considered (TBC) Criteria for Allendale Reach Floodplain Soil Alternative 1, No Action[1]

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Chemical-Specific ARARs			
Federal Requirements			
OSWER Directive 92-4-26, Approaches for Addressing Dioxins in Soil at CERCLA and RCRA Sites	TBC	Guidance cleanup levels for CERCLA removal sites and PRGs for remedial sites for dioxin (as TEQ) in surface soil involving residential exposure scenarios. Also establishes a cleanup range for dioxin (as TEQ) for commercial and industrial exposure scenarios.	Some residential use soils at the site contain dioxin at levels above the PRG and will not be addressed by this alternative.
Draft Recommended Interim Preliminary Remediation Goals for Dioxin in Soil at CERCLA and RCRA Sites	TBC	Draft recommended interim PRGs of 72 parts per trillion (ppt or ng/kg) dioxin (as TEQ) for residential exposure scenarios and 950 ppt dioxin (as TEQ) for commercial and industrial exposure scenarios are recommended as a starting point for setting cleanup levels for CERCLA removal sites.	Soil at the site contains dioxin at levels above the draft recommended interim PRGs.
Clean Water Act Federal Water Quality Criteria, Section 304(a) 40 CFR 131.11	R & A	Ambient Water Quality Criteria (AWQC) are provided by EPA for chemicals for both the protection of human health and the protection of aquatic life.	Contributions of contaminants from floodplain soil that could result in exceedances of AWQC in the Woonasquatucket River will not be minimized to the maximum extent practical.
Guidelines for Carcinogenic Risk Assessment, EPA/630/P-03/001F	TBC	These guidelines provide guidance on conducting risk assessments involving carcinogens.	Alternative would not prevent exposure to contaminants considered under this guidance.
Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens, EPA/630/R-03/003F	TBC	These guidelines provide guidance on conducting risk assessments involving carcinogens.	Alternative would not prevent exposure to contaminants considered under this guidance.
EPA Risk Reference Doses (RfDs)	TBC	RfDs are estimates of a daily exposure concentration that is likely to be without appreciable risk of deleterious effects during a lifetime exposure.	Alternative would not prevent exposure to contaminants considered under this guidance.
Human Health Assessment Cancer Slope Factors (CSFs)	TBC	CSFs are estimates of the upper-bound probability of an individual developing cancer as a result of a lifetime exposure to a particular concentration of a potential carcinogen.	Alternative would not prevent exposure to contaminants considered under this guidance.
EPA Carcinogenic Assessment Group Potency Factors	TBC	These factors are used to evaluate an acceptable risk from a carcinogen.	Alternative would not prevent exposure to contaminants considered under this guidance.

Table 6-17. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Chemical-Specific ARARs (cont)			
Federal Requirements (cont)			
EPA Health Advisories	TBC	EPA publishes contaminant-specific health advisories that indicate the non-carcinogenic risks associated with consuming contaminated drinking water.	Alternative would not prevent exposure to contaminants potentially considered under these advisories.
State Requirements			
RIDEM Water Quality Regulations	R & A	Provides water classification for surface waters in Rhode Island and sets ambient water quality criteria for toxic substances and governs water quality impacts associated with site activities.	Contributions of contaminants from sediment that could result in exceedances of water quality standards in the Woonasquatucket River will not be minimized to the maximum extent practical.
RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (i.e., Remediation Regulations)	Applicable	Unless otherwise specified, soil contaminated as a result of a release of hazardous materials shall be remediated in a manner which meets the direct exposure and leachability criteria for each hazardous substance established in Rule 8.02.B (Method 1 Soil Objectives).	Some residential use soils at the site contain contaminants subject to the Rule 8.02B soil objectives and would not be addressed by this alternative.

Notes:
[1] With no action, there are no location- or action-specific ARARs.

Key:
R & A – Relevant and Appropriate; TBC – To Be Considered

Table 6-18. Detailed Analysis of Allendale Reach Floodplain Soil Alternative 5, Excavation and Disposal and/or Treatment

EVALUATION CRITERIA	ALTERNATIVE ALLENDALE REACH FLOODPLAIN SOIL-5: EXCAVATION AND DISPOSAL AND/OR TREATMENT
OVERALL PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT	
Human Health Protection and the Environment	The removal of the top one foot (or deeper within the vadose zone to meet ARARs) of floodplain soil and backfill with clean material would achieve high overall protection because all of the soil with contaminant concentrations above cleanup goals would be removed.
COMPLIANCE WITH ARARS	
Chemical-, Location-, and Action-Specific	ARARs specific to Alternative 5 are summarized in Table 6-19. Placement of backfill in wetland areas, the nearshore CDF (Option 5b), and possibly the upland CDF (Option 5a) trigger wetlands/Section 404 requirements. As a result, these actions must be evaluated to determine the least damaging practicable alternative. State wetlands requirements will also need to be addressed. Under Option 5b, a portion of the nearshore CDF would require the permanent occupancy and modification of the floodplain. According to Executive Order 11988, a determination would need to be made that there was no other practicable alternative before selecting this option as the preferred remedy. Under Options 5a and 5e, some of the floodplain soil could require treatment if it exceeds the alternative treatment standards for contaminated soil set forth in the LDRs (40 CFR § 268.49); however this is unlikely based on the existing data. Floodplain soil excavated and contained in a nearshore CDF (Option 5b) would not need to meet the treatment standards set forth in the LDRs because it would be consolidated in an area of contamination and would not require any dewatering or other ex-situ activities. Alternative 5 will comply with ARARs for residential direct exposure and EPA's recommended residential level for dioxin (EPA, 1998b), as well as Subtitle C closure requirements under RCRA.
LONG-TERM EFFECTIVENESS AND PERMANENCE	
Magnitude of Residual Risk	Excavation would be effective in the long term because the contaminated soil would be removed and either contained on site, destroyed, or shipped off site for disposal and/or treatment thereby greatly reducing the residual risk.
Adequacy and Reliability of Controls	Because this alternative relies on excavation to remove contaminated soil, there is little reliance on controls. However, long-term monitoring, maintenance and ICs would be required to maintain any type of on-site disposal facility (Options 5a and 5b).

Table 6-18. (continued)

EVALUATION CRITERIA	ALTERNATIVE ALLENDALE REACH FLOODPLAIN SOIL-5: EXCAVATION AND DISPOSAL AND/OR TREATMENT
REDUCTION OF TOXICITY, MOBILITY, OR VOLUME	
Treatment Process Used and Materials Treated	Option 5d includes on-site incineration.
Amount Destroyed or Treated	Under Option 5d, approximately 2,400 cy of soil would be excavated and treated.
Degree of Expected Reductions of Toxicity, Mobility, or Volume Through Treatment	There would be a reduction of toxicity, mobility, or volume of contamination through incineration under Option 5d. There would be no reduction of toxicity, mobility, or volume of contamination through treatment for the containment options (Options 5a and 5e [assuming concentrations are below the alternative treatment standards for soil] and 5b), although the mobility of the contaminated soil particles would be reduced by the disposal facility.
Degree to Which Treatment is Irreversible	For material that undergoes thermal treatment (Option 5d), the process is irreversible.
Type and Quantity of Residuals Remaining After Treatment	Excavation would produce no residuals. Air emissions of contaminants or additional by-products produced during on-site thermal treatment (Option 5d) would be at levels below regulatory standards. After incineration, the volume of inorganic soil particles would be nearly the same as the pre-treatment volume, but concentrations of organic chemical contaminants would be below detection limits.
SHORT-TERM EFFECTIVENESS	
Protection of Community During Remedial Action	All of the options would present limited impacts to the community from construction. Access to the work zone during construction activities would be prohibited, and engineering controls, dust suppression techniques, and site perimeter air (dust) monitoring will mitigate risks to the community. An on-site incinerator under Option 5d would result in air emissions which would be monitored to ensure that they were below regulatory standards.
Protection of Workers During Remedial Action	Health and safety plans, emergency response plans, engineering controls (dust suppression), and personal protective equipment will be used during site activities, mitigating risks to workers.

Table 6-18. (continued)

EVALUATION CRITERIA	ALTERNATIVE ALLENDALE REACH FLOODPLAIN SOIL-5: EXCAVATION AND DISPOSAL AND/OR TREATMENT
SHORT-TERM EFFECTIVENESS	
Environmental Impacts	Excavation would result in the temporary destruction of the existing habitat, the elimination of floodplain soil infauna and riparian vegetation, and collateral impacts to wildlife that rely on this habitat for shelter and food. At least several years would be required for the remediated areas to recover sufficiently to provide the environmental services that this habitat typically provides. Habitat enhancement during construction will help facilitate ecological recovery.
Time Until Remedial Action Objectives are Achieved	RAOs are achieved immediately upon completion of remedy implementation, which is estimated to take approximately one month.
IMPLEMENTABILITY	
Ability to Construct and Operate the Technology	For all options, the soft soils would require the use of low-ground pressure equipment and hydraulic excavators. Temporary work areas would need to be set up and the areas cleared of vegetation. Temporary haul roads would need to be constructed to provide access. Upland land is required for the temporary work areas and soil processing areas (all options except Option 5b). Additional land is needed for a disposal facility (Option 5a) and Option 5d requires land for an incinerator. These properties may need to be acquired from private parties. Increased monitoring would be needed for Options 5a, 5b, and 5d relative to Option 5e.
Reliability of the Technology	Excavation, CDF construction and thermal treatment technologies have been successfully implemented at other contaminated soil sites, although the nearshore CDF (Option 5b) could present additional reliability concerns because it is located in the floodplain/river. Habitat restoration activities have historically had variable success rates.
Ease of Undertaking Additional Remedial Actions, If Necessary	This alternative would not preclude additional future remedial actions.
Ability to Monitor the Effectiveness of Remedy	The effectiveness of excavation and water quality protection measures could be monitored with routine testing. Confirmation sampling would be performed at the completion of construction activities to determine if the cleanup goals were achieved. Long-term monitoring would be required to assess the rate of recovery and degree of functioning of riparian vegetation (including the tree, shrub, and herbaceous cover strata), assess the impact of the remedial action on downstream areas, and determine if additional evaluations or clean-ups are warranted. Additional monitoring would be needed for the nearshore CDF (Option 5b) and on-site treatment (Option 5d) options.

Table 6-18. (continued)

EVALUATION CRITERIA	ALTERNATIVE ALLENDALE REACH FLOODPLAIN SOIL-5: EXCAVATION AND DISPOSAL AND/OR TREATMENT
IMPLEMENTABILITY	
Ability to Monitor the Effectiveness of Remedy (cont)	However, these monitoring programs would not present any unusual issues.
Ability to Obtain Approvals and Coordinate with Other Agencies	Because this alternative constitutes the placement of fill in waters of the US, a determination must be made that this is the least damaging practicable alternative to the aquatic environment. In addition, this alternative would result in the permanent occupancy and modification of the floodplain, and a determination would need to be made that there is no other practicable alternative before selecting this option as the preferred remedy. For Option 5a, some low-value wetlands could be destroyed depending on the location of the CDF. Coordination with DOI would be required if during remedial design or remedial action, it is determined that this alternative may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archaeological data. Coordination with adjacent property owners, and appropriate federal, state, and local agencies would be required to implement ICs. Access from property owners may be required.
Availability of Off-Site Treatment, Storage, and Disposal Services and Capacity	Off-site landfill and treatment options are readily available. Samples of the excavated soil could be tested to determine if the material could be taken to a hazardous waste landfill without treatment.
Availability of Necessary Equipment and Specialists	Excavation and CDF construction contractors and equipment are readily available. Thermal treatment equipment is commercially available.
Availability of Technology	Technology is common enough that required equipment and materials would be readily available.

Table 6-18. (continued)

EVALUATION CRITERIA	ALTERNATIVE ALLENDALE REACH FLOODPLAIN SOIL-5: EXCAVATION AND DISPOSAL AND/OR TREATMENT	
COST[1]		
Capital Cost	Option 5a, On-site Upland CDF	$1,300,000
	Option 5b, On-site Nearshore CDF	$1,300,000
	Option 5d, On-site Thermal Treatment	$4,200,000
	Option 5e, Off-site Disposal and/or Treatment	$3,100,000
Present Worth of Long-term Monitoring and Maintenance	Option 5a, On-site Upland CDF	$100,000
	Option 5b, On-site Nearshore CDF	$100,000
	Option 5d, On-site Thermal Treatment	$100,000
	Option 5e, Off-site Disposal and/or Treatment	$100,000
Total Present Worth Cost	Option 5a, On-site Upland CDF	$1,400,000
	Option 5b, On-site Nearshore CDF	$1,400,000
	Option 5d, On-site Thermal Treatment	$4,300,000
	Option 5e, Off-site Disposal and/or Treatment	$3,200,000

Notes:
[1]Detailed costs estimates provided in Appendix J of the 2010 FS (Battelle, 2010). Costs could increase by approximately $240,000 to $275,000 for compliance with the National Historic Preservation Act (NHPA) (USACE, 2011).

Table 6-19. Potential Applicable or Relevant and Appropriate Requirements (ARARs) and To Be Considered (TBC) Criteria for Allendale Reach Floodplain Soil Alternative 5, Excavation and Disposal and/or Treatment

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Chemical-Specific ARARs			
Federal Requirements			
OSWER Directive 92-4-26, Approaches for Addressing Dioxins in Soil at CERCLA and RCRA Sites	TBC	Guidance cleanup levels for CERCLA removal sites and PRGs for remedial sites for dioxin (as TEQ) in surface soil involving residential exposure scenarios. Also establishes a cleanup range for dioxin (as TEQ) for commercial and industrial exposure scenarios.	Soil at the site that contains dioxin at levels above that recommended in this guidance would be addressed under this alternative.
Draft Recommended Interim Preliminary Remediation Goals for Dioxin in Soil at CERCLA and RCRA Sites	TBC	Draft recommended interim PRGs of 72 parts per trillion (ppt or ng/kg) dioxin (as TEQ) for residential exposure scenarios and 950 ppt dioxin (as TEQ) for commercial and industrial exposure scenarios are recommended as a starting point for setting cleanup levels for CERCLA removal sites.	Soil at the site contains dioxin at levels above the draft recommended interim PRGs.
Clean Water Act Federal Water Quality Criteria, Section 304(a) 40 CFR 131.11	R & A	Ambient Water Quality Criteria (AWOC) are provided by EPA for chemicals for both the protection of human health and the protection of aquatic life.	Contaminants from floodplain soil that could result in exceedances of AWQC in Woonasquatucket River will be minimized to the maximum extent practical.
Guidelines for Carcinogenic Risk Assessment, EPA/630/P-03/001F	TBC	These guidelines provide guidance on conducting risk assessments involving carcinogens.	Guidelines used to evaluate all risk assessments on carcinogenicity.
Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens, EPA/630/R-03/003F	TBC	These guidelines provide guidance on conducting risk assessments involving carcinogens.	Guidelines used to evaluate all risk assessments on carcinogenicity in children.
EPA Risk Reference Doses (RfDs)	TBC	RfDs are estimates of a daily exposure concentration that is likely to be without appreciable risk of deleterious effects during a lifetime exposure.	RfDs used to characterize human health risks due to non-carcinogens in site media.
Human Health Assessment Cancer Slope Factors (CSFs)	TBC	CSFs are estimates of the upper-bound probability of an individual developing cancer as a result of a lifetime exposure to a particular concentration of a potential carcinogen.	CSFs used to compute the individual incremental cancer risk resulting from exposure to carcinogens in site media.
EPA Carcinogenic Assessment Group Potency Factors	TBC	These factors are used to evaluate an acceptable risk from a carcinogen.	Used to evaluate carcinogenicity of dioxin.

Table 6-19. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Chemical-Specific ARARs (cont)			
Federal Requirements (cont)			
EPA Health Advisories	TBC	EPA publishes contaminant-specific health advisories that indicate the non-carcinogenic risks associated with consuming contaminated drinking water.	Used to establish criteria in the absence of other standards.
State Requirements			
RIDEM Water Quality Regulations	R & A	Provides water classification for surface waters in Rhode Island and sets ambient water quality criteria for toxic substances and governs water quality impacts associated with site activities.	Contributions of contaminants from sediment that could result in exceedances of water quality standards in the Woonasquatucket River will be minimized to the maximum extent practical.
RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (i.e., Remediation Regulations)	Applicable	Unless otherwise specified, soil contaminated as a result of a release of hazardous materials shall be remediated in a manner which meets the direct exposure and leachability criteria for each hazardous substance established in Rule 8.02.B (Method 1 Soil Objectives).	Some residential use soils at the site contain contaminants subject to the Rule 8.02B soil objectives and would be addressed under this alternative consistent with state requirements.
Location-Specific ARARs			
Federal Requirements			
Fish and Wildlife Coordination Act 16 U.S.C. 661, Fish and Wildlife Protection (40 CFR Section 6.302(g))	Applicable	Requires that a federal agency take action to prevent, mitigate, or compensate for project-related losses of fish and wildlife resources. Encourages that any federal agency proposing to modify a body of water to consult with the U.S. Fish and Wildlife Service, National Marine Fisheries Service, and other related state agencies.	Construction activities under this alternative in the Woonasquatucket River are subject to these requirements. Actions will be taken in accordance with these requirements.
Clean Water Act, Section 404 Guidelines for discharge of dredged or fill material into waters of US (40 CFR Parts 230 and 231, 33 CFR Parts 320-323, and 33 CFR Part 332)	Applicable	Outlines requirements for the discharge of dredged or fill materials into surface waters, including wetlands. Such discharges are not allowed if there are practicable alternatives with less adverse impact. Sets standards for restoration and mitigation required as a result of unavoidable impacts to aquatic resources.	Excavation, placement of backfill, and nearshore CDF (and potentially upland CDF) subject to these requirements. Activities must be conducted in accordance with these requirements, including but not limited to mitigation and/or restoration. Alternative must be evaluated to determine least damaging practicable alternative before it can be selected.

Table 6-19. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Location-Specific ARARs (cont)			
Federal Requirements (cont)			
Rivers and Harbors Act Section 10 (33 U.S.C. Section 403)	Applicable	Sets forth criteria for placing dams/structures in navigable waters of the U.S.	Nearshore CDF subject to these requirements. Activities must be conducted in accordance with these requirements.
Protection of Wetlands (Executive Order 11990)	TBC	Federal agencies are required to avoid adversely impacting wetlands unless there is no practicable alternative and the proposed action includes all practicable measures to minimize harm to wetlands that may result from such use.	Excavation, placement of backfill, and the nearshore CDF (and potentially the upland CDF) are subject to these requirements. Activities must be conducted in accordance with these requirements.
Archaeological and Historical Preservation Act of 1974 Public Law 93-291	Potentially applicable	When a Federal agency finds, or is notified, that its activities in connection with a Federal construction project may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archeological data, such agency shall notify DOI. Such agency may request DOI to undertake the preservation of such data or it may undertake such activities.	If during remedial design or remedial action, it is determined that this alternative may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archaeological data, EPA will notify DOI and comply with these requirements.
National Historic Preservation Act 16 USC 470 36 CFR Part 800	Applicable	A federal agency must take into account the project's effect on properties included or eligible for inclusion in the National Register of Historic Places.	Work conducted will take into account the project's effect on properties included or eligible for inclusion in the National Register of Historic Places as required under this law.
Floodplain Management (Executive Order 11988)	TBC	Federal agencies are required to avoid impacts associated with the occupancy and modification of a floodplain and avoid support of floodplain development wherever there is a practicable alternative.	Nearshore CDF alternative can only be selected if there is no practicable alternative to occupancy and modification of floodplain.

Table 6-19. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Location-Specific ARARs (cont)			
State Requirements			
RIDEM Rules and Regulations for Hazardous Waste Management – Section 8 Location Standards for Hazardous Waste Facilities	R & A: Nearshore CDF	Rhode Island is delegated to administer the federal RCRA statute through its state regulations. The standards of 40 CFR 264.18(b), with some exceptions, are incorporated by reference. Certain facilities located in 100-yr floodplain must be designed, constructed, operated and maintained to prevent washout of any hazardous waste by 100-yr flood, unless demonstrate no adverse effects on human health or environment will result from washout.	Nearshore CDF must meet these requirements.
Rhode Island Historic Preservation Act - Rhode Island General Laws 42-45 et seq.	Applicable	Regulations that address the project's effect on properties included or eligible for inclusion in the State/National Registers of Historic Places.	Will take into account the project's effect on properties included or eligible for inclusion in the National/State Registers of Historic Places in accordance with these requirements.
RIDEM Rules and Regulations Governing the Enforcement of the Freshwater Wetlands Act	Applicable	Sets requirements to prevent the undesirable drainage, excavation, filling, alteration, encroachment, or any other form of disturbance or destruction to a wetland.	Activities required by RIDEM for remediation will be conducted in accordance with these requirements.
Action-Specific ARARs			
Federal Requirements			
Clean Water Act Federal Water Quality Criteria, Section 304(a) 40 CFR 131.11	Applicable	Ambient Water Quality Criteria (AWQC) are provided by EPA for chemicals for both the protection of human health and the protection of aquatic life.	Excavation, placement of backfill, and nearshore CDF must be conducted so that there are no exceedances of AWQC.
RCRA (40 CFR 264, Subpart AA)	Applicable: On-site Incineration	Air emission standards for process vents apply to process vents that manage hazardous wastes with organic concentrations of at least 10 parts per million by weight (ppmw).	Should incinerator operations manage hazardous wastes with organic concentrations of at least 10 ppm by weight, vents operated as part of the system will comply with these requirements.

Table 6-19. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
***Action-Specific ARARs* (cont)**			
Federal Requirements (cont)			
RCRA (40 CFR 264, Subpart BB)	Applicable: On-site Incineration	Air emission standards for equipment leaks apply to equipment that contains or contacts hazardous wastes with organic concentrations of at least 10 percent by weight.	Should equipment used in incineration come into contact with hazardous wastes containing organic concentrations of at least 10 percent by weight, these regulations will be followed.
RCRA (40 CFR 264, Subpart CC)	Applicable: Upland CDF On-site Incineration	Air emission standards for tanks, surface impoundments, and containers used to manage hazardous waste. Emission controls required if tanks, surface impoundments, and containers used to manage hazardous waste have greater than 500 ppmw of volatile organics.	If tanks, surface impoundments, and containers used to manage hazardous waste have greater than 500 ppmw of volatile organics then these requirements will be met.
CAA National Emissions Standards for Hazardous Air Pollutants: Site remediation (40 CFR 63, Subpart GGGGG)	Applicable: On-site Incineration	Applicable to major sources of hazardous air pollutants conducting site remediation.	On-site incineration must be conducted to meet these substantive requirements.
RCRA Land Disposal Restrictions (40 CFR 268)	Applicable: Upland CDF	These regulations identify treatment standards for hazardous wastes and specify requirements that generators, transporters, and owners or operators of treatment, storage, and disposal facilities that manage restricted wastes destined for land disposal must meet.	Material subject to these regulations placed in upland CDF must be treated to meet these requirements.
Invasive Species (Executive Order 13112)	TBC	Federal agencies are directed to prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause when requiring actions that impact the environment.	Actions will be taken to address invasive species consistent with the Executive Order.
State Requirements			
RIDEM Rules and Regulations for Hazardous Waste Management Identification and Listing of Hazardous Wastes	Applicable: Upland CDF Incineration Off-site Disposal	Rhode Island is delegated to administer the federal RCRA statute through its regulations. The standards of 40 Part 261 of RCRA are incorporated by reference. Sets forth requirements for hazardous waste determination according to federal (40 CFR 262.11) and RI State (Rule 5.8) definitions.	Will be used to determine appropriate treatment and disposal.

Table 6-19. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
***Action-Specific ARARs* (cont)**			
State Requirements (cont)			
RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (i.e., Remediation Regulations), Section 8.0 (Risk Management)	Applicable	This section regulates impacted media at contaminated sites.	This section was used to develop cleanup goals for the site. This alternative meets this requirement.
RIDEM Rules and Regulations for Hazardous Waste Management, Section 8 – Operation Requirements for Treatment, Storage, and Disposal Facilities	Applicable and R & A	Outlines operational requirements for all hazardous waste treatment, storage, and disposal facilities, including general waste analyses, security procedures, inspections, safety, groundwater monitoring etc. Sets design, construction, and operational requirements for hazardous waste containers and tanks, and closure requirements for hazardous waste facilities.	Substantive requirements related to land disposal, on-site incineration, closure, etc. must be met.
RIDEM Rules and Regulations for Hazardous Waste Management, Section 8 – Land Disposal Facilities	Applicable: Upland CDF R & A: Nearshore CDF Floodplain	Outlines design, operational, and closure requirements for land disposal facilities.	Substantive requirements for land disposal/closure, etc. must be met.
RIDEM Rules and Regulations for Hazardous Waste Management, Section 8 – Incinerators	Applicable: On-site incineration	Outlines design, operational, and closure requirements for incinerator facilities.	On-site incineration must be conducted to meet these substantive requirements.
RIDEM Water Quality Regulations	Applicable	Provides water classification for surface waters in Rhode Island and sets ambient water quality criteria for toxic substances and governs water quality impacts associated with site activities.	Excavation, placement of backfill, and nearshore CDF must be conducted so that there are no exceedances of water quality standards.
RI Air Pollution Control Regulation #1: Visible Emissions	Applicable	Establishes opacity limitations for contaminant emissions.	Remediation will be conducted to meet the standards for visible emissions.
RI Air Pollution Control Regulation #5: Fugitive Dust	Applicable	Requires that reasonable precaution be taken to prevent particulate matter from becoming airborne.	Actions will be taken to prevent particulate matter from becoming airborne in accordance with these regulations.
RI Air Pollution Control Regulation #7: Emissions Detrimental to Persons or Property	Applicable	Prohibits emissions of contaminants which may be injurious to human, plant, or animal life or cause damage to property or which unreasonably interfere with the enjoyment of life and property.	Any potential emissions subject to these requirements will meet these standards.

Table 6-19. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
***Action-Specific ARARs* (cont)**			
State Requirements (cont)			
RI Air Pollution Control Regulation #15: Control of Organic Solvent Emissions	Applicable: On-site incineration	Limits the amount of organic solvents emitted to the atmosphere.	Any emissions of organic solvents will be controlled to ensure that the standards are met.
RI Air Pollution Control Regulation #22: Air Toxics, Air Toxics Guideline, and Air Modeling Guidelines	Applicable: On-site incineration	Prohibits the emissions of specified contaminants that result in ground level concentrations greater than ambient level concentrations.	Remediation will be conducted so that these requirements are met.

Key:
R & A – Relevant and Appropriate; TBC – To Be Considered

Table 6-39. Potential Applicable or Relevant and Appropriate Requirements (ARARs) and To Be Considered (TBC) Criteria for Source Area Groundwater Alternative 1, No Action[1]

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Chemical-Specific ARARs			
Federal Requirements			
Safe Drinking Water Act Maximum Contaminant Levels (MCLs), 40 CFR 141.11-141.13	R & A	The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to Maximum Contaminant Levels Goals (MCLGs) as feasible using the best available treatment technology and taking cost into consideration. MCLs are enforceable standards.	MCLs are relevant and appropriate as the groundwater at the Source Area is a potential federal drinking water source. These standards will not be met by this alternative.
Safe Drinking Water Act Maximum Contaminant Levels Goals (non-zero MCLGs), 40 CFR 141.50-141.51	R & A	The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety and are non-enforceable public health goals.	Non-zero MCLGs are relevant and appropriate as the groundwater at the Source Area is a potential federal drinking water source. These standards will not be met by this alternative.
Clean Water Act Federal Water Quality Criteria, Section 304(a) 40 CFR 131.11	Applicable	Ambient Water Quality Criteria (AWQC) are provided by EPA for chemicals for both the protection of human health and the protection of aquatic life.	Discharges from the action area may cause degradation of surface water quality of the Woonasquatucket River in excess of AWQC. This alternative would not address these exceedances.
State Requirements			
RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (i.e., Remediation Regulations)	Applicable	Groundwater objectives established in Rule 8.03 provide groundwater cleanup criteria.	Groundwater outside the Source Area contains contaminants subject to the Rule 8.03 GB groundwater objectives that would not be addressed under this alternative.
RIDEM Water Quality Regulations	R & A	Provides water classification for surface waters in Rhode Island and sets ambient water quality criteria for toxic substances.	Discharges from the action area may cause degradation of surface water quality of Woonasquatucket River in excess of water quality standards. This alternative would not address these exceedances.

Notes:
[1] With no action, there are no location- or action-specific ARARs.

Table 6-41. Potential Applicable or Relevant and Appropriate Requirements (ARARs) and To Be Considered (TBC) Criteria for Source Area Groundwater Alternative 2, Excavation/Dewatering

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Chemical-Specific ARARs			
Federal Requirements			
Safe Drinking Water Act Maximum Contaminant Levels (MCLs), 40 CFR 141.11-141.13	R & A	The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to Maximum Contaminant Levels Goals (MCLGs) as feasible using the best available treatment technology and taking cost into consideration. MCLs are enforceable standards.	MCLs are relevant and appropriate as the groundwater at the Source Area is a potential federal drinking water source. These standards may be met by this alternative if combined with additional source controls measures to address the Source Area.
Safe Drinking Water Act Maximum Contaminant Levels Goals (non-zero MCLGs), 40 CFR 141.50-141.51	R & A	The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety and are non-enforceable public health goals.	Non-zero MCLGs are relevant and appropriate as the groundwater at the Source Area is a potential federal drinking water source. These standards may be met by this alternative if combined with additional source controls measures to address the Source Area.
Clean Water Act Federal Water Quality Criteria, Section 304(a) 40 CFR 131.11	R & A	Ambient Water Quality Criteria (AWOC) are provided by EPA for chemicals for both the protection of human health and the protection of aquatic life.	Contaminants that could result in exceedances of AWQC in Woonasquatucket River will be minimized to the maximum extent practical.
State Requirements			
RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (i.e., Remediation Regulations)	Applicable	Groundwater objectives established in Rule 8.03 provide groundwater cleanup criteria.	Groundwater beyond the Source Area contains contaminants subject to the Rule 8.03 GB groundwater objectives and would be addressed under this alternative consistent with state requirements. Contaminated soil that exceed GA leachability criteria in Rule 8.02 included under the Source Area Soil remedy.

Table 6-41. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Chemical-Specific ARARs (cont)			
State Requirements (cont)			
RIDEM Water Quality Regulations	R & A	Provides water classification for surface waters in Rhode Island and sets water quality standards.	Contaminants that could result in exceedances of water quality standards in Woonasquatucket River will be minimized to the maximum extent practical.
Location-Specific ARARs			
Federal Requirements			
Clean Water Act, Section 404 Guidelines for discharge of dredged or fill material into waters of US (40 CFR Parts 230 and 231, 33 CFR Parts 320-323, and 33 CFR Part 332)	Applicable	Outlines requirements for the discharge of dredged or fill materials into surface waters, including wetlands. Such discharges are not allowed if there are practicable alternatives with less adverse impact. Sets standards for restoration and mitigation required as a result of unavoidable impacts to aquatic resources.	Excavation/backfill, dewatering, capping, and sheet pile wall are subject to these requirements. Activities must be conducted in accordance with these requirements, including but not limited to mitigation and/or restoration. Alternative must be evaluated to determine least damaging practicable alternative before it can be selected.
Rivers and Harbors Act Section 10 (33 U.S.C. Section 403)	Applicable	Sets forth criteria for placing dams/structures in navigable waters of the U.S.	Coffer dam and sheet pile wall subject to these requirements. Activities must be conducted in accordance with these requirements.
Protection of Wetlands (Executive Order 11990)	TBC	Federal agencies are required to avoid adversely impacting wetlands unless there is no practicable alternative and the proposed action includes all practicable measures to minimize harm to wetlands that may result from such use.	Excavation/backfill, sheet pile wall, dewatering, and capping are subject to these requirements. Activities must be conducted in accordance with these requirements.
State Requirement			
RIDEM Rules and Regulations Governing the Enforcement of the Freshwater Wetlands Act	Applicable	Sets requirements to prevent the undesirable drainage, excavation, filling, alteration, encroachment, or any other form of disturbance or destruction to a wetland.	Some riverbank wetland resource areas are located within the site boundaries. Activities must be conducted in accordance with Rule 6.08.

Table 6-41. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Action-Specific ARARs			
Federal Requirements			
Clean Water Act Federal Water Quality Criteria, Section 304(a) 40 CFR 131.11	Applicable	Ambient Water Quality Criteria (AWQC) are provided by EPA for chemicals for both the protection of human health and the protection of aquatic life.	Excavation/backfill, dewatering, sheet pile wall, and capping must be conducted so that there are no exceedances of AWQC.
State Requirements			
RIDEM Regulations for the Rhode Island Pollutant Discharge Elimination System (RIPDES)	Applicable	Contains discharge limitations, monitoring requirements, and best management practices applicable to discharges to navigable waters.	Remediation activities may require discharge of water to the Woonasquatucket River as a result of extracting groundwater or dewatering an excavation. Discharge of treated groundwater to river will meet substantive requirements.
RIDEM Water Quality Regulations	R & A	Provides water classification for surface waters in Rhode Island and sets ambient water quality criteria for toxic substances and governs water quality impacts associated with site activities.	Excavation/backfill, dewatering, sheet pile wall, and capping must be conducted so that there are no exceedances of water quality standards.
RIDEM Rules and Regulations for Groundwater Quality, 5/06	Applicable	Establishes construction standards for permanent monitoring wells and abandonment procedures (Appendix 1)	Monitoring wells will comply with these standards.
RIDEM Rules and Regulations for Hazardous Waste Management Identification and Listing of Hazardous Wastes	Applicable	Rhode Island is delegated to administer the federal RCRA statute through its regulations. The standards of 40 Part 261 of RCRA are incorporated by reference. Sets forth requirements for hazardous waste determination according to federal (40 CFR 262.11) and RI State (Rule 5.08) definitions.	Material generated by excavation will undergo hazardous waste determination to determine appropriate treatment and disposal. .
RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (i.e., Remediation Regulations), Section 8.0 (Risk Management)	Applicable	This section regulates impacted media at contaminated sites.	This section was used to develop cleanup goals for the site. This alternative will meet these requirements.

Table 6-41. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Action-Specific ARARs(cont)			
State Requirements (cont)			
RIDEM Rules and Regulations for Hazardous Waste Management, Section 8 – Operation Requirements for Treatment, Storage, and Disposal Facilities	Applicable	Outlines operational requirements for all hazardous waste treatment, storage, and disposal facilities, including general waste analyses, security procedures, inspections, safety, groundwater monitoring etc. Sets design, construction, and operational requirements for hazardous waste containers and tanks, and closure requirements for hazardous waste facilities.	Substantive requirements related to excavated material and closure must be met. Groundwater monitoring will be conducted in accordance with these requirements.
RI Air Pollution Control Regulation #1: Visible Emissions	Applicable	Establishes opacity limitations for contaminant emissions	Remediation will be conducted to meet the standards for visible emissions.
RI Air Pollution Control Regulation #5: Fugitive Dust	Applicable	Requires that reasonable precaution be taken to prevent particulate matter from becoming airborne.	Actions will be taken to prevent particulate matter from becoming airborne in accordance with these regulations.
RI Air Pollution Control Regulation #7: Emissions Detrimental to Persons or Property	Applicable	Prohibits emissions of contaminants which may be injurious to human, plant, or animal life or cause damage to property or which unreasonably interfere with the enjoyment of life and property.	Any potential emissions subject to these requirements will meet these standards.

Key:
R & A – Relevant and Appropriate; TBC – To Be Considered

Table 6-43. Potential Applicable or Relevant and Appropriate Requirements (ARARs) and To Be Considered (TBC) Criteria for Source Area Groundwater Alternative 5, In-Situ Chemical Oxidation

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Chemical-Specific ARARs			
Federal Requirements			
Safe Drinking Water Act Maximum Contaminant Levels (MCLs), 40 CFR 141.11-141.13	R & A	The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to Maximum Contaminant Levels Goals (MCLGs) as feasible using the best available treatment technology and taking cost into consideration. MCLs are enforceable standards.	MCLs are relevant and appropriate as the groundwater at the Source Area is a potential federal drinking water source. These standards may be met by this alternative if combined with additional source controls measures to address the Source Area.
Safe Drinking Water Act Maximum Contaminant Levels Goals (non-zero MCLGs), 40 CFR 141.50-141.51	R & A	The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety and are non-enforceable public health goals.	Non-zero MCLGs are relevant and appropriate as the groundwater at the Source Area is a potential federal drinking water source. These standards may be met by this alternative if combined with additional source controls measures to address the Source Area.
Clean Water Act Federal Water Quality Criteria, Section 304(a) 40 CFR 131.11	R & A	Ambient Water Quality Criteria (AWOC) are provided by EPA for chemicals for both the protection of human health and the protection of aquatic life.	Contaminants could result in exceedances of AWQC in Woonasquatucket River will be minimized to the maximum extent practical but surface water requirements may not be met.

Table 6-43. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
Chemical-Specific ARARs (cont)			
State Requirements			
RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (i.e., Remediation Regulations)	Applicable	Groundwater objectives established in Rule 8.03 provide groundwater cleanup criteria.	Groundwater beyond the Source Area contains contaminants subject to the Rule 8.03 GB groundwater objectives and would be addressed under this alternative consistent with state requirements. Contaminated soils that exceed GA leachability criteria in Rule 8.02 would be included under the Source Area Soil remedy.
RIDEM Water Quality Regulations	R & A	Provides water classification for surface waters in Rhode Island and sets water quality standards.	Contaminants that could result in exceedances of water quality standards in Woonasquatucket River will be minimized to the maximum extent practical but surface water requirements may not be met.
Location-Specific ARARs (there are no Federal requirements)			
State Requirements			
RIDEM Rules and Regulations Governing the Enforcement of the Freshwater Wetlands Act	Applicable	Sets requirements to prevent the undesirable drainage, excavation, filling, alteration, encroachment, or any other form of disturbance or destruction to a wetland.	Some riverbank wetland resource areas are located within the site boundaries. Activities required by RIDEM for remediation are permitted provided site plans are submitted to the Freshwater Wetland Program for review and activities are conducted in accordance with Rule 6.08.

Table 6-43. (continued)

Requirement	Status	Synopsis	Action to Be Taken to Attain Requirement
***Action-Specific ARAR* (there are no Federal requirements)**			
State Requirement			
RIDEM Rules and Regulations for Groundwater Quality	Applicable	Establishes construction standards for permanent monitoring wells and abandonment procedures (Appendix 1)	Monitoring wells will comply with these standards.
RIDEM Rules and Regulations for Hazardous Waste Management Operational Requirements for Treatment Storage Disposal Facilities	Applicable	Rhode Island is delegated to administer the federal RCRA statute through its regulations. The standards of 40 CFR Part 264 of RCRA are incorporated by reference. Sets forth requirements for groundwater monitoring (40 CFR 264 Subpart F) (State Rule 8.1).	Groundwater monitoring will be conducted in accordance with these requirements.
RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (i.e., Remediation Regulations), Section 8.0 (Risk Management)	Applicable	This section regulates impacted media at contaminated sites.	This section was used to develop cleanup goals for the site. This alternative will meet these requirements.
RIDEM Underground Injection Control Program	Applicable	Establishes rules for remedial actions that include subsurface discharge or underground injection of treated or untreated groundwater.	Subsurface injections of chemical oxidants must meet these requirements.
RI Air Pollution Control Regulation #1: Visible Emissions	Applicable	Establishes opacity limitations for contaminant emissions	Remediation will be conducted to meet the standards for visible emissions.
RI Air Pollution Control Regulation #5: Fugitive Dust	Applicable	Requires that reasonable precaution be taken to prevent particulate matter from becoming airborne.	Actions will be taken to prevent particulate matter from becoming airborne in accordance with these regulations.
RI Air Pollution Control Regulation #7: Emissions Detrimental to Persons or Property	Applicable	Prohibits emissions of contaminants which may be injurious to human, plant, or animal life or cause damage to property or which unreasonably interfere with the enjoyment of life and property.	Any potential emissions subject to these requirements will meet these standards.

Key:
R & A – Relevant and Appropriate; TBC – To Be Considered