Nobis
Engineering a Sustainable Future

EPA Region 1 RAC 2 Contract No. EP-S1-06-03

April 15, 2015
Nobis Project No. 80043

Via Electronic Submittal

U.S. Environmental Protection Agency, Region 1
Attention: Mr. Ronald Jennings, Task Order Project Officer
5 Post Office Square, Suite 100
Boston, Massachusetts 02109-3919

Subject: Transmittal of the Remedial Investigation Update Addendum
Raymark Industries Inc. Site – Operable Unit 2, Stratford, Connecticut
Remedial Investigation / Feasibility Study
Task Order No. 0043-RI-CO-01H3

Dear Mr. Jennings:

Enclosed is the Remedial Investigation Update Addendum for the above-mentioned Task Order. This document addresses comments provided by EPA on the prior version of the document submitted by Nobis on February 20, 2015. Comments were addressed as described in the responses to comments and preliminary text provided to EPA for review on March 26, 2015 and as discussed in subsequent conversations with EPA.

Please contact me if you have any questions or require additional information.

Sincerely,

NOBIS ENGINEERING, INC.

Diane M. Baxter
Senior Project Manager

Enclosure

c: R. Curran (CTDEEP)
File 80043/MA

SDMS Doc ID 568744

Nobis Engineering, Inc.
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

Remedial Investigation Update Addendum

Supplemental Investigations

Raymark Industries, Inc. Site – Operable Unit 2
Stratford, Connecticut

Remedial Investigation/Feasibility Study
EPA Task Order No. 0043-RI-CO-01H3

REMEDIAL ACTION CONTRACT
No. EP-S1-06-03

FOR

US Environmental Protection Agency
Region 1

BY

Nobis Engineering, Inc.

Nobis Project No. 80043

April 2015

U.S. Environmental Protection Agency

Region 1
5 Post Office Square, Suite 100
Boston, Massachusetts 02109 3919

Nobis Engineering, Inc.

Lowell, Massachusetts
Concord, New Hampshire

Phone (800) 394 4182
www.nobisengineering.com

Remedial Investigation Update Addendum

Supplemental Investigations

Raymark Industries, Inc. Site – Operable Unit 2
Stratford, Connecticut
Remedial Investigation/Feasibility Study
EPA Task Order No. 0043-RI-CO-01H3

REMEDIAL ACTION CONTRACT
No. EP-S1-06-03

For
US Environmental Protection Agency
Region 1

By
Nobis Engineering, Inc.

Nobis Project No. 80043

April 2015

Scott Harding, PE
Program Manager

Diane M. Baxter
Senior Project Manager

Nobis Engineering a Sustainable Future
Nobis En
585 Midd
Lowell, M
T (978) 69
www.nob

TABLE OF CONTENTS
REMEDIAL INVESTIGATION UPDATE ADDENDUM
SUPPLEMENTAL INVESTIGATIONS
RAYMARK INDUSTRIES, INC. SITE – OPERABLE UNIT 2 – GROUNDWATER
STRATFORD, CONNECTICUT

SECTION **PAGE**

ES EXECUTIVE SUMMARY 1

1.0 INTRODUCTION 1

2.0 SUPPLEMENTAL FIELD INVESTIGATIONS 2
2.1 Soil Boring and Monitoring Well Installation and Soil Sampling 3
2.2 Groundwater Sampling for Vapor Intrusion Pathway Evaluation 4
2.3 Sub-slab Soil Gas and Indoor Air Sampling 6
2.4 Downhole Geophysical Survey of DNAPL Recovery Wells 7

3.0 DATA SUMMARY: SUPPLEMENTAL GROUNDWATER, SOIL GAS, INDOOR AIR, AND SOIL 11
3.1 Data Summary: Groundwater 11
3.1.1 Volatile Organic Compounds (VOCs) in Groundwater 12
3.1.2 Non-VOCs in Groundwater 16
3.2 Data Summary: Soil Gas 17
3.3 Data Summary: Indoor Air 18
3.4 Data Summary: Soil 19

4.0 VAPOR INTRUSION PATHWAY EVALUATION 20
4.1 Vapor Intrusion Pathway Evaluation: Residential Properties 22
4.1.1 Comparison of Analytical Results with Media-Specific Comparison Levels at Residential Properties 22
4.1.2 Vapor Intrusion Pathway Evaluation at Residential Properties .. 23
4.1.3 Summary of Vapor Intrusion Pathway Evaluation at Residential Properties 26
4.2 Vapor Intrusion Pathway Evaluation: Industrial/Commercial Properties ... 26
4.2.1 Comparison of Analytical Results with Media-Specific Comparison Levels at Commercial/Industrial Properties 27
4.2.2 Vapor Intrusion Pathway Evaluation for Individual COCs at Industrial/Commercial Properties 27
4.2.3 Summary of Vapor Intrusion Pathway Evaluation at Industrial/Commercial Properties 38
4.3 Revised Indoor Air Areas of Concern 38

5.0 INDOOR AIR RISKS 39

6.0 POTENTIAL VAPOR INTRUSION RISKS ABOVE THRESHOLDS 41

7.0 SUMMARY AND CONCLUSIONS 44
7.1 Summary 44
7.2 Conclusions 48

TABLE OF CONTENTS (cont.)
REMEDIAL INVESTIGATION UPDATE ADDENDUM
SUPPLEMENTAL INVESTIGATIONS
RAYMARK INDUSTRIES, INC. SITE – OPERABLE UNIT 2 – GROUNDWATER
STRATFORD, CONNECTICUT

SECTION **PAGE**

8.0 REFERENCES 51

TABLES

NUMBER

ES-1 Summary of Indoor Air Cancer Risks and Hazard Indices
1 Groundwater Analytical Results
2 Groundwater Results Statistical Summary
3 Summary of Sub-Slab Soil Vapor Analytical Results
4 Summary of Indoor Air Sampling Results
5 Soil Analytical Results
6 Groundwater, Soil Vapor, and Indoor Air Results by Property
7 Vapor Intrusion Pathway Evaluation - Conclusions by Property
8 Summary of Indoor Air Cancer Risks and Hazard Indices

FIGURES

NUMBER

ES-1 Indoor Air Areas of Concern Based on 1 x 10^{-6} Cancer Risk or Hazard Quotient of 1.0 Comparison Levels
1 Groundwater and DNAPL Investigation Locations – 2009/10 and 2012 Events
2 2009 Soil Gas, 2012/13 Sub-Slab Soil Gas, and 2012/13 Indoor Air Sampling Locations
3 Indoor Air Areas of Concern Based on 2009-2012 Groundwater 1 x 10^{-4} Cancer Risk or Hazard Quotient of 1.0 Comparison Levels for COCs
4 Indoor Air Areas of Concern Based on 2009-2012 Groundwater 1 x 10^{-5} Cancer Risk or Hazard Quotient of 1.0 Comparison Levels for COCs
5 Indoor Air Areas of Concern Based on 2009-2012 Groundwater 1 x 10^{-6} Cancer Risk or Hazard Quotient of 1.0 Comparison Levels for COCs
6 2009 Soil Gas and 2012/13 Sub-Slab Soil Gas Trichloroethene Concentrations
7 2009 Soil Gas and 2012/13 Sub-Slab Soil Gas 1,1-Dichloroethene Concentrations
8 2012/13 Sub-Slab Soil Gas and Indoor Air Results vs Comparison Levels for 1 x 10^{-6} Cancer Risk or Hazard Quotient of 1.0

TABLE OF CONTENTS (cont.)
REMEDIAL INVESTIGATION UPDATE ADDENDUM
SUPPLEMENTAL INVESTIGATIONS
RAYMARK INDUSTRIES, INC. SITE – OPERABLE UNIT 2 – GROUNDWATER
STRATFORD, CONNECTICUT

APPENDICES

A 2012 Boring Logs
B EPA Indoor Air Soil Vapor Intrusion Study Reports (February 2012, August 2012, and December 2013)
C Geophysical Report
D 2014 Adjusted Vapor Intrusion Screening and Comparison Level Calculations
E Indoor Air Risk Calculations
F Environmental Assessment Reports – 734 Ferry Boulevard

ACRONYMS AND ABBREVIATIONS

1,1,1-TCA	1,1,1-trichloroethane
1,1,2-TCA	1,1,2-trichloroethane
1,1-DCA	1,1-dichloroethane
1,1-DCE	1,1-dichloroethene
1,2-DCA	1,2-dichloroethane
2,3,7,8-TCDD	2,3,7,8-tetrachlorodibenzo-p-dioxin
ADAF	age-dependent adjustment factor
ASTM	American Society for Testing and Materials
ATV	acoustic televiewer
AWQC	Ambient Water Quality Criteria
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylenes
°C	degrees Celsius
CERCLA	The Comprehensive Environmental Response, Compensation, and Liability Act of 1980. Amended by SARA in 1986. Also called the Superfund Law.
cis-1,2-DCE	cis-1,2-dichloroethene
CLP	(EPA) Contract Laboratory Program
COC	contaminant of concern
COPC	chemicals of potential concern
CT	Connecticut
CTDEEP	Connecticut Department of Energy and Environmental Protection (formerly CTDEP)
CTDEP	Connecticut Department of Environmental Protection
CTDOT	Connecticut Department of Transportation
DDT	dichloro diphenyl trichloroethane
DNAPL	dense non-aqueous phase liquid
Eh	Observed Electrode Potential
EPA	United States Environmental Protection Agency
ERA	Ecological Risk Assessment
ESV	Ecological Screening Value
°F	degrees Fahrenheit
FAWQC	Federal Ambient Water Quality Criteria

ACRONYMS AND ABBREVIATIONS (cont.)

FS	Feasibility Study
ft	feet
ft^2	square feet
ft^3/hr	cubic feet per hour
g/cm^3	grams per cubic centimeter
GB	State of Connecticut classification for non-drinking water sources
HHRA	human health risk assessment
HI	Hazard Index
HNUS	Halliburton NUS
HQ	Hazard Quotient
I-95	Interstate 95
m	meters
m^3	cubic meters
m^3/day	cubic meters per day
MTBE	methyl-t butyl ether
µ	micro (prefix)
µg/l or µg/L	micrograms per liter
µg/m^3	micrograms per cubic meter
mg/kg/day	milligrams per kilogram per day
mg/l or mg/L	milligrams per liter
mg/m^3	milligrams per cubic meter
mg/µg	milligrams per microgram
ml/g	milliliters per gram
mph	miles per hour
MSL or msl	mean sea level
mV	millivolts
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NERL	New England Regional Laboratory
NGVD	National Geodetic Vertical Datum
Nobis	Nobis Engineering, Inc.
NPL	National Priorities List
NVT	Not sufficiently volatile and/or toxic to pose inhalation risk

ACRONYMS AND ABBREVIATIONS (cont.)

OSWER	(EPA's) Office of Solid Waste and Emergency Response
OU	Operable Unit
PAH	polycyclic aromatic hydrocarbon
PC	Post closure
PCB	polychlorinated biphenyl
PCDD	polychlorinated dibenzo dioxins
PCDF	polychlorinated dibenzo furans
PCE	tetrachloroethene
pg/l or pg/L	picograms per liter
pH	hydrogen-ion concentration
PID	photoionization detector
ppb	parts per billion
ppb/V	parts per billion by volume
ppm	parts per million
ppt	parts per trillion
PVC	polyvinyl chloride
RAC	Response Action Contract
RAGS HHEM	Risk Assessment Guidance for Superfund, Human Health Evaluation Manual
Raymark Facility	Raymark Industries, Inc. Facility
RCRA	Resource Conservation and Recovery Act
Removal Action	Action taken by EPA to address immediate danger to public health and the environment
RfC	Reference Concentration
RfD	Reference Dose
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
ROD	(EPA's) Record of Decision. Documents the selection of a cost-effective Superfund remedy.
RSL	Residential Screening Level
RSRs	State of Connecticut Remediation Standard Regulations
RVC	residential volatilization criteria

ACRONYMS AND ABBREVIATIONS (cont.)

SARA	Superfund Amendments and Reauthorization Act of 1986. Amended CERCLA. Also known as the Superfund law.
SSD	sub-slab depressurization
SVOC	semivolatile organic compound
SWP/SWPC	Surface Water Protection Criteria
TAL	(CLP) Target Analyte List for Inorganics
TCE	trichloroethene
TCL	(CLP) Target Compound List for Organics
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalency
TtNUS	Tetra Tech NUS, Inc.
UCL	upper confidence limit
URF	Inhalation Unit Risk Factor
USGS	United States Geological Survey
VFW	Veterans of Foreign Wars
VISL	vapor intrusion screening level
VOC	volatile organic compound
WQC	State of Connecticut water quality standards
yr	year

ES EXECUTIVE SUMMARY

This Remedial Investigation (RI) Update Report Addendum (this Addendum) is for the Raymark Industries, Inc. Superfund Site, Operable Unit (OU) 2 – Groundwater, located in Stratford, Fairfield County, Connecticut. There are nine OUs associated with Raymark Industries, Inc. (former Raymark facility); OU2 focuses on the groundwater contamination. An RI Update Report for OU2 was issued by EPA in 2014 (Nobis, 2014) (RI Update Report) to address data gaps in the 2005 RI and update the risk assessments. The RI Update Report was developed based on field investigations and sampling performed in 2009 and 2010 (2009/10) and updated toxicity factors for evaluation of risks from vapor intrusion. This Addendum presents the results of supplemental investigations performed in 2012 and 2013 to fill data gaps identified in the RI Update Report and incorporates updated human health risk assessment regional screening levels (RSLs) (EPA, 2015b), vapor intrusion screening levels (VISLs) (EPA, 2014b), and exposure assumptions (EPA, 2014a). This Addendum was prepared by Nobis Engineering, Inc. (Nobis), as authorized by the United States Environmental Protection Agency (EPA) under Remedial Action Contract No. EP-S1-06-03, Task Order No. 0043-RI-CO-01H3.

The supplemental investigations conducted in 2012 and 2013 and documented in this Addendum include:

1. Soil boring and monitoring well installation and soil and groundwater sampling for evaluation of nature and extent of shallow contamination southeast of the former Raymark facility;

2. Groundwater sampling at existing and new wells for vapor intrusion pathway evaluation;

3. Sub-slab soil gas and indoor air sampling at commercial and residential properties for vapor intrusion pathway evaluation and indoor air risk calculations; and

4. Downhole geophysical survey of the former Raymark facility DNAPL recovery wells to evaluate their condition and potential for potential future use in a cleanup remedy.

The data obtained during the supplemental investigations were evaluated to refine estimates of the nature and extent of contamination southeast of the former Raymark facility; evaluate potential

vapor intrusion concerns for OU2 Contaminants of Concern (COCs) [1] at residential properties east of the previously defined indoor air area of concern and commercial properties within the indoor air area of concern; conduct a quantitative risk assessment for each of the 21 properties where indoor air was sampled during the supplemental investigations; identify risks above threshold levels resulting from potential vapor intrusion of OU2 COCs; and assess the condition and usability of the DNAPL recovery wells on the former Raymark facility.

Risks above threshold levels resulting from potential vapor intrusion of OU2 COCs are identified via the following stepwise process:

1. Evaluation of the vapor intrusion pathway at each location sampled for the OU2 COCs;

2. Calculation of indoor air risks; and

3. Integration of the results of the vapor intrusion pathway evaluation and the indoor air risk calculations to determine if risks above threshold levels resulting from potential vapor intrusion of OU2 COCs exist.

The findings and conclusions of the supplemental investigations and evaluations are summarized below.

Nature and Extent of Contamination Southeast of the Former Raymark Facility

- No Raymark OU2 COCs or Raymark Waste[2] constituents were detected in soils collected from the soil borings advanced in 2012 (SB-601 through SB-604), that were completed as monitoring wells (MW-601 to MW-604S/MW-604D) (See Figure 1).

- No OU2 COCs were identified at concentrations exceeding vapor intrusion comparison criteria based on $1x10^{-6}$ cancer risks and hazard quotients (HQs) of 1.0 in groundwater

[1] The RI Update Report identified eight volatile organic compounds (VOCs) as Contaminants of Concern (COCs) for vapor intrusion from OU2 groundwater: TCE, 1,1-DCE, 1,1-DCA, vinyl chloride, benzene, chlorobenzene, chloroform, and ethylbenzene. Of these eight COCs, four (TCE, 1,1-DCE, 1,1-DCA, and vinyl chloride) were identified as the primary COCs for residential properties and three (TCE, 1,1-DCA, and vinyl chloride) were identified as the primary COCs for industrial/commercial properties.

[2] Raymark Waste is defined as a single soil sample at the same depth interval containing lead above 400 mg/kg and asbestos [chrysotile only] greater than 1 percent, and either PCBs [Aroclor 1268 only] above 1 mg/kg or copper above 288 mg/kg". (TtNUS 2005b).

from the three wells installed at the residential condominium complex southeast of the former Raymark facility (MW-601 – MW-603) (See Figure 1).

- Benzene and ethylbenzene (OU2 COCs) were detected in the shallow well installed on Orchard Street (MW-604S) at concentrations exceeding the vapor intrusion comparison levels. However, several lines of evidence indicate that these volatile organic compounds (VOCs) are not site-related and instead originate from an off-site source, likely the adjacent gasoline station. The gasoline additive MTBE was also found at this location.

- Chlorobenzene (an OU2 COC) was detected in groundwater samples at MW-603 and at MW-604S and MW-604D at concentrations below the residential vapor intrusion comparison levels based on cancer risk of $1x10^{-6}$ or HQ of 1. The chlorobenzene appears to have originated from a shallow source on the former Raymark facility, migrated downgradient into deeper groundwater, and then migrated upward near MW-604. Chlorobenzene concentrations downgradient from the former Raymark facility do not appear to pose a vapor intrusion concern.

Vapor Intrusion Pathway Evaluation

A vapor intrusion pathway evaluation was performed for the 21 locations where indoor air samples were collected during the supplemental investigations. The evaluation of the vapor intrusion pathway at each location sampled includes the following:

a. Groundwater, soil gas, and indoor air data at each location are compared to media-specific comparison levels based on $1x10^{-6}$ cancer risks and hazard quotients (HQs) of 1.0.

b. Indoor air data for each property are compared to other indoor air results from the same property (from different areas and/or dates), sub-slab soil gas data, nearby groundwater data, outdoor ambient air data representing background outdoor air, and measured background indoor air concentrations for residences in North America (EPA, 2011).

c. Potential indoor air sources are also considered on a property-specific basis.

d. The evaluation identifies properties where the lines of evidence indicate vapor intrusion may be occurring above comparison levels based on where contaminants were detected in either shallow groundwater and/or sub-slab soil gas above comparison levels and detected in indoor air above comparison levels and background levels, with consideration of potential indoor air sources.

The vapor intrusion pathway evaluation results are summarized below.

- **Residential condominium complex southeast of the former Raymark facility –** Three COCs (benzene, chloroform, and ethylbenzene) were detected in indoor air samples collected from the condominium complex southeast of the former Raymark facility at concentrations exceeding residential indoor air comparison levels and trichloroethene (TCE) was detected in one building at concentrations equal to the comparison levels. However, multiple lines of evidence suggest that the presence of these COCs in the air inside these buildings results from background conditions or indoor air sources and not vapor intrusion from the OU2 groundwater contaminant plume.

- **500 Ferry Boulevard (Current Commercial Use, but Residential Zoning) –** Four COCs (TCE, benzene, chloroform, and ethylbenzene) were detected in indoor air samples collected at 500 Ferry Boulevard. The vapor intrusion pathway evaluation concluded that vapor intrusion of TCE may be occurring, but not at levels of concern, and multiple lines of evidence suggest that benzene, chloroform, and ethylbenzene detected in indoor air at this location likely result from indoor air sources.

- **Commercial/Industrial Properties –** At least one OU2 COC was detected in indoor air at each of the 16 commercial/industrial locations included in the supplemental vapor intrusion sampling. However, the vapor intrusion pathway evaluation concluded that in most cases, the presence of OU2 COCs in indoor air is likely from indoor air sources and not vapor intrusion of contaminants from groundwater. Potential vapor intrusion of TCE at levels of concern was identified at two locations: 100 Veterans Boulevard, and 300 Ferry Boulevard. Based on the presence of TCE in indoor air samples collected at 411 Barnum Avenue Cut-Off (Sleepy's and Payless stores) and TCE in nearby groundwater, vapor intrusion may be occurring at these locations as well. However, consistently lower TCE concentrations (below comparison levels) in adjacent and nearby stores and in two of the

three Payless samples and the presence of several non-OU2 COCs in indoor air that are not detected in nearby groundwater or outdoor ambient air point toward a strong likelihood that most of the TCE detected in indoor air at the Sleepy's and Payless stores is the result of indoor air sources such as off-gassing of VOCs from the products sold. The vapor intrusion pathway evaluation concluded that vapor intrusion may be occurring at 411 Barnum Avenue Cut-Off (Sleepy's and Payless stores), but at levels that do not pose a human health risk.

- **Indoor Air Area of Concern –** The indoor air area of concern was refined based on the vapor intrusion pathway evaluation presented above and the 2009-2012 groundwater data. The incorporation and evaluation of data from the supplemental evaluations resulted in a decrease in the estimated extent of the indoor air area of concern for vapor intrusion previously defined in the RI Update. The estimated extent of the area of concern was decreased on the eastern side of the OU2 study area and slightly altered along the southwestern side of the area of concern. The revised indoor air area of concern is shown on Figure ES-1.

  Figure ES-1 identifies residences within the indoor air area of concern that currently have sub-slab depressurization (SSD) systems designed to mitigate vapor intrusion concerns, and those that do not have the systems. The SSD systems were installed by CTDEEP, with funding from EPA, in 2003 and 2004. Several homes within the updated indoor air area of concern shown on Figure ES-1 do not have SSD systems. Homes without SSD systems include those whose owners (or former owners) previously refused systems, those who removed their systems (2 properties), and one home constructed after the systems were installed in the area. Although the limits of the indoor air area of concern have been modified since the 2005 RI Report, the revised area does not encompass any additional residential properties. Several residential properties where SSD systems were installed are situated outside the revised boundaries of the indoor air area of concern.

Indoor Air Risks

Quantitative risk assessments were performed for the 21 properties where indoor air samples were collected during the supplemental investigations. The risk assessments calculated the total cancer and non-cancer risks for all detected contaminants in indoor air, and for the total of the

eight OU2 COCs detected. The calculated indoor air risks from OU2 COCs are likely to over-estimate the risks resulting from vapor intrusion of groundwater contaminants because inclusion as a groundwater COC does not preclude the presence of these contaminants from indoor air sources. As noted in the conclusions of the vapor intrusion pathway evaluation, the COCs detected in indoor air were often from indoor air sources and not from vapor intrusion of OU2 groundwater contaminants. The property-specific conclusions of the quantitative risk estimates based on the supplemental investigations indoor air data are summarized below. Table ES-1 presents a summary of the indoor air risk results, along with the conclusions of the vapor intrusion pathway evaluation.

- **Residential condominium complex southeast of the former Raymark facility –** Total cancer risks and total non-cancer hazard indices (HIs) exceeded risk thresholds of $1x10^{-4}$ (cancer risk) and HI of 1.0 at 72 Ferry Court, the westernmost of the residential buildings evaluated at the condominium complex southeast of the former Raymark facility. However, risks from VOCs identified as OU2 COCs were below the risk thresholds at this location. These risk thresholds were not exceeded at the other three condominium complex buildings evaluated.

- **500 Ferry Boulevard (Current Commercial Use, but Residential Zoning) –** Calculated non-cancer HIs were in excess of 1.0 for both residential and commercial exposures to indoor air at 500 Ferry Boulevard. However, HIs from VOCs identified as OU2 COCs were below 1.0 for both exposure scenarios.

- **Commercial/Industrial Properties –** The total cancer risks and/or non-cancer HIs were in excess of risk thresholds of $1x10^{-4}$ (cancer risk) and HI of 1.0 for commercial exposures at four of the 16 commercial/industrial locations evaluated (100 Veterans Boulevard, 300 Ferry Boulevard, and 411 Barnum Avenue Cut-off [Sleepy's and Payless]). However, risks from VOCs identified as OU2 COCs exceeded risk thresholds at only one location:

- **411 Barnum Avenue Cut-off (Sleepy's Mattress store) –** The non-cancer HI from VOCs identified as OU2 COCs slightly exceeded 1.0 at this location; TCE was the primary driver of the elevated organ-specific HI for the immune system.

Potential Vapor Intrusion Risks above Thresholds

Indoor air risk results were integrated with the conclusions of the vapor intrusion pathway evaluation to identify locations with risks above threshold levels resulting from potential vapor intrusion of OU2 COCs. Risks above threshold levels resulting from potential vapor intrusion of OU2 COCs exist where a potential for vapor intrusion above comparison levels has been identified (see the left side of Table ES-1) **AND** the calculated risk from VOCs identified as OU2 COCs exceeds acceptable risk thresholds (cancer risk exceeding $1x10^{-4}$ or an organ-specific HI exceeding 1). These conditions do not apply to any of the 21 properties where indoor air was sampled during the supplemental investigations.

Downhole Geophysical Survey of the former Raymark facility DNAPL Recovery Wells

The down-hole geophysical survey of the former Raymark facility NAPL recovery wells concluded that the recovery wells were in adequate condition for use in potential future remedial actions. Evidence of apparent DNAPL infiltration into two wells and biological activity in multiple wells was also observed.

1.0 INTRODUCTION

This report is an Addendum to the Remedial Investigation (RI) Update Report for the Raymark Industries, Inc. Superfund Site, Operable Unit (OU) 2 – Groundwater, located in Stratford, Fairfield County, Connecticut (Nobis, 2014) (the RI Update Report). The United States Environmental Protection Agency (EPA) conducted supplemental field investigations to 1) address data gaps identified in the RI Update Report, 2) evaluate potential indoor air risks from vapor intrusion of Raymark OU2 groundwater contaminants at commercial properties and a residential condominium complex southeast (downgradient) from the former Raymark facility, and 3) evaluate the condition of the dense non-aqueous phase liquid (DNAPL) recovery wells located on the former Raymark facility to determine their potential for use in any future remedial actions. This Addendum summarizes the field investigation objectives, methods, and results; provides an evaluation of the vapor intrusion pathway for the eight OU2 contaminants of concern (COCs) identified in the RI Update Report (1,1-DCA, 1,1-DCE, benzene, chlorobenzene, chloroform, ethylbenzene, TCE, and vinyl chloride); provides the results of the quantitative risk assessments performed for each of the 21 properties where indoor air sampling was performed during the supplemental field investigations; identifies risks above threshold levels resulting from potential vapor intrusion of OU2 COCs ; and presents the overall conclusions of the RI Update supplemental investigations.

Risks above threshold levels resulting from potential vapor intrusion of OU2 COCs are identified via the following stepwise process:

1. Evaluation of the vapor intrusion pathway at each location sampled for the OU2 COCs;

    a. Groundwater, soil gas, and indoor air at each location are compared to media-specific comparison levels based on $1x10^{-6}$ cancer risks and hazard quotients (HQs) of 1.0.

    b. Indoor air data for each property are compared to other indoor air results from the same property (from different areas and/or dates), sub-slab soil gas data, nearby groundwater data, outdoor ambient air data representing background outdoor air, and measured background indoor air concentrations for residences in North America (EPA, 2011).

c. Potential indoor air sources are also considered on a property-specific basis.

d. The evaluation identifies properties where the lines of evidence indicate vapor intrusion may be occurring above comparison levels based on where contaminants were detected in either shallow groundwater and/or sub-slab soil gas above comparison levels and detected in indoor air above comparison levels and background levels, with consideration of potential indoor air sources.

2. Calculation of indoor air risks

   a. Total risks calculated from all detected contaminants in indoor air at each location sampled;
   b. Total risks calculated from OU2 COCs detected in indoor air at each location sampled;

3. Integration of the results of the vapor intrusion pathway evaluation and the indoor air risk calculations to determine if risks above threshold levels resulting from potential vapor intrusion of OU2 COCs exist. Risks above threshold levels resulting from potential vapor intrusion of OU2 COCs are identified at locations where:

   a. The vapor intrusion pathway evaluation identifies potential vapor intrusion above comparison levels AND
   b. Indoor air risks from OU2 COCs exceed $1x10^{-4}$ or an organ-specific hazard index (HI) of 1.0.

2.0 SUPPLEMENTAL FIELD INVESTIGATIONS

The supplemental field investigations were performed in 2012 and 2013 and included the following elements:

- soil boring and monitoring well installation and soil and groundwater sampling for evaluation of nature and extent of shallow contamination southeast of the former Raymark facility;

- groundwater sampling at existing and new wells for vapor intrusion pathway evaluation;

- sub-slab soil gas and indoor air sampling at commercial and residential properties for vapor intrusion pathway evaluation and indoor air risk calculations; and

- downhole geophysical survey of the former Raymark facility DNAPL recovery wells to evaluate their condition and potential for potential future use in a cleanup remedy.

The following subsections describe the field investigations. An evaluation of the sampling data is presented in Section 3.0. Figure 1 depicts the groundwater monitoring wells and DNAPL recovery wells included in the investigation. Figure 2 depicts the sub-slab soil gas and indoor air locations that were sampled in the supplemental investigations as well as previously sampled soil gas monitoring wells.

2.1 Soil Boring and Monitoring Well Installation and Soil Sampling

In April 2012, five new soil borings and associated monitoring wells (SB/MW-601, SB/MW-602, SB/MW-603, SB/MW-604S, and SB/MW-604D) were installed in a residential area southeast of the former Raymark facility, east of the previously defined residential indoor air area of concern in order to better define the nature and extent of shallow contamination. Boring Logs are presented in Appendix A. Three of these borings/monitoring wells (MW-601, MW-602, and MW-603) were located in the vicinity of a residential condominium complex southeast of the former Raymark facility and two borings/monitoring wells (MW-604S and MW-604D) were installed farther northeast, at the intersection of Orchard Street and Housatonic Avenue Extension. See Figure 1 for locations.

Four boreholes were drilled to a depth of eighteen feet and one borehole (MW-604D) was drilled to depth of forty feet using the drive and wash drilling method. Continuous soil sampling from the ground surface to the bottom of the boring was performed at each boring location using a 2-inch split-spoon sampler; at the MW-604 well cluster, soil sampling was performed only in the deeper borehole. Soil samples were field screened for volatile organic compounds (VOCs) using a photoionization detector (PID) and logged for geology/stratigraphy. Elevated PID readings and petroleum odor were noted at SB-604D, at a depth of 8 to 10 feet below ground surface (bgs). Monitoring wells MW-604S and MW-604D are located immediately downgradient of a gasoline

station at 734 Ferry Boulevard where gasoline contamination has been identified in soil and groundwater (CTDEEP, 2014 and Geosciences, 2013).

Two soil samples were collected from each of four borings (eight samples plus one duplicate from MW-601, MW-602, MW-603, and MW-604D) and sent to the EPA New England Regional Laboratory (NERL) for asbestos, VOCs, semi-volatile organic compounds (SVOCs), pesticides, PCBs, metals, and cyanide analyses. Two of the eight samples were also tested for dioxins/furans. No soil samples were collected from MW-604S.

Four shallow monitoring wells (MW-601, MW-602, MW-603, and MW-604S) were installed in the 18 feet deep boreholes, screened across the water table. One deep monitoring well (MW-604D) was installed, screened from 30-40 feet bgs. Each monitoring well was developed following installation using pump and surge techniques to ensure hydraulic connection with the aquifer. The monitoring wells were sampled in April and August, as described in Section 2.2.

2.2 Groundwater Sampling for Vapor Intrusion Pathway Evaluation

Groundwater sampling to support the vapor intrusion pathway evaluations was performed during three sampling events in February, April, and August 2012. These sampling events are described below.

February 2012

Groundwater samples were collected from 11 existing groundwater monitoring wells as part of the February 2012 vapor intrusion (VI) evaluations. The samples were collected at select locations within the OU2 study area in accordance with the Quality Assurance Project Plan, Revision 1 (Nobis, March 2012). Sample locations were selected for their proximity to the buildings where sub-slab and indoor air samples were to be collected simultaneously. Groundwater sample locations are listed below; the associated air investigation is described in subsection 2.3.

February 2012 Groundwater Sampling Locations

Well Identification	Date Sampled
MW-514S	02-13-2012
MW-529S	02-14-2012
MW-111S	02-14-2012
MW-520S	02-14-2012
MW-527S	02-15-2012
MW-519S	02-15-2012
MW-210S	02-15-2012
MW-513S	02-15-2012
MW-209S	02-16-2012
MW-502S	02-16-2012
MW-504S	02-16-2012

Groundwater sampling was performed in accordance with the EPA Region 1 procedure for *Low Stress (Low Flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells, Revision 2* (EPA, 2010). Groundwater samples collected from the eleven monitoring wells were analyzed for VOCs using both field- and fixed-laboratory analysis. The samples were analyzed in the EPA Mobile Field Laboratory for a short list of VOCs: 1,1,1-Trichloroethane (1,1,1-TCA), 1,1-Dichloroethene (1,1-DCE), cis-1,2-Dichloroethene (cis-1,2-DCE), Tetrachloroethene (PCE), and Trichloroethene (TCE). The samples were analyzed for a more expansive list of VOCs by the EPA New England Regional Laboratory (NERL) in Chelmsford, Massachusetts.

April 2012

Five new monitoring wells (MW-601, MW-602, MW-603, MW-604S, and MW-604D) were installed in April, as described in Section 2.1. The monitoring wells were sampled, approximately one week after well development. Sampling was performed using low-flow sampling and samples were analyzed for VOCs, SVOCs, pesticides, polychlorinated biphenyls (PCBs), metals, cyanide, anions (chloride, sulfate, nitrate, and nitrite), and natural attenuation parameters (alkalinity, ferrous iron, and dissolved gases [methane, ethane, ethene, and carbon dioxide]).

August 2012

A second round of groundwater samples from the five groundwater monitoring wells installed in April 2012 (MW-601, MW-602, MW-603, MW-604S, and MW-604D) was collected as part of the VI evaluations in August. Groundwater samples were analyzed for VOCs only.

Table 1 presents the groundwater sampling data from all three sampling events. Table 2 provides a statistical data summary of 2012 groundwater sampling VOC results.

2.3 Sub-slab Soil Gas and Indoor Air Sampling

Sub-slab soil gas and indoor air sampling was performed by EPA during three sampling events in February and August 2012 and December 2013 to support the vapor intrusion pathway evaluation and indoor air risk assessment. These sampling events are described below.

February 2012

EPA performed indoor air sampling and, where feasible, sub-slab soil gas sampling inside nine commercial buildings and three residential condominiums in February 2012. One of the commercial buildings evaluated (411 Barnum Avenue Cut-Off) contains several individual retail stores that were sampled for indoor air only. Collection of sub-slab soil gas samples was not feasible at this location because the building construction (slab on grade, with 8 to 10 inch thick slab, finished floors) and active retail operations made sub-slab sampling impractical. Collection of sub-slab soil gas samples was also not feasible at 326 Ferry Boulevard because of building construction (slab-on-grade foundation resting on driven piles with a small inaccessible crawl space between the slab-on-grade foundation and the building floor). Details on the sampling, including sampling techniques, sample locations, and analytical results are presented in the Commercial Properties Indoor Air Soil Vapor Intrusion Study Report, Raymark Site, OU2 – February 2012 (EPA, April 2012) included as Appendix B-1 to this report.

August 2012

During August 2012, EPA performed a second round of indoor air sampling and, where feasible, sub-slab soil gas sampling inside the same commercial and residential buildings sampled in February and one additional residential condominium complex building. Details on the sampling,

including sampling techniques, sample locations, and analytical results are presented in the Commercial Properties Indoor Air Soil Vapor Intrusion Study Report, Raymark Site, OU-2 – August 2012 (EPA, August 2012) included as Appendix B-2 to this report.

December 2013

In December 2013, EPA performed a third round of indoor air sampling and sub-slab soil gas sampling at one of the commercial properties sampled during the prior events (335 Ferry Boulevard). Details on the sampling, including sampling techniques, sample locations, and analytical results are presented in the 335 Ferry Boulevard Indoor Air Soil Vapor Intrusion Study Report, Raymark Site, OU-2 – December 2013 (EPA, December 2013) included as Appendix B-3 to this report.

Discussion of the results from this supplemental sampling is included in Section 3.0. Tables 3 and 4 present the sub-slab soil gas and indoor air sampling results.

2.4 Downhole Geophysical Survey of DNAPL Recovery Wells

In February, Nobis oversaw Hager GeoScience, Inc. (HGI) perform downhole inspections of the five DNAPL Recovery Wells (RW) on the former Raymark facility. This investigation was conducted to assess the condition of the well casing and screened intervals to evaluate the potential for future use of the wells. Specialized equipment was advanced down each recovery well to visually and acoustically inspect the casing and well screens, to assess possible locations of DNAPL infiltration into the wells, and to determine the general condition of the wells. Equipment utilized during the inspection included a combination of a 3-arm caliper to obtain diameter measurements, acoustic televiewer (ATV), optical televiewer (OTV) (only used at RW-2), and video camera. Appendix C includes the Geophysical Investigation Report, with ATV, OTV, and video logs; video files are provided in Appendix C-2 (in separate files). The following general observations can be made based on the results of the survey:

- In general, the wells were in good condition, with the exception of a constriction in RW-6 where the top of the screen is bent inward resulting in a reduction of the diameter of the well by about 2-inches (from 6 to approximately 4-inches).

- Evidence of biological activity (i.e., biological floc) was observed suspended in the well water and attached to the well screens. In some cases, the well screen was completely obscured by the biological growth. Although recovery well VOC sampling was not conducted, the amount of biological activity appears to be positively correlated with the amount of contamination likely present in each well (based on historical sampling).

- Evidence of apparent DNAPL infiltration into RW-3 and RW-6 was observed.

Additional details regarding the results of the survey are provided below for each DNAPL recovery well (RW-1 to RW-6; RW-4 was planned but never installed on the site).

RW-1 Geophysical Survey Results

The condition of casing and screens in RW-1 is very good. This well is the least contaminated of the five wells and is in the best condition. RW-1 has the cleanest casing and well screen, with most of the slotted interval still open. With the exception of a possible casing defect at 37 feet bgs, the ATV did not show any areas of thinning or large-scale casing or screen deterioration.

Based on the video, very little foreign material is coming through the slots, and coarse-grained material can be seen behind the screen. All of the joints within the well are in good condition with only some minor buildup of sediment on the protruding edges. The most notable feature of RW-1 is a visible change in fluid density in the sump at the bottom of the well. An accumulation of sediment and dense liquid is observed in the sump. Some casing pitting is noticeable in the sump.

Upon removal of the video camera from the well, a red/orange coating was observed on the surface of the camera light. This material appeared to be iron oxide from the formation that was mobilized into the well.

RW-2 Geophysical Survey Results

The solid casing in RW-2 extends only 15 feet into the well and is above the water level. The casing is in very good condition, but the screened interval is less so. The screen is in good condition to a depth of approximately 22 feet bgs (elev. 4.35’). Below 22 feet, flocking fills and coats the screen. The buildup varies in density, but at times completely covers the screen. However, it does not adhere to the joints between sections of screen. The joints appear to be in

good condition except for some dark staining that may be due to a chemical reaction between the steel and contaminants in the water.

The flocking disturbed by the video camera was readily detached from the screen and can be seen settling to the bottom of the hole. The accumulated sediment in the sump prevented its visual inspection by the camera. Based on depths measured by the caliper probe, the bottom of the sump is 57 feet bgs (elev. -31). ATV data show potential casing deterioration in the sump along with an increase in fluid velocity at the sump.

RW-3 Geophysical Survey Results

Historical data indicates that RW-3 contains the highest level of DNAPL and other chemicals compared to the other recovery wells. The solid casing in RW-3 extends 11.6 feet into the well and ends above the water level. It is in very good condition. The screen above the water table is also in good condition, with open slots, but is coated with dark material. The water in the upper portion on the well is very cloudy but improves in clarity with depth, most notably at 50 feet bgs (elev. -24.5').

Below the water level, the screened interval is almost totally covered with a dark material (likely DNAPL) with lighter material on the screen surface (likely biological material). The thickness of this material appears to increase with depth to approximately 38 feet bgs (elev. -12.5). At approximately 49 feet, the light material appears to change texture (finer grained) possibly indicating a different biological population or a combination of biological material and inorganic material. Similar to RW-2, the joints in RW-3 are free of flocking, but show black staining. The joints appear to be in good condition.

The video log identified a few areas where DNAPL appears to be entering the well through the screen (45.1, 56, and 58.5 feet below ground surface) and is probably the source of the dark staining on the exposed metal surfaces and of flocking covering the screen.

ATV data show a variable and increased thickness of the screened intervals. This is probably the response to the combined thickness of the DNAPL and the original screen (and well packing). The screen thickness variations measured by the ATV appear to increase with depth and correlate with changes in thickness and composition of the surface buildup observed in the video log.

Water clarity increases at about 50 feet bgs (elev. -24'). Fine suspended particles are replaced by larger pieces of flocking. This material remains generally in suspension and does not accumulate in the bottom of the well. The screened interval ends at the sump, approximately 61 feet bgs (elev. -35.5'). The solid casing at the bottom of the well shows dark staining and possible pitting is observable in the sump. The ATV data suggest deterioration of the exterior surface of the solid steel casing.

RW-5 Geophysical Survey Results

The solid casing at the top of RW-5 is in good condition, and casing exposed to the air is free of staining or pitting. Below the water level, the casing has a tan-colored coating that increases in thickness down to the top of the screen. The screened interval appears to be in good condition from 27 to 48 feet bgs (elev. -2.75 and -23.75), where slot openings are still visible. Below 48 feet bgs, the screen and joints are covered with flocking and are no longer visible. As with RW-3, variable and increased thickness measured by the ATV probe along isolated sections of the screened interval is probably caused by the combined thickness of the surface buildup and original screen (and well packing).

Water turbidity is high near the top of the water column, but quickly decreases below 47 feet. The change in water clarity is also reflected by changes in the fluid velocity logs. The video log ends at the sump due to the accumulated flocking. Well records indicate that the sump consists of a 5-foot section of solid casing starting just below the screen at approximately 110.5 feet bgs (elev. -86.25'). Approximately 2.5 feet of the sump were imaged by the caliper and ATV probes. The video camera reached only 108.5 feet. Variable thickness of the solid casing interval measured by the ATV probe may indicate possible casing deterioration and a thick accumulation of muck on the casing wall.

RW-6 Geophysical Survey Results

The solid casing extends 16.8 feet into the well and is completely above the water level. The top of the screened interval is heavily damaged below the first joint with the solid casing. The screen is bent inward into the well, reducing the diameter by about 2 inches (to about 4 inches), but still appears to be attached to the joint. The screen is clean of debris or flocking above the water level

(elev. 5.95'), but appears to be completely covered by a film of flocking material from 2 feet below the water table to the bottom of the well.

Unlike in the other wells, the flocking in RW-6 appears in two different forms: a tan-colored less dense flocking (likely biological) and a dark fine-grained more dense flocking that may contain tan material at its core (possibly suspended DNAPL). The color of the darker material is similar to that of the chemical staining covering the joints and exposed steel casing in the other wells.

Similar to the ATV data for RW-3 and RW-5, increased variable thickness measured by the ATV probe along isolated sections of the screened interval is probably the response to the combined thickness of the surface buildup and original screen (and well packing). The joint at 36 feet bgs (elev. -10.75) is clear of any light flocking, but shows dark staining. The video shows possible DNAPL penetrating the flocking at 55.8', directly above the sump. The dark staining may indicate that DNAPL is making its way through the screen more at this location than elsewhere in the well.

A noticeable change in water density and clarity were observed at approximately 50 feet bgs (elev. -24.75'). A second change occurs at 54.4 feet, where a change in color was observed. Below 50 feet bgs, the flocking is less thick and the staining less prevalent on the screen's vertical bars. The sump casing shows black staining below 55.5 feet (elev. -30.25'), but the video log shows that most of the casing appears to be in good condition. The ATV data shows an increase in the casing thickness along the bottom 6 inches, suggesting deterioration on the outer surface. The sump has a hard bottom and is partially filled with a dense liquid that did not disperse when disturbed by the video camera.

3.0 DATA SUMMARY: SUPPLEMENTAL GROUNDWATER, SOIL GAS, INDOOR AIR, AND SOIL

The following subsections present a summary evaluation of groundwater, soil gas, indoor air, and soil data collected during supplemental field investigations.

3.1 Data Summary: Groundwater

This section summarizes the groundwater analytical results collected during the field investigations and updates the understanding of contamination in shallow groundwater. The groundwater investigation was designed to fill groundwater data gaps in the area of a residential

condominium complex southeast of the former Raymark facility just outside the previously identified indoor air area of concern and to support the evaluation of potential vapor intrusion in this area and at commercial/industrial buildings within the indoor air area of concern.

Figure 1 depicts the 16 groundwater monitoring wells that were sampled, including 5 new wells installed on the eastern side of the indoor air area of concern and 11 previously sampled shallow groundwater wells. Table 1 presents individual well groundwater data from the supplemental sampling rounds for all the contaminants analyzed.

The groundwater analytical results were compared to: 1) residential 2014 adjusted vapor intrusion screening levels (groundwater concentration screening levels based on residential indoor air risks corresponding to a hazard quotient (HQ) of 0.1 and cancer risks of 1×10^{-6} (Appendix D-1)); 2) industrial/commercial 2014 adjusted vapor intrusion screening levels (groundwater concentration screening levels based on industrial/commercial indoor air risks corresponding to a HQ of 0.1 and cancer risks of 1×10^{-6} (Appendix D-2)); and 3) State of Connecticut Remediation Standard Regulations (RSRs) Groundwater Surface Water Protection Criteria (SWPC) (CTDEEP, 2013). The 2014 adjusted vapor intrusion screening levels presented in Appendix D were developed using EPA's Vapor Intrusion Screening Level (VISL) Calculator version 3.3.1 (EPA, 2014b). This version utilized the May 2014 EPA Regional Screening Levels (RSLs) for indoor air as the target indoor air concentrations. The EPA RSLs were updated in January 2015 (EPA, 2015b); however, no changes were made to the RSLs for indoor air. The Appendix D adjusted vapor intrusion screening levels are therefore consistent with the January 2015 RSLs for indoor air.

The following sections describe the groundwater data in greater detail.

3.1.1 Volatile Organic Compounds (VOCs) in Groundwater

VOCs are the primary groundwater contaminants. The RI Update Report identified 1,1-DCA, 1,1-DCE, TCE, vinyl chloride, benzene, chlorobenzene, chloroform, and ethylbenzene as contaminants of concern (COCs) for groundwater. Table 2 provides a statistical data summary of supplemental groundwater sampling VOC results, including the frequency of detection and frequency of exceedances of comparison criteria. The table summarizes the analytical results and shows the range of detected concentrations and the average concentrations for detected

compounds. Exceedances of the vapor intrusion screening levels and SWPC are described below.

Twenty-four groundwater samples were analyzed for VOCs. As shown on Table 2, the concentrations of ten VOCs (1,1,1-TCA, 1,1-dichloroethane [1,1-DCA], 1,1-DCE, benzene, chlorobenzene, ethylbenzene, m,p-xylenes, methyl tert-butyl ether [MTBE], TCE, and vinyl chloride) exceeded the residential vapor intrusion screening levels in at least one groundwater sample collected during the supplemental sampling. Discussion of the results is presented below in two subsections: the new monitoring wells installed in 2012 in the residential area just outside the indoor air area of concern; and the existing wells located near commercial/industrial properties located within the indoor air area of concern.

Groundwater Sample Results from the Wells Installed in 2012

The 2012 wells were installed in two areas: within a residential condominium complex southeast of the former Raymark facility (MW-601, MW-602, MW-603) and farther northeast at the intersection of Orchard Street and Housatonic Avenue Extension (MW-604S and MW-604D). The sampling results from these wells are discussed below. See Table 1 for the individual well results and Figure 1 for well locations.

Three VOCs (chlorobenzene, MTBE, and 1,1-DCA) were detected in groundwater from the wells within the condominium complex. These VOCs were detected at MW-602 at concentrations below the groundwater residential vapor intrusion screening levels. Chlorobenzene and MTBE were detected in samples from MW-603, both at concentrations greater than the screening level based on an HQ of 0.1 but less than comparison levels equating to an HQ of 1.0. No VOCs were detected in MW-601, the southernmost well in the group. Chlorobenzene and 1,1-DCA have been identified as Raymark OU2 COCs for groundwater; MTBE is not an OU2 COC.

Five VOCs (benzene, chlorobenzene, ethylbenzene, MTBE, and m,p-xylenes) were detected at concentrations exceeding the residential adjusted vapor intrusion screening levels in the wells installed farther northeast, at the intersection of Orchard Street and Housatonic Avenue Extension (MW-604S and MW-604D). Three of these VOCs (benzene, chlorobenzene, and ethylbenzene) have been identified as OU2 COCs because of their presence in OU2 shallow groundwater at concentrations that pose a potential vapor intrusion concern.

Based on the location and magnitude of detections of these VOCs in groundwater at and downgradient from the former Raymark facility and on the groundwater flow patterns, only the chlorobenzene detected in MW-604S and MW-604D appears to be Site-related (it appears to have migrated from a source located on the east side of the former Raymark facility property). The chlorobenzene concentration detected in this well is greater than the vapor intrusion screening level based on an HQ of 0.1 but is less than the comparison level equating to an HQ of 1.0.

The benzene, ethylbenzene, and MTBE detected in MW-604S and the MTBE detected in MW-604D appear to be from a source downgradient of the former Raymark facility, likely from release(s) of gasoline and possibly other petroleum products. This conclusion is supported by the location of the MW-604 well cluster immediately south and downgradient of an active gasoline service station (at 734 Ferry Boulevard); observation of petroleum odors in soils collected from approximately 8 to 10 ft bgs at MW-604D during drilling; the detection of several gasoline-related compounds (benzene, ethylbenzene, m,p-xylenes, o-xylenes, and propylbenzene) in groundwater in shallow well MW-604S, but not in deeper well MW-604D, which is indicative of a nearby shallow source; and the detection of MTBE, a gasoline additive, in both MW-604S and MW-604D, with the higher concentrations in the shallow well, also indicative of a shallow source. CT DEEP conducted a Limited Subsurface Investigation at 734 Ferry Boulevard (CT DEEP, 2014), which concluded that “Based on the analytical results from soil and groundwater samples collected in the vicinity of the site’s gasoline underground storage tank grave, it appears likely that a source of gasoline contamination exists on-site.” MTBE is highly soluble in water, migrates more rapidly in groundwater than other gasoline constituents, and is more resistant to biodegradation than other gasoline constituents are. As a result, MTBE tends to migrate farther and persist longer than other gasoline constituents. The presence of MTBE in MW-604S and MW-604D may result from releases at the nearby gasoline station, where it was detected in the car storage area adjacent to MW-604S/D; however, it may also be from a separate upgradient source impacting both MW-603 and MW-604S/D.

TCE, vinyl chloride, and chloroform were not detected in groundwater from the wells within the condominium complex or the wells farther northeast, on Orchard Street. However, the non-detect results do not completely rule out the presence of these OU2 COCs at concentrations above levels of concern for vapor intrusion because the detection limits for these compounds in groundwater samples from these wells exceeded the vapor intrusion screening levels based on

HQ of 0.1 and cancer risks of 1 x 10^{-6}. (Detection limits in samples from MW-601, MW-602, and the August 2012 results from MW-604S slightly exceeded these screening levels, whereas the detection limits in samples from MW-603 and MW-604D significantly exceeded these screening levels and thus present greater uncertainty. The detection limits for TCE in samples from MW-601, MW-602, and MW-604S (August) did not exceed comparison levels based on HQ of 1.0 and cancer risks of 1 x 10^{-6}.)

Groundwater Sampling Results from Existing (Shallow) Monitoring Wells

VOC concentrations detected in samples from the 11 existing shallow wells sampled are generally consistent with or slightly lower than the concentrations detected during earlier sampling rounds. Six VOCs (1,1,1-TCA, 1,1-DCA, 1,1-DCE, chlorobenzene, TCE, and vinyl chloride) were detected at concentrations that exceeded the residential vapor intrusion screening levels; however, these wells are located adjacent to commercial properties. Concentrations of four of the VOCs (1,1-DCA, 1,1-DCE, TCE, and vinyl chloride) also exceeded industrial/commercial vapor intrusion screening levels. The most prevalent exceedances of the industrial/commercial vapor intrusion screening levels are TCE and vinyl chloride, with TCE exceeding the screening levels in five wells and vinyl chloride exceeding the screening levels in six wells. Only 1,1-DCE exceeded Connecticut's SWPC, at wells MW-513S and MW-520S.

Figures 3 through 5 present the estimated extent of the indoor air areas of concern based on 2009-2012 groundwater data. These figures were developed based on the presence of COCs, including 1,1-DCA, 1,1-DCE, benzene, chlorobenzene, chloroform, ethylbenzene, TCE, and vinyl chloride, in shallow groundwater at concentrations exceeding a range of vapor intrusion comparison levels. The figures depict the estimated areas of concern based on varying levels of cancer risk (from $1x10^{-4}$ to $1x10^{-6}$) and a HQ of 1.0. These figures are revised versions of Figures 6-1 through 6-3 of the RI Update Report, adjusted to incorporate the supplemental shallow groundwater sampling results. The supplemental data have provided more certainty to the northeastern side of the indoor air areas of concern, indicating that the OU2 shallow VOC groundwater plume does not appear to extend beneath the residential condominium complex southeast of the former Raymark facility. The revised residential indoor air area of concern based on COC $1x10^{-6}$ cancer risks levels and HQs of 1.0 (Figure 5) extends to the northwestern side of the condominium complex, rather than into the middle of the complex as indicated on Figure 6-3 of the RI Update Report.

Isolated areas of contamination southeast of the former Raymark facility along Orchard Street and between Ferry Boulevard and Route 1 are shown on the figures (indicated by dashed lines). The above discussion of contamination at MW-604S and previous investigations of results from MW-203 have concluded that these areas are isolated detections, which are not contiguous with the OU2 VOC plume (see RI Update Section 4.1.3 and Figure 6-3); therefore these areas are not considered to be part of the indoor air areas of concern.

3.1.2 Non-VOCs in Groundwater

Groundwater samples were collected and analyzed for SVOCs, metals, pesticides, and PCBs from the five new monitoring wells: four shallow wells (MW-601, MW-602, MW-603, and MW-604S) and one deep well (MW-604D). The types and distribution of non-VOCs in these groundwater samples are presented below. Table 1 provides the analytical results for contaminants detected in the supplemental groundwater sampling. No figures are presented for non-VOCs.

SVOCs

The only SVOC detected in the supplemental groundwater samples was naphthalene, which was detected in a single well (MW-604S) at a concentration slightly exceeding the residential vapor intrusion screening level based on a cancer risk level of $1x10^{-6}$ and HQ of 0.1. Naphthalene has not been identified as an OU2 COC.

Pesticides and PCBs

No pesticides or PCBs were detected in the supplemental groundwater samples.

Metals

Several metals were detected in the supplemental groundwater samples; however, no metals were detected at concentrations exceeding CT SWPC.

3.2 Data Summary: Soil Gas

This evaluation of the soil gas VOCs data is based on the data collected from sub-slab soil gas and indoor air sampling efforts in the supplemental investigations. The purpose of the EPA sampling was to evaluate the extent of VOC contamination in soil gas and indoor air at commercial/industrial buildings, to fill gaps in sampling at residential areas southeast of the former Raymark facility, and provide multiple lines of evidence for a vapor intrusion pathway evaluation at these locations.

In February and August 2012, sub-slab soil gas samples were collected from areas beneath six commercial buildings and three residential condominium complex buildings. The August 2012 sampling round included sampling beneath one additional residential condominium complex building. In December 2013, sub-slab soil gas samples were collected from beneath one of the commercial buildings sampled during the prior events (335 Ferry Boulevard). The December 2013 sampling was performed to evaluate conditions at the property following a change in building usage (the portion of the building formerly occupied by Curtin Taxi, where high concentrations of TCE had been detected previously, became vacant).

Samples were analyzed for selected VOCs (1,1,1-TCA, 1,1-DCE, PCE, and TCE) at an on-site EPA mobile laboratory and confirmation samples were analyzed using EPA Method TO-15 for VOCs at the EPA NERL fixed laboratory. Only confirmation samples are discussed in this evaluation and the associated figures and tables. Figure 2 shows locations for sub-slab soil gas sampling. Table 3 presents the sub-slab soil gas sampling EPA fixed laboratory results. VOCs exceeding EPA's residential 2014 adjusted vapor intrusion screening levels for sub-slab soil gas based on $1x10^{-6}$ cancer risks levels and HQs of 0.1 (Appendix D-1) are described below.

Twenty-nine VOCs were detected in sub-slab soil gas. Eight VOCs (1,1-DCA, 1,1-DCE, benzene, chloroform, dichlorodifluoromethane, trans-1,2-DCE, TCE, and vinyl chloride) were detected at concentrations exceeding residential 2014 vapor intrusion screening levels for sub-slab soil gas based on $1x10^{-6}$ cancer risks levels and HQs of 0.1; however, only chloroform exceeded these residential screening levels at a residential property (82 Ferry Court, the southernmost of the residential condominium complex buildings sampled). 1,1-DCA, 1,1-DCE, chloroform, dichlorodifluoromethane, TCE, and vinyl chloride were each detected in sub-slab soil gas at one or more industrial/commercial properties at concentrations exceeding industrial/commercial 2014

vapor intrusion screening levels for sub-slab soil gas based on $1x10^{-6}$ cancer risks levels and HQs of 0.1 (Appendix D-2).

Figures 6 and 7 present soil gas plume maps for TCE and 1,1-DCE, respectively. These figures are revised versions of Figures 4-12 and 4-13 of the RI Update Report and have been updated to incorporate the supplemental sub-slab soil gas sampling results. Residential Comparison Levels shown on the figures are based on $1x10^{-5}$ cancer risks levels and HQs of 1.0. As shown on Figure 6, TCE concentrations in soil gas are greatest along Ferry Boulevard, just northeast of the residential areas. Sub-slab soil gas sampling indicates concentrations below the Residential Comparison Levels based on $1x10^{-5}$ cancer risks levels beneath the residential condominium complex southeast of the former Raymark facility. As shown on Figure 7, 1,1-DCE concentrations in soil gas are greatest along Ferry Boulevard, but all soil gas concentrations are below Residential Comparison Levels based on HQs of 1.0.

3.3 Data Summary: Indoor Air

This evaluation of the indoor air VOCs data is based on the data collected during EPA's supplemental sub-slab soil gas and indoor air sampling efforts described above. In February and August 2012, indoor air samples were collected from nine commercial buildings and three residential condominium complex buildings. The August sampling round also included sampling at one additional residential condominium complex building. In December 2013, indoor air samples were collected from one of the commercial buildings sampled during the prior events (335 Ferry Boulevard). The December 2013 sampling was performed to evaluate conditions at the property following a change in building usage (the portion of the building formerly occupied by Curtin Taxi became vacant).

Samples were analyzed for selected VOCs (1,1,1-TCA, 1,1-DCE, PCE, and TCE) at an on-site EPA mobile laboratory, and confirmation samples were analyzed using EPA Method TO-15 for VOCs at the EPA NERL. Only the confirmation samples are discussed in this evaluation. Figure 2 shows locations for indoor air sampling. Table 4 presents the supplemental indoor air sampling EPA results.

Outdoor ambient air samples were collected during each day of indoor air sampling to represent background outdoor air conditions.

Numerous VOCs were detected in indoor air samples. VOCs exceeding EPA's residential 2015 RSLs for indoor air based on $1x10^{-6}$ cancer risks levels and HQs of 0.1 (Appendix D-1) are described below.

At residential properties, 13 VOCs (1,2-DCA, 1,2,4-trichlorobenzene, 1,2,4-trimethylbenzene, 1,3-butadiene, 1,4-dichlorobenzene, acrylonitrile, benzene, bromodichloromethane, carbon tetrachloride, chloroform, ethylbenzene, methylene chloride, and/or TCE) were detected in indoor air at concentrations exceeding residential screening levels for indoor air based on $1x10^{-6}$ cancer risks levels and HQs of 0.1 in at least one location. Only four of the 13 VOCs (benzene, chloroform, ethylbenzene, and TCE) have been identified as Raymark OU2 COCs based on potential health risks from vapor intrusion.

Thirteen VOCs (1,2-DCA, 1,2-dichloropropane, 1,2,4-trimethylbenzene, 1,3-butadiene, 1,4-dichlorobenzene, acrylonitrile, benzene, chloroform, dichlorodifluoromethane, ethylbenzene, m,p-xylene, toluene, and/or TCE) were detected at concentrations exceeding industrial/commercial RSLs for indoor air based on $1x10^{-6}$ cancer risks levels and HQs of 0.1 (Appendix D-2) at one or more industrial/commercial property. Only four of these VOCS (benzene, chloroform, ethylbenzene, and TCE) have been identified as OU2 COCs based on potential health risks from vapor intrusion impacts.

Because a significant indoor air source of TCE was observed in a supply room during sampling at 335 Ferry Boulevard (an open jar of a universal cement containing TCE), this property was re-sampled in 2013 after the portion of the building formerly occupied by Curtin Taxi became vacant. TCE was not detected in indoor air during the 2013 sampling event.

3.4 Data Summary: Soil

Soil sampling was performed at four of the five groundwater monitoring well borings installed in 2012 for evaluation of potential groundwater contamination east of the previously identified indoor air area of concern. Soil samples were collected from MW-601, MW-602, MW-603, and MW-604D. Table 5 presents soil sampling results.

None of the eight VOCs identified as Raymark OU2 COCs (1,1-DCA, 1,1-DCE, benzene, chlorobenzene, chloroform, ethylbenzene, TCE, and vinyl chloride) were detected in soil samples collected at these locations. Bromomethane was the only VOC or SVOC detected. Arsenic was detected in one soil sample collected from a depth of 6 to 10 feet bgs. The arsenic concentration in this sample exceeded the CT RSR for residential soils Direct Exposure Criteria (DEC). No other CT RSR DEC was exceeded. No soil samples exceeded CT RSR Pollutant Mobility Criteria.

None of the soil samples met the definition of "Raymark Waste". "Raymark Waste" has been defined during past investigations as "*a single soil sample at the same depth interval containing lead above 400 mg/kg and asbestos [chrysotile only] greater than 1 percent and either PCBs [Aroclor 1268 only] above 1 mg/kg, or copper above 288 mg/kg"*. See the RI for Raymark OU6 (Additional Properties) (TtNUS 2005) for additional discussion of the delineation of "Raymark Waste".

4.0 VAPOR INTRUSION PATHWAY EVALUATION

This section presents the methods and conclusions of the vapor intrusion pathway evaluation that was performed by considering the shallow groundwater, soil gas, indoor air, and outdoor ambient air data for the OU2 COCs (1,1-DCA, 1,1-DCE, benzene, chlorobenzene, chloroform, ethylbenzene, TCE, and vinyl chloride) at each location included in the vapor intrusion investigation. Several Non-COCs were also detected at various locations (see Sections 3.1 through 3.3); however, this vapor intrusion pathway evaluation focuses on OU2 COCs in order to evaluate potential vapor intrusion impacts from the Raymark Site.

The evaluation of the vapor intrusion pathway included:

- Comparison of groundwater, soil gas, and indoor air at each location to media-specific comparison levels based on $1x10^{-6}$ cancer risks and hazard quotients (HQs) of 1.0.

- Comparison of indoor air results for each property to other indoor air results from the same property (from different areas and/or dates), sub-slab soil gas data, nearby groundwater data, outdoor ambient air results representing background outdoor air, and measured background indoor air concentrations for residences in North America (EPA, 2011).

- Consideration of potential indoor air sources on a property-specific basis.

- Identification of properties where the lines of evidence indicate vapor intrusion may be occurring above comparison levels, based on where contaminants were detected in either shallow groundwater and/or sub-slab soil gas above comparison levels and detected in indoor air above comparison levels and background levels, with consideration of potential indoor air sources.

Table 6 presents the results of the supplemental groundwater, soil gas, indoor air, and outdoor ambient air sampling by property, with comparisons to media-specific comparison levels based on $1x10^{-6}$ cancer risks and HQs of 1.0. Appendices D-3 and D-4 present supporting documentation for the development of the comparison levels for residential and industrial/commercial scenarios. For each property, the results are presented separately for each soil gas/indoor air sampling round: February 2012 (Round 1), August 2012 (Round 2), and December 2013 (Round 3 [at 335 Ferry Boulevard only]). Groundwater sampling was not conducted concurrent with indoor air and soil gas sampling at all times or all locations. Therefore, the groundwater data presented for comparison are the results collected from the date nearest to the time of the air sampling, from the well(s) located closest to the buildings where sub-slab and indoor air samples were collected. In most cases, only groundwater data from 2012 were used; however, at some locations 2009 groundwater data (from wells not sampled in 2012) were also used to provide additional insight into the level of groundwater contamination nearby.

Table 7 presents property-specific conclusions of the vapor intrusion pathway evaluation, including identification of properties where multiple lines of evidence indicate vapor intrusion may be occurring above comparison levels. Figure 8 presents the supplemental indoor air and sub-slab soil gas results and sampling locations.

The following sub-sections (4.1 through 4.3) present the evaluation of vapor intrusion pathways for the residential properties and commercial properties, and the overall conclusions of the vapor intrusion pathway evaluation. Sections 5 and 6 present the results of the indoor air risk calculations for each property and identification of locations with risks above threshold levels resulting from potential vapor intrusion of OU2 COCs, based on integration of the vapor intrusion pathway evaluation and indoor air risk assessment.

4.1 Vapor Intrusion Pathway Evaluation: Residential Properties

This section presents the vapor intrusion pathway evaluation for four buildings at a residential condominium complex southeast of the former Raymark facility.

4.1.1 Comparison of Analytical Results with Media-Specific Comparison Levels at Residential Properties

The evaluation of the groundwater, soil gas, indoor air, and outdoor ambient air sampling results in comparison to vapor intrusion screening levels is summarized below. The analytical results and criteria comparisons are presented on Table 6.

- Two COCs (chlorobenzene and 1,1-DCA) were detected in groundwater collected from the three monitoring wells located within the condominium complex (MW-601 – MW-603); however, neither was detected at concentrations exceeding vapor intrusion comparison levels based on cancer risks of $1x10^{-6}$ and HQs of 1.0. Chlorobenzene was detected only at MW-602 and MW-603; 1,1-DCA was detected only at MW-602. The detection limits for two COCs (vinyl chloride and chloroform) exceed the vapor intrusion comparison levels in groundwater samples from the three wells in the area, and the detection limit for TCE exceeds the comparison levels in samples from one well (MW-603). In two of the wells (MW-601 and MW-602), the detection limits only slightly exceed the comparison levels for vinyl chloride and chloroform (and are slightly below the comparison level for TCE), whereas the detection limits in samples from MW-603 significantly exceeded the comparison levels for the three COCs.

- Sub-slab soil gas concentrations beneath the four condominium complex buildings sampled were below soil gas comparison levels, with the exception of chloroform. Chloroform at 82 Ferry Court slightly exceeded the soil gas comparison level during the February 2012 sampling event only. Detection limits in soil gas were all below the comparison levels.

- Three COCs (benzene, chloroform, and ethylbenzene) were detected in indoor air at concentrations exceeding indoor air comparison levels and TCE was detected in two buildings at concentrations below the comparison levels. No other OU2 COCs were

detected in indoor air at the condominium complex. Detection limits in indoor air for COCs TCE and vinyl chloride slightly exceed comparison levels.

- Benzene and ethylbenzene were both detected in outdoor ambient air.

4.1.2 Vapor Intrusion Pathway Evaluation at Residential Properties

The following paragraphs present the vapor intrusion pathway evaluations for the residential properties. The evaluations integrate the media-specific comparison level exceedances described in Section 4.1.1 with other lines of evidence. The evaluations are organized by COC, for the four COCs detected in indoor air samples from the condominium complex buildings. The evaluation and conclusions for each property are summarized on Tables 6 and 7. See Figures 1, 2, and 8 for sample locations.

Benzene at Residential Properties

- Indoor air concentrations of benzene exceeded indoor air comparison levels at each of the four condominium complex buildings in both basement and first floor sampling locations. However, concentrations detected at the first floor sampling locations exceeded those from the basement sampling locations at all three buildings sampled in February. During August sampling, concentrations in first floor samples were less than or equal to those in the basement samples. Benzene was detected in outdoor ambient air during both rounds. Indoor air concentrations exceeded outdoor ambient air concentrations in most instances. Further, benzene was not detected in shallow groundwater within the condominium complex and was detected in only two sub-slab soil gas samples, at concentrations well below the vapor intrusion comparison levels for soil gas. See Figure 8 for locations.

- Benzene is commonly present as a background contaminant in residential indoor air because of its use in many household products including glues, paints, and detergents, as well as its presence in tobacco smoke, gasoline, and automobile exhaust. The concentrations of benzene detected in indoor air in the residential condominium complex buildings sampled are consistent with measured background indoor air concentrations in residences (EPA, 2011). See Figure 8 for locations.

Based on the above information, the presence of benzene in indoor air in the condominium complex buildings appears to result from background conditions and not vapor intrusion from the OU2 groundwater contaminant plume.

Chloroform at Residential Properties

- Indoor air concentrations of chloroform exceeded indoor air comparison levels at each of the four condominium complex buildings in both basement and first floor sampling locations. Concentrations at first floor sampling locations exceeded those from basement sampling locations at all three buildings sampled in February. Chloroform was not detected in outdoor ambient air. Chloroform was detected in soil gas beneath all four of the buildings, but exceeded soil gas comparison levels at only one location (82 Ferry Court, the southernmost of the condominium complex buildings sampled) and only during the February sampling round. See Figure 8 for location.

- Chloroform was not detected in shallow groundwater in any of the three nearby monitoring wells. Although the detection limit for chloroform in each of the groundwater samples exceeded the groundwater comparison level, it is not likely that chloroform from OU2 is present in groundwater beneath the condominium complex area. Chloroform has been identified as an OU2 COC; however, it is present primarily in deep wells on the southwestern portion of the former Raymark facility property and toward the south. A chloroform plume has not been identified extending toward the residential condominium complex southeast of the former Raymark facility.

- Chloroform is commonly present as a background contaminant in residential indoor air because of volatilization from chlorinated tap water used for showering, and because of its use in household products including bleach and cleaning solvents. The concentrations of chloroform detected in indoor air in the residential condominium complex buildings are generally consistent with measured background indoor air concentrations in residences (EPA, 2011).

Based on the above information, the presence of chloroform in indoor air in the condominium complex buildings appears to result from background conditions and not vapor intrusion from the OU2 groundwater contaminant plume.

Ethylbenzene at Residential Properties

- Ethylbenzene concentrations in indoor air slightly exceed indoor air comparison levels at all four condominium complex buildings in the basement sampling locations and in first floor samples at 50 Ferry Court and 72 Ferry Court. However, ethylbenzene was not detected in either soil gas or groundwater at these locations. Ethylbenzene was detected in outdoor ambient air in the condominium complex area. Concentrations detected in indoor air at all four condominium complex buildings in both basement and first floor samples exceeded outdoor ambient air concentrations. See Figure 8 for locations.

- Ethylbenzene is commonly present as a background contaminant in residential indoor air because of its use in many household products including glues, paints, and detergents, as well as its presence in tobacco smoke, gasoline, and automobile exhaust. The concentrations of ethylbenzene detected in indoor air in the residential condominium complex buildings are consistent with measured background indoor air concentrations in residences (EPA, 2011).

Based on the above information, the presence of ethylbenzene in indoor air in the condominium complex buildings appears to result from background conditions and not vapor intrusion from the OU2 groundwater contaminant plume.

TCE at Residential Properties

- TCE was detected at concentrations slightly less than the indoor air comparison level in three indoor air samples collected from the condominium buildings: one sample in February 2012 from 62 Ferry Court, and two samples in August 2012 from 72 Ferry Court (See Figure 8 for locations). The detection limits in all the indoor air samples equaled or slightly exceeded the indoor air comparison level. However, TCE was detected only at concentrations well below soil gas comparison levels and in only three samples. Further, TCE was not detected in groundwater from the nearest groundwater monitoring wells (MW-601 and MW-602) during either sampling event. TCE was detected in groundwater at concentrations greater than comparison levels in upgradient monitoring well MW-519S (approximately 200 ft upgradient of the westernmost of the condominium complex buildings sampled) during the February sampling.

- The detected concentrations of TCE (0.27 L µg/m^3 and 0.43 L µg/m^3) in the February and August indoor air samples were qualified as estimated concentration values detected below the laboratory instrument calibration range, and fall within the range of measured background indoor air concentrations for residences in North America (EPA, 2011). TCE is used in many household products including glues, adhesives, paint removers, and spot removers.

Based on the information above, TCE detected in indoor air at 62 Ferry Court and 72 Ferry Court appears to result from background conditions and not vapor intrusion from the OU2 groundwater contaminant plume. There is some uncertainty in this conclusion because the detection limits for TCE in groundwater at one nearby monitoring well (MW-603) significantly exceed the comparison levels; however, this concern is mitigated by the fact that TCE was also not detected in the nearest monitoring wells (MW-601 and MW-602) and the detection limits at these wells were below the comparison level based on cancer risk of $1x10^{-6}$ or HQ of 1.0.

4.1.3 Summary of Vapor Intrusion Pathway Evaluation at Residential Properties

In conclusion, as described in Section 4.1.2 and noted on Table 7, multiple lines of evidence indicate that the contaminants detected in indoor air in the residential condominium buildings result from background conditions/indoor air sources and not vapor from intrusion from the OU2 groundwater contaminant plume. Vapor intrusion is not occurring at levels of concern for human health at the residential condominium complex southeast of the former Raymark facility.

4.2 Vapor Intrusion Pathway Evaluation: Industrial/Commercial Properties

This section presents the vapor intrusion pathway evaluation for the commercial/industrial properties included in the vapor intrusion investigations.

4.2.1 Comparison of Analytical Results with Media-Specific Comparison Levels at Commercial/Industrial Properties

The evaluation of the groundwater, soil gas, indoor air, and outdoor ambient air sampling results in comparison to vapor intrusion screening levels for the industrial/commercial properties summarized below. The analytical results and criteria comparisons are presented on Table 6.

- Three COCs (1,1-DCA, TCE, and vinyl chloride) are present in shallow groundwater at concentrations exceeding industrial/commercial comparison levels at several commercial properties. (Detection limits in groundwater for benzene, chloroform, ethylbenzene, PCE, TCE, and vinyl chloride exceed the comparison levels at some locations.)

- Four COCs (1,1-DCA, TCE, benzene, and chloroform) are present in sub-slab soil gas collected from beneath commercial properties at concentrations exceeding industrial/commercial comparison levels. See Figure 8 for locations. (Detection limits in soil gas generally meet comparison levels, with a few exceptions.)

- Four COCs (TCE, benzene, chloroform, and ethylbenzene) are present in indoor air collected from within commercial properties at concentrations exceeding industrial/commercial comparison levels; two COCs (1,1-DCA and vinyl chloride) were detected in indoor air in a few samples at concentrations below industrial/commercial comparison levels, but above residential comparison levels. See Figure 8 for locations. (Detection limits in indoor air for chloroform at several locations exceed comparison levels).

- Benzene, chloroform, ethylbenzene, TCE, and vinyl chloride were detected in outdoor ambient air.

4.2.2 Vapor Intrusion Pathway Evaluation for Individual COCs at Industrial/Commercial Properties

The following paragraphs present the vapor intrusion pathway evaluations for the industrial/commercial properties. The evaluations integrate the media-specific comparison level exceedances described in Section 4.2.1 with other lines of evidence. The evaluations are organized by COC, for the four COCs (TCE, benzene, chloroform, and ethylbenzene) detected in

indoor air samples from industrial/commercial properties at concentrations exceeding the applicable indoor air comparison levels, as well as two COCs (1,1-DCA and vinyl chloride) that did not exceed industrial/commercial comparison levels, but did exceed the lower residential comparison levels. Within each COC discussion, evaluations are presented for the individual properties where the COC was detected in indoor air. The evaluation and conclusions for each property are summarized on Tables 6 and 7. See Figures 1, 2, and 8 for sample locations.

TCE at Industrial/Commercial Properties

- TCE at 100 Veteran's Boulevard - At 100 Veteran's Boulevard (the Veterans of Foreign Wars [VFW] post), TCE was detected in each of the indoor air samples collected during both sampling rounds and was detected at slightly higher concentrations in the basement samples than the first floor samples during each event. TCE was detected at concentrations exceeding industrial/commercial comparison levels in only one indoor air sample, collected from the basement during the February sampling round. However, TCE was detected in sub-slab soil gas at concentrations significantly exceeding industrial/commercial comparison levels during both sampling rounds. TCE was not detected in shallow groundwater at the monitoring well sampled closest to 100 Veteran's Boulevard (MW-529S), but was detected at concentrations above comparison levels in other nearby wells (i.e. PC-15S [5.1 µg/L] and PC-12D [4800 µg/L]). These results indicate potential vapor intrusion.

- TCE at 300 Ferry Boulevard - At 300 Ferry Boulevard (in a ski and snowboard store), TCE was detected in indoor air at concentrations exceeding industrial/commercial comparison levels in indoor air sample collected during the August sampling, but it was not detected in the second sample collected during the August sampling or in either sample during the February sampling. TCE was detected in sub-slab soil gas at concentrations significantly exceeding comparison levels in both sampling rounds (five times higher than comparison levels in February and nearly 400 times higher than comparison levels in August). TCE was not detected in shallow groundwater at the well immediately upgradient of 300 Ferry Boulevard (MW-111S); however, TCE was detected at concentrations significantly above comparison levels in nearby intermediate depth wells (MW-111M, 112M) during the last comprehensive sampling in November 2009. These results, particularly the high concentrations of TCE in soil gas and TCE presence in nearby groundwater indicate a

potential for vapor intrusion. There is a potential for vapor intrusion, particularly when soil gas concentrations beneath the building are higher, such as during the August sampling event. However, based on the VOC data for indoor air, ambient air, soil gas, and groundwater, and observations made during sampling, it appears possible that detected indoor air TCE concentrations may be partly the result of indoor air sources. The sample containing TCE above the comparison level also contained elevated concentrations of other COCs/VOCs that were not detected in soil gas or nearby groundwater and are common indoor air pollutants (COCs benzene and ethylbenzene and several non-COCs); TCE is a constituent in many consumer products that may be present in a ski/snowboard shop. In summary, although the weight of the evidence from 300 Ferry Boulevard indicates that vapor intrusion may be occurring at concentrations exceeding comparison levels, an indoor air source for TCE is also likely.

- TCE at 326 Ferry Boulevard - At 326 Ferry Boulevard, TCE was not detected in indoor air at concentrations exceeding comparison levels, but is present in groundwater at the nearest well. Because of access limitations, sub-slab soil gas samples were not collected at this location.

- TCE at 335 Ferry Boulevard - At 335 Ferry Boulevard (Salce Building), TCE was detected in indoor air at concentrations exceeding industrial/commercial comparison levels during both February and August 2012 sampling in the portion of the building occupied by Curtin Taxi. TCE was detected in sub-slab soil gas at concentrations just below comparison levels in February and exceeding comparison levels in August, and in nearby shallow groundwater at a concentration exceeding industrial/commercial comparison levels. These results indicate potential vapor intrusion. However, the presence of TCE in the portion of the building occupied by Curtin Taxi was suspected to result primarily from a significant indoor air source of TCE that was observed in a supply room during sampling. An open jar of “Tru-Flate Universal Cement, Type C”, with a label indicating that the product contains TCE, was observed in a supply room during the August sampling event. The TCE concentration in the supply room (3100 µg/m^3) was significantly higher than detected elsewhere in the building during either sampling event (0.23 to 400 µg/m^3) (see Table 6). Re-sampling of soil gas and indoor air at this property was completed in December 2013 after Curtin Taxi vacated the building and the suspected source material was removed. TCE was detected in sub-slab soil gas at concentrations exceeding

comparison levels. However, TCE was not detected in indoor air during the 2013 sampling event. While the presence of TCE in groundwater and soil gas exceeding comparison levels suggests a potential for vapor intrusion, lack of detections of TCE in indoor air indicates that vapor intrusion is not occurring at levels of concern for human health.

- TCE at 500 Ferry Boulevard - 500 Ferry Boulevard is currently used as a commercial property; however, it is zoned for residential use and was therefore evaluated for both types of use. TCE was detected in basement indoor air during the February sampling, at concentrations below the residential and industrial/commercial comparison level; it was not detected in any of the other indoor air samples. In contrast, TCE was detected at concentrations exceeding both residential and industrial/commercial comparison levels in sub-slab soil gas samples collected in both February and August, and in shallow groundwater from the nearest monitoring well (MW517S) sampled in February. These results suggest that vapor intrusion of TCE may be occurring, but not at levels of concern for human health.

- TCE at 608 Ferry Boulevard - At 608 Ferry Boulevard, TCE was detected in soil gas and in one basement indoor air sample at concentrations well below industrial/commercial comparison level; TCE was not detected in any other indoor air samples or in shallow groundwater nearby. These results indicate that vapor intrusion of TCE is not a concern at this location.

- TCE at 411 Barnum Avenue Cut-off - At two retail stores at 411 Barnum Avenue Cut-off (Sleepy's and Payless), TCE was detected in indoor air at concentrations exceeding industrial/commercial comparison levels. TCE was detected in indoor air exceeding comparison levels in the Sleepy's store during both February and August sampling and in Payless only during February. Sub-slab soil gas was not collected at this location because of slab construction and retail operations; however, TCE was detected in nearby shallow groundwater upgradient of these stores at a concentration exceeding industrial/commercial comparison levels. TCE was detected in outdoor ambient air on the day of sampling at some of the retail stores at 411 Barnum Avenue Cut-off; however, detected indoor air concentrations at Sleepy's exceeded outdoor ambient air concentrations. The indoor air TCE concentrations in Payless exceeded ambient air concentrations in February, but were similar in August. These results indicate potential

vapor intrusion. However, based on the VOC data for indoor air, ambient air, and groundwater, and observations made during sampling, it appears more likely that detected indoor air TCE concentrations are the result of indoor air sources, such as off-gassing VOCs from the products sold.

During sampling at 411 Barnum Avenue, the sampling crew noted an overwhelming odor, smelling like rubber, upon entering the Payless store. Numerous VOCs were detected inside the Payless store, including 1,2,4-trimethylbenzene, 1,2-dichloroethane, 1,2-dichloropropane, 1,3,5-trimethylbenzene, 4-ethyltoluene, benzene, cyclohexane, ethylbenzene, heptane, methyl ethyl ketone, methylene chloride, styrene, toluene, trichlorofluoromethane, and xylenes. Most of these VOCs were also detected in indoor air at the Sleepy's store, generally at lower concentrations. Most of the VOCs detected at Payless and Sleepy's were not detected in ambient air near the building; those that were also detected in ambient air were generally present in the indoor air at much higher concentrations than detected in outdoor ambient air. Further, other than TCE, none of the VOCs detected in indoor air in Payless or Sleepy's were detected in nearby groundwater. TCE was detected in indoor air at the stores nearest to Payless and Sleepy's (Marshalls, Fashion Bug, and the Post Office); however, the TCE concentrations inside those stores were considerably lower than those in Sleepy's, and were similar to those in two of the three samples from Payless. The TCE concentrations in indoor air from the nearby stores did not exceed comparison criteria, despite being in similar proximity to groundwater containing TCE above comparison levels.

There is uncertainty in the vapor intrusion pathway evaluation for 411 Barnum Avenue Cut-Off (Sleepy's and Payless stores) because of the absence of soil gas data from beneath the 411 Barnum Avenue Cut-Off building, which would provide an important line of evidence to link groundwater and indoor air contamination. However, the elevated levels of TCE in indoor air samples from Sleepy's and Payless; the consistently lower TCE concentrations (below comparison levels) in adjacent and nearby stores and in two of the three Payless samples; and the presence of several non-OU2 COCs not detected in nearby groundwater or outdoor ambient air point toward a strong likelihood that most of the TCE detected in indoor air at the Sleepy's and Payless stores is the result of indoor air sources such as off-gassing of VOCs from the products sold. Based on the low-level

presence of TCE in many indoor air samples, and TCE in nearby groundwater, vapor intrusion may be occurring, but not at levels of concern for human health.

Benzene at Industrial/Commercial Properties

- Benzene at 100 Veteran's Boulevard, 326 Ferry Boulevard, and several retail stores at 411 Barnum Avenue Cut-off - Benzene was detected in indoor air exceeding industrial/commercial comparison levels, but was not detected exceeding industrial/commercial comparison levels in either soil gas or shallow groundwater at these locations. See Figure 8 for locations. Indoor air concentrations exceeded outdoor ambient air concentrations at all these locations. Considering the absence of elevated concentrations of benzene in groundwater and soil gas, and its presence in outdoor ambient air, there is no clear evidence of vapor intrusion, and the source of the benzene in indoor air at these locations is uncertain. As described in Section 4.1, benzene is a common indoor air contaminant because of its use in many products as well as its presence in tobacco smoke, gasoline, and automobile exhaust. The concentrations of benzene detected in indoor air were generally consistent with those detected in the residential locations discussed above and measured background indoor air concentrations in residences (EPA, 2011). These factors suggest that benzene presence in indoor air in these buildings appears to result from background indoor air sources and not vapor intrusion from the OU2 groundwater contaminant plume.

- Benzene at 300 Ferry Boulevard - Benzene was detected in indoor air exceeding industrial/commercial comparison levels, but was not detected in either soil gas or shallow groundwater at this location. Indoor air concentrations exceeded outdoor ambient air concentrations. Considering the absence of elevated concentrations of benzene in groundwater and soil gas, and its presence in outdoor ambient air, there is no clear evidence of vapor intrusion. During the August sampling event, samplers noticed three motorcycles stored in the area with gasoline in the tanks. Benzene was detected in indoor air at lower concentrations during the February sampling event when the motorcycles were absent. Therefore, it is most likely that the benzene concentrations detected in indoor air during the August sampling event are the results of the gasoline.

- Benzene at 335 Ferry Boulevard - At 335 Ferry Boulevard (Salce Building), benzene was detected in indoor air at concentrations exceeding industrial/commercial comparison levels only during the February 2012 sampling event. It was not detected in either soil gas beneath the building or in shallow groundwater nearby. Indoor air concentrations exceeded outdoor ambient air concentrations during February 2012 sampling, but were consistent with the ambient air concentrations during the two subsequent sampling events. Re-sampling of soil gas and indoor air at this property was completed in December 2013 after Curtin Taxi vacated the building and the suspected indoor air contaminant source was removed. In December 2013, benzene was not detected in sub-slab soil gas and was detected at low concentrations, below the industrial/commercial comparison level in indoor air and outdoor ambient air. Considering the absence of elevated concentrations of benzene in groundwater and soil gas, its presence in outdoor ambient air, and its presence in indoor air at low concentrations after Curtin Taxi vacated the building, there is no evidence of vapor intrusion. Benzene presence in indoor air appears to result from background indoor air sources and not vapor intrusion from the OU2 groundwater contaminant plume.

- Benzene at 500 Ferry Boulevard - 500 Ferry Boulevard is currently used as a commercial property; however, it is zoned for residential use. Benzene was detected in indoor air at 500 Ferry Boulevard at concentrations exceeding both industrial/commercial and residential comparison levels and was detected in sub-slab soil gas at concentrations below industrial/commercial comparison levels, but above residential comparison levels. However, benzene was not detected in nearby shallow groundwater. According to the EPA Soil Vapor Intrusion Study Report for OU2 (EPA, August 2012), at the time of sampling, gasoline powered equipment was stored in the basement of 500 Ferry Boulevard, with gasoline in the tanks, and a gasoline odor was noted. The gasoline in this equipment is the likely source of indoor air detections of benzene.

- Benzene at 411 Barnum Avenue Cut-off - At several retail stores at 411 Barnum Avenue Cut-off, benzene was detected in indoor air exceeding industrial/commercial comparison levels, but was not detected exceeding industrial/commercial comparison levels in shallow groundwater nearby. Indoor air concentrations exceeded outdoor ambient air concentrations at most of these locations. Considering the absence of elevated concentrations of benzene in groundwater, there is no clear evidence of vapor intrusion,

and the source of the benzene in indoor air at these locations is uncertain. The concentrations of benzene detected in indoor air were generally consistent with those detected in the residential locations discussed above and measured background indoor air concentrations in residences (EPA, 2011), with the exception of the Payless store at 411 Barnum Avenue Cut-off (discussed further below). These factors suggest that benzene presence in indoor air in these locations appears to result from indoor air sources and not vapor intrusion from the OU2 groundwater contaminant plume.

At the Payless shoe store at 411 Barnum Avenue Cut-off, benzene concentrations detected in indoor air were an order of magnitude higher than the concentrations detected in indoor air in other stores within the shopping plaza, an order of magnitude higher than the outdoor ambient air, and an order of magnitude higher than the industrial/commercial indoor air comparison level. Because benzene was not detected in nearby shallow groundwater, vapor intrusion does not appear to be the source of the benzene in the store. The presence of several non-COCs in indoor air at concentrations significantly exceeding those detected in indoor air in adjacent stores and significantly exceeding outdoor ambient air further supports the conclusion that benzene detected in indoor air at the Payless store results from the presence of indoor air sources within the store, such as off-gassing of VOCs from the products sold.

Chloroform at Industrial/Commercial Properties

- Chloroform at 100 Veteran's Boulevard, 326 Ferry Boulevard, 444 Ferry Boulevard, and three retail stores at 411 Barnum Avenue Cut-off - Chloroform was detected in indoor air at concentrations exceeding industrial/commercial comparison levels, but was not detected in either soil gas or shallow groundwater exceeding industrial/commercial comparison levels at these locations. See Figure 8 for locations. Chloroform was not detected in outdoor ambient air. Because chloroform was not detected in groundwater or soil gas exceeding industrial/commercial comparison levels at these locations or detected in outdoor ambient air, it is unlikely that groundwater or outdoor ambient air is the source. As described above, chloroform is a common indoor air contaminant. The concentrations of chloroform detected in indoor air were generally consistent with those detected in the residential locations discussed above. These factors suggest that chloroform presence in indoor air in these buildings is likely to result from indoor sources.

- Chloroform at 300 Ferry Boulevard - At 300 Ferry Boulevard, chloroform was detected in indoor air in one sample and in sub-slab soil gas at concentrations slightly exceeding industrial/commercial comparison levels during the August 2012 sampling event. However, chloroform was not detected in nearby shallow groundwater or soil gas during the February sampling event, and was detected in only one of the two indoor air samples collected during each sampling event and in neither of the outdoor ambient air samples collected. These results suggest that chloroform presence in indoor air at 300 Ferry Boulevard likely results from indoor sources and not vapor intrusion from the OU2 groundwater contaminant plume.

- Chloroform at 335 Ferry Boulevard - At 335 Ferry Boulevard (Salce Building), chloroform was detected in 2012 in indoor air at the Curtin Taxi portion of the building at concentrations exceeding industrial/commercial comparison levels, but was not detected in either soil gas or shallow groundwater exceeding industrial/commercial comparison levels. Chloroform was not detected in outdoor ambient air. Because chloroform was not detected in groundwater or soil gas exceeding industrial/commercial comparison levels or detected in outdoor ambient air, it is unlikely that groundwater or outdoor ambient air is the source. As described above, chloroform is a common indoor air contaminant. The concentrations of chloroform detected in indoor air were generally consistent with those detected in the residential locations discussed above. These factors suggest that chloroform presence in indoor air in 2012 was likely to result from indoor sources. Re-sampling of soil gas and indoor air at this property was completed in December 2013 after Curtin Taxi vacated the building and the suspected indoor air contaminant source was removed. In December 2013, chloroform was detected in sub-slab soil gas at concentrations slightly exceeding the industrial/commercial comparison level, but it was not detected in indoor air, outdoor ambient air, or shallow groundwater. While the presence of chloroform in soil gas exceeding comparison levels suggests a potential for vapor intrusion, lack of detections of chloroform in indoor air exceeding comparison levels indicates that vapor intrusion may be occurring, but not at levels of concern for human health.

- Chloroform at 500 Ferry Boulevard - At 500 Ferry Boulevard in February 2012, chloroform was detected in sub-slab soil gas at a concentration slightly exceeding the

industrial/commercial comparison level, but it was not detected in indoor air, outdoor ambient air, or shallow groundwater. In August 2012, chloroform was detected in the first floor indoor air sample at a concentration slightly exceeding the industrial/commercial comparison levels; however, chloroform concentrations in sub-slab soil gas and the basement and crawl space indoor air samples did not exceed industrial/commercial comparison levels. Because chloroform was not detected in groundwater or outdoor ambient air, and the concentrations detected in the August 2012 first floor sample exceeded those detected in the basement and crawl space, it is unlikely that groundwater or outdoor ambient air is the source. The concentrations of chloroform detected in indoor air were consistent with those detected in the residential locations discussed above. These factors suggest that chloroform presence in indoor air in this building is likely to result from indoor sources.

Ethylbenzene at Industrial/Commercial Properties

- Ethylbenzene at 500 Ferry Boulevard and two retail stores at 411 Barnum Avenue Cut-off - Ethylbenzene was detected in indoor air exceeding industrial/commercial comparison levels, but was not detected exceeding industrial/commercial comparison levels in either soil gas or shallow groundwater at these locations. See Figure 8 for locations. Ethylbenzene was not detected in outdoor ambient air. Because ethylbenzene was not detected in groundwater or soil gas exceeding industrial/commercial comparison levels at these locations or detected in outdoor ambient air, it is unlikely that groundwater or outdoor ambient air is the source. As described above, ethylbenzene is a common indoor air contaminant. The concentrations of ethylbenzene detected in indoor air were generally consistent with those detected in the residential locations discussed above. At 411 Barnum Avenue, numerous non-COCs were detected at higher concentrations at both the Payless and the Sleepy's stores than in adjacent stores or outdoor ambient air samples. These factors suggest that ethylbenzene presence in indoor air in these buildings is likely the result of indoor sources.

- Ethylbenzene at 300 Ferry Boulevard - Ethylbenzene was detected in indoor air during the August sampling event exceeding industrial/commercial comparison levels, but was not detected exceeding industrial/commercial comparison levels in the February sampling event or in either soil gas or shallow groundwater at this location. Ethylbenzene was not

detected in outdoor ambient air. During the August sampling event, samplers noticed three motorcycles stored in the area with gasoline in the tanks. Because ethylbenzene was not detected in groundwater or soil gas exceeding industrial/commercial comparison levels at these locations or detected in outdoor ambient air, it is unlikely that groundwater or outdoor ambient air is the source. Rather, because ethylbenzene was detected in indoor air at lower concentrations when the motorcycles were absent, it is most likely that the ethylbenzene concentrations detected in indoor air during the August sampling event are the results of the gasoline.

1,1-DCA at Industrial/Commercial Properties

While the presence of 1,1-DCA in soil gas and/or shallow groundwater exceeding comparison levels suggests a potential for vapor intrusion, lack of detections of 1,1-DCA in indoor air exceeding comparison levels indicates that vapor intrusion may be occurring at some locations, but not at levels of concern for human health (see Figure 8 for locations):

- 1,1-DCA at 500 Ferry Boulevard - At 500 Ferry Boulevard, 1,1-DCA is present in both groundwater and sub-slab soil gas at concentrations exceeding comparison levels, but was not detected in indoor air.

- 1,1-DCA at 100 Veteran's Boulevard - At 100 Veteran's Boulevard, 1,1-DCA is present in sub-slab soil gas at concentrations exceeding comparison levels, but was not detected in groundwater or indoor air at concentrations exceeding comparison levels.

- 1,1-DCA in groundwater - At the well closest to both 326 and 335 Ferry Boulevard and at 444 Ferry Boulevard, 1,1-DCA is present in groundwater at concentrations exceeding comparison levels, but was not detected in sub-slab soil gas or indoor air at concentrations exceeding comparison levels.

Vinyl Chloride at Industrial/Commercial Properties

Vinyl chloride in groundwater - At the monitoring wells closest to 100 Veteran's Boulevard, 326 and 335 Ferry Boulevard, 411 Barnum Avenue Cut-off, and 500 Ferry Boulevard, vinyl chloride is present in groundwater at concentrations exceeding comparison levels, suggesting a potential for vapor intrusion. However, it was not detected in sub-slab soil gas or indoor air at concentrations

exceeding comparison levels, indicating that vapor intrusion may be occurring at these locations, but not at levels of concern for human health.

4.2.3 Summary of Vapor Intrusion Pathway Evaluation at Industrial/Commercial Properties

In conclusion, as noted on Table 7, these multiple lines of evidence indicate that vapor intrusion is not occurring at the majority of the industrial/commercial properties evaluated at levels of concern. However, the evidence described above for TCE at industrial/commercial properties indicates that vapor intrusion is a possible source of TCE in indoor air at 100 Veteran's Boulevard and 300 Ferry Boulevard. The vapor intrusion pathway evaluation results for two stores at 411 Barnum Avenue Cut-off (Sleepy's and Payless) also indicate potential TCE vapor intrusion. However, several lines of evidence support the conclusion that TCE detected in indoor air at the Sleepy's and Payless stores is the result of indoor air sources, such as off-gassing from products sold, and not from vapor intrusion.

4.3 Revised Indoor Air Areas of Concern

The supplemental indoor air and sub-slab soil gas results are presented on Figure 8 along with outlines of the indoor air areas of concern determined based on comparison of the groundwater data to screening levels based $1x10^{-6}$ cancer risk or HQ of 1.0 for the eight COCs identified in the OU2 RI Update Report (1,1-DCA, 1,1-DCE, TCE, vinyl chloride benzene, chlorobenzene, chloroform, and ethylbenzene). The delineation of the indoor air areas of concern presented on Figure 8 was determined based on the 2009-2012 groundwater data.

The incorporation and evaluation of data from the supplemental evaluations resulted in a decrease in the estimated extent of the indoor air area of concern for vapor intrusion previously defined in the RI Update. The estimated extent of the area of concern was decreased on the eastern side of the OU2 study area and slightly altered along the southwestern side of the area of concern.

Figure 8 identifies residences within the indoor air area of concern that currently have sub-slab depressurization (SSD) systems designed to mitigate vapor intrusion concerns, and those that do not have the systems. The SSD systems were installed by CTDEEP, with funding from EPA, in 2003 and 2004. Several homes within the updated indoor air area of concern shown on Figure 8

do not have systems. Homes without SSD systems include those whose owners (or former owners) previously refused systems, those who removed their systems (2 properties), and one home constructed after the systems were installed in the area. Although the limits of the indoor air area of concern have been modified since the 2005 RI Report, the revised area does not encompass any additional residential properties. Several residential properties where SSD systems were installed are situated outside the revised boundaries of the indoor air area of concern.

5.0 INDOOR AIR RISKS

A quantitative risk assessment was conducted for each of the 21 properties where indoor air was sampled during the supplemental sampling rounds. The risk assessment calculated the total cancer risks and non-cancer hazard indices (HIs) for all detected contaminants in indoor air at each location; in addition, because the focus of this report is on risks resulting from volatilization of contaminants in groundwater into indoor air spaces, indoor air risks associated with the eight OU2 COCs identified in the RI Update Report (1,1-DCA, 1,1-DCE, benzene, chlorobenzene, chloroform, ethylbenzene, TCE, and vinyl chloride) were also calculated for each location. Not all eight of these COCs are detected at each location. The COC-related risks may over-estimate the risk resulting from vapor intrusion because, as discussed in Sections 4.1.2 and 4.2.2 above, indoor air sources may also be contributing to the detected indoor air concentrations.

The indoor air risk assessment results are presented in Table 8 and summarized below. Appendix E presents the supporting tables for the risk assessment, as described below.

- Tables E-1A and E-1B present summaries of the supplemental measured indoor air data for residential and industrial/commercial properties, respectively.

- Tables E-2A and E-2B present the exposure point concentrations for each residential and commercial property. As shown on these tables, the assessments for most properties were conducted using the maximum measured indoor air concentrations for all detected VOCs at that property. The only exception is that for 335 Ferry Boulevard, only data from the 2013 sampling event are included in the quantitative risk calculations. The 2013 sampling at this property was performed after Curtin Taxi vacated the building and the suspected TCE source material was removed.

- Tables E-3A and E-3B present the exposure assumptions for residential and commercial properties. One property, 500 Ferry Boulevard, an office building zoned for residential use, was evaluated under both residential and industrial/commercial scenarios.

- Table E-4 presents non-cancer toxicity values (reference concentrations) and the sources of each value.

- Table E-5 presents cancer toxicity values (inhalation unit risk factors) and the sources of each value.

- Tables E-6A and E-6B present the residential cancer risk calculations for the two chemicals (methylene chloride and TCE) detected at residential properties whose cancer effects result from a mutagenic mode of action. For such chemicals, an age dependent adjustment factor is applied to cancer risk calculations for scenarios including childhood exposure. Table E-6A presents calculations of residential risks for methylene chloride. Table E-6B presents calculations of residential risks for TCE.

- Tables E-7A and E-7B present the risk calculations for each residential and commercial property. These tables present total cancer risks and non-cancer HIs for all detected contaminants in indoor air at each location and those associated with the eight contaminants identified as COCs in the RI Update Report.

The quantitative risk estimates identified total non-carcinogenic and carcinogenic risks (for all detected chemicals) exceeding thresholds of $1x10^{-4}$ cancer risk and/or organ-specific HI of 1.0 for residential and industrial/commercial worker inhalation exposures. However, total COC-related risks did not exceed these thresholds for any of the residential properties. The calculated risks are described below and summarized in Table 8.

Residential Properties

Total calculated non-cancer HIs of greater than 1.0 for residential exposures to indoor air were identified at one residential property (72 Ferry Court, the westernmost of the condominium complex buildings sampled) and at 500 Ferry Boulevard (an office building zoned for residential

use). Organ-specific HIs exceed 1.0 only at 500 Ferry Boulevard. Although total residential HIs at these two properties exceed 1.0, total and organ-specific HIs from VOCs identified as OU2 COCs are below 1.0 at both properties. Total cancer risks at one residential property (72 Ferry Court, the westernmost of the condominium complex buildings sampled) exceed $1x10^{-4}$; however, risks from VOCs identified as OU2 COCs are below $1x10^{-4}$ for all residential properties evaluated.

Commercial Properties

Calculated non-cancer HIs of greater than 1.0 for industrial/commercial exposures to indoor air were identified at five commercial properties, two of which had organ-specific HIs greater than 1.0 (see Table 8). Although total HIs at the five commercial properties exceed 1.0, HIs from VOCs identified as OU2 COCs are below 1.0 at all but one location: 411 Barnum Avenue Cut-off (the section of the building occupied by Sleepy's Mattress Store). The organ-specific HI for the immune system attributable to TCE exceeds 1.0 at this location. Total cancer risk at one commercial property (411 Barnum Avenue Cut-off – Payless Shoes) exceeds $1x10^{-4}$. Although total cancer risk at this commercial property exceeds $1x10^{-4}$, risks from VOCs identified as OU2 COCs are below $1x10^{-4}$ at each commercial property location.

6.0 POTENTIAL VAPOR INTRUSION RISKS ABOVE THRESHOLDS

Risks above threshold levels resulting from potential vapor intrusion of OU2 COCs are identified via the following stepwise process:

1. Evaluation of the vapor intrusion pathway at each location sampled for the OU2 COCs;
2. Calculation of indoor air risks; then
3. Integration of the results of the vapor intrusion pathway evaluation and the indoor air risk calculations to determine if risks above threshold levels resulting from potential vapor intrusion of OU2 COCs exist.

Section 4.0 presented the first step, the evaluation of the vapor intrusion pathway. Results of the vapor intrusion pathway evaluation are presented on Table 7 and carried over onto the left side (the third column) of Table 8.

Section 5.0 presented the second step, the calculation of indoor air risks. Risks from all detected contaminants in indoor air were calculated as well as risks associated with only the eight VOCs

identified as OU2 COCs. Both of these results are presented in the center of Table 8. These calculated risks from VOCs identified as OU2 COCs may be the result of vapor intrusion, indoor air sources, or a combination of both.

This section presents the third step, the integration of the results of the vapor intrusion pathway evaluation and the indoor air risk calculations to determine if risks above threshold levels are potentially the result of vapor intrusion of OU2 COCs. These conditions exist where a potential for vapor intrusion above comparison levels has been identified AND the calculated risk from VOCs identified as OU2 COCs exceeds identified risk thresholds (cancer risk exceeding $1x10^{-4}$ or organ-specific HIs exceeding 1.0). The results of this step are presented below and in the final column of Table 8.

Residential Properties

The vapor intrusion pathway evaluation in Section 4.0 concluded that the COCs detected in indoor air at the residential condominium properties evaluated (50, 62, 72, and 82 Ferry Court) were from indoor air sources and not from vapor intrusion of OU2 groundwater contaminants (see Table 7). Additionally, calculated risks from VOCs identified as OU2 COCs were below risk thresholds of $1x10^{-4}$ (cancer risk) and HI of 1.0 for residential exposures at all four residential properties evaluated (see Table 8). Therefore, there are no risks above threshold levels resulting from potential vapor intrusion of OU2 COCs at these locations.

Current Commercial Use, but Residential Zoning (500 Ferry Boulevard)

The vapor intrusion pathway evaluation in Section 4.0 concluded that vapor intrusion of TCE may be occurring at 500 Ferry Boulevard, but not at concentrations exceeding comparison levels (see Table 7). Calculated risks from VOCs identified as OU2 COCs were below risk thresholds of $1x10^{-4}$ (cancer risk) and HI of 1.0 for both residential and commercial exposures at this location (see Table 8). Therefore, there are no risks above threshold levels resulting from potential vapor intrusion of OU2 COCs at this location.

Commercial/Industrial Properties

The vapor intrusion pathway evaluation presented in Section 4.0 concluded that the presence of OU2 COCs detected in indoor air was often from indoor air sources and not from vapor intrusion

of OU2 groundwater contaminants. Evaluations for 12 of the 16 commercial properties concluded that vapor intrusion was not occurring at concentrations exceeding risk-based comparison levels AND total risks from detected indoor air contaminants did not exceed risk thresholds of $1x10^{-4}$ (cancer risk) and HI of 1.0 for commercial exposures (see Table 8). Therefore, there are no risks above threshold levels resulting from potential vapor intrusion of OU2 COCs at these locations. Conclusions for the four remaining properties are described below.

100 Veteran's Boulevard and 300 Ferry Boulevard

The vapor intrusion pathway evaluation presented in Section 4.0 concluded that vapor intrusion might be occurring at concentrations exceeding comparison levels at 100 Veteran's Boulevard and 300 Ferry Boulevard. At 300 Ferry Boulevard, an indoor air source of TCE also appears to be present (see Table 7). Calculated risks from VOCs identified as OU2 COCs, however, were below risk thresholds of $1x10^{-4}$ (cancer risk) and HI of 1.0 for commercial exposures at both locations (see Table 8). Therefore, although the vapor intrusion pathway evaluation concluded that vapor intrusion of TCE may be occurring at concentrations exceeding comparison levels; there are no risks above threshold levels resulting from potential vapor intrusion of OU2 COCs at these locations.

411 Barnum Avenue Cut-off (Payless)

The vapor intrusion pathway evaluation presented in Section 4.0 indicated that vapor intrusion of TCE might be occurring but not at concentrations exceeding comparison levels. Multiple lines of evidence suggest that TCE detected in indoor air at the Payless store is primarily the result of indoor air sources (such as off-gassing from products sold) and not vapor intrusion (see Table 7). Calculated risks from VOCs identified as OU2 COCs were below risk thresholds of $1x10^{-4}$ (cancer risk) and HI of 1.0 for commercial exposures (see Table 8). Therefore, there are no risks above threshold levels resulting from potential vapor intrusion of OU2 COCs at this location.

411 Barnum Avenue Cut-off (Sleepy's)

The vapor intrusion pathway evaluation presented in Section 4.0 indicated that vapor intrusion of TCE might be occurring but not at concentrations exceeding comparison levels. Multiple lines of evidence suggest that TCE detected in indoor air at the Sleepy's store is primarily the result of indoor air sources (such as off-gassing from products sold) and not vapor intrusion (see Table 7).

Calculated risks from VOCs identified as OU2 COCs exceed the non-cancer risk threshold of HI of 1.0 for commercial exposures at 411 Barnum Avenue Cut-off – Sleepy's Mattress Store (see Table 8). The calculated HI at this location is attributed entirely to TCE. Although the calculated risk associated with TCE exceeds the risk threshold, the vapor intrusion pathway evaluation concluded that TCE detected in indoor air is primarily the result of indoor air sources; therefore, there are no risks above threshold levels resulting from potential vapor intrusion of OU2 COCs at this location.

Conclusion

As noted above, risks above threshold levels resulting from potential vapor intrusion of OU2 COCs exist where a potential for vapor intrusion above comparison levels has been identified AND the calculated risk from VOCs identified as OU2 COCs exceeds identified risk thresholds (cancer risk exceeding $1x10^{-4}$ or organ-specific HIs exceeding 1.0). These conditions do not exist at any of the 21 properties where indoor air was sampled during the supplemental investigations. No properties have both a potential for vapor intrusion above comparison levels and calculated risk from VOCs identified as OU2 groundwater COCs exceeding identified risk thresholds. Refer to Tables 7 and 8 for details of the property-specific vapor intrusion pathway evaluations and indoor air risk evaluations.

7.0 SUMMARY AND CONCLUSIONS

This section presents summary and conclusions of the supplemental investigations.

7.1 Summary

The data obtained from the supplemental investigations and risk assessment were evaluated to refine estimates of the nature and extent of contamination (southeast of the former Raymark facility); evaluate potential human health risks and potential vapor intrusion pathways from OU2 COCs at residential properties east of the previously defined indoor air area of concern and commercial properties within the indoor air area of concern; update the indoor air areas of concern; and assess the condition and usability of the DNAPL recovery wells on the former Raymark facility.

Nature and Extent of Contamination Southeast of the Former Raymark Facility

- No Raymark OU2 COCs or Raymark Waste constituents were detected in soils collected from the soil borings advanced in 2012 (SB-601 through SB-604), that were completed as monitoring wells (MW-601 to MW-604S/MW-604D).

- No OU2 COCs were identified at concentrations exceeding vapor intrusion comparison criteria based on $1x10^{-6}$ cancer risks and HQs of 1.0 in groundwater from the three wells installed at the residential condominium complex southeast of the former Raymark facility (MW-601 – MW-603). See Figure 1 for well locations.

- Chlorobenzene (an OU2 COC) was detected in groundwater samples at MW-603 and at MW-604S and MW-604D at concentrations below the residential vapor intrusion comparison levels based on cancer risk of $1x10^{-6}$ or HQ of 1. The chlorobenzene appears to have originated from a shallow source on the former Raymark facility near East Main Street, migrated downgradient into deeper groundwater, and then migrated upward near MW-604. Chlorobenzene concentrations downgradient from the former Raymark facility do not appear to pose a vapor intrusion concern.

- 1,1-DCA (an OU2 COC) was detected in groundwater at MW-602 at concentrations below the residential vapor intrusion comparison levels based on cancer risk of $1x10^{-6}$ or HQ of 1 during the August 2012 sampling event. It was not detected during the April 2012 sampling event.

- Benzene and ethylbenzene (OU2 COCs) were detected in MW-604S at concentrations exceeding the vapor intrusion comparison levels based on cancer risk of $1x10^{-6}$ or HQ of 1. However, several lines of evidence described in Section 3.1.1 indicate that the presence of these VOCs in this area is not site-related. These compounds appear to originate from an off-site source, likely the adjacent gasoline station. The gasoline additive MTBE was also found at this location.

- The 2012 groundwater data were considered along with 2009 groundwater results to re-evaluate the extent of the indoor air areas of concern based on vapor intrusion comparison levels for groundwater. Inclusion of the 2012 data resulted in changes to the 2009

estimated extent of the indoor air area of concern (Figure 6-3 of the RI Update Report). The revisions decrease the estimated extent of the area of concern on the eastern side of the OU2 study area. The revised indoor air areas of concern for residential and commercial/industrial exposure, based on 2009 through 2012 shallow groundwater and vapor intrusion comparison levels based on 1 x 10^{-6} cancer risk and HQs of 1.0 are shown on Figure 5.

Vapor Intrusion Risks above Thresholds

Risks above threshold levels resulting from potential vapor intrusion of OU2 COCs are identified via the following stepwise process:

1. Evaluation of the vapor intrusion pathway at each location sampled for the OU2 COCs (Section 4);

2. Calculation of indoor air risks (Section 5); and

3. Integration of the results of the vapor intrusion pathway evaluation and the indoor air risk calculations to determine if risks above threshold levels resulting from potential vapor intrusion of OU2 COCs exist (Section 6).

The stepwise process is described in greater detail below. The conclusions of these three sections are discussed together in Section 7.2.

Vapor Intrusion Pathway Evaluation

The evaluation of the vapor intrusion pathway included:

- Comparison of groundwater, soil gas, and indoor air at each location to media-specific comparison levels based on 1x10^{-6} cancer risks and hazard quotients (HQs) of 1.0.

- Comparison of indoor air results to other indoor air results from the same property (from different areas and/or dates), sub-slab soil gas data, nearby groundwater data, outdoor ambient air results representing background outdoor air, and measured background indoor air concentrations for residences in North America (EPA, 2011).

- Consideration of potential indoor air sources on a property-specific basis.

- Identification of properties where the lines of evidence indicate vapor intrusion may be occurring based on where contaminants were detected in either shallow groundwater and/or sub-slab soil gas above comparison levels and detected in indoor air above comparison levels and background levels, with consideration of potential indoor air sources.

The property-specific conclusions of the vapor intrusion pathway evaluation are summarized below in the section titled Vapor Intrusion Risks above Threshold Levels. Details of the evaluation are presented in Table 7 and Section 4.0.

Indoor Air Risks

A quantitative risk assessment was conducted for each of the 21 properties where indoor air was sampled during the supplemental sampling rounds. The risk assessment calculated the total cancer risks and non-cancer hazard indices (HIs) for all detected contaminants in indoor air at each location; in addition, because the focus of this report is on risks resulting from volatilization of contaminants in groundwater into indoor air spaces, indoor air risks associated with the eight OU2 COCs identified in the RI Update Report (1,1-DCA, 1,1-DCE, benzene, chlorobenzene, chloroform, ethylbenzene, TCE, and vinyl chloride) were also calculated for each location. These calculated risks from VOCs identified as OU2 COCs may be the result of vapor intrusion, indoor air sources, or a combination of both.

The property-specific conclusions of the quantitative risk estimates based on the supplemental indoor air data are summarized below and presented. Details of the evaluation are presented in Table 8 and Section 5.0.

Vapor Intrusion Risks above Threshold Levels

The integration of the results of the vapor intrusion pathway evaluation and the indoor air risk calculations was presented in Section 6. Risks above threshold levels resulting from potential vapor intrusion of OU2 COCs exist where a potential for vapor intrusion above risk-based comparison levels has been identified AND the calculated risk from VOCs identified as OU2

COCs exceeds identified risk thresholds (cancer risk exceeding $1x10^{-4}$ or organ-specific HIs exceeding 1.0).

Indoor Air Area of Concern

The supplemental investigations included evaluations of 21 properties, including residential properties east of the former indoor air area of concern and numerous commercial properties within the indoor air area of concern. Residential properties identified within the indoor air area of concern identified in the 2005 RI were not re-evaluated. As noted above, the indoor air area of concern was updated based on 2009 groundwater data in the RI Update and was further updated in this document. Figure 8 presents the revised indoor air areas of concern (for residential and commercial/industrial exposures) developed considering 2009 through 2012 shallow groundwater data and the updated vapor intrusion comparison levels for OU2 COCs. Figure 8 also shows residences that currently have installed SSD systems designed to mitigate vapor intrusion concerns, and those that do not have the systems. Several homes within the updated residential indoor air area of concern shown on Figure 8 do not have SSD systems.

Usability of the DNAPL Recovery Wells on the Former Raymark Facility

Downhole inspections of the five DNAPL Recovery Wells (RW) on the former Raymark facility were performed. The investigation was conducted to assess the condition of the well casing and screened intervals to evaluate the potential for future use of the wells. Specialized equipment was advanced down each recovery well to visually and acoustically inspect the casing and well screens, to assess possible locations of DNAPL infiltration into the wells, and to determine the general condition of the wells. Overall, the recovery wells were in good condition with evidence of biological activity (i.e. biological floc). See Section 2.4.

7.2 Conclusions

No risks above threshold levels resulting from potential vapor intrusion of OU2 COCs were identified at any of the 21 properties evaluated. Risks above threshold levels are defined by a property having both a potential for vapor intrusion above comparison levels and calculated risk exceeding threshold levels from VOCs identified as OU2 COCs.

Multiple lines of evidence indicate that vapor intrusion is not occurring at levels of concern at the residential condominium complex southeast of the former Raymark facility or at the majority of the industrial/commercial properties evaluated. Additionally, calculated risks from VOCs identified as OU2 COCs were below risk thresholds of $1x10^{-4}$ (cancer risk) and HI of 1.0 at these locations. Therefore, there are no risks above threshold levels resulting from potential vapor intrusion of OU2 COCs at these locations.

Vapor intrusion is a possible source of TCE in indoor air at 100 Veteran's Boulevard and 300 Ferry Boulevard. At 300 Ferry Boulevard, an indoor air source of TCE also appears to be present. Calculated risks from VOCs identified as OU2 COCs were below risk thresholds for commercial exposures at both locations. Therefore, there are no risks above threshold levels resulting from potential vapor intrusion of OU2 COCs at these locations.

The vapor intrusion pathway evaluation results for two stores at 411 Barnum Avenue Cut-off (Payless and Sleepy's) indicate potential TCE vapor intrusion. However, multiple lines of evidence support the conclusion that TCE detected in indoor air at the Payless and Sleepy's stores is primarily the result of indoor air sources, such as off-gassing from products sold, and not from vapor intrusion. At Payless, calculated risks from VOCs identified as OU2 COCs were below risk thresholds for commercial exposures. At Sleepy's, calculated risks from VOCs identified as OU2 COCs exceed the non-cancer risk threshold for commercial exposures. Because TCE detected in indoor air at these locations is primarily the result of indoor air sources, there are no risks above threshold levels resulting from potential vapor intrusion of OU2 COCs at these locations.

Indoor Air Area of Concern

The indoor air area of concern was revised in the RI Update (Nobis 2014) and has been further updated in this document. Minor changes have been made to the delineated area southeast and southwest of the groundwater plume. Figure 8 presents the revised indoor air areas of concern (for residential and commercial/industrial exposures).

Downhole Geophysical Survey of the former Raymark facility DNAPL Recovery Wells

Downhole inspections of the five DNAPL Recovery Wells (RW) on the former Raymark facility identified the following:

- In general, the recovery wells were in good condition, with the exception of a constriction in RW-6 where the top of the screen is bent inward resulting in a reduction of the diameter of the well by about 2-inches (from 6 to approximately 4 inches). The wells appear to be in adequate condition for potential use in a future remedial action.

- Evidence of biological activity (i.e., biological floc) was observed suspended in the well water and attached to the well screens. In some cases, the well screen was completely obscured by the biological growth. Although recovery well VOC sampling was not conducted, the amount of biological activity appears to be positively correlated with the amount of contamination likely present in each well.

- Evidence of apparent DNAPL infiltration into RW-3 and RW-6 was observed.

8.0 REFERENCES

Conestoga Rovers Associates (CRA), 1996. P. 42, *Supplemental Hydrologic Report.* http://www.epa.gov/ne/cleanup/rcra/106735.pdf

Connecticut Department of Environmental Protection (CTDEP), 1996. Remediation Standard Regulations. Bureau of Water Management, Hartford, Connecticut. January.

Connecticut Department of Environmental Protection (CTDEP), 2002. Water Quality Standards. Bureau of Water Management, Hartford, Connecticut. http://www.dep.state.ct.us.

Connecticut Department of Environmental Protection (CTDEP), 2003. Proposed Revisions to Connecticut's Remediation Standard Regulations Volatilization Criteria. Bureau of Water Management, Permitting, Enforcement and Remediation Division, Hartford, Connecticut. March.

Connecticut Department of Energy and Environmental Protection (CTDEEP), 2014. Limited Subsurface Investigation at 734 Ferry Boulevard, Stratford, CT. August.

Environmental Laboratories Inc. (ELI), 1995. RCRA Facility Investigation Report

Foster Wheeler Environmental Corporation (Foster Wheeler Environmental), 1996. Total Environmental Restoration Contract, *NAPL Interim Removal Field Evaluation Report for the Remediation of the Raymark Industries Facility Site* (NAPL Extraction, Subtask 12.05). January 26.

Geosciences Technical Services, Inc. (Geosciences), 2013. Underground Storage Tank Closure Report – 734 Ferry Boulevard. September.

Halliburton NUS (HNUS), 1995. Final Remedial Investigation Report, Raymark Industries, Inc. Facility. April 1995.

Johnson, P.C., and Ettinger, R.A. (Johnson and Ettinger), 1991. Heuristic model for predicting the intrusion rate of contaminant vapors into buildings. Environ. Sci. Technology, 2:1445-1452.

Nobis Engineering, Inc. (NOBIS), 2009. Quality Assurance Project Plan, Raymark Industries, Inc. Site OU2. September.

Nobis Engineering, Inc. (NOBIS), 2012. Quality Assurance Project Plan, Revision 1. March

Nobis Engineering, Inc. (NOBIS), 2014. Remedial Investigation Update Report, Raymark Industries, Inc. Site - OU2. May.

Tetra Tech NUS (TtNUS), 1999. Final Area I Remedial Investigation, Raymark – Ferry Creek OU3. October.

Tetra Tech NUS (TtNUS), 2005. Final Remediation Investigation, Raymark– OU2 – Groundwater. Stratford, Connecticut. January.

Tetra Tech NUS (TtNUS), 2005b. Final Remediation Investigation, Raymark– OU6 – Additional Properties. Stratford, Connecticut. January.

United States Environmental Protection Agency (EPA), 1988. “Interim Final Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA”. EPA/540/G-89/004. October.

United States Environmental Protection Agency (EPA), 1995. Record of Decision. http://www.epa.gov/region1/superfund/sites/raymark/241283.pdf

United States Environmental Protection Agency (EPA), 1996. “Low Stress (Low Flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells, Revision 2”. July.

United States Environmental Protection Agency (EPA), 2002. OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils. EPA/530/D-02/004. November.

United States Environmental Protection Agency (EPA) Region 1, 2010. Third Five-Year Review Report for Raymark Industries, Inc. Site. http://www.epa.gov/region1/superfund/sites/raymark/469086.pdf. September.

United States Environmental Protection Agency (EPA) Region 1, 2010b. *Low Stress (Low Flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells, Revision 2.*

United States Environmental Protection Agency (EPA), 2011. OSWER Background Indoor Air Concentrations of Volatile Organic Compounds in North American Residences. EPA 530-R-10-001. June. http://www.epa.gov/oswer/vaporintrusion/documents/oswer-vapor-intrusion-background-Report-062411.pdf

United States Environmental Protection Agency (EPA), 2012b. Commercial Properties Indoor Air Soil Vapor Intrusion Study Report - February 2012 (EPA, April 2012)

United States Environmental Protection Agency (EPA), 2012c. Commercial Properties Indoor Air Soil Vapor Intrusion Study Report - August 2012 (EPA, September 2012)

United States Environmental Protection Agency (EPA), 2013. 335 Ferry Boulevard Indoor Air Soil Vapor Intrusion Study Report - December 2013 (EPA, December 2013)

United States Environmental Protection Agency (EPA), 2014a. OSWER Directive 9200.1-120. Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. February.

United States Environmental Protection Agency (EPA), 2014b. *OSWER Vapor Intrusion Screening Level (VISL) Calculator Version 3.3.1, May 2014 RSLs* Office of Superfund Remediation and Technology Innovation (OSRTI), May.

United States Environmental Protection Agency (EPA), 2015a. Integrated Risk Information System, On-Line Data Base. [URL: http://www.epa.gov/iris/index.html].

United States Environmental Protection Agency (EPA), 2015b. EPA's Regional Screening Levels for Chemical Contaminants at Superfund Sites www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm, January.

Van der Berg, M., et al. 1998. “Toxic Equivalency Factor for PCBs, PCDDs, PCDFs for Humans and Wildlife.” Environmental Health Perspective, vol. 106, no. 12. December.

TABLES

Table ES-1
Summary of Indoor Air Cancer Risks and Hazard Indices
Raymark - Operable Unit 2 - Groundwater
Stratford, Connecticut

Sampling Location	Scenario/ Receptor	Potential Vapor Intrusion Concern[2]	Total Risks from all Detected Chemicals			Risks from OU2 Groundwater COCs[3]			Vapor Intrusion Risks Above Threshold Levels[4]
			Total Indoor Air Cancer Risks	Total Indoor Air Non-cancer Hazard Index	Total Target Organ-specific Hazard Index > 1.0	Indoor Air Cancer Risks from Groundwater COCs[3]	Indoor Air Non-cancer Hazard Index from Groundwater COCs[3]	Target Organ-specific Hazard Index from Groundwater COCs[3] >1.0	
Ferry Ct - Unit 50	Resident	No	3.6E-05	0.56	No	2.5E-05	0.06	No	No
Ferry Ct - Unit 62	Resident	No	4.1E-05	1.0	No	1.9E-05	0.20	No	No
Ferry Ct - Unit 72	Resident	No	1.4E-04	1.6	No	7.0E-05	0.32	No	No
Ferry Ct - Unit 82	Resident	No	4.2E-05	0.57	No	1.8E-05	0.05	No	No
500 Ferry Boulevard	Resident	No	8.5E-05	4.4	Yes	7.8E-05	0.77	No	No
500 Ferry Boulevard	Commercial	No	1.9E-05	1.1	No	1.8E-05	0.18	No	No
100 Veteran's Boulevard	Commercial	Yes	3.0E-05	1.2	No	1.2E-05	0.66	No	No[5]
300 Ferry Boulevard	Commercial	Yes	1.4E-05	1.4	No	1.1E-05	0.69	No	No[5]
326 Ferry Boulevard	Commercial	No	6.7E-06	0.22	No	5.5E-06	0.04	No	No
335 Ferry Boulevard	Commercial	No	1.1E-06	0.06	No	1.1E-06	0.01	No	No
444 Ferry Boulevard	Commercial	No	3.7E-06	0.25	No	2.8E-06	0.01	No	No
608 Ferry Boulevard	Commercial	No	1.1E-06	0.17	No	8.6E-07	0.15	No	No
411 Barnum Avenue Cut-off - Fashion Bug	Commercial	No	1.3E-05	0.41	No	2.9E-06	0.17	No	No
411 Barnum Avenue Cut-off - Gamestop	Commercial	No	3.1E-06	0.10	No	1.4E-06	0.01	No	No
411 Barnum Avenue Cut-off - Marshalls	Commercial	No	1.8E-05	0.52	No	2.5E-06	0.07	No	No
411 Barnum Avenue Cut-off - McDonald's	Commercial	No	4.6E-06	0.18	No	4.1E-06	0.14	No	No
411 Barnum Avenue Cut-off - Movie Theater	Commercial	No	1.9E-06	0.04	No	6.4E-07	0.01	No	No
411 Barnum Avenue Cut-off - Post Office	Commercial	No	5.0E-06	0.27	No	3.5E-06	0.16	No	No
411 Barnum Avenue Cut-off - Sally's Beauty	Commercial	No	3.3E-06	0.12	No	1.5E-06	0.02	No	No
411 Barnum Avenue Cut-off - Payless Shoes	Commercial	No	2.6E-04	6.80	Yes	3.0E-05	0.86	No	No[6]
411 Barnum Avenue Cut-off - Sleepy's	Commercial	No	2.9E-05	2.4	Yes	7.7E-06	1.5	Yes	No[6]
411 Barnum Avenue Cut-off - T-Mobile	Commercial	No	2.9E-06	0.36	No	2.0E-06	0.32	No	No

Notes:

1. Results based on 2012/13 indoor air sample data. 2. Based on lines of evidence of vapor intrusion summarized on Table 7.

Shading indicates Cancer Risks exceeding 1E-4 or non-cancer Hazard Indices exceeding 1.0.

3. Groundwater COCs = OU2 groundwater contaminants of concern based on industrial/commercial worker risks exceeding $1x10^{-6}$ or Hazard Quotient of 1.0 determined by modelling potential indoor air risks from maximum shallow groundwater data. The residential COCs are: 1,1-dichloroethane, 1,1-dichloroethene, trichloroethene, vinyl chloride, benzene, chlorobenzene, chloroform, and ethylbenzene. The industrial/commercial worker COCs are: 1,1-dichloroethane, trichloroethene, vinyl chloride, benzene, chlorobenzene, chloroform, and ethylbenzene.

4. Risks above threshold levels resulting from potential vapor intrusion of OU2 COCs exist where a potential for vapor intrusion at levels of concern has been identified (see Table 7) and the calculated risk from VOCs identified as OU2 COCs exceeds identified risk thresholds (cancer risk exceeding 1E-4 or organ-specific hazard indices exceeding 1.0).

5. The vapor intrusion pathway evaluation concluded that vapor intrusion of TCE may be occurring at concentrations exceeding comparison levels at these locations. At 300 Ferry Boulevard, an indoor air source of TCE also appears to be present. However, because calculated risks from VOCs identified as OU2 COCs were below risk thresholds, there are no risks above threshold levels resulting from potential vapor intrusion of OU2 COCs at these locations.

6. The vapor intrusion pathway evaluation concluded that vapor intrusion of TCE may be occurring at these locations, but not at concentrations exceeding comparison levels. The elevated levels of TCE in indoor air samples from Sleepy's and Payless; the consistently lower TCE concentrations (below comparison levels) in adjacent and nearby stores and in two of the three Payless samples; and the presence of several non-OU2 COCs in indoor air at these locations, but not in nearby groundwater or outdoor ambient air suggest a strong likelihood that the TCE detected in indoor air at the Sleepy's and Payless stores is primarily the result of indoor air sources such as off-gassing of VOCs from the products sold. See text section 4.2.2 for details of the vapor intrusion pathway evaluation. Calculated risks from VOCs identified as OU2 COCs were below risk thresholds for commercial exposures at the Payless store. The calculated non-cancer HI from VOCs identified as OU2 COCs of 1.5 at the Sleepy's store is entirely attributed to TCE. Because the vapor intrusion pathway evaluation concluded that TCE detected in indoor air is primarily the result of indoor air sources at both stores; there are no risks above threshold levels resulting from potential vapor intrusion of OU2 COCs at these locations.

Table 1
Groundwater Analytical Results
Raymark - Operable Unit 2 - Groundwater
Stratford, Connecticut

					Sample Location	MW-111S	MW-209S	MW-210S	MW-502S	MW-504S	MW-513S	MW-514S	MW-519S	MW-520S	MW-527S	MW-529S		MW-601				MW-602		MW-603		MW-604D		MW-604S	
					Sample Date	02/14/12	02/16/12	02/15/12	02/16/12	02/16/12	02/15/12	02/13/12	02/15/12	02/14/12	02/15/12	02/14/12		04/11/12		08/09/12		04/12/12	08/09/12	04/12/12	08/09/12	04/11/12	08/10/12	04/12/12	08/10/12
					Sample Type	N	N	N	N	N	N	N	N	N	N	N	FD	N	FD	N		N	N	N	N	N	N	N	N
Sample ID	**2014 Adjusted Residential Vapor Intrusion Screening Levels[1]**	**Basis**	**2014 Adjusted Industrial/ Commercial Vapor Intrusion Screening Levels[2]**	**Basis**	**Connecticut Surface Water Protection Criteria[3]**	80043-MW111S-021412	80043-MW209S-021612	80043-MW210S-021512	80043-MW502S-021612	80043-MW504S-021612	80043-MW513S-021512	80043-MW514S-021312	80043-MW519S-021512	80043-MW520S-021412	80043-MW527S-021512	80043-MW529S-021412	80043-DUP01-021412	80043-GW-MW601-041112	80043-GW-DUP01-041112	MW601-08092012	MW601D-08092012	80043-GW-MW602-041212	MW602-08092012	80043-GW-MW603-041212	MW603-08092012	80043-GW-MW604D-041112	MW604D-08102012	80043-GW-MW604S-041212	MW604S-08102012
Volatile Organic Compounds (ug/L)																												
1,1,1,2-Tetrachloroethane	3.7	C	16	C	--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
1,1,1-Trichloroethane	**740**	NC	3100	NC	62000	1 U	1 U	2.1	5.4	1 U	**2800**	6	2.9	160	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
1,1,2,2-Tetrachloroethane	3.2	C	14	C	110	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
1,1,2-Trichloro-1,2,2-trifluoroethane	150	NC	610	NC	--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
1,1,2-Trichloroethane	0.62	NC	2.6	NC	1260	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
1,1-Dichloroethane	**7.6**	C	***33***	C	--	1 U	1 U	**13**	**17**	5.9	***180***	***74***	***37***	***70***	1.2	**9.6**	**9.4**	1 U	1 U	1 U	1 U	1 U	2.2	20 U	10 U	5 U	5 U	10 U	1 U
1,1-Dichloroethene	**20**	NC	***82***	NC	**96**	1 U	1 U	10	**21**	1 U	***510***	**62**	11	***190***	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
1,1-Dichloropropene	--		--		--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
1,2,3-Trichlorobenzene	--		--		--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
1,2,3-Trichloropropane	2.2	NC	9.4	NC	--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
1,2,4-Trichlorobenzene	3.6	NC	15	NC	--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
1,2,4-Trimethylbenzene	2.9	NC	12	NC	--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
1,2-Dibromo-3-chloropropane	0.028	C	0.34	C	--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
1,2-Dibromoethane	0.18	C	0.77	C	--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
1,2-Dichlorobenzene	270	NC	1100	NC	170000	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
1,2-Dichloroethane	2.2	C	9.8	C	2970	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
1,2-Dichloropropane	2.4	C	11	C	--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
1,3,5-Trimethylbenzene	--		--		--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
1,3-Dichlorobenzene	--		--		26000	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
1,3-Dichloropropane	--		--		--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
1,4-Dichlorobenzene	2.6	C	11	C	26000	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
2,2-Dichloropropane	--		--		--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
2-Butanone	220000	NC	940000	NC	--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
2-Chlorotoluene	--		--		--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
2-Hexanone	820	NC	3400	NC	--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
4-Chlorotoluene	--		--		--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
4-Isopropyltoluene	--		--		--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
4-Methyl-2-pentanone	55000	NC	230000	NC	--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
Acetone	2300000	NC	9500000	NC	--	1.2	1.3	4.6	5 U	1.2	50 U	5 U	1.8	2 U	1 U	1 U	1 U	2.8 B	1 U	1 UJ	1 UJ	3 B	3.9 J	22 B	10 UJ	5.5 B	5 UJ	10 U	1 UJ
Acrylonitrile	7.3	C	32	C	20	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
Benzene	**1.6**	C	***6.9***	C	710	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	***210***	***15***
Bromobenzene	62	NC	260	NC	--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
Bromochloromethane	70	NC	290	NC	--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
Bromodichloromethane	0.88	C	3.8	C	--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
Bromoform	--		--		10800	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
Bromomethane	1.7	NC	7.3	NC	--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
Carbon disulfide	120	NC	520	NC	--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
Carbon tetrachloride	0.41	C	1.8	C	132	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
Chlorobenzene	**41**	NC	***170***	NC	420000	1 U	1 U	19	41	1 U	50 U	6.5	**110**	3.7	1 U	1.7	1.9	1 U	1 U	1 U	1 U	1 U	32	37	**45**	**100**	**130**	**100**	***210***
Chloroethane	2300	NC	9700	NC	--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
Chloroform	0.81	C	3.6	C	14100	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
Chloromethane	26	NC	110	NC	--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
cis-1,2-Dichloroethene	--		--		--	1 U	1 U	28	150	6.9	260	210	23	160	1 U	39	39	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
cis-1,3-Dichloropropene	--		--		--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
Dibromochloromethane	3.2	C	14	C	1020	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
Dibromomethane	12	NC	52	NC	--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
Dichlorodifluoromethane	0.74	NC	3.1	NC	--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
Diethyl ether	--		--		--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
Ethylbenzene	**3.5**	C	***15***	C	580000	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	***68***	1 U
Hexachlorobutadiene	--		--		--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
Isopropylbenzene	89	NC	370	NC	--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
m,p-Xylene	--		--		--	2 U	2 U	2 U	10 U	2 U	100 U	10 U	2 U	4 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	40 U	20 U	10 U	10 U	81	2 U
Methyl tert-butyl ether	**450**	C	2000	C	--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	28	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	54	**550**	**600**	180	250	220	440

Table 1
Groundwater Analytical Results
Raymark - Operable Unit 2 - Groundwater
Stratford, Connecticut

					Sample Location	MW-111S	MW-209S	MW-210S	MW-502S	MW-504S	MW-513S	MW-514S	MW-519S	MW-520S	MW-527S	MW-529S		MW-601				MW-602		MW-603		MW-604D		MW-604S	
					Sample Date	02/14/12	02/16/12	02/15/12	02/16/12	02/16/12	02/15/12	02/13/12	02/15/12	02/14/12	02/15/12	02/14/12		04/11/12		08/09/12		04/12/12	08/09/12	04/12/12	08/09/12	04/11/12	08/10/12	04/12/12	08/10/12
					Sample Type	N	N	N	N	N	N	N	N	N	N	N	FD	N	FD	N		N	N	N	N	N	N	N	N
Sample ID	**2014 Adjusted Residential Vapor Intrusion Screening Levels[1]**	**Basis**	**2014 Adjusted Industrial/ Commercial Vapor Intrusion Screening Levels[2]**	**Basis**	**Connecticut Surface Water Protection Criteria[3]**	80043-MW111S-021412	80043-MW209S-021612	80043-MW210S-021512	80043-MW502S-021612	80043-MW504S-021612	80043-MW513S-021512	80043-MW514S-021312	80043-MW519S-021512	80043-MW520S-021412	80043-MW527S-021512	80043-MW529S-021412	80043-DUP01-021412	80043-GW-MW601-041112	80043-GW-DUP01-041112	MW601-08092012	MW601D-08092012	80043-GW-MW602-041212	MW602-08092012	80043-GW-MW603-041212	MW603-08092012	80043-GW-MW604D-041112	MW604D-08102012	80043-GW-MW604S-041212	MW604S-08102012
Methylene chloride	470	NC	2000	NC	48000	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
Naphthalene	4.6	C	20	C	--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
n-Butylbenzene	--		--		--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
n-Propylbenzene	240	NC	1000	NC	--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	5.2	1 U
o-Xylene	49	NC	210	NC	--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	24	1 U
sec-Butylbenzene	--		--		--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
Styrene	930	NC	3900	NC	--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
tert-Butylbenzene	--		--		--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
Tetrachloroethene	5.8	NC	24	NC	88	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
Tetrahydrofuran	72000	NC	300000	NC	--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
Toluene	1900	NC	8100	NC	4000000	1 U	1	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
Total VOCs	--		--		--	NA	NA	NA	NA	NA	4850	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	--		--		--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
trans-1,3-Dichloropropene	--		--		--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
Trichloroethene	**0.52**	NC	***2.2***	NC	2340	1 U	1 U	***57***	***51***	1 U	***1100***	5 U	***24***	***180***	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
Trichlorofluoromethane	18	NC	77	NC	--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
Vinyl acetate	1000	NC	4200	NC	--	1 U	1 U	1 U	5 U	1 U	50 U	5 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
Vinyl chloride	**0.15**	C	***2.5***	C	15750	1 U	1 U	***3.5***	***7.5***	1 U	50 U	***120***	***2***	***7.4***	1 U	***4.9***	***4.3***	1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U	5 U	5 U	10 U	1 U
Semivolatile Organic Compounds (ug/L)																													
1,2,4,5-Tetrachlorobenzene	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
1,2,4-Trichlorobenzene	3.6	NC	15	NC	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
1,2-Dichlorobenzene	270	NC	1100	NC	170000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
1,3-Dichlorobenzene	--		--		26000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
1,4-Dichlorobenzene	2.6	C	11	C	26000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
1,4-Naphthoquinone	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
2,2'-Oxybis(1-chloropropane)	93	C	400	C	3400000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
2,3,4,6-Tetrachlorophenol	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
2,4,5-Trichlorophenol	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
2,4,6-Trichlorophenol	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
2,4-Dichlorophenol	--		--		15800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
2,4-Dimethylphenol	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
2,4-Dinitrophenol	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	NA	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA
2,4-Dinitrotoluene	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
2,6-Dichlorophenol	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
2,6-Dinitrotoluene	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
2-Chloronaphthalene	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
2-Chlorophenol	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
2-Methylnaphthalene	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
2-Methylphenol	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
2-Nitroaniline	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
2-Nitrophenol	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
3 & 4 Methylphenol	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	NA	NA	5 U	NA	5 U	NA	5 U	NA	5 U	NA
3,3'-Dichlorobenzidine	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
3-Methylchloranthrene	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
3-Nitroaniline	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
4,6-Dinitro-2-methylphenol	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	NA	NA	5 U	NA	5 U	NA	5 U	NA	5 U	NA
4-Bromophenyl-phenylether	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
4-Chloro-3-methylphenol	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
4-Chloroaniline	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
4-Chlorophenyl-phenylether	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
4-Nitroaniline	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
4-Nitrophenol	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	NA	NA	5 U	NA	5 U	NA	5 U	NA	5 U	NA
4-Nitroquinoline-n-Oxide	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	NA	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA

Table 1
Groundwater Analytical Results
Raymark - Operable Unit 2 - Groundwater
Stratford, Connecticut

					Sample Location	MW-111S	MW-209S	MW-210S	MW-502S	MW-504S	MW-513S	MW-514S	MW-519S	MW-520S	MW-527S	MW-529S		MW-601				MW-602		MW-603		MW-604D		MW-604S	
					Sample Date	02/14/12	02/16/12	02/15/12	02/16/12	02/16/12	02/15/12	02/13/12	02/15/12	02/14/12	02/15/12	02/14/12		04/11/12		08/09/12		04/12/12	08/09/12	04/12/12	08/09/12	04/11/12	08/10/12	04/12/12	08/10/12
					Sample Type	N	N	N	N	N	N	N	N	N	N	N	FD	N	FD	N		N	N	N	N	N	N	N	N
Sample ID	**2014 Adjusted Residential Vapor Intrusion Screening Levels[1]**	**Basis**	**2014 Adjusted Industrial/ Commercial Vapor Intrusion Screening Levels[2]**	**Basis**	**Connecticut Surface Water Protection Criteria[3]**	80043-MW111S-021412	80043-MW209S-021612	80043-MW210S-021512	80043-MW502S-021612	80043-MW504S-021612	80043-MW513S-021512	80043-MW514S-021312	80043-MW519S-021512	80043-MW520S-021412	80043-MW527S-021512	80043-MW529S-021412	80043-DUP01-021412	80043-GW-MW601-041112	80043-GW-DUP01-041112	MW601-08092012	MW601D-08092012	80043-GW-MW602-041212	MW602-08092012	80043-GW-MW603-041212	MW603-08092012	80043-GW-MW604D-041112	MW604D-08102012	80043-GW-MW604S-041212	MW604S-08102012
Acenaphthene	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Acenaphthylene	--		--		0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Acetophenone	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Aniline	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Anthracene	--		--		1100000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Aramite	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Azobenzene	160	C	720	C	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Benzidine	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Benzo(a)anthracene	--		--		0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Benzo(a)pyrene	--		--		0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Benzo(b)fluoranthene	--		--		0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Benzo(g,h,i)perylene	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Benzo(k)fluoranthene	--		--		0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Benzoic Acid	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	NA	NA	5 U	NA	5 U	NA	5 U	NA	5 U	NA
Benzyl Alcohol	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Bis(2-chloroethoxy)methane	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Bis(2-chloroethyl)ether	12	C	53	C	42	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Bis(2-ethylhexyl)phthalate	--		--		59	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Butylbenzylphthalate	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Carbazole	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Chlorobenzilate	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Chrysene	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Dibenz(a,h)anthracene	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Dibenzofuran	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Diethylphthalate	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Dimethylphthalate	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Di-N-Butylphthalate	--		--		120000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Di-N-Octyl Phthalate	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Dinoseb	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	NA	NA	5 U	NA	5 U	NA	5 U	NA	5 U	NA
Ethyl methanesulfonate	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Fluoranthene	--		--		3700	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Fluorene	--		--		140000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Hexachlorobenzene	--		--		0.077	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Hexachlorobutadiene	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Hexachlorocyclopentadiene	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Hexachloroethane	--		--		89	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Hexachloropropene	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Indeno(1,2,3-cd)pyrene	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Isodrin	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Isophorone	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Isosafrole	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Kepone	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	NA	NA	5 U	NA	5 U	NA	5 U	NA	5 U	NA
m-Dinitrobenzene	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Methyl Methanesulfonate	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Naphthalene	**4.6**	C	20	C	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	**7.7**	NA
Naphthalene, 1-methyl-	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Nitrobenzene	72	C	310	C	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
N-Nitrosodimethylamine (NDMA)	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
N-Nitroso-di-n-propylamine (NDPA)	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
N-Nitrosodiphenylamine	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Pentachlorobenzene	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA

Table 1
Groundwater Analytical Results
Raymark - Operable Unit 2 - Groundwater
Stratford, Connecticut

					Sample Location	MW-111S	MW-209S	MW-210S	MW-502S	MW-504S	MW-513S	MW-514S	MW-519S	MW-520S	MW-527S	MW-529S		MW-601				MW-602		MW-603		MW-604D		MW-604S	
					Sample Date	02/14/12	02/16/12	02/15/12	02/16/12	02/16/12	02/15/12	02/13/12	02/15/12	02/14/12	02/15/12	02/14/12		04/11/12		08/09/12		04/12/12	08/09/12	04/12/12	08/09/12	04/11/12	08/10/12	04/12/12	08/10/12
					Sample Type	N	N	N	N	N	N	N	N	N	N	N	FD	N	FD	N		N	N	N	N	N	N	N	N
Sample ID	**2014 Adjusted Residential Vapor Intrusion Screening Levels[1]**	**Basis**	**2014 Adjusted Industrial/ Commercial Vapor Intrusion Screening Levels[2]**	**Basis**	**Connecticut Surface Water Protection Criteria[3]**	80043-MW111S-021412	80043-MW209S-021612	80043-MW210S-021512	80043-MW502S-021612	80043-MW504S-021612	80043-MW513S-021512	80043-MW514S-021312	80043-MW519S-021512	80043-MW520S-021412	80043-MW527S-021512	80043-MW529S-021412	80043-DUP01-021412	80043-GW-MW601-041112	80043-GW-DUP01-041112	MW601-08092012	MW601D-08092012	80043-GW-MW602-041212	MW602-08092012	80043-GW-MW603-041212	MW603-08092012	80043-GW-MW604D-041112	MW604D-08102012	80043-GW-MW604S-041212	MW604S-08102012
Pentachloronitrobenzene	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Pentachlorophenol	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	NA	NA	5 U	NA	5 U	NA	5 U	NA	5 U	NA
Phenacetin	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Phenanthrene	--		--		0.077	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Phenol	--		--		92000000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Pyrene	--		--		110000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Pyridine	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
Safrole	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA	2.5 U	NA
	Pesticides/PCBs (ug/L)																												
4,4'-DDD	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.025 U	0.025 U	NA	NA	0.025 U	NA	0.026 U	NA	0.028 U	NA	0.025 U	NA
4,4'-DDE	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.025 U	0.025 U	NA	NA	0.025 U	NA	0.026 U	NA	0.028 U	NA	0.025 U	NA
4,4'-DDT	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.028 U	0.028 U	NA	NA	0.028 U	NA	0.029 U	NA	0.031 U	NA	0.028 U	NA
Aldrin	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.05 U	0.05 U	NA	NA	0.05 U	NA	0.052 U	NA	0.055 U	NA	0.05 U	NA
alpha-BHC	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.025 U	0.025 U	NA	NA	0.025 U	NA	0.026 U	NA	0.028 U	NA	0.025 U	NA
Alpha-Chlordane	--		--		0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.025 U	0.025 U	NA	NA	0.025 U	NA	0.026 U	NA	0.028 U	NA	0.025 U	NA
Aroclor 1016	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA	0.515 U	NA	0.55 U	NA	0.5 U	NA
Aroclor 1221	0.16	C	0.72	C	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA	0.515 U	NA	0.55 U	NA	0.5 U	NA
Aroclor 1232	0.16	C	0.72	C	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA	0.515 U	NA	0.55 U	NA	0.5 U	NA
Aroclor 1242	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA	0.515 U	NA	0.55 U	NA	0.5 U	NA
Aroclor 1248	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA	0.515 U	NA	0.55 U	NA	0.5 U	NA
Aroclor 1254	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA	0.515 U	NA	0.55 U	NA	0.5 U	NA
Aroclor 1260	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA	0.515 U	NA	0.55 U	NA	0.5 U	NA
Aroclor 1262	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA	0.515 U	NA	0.55 U	NA	0.5 U	NA
Aroclor 1268	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA	0.515 U	NA	0.55 U	NA	0.5 U	NA
beta-BHC	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.025 U	0.025 U	NA	NA	0.025 U	NA	0.026 U	NA	0.028 U	NA	0.025 U	NA
Chlordane	--		--		0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA	0.515 U	NA	0.55 U	NA	0.5 U	NA
delta-BHC	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.025 U	0.025 U	NA	NA	0.025 U	NA	0.026 U	NA	0.028 U	NA	0.025 U	NA
Dieldrin	--		--		0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.025 U	0.025 U	NA	NA	0.025 U	NA	0.026 U	NA	0.028 U	NA	0.025 U	NA
Endosulfan I	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.025 U	0.025 U	NA	NA	0.025 U	NA	0.026 U	NA	0.028 U	NA	0.025 U	NA
Endosulfan II	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.025 U	0.025 U	NA	NA	0.025 U	NA	0.026 U	NA	0.028 U	NA	0.025 U	NA
Endosulfan Sulfate	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.025 U	0.025 U	NA	NA	0.025 U	NA	0.026 U	NA	0.028 U	NA	0.025 U	NA
Endrin	--		--		0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.025 U	0.025 U	NA	NA	0.025 U	NA	0.026 U	NA	0.028 U	NA	0.025 U	NA
Endrin Aldehyde	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.025 U	0.025 U	NA	NA	0.025 U	NA	0.026 U	NA	0.028 U	NA	0.025 U	NA
Endrin Ketone	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.025 U	0.025 U	NA	NA	0.025 U	NA	0.026 U	NA	0.028 U	NA	0.025 U	NA
gamma-BHC (Lindane)	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.025 U	0.025 U	NA	NA	0.025 U	NA	0.026 U	NA	0.028 U	NA	0.025 U	NA
gamma-Chlordane	--		--		0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.025 U	0.025 U	NA	NA	0.025 U	NA	0.026 U	NA	0.028 U	NA	0.025 U	NA
Heptachlor	--		--		0.05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.028 U	0.028 U	NA	NA	0.028 U	NA	0.029 U	NA	0.031 U	NA	0.028 U	NA
Heptachlor Epoxide	--		--		0.05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.025 U	0.025 U	NA	NA	0.025 U	NA	0.026 U	NA	0.028 U	NA	0.025 U	NA
Methoxychlor	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.025 U	0.025 U	NA	NA	0.025 U	NA	0.026 U	NA	0.028 U	NA	0.025 U	NA
Toxaphene	--		--		1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	NA	0.515 U	NA	0.55 U	NA	0.5 U	NA
	Metals (ug/L)																												
Aluminum	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	320	190	NA	NA	120	NA	3000	NA	6100	NA	590	NA
Antimony	--		--		86000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	20 U	20 U	NA	NA	20 U	NA	20 U	NA	20 U	NA	20 U	NA
Arsenic	--		--		4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	20 U	20 U	NA	NA	20 U	NA	20 U	NA	20 U	NA	20 U	NA
Barium	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	33	31	NA	NA	160	NA	73	NA	130	NA	160	NA
Beryllium	--		--		4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8 U	8 U	NA	NA	8 U	NA	8 U	NA	8 U	NA	8 U	NA
Cadmium	--		--		6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	NA	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA
Calcium	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	11000	11000	NA	NA	93000	NA	76000	NA	120000	NA	86000	NA
Chromium	--		--		1200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	20 U	20 U	NA	NA	20 U	NA	20 U	NA	20 U	NA	20 U	NA
Cobalt	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	20 U	20 U	NA	NA	20 U	NA	20 U	NA	20 U	NA	20 U	NA
Copper	--		--		48	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	20 U	20 U	NA	NA	20 U	NA	20 U	NA	20 U	NA	20 U	NA
Iron	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	380	200	NA	NA	280	NA	3600	NA	11000	NA	7200	NA

Table 1
Groundwater Analytical Results
Raymark - Operable Unit 2 - Groundwater
Stratford, Connecticut

					Sample Location	MW-111S	MW-209S	MW-210S	MW-502S	MW-504S	MW-513S	MW-514S	MW-519S	MW-520S	MW-527S	MW-529S		MW-601				MW-602		MW-603		MW-604D		MW-604S	
					Sample Date	02/14/12	02/16/12	02/15/12	02/16/12	02/16/12	02/15/12	02/13/12	02/15/12	02/14/12	02/15/12	02/14/12		04/11/12		08/09/12		04/12/12	08/09/12	04/12/12	08/09/12	04/11/12	08/10/12	04/12/12	08/10/12
					Sample Type	N	N	N	N	N	N	N	N	N	N	N	FD	N	FD	N		N	N	N	N	N	N	N	N
Sample ID	**2014 Adjusted Residential Vapor Intrusion Screening Levels[1]**	**Basis**	**2014 Adjusted Industrial/ Commercial Vapor Intrusion Screening Levels[2]**	**Basis**	**Connecticut Surface Water Protection Criteria[3]**	80043-MW111S-021412	80043-MW209S-021612	80043-MW210S-021512	80043-MW502S-021612	80043-MW504S-021612	80043-MW513S-021512	80043-MW514S-021312	80043-MW519S-021512	80043-MW520S-021412	80043-MW527S-021512	80043-MW529S-021412	80043-DUP01-021412	80043-GW-MW601-041112	80043-GW-DUP01-041112	MW601-08092012	MW601D-08092012	80043-GW-MW602-041212	MW602-08092012	80043-GW-MW603-041212	MW603-08092012	80043-GW-MW604D-041112	MW604D-08102012	80043-GW-MW604S-041212	MW604S-08102012
Lead	--		--		13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	20 U	20 U	NA	NA	20 U	NA	20 U	NA	20 U	NA	20 U	NA
Magnesium	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1400	1300	NA	NA	7700	NA	17000	NA	24000	NA	14000	NA
Manganese	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	260	230	NA	NA	2600	NA	6700	NA	7300	NA	2800	NA
Mercury	0.067	NC	0.28	NC	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.2 U	0.2 U	NA	NA	0.2 U	NA	0.2 U	NA	0.2 U	NA	0.2 U	NA
Nickel	--		--		880	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	20 U	20 U	NA	NA	20 U	NA	20 U	NA	20 U	NA	20 U	NA
Selenium	--		--		50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	20 U	20 U	NA	NA	20 U	NA	20 U	NA	20 U	NA	20 U	NA
Silver	--		--		12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	NA	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA
Thallium	--		--		63	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	40 U	40 U	NA	NA	40 U	NA	40 U	NA	40 U	NA	40 U	NA
Vanadium	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	20 U	20 U	NA	NA	20 U	NA	20 U	NA	20 U	NA	20 U	NA
Zinc	--		--		123	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	20 U	20 U	NA	NA	20 U	NA	20 U	NA	22	NA	20 U	NA
General Chemistry (mg/L)																													
Alkalinity, Total (as CaCO3)	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	34	45	NA	NA	250	NA	85	NA	100	NA	120	NA
Chloride	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	31	30	NA	NA	380	NA	310	NA	470	NA	370	NA
Nitrate	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	11	11	NA	NA	17	NA	12	NA	3.6	NA	16	NA
Nitrate as Nitrogen	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5	2.5	NA	NA	3.84	NA	2.7	NA	0.81	NA	3.6	NA
Nitrite	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.05 U	0.05 U	NA	NA	0.05 U	NA	0.05 UJ	NA	0.05 U	NA	6.9	NA
Nitrite as Nitrogen	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.03 U	0.03 U	NA	NA	0.03 U	NA	0.03 U	NA	0.03 U	NA	2.1	NA
Sulfate	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	11	11	NA	NA	42	NA	150	NA	170	NA	110	NA
General Chemistry (ug/L)																													
Cyanide	15	NC	64	NC	52	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	NA	NA	5 U	NA	5 U	NA	5 U	NA	5 U	NA
Dissolved Gases (ug/L)																													
Ethane	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.2 U	1.2 U	NA	NA	1.3 U	NA	1.3	NA	1.7	NA	1.7	NA
Ethene	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.5 U	1.5 U	NA	NA	1.6 U	NA	1.6	NA	1.6 U	NA	2.1	NA
Methane	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.3	2.1	NA	NA	2.6	NA	7.1	NA	22	NA	1400	NA
Carbon Dioxide	--		--		--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4570	4350	NA	NA	39400	NA	35300	NA	42200	NA	43000	NA

Notes:

[1] 2014 Adjusted Residential Vapor Intrusion Screening Levels are groundwater screening levels based on protection of residential indoor air. They have been calculated using the OSWER Vapor Intrusion Screening Level (VISL) calculator, Version 3.1.1 (May 2014), adjusted to correspond to Hazard Quotient = 0.1 and cancer risks = $1x10^{-6}$.

[2] 2014 Adjusted Industrial/Commercial Vapor Intrusion Screening Levels are groundwater screening levels based on protection of residential indoor air. They have been calculated using the OSWER Vapor Intrusion Screening Level (VISL) calculator, Version 3.1.1 (May 2014), adjusted to correspond to Hazard Quotient = 0.1 and cancer risks = $1x10^{-6}$. Reference Concentrations (RfCs), Unit Risk Factors (URFs), and Henry's Law constants were obtained from the January 2015 Regional Screening Level (RSL) table.

[3] Connecticut Surface Water Protection Criteria for Substances in Groundwater: Appendix D to Sections 22a-133k-1 through 22a-133k-3 of the CTDEEP Remediation Standard Regulations (CTDEEP, January 1996). C = Cancer based value
N = Non-cancer based value

Bold Analyte - Raymark OU2 Contaminant of Concern
Blue highlighted, bold concentrations exceed the 2014 Residential Adjusted Vapor Intrusion Screening Levels.
Blue highlighted, bold, italicized concentrations exceed the 2014 Industrial/Commercial Vapor Intrusion Screening Levels.
Black highlighted, bold concentrations exceed the applicable Connecticut Surface Water Protection Criteria as well as the other screening levels.
U = Concentration was not detected above the applicable laboratory reporting limit.
NA = Not analyzed.
J = Estimated value.
UJ = Estimated concentration was not detected above the applicable laboratory reporting limit.

Table 2
Groundwater Analytical Results Statistical Summary*
Raymark - Operable Unit 2 - Groundwater
Stratford, Connecticut

Parameter	CAS #	Units	Freq. Detect	% Detect	Min.	Max.	Mean	Std Dev.	Loc. Of Max. Conc.	2014 Adjusted Residential Vapor Intrusion Screening Levels[1]		2014 Adjusted Industrial/ Commercial Vapor Intrusion Screening Levels[2]		Connecticut Surface Water Protection Criteria[3]	
										Comparison Level	# Exceedances	Comparison Level	# Exceedances	Comparison Level	# Exceedances
1,1,1-Trichloroethane	71-55-6	µg/L	6/24	25	2.1	2800	496	1130	MW-513S	740	**1**	3100	0	62000	0
1,1-Dichloroethane	75-34-3	µg/L	11/24	45.8	1.2	180	38.1	53.7	MW-513S	7.6	**8**	33	**4**	--	
1,1-Dichloroethene	75-35-4	µg/L	6/24	25	10	510	134	196	MW-513S	20	**4**	82	**2**	96	**2**
Acetone	67-64-1	µg/L	10/24	41.7	1.2	22	4.73	6.25	MW-603	2300000	0	9500000	0	--	
Benzene	71-43-2	µg/L	2/24	8.3	15	210	112	138	MW-604S	1.6	**2**	6.9	**2**	710	0
Chlorobenzene	108-90-7	µg/L	14/24	58.3	1.7	210	59.8	61.7	MW-604S	41	**6**	170	**1**	420000	0
cis-1,2-Dichloroethene	156-59-2	µg/L	9/24	37.5	6.9	260	102	94.2	MW-513S	--		--		--	
Ethylbenzene	100-41-4	µg/L	1/24	4.2	68	68	68		MW-604S	3.5	**1**	15	**1**	580000	0
m,p-Xylene	179601-23-1	µg/L	1/24	4.2	81	81	81		MW-604S	--		--		--	
Methyl tert-butyl ether	1634-04-4	µg/L	8/24	33.3	28	600	290	217	MW-603	450	**2**	2000	0	--	
n-Propylbenzene	103-65-1	µg/L	1/24	4.2	5.2	5.2	5.2		MW-604S	240	0	1000	0	--	
o-Xylene	95-47-6	µg/L	1/24	4.2	24	24	24		MW-604S	49	0	210	0	--	
Toluene	108-88-3	µg/L	1/24	4.2	1	1	1		MW-209S	1900	0	8100	0	4000000	0
Trichloroethene	79-01-6	µg/L	5/24	20.8	24	1100	282	461	MW-513S	0.52	**5**	2.2	**5**	2340	0
Vinyl chloride	75-01-4	µg/L	7/24	29.2	2	120	21.4	43.5	MW-514S	0.15	**7**	2.5	**6**	15750	0

Notes:

* Statistical summary of 2012 groundwater sampling results for analytes detected in at least one sample.

1. 2014 Adjusted Residential Vapor Intrusion Screening Levels are groundwater screening levels based on protection of residential indoor air. They have been calculated using the OSWER Vapor Intrusion Screening Level (VISL) calculator, Version 3.1.1 (May 2014), adjusted to correspond to Hazard Quotient = 0.1 and cancer risks = $1x10^{-6}$.

2. 2014 Adjusted Industrial/Commercial Vapor Intrusion Screening Levels are groundwater screening levels based on protection of residential indoor air. They have been calculated using the OSWER Vapor Intrusion Screening Level (VISL) calculator, Version 3.1.1 (May 2014), adjusted to correspond to Hazard Quotient = 0.1 and cancer risks = $1x10^{-6}$.

3. Connecticut Surface Water Protection Criteria for Substances in Groundwater: Appendix D to Sections 22a-133k-1 through 22a-133k-3 of the CTDEEP Remediation Standard Regulations (CTDEEP, June 2013).

Bold analyte = Raymark OU2 Contaminant of Concern
Highlighted, bold = Concentration in one or more samples exceeds the applicable screening level.

Table 3
Sub-Slab Soil Gas Analytical Results*
Raymark - Operable Unit 2 - Groundwater
Stratford, Connecticut

					INDUSTRIAL/COMMERCIAL PROPERTIES															RESIDENTIAL PROPERTIES						
				Sample Location	100 VETERANS, SS-1	100 VETERANS, SS-3	300 FERRY BLVD, SS-1		335 FERRY BLVD, SS-1		335 FERRY BLVD, SS-2	335 FERRY BLVD, SS-3		444 FERRY BLVD, SS-3		500 FERRY BLVD, SS-2		608 FERRY BLVD, SS-3		50 FERRY CT, SS-1	62 FERRY CT, SS-1		72 FERRY CT, SS-1		82 FERRY CT, SS-1	
				Sample Date	08/14/12	02/14/12	02/14/12	08/15/12	02/14/12	12/12/13	12/12/13	08/15/12	12/12/13	02/15/12	08/14/12	02/13/12	08/13/12	02/14/12	08/15/12	08/13/12	02/14/12	08/13/12	02/13/12	08/13/12	02/15/12	08/13/12
				Canister	20860	15050	14902	22692	22680	4742	1565	12565	4778	20856	22105	12562	13498	22684	22681	13500	15047	22153	22683	12569	14901	12562
Sample ID	**Residential Vapor Intrusion Screening Level[1]**	**Basis**	**Industrial/ Commercial Vapor Intrusion Screening Level[2]**	**Basis**	100VETERANS-GRAB-SS1-081412	100VETERANS-GRAB-SS-3	300FERRY-GRAB-SS-1	300FERRY-GRAB-SS-1-081512	335FERRY-GRAB-SS-1	335FERRY-GRAB-SS1-121213	335FERRY-GRAB-SS2-121213	335FERRY-GRAB-SS3-081512	335FERRY-GRAB-SS3-121213	444FERRY-GRAB-SS-3	444FERRY-GRAB-SS3-081412	500FERRY-GRAB-SS2	500FERRY-GRAB-SS2-081312	608FERRY-GRAB-SS-3	608FERRY-GRAB-SS3-081512	FERRYCT-UNIT50-GRAB-SS1-081312	FERRYCT-UNIT62-GRAB-SS-1	FERRYCT-UNIT62-GRAB-SS1-081312	FERRYCT-UNIT72-GRAB-SS-1	FERRYCT-UNIT72-GRAB-SS1-081312	FERRYCT-UNIT82-GRAB-SS-1	FERRYCT-UNIT82-GRAB-SS1-081312
Volatiles (µg/m^3)																										
1,1,1-Trichloroethane	5200	N	22000	N	**980**	**720**	4.1 U	**3.2**	**500**	**2340**	**2620**	**240**	**818**	**20**	**30**	**310**	**20**	**0.88**	**1.6**	**1.1**	0.49 U	0.5 U	**0.47**	0.45 U	**0.9**	**0.87**
1,1,2,2-Tetrachloroethane	0.48	C	2.1	C	270 U	190 U	5.2 U	0.76 U	10 U	0.617 U	0.617 U	0.68 U	0.617 U	0.6 U	0.69 U	11 U	0.58 U	0.53 U	1 U	0.62 U	0.62 U	0.62 U	0.57 U	0.56 U	0.6 U	0.56 U
1,1,2-Trichloro-1,2,2-trifluoroethane	31000	N	130000	N	310 U	210 U	5.8 U	0.84 U	12 U	0.689 U	0.689 U	0.76 U	0.689 U	**0.4 L**	**0.5 L**	12 U	0.64 U	**0.41 L**	**0.53 L**	**0.52 L**	**0.43 L**	0.7 U	**0.38 L**	**0.38 L**	0.6 U	0.63 U
1,1,2-Trichloroethane	0.21	N	0.88	N	220 U	150 U	4.1 U	0.6 U	8.3 U	0.491 U	0.491 U	0.54 U	0.491 U	0.5 U	0.55 U	8.8 U	0.46 U	0.42 U	0.82 U	0.49 U	0.49 U	0.5 U	0.45 U	0.45 U	0.5 U	0.45 U
1,1-Dichloroethane	**18**	C	***77***	C	***6100***	***2100***	**3.8**	**10**	**5.6 L**	**36.4**	**12.9**	**1.3**	**64.7**	**0.2 L**	**15**	***110***	**3.1**	**2.13**	0.61 U	0.36 U	0.36 U	0.37 U	0.34 U	0.33 U	0.3 U	0.33 U
1,1-Dichloroethene	**210**	N	***880***	N	***1000***	***1000***	3 U	**4.4**	6 U	**55.5**	**0.396**	0.39 U	**43.6**	**0.7**	**2.6**	***310***	**6.5**	**1**	0.59 U	0.36 U	0.36 U	0.36 U	**0.2 L**	0.33 U	0.3 U	0.33 U
1,2,4-Trichlorobenzene	2.1	N	8.8	N	300 U	200 U	5.6 U	0.82 U	11 U	0.667 U	0.667 U	0.73 U	0.667 U	0.7 U	0.74 U	12 U	0.62 U	0.58 U	1.1 U	0.67 U	0.67 U	0.68 U	0.61 U	0.61 U	0.6 U	0.61 U
1,2,4-Trimethylbenzene	7.3	N	31	N	200 U	130 U	3.7 U	**2.2**	7.4 U	0.442 U	0.442 U	0.49 U	0.442 U	0.4 U	0.49 U	8 U	**2.6**	0.38 U	0.74 U	0.44 U	0.44 U	0.45 U	0.41 U	0.4 U	0.4 U	0.4 U
1,2-Dibromoethane	0.047	C	0.2	C	310 U	210 U	5.8 U	0.85 U	12 U	0.691 U	0.691 U	0.76 U	0.691 U	0.7 U	0.77 U	12 U	0.65 U	0.6 U	1.2 U	0.69 U	0.69 U	0.7 U	0.64 U	0.63 U	0.6 U	0.63 U
1,2-Dichlorobenzene	210	N	880	N	240 U	160 U	4.6 U	0.66 U	9.1 U	0.541 U	0.541 U	0.6 U	0.541 U	0.5 U	0.6 U	9.7 U	0.51 U	0.47 U	0.9 U	0.54 U	0.54 U	0.55 U	0.5 U	0.49 U	0.5 U	0.49 U
1,2-Dichloroethane	1.1	C	4.7	C	160 U	110 U	3.1 U	0.45 U	6.1 U	0.364 U	0.364 U	0.4 U	0.364 U	0.4 U	0.4 U	6.5 U	0.34 U	0.31 U	0.61 U	0.36 U	0.36 U	0.37 U	0.34 U	0.33 U	0.3 U	0.33 U
1,2-Dichloropropane	2.8	C	12	C	180 U	130 U	3.5 U	0.51 U	7 U	0.416 U	0.416 U	0.46 U	0.416 U	0.4 U	0.46 U	7.5 U	0.39 U	0.36 U	0.69 U	0.42 U	0.42 U	0.42 U	0.38 U	0.38 U	0.4 U	0.38 U
1,3,5-Trimethylbenzene	--		--		200 U	130 U	3.7 U	0.54 U	7.4 U	0.442 U	0.442 U	0.49 U	0.442 U	0.4 U	0.49 U	8 U	0.41 U	0.38 U	0.74 U	0.44 U	0.44 U	0.45 U	0.41 U	0.4 U	0.4 U	0.4 U
1,3-Butadiene	0.94	C	4.1	C	180 U	120 U	3.3 U	0.49 U	6.7 U	0.398 U	0.42 U	0.44 U	0.42 U	0.4 U	0.44 U	7.1 U	0.38 U	0.33 U	0.66 U	0.4 U	0.4 U	0.4 U	0.36 U	0.35 U	0.4 U	0.35 U
1,3-Dichlorobenzene	--		--		240 U	160 U	4.6 U	0.66 U	9.1 U	0.541 U	0.541 U	0.6 U	0.541 U	0.5 U	0.6 U	9.7 U	0.51 U	0.47 U	0.9 U	0.54 U	0.54 U	0.55 U	0.5 U	0.49 U	0.5 U	0.49 U
1,4-Dichlorobenzene	2.6	C	11	C	240 U	160 U	4.6 U	0.66 U	9.1 U	0.541 U	0.541 U	0.6 U	0.541 U	0.5 U	0.6 U	9.7 U	0.51 U	0.47 U	0.9 U	0.54 U	0.54 U	0.55 U	0.5 U	0.49 U	0.5 U	0.49 U
2-Butanone	5200	N	22000	N	120 U	80 U	2.2 U	0.32 U	4.5 U	**0.472**	**0.383**	0.29 U	0.265 U	**0.2 L**	**0.5**	4.8 U	0.25 U	**0.19 L**	**0.47**	**0.56**	**0.42**	**0.28**	**0.15 L**	**0.44**	**0.5**	**0.35**
2-Hexanone	31	N	130	N	160 U	110 U	3.1 U	0.45 U	6.2 U	0.368 U	0.368 U	0.41 U	0.368 U	0.4 U	0.41 U	6.6 U	0.34 U	0.32 U	0.61 U	0.37 U	0.37 U	0.37 U	0.34 U	0.34 U	0.3 U	0.34 U
4-Ethyltoluene	--		--		200 U	130 U	3.7 U	**1.3**	7.4 U	0.442 U	0.442 U	0.49 U	0.442 U	0.4 U	0.49 U	8 U	**2.8**	0.38 U	**0.27 L**	0.44 U	0.44 U	0.45 U	0.41 U	0.4 U	0.4 U	0.4 U
4-Methyl-2-pentanone	3100	N	13000	N	160 U	110 U	3.1 U	0.45 U	6.2 U	0.368 U	0.368 U	0.41 U	0.368 U	0.4 U	0.41 U	6.6 U	0.34 U	0.32 U	0.61 U	0.37 U	0.37 U	0.37 U	0.34 U	0.34 U	0.3 U	0.34 U
Acrylonitrile	0.41	C	1.8	C	87 U	59 U	1.6 U	0.24 U	3.3 U	0.195 U	0.195 U	0.21 U	0.195 U	0.2 U	0.22 U	3.5 U	0.18 U	0.17 U	0.33 U	0.2 U	0.2 U	0.2 U	0.18 U	0.18 U	0.2 U	0.18 U
Allyl chloride	1	N	4.4	N	130 U	85 U	2.4 U	0.34 U	4.7 U	0.282 U	0.282 U	0.31 U	0.282 U	0.3 U	0.31 U	5.1 U	0.26 U	0.24 U	0.47 U	0.28 U	0.28 U	0.28 U	0.26 U	0.26 U	0.3 U	0.26 U
Benzene	**3.6**	C	16	C	130 U	87 U	2.4 U	**2.2**	4.8 U	0.287 U	0.287 U	**0.48**	0.287 U	0.3 U	0.32 U	**5.2**	**3.9**	0.25 U	0.48 U	0.29 U	**0.42**	0.29 U	0.26 U	0.26 U	**0.2 L**	0.26 U
Benzyl chloride	0.57	C	2.5	C	210 U	140 U	3.9 U	0.57 U	7.8 U	0.466 U	0.466 U	0.51 U	0.466 U	0.5 U	0.52 U	8.4 U	0.43 U	0.4 U	0.78 U	0.47 U	0.47 U	0.47 U	0.43 U	0.42 U	0.4 U	0.42 U
Bromodichloromethane	0.76	C	3.3	C	270 U	180 U	5.1 U	0.74 U	10 U	0.603 U	0.603 U	0.66 U	0.603 U	0.6 U	0.67 U	11 U	0.56 U	0.52 U	1 U	0.6 U	0.6 U	0.61 U	0.56 U	0.55 U	0.6 U	0.55 U
Bromoform	26	C	110	C	410 U	280 U	7.8 U	1.1 U	16 U	0.93 U	0.93 U	1 U	0.93 U	0.9 U	1 U	17 U	0.87 U	0.8 U	1.6 U	0.93 U	0.93 U	0.94 U	0.86 U	0.85 U	0.9 U	0.85 U
Bromomethane	5.2	N	22	N	160 U	110 U	2.9 U	0.43 U	5.9 U	0.349 U	0.349 U	0.38 U	0.349 U	0.3 U	0.39 U	6.3 U	0.33 U	0.3 U	0.58 U	0.35 U	0.35 U	0.35 U	0.32 U	0.32 U	0.3 U	0.32 U
Carbon tetrachloride	4.7	C	20	C	250 U	170 U	4.8 U	0.69 U	9.5 U	0.566 U	0.566 U	0.62 U	0.566 U	0.6 U	0.63 U	10 U	0.53 U	**0.34 L**	**0.52 L**	0.57 U	**0.26 L**	0.57 U	0.52 U	**0.52**	0.5 U	**0.33 L**
Chlorobenzene	52	N	220	N	180 U	130 U	3.5 U	**18**	7 U	0.414 U	0.414 U	0.46 U	0.414 U	0.4 U	0.46 U	7.4 U	0.39 U	0.36 U	0.69 U	0.41 U	0.41 U	0.42 U	0.38 U	0.38 U	0.4 U	0.38 U
Chloroethane	10000	N	44000	N	110 U	72 U	2 U	0.29 U	4 U	0.237 U	0.237 U	0.26 U	0.237 U	0.2 U	0.26 U	4.3 U	0.22 U	0.21 U	0.4 U	0.24 U	0.24 U	0.24 U	0.22 U	0.22 U	0.2 U	0.22 U
Chloroform	**1.2**	C	***5.3***	C	200 U	130 U	3.7 U	***8.5***	7.4 U	***8.3***	**3.51**	**3.9**	***17.1***	0.4 U	0.49 U	***5.9 L***	**0.93**	0.38 U	**0.44 L**	**0.33 L**	**0.23 L**	**0.93**	0.4 U	**0.88**	**1.9**	**0.35 L**
Chloromethane	94	N	390	N	83 U	56 U	1.6 U	**0.68**	3.1 U	0.186 U	0.186 U	0.2 U	0.186 U	0.2 U	**0.23**	3.3 U	**0.27**	0.16 U	**0.27**	**0.12 L**	**0.29**	0.19 U	**0.1 L**	**0.11 L**	**0.1 L**	**0.23**
cis-1,2-Dichloroethene	--		--		**16000**	**5200**	**3.5**	**360**	**11**	**7.53**	0.357 U	0.39 U	**43.6**	0.4 U	**52**	**84**	**1.2**	**4.97**	**0.95**	0.36 U	**0.17 L**	0.36 U	0.33 U	0.33 U	0.3 U	0.33 U
cis-1,3-Dichloropropene	--		--		180 U	120 U	3.4 U	0.5 U	6.9 U	0.408 U	0.408 U	0.45 U	0.408 U	0.4 U	0.45 U	7.3 U	0.38 U	0.35 U	0.68 U	0.41 U	0.41 U	0.41 U	0.38 U	0.37 U	0.4 U	0.37 U
Cyclohexane	6300	N	26000	N	140 U	94 U	2.6 U	**22**	**21**	0.31 U	0.31 U	0.34 U	0.31 U	0.3 U	0.34 U	5.6 U	**3.6**	0.27 U	0.52 U	0.31 U	0.31 U	0.31 U	0.29 U	0.28 U	0.3 U	0.28 U
Dibromochloromethane	1	C	4.5	C	340 U	230 U	6.5 U	0.94 U	13 U	0.766 U	0.766 U	0.84 U	0.766 U	0.8 U	0.85 U	14 U	0.72 U	0.66 U	1.3 U	0.77 U	0.77 U	0.78 U	0.71 U	0.7 U	0.7 U	0.7 U
Dichlorodifluoromethane	**100**	N	***440***	N	200 U	130 U	**16**	**46**	7.5 U	0.445 U	0.445 U	***27000***	0.445 U	**1.6**	**2.1**	8 U	**1.5**	**3**	**6.9**	**2.5**	**1**	**1.6**	**1.7**	**2.6**	**2**	**2.3**
Dichlorotetrafluoroethane	--		--		280 U	190 U	5.3 U	0.77 U	11 U	0.629 U	0.629 U	0.69 U	0.629 U	0.6 U	0.7 U	11 U	0.59 U	0.54 U	1 U	0.63 U	0.63 U	0.64 U	0.58 U	0.57 U	0.6 U	0.57 U
Ethylbenzene	11	C	49	C	170 U	120 U	3.3 U	0.48 U	6.6 U	0.391 U	0.391 U	0.43 U	0.391 U	0.4 U	0.43 U	7 U	**3.4**	0.34 U	0.65 U	0.39 U	0.39 U	0.4 U	0.36 U	0.36 U	0.4 U	0.36 U
Hexachlorobutadiene	1.3	C	5.6	C	430 U	280 U	7.7 U	1.2 U	15 U	0.959 U	0.959 U	1.1 U	0.959 U	0.9 U	1.1 U	16 U	0.9 U	0.79 U	1.6 U	0.96 U	0.92 U	0.97 U	0.84 U	0.87 U	0.9 U	0.87 U
Hexane	730	N	3100	N	140 U	96 U	2.7 U	**4.9**	5.3 U	0.317 U	**4.23**	**2.6**	0.317 U	**0.2 L**	**0.28 L**	**9.3**	**26**	0.27 U	**0.32 L**	0.32 U	**0.64**	**0.22 L**	0.29 U	0.29 U	**1.4**	**0.23 L**
m,p-Xylene	--		--		350 U	240 U	6.6 U	**8.9**	13 U	0.868 U	0.868 U	0.87 U	0.868 U	0.8 U	0.87 U	**12 L**	**10**	0.66 U	1.3 U	0.78 U	**0.44 L**	0.78 U	0.7 U	0.69 U	0.7 U	0.71 U
Methyl tert-butyl ether	110	C	470	C	140 U	98 U	**5.2**	**11**	5.5 U	0.324 U	0.324 U	0.36 U	0.324 U	0.3 U	0.36 U	5.8 U	0.3 U	0.28 U	0.54 U	0.32 U	0.32 U	0.33 U	0.3 U	0.3 U	0.3 U	0.3 U
Methylene chloride	630	N	2600	N	140 U	95 U	2.6 U	0.38 U	5.3 U	0.312 U	0.312 U	0.34 U	0.312 U	**0.5**	0.35 U	5.6 U	0.29 U	**1.05**	0.52 U	0.31 U	**0.63**	0.32 U	0.29 U	0.28 U	**0.1 L**	0.28 U
n-Heptane	--		--		160 U	110 U	3.1 U	**8.8**	6.2 U	0.369 U	0.369 U	0.41 U	0.369 U	0.4 U	0.41 U	6.6 U	0.34 U	0.32 U	0.61 U	0.37 U	0.37 U	0.37 U	0.34 U	0.34 U	0.3 U	0.34 U
o-Xylene	100	N	440	N	170 U	120 U	3.3 U	**4.8**	6.6 U	0.391 U	0.391 U	0.43 U	0.391 U	0.4 U	0.43 U	7 U	**3.6**	0.34 U	0.65 U	0.39 U	0.39 U	0.4 U	0.36 U	0.36 U	0.4 U	0.36 U

Table 3
Sub-Slab Soil Gas Analytical Results*
Raymark - Operable Unit 2 - Groundwater
Stratford, Connecticut

					INDUSTRIAL/COMMERCIAL PROPERTIES															RESIDENTIAL PROPERTIES						
				Sample Location	100 VETERANS, SS-1	100 VETERANS, SS-3	300 FERRY BLVD, SS-1		335 FERRY BLVD, SS-1		335 FERRY BLVD, SS-2	335 FERRY BLVD, SS-3		444 FERRY BLVD, SS-3		500 FERRY BLVD, SS-2		608 FERRY BLVD, SS-3		50 FERRY CT, SS-1	62 FERRY CT, SS-1		72 FERRY CT, SS-1		82 FERRY CT, SS-1	
				Sample Date	08/14/12	02/14/12	02/14/12	08/15/12	02/14/12	12/12/13	12/12/13	08/15/12	12/12/13	02/15/12	08/14/12	02/13/12	08/13/12	02/14/12	08/15/12	08/13/12	02/14/12	08/13/12	02/13/12	08/13/12	02/15/12	08/13/12
				Canister	20860	15050	14902	22692	22680	4742	1565	12565	4778	20856	22105	12562	13498	22684	22681	13500	15047	22153	22683	12569	14901	12562
Sample ID	**Residential Vapor Intrusion Screening Level[1]**	**Basis**	**Industrial/ Commercial Vapor Intrusion Screening Level[2]**	**Basis**	100VETERANS-GRAB-SS1-081412	100VETERANS-GRAB-SS-3	300FERRY-GRAB-SS-1	300FERRY-GRAB-SS-1-081512	335FERRY-GRAB-SS-1	335FERRY-GRAB-SS1-121213	335FERRY-GRAB-SS2-121213	335FERRY-GRAB-SS3-081512	335FERRY-GRAB-SS3-121213	444FERRY-GRAB-SS-3	444FERRY-GRAB-SS3-081412	500FERRY-GRAB-SS2	500FERRY-GRAB-SS2-081312	608FERRY-GRAB-SS-3	608FERRY-GRAB-SS3-081512	FERRYCT-UNIT50-GRAB-SS1-081312	FERRYCT-UNIT62-GRAB-SS-1	FERRYCT-UNIT62-GRAB-SS1-081312	FERRYCT-UNIT72-GRAB-SS-1	FERRYCT-UNIT72-GRAB-SS1-081312	FERRYCT-UNIT82-GRAB-SS-1	FERRYCT-UNIT82-GRAB-SS1-081312
Styrene	1000	N	4400	N	170 U	120 U	3.2 U	0.47 U	6.5 U	0.383 U	0.383 U	0.42 U	0.383 U	**0.4**	0.43 U	6.9 U	**1.4**	0.33 U	0.64 U	0.38 U	0.38 U	0.39 U	0.35 U	0.35 U	**1.4**	0.35 U
Tetrachloroethene	42	N	180	N	270 U	180 U	**4.1 L**	**10**	**6.6 L**	**5.9**	**1.36**	**6.2**	**4.13**	**1.6**	**5.2**	**13**	**1.6**	**0.44 L**	**9.8**	**8.7**	**1.85**	**3**	0.56 U	**0.36 L**	**0.8**	**0.56**
Tetrahydrofuran	2100	N	8800	N	120 U	80 U	2.2 U	0.32 U	4.5 U	0.265 U	0.265 U	0.29 U	0.265 U	0.3 U	0.29 U	4.8 U	0.25 U	0.23 U	0.44 U	0.27 U	0.27 U	0.27 U	0.24 U	0.24 U	0.2 U	0.24 U
Toluene	5200	N	22000	N	150 U	100 U	2.9 U	**6.5**	5.7 U	0.339 U	0.339 U	**0.72**	0.339 U	**0.2 L**	0.38 U	**16**	**22**	0.29 U	0.57 U	0.34 U	**0.99**	0.34 U	0.31 U	0.31 U	**0.7**	0.31 U
trans-1,2-Dichloroethene	--		--		**170**	110 U	3 U	**19**	6 U	0.357 U	0.357 U	0.39 U	**0.515**	0.4 U	**0.52**	6.4 U	0.33 U	0.31 U	0.59 U	0.36 U	0.36 U	0.36 U	0.33 U	0.33 U	0.3 U	0.33 U
trans-1,3-Dichloropropene	--		--		180 U	120 U	3.4 U	0.5 U	6.9 U	0.408 U	0.408 U	0.45 U	0.408 U	0.4 U	0.45 U	7.3 U	0.38 U	0.35 U	0.68 U	0.41 U	0.41 U	0.41 U	0.38 U	0.37 U	0.4 U	0.37 U
Trichloroethene	**2.1**	N	***8.8***	N	***2500***	***1100***	***160***	***1100***	***23***	***59.1***	0.483 U	***91 L***	***134***	**2.6**	***15***	***650***	***97***	**1.41**	**4.7**	0.48 U	0.48 U	0.49 U	**0.52**	0.44 U	**0.2 L**	**0.46**
Trichlorofluoromethane	730	N	3100	N	220 U	150 U	4.3 U	**0.84**	8.5 U	**4.49**	**16.8**	**190**	**25.8**	**1**	**1.5**	9.1 U	0.47 U	**1.02**	**1.6**	**2.4**	**1.82**	**1.1**	**0.91**	**2.9**	**1.2**	**1.2**
Vinyl bromide (bromoethene)	0.88	C	3.8	C	170 U	120 U	3.3 U	0.48 U	6.6 U	0.393 U	0.393 U	0.43 U	0.393 U	0.4 U	0.44 U	7 U	0.37 U	0.34 U	0.66 U	0.39 U	0.39 U	0.4 U	0.36 U	0.36 U	0.4 U	0.36 U
Vinyl chloride	**1.7**	C	***28***	C	100 U	70 U	1.9 U	***330***	3.9 U	0.23 U	0.23 U	0.25 U	0.23 U	0.2 U	0.26 U	4.1 U	0.21 U	0.2 U	**0.92**	0.23 U	0.23 U	0.23 U	0.21 U	0.21 U	0.2 U	0.21 U

Notes:

1. Residential Soil Gas Screening Levels are VISLs for soil gas based on protection of indoor air, calculated using the OSWER Vapor Intrusion Screening Level (VISL) calculator, Version 3.1.1 (May 2014). Concentrations have been calculated to correspond to cancer risk = $1x10^{-6}$ and Hazard Quotient = 0.1.

2. Industrial/Commercial Soil Gas Screening Levels are VISLs for soil gas based on protection of indoor air, calculated using the OSWER Vapor Intrusion Screening Level (VISL) calculator, Version 3.1.1 (May 2014). Concentrations have been calculated to correspond to cancer risk = $1x10^{-6}$ and Hazard Quotient = 0.1.

* Analytical results from EPA fixed laboratory only for sub-slab soil gas samples collected by EPA in 2012 and 2013.

Bold Analyte - Raymark OU2 Contaminant of Concern

Highlighted, bold concentrations exceed Residential Screening levels.

Highlighted, bold, italicized concentrations also exceed Industrial/Commercial Screening levels.

U = Concentration was not detected above the laboratory reporting limit.

L = Estimated concentration value was detected below the calibration range.

C = Cancer based value
N = Non-cancer based value
Bold - Detected; U - Not Detected;
J - Estimated; R - Rejected; NA - Not Analyzed

Table 4
Indoor Air Analytical Results*
Raymark - Operable Unit 2 - Groundwater
Stratford, Connecticut

					INDUSTRIAL/COMMERCIAL PROPERTIES												
				Sample Location	100 VETERANS, 1ST FL		100 VETERANS, BSMT			300 FERRY-MAIN FLOOR		300 FERRY-SNOWBOARD		326 FERRY, DINING RM		326 FERRY, KITCHEN	
				Sample Date	02/14/12	08/14/12	02/14/12	08/14/12		02/14/12	08/15/12	02/14/12	08/15/12	02/15/12	08/14/12	02/15/12	08/14/12
				Canister	6583	6558	1594	6547	6555	1577	6463	6580	6460	5810	5790	6461	1560
Sample ID	**Residential Target Indoor Air Concentration[1]**	**Basis**	**Industrial/ Commercial Target Indoor Air Concentration[2]**	**Basis**	100VETERANS-FIRST FLOOR	100VETERANS-1STFL-081412	100VETERANS-BASEMENT	100VETERANS-BASEMENT-081412	100VETERANS-BSMT-DUP-081412	300FERRY-MAINFLOOR	300FERRY-MAINFLOOR-081512	300FERRY-SNOWBOARD	300FERRY-SNOWBOARD-081512	326FERRY-DININGROOM	326FERRY-DININGRM-081412	326FERRY-KITCHEN	326FERRY-KITCHEN-081412
Volatiles (µg/m^3)																	
1,1,1-Trichloroethane	520	N	2200	N	0.7	0.55 U	2.4	0.33 L	0.31 L	0.9	1.1 U	0.7	0.98	0.5 L	0.6 U	0.3 L	0.65 U
1,1,2,2-Tetrachloroethane	0.048	C	0.21	C	0.8 U	0.69 U	0.8 U	0.76 U	0.76 U	0.9 U	1.4 U	0.8 U	0.76 U	0.8 U	0.76 U	0.8 U	0.82 U
1,1,2-Trichloro-1,2,2-trifluoroethane	3100	N	13000	N	0.4 L	0.77 U	0.5 L	0.84 U	0.84 U	0.5 L	1.5 U	0.4 L	0.47 L	0.6 L	0.84 U	0.5 L	0.92 U
1,1,2-Trichloroethane	0.021	N	0.088	N	0.6 U	0.55 U	0.7 U	0.6 U	0.6 U	0.7 U	1.1 U	0.7 U	0.6 U	0.7 U	0.6 U	0.6 U	0.65 U
1,1-Dichloroethane	1.8	C	7.7	C	1.7	0.36 L	5.8	0.97	1	0.5 U	0.81 U	0.5 U	0.45 U	0.5 U	0.45 U	0.4 U	0.49 U
1,1-Dichloroethene	21	N	88	N	0.7	0.4 U	2.6	0.44 U	0.44 U	0.5 U	0.79 U	0.5 U	0.44 U	0.5 U	0.44 U	0.4 U	0.48 U
1,2,4-Trichlorobenzene	0.21	N	0.88	N	0.8 U	0.61 L	0.9 U	0.82 U	0.82 U	1 U	1.5 U	0.9 U	0.46 L	0.9 U	0.4 L	0.8 U	0.89 U
1,2,4-Trimethylbenzene	0.73	N	3.1	N	0.2	0.88	0.5 L	0.54 U	1.5	0.5 L	9.3	0.5 L	14	0.5 L	1.4	0.5 U	1.2
1,2-Dibromoethane	0.0047	C	0.02	C	0.9 U	0.77 U	0.9 U	0.85 U	0.85 U	1 U	1.5 U	0.9 U	0.85 U	0.9 U	0.85 U	0.9 U	0.92 U
1,2-Dichlorobenzene	21	N	88	N	0.7 U	0.6 U	0.7 U	0.66 U	0.66 U	0.8 U	1.2 U	0.7 U	0.66 U	0.7 U	0.66 U	0.7 U	0.72 U
1,2-Dichloroethane	0.11	C	0.47	C	0.4 U	0.89	0.5 U	5.4	5.4	0.5 U	0.81 U	0.5 U	0.45	0.5 U	0.45 U	0.4 U	0.49 U
1,2-Dichloropropane	0.28	C	1.2	C	0.5 U	0.46 U	0.6 U	0.51 U	0.51 U	0.6 U	0.92 U	0.6 U	0.51 U	0.6 U	0.51 U	0.5 U	0.55 U
1,3,5-Trimethylbenzene	--		--		0.5 U	0.26 L	0.3 L	0.59	0.64	0.3 L	2.9	0.6 U	3.8	0.2 L	0.54	0.5 U	0.59 U
1,3-Butadiene	0.094	C	0.41	C	1.2	0.44 U	0.3 L	0.49 U	0.49 U	0.2 L	0.88 U	0.2 L	0.49 U	0.4 L	0.14 L	0.4 L	0.2 L
1,3-Dichlorobenzene	--		--		0.7 U	0.6 U	0.7 U	0.66 U	0.66 U	0.8 U	1.2 U	0.7 U	0.66 U	0.7 U	0.66 U	0.7 U	0.72 U
1,4-Dichlorobenzene	0.26	C	1.1	C	0.3 L	1.8	0.7 U	1.2	1.1	0.8 U	1.2 U	0.7 U	0.66 U	0.7 U	0.66 U	0.7 U	0.72 U
2-Butanone	520	N	2200	N	0.9	3.3	0.6	3.5	3.2	0.8	8.6	1	11	1.1	1.4	1.5	1.7
2-Hexanone	3.1	N	13	N	0.5 U	0.41 U	0.5 U	0.45 U	0.45 U	0.5 U	0.82 U	0.5 U	0.45 U	0.5 U	0.45 U	0.5 U	0.49 U
4-Ethyltoluene	--		--		0.3 L	0.98	0.5 L	1.6	1.5	0.5 L	8.8	0.5 L	12	0.4 L	1.2	0.3 L	1.4
4-Methyl-2-pentanone	310	N	1300	N	0.5 U	0.41 U	0.5 U	0.45 U	0.45 U	0.5 U	0.82 U	0.5 U	0.61	0.2 L	0.45 U	0.5 U	0.49 U
Acrylonitrile	0.041	C	0.18	C	0.4	0.22 U	0.3 U	0.24 U	0.24 U	0.3 U	0.43 U	0.3 U	0.24 U	0.3 U	0.24 U	0.2 U	0.26 U
Allyl chloride	0.1	N	0.44	N	0.3 U	0.31 U	0.4 U	0.34 U	0.34 U	0.4 U	0.63 U	0.4 U	0.34 U	0.4 U	0.34 U	0.3 U	0.38 U
Benzene	0.36	C	1.6	C	1.8	2.1	1.4	3.2	3.3	2	7.3	1.6	7.2	1.7	1	2.2	1.3
Benzyl chloride	0.057	C	0.25	C	0.6 U	0.52 U	0.6 U	0.57 U	0.57 U	0.7 U	1 U	0.6 U	0.57 U	0.6 U	0.57 U	0.6 U	0.62 U
Bromodichloromethane	0.076	C	0.33	C	0.7 U	0.67 U	0.8 U	0.74 U	0.74 U	0.9 U	1.3 U	0.8 U	0.74 U	0.8 U	0.74 U	0.7 U	0.8 U
Bromoform	2.6	C	11	C	1.1 U	1 U	1.3 U	1.1 U	1.1 U	1.4 U	2.1 U	1.3 U	1.1 U	1.3 U	1.1 U	1.1 U	1.2 U
Bromomethane	0.52	N	2.2	N	0.4 U	0.39 U	0.5 U	0.43 U	0.43 U	0.5 U	0.78 U	0.5 U	0.43 U	0.5 U	0.43 U	0.4 U	0.47 U
Carbon tetrachloride	0.47	C	2	C	0.4 L	0.46 L	0.5 L	0.69 U	0.41 L	0.5 L	1.3 U	0.4 L	0.45 L	0.5 L	0.4 L	0.4 L	0.35 L
Chlorobenzene	5.2	N	22	N	0.5 U	0.46 U	0.6 U	0.51 U	0.51 U	0.6 U	0.92 U	0.6 U	0.51 U	0.6 U	0.51 U	0.5 U	0.55 U
Chloroethane	1000	N	4400	N	0.3 U	0.26 U	0.3 U	0.29 U	0.29 U	0.3 U	0.53 U	0.3 U	0.29 U	0.3 U	0.29 U	0.3 U	0.32 U
Chloroform	0.12	C	0.53	C	0.5 L	3.4	0.3 L	3.1	3.2	0.3 L	0.98 U	0.6 U	0.68	0.4 L	0.38 L	2	1.2
Chloromethane	9.4	N	39	N	1.1	1.5	0.8	1.4	1.3	0.8	1.2	0.8	0.95	0.7	0.97	0.9	0.85
cis-1,2-Dichloroethene	--		--		3.9	1.1	14	3.4	3.4	0.5 U	0.79 U	0.5 U	1.9	0.5 U	0.44 U	0.4 U	0.48 U
cis-1,3-Dichloropropene	--		--		0.5 U	0.45 U	0.6 U	0.5 U	0.5 U	0.6 U	0.91 U	0.6 U	0.5 U	0.6 U	0.5 U	0.5 U	0.54 U
Cyclohexane	630	N	2600	N	0.3 L	0.52	0.6	0.76	0.72	0.5	5.2	0.4	4.8	0.3 L	1.3	0.3 L	0.62
Dibromochloromethane	0.1	C	0.45	C	0.9 U	0.85 U	1 U	0.94 U	0.94 U	1.1 U	1.7 U	1 U	0.94 U	1 U	0.94 U	0.9 U	1 U
Dichlorodifluoromethane	10	N	44	N	2	6.4	2.7	4.5	3.9	2.7	5.4	2.1	5.9	2	3.2	2.1	2
Dichlorotetrafluoroethane	--		--		0.8 U	14	0.8 U	0.77 U	0.77 U	0.9 U	1.4 U	0.8 U	0.77 U	0.8 U	0.77 U	0.8 U	0.84 U
Ethylbenzene	1.1	C	4.9	C	0.5	1.5	1.1	2.6	2.3	1.4	11	1.3	14	0.5	0.95	0.4 L	1.1
Hexachlorobutadiene	0.13	C	0.56	C	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	0.4 L	2.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.1 U	1.3 U
Hexane	73	N	310	N	4	13	5.9	12	12	4.8	22	4.1	24	2.6	16	2.4	20
m,p-Xylene	--		--		1.8	3.9	3.6	7.4	7	4.1	33	4.4	39	1.6	2.7	1.4	3.4
Methyl tert-butyl ether	11	C	47	C	0.4 U	0.36 U	0.4 U	0.4 U	0.4 U	0.5 U	0.72 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.43 U
Methylene chloride	63	N	260	N	0.7	0.66	2.5	1	0.97	3.3	0.69 U	3.8	13	4.8	0.38 U	5.1	0.42 U
n-Heptane	--		--		0.5 U	0.41 U	0.5 U	0.45 U	0.45 U	0.5 U	0.82 U	0.5 U	0.45 U	0.5 U	0.45 U	0.5 U	0.49 U
o-Xylene	10	N	44	N	0.5	1.2	1.1	2.2	2	1.3	12	1.3	15	0.7	1.3	0.5	1.3
Styrene	100	N	440	N	1	1.4	9	2.6	2.3	0.3 L	2.6	0.3 L	2.7	0.3 L	2.7	0.2 L	0.64
Tetrachloroethene	4.2	N	18	N	0.8 U	0.68 U	0.3 L	0.75 U	0.75 U	0.6 L	1.4 U	0.4 L	0.75 U	1.2	0.75 U	1.1	0.81 U
Tetrahydrofuran	210	N	880	N	0.3 U	0.29 U	0.4 U	0.32 U	0.32 U	0.4 U	18	0.4 U	0.32 U	0.4 U	0.32 U	0.3 U	0.35 U
Toluene	520	N	2200	N	5.2	10	7.7	15	14	13	78	13	98	3.4	5.2	3	5.6

Table 4
Indoor Air Analytical Results*
Raymark - Operable Unit 2 - Groundwater
Stratford, Connecticut

					INDUSTRIAL/COMMERCIAL PROPERTIES												
				Sample Location	100 VETERANS, 1ST FL		100 VETERANS, BSMT			300 FERRY-MAIN FLOOR		300 FERRY-SNOWBOARD		326 FERRY, DINING RM		326 FERRY, KITCHEN	
				Sample Date	02/14/12	08/14/12	02/14/12	08/14/12		02/14/12	08/15/12	02/14/12	08/15/12	02/15/12	08/14/12	02/15/12	08/14/12
				Canister	6583	6558	1594	6547	6555	1577	6463	6580	6460	5810	5790	6461	1560
Sample ID	**Residential Target Indoor Air Concentration[1]**	**Basis**	**Industrial/ Commercial Target Indoor Air Concentration[2]**	**Basis**	100VETERANS-FIRST FLOOR	100VETERANS-1STFL-081412	100VETERANS-BASEMENT	100VETERANS-BASEMENT-081412	100VETERANS-BSMT-DUP-081412	300FERRY-MAINFLOOR	300FERRY-MAINFLOOR-081512	300FERRY-SNOWBOARD	300FERRY-SNOWBOARD-081512	326FERRY-DININGROOM	326FERRY-DININGRM-081412	326FERRY-KITCHEN	326FERRY-KITCHEN-081412
trans-1,2-Dichloroethene	--		--		0.4 U	0.4 U	0.5 U	0.44 U	0.44 U	0.5 U	0.79 U	0.5 U	**0.44**	0.5 U	0.44 U	0.4 U	0.48 U
trans-1,3-Dichloropropene	--		--		0.5 U	0.45 U	0.6 U	0.5 U	0.5 U	0.6 U	0.91 U	0.6 U	0.5 U	0.6 U	0.5 U	0.5 U	0.54 U
Trichloroethene	**0.21**	N	***0.88***	N	***1.2***	**0.54**	***5.4***	***1.7***	***1.6***	0.7 U	1.1 U	0.7 U	***5.4***	**0.2 L**	0.59 U	0.6 U	0.64 U
Trichlorofluoromethane	**73**	N	310	N	**1.1**	**2.5**	**2**	**2.2**	**2**	**1.1**	1.1 U	**0.9**	**1**	**1.1**	**0.67**	**1.1**	**0.79**
Vinyl bromide (bromoethene)	0.088	C	0.38	C	0.5 U	0.44 U	0.5 U	0.48 U	0.48 U	0.6 U	0.87 U	0.5 U	0.48 U	0.5 U	0.48 U	0.5 U	0.52 U
Vinyl chloride	**0.17**	C	2.8	C	0.3 U	0.26 U	0.3 U	0.28 U	0.28 U	0.3 U	0.51 U	0.3 U	**2.1**	0.3 U	0.28 U	0.3 U	0.31 U

Notes:

1. Residential Target Indoor Air Concentration is based on $1x10^{-6}$ cancer risk or HQ = 0.1.

2. Industrial/Commercial Target Indoor Air Concentration based on $1x10^{-6}$ cancer risk or HQ = 0.1.

*Analytical results from EPA fixed laboratory only for indoor air samples collected by EPA in 2012 and 2013.

Bold Analyte - Raymark OU2 Contaminant of Concern
Highlighted, bold concentrations exceed Residential Screening levels.
Highlighted, bold, italicized concentrations also exceed Industrial/Commercial Screening levels.

C = Cancer based value
N = Non-cancer based value
U = Concentration was not detected above the laboratory reporting limit.
L = Estimated concentration value was detected below the calibration range.
Bold - Detected; U - Not Detected;
J - Estimated; R - Rejected; NA - Not Analyzed

Table 4
Indoor Air Analytical Results*
Raymark - Operable Unit 2 - Groundwater
Stratford, Connecticut

					INDUSTRIAL/COMMERCIAL PROPERTIES														
				Sample Location	335 FERRY -ESTIMATINGRM			335 FERRY-CURTINTAXI		335 FERRY-MAINOFFICE		335 FERRY-RECEPTION	335 FERRY-TAXI-SUPRM			444 FERRY BASEMENT			444 FERRY, 1ST FL	
				Sample Date	02/14/12	08/15/12	12/12/13	02/14/12	08/15/12	02/14/12	12/12/13	12/12/13	08/15/12	12/12/13		02/15/12		08/14/12	02/15/12	08/14/12
				Canister	4778	6568	13498	6460	1577	6555	15056	22692	14896	14898	22685	3092	6568	6461	1582	6567
Sample ID	**Residential Target Indoor Air Concentration[1]**	**Basis**	**Industrial/ Commercial Target Indoor Air Concentration[2]**	**Basis**	335FERRY-ESTIMATING RM	335FERRY-ESTIMATING RM-081512	335FERRY-ESTIMATING RM-121213	335FERRY-CURTINTAXI	335FERRY-CURTINTAXI-081512	335FERRY-MAINOFFICE	335FERRY-MAINOFFICE-121213	335FERRY-RECEPTIONOFC-121213	335FERRY-TAXI-SUPPLYRM-081512	335FERRY-TAXI-SUPPLYRM-121213	335FERRY-DUP-121213	444FERRY-BASEMENT	444FERRY-BASEMENT-DUP	444FERRY-BASEMENT-081412	444FERRY-FIRST FLOOR	444FERRY-1STFL-081412
Volatiles (µg/m^3)																				
1,1,1-Trichloroethane	520	N	2200	N	**0.77**	0.52 U	0.6 U	**1.82**	0.98 U	**1.6**	0.6 U	0.6 U	71 U	**0.6**	**0.458**	**1.5**	**0.3 L**	0.6 U	**0.9**	**0.76**
1,1,2,2-Tetrachloroethane	0.048	C	0.21	C	0.83 U	0.65 U	0.755 U	0.76 U	1.2 U	0.83 U	0.755 U	0.755 U	89 U	0.823 U	0.686 U	0.8 U	0.8 U	0.76 U	0.8 U	0.76 U
1,1,2-Trichloro-1,2,2-trifluoroethane	3100	N	13000	N	**0.45 L**	0.73 U	0.842 U	**0.4 L**	1.4 U	**0.49 L**	0.842 U	0.842 U	100 U	0.919 U	0.766 U	**0.4 L**	**0.4 L**	**0.39 L**	**0.4 L**	0.84 U
1,1,2-Trichloroethane	0.021	N	0.088	N	0.66 U	0.52 U	0.6 U	0.61 U	0.98 U	0.66 U	0.6 U	0.6 U	71 U	0.654 U	0.545 U	0.6 U	0.6 U	0.6 U	0.7 U	0.6 U
1,1-Dichloroethane	**1.8**	C	7.7	C	0.49 U	0.38 U	0.445 U	0.45 U	0.73 U	0.49 U	0.445 U	0.445 U	53 U	0.485 U	0.404 U	0.4 U	0.4 U	0.45 U	0.5 U	0.45 U
1,1-Dichloroethene	21	N	88	N	0.48 U	0.38 U	0.436 U	0.44 U	0.71 U	0.48 U	0.436 U	0.436 U	52 U	0.475 U	0.396 U	0.4 U	0.4 U	0.44 U	0.5 U	0.44 U
1,2,4-Trichlorobenzene	**0.21**	N	0.88	N	0.9 U	0.71 U	0.816 U	0.82 U	1.3 U	0.9 U	0.816 U	0.816 U	96 U	0.89 U	0.742 U	0.8 U	0.8 U	0.82 U	0.9 U	0.82 U
1,2,4-Trimethylbenzene	**0.73**	N	***3.1***	N	**0.89**	**0.98**	**0.786**	**0.89**	***8.7***	**0.33 L**	0.54 U	0.54 U	64 U	0.59 U	0.491 U	**2.9**	**2.2**	***5.2***	**2.4**	**2.6**
1,2-Dibromoethane	0.0047	C	0.02	C	0.93 U	0.73 U	0.845 U	0.85 U	1.4 U	0.93 U	0.845 U	0.845 U	100 U	0.921 U	0.768 U	0.9 U	0.9 U	0.85 U	0.9 U	0.85 U
1,2-Dichlorobenzene	21	N	88	N	0.73 U	0.57 U	0.661 U	0.67 U	1.1 U	0.73 U	0.661 U	0.661 U	78 U	0.721 U	0.601 U	0.7 U	0.7 U	0.66 U	0.7 U	0.66 U
1,2-Dichloroethane	**0.11**	C	***0.47***	C	0.49 U	0.38 U	0.445 U	0.45 U	0.73 U	0.49 U	0.445 U	0.445 U	53 U	0.485 U	0.404 U	0.4 U	0.4 U	0.45 U	0.5 U	0.45 U
1,2-Dichloropropane	**0.28**	C	***1.2***	C	0.56 U	0.44 U	0.508 U	0.51 U	0.83 U	0.56 U	0.508 U	0.508 U	60 U	0.554 U	0.462 U	0.5 U	0.5 U	0.51 U	0.6 U	0.51 U
1,3,5-Trimethylbenzene	--		--		**0.31 L**	0.47 U	0.54 U	**0.37 L**	**2.7**	0.6 U	0.54 U	0.54 U	64 U	0.59 U	0.491 U	**1.7**	**1.5**	**3.7**	**1.5**	**1.5**
1,3-Butadiene	**0.094**	C	***0.41***	C	**0.25 L**	0.42 U	0.486 U	**0.29 L**	0.8 U	**0.25 L**	0.508 U	0.464 U	58 U	0.531 U	0.464 U	**0.2 L**	**0.2 L**	0.49 U	**0.2 L**	0.49 U
1,3-Dichlorobenzene	--		--		0.73 U	0.57 U	0.661 U	0.67 U	1.1 U	0.73 U	0.661 U	0.661 U	78 U	0.721 U	0.601 U	0.7 U	0.7 U	0.66 U	0.7 U	0.66 U
1,4-Dichlorobenzene	**0.26**	C	***1.1***	C	0.73 U	0.57 U	0.661 U	0.67 U	1.1 U	0.73 U	0.661 U	0.661 U	78 U	0.721 U	0.601 U	0.7 U	0.7 U	0.66 U	0.7 U	0.66 U
2-Butanone	520	N	2200	N	0.36 U	**1.3**	**0.796**	0.33 U	**32**	**0.51**	**0.383**	**0.707**	**88**	**0.383**	**0.413**	**2.8**	**2**	**4.2**	**4.5**	**4.5**
2-Hexanone	3.1	N	13	N	0.5 U	0.39 U	0.45 U	0.46 U	0.74 U	0.5 U	0.45 U	0.45 U	53 U	0.491 U	0.409 U	0.5 U	0.5 U	0.45 U	0.5 U	0.45 U
4-Ethyltoluene	--		--		**0.7**	**0.79**	**0.59**	**0.74**	**7.1**	**0.43 L**	0.54 U	0.54 U	64 U	0.59 U	0.491 U	**5.3**	**4.5**	**10**	**4**	**3.9**
4-Methyl-2-pentanone	310	N	1300	N	0.5 U	0.39 U	0.45 U	**0.35 L**	0.74 U	0.5 U	0.45 U	0.45 U	53 U	0.491 U	0.409 U	0.5 U	0.5 U	0.45 U	**0.2 L**	0.45 U
Acrylonitrile	**0.041**	C	***0.18***	C	0.26 U	0.21 U	0.239 U	0.24 U	0.39 U	0.26 U	0.239 U	0.239 U	28 U	0.26 U	0.217 U	0.2 U	0.2 U	0.24 U	0.3 U	0.24 U
Allyl chloride	0.1	N	0.44	N	0.38 U	0.3 U	0.344 U	0.35 U	0.56 U	0.38 U	0.344 U	0.344 U	41 U	0.375 U	0.313 U	0.3 U	0.3 U	0.34 U	0.4 U	0.34 U
Benzene	**0.36**	C	***1.6***	C	***1.71***	**0.48**	**1.5**	***1.81***	**1.4**	***2***	**0.511**	**1.18**	42 U	**0.511**	**0.511**	**1.3**	**1.3**	**1.4**	**1.3**	**1.4**
Benzyl chloride	0.057	C	0.25	C	0.63 U	0.49 U	0.569 U	0.58 U	0.93 U	0.63 U	0.569 U	0.569 U	67 U	0.621 U	0.517 U	0.6 U	0.6 U	0.57 U	0.6 U	0.57 U
Bromodichloromethane	**0.076**	C	***0.33***	C	0.81 U	0.64 U	0.737 U	0.74 U	1.2 U	0.81 U	0.737 U	0.737 U	87 U	0.804 U	0.67 U	0.7 U	0.7 U	0.74 U	0.8 U	0.74 U
Bromoform	2.6	C	11	C	1.25 U	0.98 U	1.14 U	1.15 U	1.9 U	1.25 U	1.14 U	1.14 U	130 U	1.24 U	1.03 U	1.1 U	1.1 U	1.1 U	1.3 U	1.1 U
Bromomethane	0.52	N	2.2	N	0.47 U	0.37 U	0.427 U	0.43 U	0.7 U	0.47 U	0.427 U	0.427 U	50 U	0.466 U	0.388 U	0.4 U	0.4 U	0.43 U	0.5 U	0.43 U
Carbon tetrachloride	**0.47**	C	2	C	**0.42 L**	0.6 U	0.692 U	**0.42 L**	1.1 U	**0.43 L**	0.692 U	0.692 U	82 U	0.754 U	0.629 U	**0.4 L**	**0.4 L**	**0.42 L**	**0.4 L**	**0.82**
Chlorobenzene	5.2	N	22	N	0.56 U	0.44 U	0.506 U	0.51 U	0.83 U	0.56 U	0.506 U	0.506 U	60 U	0.552 U	0.46 U	0.5 U	0.5 U	0.51 U	0.6 U	0.51 U
Chloroethane	1000	N	4400	N	0.32 U	0.25 U	0.29 U	0.29 U	0.47 U	0.32 U	0.29 U	0.29 U	34 U	0.316 U	0.264 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U
Chloroform	**0.12**	C	***0.53***	C	0.59 U	0.46 U	0.537 U	**0.44 L**	***1.6***	0.59 U	0.537 U	0.537 U	63 U	0.586 U	0.488 U	0.5 U	0.5 U	***0.59***	0.6 U	***0.88***
Chloromethane	9.4	N	39	N	**0.69**	**0.85**	**1.22**	**0.75**	**1.7**	**0.83**	**1.18**	**1.03**	27 U	**1.01**	**0.929**	**0.5**	**0.6**	**0.76**	**0.6**	**0.81**
cis-1,2-Dichloroethene	--		--		0.48 U	**1.3**	0.436 U	0.44 U	0.71 U	0.48 U	0.436 U	0.436 U	52 U	0.475 U	0.396 U	0.4 U	0.4 U	0.44 U	0.5 U	0.44 U
cis-1,3-Dichloropropene	--		--		0.55 U	0.43 U	0.499 U	0.5 U	0.82 U	0.55 U	0.499 U	0.499 U	59 U	0.544 U	0.454 U	0.5 U	0.5 U	0.5 U	0.6 U	0.5 U
Cyclohexane	630	N	2600	N	**0.56**	**0.34**	**0.791**	**5.36**	**8.3**	**0.66**	0.378 U	**0.55**	45 U	0.413 U	0.344 U	**0.5**	**0.5**	**1.2**	**0.5**	**1**
Dibromochloromethane	0.1	C	0.45	C	1.03 U	0.81 U	0.936 U	0.95 U	1.5 U	1.03 U	0.936 U	0.936 U	110 U	1.02 U	0.851 U	0.9 U	0.9 U	0.94 U	1 U	0.94 U
Dichlorodifluoromethane	**10**	N	***44***	N	**1.9**	**29 J**	**2.57**	**1.75**	**17**	**2.95**	**2.37**	**2.42**	***99***	**2.32**	**2.17**	**1.9**	**1.9**	**1.9**	**2**	**2.4**
Dichlorotetrafluoroethane	--		--		0.85 U	0.66 U	0.768 U	0.78 U	1.3 U	0.85 U	0.768 U	0.768 U	91 U	0.838 U	0.699 U	0.8 U	0.8 U	0.77 U	0.8 U	0.77 U
Ethylbenzene	**1.1**	C	***4.9***	C	**0.88**	**0.52**	**0.868**	**1.1**	**4.2**	**0.97**	0.477 U	**0.694**	56 U	0.521 U	0.434 U	**0.9**	**0.8**	**1.1**	**0.8**	**1.3**
Hexachlorobutadiene	**0.13**	C	0.56	C	1.23 U	1 U	1.17 U	1.13 U	1.9 U	1.23 U	1.17 U	1.17 U	140 U	1.28 U	1.07 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
Hexane	**73**	N	310	N	**7.05**	**2**	**7.04**	**7.83**	**17**	**8.51**	**2.89**	**5.64**	**88**	**2.5**	**2.75**	**1.8**	**2.1**	**22**	**2.2**	**20**
m,p-Xylene	--		--		**2.94**	**1.8**	**3.56**	**3.16**	**13**	**2.98**	0.868 U	**2.82**	110 U	0.868 U	0.868 U	**2.6**	**2.5**	**2.9**	**2.4**	**3.2**
Methyl tert-butyl ether	11	C	47	C	0.44 U	0.34 U	0.396 U	0.4 U	0.65 U	0.44 U	0.396 U	0.396 U	47 U	0.432 U	0.36 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Methylene chloride	63	N	260	N	**1.54**	**2.8**	**1.25**	**0.49**	**9.6**	**1.61**	**0.451**	**1.18**	45 U	**0.451**	**0.417**	**9.9**	**9.7**	0.38 U	**12**	0.38 U
n-Heptane	--		--		0.5 U	0.39 U	0.451 U	0.46 U	0.74 U	0.5 U	0.451 U	0.451 U	53 U	0.491 U	0.41 U	0.5 U	0.5 U	0.45 U	0.5 U	0.45 U
o-Xylene	**10**	N	44	N	**0.97**	**0.65**	**0.998**	**1.1**	**5.6**	**0.97**	0.477 U	**0.825**	56 U	0.521 U	0.434 U	**1.1**	**1.1**	**2.3**	**1**	**2.4**
Styrene	100	N	440	N	0.52 U	0.4 U	0.468 U	**0.23 L**	0.77 U	0.52 U	0.468 U	0.468 U	55 U	0.511 U	0.426 U	**0.2 L**	**0.2 L**	**0.51**	**0.3 L**	0.47 U
Tetrachloroethene	4.2	N	18	N	**0.4 L**	0.64 U	0.746 U	**0.34 L**	**1.4**	**0.4 L**	0.746 U	0.746 U	88 U	0.813 U	0.678 U	**0.4 L**	**0.5 L**	0.75 U	**0.4 L**	0.75 U
Tetrahydrofuran	210	N	880	N	0.36 U	0.28 U	0.324 U	0.33 U	**15**	0.36 U	0.324 U	0.324 U	38 U	0.354 U	0.295 U	0.3 U	0.3 U	0.32 U	0.4 U	0.32 U
Toluene	**520**	N	***2200***	N	**5.79**	**2.5**	**7.16**	**4.68**	**21**	**7.08**	**0.565**	**6.03**	**60**	**0.527**	**0.49**	**5.8**	**5.8**	**11**	**5.4**	**10**

Table 4
Indoor Air Analytical Results*
Raymark - Operable Unit 2 - Groundwater
Stratford, Connecticut

					INDUSTRIAL/COMMERCIAL PROPERTIES														
				Sample Location	335 FERRY -ESTIMATINGRM			335 FERRY-CURTINTAXI		335 FERRY-MAINOFFICE		335 FERRY-RECEPTION	335 FERRY-TAXI-SUPRM			444 FERRY BASEMENT			444 FERRY, 1ST FL	
				Sample Date	02/14/12	08/15/12	12/12/13	02/14/12	08/15/12	02/14/12	12/12/13	12/12/13	08/15/12	12/12/13		02/15/12		08/14/12	02/15/12	08/14/12
				Canister	4778	6568	13498	6460	1577	6555	15056	22692	14896	14898	22685	3092	6568	6461	1582	6567
Sample ID	**Residential Target Indoor Air Concentration[1]**	**Basis**	**Industrial/ Commercial Target Indoor Air Concentration[2]**	**Basis**	335FERRY-ESTIMATING RM	335FERRY-ESTIMATING RM-081512	335FERRY-ESTIMATING RM-121213	335FERRY-CURTINTAXI	335FERRY-CURTINTAXI-081512	335FERRY-MAINOFFICE	335FERRY-MAINOFFICE-121213	335FERRY-RECEPTIONOFC-121213	335FERRY-TAXI-SUPPLYRM-081512	335FERRY-TAXI-SUPPLYRM-121213	335FERRY-DUP-121213	444FERRY-BASEMENT	444FERRY-BASEMENT-DUP	444FERRY-BASEMENT-081412	444FERRY-FIRST FLOOR	444FERRY-1STFL-081412
trans-1,2-Dichloroethene	--		--		0.48 U	0.38 U	0.436 U	0.44 U	0.71 U	0.48 U	0.436 U	0.436 U	52 U	0.475 U	0.396 U	0.4 U	0.4 U	0.44 U	0.5 U	0.44 U
trans-1,3-Dichloropropene	--		--		0.55 U	0.43 U	0.499 U	0.5 U	0.82 U	0.55 U	0.499 U	0.499 U	59 U	0.544 U	0.454 U	0.5 U	0.5 U	0.5 U	0.6 U	0.5 U
Trichloroethene	**0.21**	N	***0.88***	N	0.65 U	***4.3***	0.591 U	***11.13***	***400***	**0.23 L**	0.591 U	0.591 U	***3100***	0.644 U	0.537 U	0.6 U	0.6 U	0.59 U	0.7 U	0.59 U
Trichlorofluoromethane	**73**	N	310	N	**3.24**	**4.9**	**3.14**	**1.25**	**60**	**2.95**	**1.35**	**2.58**	73 U	**1.29**	**1.29**	**1**	**1**	**0.9**	**1.1**	**1.2**
Vinyl bromide (bromoethene)	0.088	C	0.38	C	0.53 U	0.42 U	0.481 U	0.49 U	0.79 U	0.53 U	0.481 U	0.481 U	57 U	0.525 U	0.437 U	0.5 U	0.5 U	0.48 U	0.5 U	0.48 U
Vinyl chloride	**0.17**	C	2.8	C	**0.11 L**	**1.6**	0.281 U	0.28 U	0.46 U	**0.12 L**	0.281 U	0.281 U	33 U	0.307 U	0.255 U	0.3 U	0.3 U	0.28 U	0.3 U	0.28 U

Notes:

1. Residential Target Indoor Air Concentration is based on $1x10^{-6}$ cancer risk or HQ = 0.1.

2. Industrial/Commercial Target Indoor Air Concentration based on $1x10^{-6}$ cancer risk or HQ = 0.1.

* Analytical results from EPA fixed laboratory only for indoor air samples collected by EPA in 2012 and 2013.

Bold Analyte - Raymark OU2 Contaminant of Concern
Highlighted, bold concentrations exceed Residential Screening levels.
Highlighted, bold, italicized concentrations also exceed Industrial/Commercial Screening levels.

C = Cancer based value
N = Non-cancer based value
U = Concentration was not detected above the laboratory reporting limit.
L = Estimated concentration value was detected below the calibration range.
Bold - Detected; U - Not Detected;
J - Estimated; R - Rejected; NA - Not Analyzed

Table 4
Indoor Air Analytical Results*
Raymark - Operable Unit 2 - Groundwater
Stratford, Connecticut

					INDUSTRIAL/COMMERCIAL PROPERTIES															
				Sample Location	500 FERRY-1STFL		500 FERRY-BASEMENT				500 FERRY-CRAWLSP		608 FERRY, 1ST FL		608 FERRY, BSMT				411B-FASHIONBUG	
				Sample Date	02/13/12	08/13/12	02/13/12		08/13/12		02/13/12	08/13/12	02/14/12	08/15/12	02/14/12		08/15/12		02/16/12	08/16/12
				Canister	1565	4742	6554	1587	6548	3656	6566	1587	1584	1565	5786	3656	6569	1574	4742	22687
Sample ID	**Residential Target Indoor Air Concentration[1]**	**Basis**	**Industrial/ Commercial Target Indoor Air Concentration[2]**	**Basis**	500FERRY-1STFL	500FERRY-1STFL-081312	500FERRY-BASEMENT	500FERRY-BASEMENT-DUP	500FERRY-BASEMENT-081312	500FERRY-BASEMENT-DUP-081312	500FERRY-CRAWLSP	500FERRY-CRAWLSP-081312	608FERRY-1STFL	608FERRY-1STFL-081512	608FERRY-BASEMENT	608FERRY-BASEMENT-DUP	608FERRY-BASEMENT-081512	608FERRY-BSMT-DUP-081512	411BARNUM-FASHIONBUG	411BARNUM-FASHIONBUG-081612
Volatiles (µg/m^3)																				
1,1,1-Trichloroethane	520	N	2200	N	0.55 U	0.51 U	0.66 U	0.51 U	0.46 U	0.49 U	0.51 U	0.47 U	**0.4 L**	0.93 U	**0.66**	**0.61**	**2.6**	**1.4**	**0.61**	0.46 U
1,1,2,2-Tetrachloroethane	0.048	C	0.21	C	0.69 U	0.65 U	0.83 U	0.64 U	0.58 U	0.62 U	0.64 U	0.6 U	0.65 U	1.2 U	0.69 U	0.69 U	0.76 U	0.76 U	0.83 U	0.58 U
1,1,2-Trichloro-1,2,2-trifluoroethane	3100	N	13000	N	**0.45 L**	0.72 U	**0.5 L**	**0.43 L**	0.65 U	0.69 U	**0.43 L**	0.67 U	**0.38 L**	1.3 U	**0.43 L**	**0.41 L**	**0.41 L**	0.84 U	0.93 U	0.65 U
1,1,2-Trichloroethane	0.021	N	0.088	N	0.55 U	0.51 U	0.66 U	0.51 U	0.46 U	0.49 U	0.51 U	0.47 U	0.51 U	0.93 U	0.55 U	0.55 U	0.6 U	0.6 U	0.66 U	0.46 U
1,1-Dichloroethane	**1.8**	C	7.7	C	0.41 U	0.38 U	0.49 U	0.38 U	0.34 U	0.36 U	0.38 U	0.35 U	0.38 U	0.69 U	0.41 U	0.41 U	**0.22 L**	0.45 U	0.49 U	0.34 U
1,1-Dichloroethene	21	N	88	N	0.4 U	0.37 U	0.48 U	0.37 U	0.34 U	0.36 U	0.37 U	0.34 U	0.37 U	0.67 U	0.4 U	0.4 U	0.44 U	0.44 U	0.48 U	0.34 U
1,2,4-Trichlorobenzene	**0.21**	N	0.88	N	0.75 U	**0.39 L**	0.9 U	0.69 U	**0.45 L**	**0.42 L**	0.69 U	0.65 U	0.7 U	1.3 U	0.75 U	0.75 U	0.82 U	0.82 U	0.9 U	0.63 U
1,2,4-Trimethylbenzene	**0.73**	N	***3.1***	N	**0.25 L**	***14***	**2.93**	**1.34**	***18***	***18***	0.46 U	***8.8***	0.46 U	0.84 U	0.5 U	0.5 U	0.54 U	0.54 U	**0.79**	**1.7**
1,2-Dibromoethane	0.0047	C	0.02	C	0.78 U	0.72 U	0.93 U	0.71 U	0.65 U	0.69 U	0.71 U	0.67 U	0.72 U	1.3 U	0.78 U	0.78 U	0.85 U	0.85 U	0.93 U	0.65 U
1,2-Dichlorobenzene	21	N	88	N	0.61 U	0.57 U	0.73 U	0.56 U	0.51 U	0.54 U	0.56 U	0.52 U	0.56 U	1 U	0.61 U	0.61 U	0.66 U	0.66 U	0.73 U	0.51 U
1,2-Dichloroethane	**0.11**	C	***0.47***	C	0.41 U	0.38 U	0.49 U	0.38 U	0.34 U	0.36 U	0.38 U	0.35 U	0.38 U	0.69 U	0.41 U	0.41 U	0.45 U	0.45 U	***4.42***	0.34 U
1,2-Dichloropropane	**0.28**	C	***1.2***	C	0.47 U	0.43 U	0.56 U	0.43 U	0.39 U	0.42 U	0.43 U	0.4 U	0.43 U	0.79 U	0.47 U	0.47 U	0.51 U	0.51 U	0.56 U	0.39 U
1,3,5-Trimethylbenzene	--		--		**0.3 L**	**4.3**	**0.94**	**0.46**	**5**	0.44 U	0.46 U	**2.6**	0.46 U	0.84 U	0.5 U	0.5 U	0.54 U	0.54 U	0.6 U	**1**
1,3-Butadiene	**0.094**	C	***0.41***	C	0.45 U	0.42 U	**0.1 L**	0.4 U	0.38 U	0.4 U	0.4 U	0.38 U	0.42 U	0.75 U	0.45 U	0.45 U	0.49 U	0.49 U	0.54 U	0.38 U
1,3-Dichlorobenzene	--		--		0.61 U	0.57 U	0.73 U	0.56 U	0.51 U	0.54 U	0.56 U	0.52 U	0.56 U	1 U	0.61 U	0.61 U	0.66 U	0.66 U	0.73 U	0.51 U
1,4-Dichlorobenzene	**0.26**	C	***1.1***	C	0.61 U	0.57 U	0.73 U	0.56 U	0.51 U	0.54 U	0.56 U	0.52 U	0.56 U	1 U	0.61 U	0.61 U	0.66 U	0.66 U	0.73 U	0.51 U
2-Butanone	520	N	2200	N	**0.29 L**	0.28 U	0.36 U	0.27 U	0.25 U	0.27 U	0.27 U	0.26 U	0.28 U	**1**	0.3 U	0.3 U	**0.97**	**0.44**	**5.72**	**2.1**
2-Hexanone	3.1	N	13	N	0.41 U	0.39 U	0.5 U	0.38 U	0.35 U	0.37 U	0.38 U	0.36 U	0.38 U	0.7 U	0.41 U	0.41 U	0.45 U	0.45 U	0.5 U	0.35 U
4-Ethyltoluene	--		--		**0.89**	**15**	**2.88**	**1.54**	**19**	**18**	0.46 U	**8.8**	0.46 U	0.84 U	0.5 U	0.5 U	**0.26 L**	**0.25 L**	**0.74**	**1.5**
4-Methyl-2-pentanone	310	N	1300	N	0.41 U	0.39 U	0.5 U	0.38 U	0.35 U	0.37 U	0.38 U	0.36 U	0.38 U	0.7 U	0.41 U	0.41 U	0.45 U	0.45 U	0.5 U	0.35 U
Acrylonitrile	**0.041**	C	***0.18***	C	0.22 U	0.2 U	0.26 U	0.2 U	0.18 U	0.2 U	0.2 U	0.19 U	0.2 U	0.37 U	0.22 U	0.22 U	0.24 U	0.24 U	0.26 U	0.18 U
Allyl chloride	0.1	N	0.44	N	0.32 U	0.29 U	0.38 U	0.29 U	0.27 U	0.28 U	0.29 U	0.27 U	0.29 U	0.53 U	0.32 U	0.32 U	0.34 U	0.34 U	0.38 U	0.27 U
Benzene	**0.36**	C	***1.6***	C	***1.68***	***16***	***2.81***	***2.16***	***19***	***19***	**0.74**	***9.4***	**0.58**	0.54 U	**0.61**	**0.55**	0.35 U	0.35 U	***3.1***	**0.67**
Benzyl chloride	0.057	C	0.25	C	0.52 U	0.49 U	0.63 U	0.48 U	0.44 U	0.47 U	0.48 U	0.45 U	0.49 U	0.88 U	0.52 U	0.52 U	0.57 U	0.57 U	0.63 U	0.44 U
Bromodichloromethane	**0.076**	C	***0.33***	C	0.68 U	0.63 U	0.81 U	0.62 U	0.57 U	0.6 U	0.62 U	0.58 U	0.63 U	1.1 U	0.68 U	0.68 U	0.74 U	0.74 U	0.81 U	0.57 U
Bromoform	2.6	C	11	C	1.04 U	0.97 U	1.25 U	0.96 U	0.88 U	0.93 U	0.96 U	0.9 U	0.97 U	1.8 U	1.04 U	1.04 U	1.1 U	1.1 U	1.25 U	0.88 U
Bromomethane	0.52	N	2.2	N	0.39 U	0.37 U	0.47 U	0.36 U	0.33 U	0.35 U	0.36 U	0.34 U	0.36 U	0.66 U	0.39 U	0.39 U	0.43 U	0.43 U	0.47 U	0.33 U
Carbon tetrachloride	**0.47**	C	2	C	**0.41 L**	0.59 U	**0.46 L**	**0.37 L**	0.53 U	0.57 U	**0.39 L**	**0.34 L**	**0.33 L**	1.1 U	**0.38 L**	**0.38 L**	**0.4 L**	0.69 U	0.76 U	**0.39 L**
Chlorobenzene	5.2	N	22	N	0.47 U	0.43 U	0.56 U	0.43 U	0.39 U	0.41 U	0.43 U	0.4 U	0.43 U	0.78 U	0.47 U	0.47 U	0.51 U	0.51 U	0.56 U	0.39 U
Chloroethane	1000	N	4400	N	0.27 U	0.25 U	0.32 U	0.25 U	0.22 U	0.24 U	0.25 U	0.23 U	0.25 U	0.45 U	0.27 U	0.27 U	0.29 U	0.29 U	0.32 U	0.22 U
Chloroform	**0.12**	C	***0.53***	C	0.49 U	***0.78***	0.59 U	0.45 U	**0.37 L**	**0.4 L**	0.45 U	**0.49**	0.46 U	0.83 U	0.49 U	0.49 U	0.54 U	0.54 U	0.59 U	0.42 U
Chloromethane	9.4	N	39	N	**0.67**	**0.91**	**0.61**	**0.58**	**0.83**	**0.83**	**0.58**	**0.66**	**0.48**	**0.68**	**0.48**	**0.46**	**0.81**	**0.54**	**0.73**	**0.81**
cis-1,2-Dichloroethene	--		--		0.4 U	0.37 U	0.48 U	0.37 U	0.34 U	0.36 U	0.37 U	0.34 U	0.37 U	0.67 U	0.4 U	0.4 U	0.44 U	0.44 U	0.48 U	0.34 U
cis-1,3-Dichloropropene	--		--		0.46 U	0.43 U	0.55 U	0.42 U	0.39 U	0.41 U	0.42 U	0.39 U	0.43 U	0.77 U	0.46 U	0.46 U	0.5 U	0.5 U	0.55 U	0.39 U
Cyclohexane	630	N	2600	N	**0.77**	**9.2**	**1.5**	**1.11**	**9.3**	**9.6**	0.32 U	**5**	0.32 U	0.59 U	0.35 U	0.35 U	0.38 U	0.38 U	**0.87**	**2.2**
Dibromochloromethane	0.1	C	0.45	C	0.86 U	0.8 U	1.03 U	0.79 U	0.72 U	0.77 U	0.79 U	0.74 U	0.8 U	1.4 U	0.86 U	0.86 U	0.94 U	0.94 U	1.03 U	0.72 U
Dichlorodifluoromethane	**10**	N	***44***	N	**1.9**	**2.5**	**2.3**	**1.8**	**2.2**	**2.1**	**2**	**1.6**	**2.8**	**2.6**	**2.95**	**2.4**	**2.3**	**1.7**	**4.15**	**5.9**
Dichlorotetrafluoroethane	--		--		0.71 U	0.66 U	0.85 U	0.65 U	0.59 U	0.63 U	0.65 U	0.61 U	0.66 U	1.2 U	0.71 U	0.71 U	0.77 U	0.77 U	0.85 U	0.59 U
Ethylbenzene	**1.1**	C	***4.9***	C	**1.58**	***17***	**3.55**	**2.41**	***20***	***20***	**0.29 L**	***9.9***	0.41 U	0.74 U	0.44 U	0.44 U	0.48 U	0.48 U	**2.24**	**0.82**
Hexachlorobutadiene	**0.13**	C	0.56	C	1.03 U	**0.56 L**	1.23 U	0.95 U	0.91 U	0.96 U	0.95 U	0.93 U	0.96 U	1.8 U	1.03 U	1.03 U	1.2 U	1.2 U	1.23 U	0.91 U
Hexane	**73**	N	310	N	**3.38**	**53**	**6.52**	**4.74**	**70**	**74**	**0.78**	**30**	**3.24**	**7.2**	**4.99**	**4.56**	**8.2**	**6.5**	**2.03**	**0.92**
m,p-Xylene	--		--		**5**	**49**	**10.92**	**7.41**	**58**	**58**	**0.88**	**29**	**0.48**	1.5 U	**0.41 L**	**0.39 L**	**0.35 L**	**0.28 L**	**3.86**	**1.1**
Methyl tert-butyl ether	11	C	47	C	0.36 U	0.34 U	0.44 U	0.34 U	0.31 U	0.32 U	0.34 U	0.31 U	0.34 U	0.61 U	0.36 U	0.36 U	0.4 U	0.4 U	0.44 U	0.31 U
Methylene chloride	63	N	260	N	**2.25**	0.33 U	**2.21**	**1.58**	0.3 U	0.31 U	**1.9**	0.3 U	**1.51**	**1.2**	**1.75**	**1.65**	**1.7**	**5**	**1.75**	0.3 U
n-Heptane	--		--		0.41 U	**32**	0.5 U	0.38 U	**37**	**36**	0.38 U	0.36 U	0.39 U	0.7 U	0.41 U	0.41 U	0.45 U	0.45 U	0.5 U	0.35 U
o-Xylene	**10**	N	44	N	**1.62**	**17**	**3.86**	**2.5**	**20**	**20**	**0.3 L**	**10**	**0.18 L**	0.74 U	0.44 U	0.44 U	0.48 U	0.48 U	**1.62**	**0.61**
Styrene	100	N	440	N	0.43 U	0.4 U	0.52 U	0.4 U	0.36 U	0.38 U	0.4 U	0.37 U	0.4 U	0.72 U	0.43 U	0.43 U	0.47 U	0.47 U	**0.56**	**0.51**
Tetrachloroethene	4.2	N	18	N	0.69 U	0.64 U	0.82 U	0.63 U	0.58 U	0.61 U	0.63 U	0.59 U	0.64 U	1.2 U	0.69 U	0.69 U	0.75 U	0.75 U	0.82 U	0.58 U
Tetrahydrofuran	210	N	880	N	0.3 U	0.28 U	0.36 U	0.27 U	0.25 U	0.27 U	0.27 U	0.26 U	0.28 U	0.5 U	**0.72**	**0.69**	0.32 U	0.32 U	0.36 U	0.25 U
Toluene	**520**	N	***2200***	N	**10.24**	**120**	**20.1**	**14.2**	**140**	**140**	**2.02**	**90**	**0.95**	**0.79**	**0.88**	**0.76**	**0.6**	**0.49**	**114**	**20**

Table 4
Indoor Air Analytical Results*
Raymark - Operable Unit 2 - Groundwater
Stratford, Connecticut

					INDUSTRIAL/COMMERCIAL PROPERTIES															
				Sample Location	500 FERRY-1STFL		500 FERRY-BASEMENT				500 FERRY-CRAWLSP		608 FERRY, 1ST FL		608 FERRY, BSMT				411B-FASHIONBUG	
				Sample Date	02/13/12	08/13/12	02/13/12		08/13/12		02/13/12	08/13/12	02/14/12	08/15/12	02/14/12		08/15/12		02/16/12	08/16/12
				Canister	1565	4742	6554	1587	6548	3656	6566	1587	1584	1565	5786	3656	6569	1574	4742	22687
Sample ID	**Residential Target Indoor Air Concentration[1]**	**Basis**	**Industrial/ Commercial Target Indoor Air Concentration[2]**	**Basis**	500FERRY-1STFL	500FERRY-1STFL-081312	500FERRY-BASEMENT	500FERRY-BASEMENT-DUP	500FERRY-BASEMENT-081312	500FERRY-BASEMENT-DUP-081312	500FERRY-CRAWLSP	500FERRY-CRAWLSP-081312	608FERRY-1STFL	608FERRY-1STFL-081512	608FERRY-BASEMENT	608FERRY-BASEMENT-DUP	608FERRY-BASEMENT-081512	608FERRY-BSMT-DUP-081512	411BARNUM-FASHIONBUG	411BARNUM-FASHIONBUG-081612
trans-1,2-Dichloroethene	--		--		0.4 U	0.37 U	0.48 U	0.37 U	0.34 U	0.36 U	0.37 U	0.34 U	0.37 U	0.67 U	0.4 U	0.4 U	0.44 U	0.44 U	0.48 U	0.34 U
trans-1,3-Dichloropropene	--		--		0.46 U	0.43 U	0.55 U	0.42 U	0.39 U	0.41 U	0.42 U	0.39 U	0.43 U	0.77 U	0.46 U	0.46 U	0.5 U	0.5 U	0.55 U	0.39 U
Trichloroethene	**0.21**	N	***0.88***	N	0.54 U	0.51 U	**0.27 L**	0.5 U	0.46 U	0.48 U	0.5 U	0.47 U	0.5 U	0.91 U	0.54 U	0.54 U	***1.3***	***0.91***	***1.25***	**0.7**
Trichlorofluoromethane	**73**	N	310	N	**1.02**	0.53 U	**1.08**	**0.91**	0.48 U	0.51 U	**0.96**	0.49 U	**0.91**	**0.96**	**1.08**	**1.02**	**1.1**	**0.79**	**11.9**	**19**
Vinyl bromide (bromoethene)	0.088	C	0.38	C	0.44 U	0.41 U	0.53 U	0.41 U	0.37 U	0.39 U	0.41 U	0.38 U	0.41 U	0.74 U	0.44 U	0.44 U	0.48 U	0.48 U	0.53 U	0.37 U
Vinyl chloride	**0.17**	C	2.8	C	0.26 U	0.24 U	0.31 U	0.24 U	0.22 U	0.23 U	0.24 U	0.22 U	0.24 U	0.43 U	0.26 U	0.26 U	0.28 U	0.28 U	0.31 U	0.22 U

Notes:

1. Residential Target Indoor Air Concentration is based on $1x10^{-6}$ cancer risk or HQ = 0.1.
2. Industrial/Commercial Target Indoor Air Concentration based on $1x10^{-6}$ cancer risk or HQ = 0.1.

* Analytical results from EPA fixed laboratory only for indoor air samples collected by EPA in 2012 and 2013.

Bold Analyte - Raymark OU2 Contaminant of Concern
Highlighted, bold concentrations exceed Residential Screening levels.
Highlighted, bold, italicized concentrations also exceed Industrial/Commercial Screening levels.

C = Cancer based value
N = Non-cancer based value
U = Concentration was not detected above the laboratory reporting limit.
L = Estimated concentration value was detected below the calibration range.
Bold - Detected; U - Not Detected;
J - Estimated; R - Rejected; NA - Not Analyzed

Table 4
Indoor Air Analytical Results*
Raymark - Operable Unit 2 - Groundwater
Stratford, Connecticut

					INDUSTRIAL/COMMERCIAL PROPERTIES													
				Sample Location	411B-GAMESHOP		411B-MARSHALLS-BKRM				411B-MARSHALLS-SHOP		411B-MCDONALDS		411B-MTHEATRE-11		411B-MTHEATRE-8	
				Sample Date	02/16/12	08/16/12	02/16/12		08/16/12		02/16/12	08/16/12	02/14/12	08/16/12	02/16/12	08/16/12	02/16/12	08/16/12
				Canister	1589	12568	6558	6548	5792	1114	3048	22684	4743	20841	6553	20850	6567	15053
Sample ID	**Residential Target Indoor Air Concentration[1]**	**Basis**	**Industrial/ Commercial Target Indoor Air Concentration[2]**	**Basis**	411BARNUM-GAMESHOP	411BARNUM-GAMESTOP-081612	411BARNUM-MARSHALLS-BKRM	411BARNUM-MARSHALLS-BKRM-DUP	411BARNUM-MARSHALLS-BKRM-081612	411BARNUM-MARSHALLS-BKRM-DUP-081612	411BARNUM-MARSHALLS-SHOP	411BARNUM-MARSHALLS-SHOP-081612	411BARNUM-MCDONALDS	411BARNUM-MCDONALDS-081612	411BARNUM-MOVIETHEATRE-11	411BARNUM-MTHEATRE-11-081612	411BARNUM-MOVIETHEATRE-8	411BARNUM-MTHEATRE-8-081612
Volatiles (µg/m^3)																		
1,1,1-Trichloroethane	520	N	2200	N	0.88 U	0.55 U	0.72 U	0.66 U	0.55 U	0.65 U	**3.64**	0.51 U	**2.7**	0.65 U	0.72 U	**0.28 L**	**1.98**	0.55 U
1,1,2,2-Tetrachloroethane	0.048	C	0.21	C	1.11 U	0.69 U	0.9 U	0.83 U	0.69 U	0.82 U	0.83 U	0.64 U	0.8 U	0.82 U	0.9 U	0.76 U	0.76 U	0.69 U
1,1,2-Trichloro-1,2,2-trifluoroethane	3100	N	13000	N	1.24 U	0.77 U	**0.47 L**	**0.46 L**	0.77 U	0.92 U	0.93 U	0.71 U	**0.5 L**	0.92 U	1.01 U	**0.44 L**	**0.49 L**	0.77 U
1,1,2-Trichloroethane	0.021	N	0.088	N	0.88 U	0.55 U	0.72 U	0.66 U	0.55 U	0.65 U	0.66 U	0.51 U	0.6 U	0.65 U	0.72 U	0.6 U	0.61 U	0.55 U
1,1-Dichloroethane	**1.8**	C	7.7	C	0.65 U	0.4 U	0.53 U	0.49 U	0.4 U	0.49 U	0.49 U	0.38 U	0.4 U	0.49 U	0.53 U	0.45 U	0.45 U	0.4 U
1,1-Dichloroethene	21	N	88	N	0.64 U	0.4 U	0.52 U	0.48 U	0.4 U	0.48 U	0.48 U	0.37 U	0.4 U	0.48 U	0.52 U	0.44 U	0.44 U	0.4 U
1,2,4-Trichlorobenzene	**0.21**	N	0.88	N	1.2 U	0.74 U	0.97 U	0.9 U	0.74 U	0.89 U	0.9 U	0.69 U	0.8 U	0.89 U	0.97 U	0.82 U	0.82 U	0.74 U
1,2,4-Trimethylbenzene	**0.73**	N	***3.1***	N	0.79 U	**0.44 L**	0.65 U	**0.6**	**1.2**	**1.2**	0.6 U	**1.3**	0.5 U	**0.27 L**	0.65 U	0.54 U	0.55 U	0.49 U
1,2-Dibromoethane	0.0047	C	0.02	C	1.24 U	0.77 U	1.01 U	0.93 U	0.77 U	0.92 U	0.93 U	0.71 U	0.9 U	0.92 U	1.01 U	0.85 U	0.85 U	0.77 U
1,2-Dichlorobenzene	21	N	88	N	0.97 U	0.6 U	0.79 U	0.73 U	0.6 U	0.72 U	0.73 U	0.56 U	0.7 U	0.72 U	0.79 U	0.66 U	0.67 U	0.6 U
1,2-Dichloroethane	**0.11**	C	***0.47***	C	**0.41 L**	0.4 U	***6.09***	***6.13***	***5.7***	***5.5***	***5.15***	***3.8***	0.4 U	0.49 U	0.53 U	0.45 U	0.45 U	0.4 U
1,2-Dichloropropane	**0.28**	C	***1.2***	C	0.75 U	0.46 U	***1.77***	***1.82***	**1.2**	**1.2**	***2.33***	***1.3***	0.5 U	0.55 U	0.61 U	0.51 U	0.51 U	0.46 U
1,3,5-Trimethylbenzene	--		--		0.79 U	0.49 U	0.65 U	0.6 U	0.49 U	0.59 U	0.6 U	0.46 U	0.5 U	0.59 U	0.65 U	0.54 U	0.55 U	0.49 U
1,3-Butadiene	**0.094**	C	***0.41***	C	**0.25**	0.44 U	**0.13 L**	**0.12 L**	0.44 U	0.53 U	0.54 U	0.42 U	**0.1 L**	0.53 U	0.58 U	0.49 U	**0.1 L**	0.44 U
1,3-Dichlorobenzene	--		--		0.97 U	0.6 U	0.79 U	0.73 U	0.6 U	0.72 U	0.73 U	0.56 U	0.7 U	0.72 U	0.79 U	0.66 U	0.67 U	0.6 U
1,4-Dichlorobenzene	**0.26**	C	***1.1***	C	0.97 U	0.6 U	0.79 U	0.73 U	0.6 U	0.72 U	0.73 U	0.56 U	0.7 U	0.72 U	0.79 U	0.66 U	0.67 U	0.6 U
2-Butanone	520	N	2200	N	**2.53**	**11**	**3.1**	**4.8**	**3.8**	**3.9**	**5.04**	**3.4**	**0.4**	**1**	0.39 U	**0.68**	**0.74**	**0.97**
2-Hexanone	3.1	N	13	N	0.66 U	0.41 U	0.54 U	0.5 U	0.41 U	0.49 U	0.5 U	0.38 U	0.5 U	0.49 U	0.54 U	0.45 U	0.46 U	0.41 U
4-Ethyltoluene	--		--		**0.55 L**	**0.45 L**	**0.38 L**	**0.5 L**	**1**	**1.1**	**0.65**	**1.2**	0.5 U	**0.31 L**	0.65 U	**0.27 L**	0.55 U	0.49 U
4-Methyl-2-pentanone	310	N	1300	N	0.66 U	0.41 U	0.54 U	**0.21 L**	0.41 U	0.49 U	0.5 U	0.38 U	0.5 U	0.49 U	0.54 U	0.45 U	0.46 U	0.41 U
Acrylonitrile	**0.041**	C	***0.18***	C	0.35 U	0.22 U	0.29 U	0.26 U	0.22 U	0.26 U	0.26 U	0.2 U	0.2 U	0.26 U	0.29 U	0.24 U	0.24 U	0.22 U
Allyl chloride	0.1	N	0.44	N	0.51 U	0.31 U	0.41 U	0.38 U	0.31 U	0.38 U	0.38 U	0.29 U	0.3 U	0.38 U	0.41 U	0.34 U	0.35 U	0.31 U
Benzene	**0.36**	C	***1.6***	C	***1.9***	**0.45**	***2.19***	***2.1***	**1**	**1.1**	***2.78***	**1.1**	**1**	**0.32 L**	**0.9**	**0.32 L**	**1**	0.32 U
Benzyl chloride	0.057	C	0.25	C	0.84 U	0.52 U	0.68 U	0.63 U	0.52 U	0.62 U	0.63 U	0.48 U	0.6 U	0.62 U	0.68 U	0.57 U	0.58 U	0.52 U
Bromodichloromethane	**0.076**	C	***0.33***	C	1.08 U	0.67 U	0.88 U	0.81 U	0.67 U	0.8 U	0.81 U	0.62 U	0.7 U	0.8 U	0.88 U	0.74 U	0.74 U	0.67 U
Bromoform	2.6	C	11	C	1.67 U	1 U	1.36 U	1.25 U	1 U	1.2 U	1.25 U	0.96 U	1.1 U	1.2 U	1.36 U	1.1 U	1.15 U	1 U
Bromomethane	0.52	N	2.2	N	0.63 U	0.39 U	0.51 U	0.47 U	0.39 U	0.47 U	0.47 U	0.36 U	0.4 U	0.47 U	0.51 U	0.43 U	0.43 U	0.39 U
Carbon tetrachloride	**0.47**	C	2	C	1.02 U	**0.38 L**	**0.41 L**	**0.39 L**	0.63 U	0.75 U	0.76 U	0.59 U	**0.5 L**	0.75 U	0.83 U	**0.37 L**	**0.43 L**	0.63 U
Chlorobenzene	5.2	N	22	N	0.74 U	0.46 U	0.6 U	0.56 U	0.46 U	0.55 U	0.56 U	0.43 U	0.5 U	0.55 U	0.6 U	0.51 U	0.51 U	0.46 U
Chloroethane	1000	N	4400	N	0.43 U	0.26 U	0.35 U	0.32 U	0.26 U	0.32 U	0.32 U	0.25 U	0.3 U	0.32 U	0.35 U	0.29 U	0.29 U	0.26 U
Chloroform	**0.12**	C	***0.53***	C	0.79 U	0.49 U	0.64 U	0.59 U	0.49 U	0.59 U	0.59 U	0.45 U	***1.3***	***1.4***	0.64 U	0.54 U	0.54 U	0.49 U
Chloromethane	9.4	N	39	N	**0.83**	**0.83**	**0.77**	**0.73**	**0.74**	**0.72**	**1.06**	**0.74**	**0.8**	**0.6**	**0.61**	**0.76**	**0.77**	**0.79**
cis-1,2-Dichloroethene	--		--		0.64 U	0.4 U	0.52 U	0.48 U	0.4 U	0.48 U	0.48 U	0.37 U	0.4 U	0.48 U	0.52 U	0.44 U	0.44 U	0.4 U
cis-1,3-Dichloropropene	--		--		0.73 U	0.45 U	0.6 U	0.55 U	0.45 U	0.54 U	0.55 U	0.42 U	0.5 U	0.54 U	0.6 U	0.5 U	0.5 U	0.45 U
Cyclohexane	630	N	2600	N	**0.73**	**0.26 L**	**1.11**	**1.08**	0.34 U	**0.69**	**1.29**	0.32 U	0.4 U	0.41 U	0.45 U	0.38 U	0.38 U	0.34 U
Dibromochloromethane	0.1	C	0.45	C	1.38 U	0.85 U	1.12 U	1.03 U	0.85 U	1 U	1.03 U	0.79 U	0.9 U	1 U	1.12 U	0.94 U	0.95 U	0.85 U
Dichlorodifluoromethane	**10**	N	***44***	N	**2.55**	**3.6**	**2.8**	**3.35**	**4.9**	**4.2**	**2.6**	**2.4**	**2.2**	**1.8**	**1.95**	**2.9**	**2.4**	**3.8**
Dichlorotetrafluoroethane	--		--		1.13 U	0.7 U	0.92 U	0.85 U	0.7 U	0.84 U	0.85 U	0.65 U	0.8 U	0.84 U	0.92 U	0.77 U	0.78 U	0.7 U
Ethylbenzene	**1.1**	C	***4.9***	C	**0.97**	**0.39 L**	**2.33**	**2.37**	**2.2**	**2.3**	**2.9**	**2.1**	**0.3 L**	0.52 U	0.57 U	0.48 U	0.48 U	0.43 U
Hexachlorobutadiene	**0.13**	C	0.56	C	1.65 U	1.1 U	1.34 U	1.23 U	1.1 U	1.3 U	1.23 U	0.99 U	1.1 U	1.3 U	1.34 U	1.2 U	1.13 U	1.1 U
Hexane	**73**	N	310	N	**2.85**	**0.92**	**1.89**	**1.89**	**0.77**	0.42 U	**1.92**	0.33 U	**4.3**	**3.4**	**1.25**	**3.5**	**1.28**	**0.74**
m,p-Xylene	--		--		**2.76**	**0.82 L**	**4.69**	**5**	**3.7**	**3.9**	**5.83**	**3.8**	**0.7 L**	**0.48 L**	**0.75 L**	**0.52 L**	**0.92**	0.87 U
Methyl tert-butyl ether	11	C	47	C	0.58 U	0.36 U	0.47 U	0.44 U	0.36 U	0.43 U	0.44 U	0.34 U	0.4 U	0.43 U	0.47 U	0.4 U	0.4 U	0.36 U
Methylene chloride	63	N	260	N	**2.6**	0.35 U	**2.6**	**2.42**	0.35 U	0.42 U	**2.39**	**1.5**	**1.3**	0.42 U	**0.98**	**0.35 L**	**0.98**	0.35 U
n-Heptane	--		--		0.66 U	0.41 U	0.54 U	0.5 U	0.41 U	0.49 U	0.5 U	0.38 U	0.5 U	0.49 U	0.54 U	0.45 U	0.46 U	0.41 U
o-Xylene	**10**	N	44	N	**1.1**	**0.33 L**	**1.58**	**1.75**	**1.6**	**1.8**	**2.02**	**1.7**	**0.3 L**	**0.26 L**	0.57 U	**0.25 L**	**0.33 L**	0.43 U
Styrene	100	N	440	N	**0.6 L**	**0.51**	**1.59**	**1.89**	**2.3**	**2.3**	**0.99**	**1.6**	0.5 U	0.51 U	0.56 U	0.47 U	**0.3 L**	**0.89**
Tetrachloroethene	4.2	N	18	N	1.1 U	0.68 U	**0.53 L**	**0.53 L**	0.68 U	0.81 U	0.82 U	0.63 U	**0.3 L**	0.81 U	0.89 U	0.75 U	**0.49**	0.68 U
Tetrahydrofuran	210	N	880	N	0.48 U	0.29 U	0.39 U	0.36 U	0.29 U	**2.5**	0.36 U	0.27 U	0.3 U	0.35 U	0.39 U	0.32 U	0.33 U	0.29 U
Toluene	**520**	N	***2200***	N	**11.2 J**	**5**	**160**	**145**	**52**	**60**	**209**	**60**	**1.9**	**0.83**	**2.17 J**	**1.7**	**3.35**	**3.1**

Table 4
Indoor Air Analytical Results*
Raymark - Operable Unit 2 - Groundwater
Stratford, Connecticut

					INDUSTRIAL/COMMERCIAL PROPERTIES													
				Sample Location	411B-GAMESHOP		411B-MARSHALLS-BKRM				411B-MARSHALLS-SHOP		411B-MCDONALDS		411B-MTHEATRE-11		411B-MTHEATRE-8	
				Sample Date	02/16/12	08/16/12	02/16/12		08/16/12		02/16/12	08/16/12	02/14/12	08/16/12	02/16/12	08/16/12	02/16/12	08/16/12
				Canister	1589	12568	6558	6548	5792	1114	3048	22684	4743	20841	6553	20850	6567	15053
Sample ID	**Residential Target Indoor Air Concentration[1]**	**Basis**	**Industrial/ Commercial Target Indoor Air Concentration[2]**	**Basis**	411BARNUM-GAMESHOP	411BARNUM-GAMESTOP-081612	411BARNUM-MARSHALLS-BKRM	411BARNUM-MARSHALLS-BKRM-DUP	411BARNUM-MARSHALLS-BKRM-081612	411BARNUM-MARSHALLS-BKRM-DUP-081612	411BARNUM-MARSHALLS-SHOP	411BARNUM-MARSHALLS-SHOP-081612	411BARNUM-MCDONALDS	411BARNUM-MCDONALDS-081612	411BARNUM-MOVIETHEATRE-11	411BARNUM-MTHEATRE-11-081612	411BARNUM-MOVIETHEATRE-8	411BARNUM-MTHEATRE-8-081612
trans-1,2-Dichloroethene	--		--		0.64 U	0.4 U	0.52 U	0.48 U	0.4 U	0.48 U	0.48 U	0.37 U	0.4 U	0.48 U	0.52 U	0.44 U	0.44 U	0.4 U
trans-1,3-Dichloropropene	--		--		0.73 U	0.45 U	0.6 U	0.55 U	0.45 U	0.54 U	0.55 U	0.42 U	0.5 U	0.54 U	0.6 U	0.5 U	0.5 U	0.45 U
Trichloroethene	**0.21**	N	***0.88***	N	0.87 U	0.54 U	**0.43 L**	**0.42 L**	0.54 U	0.64 U	0.65 U	0.5 U	0.6 U	***1.1***	0.71 U	0.59 U	0.6 U	0.54 U
Trichlorofluoromethane	**73**	N	310	N	**2.1**	**3.3**	**5.51**	**5.17**	**13**	**13**	**3.92**	**4.8**	**1.1**	**0.67**	**1.08**	**1.1**	**1.48**	**2.9**
Vinyl bromide (bromoethene)	0.088	C	0.38	C	0.71 U	0.44 U	0.57 U	0.53 U	0.44 U	0.52 U	0.53 U	0.41 U	0.5 U	0.52 U	0.57 U	0.48 U	0.49 U	0.44 U
Vinyl chloride	**0.17**	C	2.8	C	0.41 U	0.26 U	0.34 U	0.31 U	0.26 U	0.31 U	0.31 U	0.24 U	0.3 U	**1**	0.34 U	0.28 U	0.28 U	0.26 U

Notes:

1. Residential Target Indoor Air Concentration is based on $1x10^{-6}$ cancer risk or HQ = 0.1.

2. Industrial/Commercial Target Indoor Air Concentration based on $1x10^{-6}$ cancer risk or HQ = 0.1.

*Analytical results from EPA fixed laboratory only for indoor air samples collected by EPA in 2012 and 2013.

Bold Analyte - Raymark OU2 Contaminant of Concern

Highlighted, bold concentrations exceed Residential Screening levels.

Highlighted, bold, italicized concentrations also exceed Industrial/Commercial Screening levels.

C = Cancer based value
N = Non-cancer based value
U = Concentration was not detected above the laboratory reporting limit.
L = Estimated concentration value was detected below the calibration range.
Bold - Detected; U - Not Detected;
J - Estimated; R - Rejected; NA - Not Analyzed

Table 4
Indoor Air Analytical Results*
Raymark - Operable Unit 2 - Groundwater
Stratford, Connecticut

					INDUSTRIAL/COMMERCIAL PROPERTIES												
				Sample Location	411B-MTHEATRE-BTH		411B-PAYLESS BACK	411B-PAYLESS SHOE		411B-POSTOFFICE		411B-SALLYSBEAUTY		411B-SLEEPYS		411B-TMOBILE	
				Sample Date	02/16/12	08/16/12	08/16/12	02/16/12	08/16/12	02/14/12	08/16/12	02/16/12	08/16/12	02/16/12	08/16/12	02/16/12	08/16/12
				Canister	6463	22693	15049	13498	15054	6569	15055	5804	20844	20857	20849	6581	14891
Sample ID	**Residential Target Indoor Air Concentration[1]**	**Basis**	**Industrial/ Commercial Target Indoor Air Concentration[2]**	**Basis**	411BARNUM-MOVIETHEATRE-BOOTH	411BARNUM-MTHEATRE-BOOTH-081612	411BARNUM-PAYLESS-BACK-081612	411BARNUM-PAYLESS	411BARNUM-PAYLESS-081612	411BARNUM-POSTOFFICE	411BARNUM-POSTOFFICE 081612	411BARNUM-SALLYS BEAUTY	411BARNUM-SALLYS BEAUTY-081612	411BARNUM-SLEEPYS	411BARNUM-SLEEPYS-081612	411BARNUM-TMOBILE	411BARNUM-TMOBILE-081612
Volatiles (µg/m^3)																	
1,1,1-Trichloroethane	520	N	2200	N	0.66 U	0.6 U	0.6 U	0.66 U	0.48 U	**4.19**	**1.5**	0.66 U	0.71 U	**0.61**	1.3 U	0.72 U	2.3 U
1,1,2,2-Tetrachloroethane	0.048	C	0.21	C	0.83 U	0.76 U	0.76 U	0.83 U	0.6 U	0.76 U	0.76 U	0.83 U	0.89 U	0.76 U	1.6 U	0.9 U	2.9 U
1,1,2-Trichloro-1,2,2-trifluoroethane	3100	N	13000	N	0.93 U	0.84 U	0.84 U	0.93 U	0.67 U	**0.4 L**	0.84 U	0.93 U	1 U	0.85 U	1.8 U	**2.94**	3.2 U
1,1,2-Trichloroethane	0.021	N	0.088	N	0.66 U	0.6 U	0.6 U	0.66 U	0.48 U	0.61 U	0.6 U	0.66 U	0.71 U	0.61 U	1.3 U	0.72 U	2.3 U
1,1-Dichloroethane	**1.8**	C	7.7	C	0.49 U	0.45 U	0.45 U	0.49 U	0.36 U	0.45 U	0.45 U	0.49 U	0.53 U	0.45 U	0.97 U	0.53 U	1.7 U
1,1-Dichloroethene	21	N	88	N	0.48 U	0.44 U	0.44 U	0.48 U	0.35 U	0.44 U	0.44 U	0.48 U	0.52 U	0.44 U	0.95 U	0.52 U	1.7 U
1,2,4-Trichlorobenzene	**0.21**	N	0.88	N	0.9 U	0.82 U	0.82 U	0.9 U	0.65 U	0.82 U	0.82 U	0.9 U	0.96 U	0.82 U	1.8 U	0.97 U	3.1 U
1,2,4-Trimethylbenzene	**0.73**	N	***3.1***	N	0.6 U	0.54 U	***6.5***	***12.1***	***7.1***	0.55 U	**1.7**	**1.14**	0.64 U	**1.19**	**3.1**	0.65 U	2.1 U
1,2-Dibromoethane	0.0047	C	0.02	C	0.93 U	0.85 U	0.85 U	0.93 U	0.68 U	0.85 U	0.85 U	0.93 U	1 U	0.85 U	1.8 U	1.01 U	3.2 U
1,2-Dichlorobenzene	21	N	88	N	0.73 U	0.66 U	0.66 U	0.73 U	0.53 U	0.67 U	0.66 U	0.73 U	0.78 U	0.67 U	1.4 U	0.79 U	2.5 U
1,2-Dichloroethane	**0.11**	C	***0.47***	C	0.49 U	0.45 U	***15***	***90***	***16***	**0.36 L**	0.45 U	0.49 U	0.53 U	***7.4***	***3.2***	**0.41 L**	1.7 U
1,2-Dichloropropane	**0.28**	C	***1.2***	C	0.56 U	0.51 U	***15***	***35.5***	***16***	0.51 U	0.51 U	0.56 U	0.6 U	***6.21***	***3.6***	0.61 U	1.9 U
1,3,5-Trimethylbenzene	--		--		0.6 U	0.54 U	**2.3**	**4.87**	**2.5**	**0.2 L**	**0.98**	0.6 U	**0.4 L**	0.55 U	**1.8**	0.65 U	2.1 U
1,3-Butadiene	**0.094**	C	***0.41***	C	0.54 U	0.49 U	0.49 U	0.54 U	0.4 U	**0.13 L**	0.49 U	0.54 U	0.58 U	0.49 U	1.1 U	0.58 U	1.9 U
1,3-Dichlorobenzene	--		--		0.73 U	0.66 U	0.66 U	0.73 U	0.53 U	0.67 U	0.66 U	0.73 U	0.78 U	0.67 U	1.4 U	0.79 U	2.5 U
1,4-Dichlorobenzene	**0.26**	C	***1.1***	C	0.73 U	**0.84**	0.66 U	0.73 U	0.53 U	**0.27 L**	0.66 U	0.73 U	0.78 U	0.67 U	1.4 U	0.79 U	2.5 U
2-Butanone	520	N	2200	N	**0.6**	**1**	**77 L**	**164**	**88**	**1.4**	**6.2**	**53.6**	**77**	**13.2**	**11**	**1.43**	**3.7**
2-Hexanone	3.1	N	13	N	0.5 U	0.45 U	0.45 U	0.5 U	0.36 U	0.46 U	0.45 U	0.5 U	0.53 U	0.46 U	0.98 U	0.54 U	1.7 U
4-Ethyltoluene	--		--		0.6 U	**0.27 L**	**6.9**	**10.7**	**7.1**	**0.41 L**	**1.4**	**1.04**	**1**	**1.04**	**3.2**	0.65 U	2.1 U
4-Methyl-2-pentanone	310	N	1300	N	0.5 U	0.45 U	0.45 U	0.5 U	0.36 U	0.46 U	0.45 U	0.5 U	0.53 U	0.46 U	0.98 U	0.54 U	1.7 U
Acrylonitrile	**0.041**	C	***0.18***	C	0.26 U	0.24 U	0.24 U	***0.77***	0.19 U	0.24 U	0.24 U	***0.31***	0.28 U	0.24 U	0.52 U	0.29 U	0.91 U
Allyl chloride	0.1	N	0.44	N	0.38 U	0.34 U	0.34 U	0.38 U	0.28 U	0.35 U	0.34 U	0.38 U	0.41 U	0.35 U	0.75 U	0.41 U	1.3 U
Benzene	**0.36**	C	***1.6***	C	**0.97**	**0.26 L**	***9.5***	***23.9***	***11***	**1.29**	**0.61**	***1.94***	**0.77**	***3.23***	***2.6***	**1.55**	**0.67 L**
Benzyl chloride	0.057	C	0.25	C	0.63 U	0.57 U	0.57 U	0.63 U	0.46 U	0.58 U	0.57 U	0.63 U	0.67 U	0.58 U	1.2 U	0.68 U	2.2 U
Bromodichloromethane	**0.076**	C	***0.33***	C	0.81 U	0.74 U	0.74 U	0.81 U	0.59 U	0.74 U	0.74 U	0.81 U	0.87 U	0.74 U	1.6 U	0.88 U	2.8 U
Bromoform	2.6	C	11	C	1.25 U	1.1 U	1.1 U	1.25 U	0.91 U	1.15 U	1.1 U	1.25 U	1.3 U	1.15 U	2.5 U	1.36 U	4.3 U
Bromomethane	0.52	N	2.2	N	0.47 U	0.43 U	0.43 U	0.47 U	0.34 U	0.43 U	0.43 U	0.47 U	0.5 U	0.43 U	0.93 U	0.51 U	1.6 U
Carbon tetrachloride	**0.47**	C	2	C	0.76 U	0.69 U	0.69 U	0.76 U	0.55 U	**0.38 L**	**0.32 L**	0.76 U	0.82 U	0.7 U	1.5 U	0.83 U	2.6 U
Chlorobenzene	5.2	N	22	N	0.56 U	0.51 U	0.51 U	0.56 U	0.41 U	0.51 U	0.51 U	0.56 U	0.6 U	0.51 U	1.1 U	0.6 U	1.9 U
Chloroethane	1000	N	4400	N	0.32 U	0.29 U	0.29 U	0.32 U	0.23 U	0.29 U	0.29 U	0.32 U	0.34 U	0.29 U	0.63 U	0.35 U	1.1 U
Chloroform	**0.12**	C	***0.53***	C	0.59 U	0.54 U	***1.1***	***1.13***	0.43 U	***1.13***	0.54 U	0.59 U	0.63 U	0.54 U	1.2 U	0.64 U	2.1 U
Chloromethane	9.4	N	39	N	**0.75**	**0.6**	**1.1**	**0.86**	**1.2**	**0.63**	**0.76**	**1**	**1.1**	**0.65**	**0.83**	**0.83**	**0.93**
cis-1,2-Dichloroethene	--		--		0.48 U	0.44 U	0.44 U	0.48 U	0.35 U	0.44 U	0.44 U	0.48 U	0.52 U	0.44 U	0.95 U	0.52 U	1.7 U
cis-1,3-Dichloropropene	--		--		0.55 U	0.5 U	0.5 U	0.55 U	0.4 U	0.5 U	0.5 U	0.55 U	0.59 U	0.5 U	1.1 U	0.6 U	1.9 U
Cyclohexane	630	N	2600	N	0.42 U	0.38 U	**4.8**	**23.8**	**5.8**	**0.9**	0.38 U	**0.83**	**1**	**2.19**	**1.2**	0.45 U	1.4 U
Dibromochloromethane	0.1	C	0.45	C	1.03 U	0.94 U	0.94 U	1.03 U	0.75 U	0.95 U	0.94 U	1.03 U	1.1 U	0.95 U	2 U	1.12 U	3.6 U
Dichlorodifluoromethane	**10**	N	***44***	N	**3.65**	**3.9**	**13**	**9.49**	**14**	**2.75**	**3.1**	**2.3**	**3.9**	**4.35**	**19**	**2.1**	**3.4**
Dichlorotetrafluoroethane	--		--		0.85 U	0.77 U	0.77 U	0.85 U	0.62 U	0.78 U	0.77 U	0.85 U	0.91 U	0.78 U	1.7 U	0.92 U	2.9 U
Ethylbenzene	**1.1**	C	***4.9***	C	0.53 U	0.48 U	***30***	***50***	***32***	0.48 U	**0.56**	**1.36**	**1.3**	**4.17**	***6.1***	**0.66**	1.8 U
Hexachlorobutadiene	**0.13**	C	0.56	C	1.23 U	1.2 U	1.2 U	1.23 U	0.94 U	1.13 U	1.2 U	1.23 U	1.4 U	1.13 U	2.6 U	1.34 U	4.5 U
Hexane	**73**	N	310	N	**1.46**	**3.4**	**1.5**	**4.56**	**1.6**	**5.8**	**3.6**	**2.71**	0.46 U	**2.03**	**0.95**	**1.74**	1.5 U
m,p-Xylene	--		--		**0.92 L**	**0.42 L**	**37**	**71.9**	**40**	**2.06**	**1.3**	**3.07**	**2.6**	**6.93**	**8.9**	**1.75**	**0.95 L**
Methyl tert-butyl ether	11	C	47	C	0.44 U	0.4 U	0.4 U	0.44 U	0.32 U	0.4 U	0.4 U	0.44 U	0.47 U	0.4 U	0.87 U	0.47 U	1.5 U
Methylene chloride	63	N	260	N	**0.88**	0.38 U	**12 J**	**8.25**	0.31 U	**0.7**	0.38 U	**3.79**	0.45 U	**1.97**	**6.1 J**	**1.97**	1.5 U
n-Heptane	--		--		0.5 U	0.45 U	**20**	**58**	**25**	0.46 U	0.45 U	**6.75**	**27**	**11.8**	0.98 U	0.54 U	1.7 U
o-Xylene	**10**	N	44	N	0.53 U	**0.23 L**	**18**	**35.2**	**19**	**0.7**	**0.56**	**1.32**	**1.2**	**2.85**	**4**	**0.61**	1.8 U
Styrene	100	N	440	N	0.52 U	**0.47**	**14**	**22.9**	**16**	**0.32 L**	**0.4 L**	**0.86**	**0.89**	**1.25**	**2.1**	**0.99**	1.8 U
Tetrachloroethene	4.2	N	18	N	0.82 U	0.75 U	0.75 U	0.82 U	0.6 U	0.75 U	0.75 U	0.82 U	0.88 U	0.75 U	1.6 U	0.89 U	2.8 U
Tetrahydrofuran	210	N	880	N	0.36 U	0.32 U	0.32 U	0.36 U	0.26 U	0.33 U	0.32 U	0.36 U	**6**	0.33 U	0.71 U	0.39 U	1.2 U
Toluene	**520**	N	***2200***	N	**2.63**	**1.3**	**940**	***2930***	**1600**	**12.72**	**15**	**14.5 J**	**20**	**270**	**320**	**11 J**	**7.1**

Table 4
Indoor Air Analytical Results*
Raymark - Operable Unit 2 - Groundwater
Stratford, Connecticut

					INDUSTRIAL/COMMERCIAL PROPERTIES												
				Sample Location	411B-MTHEATRE-BTH		411B-PAYLESS BACK	411B-PAYLESS SHOE		411B-POSTOFFICE		411B-SALLYSBEAUTY		411B-SLEEPYS		411B-TMOBILE	
				Sample Date	02/16/12	08/16/12	08/16/12	02/16/12	08/16/12	02/14/12	08/16/12	02/16/12	08/16/12	02/16/12	08/16/12	02/16/12	08/16/12
				Canister	6463	22693	15049	13498	15054	6569	15055	5804	20844	20857	20849	6581	14891
Sample ID	**Residential Target Indoor Air Concentration[1]**	**Basis**	**Industrial/ Commercial Target Indoor Air Concentration[2]**	**Basis**	411BARNUM-MOVIETHEATRE-BOOTH	411BARNUM-MTHEATRE-BOOTH-081612	411BARNUM-PAYLESS-BACK-081612	411BARNUM-PAYLESS	411BARNUM-PAYLESS-081612	411BARNUM-POSTOFFICE	411BARNUM-POSTOFFICE-081612	411BARNUM-SALLYS BEAUTY	411BARNUM-SALLYS BEAUTY-081612	411BARNUM-SLEEPYS	411BARNUM-SLEEPYS-081612	411BARNUM-TMOBILE	411BARNUM-TMOBILE-081612
trans-1,2-Dichloroethene	--		--		0.48 U	0.44 U	0.44 U	0.48 U	0.35 U	0.44 U	0.44 U	0.48 U	0.52 U	0.44 U	0.95 U	0.52 U	1.7 U
trans-1,3-Dichloropropene	--		--		0.55 U	0.5 U	0.5 U	0.55 U	0.4 U	0.5 U	0.5 U	0.55 U	0.59 U	0.5 U	1.1 U	0.6 U	1.9 U
Trichloroethene	**0.21**	N	***0.88***	N	0.65 U	0.59 U	***1.3***	***5.76***	***1.7***	0.6 U	***1.3***	0.65 U	0.7 U	***13.1***	***11***	0.71 U	***2.7***
Trichlorofluoromethane	**73**	N	310	N	**1.48**	**1.8**	**41**	**25.3**	**51**	**5.9**	**6.7**	**2.55**	**4.9**	**13.6**	**78**	0.74 U	**4.3**
Vinyl bromide (bromoethene)	0.088	C	0.38	C	0.53 U	0.48 U	0.48 U	0.53 U	0.38 U	0.49 U	0.48 U	0.53 U	0.57 U	0.49 U	1 U	0.57 U	1.8 U
Vinyl chloride	**0.17**	C	2.8	C	0.31 U	0.28 U	0.28 U	0.31 U	0.22 U	0.28 U	0.28 U	0.31 U	0.33 U	0.28 U	0.61 U	0.34 U	1.1 U

Notes:

1. Residential Target Indoor Air Concentration is based on $1x10^{-6}$ cancer risk or HQ = 0.1.

2. Industrial/Commercial Target Indoor Air Concentration based on $1x10^{-6}$ cancer risk or HQ = 0.1.

* Analytical results from EPA fixed laboratory only for indoor air samples collected by EPA in 2012 and 2013.

Bold Analyte - Raymark OU2 Contaminant of Concern
Highlighted, bold concentrations exceed Residential Screening levels.
Highlighted, bold, italicized concentrations also exceed Industrial/Commercial Screening levels.

C = Cancer based value
N = Non-cancer based value
U = Concentration was not detected above the laboratory reporting limit.
L = Estimated concentration value was detected below the calibration range.
Bold - Detected; U - Not Detected;
J - Estimated; R - Rejected; NA - Not Analyzed

Table 4
Indoor Air Analytical Results*
Raymark - Operable Unit 2 - Groundwater
Stratford, Connecticut

					RESIDENTIAL PROPERTIES													
				Sample Location	50 FERRY CT, 1STFL	50 FERRY CT, BSMT	62 FERRY CT, 1STFL		62 FERRY CT, BSMT		72 FERRY CT, 1STFL		72 FERRYCT-BSMT		82 FERRY CT, 1STFL		82 FERRY CT, BSMT	
				Sample Date	08/13/12	08/13/12	02/13/12	08/13/12	02/13/12	08/13/12	02/13/12	08/13/12	02/13/12	08/13/12	02/15/12	08/13/12	02/15/12	08/13/12
				Canister	6553	6566	5792	6581	5790	1594	1586	3092	6547	1586	1560	1576	1592	6582
Sample ID	**Residential Target Indoor Air Concentration[1]**	**Basis**	**Industrial/ Commercial Target Indoor Air Concentration[2]**	**Basis**	FERRYCT-UNIT50-1STFL-081312	FERRYCT-UNIT50-BSMT-081312	FERRY CT-UNIT62-1STFL	FERRY CT-UNIT62-1STFL-081312	FERRYCT-UNIT62-BASEMENT	FERRYCT-UNIT62-BSMT-081312	FERRY CT-UNIT72-1STFL	FERRYCT-UNIT72-1STFL-081312	FERRYCT-UNIT72-BASEMENT	FERRYCT-UNIT72-BSMT-081312	FERRYCT-UNIT82-1STFL	FERRYCT-UNIT82-1STFL-081312	FERRYCT-UNIT82-BASEMENT	FERRYCT-UNIT82-BSMT-081312
Volatiles (µg/m^3)																		
1,1,1-Trichloroethane	520	N	2200	N	0.6 U	0.51 U	0.55 U	0.53 U	0.55 U	0.6 U	0.52 U	0.55 U	0.53 U	0.53 U	0.5 U	0.53 U	0.6 U	0.6 U
1,1,2,2-Tetrachloroethane	0.048	C	0.21	C	0.76 U	0.65 U	0.69 U	0.67 U	0.69 U	0.76 U	0.65 U	0.69 U	0.67 U	0.67 U	0.7 U	0.67 U	0.7 U	0.76 U
1,1,2-Trichloro-1,2,2-trifluoroethane	3100	N	13000	N	0.84 U	0.72 U	**0.43 L**	0.75 U	**0.46 L**	**0.42 L**	**0.44 L**	0.77 U	**0.39 L**	0.75 U	**0.4 L**	0.75 U	**0.4 L**	0.84 U
1,1,2-Trichloroethane	0.021	N	0.088	N	0.6 U	0.51 U	0.55 U	0.53 U	0.55 U	0.6 U	0.52 U	0.55 U	0.53 U	0.53 U	0.5 U	0.53 U	0.6 U	0.6 U
1,1-Dichloroethane	**1.8**	C	7.7	C	0.45 U	0.38 U	0.41 U	0.4 U	0.41 U	0.45 U	0.38 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.45 U
1,1-Dichloroethene	21	N	88	N	0.44 U	0.37 U	0.4 U	0.39 U	0.4 U	0.44 U	0.38 U	0.4 U	0.39 U	0.39 U	0.4 U	0.39 U	0.4 U	0.44 U
1,2,4-Trichlorobenzene	**0.21**	N	0.88	N	**0.38 L**	0.7 U	0.75 U	0.73 U	0.75 U	0.82 U	0.7 U	0.74 U	0.73 U	0.73 U	0.7 U	0.73 U	0.7 U	0.82 U
1,2,4-Trimethylbenzene	**0.73**	N	***3.1***	N	**1.3**	**1.3**	0.5 U	**0.29 L**	0.5 U	**0.41 L**	0.47 U	**2.7**	0.48 U	**2.9**	0.5 U	0.48 U	**0.2 L**	**0.83**
1,2-Dibromoethane	0.0047	C	0.02	C	0.85 U	0.72 U	0.78 U	0.75 U	0.78 U	0.85 U	0.73 U	0.77 U	0.75 U	0.75 U	0.8 U	0.75 U	0.8 U	0.85 U
1,2-Dichlorobenzene	21	N	88	N	0.66 U	0.57 U	0.61 U	0.59 U	0.61 U	0.66 U	0.57 U	0.6 U	0.59 U	0.59 U	0.6 U	0.59 U	0.6 U	0.66 U
1,2-Dichloroethane	**0.11**	C	***0.47***	C	0.45 U	0.38 U	0.41 U	0.4 U	0.41 U	0.45 U	***0.61***	***3.4***	***0.78***	***4.5***	***1.8***	***0.77***	**0.4**	***0.53***
1,2-Dichloropropane	**0.28**	C	***1.2***	C	0.51 U	0.43 U	0.47 U	0.45 U	0.47 U	0.51 U	0.44 U	0.46 U	0.45 U	0.45 U	0.5 U	0.45 U	0.5 U	0.51 U
1,3,5-Trimethylbenzene	--		--		**0.34 L**	**0.28 L**	0.5 U	0.48 U	0.5 U	0.54 U	0.47 U	**0.64**	0.48 U	**0.69**	0.5 U	0.48 U	0.5 U	0.54 U
1,3-Butadiene	**0.094**	C	***0.41***	C	0.49 U	0.42 U	***0.92***	0.44 U	***0.74***	0.49 U	**0.1 L**	0.44 U	**0.09 L**	0.44 U	0.4 U	0.44 U	**0.1 L**	0.49 U
1,3-Dichlorobenzene	--		--		0.66 U	0.57 U	0.61 U	0.59 U	0.61 U	0.66 U	0.57 U	0.6 U	0.59 U	0.59 U	0.6 U	0.59 U	0.6 U	0.66 U
1,4-Dichlorobenzene	**0.26**	C	***1.1***	C	**0.9**	**0.96**	0.61 U	0.59 U	0.61 U	0.66 U	0.57 U	**0.9**	0.59 U	**0.96**	0.6 U	0.59 U	0.6 U	0.66 U
2-Butanone	520	N	2200	N	**3.6**	**3.7**	**2.44**	**2.1**	**2.71**	**3.3**	0.28 U	**9.7**	0.29 U	**10**	**1.1**	**1.2**	**0.6**	**2.4**
2-Hexanone	3.1	N	13	N	0.45 U	0.39 U	0.41 U	0.4 U	0.41 U	0.45 U	0.39 U	0.41 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.45 U
4-Ethyltoluene	--		--		**0.83**	**0.93**	**0.34 L**	**0.39 L**	0.5 U	**0.49 L**	0.47 U	**1.6**	0.48 U	**1.8**	0.5 U	**0.35 L**	0.5 U	**0.54**
4-Methyl-2-pentanone	310	N	1300	N	0.45 U	0.39 U	0.41 U	0.4 U	0.41 U	0.45 U	0.39 U	0.41 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.45 U
Acrylonitrile	**0.041**	C	***0.18***	C	0.24 U	0.2 U	***0.46***	0.21 U	***0.46***	0.24 U	0.21 U	0.22 U	0.21 U	0.21 U	0.2 U	0.21 U	0.2 U	0.24 U
Allyl chloride	0.1	N	0.44	N	0.34 U	0.29 U	0.32 U	0.31 U	0.32 U	0.34 U	0.3 U	0.31 U	0.31 U	0.31 U	0.3 U	0.31 U	0.3 U	0.34 U
Benzene	**0.36**	C	***1.6***	C	**0.92**	**0.93**	***1.68***	**0.48**	***1.65***	**0.73**	**1.07**	**1**	**0.94**	**1.2**	**1**	**0.45**	**0.9**	**0.45**
Benzyl chloride	0.057	C	0.25	C	0.57 U	0.49 U	0.52 U	0.51 U	0.52 U	0.57 U	0.49 U	0.52 U	0.51 U	0.51 U	0.5 U	0.51 U	0.5 U	0.57 U
Bromodichloromethane	**0.076**	C	***0.33***	C	***0.46 L***	***0.48 L***	0.68 U	0.66 U	0.68 U	0.74 U	***0.59 L***	***1.4***	***0.39 L***	***1.3***	0.7 U	0.66 U	0.7 U	***0.39 L***
Bromoform	2.6	C	11	C	1.1 U	0.97 U	1.04 U	1 U	1.04 U	1.1 U	0.98 U	1 U	1.01 U	1 U	1 U	1 U	1 U	1.1 U
Bromomethane	0.52	N	2.2	N	0.43 U	0.37 U	0.39 U	0.38 U	0.39 U	0.43 U	0.37 U	0.39 U	0.38 U	0.38 U	0.4 U	0.38 U	0.4 U	0.43 U
Carbon tetrachloride	**0.47**	C	2	C	0.69 U	**0.36 L**	**0.39 L**	0.62 U	**0.51 L**	0.69 U	**0.41 L**	**0.52 L**	**0.36 L**	**0.5 L**	**0.4 L**	0.62 U	**0.4 L**	0.69 U
Chlorobenzene	5.2	N	22	N	0.51 U	0.43 U	0.47 U	0.45 U	0.47 U	0.51 U	0.44 U	0.46 U	0.45 U	0.45 U	0.5 U	0.45 U	0.5 U	0.51 U
Chloroethane	1000	N	4400	N	0.29 U	0.25 U	0.27 U	0.26 U	0.27 U	0.29 U	0.25 U	0.26 U	0.26 U	0.26 U	0.3 U	0.26 U	0.3 U	0.29 U
Chloroform	**0.12**	C	***0.53***	C	***2.5***	***2.4***	***1.48***	***0.64***	***1.43***	***0.88***	***3.11***	***7.1***	***2.07***	***6.3***	***1.5***	***0.54***	**0.5**	***1.7***
Chloromethane	9.4	N	39	N	**0.97**	**0.79**	**1.4**	**0.64**	**1.13**	**0.83**	**0.79**	**1.1**	**0.83**	**1.1**	**0.6**	**0.54**	**0.6**	**0.66**
cis-1,2-Dichloroethene	--		--		0.44 U	0.37 U	0.4 U	0.39 U	0.4 U	0.44 U	0.38 U	0.4 U	0.39 U	0.39 U	0.4 U	0.39 U	0.4 U	0.44 U
cis-1,3-Dichloropropene	--		--		0.5 U	0.43 U	0.46 U	0.44 U	0.46 U	0.5 U	0.43 U	0.45 U	0.44 U	0.44 U	0.4 U	0.44 U	0.5 U	0.5 U
Cyclohexane	630	N	2600	N	**0.31 L**	**0.27 L**	**0.2 L**	**0.22 L**	**0.27 L**	0.38 U	**0.35**	**0.58**	**0.29 L**	**0.58**	**0.1 L**	**0.19 L**	0.3 U	**0.25 L**
Dibromochloromethane	0.1	C	0.45	C	0.94 U	0.8 U	0.86 U	0.83 U	0.86 U	0.94 U	0.81 U	0.85 U	0.83 U	0.83 U	0.8 U	0.83 U	0.9 U	0.94 U
Dichlorodifluoromethane	**10**	N	***44***	N	**2**	**1.9**	**1.8**	**1.4**	**2.2**	**2.2**	**2.3**	**2**	**1.85**	**2.8**	**1.7**	**1.5**	**1.8**	**1.3**
Dichlorotetrafluoroethane	--		--		0.77 U	0.66 U	0.71 U	0.69 U	0.71 U	0.77 U	0.66 U	0.7 U	0.69 U	0.69 U	0.7 U	0.69 U	0.7 U	0.77 U
Ethylbenzene	**1.1**	C	***4.9***	C	**2**	**2**	**0.75**	**0.65**	**1.1**	**1.2**	**0.53**	***8.2***	**0.48**	***8.4***	**0.4 L**	**0.34 L**	**0.3 L**	**1.3**
Hexachlorobutadiene	**0.13**	C	0.56	C	1.2 U	1 U	1.03 U	1 U	1.03 U	1.2 U	0.97 U	1.1 U	1 U	1 U	1 U	1 U	1 U	1.2 U
Hexane	**73**	N	310	N	**1.6**	**1.6**	**1.14**	**0.77**	**1.18**	**1.2**	**1.18**	**2.3**	**0.96**	**2.5**	**0.9**	**0.84**	**0.7**	**1.2**
m,p-Xylene	--		--		**6**	**4.9**	**2.63**	**2**	**3.99**	**3.7**	**1.14**	**7.8**	**1.01**	**8.1**	**1**	**0.82 L**	**0.8 L**	**2**
Methyl tert-butyl ether	11	C	47	C	0.4 U	0.34 U	0.36 U	0.35 U	0.36 U	0.4 U	0.34 U	0.36 U	0.35 U	0.35 U	0.4 U	0.35 U	0.4 U	0.4 U
Methylene chloride	63	N	260	N	0.38 U	0.33 U	**2.32**	0.34 U	**2.84**	0.38 U	**2.46**	**5.6**	**2.28**	**9.4**	**0.8**	**1.4**	**0.8**	**3.1**
n-Heptane	--		--		0.45 U	0.39 U	0.41 U	0.4 U	0.41 U	0.45 U	0.39 U	0.41 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.45 U
o-Xylene	**10**	N	44	N	**2.3**	**2**	**0.61**	**0.52**	**0.92**	**0.91**	**0.4 L**	**3.2**	**0.38 L**	**3.1**	**0.3 L**	**0.33 L**	**0.3 L**	**0.95**
Styrene	100	N	440	N	**1.4**	**1.4**	**0.41 L**	**0.28 L**	**0.52**	**0.4 L**	**0.29 L**	**2.4**	**0.31 L**	**2.6**	**0.6**	**0.6**	**0.4 L**	**1.1**
Tetrachloroethene	4.2	N	18	N	**0.88**	**0.75**	**0.6 L**	**0.58 L**	**0.89**	**0.88**	0.64 U	0.68 U	0.66 U	0.66 U	**1.6**	0.66 U	**0.5 L**	0.75 U
Tetrahydrofuran	210	N	880	N	0.32 U	0.28 U	**2.35**	0.29 U	**2.38**	0.32 U	**0.86**	0.29 U	0.29 U	0.29 U	0.3 U	0.29 U	0.3 U	0.32 U
Toluene	**520**	N	***2200***	N	**9.2**	**8.4**	**4.3**	**2.8**	**4.45**	**4.3**	**8.15**	**15**	**8.45**	**18**	**3.7**	**2.6**	**3**	**4.6**

Table 4
Indoor Air Analytical Results*
Raymark - Operable Unit 2 - Groundwater
Stratford, Connecticut

					RESIDENTIAL PROPERTIES													
				Sample Location	50 FERRY CT, 1STFL	50 FERRY CT, BSMT	62 FERRY CT, 1STFL		62 FERRY CT, BSMT		72 FERRY CT, 1STFL		72 FERRYCT-BSMT		82 FERRY CT, 1STFL		82 FERRY CT, BSMT	
				Sample Date	08/13/12	08/13/12	02/13/12	08/13/12	02/13/12	08/13/12	02/13/12	08/13/12	02/13/12	08/13/12	02/15/12	08/13/12	02/15/12	08/13/12
				Canister	6553	6566	5792	6581	5790	1594	1586	3092	6547	1586	1560	1576	1592	6582
Sample ID	**Residential Target Indoor Air Concentration[1]**	**Basis**	**Industrial/ Commercial Target Indoor Air Concentration[2]**	**Basis**	FERRYCT-UNIT50-1STFL-081312	FERRYCT-UNIT50-BSMT-081312	FERRYCT-UNIT62-1STFL	FERRYCT-UNIT62-1STFL-081312	FERRYCT-UNIT62-BASEMENT	FERRYCT-UNIT62-BSMT-081312	FERRYCT-UNIT72-1STFL	FERRYCT-UNIT72-1STFL-081312	FERRYCT-UNIT72-BASEMENT	FERRYCT-UNIT72-BSMT-081312	FERRYCT-UNIT82-1STFL	FERRYCT-UNIT82-1STFL-081312	FERRYCT-UNIT82-BASEMENT	FERRYCT-UNIT82-BSMT-081312
trans-1,2-Dichloroethene	--		--		0.44 U	0.37 U	0.4 U	0.39 U	0.4 U	0.44 U	0.38 U	0.4 U	0.39 U	0.39 U	0.4 U	0.39 U	0.4 U	0.44 U
trans-1,3-Dichloropropene	--		--		0.5 U	0.43 U	0.46 U	0.44 U	0.46 U	0.5 U	0.43 U	0.45 U	0.44 U	0.44 U	0.4 U	0.44 U	0.5 U	0.5 U
Trichloroethene	**0.21**	N	***0.88***	N	0.59 U	0.51 U	0.54 U	0.53 U	**0.27 L**	0.59 U	0.51 U	**0.43 L**	0.53 U	**0.43 L**	0.5 U	0.53 U	0.5 U	0.59 U
Trichlorofluoromethane	**73**	N	310	N	**1.5**	**1.9**	**1.02**	**0.9**	**1.02**	**1.1**	**1.65**	**2.2**	**1.36**	**2**	**0.9**	**0.54 L**	**0.9**	**0.62**
Vinyl bromide (bromoethene)	0.088	C	0.38	C	0.48 U	0.41 U	0.44 U	0.43 U	0.44 U	0.48 U	0.42 U	0.44 U	0.43 U	0.43 U	0.4 U	0.43 U	0.4 U	0.48 U
Vinyl chloride	**0.17**	C	2.8	C	0.28 U	0.24 U	0.26 U	0.25 U	0.26 U	0.28 U	0.24 U	0.26 U	0.25 U	0.25 U	0.3 U	0.25 U	0.3 U	0.28 U

Notes:

1. Residential Target Indoor Air Concentration is based on $1x10^{-6}$ cancer risk or HQ = 0.1.

2. Industrial/Commercial Target Indoor Air Concentration based on $1x10^{-6}$ cancer risk or HQ = 0.1.

* Analytical results from EPA fixed laboratory only for indoor air samples collected by EPA in 2012 and 2013.

Bold Analyte - Raymark OU2 Contaminant of Concern
Highlighted, bold concentrations exceed Residential Screening levels.
Highlighted, bold, italicized concentrations also exceed Industrial/Commercial Screening levels.

C = Cancer based value
N = Non-cancer based value
U = Concentration was not detected above the laboratory reporting limit.
L = Estimated concentration value was detected below the calibration range.
Bold - Detected; U - Not Detected;
J - Estimated; R - Rejected; NA - Not Analyzed

Table 5
Soil Analytical Results
Raymark - Operable Unit 2 - Groundwater
Stratford, Connecticut

				Sample Location	**SB-601/MW-601**		**SB-601/MW-601**		**SB-602/MW-602**		**SB-602/MW-602**		**SB-603/MW-603**		**SB-603/MW-603**		**SB-605/MW-605**		**SB-605/MW-605**	
				Sample Date	4/2/2012		4/2/2012		4/3/2012		4/3/2012		4/3/2012		4/3/2012		4/4/2012		4/4/2012	
				Sample ID	80043-SB601-0814-040212		80043-SB601-1620-040212		80043-DUP01-0610-040312		80043-SB602-0610-040312		80043-SB603-0610-040312		80043-SB603-1418-040312		80043-SB605-0812-040412		80043-SB605-3640-040412	
				Sample Type	N		N		FD		N		N		N		N		N	
Chemical	**CT Soil Residential Direct Exposure Criteria[1]**	**CT Soil Pollutant Mobility Criteria[2] (GB Areas)**	**Site-Specific Criteria[3]**	**Units**	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.
Volatile Organic Compounds (SW8260B)																				
1,1,1,2-Tetrachloroethane	24000	200	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
1,1,1-Trichloroethane	500000	40000	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
1,1,2,2-Tetrachloroethane	3100	100	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
1,1,2-Trichloro-1,2,2-trifluoroethane	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
1,1,2-Trichloroethane	11000	1000	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
1,1-Dichloroethane	500000	14000	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
1,1-Dichloroethene	1000	1400	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
1,1-Dichloropropene	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
1,2,3-Trichlorobenzene	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
1,2,3-Trichloropropane	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
1,2,4-Trichlorobenzene	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
1,2,4-Trimethylbenzene	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
1,2-Dibromo-3-Chloropropane	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
1,2-Dibromoethane	7	100	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
1,2-Dichlorobenzene	500000	3100	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
1,2-Dichloroethane	6700	200	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
1,2-Dichloropropane	9000	1000	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
1,3,5-Trimethylbenzene	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
1,3-Dichlorobenzene	500000	120000	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
1,3-Dichloropropane	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
1,4-Dichlorobenzene	26000	15000	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
2,2-Dichloropropane	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
2-Butanone	500000	80000	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
2-Chlorotoluene	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
2-Hexanone	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
2-Methyl-2-phenylpropane	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
2-Phenylbutane	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
4-Chlorotoluene	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
4-Methyl-2-Pentanone	500000	14000	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
Acetone	500000	140000	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
Acrylonitrile	1100	100	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
Benzene	21000	200	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
Bromobenzene	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
Bromochloromethane	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
Bromodichloromethane	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
Bromoform	78000	800	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
Bromomethane	--	--	--	µg/kg	49	U	59	U	**100**	J	69	U	54	U	53	U	68	U	48	U	**140**	J
Carbon Disulfide	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
Carbon Tetrachloride	4700	1000	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
Chlorobenzene	500000	20000	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
Chloroethane	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
Chloroform	100000	1200	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
Chloromethane	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
cis-1,2-Dichloroethene	500000	14000	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
cis-1,3-Dichloropropene	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U

Table 5
Soil Analytical Results
Raymark - Operable Unit 2 - Groundwater
Stratford, Connecticut

				Sample Location	**SB-601/MW-601**		**SB-601/MW-601**		**SB-602/MW-602**		**SB-602/MW-602**		**SB-603/MW-603**		**SB-603/MW-603**		**SB-605/MW-605**		**SB-605/MW-605**	
				Sample Date	4/2/2012		4/2/2012		4/3/2012		4/3/2012		4/3/2012		4/3/2012		4/4/2012		4/4/2012	
				Sample ID	80043-SB601-0814-040212		80043-SB601-1620-040212		80043-DUP01-0610-040312		80043-SB602-0610-040312		80043-SB603-0610-040312		80043-SB603-1418-040312		80043-SB605-0812-040412		80043-SB605-3640-040412	
				Sample Type	N		N		FD		N		N		N		N		N	
Chemical	**CT Soil Residential Direct Exposure Criteria[1]**	**CT Soil Pollutant Mobility Criteria[2] (GB Areas)**	**Site-Specific Criteria[3]**	**Units**	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.
Cymene	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
Dibromochloromethane	7300	100	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
Dibromomethane	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
Dichlorodifluoromethane	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
Diethyl ether	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
Ethylbenzene	500000	10100	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
Hexachlorobutadiene	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
Isopropylbenzene	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
m,p-Xylene	500000	--	--	µg/kg	98	U	120	U	110	U	140	U	110	U	110	U	140	U	96	U	150	U
Methyl Tert-Butyl Ether	500000	20000	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
Methylene Chloride	82000	1000	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
Naphthalene	1000000	56000	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
n-Butylbenzene	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
n-Propylbenzene	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
o-Xylene	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
Styrene	500000	20000	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
Tetrachloroethene	12000	1000	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
Tetrahydrofuran	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
Toluene	500000	67000	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
trans-1,2-Dichloroethene	500000	20000	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
trans-1,3-Dichloropropene	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
Trichloroethene	56000	1000	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
Trichlorofluoromethane	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
Vinyl Acetate	--	--	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
Vinyl Chloride	320	400	--	µg/kg	49	U	59	U	56	U	69	U	54	U	53	U	68	U	48	U	74	U
Semivolatile Organic Compounds (SW8270C)																						
1,2,4,5-Tetrachlorobenzene	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
1,2,4-Trichlorobenzene	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
1,2-Dichlorobenzene	500000	3100	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
1,3-Dichlorobenzene	500000	120000	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
1,4-Dichlorobenzene	26000	15000	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
1,4-Naphthoquinone	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
2,2'-Oxybis(1-Chloropropane)	8800	2400	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
2,3,4,6-Tetrachlorophenol	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
2,4,5-Trichlorophenol	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
2,4,6-Trichlorophenol	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
2,4-Dichlorophenol	200000	4000	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
2,4-Dimethylphenol	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
2,4-Dinitrophenol	--	--	--	µg/kg	950	U	1100	U	920	U	970	U	870	U	970	U	1000	U	880	U	1100	U
2,4-Dinitrotoluene	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
2,6-Dichlorophenol	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
2,6-Dinitrotoluene	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
2-Chloronaphthalene	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
2-Chlorophenol	340000	7200	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
2-Methylnaphthalene	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
2-Methylphenol	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U

Table 5
Soil Analytical Results
Raymark - Operable Unit 2 - Groundwater
Stratford, Connecticut

				Sample Location	**SB-601/MW-601**		**SB-601/MW-601**		**SB-602/MW-602**		**SB-602/MW-602**		**SB-603/MW-603**		**SB-603/MW-603**		**SB-605/MW-605**		**SB-605/MW-605**	
				Sample Date	4/2/2012		4/2/2012		4/3/2012		4/3/2012		4/3/2012		4/3/2012		4/4/2012		4/4/2012	
				Sample ID	80043-SB601-0814-040212		80043-SB601-1620-040212		80043-DUP01-0610-040312		80043-SB602-0610-040312		80043-SB603-0610-040312		80043-SB603-1418-040312		80043-SB605-0812-040412		80043-SB605-3640-040412	
				Sample Type	N		N		FD		N		N		N		N		N	
Chemical	**CT Soil Residential Direct Exposure Criteria[1]**	**CT Soil Pollutant Mobility Criteria[2] (GB Areas)**	**Site-Specific Criteria[3]**	**Units**	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.
2-Nitroaniline	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
2-Nitrophenol	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
3 & 4 Methylphenol	--	--	--	µg/kg	480	U	550	U	460	U	490	U	430	U	480	U	500	U	440	U	540	U
3,3'-Dichlorobenzidine	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
3-Methylchloranthrene	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
3-Nitroaniline	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
4,6-Dinitro-2-Methylphenol	--	--	--	µg/kg	480	U	550	U	460	U	490	U	430	U	480	U	500	U	440	U	540	U
4-Bromophenyl-Phenylether	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
4-Chloro-3-Methylphenol	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
4-Chloroaniline	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
4-Chlorophenyl-Phenylether	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
4-Nitroaniline	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
4-Nitrophenol	--	--	--	µg/kg	480	U	550	U	460	U	490	U	430	U	480	U	500	U	440	U	540	U
4-Nitroquinoline-n-Oxide	--	--	--	µg/kg	950	U	1100	U	920	U	970	U	870	U	970	U	1000	U	880	U	1100	U
Acenaphthene	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Acenaphthylene	1000000	84000	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Acetophenone	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Aniline	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Anthracene	1000000	400000	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Aramite	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Azobenzene	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Benzidine	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Benzo(A)Anthracene	1000	1000	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Benzo(A)Pyrene	1000	1000	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Benzo(B)Fluoranthene	1000	1000	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Benzo(G,H,I)Perylene	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Benzo(K)Fluoranthene	8400	1000	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Benzoic Acid	--	--	--	µg/kg	480	U	550	U	460	U	490	U	430	U	480	U	500	U	440	U	540	U
Benzyl Alcohol	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Bis(2-Chloroethoxy)Methane	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Bis(2-Chloroethyl)Ether	1000	2400	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Bis(2-Ethylhexyl)Phthalate	44000	11000	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Butylbenzylphthalate	1000000	200000	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Carbazole	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Chlorobenzilate	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Chrysene	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Dibenz(A,H)Anthracene	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Dibenzofuran	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Diethylphthalate	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Dimethylphthalate	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Di-N-Butyl Phthalate	1000000	140000	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Dinitrobutyl Phenol	--	--	--	µg/kg	480	U	550	U	460	U	490	U	430	U	480	U	500	U	440	U	540	U
Di-N-Octyl Phthalate	1000000	20000	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Ethyl methanesulfonate	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Fluoranthene	1000000	56000	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Fluorene	1000000	56000	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U

Table 5
Soil Analytical Results
Raymark - Operable Unit 2 - Groundwater
Stratford, Connecticut

				Sample Location	**SB-601/MW-601**		**SB-601/MW-601**		**SB-602/MW-602**		**SB-602/MW-602**		**SB-603/MW-603**		**SB-603/MW-603**		**SB-605/MW-605**		**SB-605/MW-605**	
				Sample Date	4/2/2012		4/2/2012		4/3/2012		4/3/2012		4/3/2012		4/3/2012		4/4/2012		4/4/2012	
				Sample ID	80043-SB601-0814-040212		80043-SB601-1620-040212		80043-DUP01-0610-040312		80043-SB602-0610-040312		80043-SB603-0610-040312		80043-SB603-1418-040312		80043-SB605-0812-040412		80043-SB605-3640-040412	
				Sample Type	N		N		FD		N		N		N		N		N	
Chemical	**CT Soil Residential Direct Exposure Criteria[1]**	**CT Soil Pollutant Mobility Criteria[2] (GB Areas)**	**Site-Specific Criteria[3]**	**Units**	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.
Hexachlorobenzene	1000	1000	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Hexachlorobutadiene	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Hexachlorocyclopentadiene	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Hexachloroethane	44000	1000	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Hexachloropropene	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Indeno(1,2,3-Cd)Pyrene	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Isodrin	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Isophorone	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Isosafrole	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Kepone	--	--	--	µg/kg	480	U	550	U	460	U	490	U	430	U	480	U	500	U	440	U	540	U
m-Dinitrobenzene	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Methyl Methanesulfonate	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Naphthalene	1000000	56000	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Naphthalene, 1-Methyl-	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Nitrobenzene	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
N-Nitrosodimethylamine	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
N-Nitroso-Di-N-Propylamine	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
N-Nitrosodiphenylamine	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Pentachlorobenzene	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Pentachloronitrobenzene	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Pentachlorophenol	5100	1000	--	µg/kg	480	U	550	U	460	U	490	U	430	U	480	U	500	U	440	U	540	U
Phenacetin	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Phenanthrene	1000000	40000	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Phenol	1000000	800000	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Pyrene	1000000	40000	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Pyridine	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
Safrole	--	--	--	µg/kg	240	U	280	U	230	U	240	U	220	U	240	U	250	U	220	U	270	U
TAL Total Metals + Cyanide																						
Aluminum	--	--	--	mg/Kg	**4800**		**7000**		**9000**		**6700**		**9700**		**8600**		**4900**		**7000**		**9200**	
Antimony	27	--	--	mg/Kg	1.9	UJ	2	U	2	U	2	U	2	U	1.9	U	2	U	1.9	U	2.2	U
Arsenic	**10**	--	--	mg/Kg	**6.7**		**4.8**		**3.8**		**12**		**4**		**3**		**6.2**		**2.6**		**6.5**	
Barium	4700	--	--	mg/Kg	**24**		**31**		**51**		**28**		**52**		**47**		**20**		**46**		**39**	
Beryllium	2	--	--	mg/Kg	0.75	U	0.8	U	0.78	U	0.8	U	0.8	U	0.77	U	0.8	U	0.77	U	0.87	U
Cadmium	34	--	--	mg/Kg	0.94	U	1	U	0.98	U	1	U	1	U	0.96	U	1	U	0.96	U	1.1	U
Calcium	--	--	--	mg/Kg	**1100**		**1800**		**1500**		**1100**		**1600**		**950**		**740**		**1200**		**2200**	
Chromium	100	--	--	mg/Kg	**7.4**		**8.4**		**18**		**11**		**17**		**14**		**5.6**		**15**		**12**	
Cobalt	--	--	--	mg/Kg	**3.3**		**4.2**		**6**		**5.6**		**6.2**		**4.9**		**5**		**4.1**		**5.8**	
Copper	2500	--	288	mg/Kg	**9.9**		**13**		**17**		**14**		**18**		**14**		**11**		**20**		**19**	
Cyanide	1400	--	--	mg/Kg	0.068	U	0.068	U	0.061	U	0.059	U	0.061	U	0.06	U	0.068	U	0.061	U	0.075	U
Iron	--	--	--	mg/Kg	**8800**		**10000**		**16000**		**12000**		**16000**		**13000**		**8500**		**12000**		**15000**	
Lead	400	--	400	mg/Kg	**3.4**		**2.9**		**4**		**3.9**		**4.1**		**4.4**		**2.1**		**3.1**		**3.6**	
Magnesium	--	--	--	mg/Kg	**1900**		**2400**		**4500**		**3100**		**5000**		**3800**		**1800**		**3100**		**3600**	
Manganese	--	--	--	mg/Kg	**150**		**180**		**320**		**290**		**270**		**260**		**210**		**150**		**350**	
Mercury	20	--	--	µg/g	0.013	U	0.012	U	0.012	U	0.013	U	0.013	U	0.013	U	0.012	U	0.013	U	0.013	U
Nickel	1400	--	--	mg/Kg	**6.3**		**8.6**		**10**		**10**		**11**		**9.2**		**7.6**		**8**		**13**	
Selenium	340	--	--	mg/Kg	1.9	UJ	4	UJ	3.9	UJ	4	UJ	4	UJ	3.8	UJ	4	UJ	3.8	UJ	4.4	UJ

Table 5
Soil Analytical Results
Raymark - Operable Unit 2 - Groundwater
Stratford, Connecticut

				Sample Location	**SB-601/MW-601**		**SB-601/MW-601**		**SB-602/MW-602**		**SB-602/MW-602**		**SB-603/MW-603**		**SB-603/MW-603**		**SB-605/MW-605**		**SB-605/MW-605**	
				Sample Date	4/2/2012		4/2/2012		4/3/2012		4/3/2012		4/3/2012		4/3/2012		4/4/2012		4/4/2012	
				Sample ID	80043-SB601-0814-040212		80043-SB601-1620-040212		80043-DUP01-0610-040312		80043-SB602-0610-040312		80043-SB603-0610-040312		80043-SB603-1418-040312		80043-SB605-0812-040412		80043-SB605-3640-040412	
				Sample Type	N		N		FD		N		N		N		N		N	
Chemical	**CT Soil Residential Direct Exposure Criteria[1]**	**CT Soil Pollutant Mobility Criteria[2] (GB Areas)**	**Site-Specific Criteria[3]**	**Units**	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.
Silver	340	--	--	mg/Kg	0.94	U	1	U	0.98	U	1	U	1	U	0.96	U	1	U	0.96	U	1.1	U
Thallium	5.4	--	--	mg/Kg	1.9	U	2	U	2	U	2	U	2	U	1.9	U	2	U	1.9	U	2.2	U
Vanadium	470	--	--	mg/Kg	**13**		**16**		**29**		**18**		**29**		**26**		**10**		**21**		**23**	
Zinc	20000	--	--	mg/Kg	**16**		**19**		**31**		**23**		**30**		**27**		**17**		**22**		**31**	
Pesticides and PCBs (SW8081A)																						
4,4'-DDD	--	--	--	µg/kg	4.5	U	5	U	4	U	4	U	4	U	4	U	4.5	U	4.5	U	5	U
4,4'-DDE	--	--	--	µg/kg	4.5	U	5	U	4	U	4	U	4	U	4	U	4.5	U	4.5	U	5	U
4,4'-DDT	--	--	--	µg/kg	4.5	U	5	U	4	U	4	U	4	U	4	U	4.5	U	4.5	U	5	U
Aldrin	--	--	--	µg/kg	4.5	U	5	U	4	U	4	U	4	U	4	U	4.5	U	4.5	U	5	U
Alpha-BHC	--	--	--	µg/kg	4.5	U	5	U	4	U	4	U	4	U	4	U	4.5	U	4.5	U	5	U
Alpha-Chlordane	--	--	--	µg/kg	4.5	U	5	U	4	U	4	U	4	U	4	U	4.5	U	4.5	U	5	U
Aroclor 1016	1000	--	--	µg/kg	90	U	100	U	80	U	80	U	80	U	80	U	90	U	90	U	100	U
Aroclor 1221	1000	--	--	µg/kg	90	U	100	U	80	U	80	U	80	U	80	U	90	U	90	U	100	U
Aroclor 1232	1000	--	--	µg/kg	90	U	100	U	80	U	80	U	80	U	80	U	90	U	90	U	100	U
Aroclor 1242	1000	--	--	µg/kg	90	U	100	U	80	U	80	U	80	U	80	U	90	U	90	U	100	U
Aroclor 1248	1000	--	--	µg/kg	90	U	100	U	80	U	80	U	80	U	80	U	90	U	90	U	100	U
Aroclor 1254	1000	--	--	µg/kg	90	U	100	U	80	U	80	U	80	U	80	U	90	U	90	U	100	U
Aroclor 1260	1000	--	--	µg/kg	90	U	100	U	80	U	80	U	80	U	80	U	90	U	90	U	100	U
Aroclor 1262	1000	--	--	µg/kg	90	U	100	U	80	U	80	U	80	U	80	U	90	U	90	U	100	U
Aroclor 1268	1000	--	1000	µg/kg	90	U	100	U	80	U	80	U	80	U	80	U	90	U	90	U	100	U
Beta-BHC	--	--	--	µg/kg	4.5	U	5	U	4	U	4	U	4	U	4	U	4.5	U	4.5	U	5	U
Chlordane	490	66	--	µg/kg	90	U	100	U	80	U	80	U	80	U	80	U	90	U	90	U	100	U
Delta-BHC	--	--	--	µg/kg	4.5	U	5	U	4	U	4	U	4	U	4	U	4.5	U	4.5	U	5	U
Dieldrin	38	7	--	µg/kg	4.5	U	5	U	4	U	4	U	4	U	4	U	4.5	U	4.5	U	5	U
Endosulfan I	--	--	--	µg/kg	4.5	U	5	U	4	U	4	U	4	U	4	U	4.5	U	4.5	U	5	U
Endosulfan II	--	--	--	µg/kg	4.5	U	5	U	4	U	4	U	4	U	4	U	4.5	U	4.5	U	5	U
Endosulfan Sulfate	--	--	--	µg/kg	4.5	U	5	U	4	U	4	U	4	U	4	U	4.5	U	4.5	U	5	U
Endrin	20000	--	--	µg/kg	4.5	U	5	U	4	U	4	U	4	U	4	U	4.5	U	4.5	U	5	U
Endrin Aldehyde	--	--	--	µg/kg	4.5	U	5	U	4	U	4	U	4	U	4	U	4.5	U	4.5	U	5	U
Endrin Ketone	--	--	--	µg/kg	4.5	U	5	U	4	U	4	U	4	U	4	U	4.5	U	4.5	U	5	U
Gamma-BHC (Lindane)	20000	40	--	µg/kg	4.5	U	5	U	4	U	4	U	4	U	4	U	4.5	U	4.5	U	5	U
Gamma-Chlordane	--	--	--	µg/kg	4.5	U	5	U	4	U	4	U	4	U	4	U	4.5	U	4.5	U	5	U
Heptachlor	140	13	--	µg/kg	4.5	U	5	U	4	U	4	U	4	U	4	U	4.5	U	4.5	U	5	U
Heptachlor Epoxide	67	20	--	µg/kg	4.5	U	5	U	4	U	4	U	4	U	4	U	4.5	U	4.5	U	5	U
Methoxychlor	340000	8000	--	µg/kg	4.5	U	5	U	4	U	4	U	4	U	4	U	4.5	U	4.5	U	5	U
Toxaphene	560	600	--	µg/kg	90	U	100	U	80	U	80	U	80	U	80	U	90	U	90	U	100	U
Dioxins and Furans (DLM02.2)																						
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	--	--	--	ng/Kg	0.437	U	0.285	U	0.284	U	--		--		--		--		--		--	
1,2,3,4,6,7,8,9-Octachlorodibenzo-P-Dioxin	--	--	--	ng/Kg	**5.65**	J	**27.1**	J	**2.35**	J	--		--		--		--		--		--	
1,2,3,4,6,7,8-Heptachlorodibenzofuran	--	--	--	ng/Kg	0.143	U	**0.0994**	J	0.172	U	--		--		--		--		--		--	
1,2,3,4,6,7,8-Heptachlorodibenzo-P-Dioxin	--	--	--	ng/Kg	0.0798	EMPC	0.0702	EMPC	0.0521	EMPC	--		--		--		--		--		--	
1,2,3,4,7,8,9-Heptachlorodibenzofuran	--	--	--	ng/Kg	0.163	U	0.039	EMPC	0.243	U	--		--		--		--		--		--	
1,2,3,4,7,8-Hexachlorodibenzofuran	--	--	--	ng/Kg	0.14	U	0.0409	EMPC	0.148	U	--		--		--		--		--		--	
1,2,3,4,7,8-Hexachlorodibenzo-P-Dioxin	--	--	--	ng/Kg	0.193	U	0.0507	EMPC	0.154	U	--		--		--		--		--		--	
1,2,3,6,7,8-Hexachlorodibenzofuran	--	--	--	ng/Kg	0.129	U	**0.0546**	J	0.124	U	--		--		--		--		--		--	
1,2,3,6,7,8-Hexachlorodibenzo-P-Dioxin	--	--	--	ng/Kg	0.09	U	0.0331	EMPC	0.122	U	--		--		--		--		--		--	

Table 5
Soil Analytical Results
Raymark - Operable Unit 2 - Groundwater
Stratford, Connecticut

				Sample Location	**SB-601/MW-601**		**SB-601/MW-601**		**SB-602/MW-602**		**SB-602/MW-602**		**SB-603/MW-603**		**SB-603/MW-603**		**SB-605/MW-605**		**SB-605/MW-605**	
				Sample Date	4/2/2012		4/2/2012		4/3/2012		4/3/2012		4/3/2012		4/3/2012		4/4/2012		4/4/2012	
				Sample ID	80043-SB601-0814-040212		80043-SB601-1620-040212		80043-DUP01-0610-040312		80043-SB602-0610-040312		80043-SB603-0610-040312		80043-SB603-1418-040312		80043-SB605-0812-040412		80043-SB605-3640-040412	
				Sample Type	N		N		FD		N		N		N		N		N	
Chemical	**CT Soil Residential Direct Exposure Criteria[1]**	**CT Soil Pollutant Mobility Criteria[2] (GB Areas)**	**Site-Specific Criteria[3]**	**Units**	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.
1,2,3,7,8,9-Hexachlorodibenzofuran	--	--	--	ng/Kg	0.12	U	0.0292	EMPC	0.117	U	--		--		--		--		--	
1,2,3,7,8,9-Hexachlorodibenzo-P-Dioxin	--	--	--	ng/Kg	0.181	U	0.0624	EMPC	0.144	U	--		--		--		--		--	
1,2,3,7,8-Pentachlorodibenzofuran	--	--	--	ng/Kg	0.136	U	0.0858	EMPC	0.109	U	--		--		--		--		--	
1,2,3,7,8-Pentachlorodibenzo-P-Dioxin	--	--	--	ng/Kg	0.119	U	0.037	EMPC	0.176	U	--		--		--		--		--	
2,3,4,6,7,8-Hexachlorodibenzofuran	--	--	--	ng/Kg	0.089	U	**0.0721**	J	0.105	U	--		--		--		--		--	
2,3,4,7,8-Pentachlorodibenzofuran	--	--	--	ng/Kg	0.0589	EMPC	0.101	EMPC	0.137	U	--		--		--		--		--	
2,3,7,8-Tetrachlorodibenzofuran	--	--	--	ng/Kg	0.153	U	0.0175	EMPC	0.11	U	--		--		--		--		--	
2,3,7,8-Tetrachlorodibenzo-P-Dioxin	--	--	--	ng/Kg	0.335	U	0.0312	U	0.297	U	--		--		--		--		--	
Dioxin/Furan - Toxic Equivalent	--	--	--	ng/Kg	**0.0202**	J	**0.116**	J	**0.00123**	J	--		--		--		--		--	
Heptachlorodibenzofuran (total)	--	--	--	ng/Kg	0.163	UJ	0.138	EMPC	0.243	UJ	--		--		--		--		--	
Heptachlorodibenzo-p-dioxin (total)	--	--	--	ng/Kg	0.3	EMPC	0.622	EMPC	0.133	EMPC	--		--		--		--		--	
Hexachlorodibenzofuran (total)	--	--	--	ng/Kg	0.14	UJ	0.197	EMPC	0.148	UJ	--		--		--		--		--	
Hexachlorodibenzo-p-dioxin (total)	--	--	--	ng/Kg	0.193	UJ	0.146	EMPC	0.154	UJ	--		--		--		--		--	
Pentachlorodibenzofuran (total)	--	--	--	ng/Kg	0.0741	EMPC	0.187	EMPC	0.137	UJ	--		--		--		--		--	
Pentachlorodibenzo-p-dioxin (total)	--	--	--	ng/Kg	0.119	UJ	0.0838	EMPC	0.176	UJ	--		--		--		--		--	
Tetrachlorodibenzo(p)dioxin (total)	--	--	--	ng/Kg	0.335	UJ	0.0312	UJ	0.0154	UJ	--		--		--		--		--	
Tetrachlorodibenzofuran (total)	--	--	--	ng/Kg	0.0171	EMPC	0.0175	EMPC	0.11	UJ	--		--		--		--		--	
	Asbestos																			
Asbestos	--	--	1	%	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U

Notes:
[1] Direct Exposure Criteria for Soil, Residential Criteria : Appendix A to Sections 22a-133k-1 through 22a-133k-3 of the CTDEEP Remediation Standard Regulations (CTDEEP, June 2013).
[2] Pollutant Mobility Criteria for Soil: Appendix B to Sections 22a-133k-1 through 22a-133k-3 of the CTDEEP Remediation Standard Regulations (CTDEEP, January 1996).
[3] Site-specific criteria developed during prior Raymark investigations, used together to identify the potential presence of "Raymark Waste".
Bold = Analyte concentration was detected above the applicable laboratory reporting limit.
Highlight, Bold = Analyte concentration was detected above the applicable criteria.
U = Concentration was not detected above the laboratory reporting limit.
J = Concentration is an estimated value.
UJ = Estimated concentration was not detected above the applicable laboratory reporting limit.
EMPC = Estimated maximum possible concentration.

Table 6
Groundwater, Soil Vapor, and Indoor Air Results by Property
Raymark - Operable Unit 2 - Groundwater
Stratford, Connecticut

50 Ferry Court Area (Residential Evaluation) - Vapor Intrusion Evaluation, Round 2

Matrix	Groundwater 2014 Adjusted Residential Vapor Intrusion Screening Levels[1] (µg/L)	basis	Residential Soil Gas Screening Level[2] (µg/m3)	basis	Residential Indoor Air Screening Level[3] (µg/m3)	basis	Groundwater		Soil Gas	Indoor Air		Ambient Air
Sample Location							MW-602	MW-603	50 FERRY CT, SS-1	50 FERRY CT, BSMT	50 FERRY CT, 1STFL	OUTSIDE 500 FERRY BLVD
Station ID							MW602-08092012	MW603-08092012	FERRYCT-UNIT50-GRAB-SS-1	FERRYCT-UNIT50-BASEMENT	FERRYCT-UNIT50-1STFL	500FERRY-AMBIENT
Canister ID							N	N	Canister 13500	Canister 6566	Canister 6553	Canister 22680
Sample Date							8/9/2012	8/9/2012	8/13/2012	8/13/2012	8/13/2012	8/13/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/L	$µg/m^3$	$µg/m^3$	$µg/m^3$	$µg/m^3$
Chemical												
1,1-Dichloroethane	7.6	C	18	C	1.8	C	**2.2**	10 U	0.36 U	0.36 U	0.44 U	0.44 U
1,1-Dichloroethene	200	NC	2100	NC	210	NC	1 U	10 U	0.36 U	0.36 U	0.44 U	0.44 U
Benzene	1.6	C	3.6	C	0.36	C	1 U	10 U	0.29 U	**0.93**	**0.92**	**0.61**
Chlorobenzene	410	NC	520	NC	52	NC	**32**	**45**	0.42 U	0.42 U	0.51 U	0.51 U
Chloroform	0.81	C	1.2	C	0.12	C	1 U	10 U	**0.33** L	**2.4**	**2.5**	0.54 U
Ethylbenzene	3.5	C	11	C	1.1	C	1 U	10 U	0.39 U	**2.0**	**2.0**	**0.32**
Trichloroethene	1.2	C	4.8	C	0.48	C	1 U	10 U	0.48 U	0.48 U	0.59 U	0.59 U
Vinyl Chloride	0.15	C	1.7	C	0.17	C	1 U	10 U	0.23 U	0.23 U	0.28 U	0.28 U

62 Ferry Court Area (Residential Evaluation) - Vapor Intrusion Evaluation, Round 1

Matrix	Groundwater 2014 Adjusted Residential Vapor Intrusion Screening Levels[1] (µg/L)	basis	Residential Soil Gas Screening Level[2] (µg/m3)	basis	Residential Indoor Air Screening Level[3] (µg/m3)	basis	Groundwater		Soil Gas	Indoor Air		Ambient Air
Sample Location							MW-602	MW-603	62 FERRY CT, SS-1	62 FERRY CT, BSMT	62 FERRY CT, 1STFL	OUTSIDE 500 FERRY BLVD
Station ID							80043-GW-MW602-041212	80043-GW-MW603-041212	FERRYCT-UNIT62-GRAB-SS-1	FERRYCT-UNIT62-BASEMENT	FERRYCT-UNIT62-1STFL	500FERRY-AMBIENT
Canister ID							N	N	Canister 15047	Canister 5790	Canister 5792	Canister 13482
Sample Date							4/12/2012	4/12/2012	2/14/2012	2/13/2012	2/13/2012	2/13/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/L	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Chemical												
1,1-Dichloroethane	7.6	C	18	C	1.8	C	1 U	20 U	0.36 U	0.41 U	0.41 U	0.41 U
1,1-Dichloroethene	200	NC	2100	NC	210	NC	1 U	20 U	0.36 U	0.4 U	0.4 U	0.4 U
Benzene	1.6	C	3.6	C	0.36	C	1 U	20 U	**0.42**	**1.65**	**1.68**	**0.77**
Chlorobenzene	410	NC	520	NC	52	NC	1 U	**37**	0.41 U	0.47 U	0.47 U	0.47 U
Chloroform	0.81	C	1.2	C	0.12	C	1 U	20 U	**0.23** L	**1.43**	**1.48**	0.49 U
Ethylbenzene	3.5	C	11	C	1.1	C	1 U	20 U	0.39 U	**1.1**	**0.75**	**0.21** L
Trichloroethene	1.2	C	4.8	C	0.48	C	1 U	20 U	0.48 U	**0.27** L	0.54 U	0.54 U
Vinyl Chloride	0.15	C	1.7	C	0.17	C	1 U	20 U	0.23 U	0.26 U	0.26 U	0.26 U

62 Ferry Court Area (Residential Evaluation) - Vapor Intrusion Evaluation, Round 2

Matrix	Groundwater 2014 Adjusted Residential Vapor Intrusion Screening Levels[1] (µg/L)	basis	Residential Soil Gas Screening Level[2] (µg/m3)	basis	Residential Indoor Air Screening Level[3] (µg/m3)	basis	Groundwater		Soil Gas	Indoor Air		Ambient Air
Sample Location							MW-602	MW-603	62 FERRY CT, SS-1	62 FERRY CT, BSMT	62 FERRY CT, 1STFL	OUTSIDE 500 FERRY BLVD
Station ID							MW602-08092012	MW603-08092012	FERRYCT-UNIT62-GRAB-SS-1	FERRYCT-UNIT62-BASEMENT	FERRYCT-UNIT62-1STFL	500FERRY-AMBIENT
Canister ID							N	N	Canister 22153	Canister 1594	Canister 6581	Canister 22680
Sample Date							8/9/2012	8/9/2012	8/13/2012	8/13/2012	8/13/2012	8/13/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/L	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Chemical												
1,1-Dichloroethane	7.6	C	18	C	1.8	C	**2.2**	10 U	0.36 U	0.44 U	0.36 U	0.44 U
1,1-Dichloroethene	200	NC	2100	NC	210	NC	1 U	10 U	0.36 U	0.44 U	0.36 U	0.44 U
Benzene	1.6	C	3.6	C	0.36	C	1 U	10 U	0.29 U	**0.73**	**0.48**	**0.61**
Chlorobenzene	410	NC	520	NC	52	NC	**32**	**45**	0.42 U	0.51 U	0.42 U	0.51 U
Chloroform	0.81	C	1.2	C	0.12	C	1 U	10 U	**0.93**	**0.88**	**0.64**	0.54 U
Ethylbenzene	3.5	C	11	C	1.1	C	1 U	10 U	0.39 U	**1.2**	**0.65**	**0.32**
Trichloroethene	1.2	C	4.8	C	0.48	C	1 U	10 U	0.48 U	0.59 U	0.48 U	0.59 U
Vinyl Chloride	0.15	C	1.7	C	0.17	C	1 U	10 U	0.23 U	0.28 U	0.23 U	0.28 U

72 Ferry Court Area (Residential Evaluation) - Vapor Intrusion Evaluation, Round 1

Matrix	Groundwater 2014 Adjusted Residential Vapor Intrusion Screening Levels[1] (µg/L)	basis	Residential Soil Gas Screening Level[2] (µg/m3)	basis	Residential Indoor Air Screening Level[3] (µg/m3)	basis	Groundwater		Soil Gas	Indoor Air		Ambient Air
Sample Location							MW-519S (200 ft upgradient)	MW-602 (<50 ft upgradient)	72 FERRY CT, SS-1	FERRYCT-UNIT72-BSMT	72 FERRY CT, 1STFL	OUTSIDE 500 FERRY BLVD
Station ID							80043-MW519S-021512	80043-GW-MW602-041212	FERRYCT-UNIT72-GRAB-SS-1	FERRYCT-UNIT72-BASEMENT	FERRYCT-UNIT72-1STFL	500FERRY-AMBIENT
Canister ID							N	N	Canister 22683	Canister 6547	Canister 1586	Canister 13482
Sample Date							2/15/2012	8/9/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/L	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Chemical												
1,1-Dichloroethane	7.6	C	18	C	1.8	C	**37**	1 U	0.34 U	0.4 U	0.38 U	0.41 U
1,1-Dichloroethene	200	NC	2100	NC	210	NC	**11**	1 U	**0.2** L	0.39 U	0.38 U	0.4 U
Benzene	1.6	C	3.6	C	0.36	C	1 U	1 U	0.26 U	**0.94**	**1.07**	**0.77**
Chlorobenzene	410	NC	520	NC	52	NC	**110**	1 U	0.38 U	0.45 U	0.44 U	0.47 U
Chloroform	0.81	C	1.2	C	0.12	C	1 U	1 U	0.4 U	**2.07**	**3.11**	0.49 U
Ethylbenzene	3.5	C	11	C	1.1	C	1 U	1 U	0.36 U	**0.48**	**0.53**	**0.21** L
Trichloroethene	1.2	C	4.8	C	0.48	C	**24**	1 U	**0.52**	0.53 U	0.51 U	0.54 U
Vinyl Chloride	0.15	C	1.7	C	0.17	C	**2**	1 U	0.21 U	0.25 U	0.24 U	0.26 U

72 Ferry Court Area (Residential Evaluation) - Vapor Intrusion Evaluation, Round 2

Matrix	Groundwater 2014 Adjusted Residential Vapor Intrusion Screening Levels[1] (µg/L)	basis	Residential Soil Gas Screening Level[2] (µg/m3)	basis	Residential Indoor Air Screening Level[3] (µg/m3)	basis	Groundwater		Soil Gas	Indoor Air		Ambient Air
Sample Location							MW-519S (200 ft upgradient)	MW-602 (<50 ft upgradient)	72 FERRY CT, SS-1	FERRYCT-UNIT72-BSMT	72 FERRY CT, 1STFL	OUTSIDE 500 FERRY BLVD
Station ID							80043-MW519S-021512	MW602-08092012	FERRYCT-UNIT72-GRAB-SS-1	FERRYCT-UNIT72-BASEMENT	FERRYCT-UNIT72-1STFL	500FERRY-AMBIENT
Canister ID							N	N	Canister 12569	Canister 1586	Canister 3092	Canister 22680
Sample Date							2/15/2012	8/9/2012	8/13/2012	8/13/2012	8/13/2012	8/13/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/L	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Chemical												
1,1-Dichloroethane	7.6	C	18	C	1.8	C	**37**	**2.2**	0.32 U	0.40 U	0.40 U	0.44 U
1,1-Dichloroethene	200	NC	2100	NC	210	NC	**11**	1 U	0.32 U	0.40 U	0.40 U	0.44 U
Benzene	1.6	C	3.6	C	0.36	C	1 U	1 U	0.25 U	**1.2**	**1.0**	**0.61**
Chlorobenzene	410	NC	520	NC	52	NC	**110**	**32**	0.37 U	0.34 U	0.34 U	0.51 U
Chloroform	0.81	C	1.2	C	0.12	C	1 U	1 U	**0.88**	**6.3**	**7.1**	0.54 U
Ethylbenzene	3.5	C	11	C	1.1	C	1 U	1 U	0.35 U	**8.4**	**8.2**	**0.32**
Trichloroethene	1.2	C	4.8	C	0.48	C	**24**	1 U	0.43 U	**0.43** L	**0.43** L	0.59 U
Vinyl Chloride	0.15	C	1.7	C	0.17	C	**2**	1 U	0.20 U	0.26 U	0.26 U	0.28 U

82 Ferry Court Area (Residential Evaluation) - Vapor Intrusion Evaluation, Round 1

Matrix	Groundwater 2014 Adjusted Residential Vapor Intrusion Screening Levels[1] (µg/L)	basis	Residential Soil Gas Screening Level[2] (µg/m3)	basis	Residential Indoor Air Screening Level[3] (µg/m3)	basis	Groundwater		Soil Gas	Indoor Air		Ambient Air
Sample Location							MW-601	MW-601	82 FERRY CT, SS-1	82 FERRY CT, BSMT	82 FERRY CT, 1ST FL	OUTSIDE 500 FERRY BLVD
Station ID							80043-GW-DUP01-041112	80043-GW-MW601-041112	FERRYCT-UNIT82-GRAB-SS-1	FERRYCT-UNIT82-BASEMENT	FERRYCT-UNIT82-1STFL	500FERRY-AMBIENT-20120215
Canister ID							FD	N	Canister 14901	Canister 1592	Canister 1560	Canister 15048
Sample Date							4/11/2012	4/11/2012	2/15/2012	2/15/2012	2/15/2012	2/15/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/L	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Chemical												
1,1-Dichloroethane	7.6	C	18	C	1.8	C	1 U	1 U	0.3 U	0.4 U	0.4 U	0.4 U
1,1-Dichloroethene	200	NC	2100	NC	210	NC	1 U	1 U	0.3 U	0.4 U	0.4 U	0.4 U
Benzene	1.6	C	3.6	C	0.36	C	1 U	1 U	**0.2** L	**0.9**	**1**	**1**
Chlorobenzene	410	NC	520	NC	52	NC	1 U	1 U	0.4 U	0.5 U	0.5 U	0.4 U
Chloroform	0.81	C	1.2	C	0.12	C	1 U	1 U	**1.9**	**0.5**	**1.5**	0.5 U
Ethylbenzene	3.5	C	11	C	1.1	C	1 U	1 U	0.4 U	**0.3** L	**0.4** L	**0.2** L
Trichloroethene	1.2	C	4.8	C	0.48	C	1 U	1 U	**0.2** L	0.5 U	0.5 U	0.5 U
Vinyl Chloride	0.15	C	1.7	C	0.17	C	1 U	1 U	0.2 U	0.3 U	0.3 U	0.2 U

82 Ferry Court Area (Residential Evaluation) - Vapor Intrusion Evaluation, Round 2

Matrix	Groundwater 2014 Adjusted Residential Vapor Intrusion Screening Levels[1] (µg/L)	basis	Residential Soil Gas Screening Level[2] (µg/m3)	basis	Residential Indoor Air Screening Level[3] (µg/m3)	basis	Groundwater		Soil Gas	Indoor Air		Ambient Air
Sample Location							MW-601	MW-601	82 FERRY CT, SS-1	82 FERRY CT, BSMT	82 FERRY CT, 1ST FL	OUTSIDE 500 FERRY BLVD
Station ID							MW601D-08092012	MW601-08092012	FERRYCT-UNIT82-GRAB-SS-1	FERRYCT-UNIT82-BASEMENT	FERRYCT-UNIT82-1STFL	500FERRY-AMBIENT-20120215
Canister ID							FD	N	Canister 12562	Canister 6582	Canister 1576	Canister 22680
Sample Date							8/9/2012	8/9/2012	8/13/2012	8/13/2012	8/13/2012	8/13/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/L	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Chemical												
1,1-Dichloroethane	7.6	C	18	C	1.8	C	1 U	1 U	0.32 U	0.44 U	0.40 U	0.44 U
1,1-Dichloroethene	200	NC	2100	NC	210	NC	1 U	1 U	0.32 U	0.44 U	0.40 U	0.44 U
Benzene	1.6	C	3.6	C	0.36	C	1 U	1 U	0.25 U	**0.45**	**0.45**	**0.61**
Chlorobenzene	410	NC	520	NC	52	NC	1 U	1 U	0.37 U	0.51 U	0.34 U	0.51 U
Chloroform	0.81	C	1.2	C	0.12	C	1 U	1 U	**0.35** L	**1.7**	**0.54**	0.54 U
Ethylbenzene	3.5	C	11	C	1.1	C	1 U	1 U	0.35 U	**1.3**	**0.34** L	**0.32**
Trichloroethene	1.2	C	4.8	C	0.48	C	1 U	1 U	**0.46**	0.59 U	0.54 U	0.59 U
Vinyl Chloride	0.15	C	1.7	C	0.17	C	1 U	1 U	0.20 U	0.28 U	0.26 U	0.28 U

100 Veterans Boulevard Area (Industrial/Commercial Evaluation) - Vapor Intrusion Evaluation, Round 1

Matrix	Groundwater 2014 Adjusted Industrial/ Commercial Vapor Intrusion Screening Levels[1] (µg/L)	basis	Industrial/ Commercial Soil Gas Screening Level[2] (µg/m3)	basis	Industrial/ Commercial Indoor Air Screening Level[3] (µg/m3)	basis	Groundwater		Soil Gas	Indoor Air		Ambient Air
Sample Location							MW-529S	MW-529S	100 VETERANS, SS-3	100 VETERANS, BSMT	100 VETERANS, 1ST FL	OUTSIDE 500 FERRY BLVD
Station ID							80043-DUP01-021412	80043-MW529S-021412	100VETERANS-GRAB-SS-3	100VETERANS-BASEMENT	100VETERANS-FIRST FLOOR	500FERRY-AMBIENT-20120214
Canister ID							FD	N	Canister 15050	Canister 1594	Canister 6583	Canister 13495
Sample Date							2/14/2012	2/14/2012	2/14/2012	2/14/2012	2/14/2012	2/14/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/L	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Chemical												
1,1-Dichloroethane	33	C	77	C	7.7	C	**9.4**	**9.6**	**2100**	**5.8**	**1.7**	0.4 U
1,1-Dichloroethene	820	NC	8800	NC	880	NC	1 U	1 U	**1000**	**2.6**	**0.7**	0.4 U
Benzene	6.9	C	16	C	1.6	C	1 U	1 U	87 U	**1.4**	**1.8**	**1**
Chlorobenzene	1700	NC	2200	NC	220	NC	**1.9**	**1.7**	130 U	0.6 U	0.5 U	0.5 U
Chloroform	3.6	C	5.3	C	0.53	C	1 U	1 U	130 U	**0.3** L	**0.5** L	0.5 U
Ethylbenzene	15	C	49	C	4.9	C	1 U	1 U	120 U	**1.1**	**0.5**	**0.3** L
Trichloroethene	7.4	C	30	C	3.0	C	1 U	1 U	**1100**	**5.4**	**1.2**	0.5 U
Vinyl Chloride	2.5	C	28	C	2.8	C	**4.3**	**4.9**	70 U	0.3 U	0.3 U	0.3 U

100 Veterans Boulevard Area (Industrial/Commercial Evaluation) - Vapor Intrusion Evaluation, Round 2

Matrix	Groundwater 2014 Adjusted Industrial/ Commercial Vapor Intrusion Screening Levels[1] (µg/L)	basis	Industrial/ Commercial Soil Gas Screening Level[2] (µg/m3)	basis	Industrial/ Commercial Indoor Air Screening Level[3] (µg/m3)	basis	Groundwater		Soil Gas	Indoor Air			Ambient Air
Sample Location							MW-529S	MW-529S	100 VETERANS, SS-1	100 VETERANS, BSMT	100 VETERANS, BSMT	100 VETERANS, 1ST FL	OUTSIDE 500 FERRY BLVD
Station ID							80043-DUP01-021412	80043-MW529S-021412	100VETERANS-GRAB-SS-3	100VETERANS-BASEMENT	100VETERANS-BASEMENT-DUP	100VETERANS-FIRST FLOOR	500FERRY-AMBIENT-20120214
Canister ID							FD	N	Canister 20860	Canister 6547	Canister 6555	Canister 6558	Canister 13484
Sample Date							2/14/2012	2/14/2012	8/14/2012	8/14/2012	8/14/2012	8/14/2012	8/14/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/L	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Chemical													
1,1-Dichloroethane	33	C	77	C	7.7	C	**9.4**	**9.6**	**6100**	**0.97**	**1**	**0.36** L	0.40 U
1,1-Dichloroethene	820	NC	8800	NC	880	NC	1 U	1 U	**1000**	0.44 U	0.44 U	0.40 U	0.40 U
Benzene	6.9	C	16	C	1.6	C	1 U	1 U	138 U	**3.2**	**3.3**	**2.1**	0.32 U
Chlorobenzene	1700	NC	2200	NC	220	NC	**1.9**	**1.7**	186 U	0.51 U	0.51 U	0.46 U	0.46 U
Chloroform	3.6	C	5.3	C	0.53	C	1 U	1 U	195 U	**3.1**	**3.2**	**3.4**	0.49 U
Ethylbenzene	15	C	49	C	4.9	C	1 U	1 U	174 U	**2.6**	**2.3**	**1.5**	0.43 U
Trichloroethene	7.4	C	30	C	3.0	C	1 U	1 U	**2500**	**1.7**	**1.6**	**0.54**	0.54 U
Vinyl Chloride	2.5	C	28	C	2.8	C	**4.3**	**4.9**	102 U	0.28 U	0.28 U	0.26 U	0.26 U

300 Ferry Boulevard Area (Industrial/Commercial Evaluation) - Vapor Intrusion Evaluation, Round 1

Matrix	Groundwater						Groundwater	Soil Gas	Indoor Air		Ambient Air
Sample Location	2014 Adjusted Industrial/ Commercial Vapor Intrusion Screening Levels[1] (µg/L)	basis	Industrial/ Commercial Soil Gas Screening Level[2] (µg/m3)	basis	Industrial/ Commercial Indoor Air Screening Level[3] (µg/m3)	basis	MW-111S	300 FERRY BLVD, SS-1	300 FERRY-MAIN FLOOR #1	300 FERRY-MAIN FLOOR #2	OUTSIDE 500 FERRY BLVD
Station ID							80043-MW111S-021412	300FERRY-GRAB-SS-1	300FERRY-MAINFLOOR	300FERRY-SNOWBOARD	500FERRY-AMBIENT-20120214
Canister ID							N	Canister 14902	Canister 1577	Canister 6580	Canister 13495
Sample Date							2/14/2012	2/14/2012	2/14/2012	2/14/2012	2/14/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Chemical											
1,1-Dichloroethane	33	C	77	C	7.7	C	1 U	**3.8**	0.5 U	0.5 U	0.4 U
1,1-Dichloroethene	820	NC	8800	NC	880	NC	1 U	3 U	0.5 U	0.5 U	0.4 U
Benzene	6.9	C	16	C	1.6	C	1 U	2.4 U	***2***	**1.6**	**1**
Chlorobenzene	1700	NC	2200	NC	220	NC	1 U	3.5 U	0.6 U	0.6 U	0.5 U
Chloroform	3.6	C	5.3	C	0.53	C	1 U	3.7 U	**0.3** L	0.6 U	0.5 U
Ethylbenzene	15	C	49	C	4.9	C	1 U	3.3 U	**1.4**	**1.3**	**0.3** L
Trichloroethene	7.4	C	30	C	3.0	C	1 U	**160**	0.7 U	0.7 U	0.5 U
Vinyl Chloride	2.5	C	28	C	2.8	C	1 U	1.9 U	0.3 U	0.3 U	0.3 U

300 Ferry Boulevard Area (Industrial/Commercial Evaluation) - Vapor Intrusion Evaluation, Round 2

Matrix	Groundwater						Groundwater	Soil Gas	Indoor Air		Ambient Air
Sample Location	2014 Adjusted Industrial/ Commercial Vapor Intrusion Screening Levels[1] (µg/L)	basis	Industrial/ Commercial Soil Gas Screening Level[2] (µg/m3)	basis	Industrial/ Commercial Indoor Air Screening Level[3] (µg/m3)	basis	MW-111S	300 FERRY BLVD, SS-1	300 FERRY-MAIN FLOOR #1	300 FERRY-MAIN FLOOR #2	OUTSIDE 500 FERRY BLVD
Station ID							80043-MW111S-021412	300FERRY-GRAB-SS-1	300FERRY-MAIN SHOW ROOM	300FERRY-SNOWBOARD	500FERRY-AMBIENT-20120214
Canister ID							N	Canister 22692	Canister 6463	Canister 6460	Canister 22690
Sample Date							2/14/2012	8/15/2012	8/15/2012	8/15/2012	8/15/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Chemical											
1,1-Dichloroethane	33	C	77	C	7.7	C	1 U	**10**	0.81 U	0.44 U	0.48 U
1,1-Dichloroethene	820	NC	8800	NC	880	NC	1 U	4.4 U	0.79 U	0.44 U	0.48 U
Benzene	6.9	C	16	C	1.6	C	1 U	2.2 U	**7.3**	**7.2**	**0.48**
Chlorobenzene	1700	NC	2200	NC	220	NC	1 U	18 U	0.93 U	0.51 U	0.56 U
Chloroform	3.6	C	5.3	C	0.53	C	1 U	**8.5**	0.98 U	**0.68**	0.59 U
Ethylbenzene	15	C	49	C	4.9	C	1 U	0.48 U	**11**	**14**	0.52 U
Trichloroethene	7.4	C	30	C	3.0	C	1 U	**1100**	1.1 U	**5.4**	0.64 U
Vinyl Chloride	2.5	C	28	C	2.8	C	1 U	330 U	0.51 U	**2.1**	0.31 U

326 Ferry Boulevard Area (Industrial/Commercial Evaluation) - Vapor Intrusion Evaluation, Round 1

Matrix	Groundwater 2014 Adjusted Industrial/ Commercial Vapor Intrusion Screening Levels[1] (µg/L)	basis	Industrial/ Commercial Soil Gas Screening Level[2] (µg/m3)	basis	Industrial/ Commercial Indoor Air Screening Level[3] (µg/m3)	basis	Groundwater	Indoor Air		Ambient Air
Sample Location							MW-520S	326 FERRY, DINING RM	326 FERRY, KITCHEN	500FERRY-AMBIENT
Station ID							80043-MW520S-021412	326FERRY-DININGROOM	326FERRY-KITCHEN	500FERRY-AMBIENT-20120215
Canister ID							N	Canister 5810	Canister 6461	Canister 15048
Sample Date							2/14/2012	2/15/2012	2/15/2012	2/15/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/m^3	µg/m^3	µg/m^3
Chemical										
1,1-Dichloroethane	33	C	77	C	7.7	C	**70**	0.5 U	0.4 U	0.4 U
1,1-Dichloroethene	820	NC	8800	NC	880	NC	**190**	0.5 U	0.4 U	0.4 U
Benzene	6.9	C	16	C	1.6	C	2 U	**1.7**	**2.2**	**1**
Chlorobenzene	1700	NC	2200	NC	220	NC	**3.7**	0.6 U	0.5 U	0.4 U
Chloroform	3.6	C	5.3	C	0.53	C	2 U	**0.4** L	**2**	0.5 U
Ethylbenzene	15	C	49	C	4.9	C	2 U	**0.5**	**0.4** L	**0.2** L
Trichloroethene	7.4	C	30	C	3.0	C	**180**	**0.2** L	0.6 U	0.5 U
Vinyl Chloride	2.5	C	28	C	2.8	C	**7.4**	0.3 U	0.3 U	0.2 U

326 Ferry Boulevard Area (Industrial/Commercial Evaluation) - Vapor Intrusion Evaluation, Round 2

Matrix	Groundwater 2014 Adjusted Industrial/ Commercial Vapor Intrusion Screening Levels[1] (µg/L)	basis	Industrial/ Commercial Soil Gas Screening Level[2] (µg/m3)	basis	Industrial/ Commercial Indoor Air Screening Level[3] (µg/m3)	basis	Groundwater	Indoor Air		Ambient Air
Sample Location							MW-520S	326 FERRY, DINING RM	326 FERRY, KITCHEN	500FERRY-AMBIENT
Station ID							80043-MW520S-021412	326FERRY-DININGROOM	326FERRY-KITCHEN	500FERRY-AMBIENT-20120215
Canister ID							N	Canister 5790	Canister 1560	Canister 13484
Sample Date							2/14/2012	8/14/2012	8/14/2012	8/14/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/m^3	µg/m^3	µg/m^3
Chemical										
1,1-Dichloroethane	33	C	77	C	7.7	C	**70**	0.44 U	0.49 U	0.40 U
1,1-Dichloroethene	820	NC	8800	NC	880	NC	**190**	0.44 U	0.48 U	0.40 U
Benzene	6.9	C	16	C	1.6	C	2 U	**1.0**	**1.3**	0.32 U
Chlorobenzene	1700	NC	2200	NC	220	NC	**3.7**	0.51 U	0.56 U	0.46 U
Chloroform	3.6	C	5.3	C	0.53	C	2 U	**0.38** L	**1.2**	0.49 U
Ethylbenzene	15	C	49	C	4.9	C	2 U	**0.95**	**1.1**	0.43 U
Trichloroethene	7.4	C	30	C	3.0	C	**180**	0.59 U	0.64 U	0.54 U
Vinyl Chloride	2.5	C	28	C	2.8	C	**7.4**	0.28 U	0.31 U	0.26 U

335 Ferry Boulevard Area (Industrial/Commercial Evaluation) - Vapor Intrusion Evaluation, Round 1

Matrix	Groundwater 2014 Adjusted Industrial/ Commercial Vapor Intrusion Screening Levels[1] (µg/L)	basis	Industrial/ Commercial Soil Gas Screening Level[2] (µg/m3)	basis	Industrial/ Commercial Indoor Air Screening Level[3] (µg/m3)	basis	Groundwater	Soil Gas	Indoor Air			Ambient Air
Sample Location							MW-520S	335 FERRY BLVD, SS-1	335FERRY-CURTINTAXI	335FERRY-MAINOFFICE	335F-ESTIMATINGRM	OUTSIDE 500 FERRY BLVD
Station ID							80043-MW520S-021412	335FERRY-GRAB-SS-1	335FERRY-CURTINTAXI	335FERRY-MAINOFFICE	335FERRY-ESTIMATINGRM	500FERRY-AMBIENT-20120214
Canister ID							N	Canister 22680	Canister 6460	Canister 6555	Canister 4778	Canister 13495
Sample Date							2/14/2012	2/14/2012	2/14/2012	2/14/2012	2/14/2012	2/14/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Chemical												
1,1-Dichloroethane	33	C	77	C	7.7	C	**70**	**5.6** L	0.45 U	0.49 U	0.49 U	0.4 U
1,1-Dichloroethene	820	NC	8800	NC	880	NC	**190**	6 U	0.44 U	0.48 U	0.48 U	0.4 U
Benzene	6.9	C	16	C	1.6	C	2 U	4.8 U	**1.81**	**2**	**1.71**	**1**
Chlorobenzene	1700	NC	2200	NC	220	NC	**3.7**	7 U	0.51 U	0.56 U	0.56 U	0.5 U
Chloroform	3.6	C	5.3	C	0.53	C	2 U	7.4 U	**0.44** L	0.59 U	0.59 U	0.5 U
Ethylbenzene	15	C	49	C	4.9	C	2 U	6.6 U	**1.1**	**0.97**	**0.88**	**0.3** L
Trichloroethene	7.4	C	30	C	3.0	C	**180**	**23**	**11.13**	**0.23** L	0.65 U	0.5 U
Vinyl Chloride	2.5	C	28	C	2.8	C	**7.4**	3.9 U	0.28 U	**0.12** L	**0.11** L	0.3 U

335 Ferry Boulevard Area (Industrial/Commercial Evaluation) - Vapor Intrusion Evaluation, Round 2

Matrix	Groundwater 2014 Adjusted Industrial/ Commercial Vapor Intrusion Screening Levels[1] (µg/L)	basis	Industrial/ Commercial Soil Gas Screening Level[2] (µg/m3)	basis	Industrial/ Commercial Indoor Air Screening Level[3] (µg/m3)	basis	Groundwater	Soil Gas	Indoor Air				Ambient Air
Sample Location							MW-520S	335 FERRY BLVD, SS-3	335FERRY-CURTINTAXI	335FERRY-MAINOFFICE	335F-ESTIMATINGRM	335 FERRY-CURTIN TAXI SUPPLYRM	OUTSIDE 500 FERRY BLVD
Station ID							80043-MW520S-021412	335FERRY-BREN AIR UNIT	335FERRY-CURTINTAXI	335FERRY-MAINOFFICE	335FERRY-ESTIMATINGRM	335F-TAXISUPPLYRM	500FERRY-AMBIENT-20120214
Canister ID							N	Canister 12565	Canister 1577	Canister 1584	Canister 6568	Canister 14896	Canister 22690
Sample Date							2/14/2012	8/15/2012	8/15/2012	8/15/2012	8/15/2012		8/15/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/m^3	µg/m^3	µg/m^3	µg/m^3		µg/m^3
Chemical													
1,1-Dichloroethane	33	C	77	C	7.7	C	**70**	**1.3**	0.73 U	0.65 U	0.40 U	53 U	0.48 U
1,1-Dichloroethene	820	NC	8800	NC	880	NC	**190**	0.40 U	0.71 U	0.64 U	0.40 U	52 U	0.48 U
Benzene	6.9	C	16	C	1.6	C	2 U	0.48 U	**1.4**	0.51 U	**0.48**	42 U	**0.48**
Chlorobenzene	1700	NC	2200	NC	220	NC	**3.7**	0.46 U	0.84 U	0.75 U	0.46 U	60 U	0.56 U
Chloroform	3.6	C	5.3	C	0.53	C	2 U	3.9 U	**1.6**	0.78 U	0.49 U	63 U	0.59 U
Ethylbenzene	15	C	49	C	4.9	C	2 U	0.43 U	**4.2**	0.70 U	**0.52**	56 U	0.52 U
Trichloroethene	7.4	C	30	C	3.0	C	**180**	**91** L	**400**	**1.6**	**4.3**	**3100**	0.64 U
Vinyl Chloride	2.5	C	28	C	2.8	C	**7.4**	0.26 U	0.86 U	0.41 U	**1.6**	330 U	0.31 U

335 Ferry Boulevard Area (Industrial/Commercial Evaluation) - Vapor Intrusion Evaluation, Round 3

Matrix	Groundwater 2014 Adjusted Industrial/ Commercial Vapor Intrusion Screening Levels[1] (µg/L)	basis	Industrial/ Commercial Soil Gas Screening Level[2] (µg/m3)	basis	Industrial/ Commercial Indoor Air Screening Level[3] (µg/m3)	basis	Groundwater	Soil Gas			Indoor Air					Ambient Air
Sample Location							MW-520S	335 FERRY BLVD, SS-1	335 FERRY BLVD, SS-2	335 FERRY BLVD, SS-3	335 FERRY-CURTIN TAXI MAIN ROOM	335 FERRY-CURTIN TAXI AUTOSUPPLY	335 FERRY-CURTIN TAXI AUTOSUPPLY	335 FERRY-RECEPTIONIST	335 FERRY-ESTIMATING ROOM	OUTSIDE 335 FERRY BLVD
Station ID							80043-MW520S-021412	335FERRY-GARAGE AREA 1	335FERRY-GARAGE AREA 2	335FERRY-GARAGE AREA 3	335FERRY-CURTINTAXI MAIN ROOM	335FERRY--CURTINTAXI AUTOSUPPLY	335FERRY--CURTINTAXI AUTOSUPPLY	335FERRY-RECEPTIONIST OFFICE	335FERRY-ESTIMATING ROOM	335FERRY-AMBIENT
Canister ID							N	Canister 4742	Canister 1565	Canister 4778	Canister 15056	Canister 14898	Canister 22685	Canister 22692	Canister 13498	Canister 13499
Sample Date							2/14/2012	12/12/2013	12/12/2013	12/12/2013	12/12/2013	12/12/2013	12/12/2013	12/12/2013	12/12/2013	12/12/2013
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Chemical																
1,1-Dichloroethane	33	C	77	C	7.7	C	**70**	**36**	**13**	**65**	0.44 U	0.49 U	0.40 U	0.44 U	0.44 U	0.40 U
1,1-Dichloroethene	820	NC	8800	NC	880	NC	**190**	**55**	**0.40**	**44**	0.44 U	0.48 U	0.40 U	0.44 U	0.44 U	0.40 U
Benzene	6.9	C	16	C	1.6	C	2 U	0.29 U	0.29 U	0.29 U	**0.51**	**0.51**	**0.51**	**1.2**	**1.5**	**0.57**
Chlorobenzene	1700	NC	2200	NC	220	NC	**3.7**	0.42 U	0.42 U	0.42 U	0.51 U	0.56 U	0.46 U	0.51 U	0.51 U	0.46 U
Chloroform	3.6	C	5.3	C	0.53	C	2 U	**8.3**	**3.5**	**17**	0.54 U	0.59 U	0.49 U	0.54 U	0.54 U	0.49 U
Ethylbenzene	15	C	49	C	4.9	C	2 U	0.39 U	0.39 U	0.39 U	0.48 U	0.52 U	0.43 U	**0.69**	**0.87**	0.43 U
Trichloroethene	7.4	C	30	C	3.0	C	**180**	**59**	0.48 U	**130**	0.59 U	0.64 U	0.54 U	0.59 U	0.59 U	0.54 U
Vinyl Chloride	2.5	C	28	C	2.8	C	**7.4**	0.23 U	0.23 U	0.23 U	0.28 U	0.31 U	0.26 U	0.3 U	0.28 U	0.26 U

444 Ferry Boulevard Area (Industrial/Commercial Evaluation) - Vapor Intrusion Evaluation, Round 1

Matrix	Groundwater						Groundwater	Soil Gas	Indoor Air			Ambient Air
Sample Location	2014 Adjusted Industrial/ Commercial Vapor Intrusion Screening Levels[1] (µg/L)	basis	Industrial/ Commercial Soil Gas Screening Level[2] (µg/m3)	basis	Industrial/ Commercial Indoor Air Screening Level[3] (µg/m3)	basis	MW-513S	444 FERRY BLVD, SS-3	444 FERRY BASEMENT	444 FERRY BASEMENT	444 FERRY, 1ST FL	500FERRY-AMBIENT
Station ID							80043-MW513S-021512	444FERRY-GRAB-SS-3	444FERRY-BASEMENT	444FERRY-BASEMENT-DUP	444FERRY-FIRSTFLOOR	500FERRY-AMBIENT-20120215
Canister ID							N	Canister 20856	Canister 3092	Canister 6568	Canister 1582	Canister 15048
Sample Date							2/15/2012	2/15/2012	2/15/2012	2/15/2012	2/15/2012	2/15/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Chemical												
1,1-Dichloroethane	33	C	77	C	7.7	C	**180**	**0.2** L	0.4 U	0.4 U	0.5 U	0.4 U
1,1-Dichloroethene	820	NC	8800	NC	880	NC	**510**	**0.7**	0.4 U	0.4 U	0.5 U	0.4 U
Benzene	6.9	C	16	C	1.6	C	50 U	0.3 U	**1.3**	**1.3**	**1.3**	**1**
Chlorobenzene	1700	NC	2200	NC	220	NC	50 U	0.4 U	0.5 U	0.5 U	0.6 U	0.4 U
Chloroform	3.6	C	5.3	C	0.53	C	50 U	0.4 U	0.5 U	0.5 U	0.6 U	0.5 U
Ethylbenzene	15	C	49	C	4.9	C	50 U	0.4 U	**0.9**	**0.8**	**0.8**	**0.2** L
Trichloroethene	7.4	C	30	C	3.0	C	**1100**	**2.6**	0.6 U	0.6 U	0.7 U	0.5 U
Vinyl Chloride	2.5	C	28	C	2.8	C	50 U	0.2 U	0.3 U	0.3 U	0.3 U	0.2 U

444 Ferry Boulevard Area (Industrial/Commercial Evaluation) - Vapor Intrusion Evaluation, Round 2

Matrix	Groundwater						Groundwater	Soil Gas	Indoor Air		Ambient Air
Sample Location	2014 Adjusted Industrial/ Commercial Vapor Intrusion Screening Levels[1] (µg/L)	basis	Industrial/ Commercial Soil Gas Screening Level[2] (µg/m3)	basis	Industrial/ Commercial Indoor Air Screening Level[3] (µg/m3)	basis	MW-513S	444 FERRY BLVD, SS-3	444 FERRY BASEMENT	444 FERRY, 1ST FL	500FERRY-AMBIENT
Station ID							80043-MW513S-021512	444FERRY-GRAB-SS-3	444FERRY-BASEMENT	444FERRY-FIRSTFLOOR	500FERRY-AMBIENT-20120215
Canister ID							N	Canister 22105	Canister 6461	Canister 6567	Canister 13484
Sample Date							2/15/2012	8/14/2012	8/14/2012	8/14/2012	8/14/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Chemical											
1,1-Dichloroethane	33	C	77	C	7.7	C	**180**	**15**	0.44 U	0.44 U	0.40 U
1,1-Dichloroethene	820	NC	8800	NC	880	NC	**510**	**2.6**	0.44 U	0.44 U	0.40 U
Benzene	6.9	C	16	C	1.6	C	50 U	0.32 U	**1.4**	**1.4**	0.32 U
Chlorobenzene	1700	NC	2200	NC	220	NC	50 U	0.46 U	0.51 U	0.51 U	0.46 U
Chloroform	3.6	C	5.3	C	0.53	C	50 U	0.49 U	**0.59**	**0.88**	0.49 U
Ethylbenzene	15	C	49	C	4.9	C	50 U	0.43 U	**1.1**	**1.3**	0.43 U
Trichloroethene	7.4	C	30	C	3.0	C	**1100**	**15**	0.59 U	0.59 U	0.54 U
Vinyl Chloride	2.5	C	28	C	2.8	C	50 U	0.26 U	0.28 U	0.28 U	0.26 U

500 Ferry Boulevard Area (Industrial/Commercial Evaluation)[4] - Vapor Intrusion Evaluation, Round 1

Matrix	Groundwater 2014 Adjusted Industrial/ Commercial Vapor Intrusion Screening Levels[1] (µg/L)	basis	Industrial/ Commercial Soil Gas Screening Level[2] (µg/m3)	basis	Industrial/ Commercial Indoor Air Screening Level[3] (µg/m3)	basis	Groundwater		Soil Gas	Indoor Air				Ambient Air
Sample Location							MW-514S	MW-517S	500 FERRY BLVD, SS-2	500FERRY-BASEMENT	500FERRY-BASEMENT	500FERRY-CRAWLSP	500FERRY-1STFL	OUTSIDE 500 FERRY BLVD
Station ID							80043-MW514S-021312	OU2-MW-517S	500FERRY-GRAB-SS2	500FERRY-BASEMENT	500FERRY-BASEMENT-DUP	500FERRY-CRAWLSP	500FERRY-1STFL	500FERRY-AMBIENT
Canister ID							N	N	Canister 12562	Canister 6554	Canister 1587	Canister 6566	Canister 1565	Canister 13482
Sample Date							2/13/2012	11/10/2009	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/L	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Chemical														
1,1-Dichloroethane	33	C	77	C	7.7	C	**74**	**75**	**110**	0.49 U	0.38 U	0.38 U	0.41 U	0.41 U
1,1-Dichloroethene	820	NC	8800	NC	880	NC	**62**	**190**	**310**	0.48 U	0.37 U	0.37 U	0.4 U	0.4 U
Benzene	6.9	C	16	C	1.6	C	5 U	5 U	**5.2**	**2.81**	**2.16**	**0.74**	**1.68**	**0.77**
Chlorobenzene	1700	NC	2200	NC	220	NC	**6.5**	**12**	7.4 U	0.56 U	0.43 U	0.43 U	0.47 U	0.47 U
Chloroform	3.6	C	5.3	C	0.53	C	5 U	5 U	**5.9** L	0.59 U	0.45 U	0.45 U	0.49 U	0.49 U
Ethylbenzene	15	C	49	C	4.9	C	5 U	5 U	7 U	**3.55**	**2.41**	**0.29** L	**1.58**	**0.21** L
Trichloroethene	7.4	C	30	C	3.0	C	5 U	**440** D	**650**	**0.27** L	0.5 U	0.5 U	0.54 U	0.54 U
Vinyl Chloride	2.5	C	28	C	2.8	C	**120**	**8.3**	4.1 U	0.31 U	0.24 U	0.24 U	0.26 U	0.26 U

500 Ferry Boulevard Area (Industrial/Commercial Evaluation)[4] - Vapor Intrusion Evaluation, Round 2

Matrix	Groundwater 2014 Adjusted Industrial/ Commercial Vapor Intrusion Screening Levels[1] (µg/L)	basis	Industrial/ Commercial Soil Gas Screening Level[2] (µg/m3)	basis	Industrial/ Commercial Indoor Air Screening Level[3] (µg/m3)	basis	Groundwater		Soil Gas	Indoor Air			Ambient Air
Sample Location							MW-514S	MW-517S	500 FERRY BLVD, SS-2	500FERRY-BASEMENT	500FERRY-CRAWLSP	500FERRY-FIRST FLOOR	OUTSIDE 500 FERRY BLVD
Station ID							80043-MW514S-021312	OU2-MW-517S	500FERRY-GRAB-SS2	500FERRY-BASEMENT	500FERRY-CRAWLSP	500FERRY-FIRST FLOOR	500FERRY-AMBIENT
Canister ID							N	N	Canister 13498	Canister 6548	Canister 1587	Canister 4742	Canister 22680
Sample Date							2/13/2012	11/10/2009	8/13/2012	8/13/2012	8/13/2012	8/13/2012	8/13/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/L	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Chemical													
1,1-Dichloroethane	33	C	77	C	7.7	C	**74**	**75**	**3.1**	0.32 U	0.36 U	0.36 U	0.44 U
1,1-Dichloroethene	820	NC	8800	NC	880	NC	**62**	**190**	**6.5**	0.32 U	0.36 U	0.36 U	0.44 U
Benzene	6.9	C	16	C	1.6	C	5 U	5 U	**3.9**	**19**	**9.4**	**16**	**0.61**
Chlorobenzene	1700	NC	2200	NC	220	NC	**6.5**	**12**	0.37 U	0.37 U	0.42 U	0.42 U	0.51 U
Chloroform	3.6	C	5.3	C	0.53	C	5 U	5 U	**0.93**	**0.37** L	**0.49**	**0.78**	0.54 U
Ethylbenzene	15	C	49	C	4.9	C	5 U	5 U	**3.4**	**20**	**9.9**	**17**	**0.32**
Trichloroethene	7.4	C	30	C	3.0	C	5 U	**440** D	**97**	0.43 U	0.48 U	0.48 U	0.59 U
Vinyl Chloride	2.5	C	28	C	2.8	C	**120**	**8.3**	0.20 U	0.20 U	0.23 U	0.23 U	0.28 U

500 Ferry Boulevard Area (Residential Evaluation)[4] - Vapor Intrusion Evaluation, Round 1

Matrix	Groundwater 2014 Adjusted Residential Vapor Intrusion Screening Levels[1] (µg/L)	basis	Residential Soil Gas Screening Level[2] (µg/m3)	basis	Residential Indoor Air Screening Level[3] (µg/m3)	basis	Groundwater		Soil Gas	Indoor Air				Ambient Air
Sample Location							MW-514S	MW-517S	500 FERRY BLVD, SS-2	500FERRY-BASEMENT	500FERRY-BASEMENT	500FERRY-CRAWLSP	500FERRY-1STFL	OUTSIDE 500 FERRY BLVD
Station ID							80043-MW514S-021312	OU2-MW-517S	500FERRY-GRAB-SS2	500FERRY-BASEMENT	500FERRY-BASEMENT-DUP	500FERRY-CRAWLSP	500FERRY-1STFL	500FERRY-AMBIENT
Canister ID							N	N	Canister 12562	Canister 6554	Canister 1587	Canister 6566	Canister 1565	Canister 13482
Sample Date							2/13/2012	11/10/2009	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/L	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Chemical														
1,1-Dichloroethane	7.6	C	18	C	1.8	C	**74**	**75**	**110**	0.49 U	0.38 U	0.38 U	0.41 U	0.41 U
1,1-Dichloroethene	200	NC	2100	NC	210	NC	**62**	**190**	**310**	0.48 U	0.37 U	0.37 U	0.4 U	0.4 U
Benzene	1.6	C	3.6	C	0.36	C	5 U	5 U	**5.2**	**2.81**	**2.16**	**0.74**	**1.68**	**0.77**
Chlorobenzene	410	NC	520	NC	52	NC	**6.5**	**12**	7.4 U	0.56 U	0.43 U	0.43 U	0.47 U	0.47 U
Chloroform	0.81	C	1.2	C	0.12	C	5 U	5 U	**5.9** L	0.59 U	0.45 U	0.45 U	0.49 U	0.49 U
Ethylbenzene	3.5	C	11	C	1.1	C	5 U	5 U	7 U	**3.55**	**2.41**	**0.29** L	**1.58**	**0.21** L
Trichloroethene	1.2	C	4.8	C	0.48	C	5 U	**440** D	**650**	**0.27** L	0.5 U	0.5 U	0.54 U	0.54 U
Vinyl Chloride	0.15	C	1.7	C	0.17	C	**120**	**8.3**	4.1 U	0.31 U	0.24 U	0.24 U	0.26 U	0.26 U

500 Ferry Boulevard Area (Residential Evaluation)[4] - Vapor Intrusion Evaluation, Round 2

Matrix	Groundwater 2014 Adjusted Residential Vapor Intrusion Screening Levels[1] (µg/L)	basis	Residential Soil Gas Screening Level[2] (µg/m3)	basis	Residential Indoor Air Screening Level[3] (µg/m3)	basis	Groundwater		Soil Gas	Indoor Air			Ambient Air
Sample Location							MW-514S	MW-517S	500 FERRY BLVD, SS-2	500FERRY-BASEMENT	500FERRY-CRAWLSP	500FERRY-FIRST FLOOR	OUTSIDE 500 FERRY BLVD
Station ID							80043-MW514S-021312	OU2-MW-517S	500FERRY-GRAB-SS2	500FERRY-BASEMENT	500FERRY-CRAWLSP	500FERRY-FIRST FLOOR	500FERRY-AMBIENT
Canister ID							N	N	Canister 13498	Canister 6548	Canister 1587	Canister 4742	Canister 22680
Sample Date							2/13/2012	11/10/2009	8/13/2012	8/13/2012	8/13/2012	8/13/2012	8/13/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/L	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Chemical													
1,1-Dichloroethane	7.6	C	18	C	1.8	C	**74**	**75**	**3.1**	0.32 U	0.36 U	0.36 U	0.44 U
1,1-Dichloroethene	200	NC	2100	NC	210	NC	**62**	**190**	**6.5**	0.32 U	0.36 U	0.36 U	0.44 U
Benzene	1.6	C	3.6	C	0.36	C	5 U	5 U	**3.9**	**19**	**9.4**	**16**	**0.61**
Chlorobenzene	410	NC	520	NC	52	NC	**6.5**	**12**	0.37 U	0.37 U	0.42 U	0.42 U	0.51 U
Chloroform	0.81	C	1.2	C	0.12	C	5 U	5 U	**0.93**	**0.37** L	**0.49**	**0.78**	0.54 U
Ethylbenzene	3.5	C	11	C	1.1	C	5 U	5 U	**3.4**	**20**	**9.9**	**17**	**0.32**
Trichloroethene	1.2	C	4.8	C	0.48	C	5 U	**440** D	**97**	0.43 U	0.48 U	0.48 U	0.59 U
Vinyl Chloride	0.15	C	1.7	C	0.17	C	**120**	**8.3**	0.20 U	0.20 U	0.23 U	0.23 U	0.28 U

608 Ferry Boulevard Area (Industrial/Commercial Evaluation) - Vapor Intrusion Evaluation, Round 1

Matrix	Groundwater						Groundwater	Soil Gas	Indoor Air			Ambient Air
Sample Location	2014 Adjusted Industrial/ Commercial Vapor Intrusion Screening Levels[1] (µg/L)	basis	Industrial/ Commercial Soil Gas Screening Level[2] (µg/m3)	basis	Industrial/ Commercial Indoor Air Screening Level[3] (µg/m3)	basis	MW-527S	608 FERRY BLVD, SS-3	608 FERRY, BSMT	608 FERRY, BSMT	608 FERRY, 1ST FL	OUTSIDE 500 FERRY BLVD
Station ID							80043-MW527S-021512	608FERRY-GRAB-SS-3	608FERRY-BASEMENT	608FERRY-BASEMENT-DUP	608FERRY-1STFL	500FERRY-AMBIENT-20120214
Canister ID							N	Canister 22684	Canister 5786	Canister 3656	Canister 1584	Canister 13495
Sample Date							2/15/2012	2/14/2012	2/14/2012	2/14/2012	2/14/2012	2/14/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Chemical												
1,1-Dichloroethane	33	C	77	C	7.7	C	**1.2**	**2.13**	0.41 U	0.41 U	0.38 U	0.4 U
1,1-Dichloroethene	820	NC	8800	NC	880	NC	1 U	**1**	0.4 U	0.4 U	0.37 U	0.4 U
Benzene	6.9	C	16	C	1.6	C	1 U	0.25 U	**0.61**	**0.55**	**0.58**	**1**
Chlorobenzene	1700	NC	2200	NC	220	NC	1 U	0.36 U	0.47 U	0.47 U	0.43 U	0.5 U
Chloroform	3.6	C	5.3	C	0.53	C	1 U	0.38 U	0.49 U	0.49 U	0.46 U	0.5 U
Ethylbenzene	15	C	49	C	4.9	C	1 U	0.34 U	0.44 U	0.44 U	0.41 U	**0.3** L
Trichloroethene	7.4	C	30	C	3.0	C	1 U	**1.41**	0.54 U	0.54 U	0.5 U	0.5 U
Vinyl Chloride	2.5	C	28	C	2.8	C	1 U	0.2 U	0.26 U	0.26 U	0.24 U	0.3 U

608 Ferry Boulevard Area (Industrial/Commercial Evaluation) - Vapor Intrusion Evaluation, Round 2

Matrix	Groundwater						Groundwater	Soil Gas	Indoor Air		Ambient Air
Sample Location	2014 Adjusted Industrial/ Commercial Vapor Intrusion Screening Levels[1] (µg/L)	basis	Industrial/ Commercial Soil Gas Screening Level[2] (µg/m3)	basis	Industrial/ Commercial Indoor Air Screening Level[3] (µg/m3)	basis	MW-527S	608 FERRY BLVD, SS-3	608 FERRY, BSMT	608 FERRY, 1ST FL	OUTSIDE 500 FERRY BLVD
Station ID							80043-MW527S-021512	608FERRY-GRAB-SS-3	608FERRY-BASEMENT	608FERRY-1STFL	500FERRY-AMBIENT-20120214
Canister ID							N	Canister 22681	Canister 6569	Canister 1565	Canister 22690
Sample Date							2/15/2012	8/15/2012	8/15/2012	8/15/2012	8/15/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Chemical											
1,1-Dichloroethane	33	C	77	C	7.7	C	**1.2**	0.60 U	**0.22** L	0.69 U	0.48 U
1,1-Dichloroethene	820	NC	8800	NC	880	NC	1 U	0.60 U	0.44 U	0.67 U	0.48 U
Benzene	6.9	C	16	C	1.6	C	1 U	0.48 U	0.35 U	0.54 U	**0.48**
Chlorobenzene	1700	NC	2200	NC	220	NC	1 U	0.70 U	0.51 U	0.79 U	0.56 U
Chloroform	3.6	C	5.3	C	0.53	C	1 U	**0.44** L	0.54 U	0.83 U	0.59 U
Ethylbenzene	15	C	49	C	4.9	C	1 U	0.65 U	0.48 U	0.74 U	0.52 U
Trichloroethene	7.4	C	30	C	3.0	C	1 U	**4.7**	**1.3**	0.91 U	0.64 U
Vinyl Chloride	2.5	C	28	C	2.8	C	1 U	**0.92**	0.28 U	0.44 U	0.31 U

Table 6
Groundwater, Soil Vapor, and Indoor Air Results by Property
Raymark - Operable Unit 2 - Groundwater
Stratford, Connecticut

411 Barnum Ave Cutoff Area (Industrial/Commercial Evaluation) - Vapor Intrusion Evaluation, Round 1

Matrix	Groundwater						Groundwater	Indoor Air			Ambient Air
Sample Location	2014 Adjusted Industrial/ Commercial Vapor Intrusion Screening Levels[1] (µg/L)	basis	Industrial/ Commercial Soil Gas Screening Level[2] (µg/m3)	basis	Industrial/ Commercial Indoor Air Screening Level[3] (µg/m3)	basis	MW-209S	411B-MTHEATRE-11	411B-MTHEATRE-8	411B-MTHEATRE-BTH	411B-AMBIENT
Station ID							80043-MW209S-021612	411BARNUM-MOVIETHEATRE-11	411BARNUM-MOVIETHEATRE-8	411BARNUM-MOVIETHEATRE-BOOTH	411BARNUM-AMBIENT
Canister ID							N	Canister 6553	Canister 6567	Canister 6463	Canister 12566
Sample Date							2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Chemical											
1,1-Dichloroethane	33	C	77	C	7.7	C	1 U	0.53 U	0.45 U	0.49 U	0.4 U
1,1-Dichloroethene	820	NC	8800	NC	880	NC	1 U	0.52 U	0.44 U	0.48 U	0.44 U
Benzene	6.9	C	16	C	1.6	C	1 U	**0.9**	**1**	**0.97**	**0.21** L
Chlorobenzene	1700	NC	2200	NC	220	NC	1 U	0.6 U	0.51 U	0.56 U	0.5 U
Chloroform	3.6	C	5.3	C	0.53	C	1 U	0.64 U	0.54 U	0.59 U	**2.2**
Ethylbenzene	15	C	49	C	4.9	C	1 U	0.57 U	0.48 U	0.53 U	0.48 U
Trichloroethene	7.4	C	30	C	3.0	C	1 U	0.71 U	0.6 U	0.65 U	**0.29** L
Vinyl Chloride	2.5	C	28	C	2.8	C	1 U	0.34 U	0.28 U	0.31 U	0.28 U

411 Barnum Ave Cutoff Area (Industrial/Commercial Evaluation) - Vapor Intrusion Evaluation, Round 2

Matrix	Groundwater						Groundwater	Indoor Air			Ambient Air
Sample Location	2014 Adjusted Industrial/ Commercial Vapor Intrusion Screening Levels[1] (µg/L)	basis	Industrial/ Commercial Soil Gas Screening Level[2] (µg/m3)	basis	Industrial/ Commercial Indoor Air Screening Level[3] (µg/m3)	basis	MW-209S	411B-MTHEATRE-11	411B-MTHEATRE-8	411B-MTHEATRE-BTH	OUTSIDE 411 BARNUM AVE
Station ID							80043-MW209S-021612	411BARNUM-MOVIETHEATRE-11	411BARNUM-MOVIETHEATRE-8	411BARNUM-MOVIETHEATRE-BOOTH	411 BARNUM-AMBIENT
Canister ID							N	Canister 20850	Canister 15053	Canister 22693	Canister 20846
Sample Date							2/16/2012	8/16/2012	8/16/2012	8/16/2012	8/16/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Chemical											
1,1-Dichloroethane	33	C	77	C	7.7	C	1 U	0.44 U	0.40 U	0.44 U	0.60 U
1,1-Dichloroethene	820	NC	8800	NC	880	NC	1 U	0.44 U	0.40 U	0.44 U	0.60 U
Benzene	6.9	C	16	C	1.6	C	1 U	**0.32** L	0.32 U	**0.26** L	**0.38** L
Chlorobenzene	1700	NC	2200	NC	220	NC	1 U	0.51 U	0.46 U	0.51 U	0.70 U
Chloroform	3.6	C	5.3	C	0.53	C	1 U	0.54 U	0.49 U	0.54 U	0.73 U
Ethylbenzene	15	C	49	C	4.9	C	1 U	0.48 U	0.43 U	0.48 U	0.65 U
Trichloroethene	7.4	C	30	C	3.0	C	1 U	0.59 U	0.54 U	0.59 U	**1.7**
Vinyl Chloride	2.5	C	28	C	2.8	C	1 U	0.28 U	0.26 U	0.28 U	**0.28** L

411 Barnum Ave Cutoff Area (Industrial/Commercial Evaluation) (continued) - Vapor Intrusion Evaluation, Round 1

Matrix	Groundwater 2014 Adjusted Industrial/ Commercial Vapor Intrusion Screening Levels[1] (µg/L)	basis	Industrial/ Commercial Soil Gas Screening Level[2] (µg/m3)	basis	Industrial/ Commercial Indoor Air Screening Level[3] (µg/m3)	basis	Groundwater			Indoor Air			Ambient Air
Sample Location							MW-209S	MW-210S	MW-502S	411B-GAMESTOP	411B-SALLYSBEAUTY	411B-TMOBILE	411B-AMBIENT
Station ID							80043-MW209S-021612	80043-MW210S-021512	80043-MW502S-021612	411BARNUM-GAMESTOP	411BARNUM-SALLYSBEAUTY	411BARNUM-TMOBILE	411BARNUM-AMBIENT
Canister ID							N	N	N	Canister 1589	Canister 5804	Canister 6581	Canister 12566
Sample Date							2/16/2012	2/15/2012	2012-02	2/16/2012	2/16/2012	2/16/2012	2/15/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/L	µg/L	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Chemical													
1,1-Dichloroethane	33	C	77	C	7.7	C	1 U	**13**	**17**	0.65 U	0.49 U	0.53 U	0.4 U
1,1-Dichloroethene	820	NC	8800	NC	880	NC	1 U	**10**	**21**	0.64 U	0.48 U	0.52 U	0.4 U
Benzene	6.9	C	16	C	1.6	C	1 U	1 U	5 U	**1.9**	**1.94**	**1.55**	**0.2** L
Chlorobenzene	1700	NC	2200	NC	220	NC	1 U	**19**	**41**	0.74 U	0.56 U	0.6 U	0.5 U
Chloroform	3.6	C	5.3	C	0.53	C	1 U	1 U	5 U	0.79 U	0.59 U	0.64 U	**2.3**
Ethylbenzene	15	C	49	C	4.9	C	1 U	1 U	5 U	**0.97**	**1.36**	**0.66**	0.5 U
Trichloroethene	7.4	C	30	C	3.0	C	1 U	**57**	**51**	0.87 U	0.65 U	0.71 U	**0.3** L
Vinyl Chloride	2.5	C	28	C	2.8	C	1 U	**3.5**	**7.5**	0.41 U	0.31 U	0.34 U	0.3 U

411 Barnum Ave Cutoff Area (Industrial/Commercial Evaluation) (continued) - Vapor Intrusion Evaluation, Round 2

Matrix	Groundwater 2014 Adjusted Industrial/ Commercial Vapor Intrusion Screening Levels[1] (µg/L)	basis	Industrial/ Commercial Soil Gas Screening Level[2] (µg/m3)	basis	Industrial/ Commercial Indoor Air Screening Level[3] (µg/m3)	basis	Groundwater			Indoor Air			Ambient Air
Sample Location							MW-209S	MW-210S	MW-502S	411B-GAMESTOP	411B-SALLYSBEAUTY	411B-TMOBILE	OUTSIDE 411 BARNUM AVE
Station ID							80043-MW209S-021612	80043-MW210S-021512	80043-MW502S-021612	411BARNUM-GAMESTOP	411BARNUM-SALLYSBEAUTY	411BARNUM-TMOBILE	411 BARNUM-AMBIENT
Canister ID							N	N	N	Canister 12568	Canister 20844	Canister 14891	Canister 20846
Sample Date							2/16/2012	2/15/2012	2012-02	8/16/2012	8/16/2012	8/16/2012	8/16/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/L	µg/L	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Chemical													
1,1-Dichloroethane	33	C	77	C	7.7	C	1 U	**13**	**17**	0.40 U	0.52 U	1.7 U	0.60 U
1,1-Dichloroethene	820	NC	8800	NC	880	NC	1 U	**10**	**21**	0.40 U	0.52 U	1.7 U	0.60 U
Benzene	6.9	C	16	C	1.6	C	1 U	1 U	5 U	**0.45**	**0.77**	**0.67** L	**0.38** L
Chlorobenzene	1700	NC	2200	NC	220	NC	1 U	**19**	**41**	0.46 U	0.61 U	2.0 U	0.70 U
Chloroform	3.6	C	5.3	C	0.53	C	1 U	1 U	5 U	0.49 U	0.64 U	2.1 U	0.73 U
Ethylbenzene	15	C	49	C	4.9	C	1 U	1 U	5 U	**0.39** L	**1.3**	1.8 U	0.65 U
Trichloroethene	7.4	C	30	C	3.0	C	1 U	**57**	**51**	0.54 U	0.70 U	**2.7**	**1.7**
Vinyl Chloride	2.5	C	28	C	2.8	C	1 U	**3.5**	**7.5**	0.26 U	0.33 U	1.1 U	**0.28** L

411 Barnum Ave Cutoff Area (Industrial/Commercial Evaluation) (continued) - Vapor Intrusion Evaluation, Round 1

Matrix	Groundwater 2014 Adjusted Industrial/ Commercial Vapor Intrusion Screening Levels[1] (µg/L)	basis	Industrial/ Commercial Soil Gas Screening Level[2] (µg/m3)	basis	Industrial/ Commercial Indoor Air Screening Level[3] (µg/m3)	basis	Groundwater			Indoor Air	Ambient Air
Sample Location							MW-209S	MW-210S	MW-502S	411B-POSTOFFICE	OUTSIDE 500 FERRY BLVD
Station ID							80043-MW209S-021612	80043-MW210S-021512	80043-MW502S-021612	411BARNUM-POSTOFFICE	500FERRY-AMBIENT-20120214
Canister ID							N	N	N	Canister 6569	Canister 13495
Sample Date							2/16/2012	2/15/2012	2012-02	2/14/2012	2/14/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/L	µg/L	µg/m^3	µg/m^3
Chemical											
1,1-Dichloroethane	33	C	77	C	7.7	C	1 U	**13**	**17**	0.45 U	0.4 U
1,1-Dichloroethene	820	NC	8800	NC	880	NC	1 U	**10**	**21**	0.44 U	0.4 U
Benzene	6.9	C	16	C	1.6	C	1 U	1 U	5 U	**1.29**	**1**
Chlorobenzene	1700	NC	2200	NC	220	NC	1 U	**19**	**41**	0.51 U	0.5 U
Chloroform	3.6	C	5.3	C	0.53	C	1 U	1 U	5 U	**1.13**	0.5 U
Ethylbenzene	15	C	49	C	4.9	C	1 U	1 U	5 U	0.48 U	**0.3** L
Trichloroethene	7.4	C	30	C	3.0	C	1 U	**57**	**51**	0.6 U	0.5 U
Vinyl Chloride	2.5	C	28	C	2.8	C	1 U	**3.5**	**7.5**	0.28 U	0.3 U

411 Barnum Ave Cutoff Area (Industrial/Commercial Evaluation) (continued) - Vapor Intrusion Evaluation, Round 2

Matrix	Groundwater 2014 Adjusted Industrial/ Commercial Vapor Intrusion Screening Levels[1] (µg/L)	basis	Industrial/ Commercial Soil Gas Screening Level[2] (µg/m3)	basis	Industrial/ Commercial Indoor Air Screening Level[3] (µg/m3)	basis	Groundwater			Indoor Air	Ambient Air
Sample Location							MW-209S	MW-210S	MW-502S	411B-POSTOFFICE	OUTSIDE 411 BARNUM AVE
Station ID							80043-MW209S-021612	80043-MW210S-021512	80043-MW502S-021612	411BARNUM-POSTOFFICE	411 BARNUM-AMBIENT
Canister ID							N	N	N	Canister 15055	Canister 20846
Sample Date							2/16/2012	2/15/2012	2012-02	8/16/2012	8/16/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/L	µg/L	µg/m^3	µg/m^3
Chemical											
1,1-Dichloroethane	33	C	77	C	7.7	C	1 U	**13**	**17**	0.44 U	0.60 U
1,1-Dichloroethene	820	NC	8800	NC	880	NC	1 U	**10**	**21**	0.44 U	0.60 U
Benzene	6.9	C	16	C	1.6	C	1 U	1 U	5 U	**0.61**	**0.38** L
Chlorobenzene	1700	NC	2200	NC	220	NC	1 U	**19**	**41**	0.51 U	0.70 U
Chloroform	3.6	C	5.3	C	0.53	C	1 U	1 U	5 U	0.54 U	0.73 U
Ethylbenzene	15	C	49	C	4.9	C	1 U	1 U	5 U	**0.56**	0.65 U
Trichloroethene	7.4	C	30	C	3.0	C	1 U	**57**	**51**	**1.3**	**1.7**
Vinyl Chloride	2.5	C	28	C	2.8	C	1 U	**3.5**	**7.5**	0.28 U	**0.28** L

411 Barnum Ave Cutoff Area (Industrial/Commercial Evaluation) (continued) - Vapor Intrusion Evaluation, Round 1

Matrix	Groundwater 2014 Adjusted Industrial/ Commercial Vapor Intrusion Screening Levels[1] (µg/L)	basis	Industrial/ Commercial Soil Gas Screening Level[2] (µg/m3)	basis	Industrial/ Commercial Indoor Air Screening Level[3] (µg/m3)	basis	Groundwater	Indoor Air	Ambient Air
Sample Location							MW-502S	411B-MCDONALDS	OUTSIDE 500 FERRY BLVD
Station ID							80043-MW502S-021612	411BARNUM-MCDONALDS	500FERRY-AMBIENT-20120214
Canister ID							N	Canister 4743	Canister 13495
Sample Date							2/16/2012	2/14/2012	2/14/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/m^3	µg/m^3
Chemical									
1,1-Dichloroethane	33	C	77	C	7.7	C	**17**	0.4 U	0.4 U
1,1-Dichloroethene	820	NC	8800	NC	880	NC	**21**	0.4 U	0.4 U
Benzene	6.9	C	16	C	1.6	C	5 U	**1**	**1**
Chlorobenzene	1700	NC	2200	NC	220	NC	**41**	0.5 U	0.5 U
Chloroform	3.6	C	5.3	C	0.53	C	5 U	**1.3**	0.5 U
Ethylbenzene	15	C	49	C	4.9	C	5 U	**0.3** L	**0.3** L
Trichloroethene	7.4	C	30	C	3.0	C	**51**	0.6 U	0.5 U
Vinyl Chloride	2.5	C	28	C	2.8	C	**7.5**	0.3 U	0.3 U

411 Barnum Ave Cutoff Area (Industrial/Commercial Evaluation) (continued) - Vapor Intrusion Evaluation, Round 2

Matrix	Groundwater 2014 Adjusted Industrial/ Commercial Vapor Intrusion Screening Levels[1] (µg/L)	basis	Industrial/ Commercial Soil Gas Screening Level[2] (µg/m3)	basis	Industrial/ Commercial Indoor Air Screening Level[3] (µg/m3)	basis	Groundwater	Indoor Air	Ambient Air
Sample Location							MW-502S	411B-MCDONALDS	OUTSIDE 411 BARNUM AVE
Station ID							80043-MW502S-021612	411BARNUM-MCDONALDS	411 BARNUM-AMBIENT
Canister ID							N	Canister 20841	Canister 20846
Sample Date							2/16/2012	8/16/2012	8/16/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/m^3	µg/m^3
Chemical									
1,1-Dichloroethane	33	C	77	C	7.7	C	**17**	0.48 U	0.60 U
1,1-Dichloroethene	820	NC	8800	NC	880	NC	**21**	0.48 U	0.60 U
Benzene	6.9	C	16	C	1.6	C	5 U	**0.32** L	**0.38** L
Chlorobenzene	1700	NC	2200	NC	220	NC	**41**	0.56 U	0.70 U
Chloroform	3.6	C	5.3	C	0.53	C	5 U	**1.4**	0.73 U
Ethylbenzene	15	C	49	C	4.9	C	5 U	0.52 U	0.65 U
Trichloroethene	7.4	C	30	C	3.0	C	**51**	**1.1**	**1.7**
Vinyl Chloride	2.5	C	28	C	2.8	C	**7.5**	**1.0**	**0.28** L

411 Barnum Ave Cutoff Area (Industrial/Commercial Evaluation) (continued) - Vapor Intrusion Evaluation, Round 1

Matrix	Groundwater 2014 Adjusted Industrial/ Commercial Vapor Intrusion Screening Levels[1] (µg/L)	basis	Industrial/ Commercial Soil Gas Screening Level[2] (µg/m3)	basis	Industrial/ Commercial Indoor Air Screening Level[3] (µg/m3)	basis	Groundwater		Indoor Air			Ambient Air
Sample Location							MW-502S	MW-504S	411B-PAYLESS SHOE	411B-SLEEPYS	411B-FASHIONBUG	411B-AMBIENT
Station ID							80043-MW502S-021612	OU2-MW-504S-07	411BARNUM-PAYLESS	411BARNUM-SLEEPYS	411BARNUM-FASHIONBUG	411BARNUM-AMBIENT
Canister ID							N	N	Canister 13498	Canister 20857	Canister 4742	Canister 12566
Sample Date							2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/L	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Chemical												
1,1-Dichloroethane	33	C	77	C	7.7	C	**17**	**16**	0.49 U	0.45 U	0.49 U	0.4 U
1,1-Dichloroethene	820	NC	8800	NC	880	NC	**21**	**2**	0.48 U	0.44 U	0.48 U	0.44 U
Benzene	6.9	C	16	C	1.6	C	5 U	10 U	**23.9**	**3.23**	**3.1**	**0.21** L
Chlorobenzene	1700	NC	2200	NC	220	NC	**41**	10 U	0.56 U	0.51 U	0.56 U	0.5 U
Chloroform	3.6	C	5.3	C	0.53	C	5 U	10 U	**1.13**	0.54 U	0.59 U	**2.2**
Ethylbenzene	15	C	49	C	4.9	C	5 U	10 U	**50**	**4.17**	**2.24**	0.48 U
Trichloroethene	7.4	C	30	C	3.0	C	**51**	10 U	**5.76**	**13.1**	**1.25**	**0.29** L
Vinyl Chloride	2.5	C	28	C	2.8	C	**7.5**	**2**	0.31 U	0.28 U	0.31 U	0.28 U

411 Barnum Ave Cutoff Area (Industrial/Commercial Evaluation) (continued) - Vapor Intrusion Evaluation, Round 2

Matrix	Groundwater 2014 Adjusted Industrial/ Commercial Vapor Intrusion Screening Levels[1] (µg/L)	basis	Industrial/ Commercial Soil Gas Screening Level[2] (µg/m3)	basis	Industrial/ Commercial Indoor Air Screening Level[3] (µg/m3)	basis	Groundwater		Indoor Air				Ambient Air
Sample Location							MW-502S	MW-504S	411B-PAYLESS SHOE	411B-PAYLESS SHOE	411B-SLEEPYS	411B-FASHIONBUG	OUTSIDE 411 BARNUM AVE
Station ID							80043-MW502S-021612	OU2-MW-504S-07	411BARNUM-PAYLESS BACK OF STORE	411BARNUM-PAYLESS	411BARNUM-SLEEPYS	411BARNUM-FASHIONBUG	411 BARNUM-AMBIENT
Canister ID							N	N	Canister 15049	Canister 15054	Canister 20849	Canister 22687	Canister 20846
Sample Date							2/16/2012	2/16/2012	8/16/2012	8/16/2012	8/16/2012	8/16/2012	8/16/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/L	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Chemical													
1,1-Dichloroethane	33	C	77	C	7.7	C	**17**	**16**	0.44 U	0.36 U	0.95 U	0.36 U	0.60 U
1,1-Dichloroethene	820	NC	8800	NC	880	NC	**21**	**2**	0.44 U	0.36 U	0.95 U	0.36 U	0.60 U
Benzene	6.9	C	16	C	1.6	C	5 U	10 U	**9.5**	**11**	**2.6**	**0.67**	0.38 L
Chlorobenzene	1700	NC	2200	NC	220	NC	**41**	10 U	0.51 U	0.42 U	1.1 U	0.42 U	0.70 U
Chloroform	3.6	C	5.3	C	0.53	C	5 U	10 U	**1.1**	0.43 U	1.2 U	0.44 U	0.73 U
Ethylbenzene	15	C	49	C	4.9	C	5 U	10 U	**30**	**32**	**6.1**	**0.82**	0.65 U
Trichloroethene	7.4	C	30	C	3.0	C	**51**	10 U	**1.3**	**1.7**	**11**	**0.70**	**1.7**
Vinyl Chloride	2.5	C	28	C	2.8	C	**7.5**	**2**	0.28 U	0.23 U	0.61 U	0.23 U	**0.28** L

411 Barnum Ave Cutoff Area (Industrial/Commercial Evaluation) (continued) - Vapor Intrusion Evaluation, Round 1

Matrix	Groundwater 2014 Adjusted Industrial/ Commercial Vapor Intrusion Screening Levels[1] (µg/L)	basis	Industrial/ Commercial Soil Gas Screening Level[2] (µg/m3)	basis	Industrial/ Commercial Indoor Air Screening Level[3] (µg/m3)	basis	Groundwater		Indoor Air			Ambient Air
Sample Location							MW-502S	MW-504S	411B-MARSHALLS-BKRM	411B-MARSHALLS-BKRM	411B-MARSHALLS-SHOP	411B-AMBIENT
Station ID							80043-MW502S-021612	OU2-MW-504S-07	411BARNUM-MARSHALLS-BKRM	411BARNUM-MARSHALLS-BKRM-DUP	411BARNUM-MARSHALLS-SHOP	411BARNUM-AMBIENT
Sample Type / Canister ID							N	N	Canister 6558/6548	Canister 6558/6548	Canister 3048	Canister 12566
Sample Date							2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/L	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Chemical												
1,1-Dichloroethane	33	C	77	C	7.7	C	**17**	**16**	0.53 U	0.49 U	0.49 U	0.4 U
1,1-Dichloroethene	820	NC	8800	NC	880	NC	**21**	**2**	0.52 U	0.48 U	0.48 U	0.44 U
Benzene	6.9	C	16	C	1.6	C	5 U	10 U	**2.19**	**2.1**	**2.78**	**0.21** L
Chlorobenzene	1700	NC	2200	NC	220	NC	**41**	10 U	0.6 U	0.56 U	0.56 U	0.5 U
Chloroform	3.6	C	5.3	C	0.53	C	5 U	10 U	0.64 U	0.59 U	0.59 U	**2.2**
Ethylbenzene	15	C	49	C	4.9	C	5 U	10 U	**2.33**	**2.37**	**2.9**	0.48 U
Trichloroethene	7.4	C	30	C	3.0	C	**51**	10 U	**0.43** L	**0.42** L	0.65 U	**0.29** L
Vinyl Chloride	2.5	C	28	C	2.8	C	**7.5**	**2**	0.34 U	0.31 U	0.31 U	0.28 U

411 Barnum Ave Cutoff Area (Industrial/Commercial Evaluation) (continued) - Vapor Intrusion Evaluation, Round 2

Matrix	Groundwater 2014 Adjusted Industrial/ Commercial Vapor Intrusion Screening Levels[1] (µg/L)	basis	Industrial/ Commercial Soil Gas Screening Level[2] (µg/m3)	basis	Industrial/ Commercial Indoor Air Screening Level[3] (µg/m3)	basis	Groundwater		Indoor Air		Ambient Air
Sample Location							MW-502S	MW-504S	411B-MARSHALLS-BKRM	411B-MARSHALLS-SHOP	OUTSIDE 411 BARNUM AVE
Station ID							80043-MW502S-021612	OU2-MW-504S-07	411BARNUM-MARSHALLS-BKRM	411BARNUM-MARSHALLS-SHOP	411 BARNUM-AMBIENT
Sample Type / Canister ID							N	N	Canister 5792	Canister 22684	Canister 20846
Sample Date							2/16/2012	2/16/2012	8/16/2012	8/16/2012	8/16/2012
Units	Screening Levels protective of cancer risk = $1x10^{-6}$ and HQ = 1.0						µg/L	µg/L	µg/m^3	µg/m^3	µg/m^3
Chemical											
1,1-Dichloroethane	33	C	77	C	7.7	C	**17**	**16**	0.40 U	0.36 U	0.60 U
1,1-Dichloroethene	820	NC	8800	NC	880	NC	**21**	**2**	0.40 U	0.36 U	0.60 U
Benzene	6.9	C	16	C	1.6	C	5 U	10 U	**1.0**	**1.1**	**0.38** L
Chlorobenzene	1700	NC	2200	NC	220	NC	**41**	10 U	0.46 U	0.42 U	0.70 U
Chloroform	3.6	C	5.3	C	0.53	C	5 U	10 U	0.49 U	0.44 U	0.73 U
Ethylbenzene	15	C	49	C	4.9	C	5 U	10 U	**2.2**	**2.1**	0.65 U
Trichloroethene	7.4	C	30	C	3.0	C	**51**	10 U	0.54 U	0.48 U	**1.7**
Vinyl Chloride	2.5	C	28	C	2.8	C	**7.5**	**2**	0.26 U	0.23 U	**0.28** L

1. Groundwater 2014 Adjusted Residential Vapor Intrusion Screening Levels are groundwater screening levels based on protection of residential indoor air. They have been calculated using the OSWER Vapor Intrusion Screening Level (VISL) calculator, Version 3.1.1 (May 2014), adjusted to correspond to cancer risks = $1x10^{-6}$ and Hazard Quotient = 1.0.
2. Soil Gas Screening Levels are VISLs for soil gas based on protection of indoor air calculated using the OSWER Vapor Intrusion Screening Level (VISL) calculator, Version 3.1.1 (May 2014). Concentrations have been calculated to correspond to cancer risk = $1x10^{-6}$ and Hazard Quotient = 1.0.
3. Indoor air screening levels have been calculated to correspond to cancer risk = $1x10^{-6}$ and Hazard Quotient = 1.0.
4. The building at 500 Ferry Boulevard contains multiple commercial offices and business; however, the property is zoned single family residential and could revert back to residential use. Therefore, both residential and industrial evaluations are presented for both current and potential future property uses.

Bold = Concentration was detected above the laboratory reporting limit.
Bold and Highlighted = Concentration exceeds the applicable comparison level for the respective sampled matrix.
U = Concentration was not detected above the applicable laboratory reporting limit.
L = Estimated value detected below the calibration range.
D = Diluted
C = Cancer based value
N = Non-cancer based value
Underlined indicates detected indoor air contaminant concentration is at or below the concentration in the corresponding ambient air sample.
Round 1 consists of soil gas, indoor air, and ambient air collected in February 2012 and shallow groundwater samples collected in February 2012, April 2012, or the most recent data collected previously from nearby wells.
Round 2 consists of soil gas, indoor air, and ambient air collected in August 2012 and the most recent shallow groundwater samples collected. For a limitied number of wells the most recent samples were collected in August 2012, for most locations the most recent groundwater data is the same as that shown for Round 1.
Round 3 consists of soil gas, indoor air, and ambient air collected in Deccember 12, 2013 at 335 Ferry Boulevard and shallow groundwater samples collected in February 2012, the most recent data collected previously from nearby wells.

Table 7
Vapor Intrusion Pathway Evaluation - Conclusions by Property[1]
Raymark - Operable Unit 2 - Groundwater
Stratford, Connecticut

Building Address[1,2]	Current Property Use	Building Details	Contaminants of Concern Detected at Concentrations Exceeding Applicable Criteria Based on Cancer Risk = 10^{-5} and Hazard Quotient = 1.0							Comments	Potential Vapor Intrusion Concern[4]
			February 2012			August 2012		December 2013			
			Shallow Groundwater[3]	Subslab Soil Gas[3]	Indoor Air[3]	Subslab Soil Gas[3]	Indoor Air[3]	Subslab Soil Gas[3]	Indoor Air[3]		
RESIDENTIAL PROPERTIES INCLUDED IN 2012 INDOOR AIR INVESTIGATIONS											
50 Ferry Court	Residential	In Condominium complex		NA	NA	--	benzene, chloroform, ethylbenzene	NA	NA	Contaminants in indoor air likely from indoor sources	NO
62 Ferry Court	Residential	Condominium complex	--	--	benzene, chloroform	(chloroform)	benzene, chloroform, ethylbenzene	NA	NA	Contaminants in indoor air likely from indoor sources	NO
72 Ferry Court	Residential	Condominium complex	1,1-DCA, TCE, vinyl chloride upgradient	--	benzene, chloroform	(chloroform)	benzene, chloroform, ethylbenzene, (TCE)	NA	NA	Contaminants in indoor air likely from indoor sources	NO
82 Ferry Court	Residential	Condominium complex	--	chloroform	benzene, chloroform	(chloroform)	benzene, chloroform, ethylbenzene	NA	NA	Benzene, chloroform in indoor air likely from indoor sources; chloroform not present in nearby groundwater	NO
COMMERCIAL/INDUSTRIAL PROPERTIES INCLUDED IN 2012/2013 INDOOR AIR INVESTIGATIONS											
100 Veterans Blvd	Veterans Org.	Club/Lodge	vinyl chloride, TCE upgradient	TCE, 1,1-DCA	TCE, benzene	TCE, 1,1-DCA	benzene, chloroform (1,1-DCA, TCE)	NA	NA	Vapor intrusion of TCE may be occurring at concentrations exceeding comparison levels; Vapor intrusion of 1,1-DCA may be occurring, but not at levels of concern; benzene and chloroform in indoor air likely from indoor source.	**YES**
300 Ferry Blvd	Retail/Comm	Ski Shop	--	TCE	benzene	TCE	benzene, chloroform, ethylbenzene, TCE	NA	NA	Vapor intrusion of TCE may be occurring at concentrations exceeding comparison levels. Although TCE was not detected in shallow groundwater at the nearest well, TCE was detected in nearby intermediate depth wells in 2009 and in soil gas significantly above comparison levels. In addition, it was detected in only one indoor air sample and only slightly higher than comparison levels. Additional evidence also suggests the presence of an indoor source of TCE and other COCs. Benzene, chloroform, and ethylbenzene in indoor air are likely from indoor sources.	**YES**
326 Ferry Blvd	Restaurant/Club	Restaurant	1,1-DCA, TCE, vinyl chloride	NA	benzene, chloroform	NA	chloroform	NA	NA	Contaminants in indoor air likely from indoor sources	NO
335 Ferry Blvd	Commercial Bldg	Office Building and Taxi Business 2012; Taxi Vacated property 2013	TCE, 1,1-DCA, vinyl chloride	(TCE)	TCE, benzene	TCE	TCE, chloroform	TCE, chloroform (1,1-DCA, 1,1-DCE)	(benzene, ethylbenzene)	Indoor air sources present during 2012 rounds; however, after removal of suspect sources, no indoor air concerns were present. Low levels of benzene and ethylbenzene in indoor air likely from indoor sources.	NO
444 Ferry Blvd	Retail/Whse		1,1-DCA, TCE	--	--	(TCE)	chloroform	NA	NA	Contaminants in indoor air likely from indoor sources	NO
500 Ferry Blvd Evaluation for current **commercial** use[5]	Office Bldg	Fmr. Residence Converted to Office	1,1-DCA, TCE, vinyl chloride	1,1-DCA, chloroform, TCE	benzene, (TCE)	TCE (benzene, chloroform, ethylbenzene)	benzene, chloroform, ethylbenzene	NA	NA	Vapor intrusion of TCE may be occurring, but not at levels of concern; benzene, chloroform, and ethylbenzene in indoor air likely from indoor source.	NO
500 Ferry Blvd Evaluation assuming future **residential** use[5]	Office Bldg	Fmr. Residence Converted to Office	1,1-DCA, TCE, vinyl chloride	1,1-DCA, benzene, chloroform, TCE	benzene, ethylbenzene (TCE)	TCE (benzene, chloroform, ethylbenzene)	benzene, chloroform, ethylbenzene	NA	NA	Vapor intrusion of TCE may be occurring, but not at levels of concern; benzene, chloroform, and ethylbenzene in indoor air likely from indoor source	NO
608 Ferry Blvd	Office Bldg	Office Bldg	--	--	--	--	--	NA	NA	No evidence of vapor intrusion concern	NO
411 Barnum Ave Cutoff	Movie Theater	Movie Theater	--	NA	--	NA	--	NA	NA	No evidence of vapor intrusion concern	NO
Retail Shopping Center	Retail storefront in shopping center	Gamestop	TCE, vinyl chloride	NA	benzene	NA	--	NA	NA	Benzene in indoor air likely from indoor source	NO
1 Story Building plus	Retail storefront in shopping center	Sally's Beauty Salon	TCE, vinyl chloride	NA	benzene	NA	--	NA	NA	Benzene in indoor air likely from indoor source	NO
free standing outbuildings	Retail storefront in shopping center	T-Mobile	TCE, vinyl chloride	NA	--	NA	--	NA	NA	No evidence of vapor intrusion concern	NO
	Storefront in shopping center	Post office	TCE, vinyl chloride	NA	chloroform	NA	--	NA	NA	Chloroform in indoor air likely from indoor source	NO
	Free standing building on Mall property	McDonalds Restaurant	TCE, vinyl chloride	NA	chloroform	NA	chloroform	NA	NA	Chloroform in indoor air likely from indoor source	NO
	Retail storefront in shopping center	Payless Shoe Store	TCE, vinyl chloride	NA	benzene, chloroform, ethylbenzene, TCE	NA	benzene, chloroform, ethylbenzene (TCE)	NA	NA	Vapor intrusion of TCE may be occurring, but not at levels of concern; other contaminants and most TCE in indoor air likely from indoor sources.	NO[10]
	Retail storefront in shopping center	Sleepy's Mattress Store	TCE, vinyl chloride	NA	benzene, TCE	NA	benzene, ethylbenzene, TCE	NA	NA	Vapor intrusion of TCE may be occurring, but not at levels of concern; other contaminants and most TCE in indoor air likely from indoor sources.	NO[10]
	Retail storefront in shopping center	Fashion Bug Clothing Store	TCE, vinyl chloride	NA	benzene, (TCE)	NA	(TCE)	NA	NA	Vapor intrusion of TCE may be occurring, but not at levels of concern; benzene in indoor air likely from indoor source.	NO
	Retail storefront in shopping center	Marshalls Department Store	TCE, vinyl chloride	NA	benzene	NA	--	NA	NA	Benzene in indoor air likely from indoor source	NO

Table 7
Vapor Intrusion Pathway Evaluation - Conclusions by Property[1]
Raymark - Operable Unit 2 - Groundwater
Stratford, Connecticut

Building Address[1,2]	Current Property Use	Building Details	Contaminants of Concern Detected at Concentrations Exceeding Applicable Criteria Based on Cancer Risk = 10^{-5} and Hazard Quotient = 1.0							Comments	Potential Vapor Intrusion Concern[4]
			February 2012			August 2012		December 2013			
			Shallow Groundwater[3]	Subslab Soil Gas[3]	Indoor Air[3]	Subslab Soil Gas[3]	Indoor Air[3]	Subslab Soil Gas[3]	Indoor Air[3]		
COMMERCIAL/INDUSTRIAL PROPERTIES NOT INCLUDED IN 2012/2013 INDOOR AIR INVESTIGATIONS											
54 Veterans Blvd	Comm Whse	Light Industrial, 1 story	within VI AOC	NA	NA	NA	NA	NA	NA	Indoor air not sampled because indoor air VOC sources suspected.	NO
150 Barnum Ave Cutoff	Retail	Walmart	within VI AOC	NA	NA	NA	NA	NA	NA	On OU1; cap with soil gas collection system	NO
250 Barnum Ave Cutoff	Retail	Grocery Store	within VI AOC	NA	NA	NA	NA	NA	NA	On OU1; cap with soil gas collection system	NO
350 Barnum Ave Cutoff	Retail	Home Depot	within VI AOC	NA	NA	NA	NA	NA	NA	On OU1; cap with soil gas collection system	NO
301 Barnum Ave Cutoff	Industrial	Light Industrial, 1 story	within VI AOC	NA	NA	NA	NA	NA	NA	Indoor air not sampled because indoor air VOC sources suspected.	NO
375 Barnum Ave Cutoff	Industrial	Warehouse, 1 story	within VI AOC	NA	NA	NA	NA	NA	NA	Indoor air not sampled because indoor air VOC sources suspected.	NO
411 Barnum Ave Cutoff	Restaurant in shopping center	Restaurant	within VI AOC	NA	NA	NA	NA	NA	NA	Indoor air not sampled[6]	NO[7]
Retail Shopping Center	Office in shopping center	Dental Office	within VI AOC	NA	NA	NA	NA	NA	NA	Indoor air not sampled because indoor air VOC sources suspected.	NO
1 Story Building plus	Retail storefront in shopping center	Wine Shop	within VI AOC	NA	NA	NA	NA	NA	NA	Indoor air not sampled[6]	NO[7]
free standing outbuildings	Retail storefront in shopping center	Hallmark	within VI AOC	NA	NA	NA	NA	NA	NA	Indoor air not sampled[6]	NO[7]
	Retail storefront in shopping center	Nails	within VI AOC	NA	NA	NA	NA	NA	NA	Indoor air not sampled because indoor air VOC sources suspected.	NO
	Retail storefront in shopping center	Great Clips	within VI AOC	NA	NA	NA	NA	NA	NA	Indoor air not sampled[6]	NO[7]
	Free standing building southwest corner of Mall property	Health Club	outside of VI AOC	NA	NA	NA	NA	NA	NA	Indoor air not sampled[6]	NO[8]
	Free standing building northwest corner of Mall property	99 Restaurant	outside of VI AOC	NA	NA	NA	NA	NA	NA	Indoor air not sampled[6]	NO[8]
450 Barnum Ave Cutoff	Bank	Bank	within VI AOC	NA	NA	NA	NA	NA	NA	On OU1; cap with soil gas collection system	NO
280 Ferry Blvd	Auto Repair	Service Garage, 1 Story	within VI AOC	NA	NA	NA	NA	NA	NA	Indoor air not sampled because indoor air VOC sources suspected.	NO
336 Ferry Blvd	Gas/Mart	Gas/Mart	within VI AOC	NA	NA	NA	NA	NA	NA	Indoor air not sampled because indoor air VOC sources suspected.	NO
345 Ferry Blvd	Auto Repair	Service Garage, 1 Story	within VI AOC	NA	NA	NA	NA	NA	NA	Indoor air not sampled because indoor air VOC sources suspected.	NO
382 Ferry Blvd	Job Shop	Office/Whse	within VI AOC	NA	NA	NA	NA	NA	NA	Indoor air not sampled. Temporary Building.	NO
576 East Broadway	Ind Job Shop	Light Industrial, 1 story	within VI AOC	NA	NA	NA	NA	NA	NA	Indoor air not sampled. Temporary Building.	NO
635 East Broadway	Commercial	Comm/Whse	partly within VI AOC	NA	NA	NA	NA	NA	NA	Indoor air not sampled because indoor air VOC sources suspected.	NO
RESIDENTIAL PROPERTIES - NOT INCLUDED IN 2012 INDOOR AIR INVESTIGATIONS											
56 Willow Avenue	Residential	Single family residence	within VI AOC	NA	NA	NA	NA	NA	NA	No VM system, no current indoor air data	YES[9]
125 Willow Avenue	Residential	Single family residence	within VI AOC	NA	NA	NA	NA	NA	NA	No VM system, no current indoor air data	YES[9]
400 Ferry Boulevard	Residential	Single family residence	within VI AOC	NA	NA	NA	NA	NA	NA	No VM system, no current indoor air data	YES[9]
90 Homestead Avenue	Residential	Single family residence	within VI AOC	NA	NA	NA	NA	NA	NA	No VM system, no current indoor air data	YES[9]
29 Minor Avenue	Residential	Single family residence	within VI AOC	NA	NA	NA	NA	NA	NA	No VM system, no current indoor air data	YES[9]
42 Minor Avenue	Residential	Single family residence	within VI AOC	NA	NA	NA	NA	NA	NA	No VM system, no current indoor air data	YES[9]
28 Riverview Place	Residential	Single family residence	within VI AOC	NA	NA	NA	NA	NA	NA	No VM system, no current indoor air data	YES[9]
60 Riverview Place	Residential	Single family residence	within VI AOC	NA	NA	NA	NA	NA	NA	No VM system, no current indoor air data	YES[9]
120 Riverview Place	Residential	Single family residence	outside VI AOC	NA	NA	NA	NA	NA	NA	Built after VM systems were offered. No VM system, no current indoor air data	N0[9]

Table 7
Vapor Intrusion Pathway Evaluation - Conclusions by Property[1]
Raymark - Operable Unit 2 - Groundwater
Stratford, Connecticut

Building Address[1,2]	Current Property Use	Building Details	Contaminants of Concern Detected at Concentrations Exceeding Applicable Criteria Based on Cancer Risk = 10^{-6} and Hazard Quotient = 1.0							Comments	Potential Vapor Intrusion Concern[4]
			February 2012			August 2012		December 2013			
			Shallow Groundwater[3]	Subslab Soil Gas[3]	Indoor Air[3]	Subslab Soil Gas[3]	Indoor Air[3]	Subslab Soil Gas[3]	Indoor Air[3]		
242 Housatonic Avenue	Residential	Single family residence	within VI AOC	NA	NA	NA	NA	NA	NA	No VM system, no current indoor air data	YES[9]
299 Housatonic Avenue	Residential	Single family residence	within VI AOC	NA	NA	NA	NA	NA	NA	No VM system, no current indoor air data	YES[9]
314 Housatonic Avenue	Residential	Single family residence	within VI AOC	NA	NA	NA	NA	NA	NA	No VM system, no current indoor air data	YES[9]
319 Housatonic Avenue	Residential	Single family residence	within VI AOC	NA	NA	NA	NA	NA	NA	No VM system, no current indoor air data	YES[9]
348 Housatonic Avenue	Residential	Single family residence	within VI AOC	NA	NA	NA	NA	NA	NA	VM system provided, but house demolished and replaced without VM system. No current VM system, no current indoor air data	YES[9]
508 Housatonic Avenue	Residential	Single family residence	within VI AOC	NA	NA	NA	NA	NA	NA	VM system provided, but removed by owner. No current VM system, no current indoor air data	YES[9]
422 Housatonic Avenue	Residential	Single family residence	within VI AOC	NA	NA	NA	NA	NA	NA	No VM system, no current indoor air data	YES[9]
448 Housatonic Avenue	Residential	Single family residence	within VI AOC	NA	NA	NA	NA	NA	NA	No VM system, but property has an Air/Heat exchange system, no current indoor air data	YES[9]
575 Housatonic Avenue	Residential	Single family residence	within VI AOC	NA	NA	NA	NA	NA	NA	No VM system, no current indoor air data	YES[9]

Notes:
[1] See Figure 8 Residential and Industrial Indoor Air Areas of Concern based on $1x10^{-6}$ Cancer Risk or Hazard Quotient of 1.0 Comparison Levels for locations.
[2] Commercial Buildings identified by light tan on Figure 8.
[3] Contaminant names identified were detected at concentrations exceeding applicable criteria. Contaminant names shown in parenthesis [e.g. (TCE)] were detected at concentrations at or below applicable criteria and are included to illustrate potential pathway
[4] Yes=Lines of evidence presented indicate that vapor intrusion (VI) may be occurring at levels of concern.
[4] No = Evidence indicates that VI is not ocurring at levels of concern for human health.
[5] 500 Ferry Boulevard is zoned for residential use, but currently used for commercial office space. Evaluation performed for both potential uses.
[6] Indoor air samples were not collected at this location. Samples were collected from a subset of shops selected to be a representative sampling.
[7] No vapor intrusion concern suspected at this location based on data and conclusions for adjacent stores in shopping plaza.
[8] No vapor intrusion concern suspected at this location based on data and conclusions for adjacent stores in shopping plaza. Building also located outside VI Area of Concern (AOC) identified on Figures 8 and ES-1.
[9] Conclusion based only on whether property is located within or outside the VI AOC. Potential VI concern is indicated for properties located inside the VI AOC identified on Figures 8 and ES-1.

[10] The vapor intrusion pathway evaluation concluded that vapor intrusion of TCE may be occurring at this location, but not at levels of concern. The elevated levels of TCE in indoor air samples from Sleepy's and Payless; the consistently lower TCE concentrations (below comparison levels) in adjacent and nearby stores and in two of the three Payless samples; and the presence of several non-OU2 COCs not detected in nearby groundwater or outdoor ambient air point toward a strong likelihood that TCE detected in indoor air at the Sleepy's and Payless stores is primarily the result of indoor air sources such as off-gassing of VOCs from the products sold.

-- contaminants not detected at concentrations exceeding applicable criteria.
NA = not analyzed
NE = data not evaluated
VI AOC - The identified vapor intrusion area of concern for groundwater developed based on 2009 and 2012 groundwater data and comparison levels corresponding to $1x10^{-6}$ Cancer Risk or Hazard Quotient of 1.0; however, this property was not included in the 2012 vapor intrusion evaluation.

Table 8
Summary of Indoor Air Cancer Risks and Hazard Indices
Raymark - Operable Unit 2 - Groundwater
Stratford, Connecticut

Sampling Location	Scenario/ Receptor	Potential Vapor Intrusion Concern[2]	Total Risks from all Detected Chemicals			Risks from OU2 Groundwater COCs[3]			Vapor Intrusion Risks Above Threshold Levels[4]
			Total Indoor Air Cancer Risks	Total Indoor Air Non-cancer Hazard Index	Total Target Organ-specific Hazard Index > 1.0	Indoor Air Cancer Risks from Groundwater COCs[3]	Indoor Air Non-cancer Hazard Index from Groundwater COCs[3]	Target Organ-specific Hazard Index from Groundwater COCs[3] >1.0	
Ferry Ct - Unit 50	Resident	No	3.6E-05	0.56	No	2.5E-05	0.06	No	No
Ferry Ct - Unit 62	Resident	No	4.1E-05	1.0	No	1.9E-05	0.20	No	No
Ferry Ct - Unit 72	Resident	No	1.4E-04	1.6	No	7.0E-05	0.32	No	No
Ferry Ct - Unit 82	Resident	No	4.2E-05	0.57	No	1.8E-05	0.05	No	No
500 Ferry Boulevard	Resident	No	8.5E-05	4.4	Yes	7.8E-05	0.77	No	No
500 Ferry Boulevard	Commercial	No	1.9E-05	1.1	No	1.8E-05	0.18	No	No
100 Veteran's Boulevard	Commercial	Yes	3.0E-05	1.2	No	1.2E-05	0.66	No	No[5]
300 Ferry Boulevard	Commercial	Yes	1.4E-05	1.4	No	1.1E-05	0.69	No	No[5]
326 Ferry Boulevard	Commercial	No	6.7E-06	0.22	No	5.5E-06	0.04	No	No
335 Ferry Boulevard	Commercial	No	1.1E-06	0.06	No	1.1E-06	0.01	No	No
444 Ferry Boulevard	Commercial	No	3.7E-06	0.25	No	2.8E-06	0.01	No	No
608 Ferry Boulevard	Commercial	No	1.1E-06	0.17	No	8.6E-07	0.15	No	No
411 Barnum Avenue Cut-off - Fashion Bug	Commercial	No	1.3E-05	0.41	No	2.9E-06	0.17	No	No
411 Barnum Avenue Cut-off - Gamestop	Commercial	No	3.1E-06	0.10	No	1.4E-06	0.01	No	No
411 Barnum Avenue Cut-off - Marshalls	Commercial	No	1.8E-05	0.52	No	2.5E-06	0.07	No	No
411 Barnum Avenue Cut-off - McDonald's	Commercial	No	4.6E-06	0.18	No	4.1E-06	0.14	No	No
411 Barnum Avenue Cut-off - Movie Theater	Commercial	No	1.9E-06	0.04	No	6.4E-07	0.01	No	No
411 Barnum Avenue Cut-off - Post Office	Commercial	No	5.0E-06	0.27	No	3.5E-06	0.16	No	No
411 Barnum Avenue Cut-off - Sally's Beauty	Commercial	No	3.3E-06	0.12	No	1.5E-06	0.02	No	No
411 Barnum Avenue Cut-off - Payless Shoes	Commercial	No	2.6E-04	6.80	Yes	3.0E-05	0.86	No	No[6]
411 Barnum Avenue Cut-off - Sleepy's	Commercial	No	2.9E-05	2.4	Yes	7.7E-06	1.5	Yes	No[6]
411 Barnum Avenue Cut-off - T-Mobile	Commercial	No	2.9E-06	0.36	No	2.0E-06	0.32	No	No

Notes:

1. Results based on 2012/13 indoor air sample data. 2. Based on lines of evidence of vapor intrusion summarized on Table 7. Shading indicates Cancer Risks exceeding 1E-4 or non-cancer Hazard Indices exceeding 1.0.

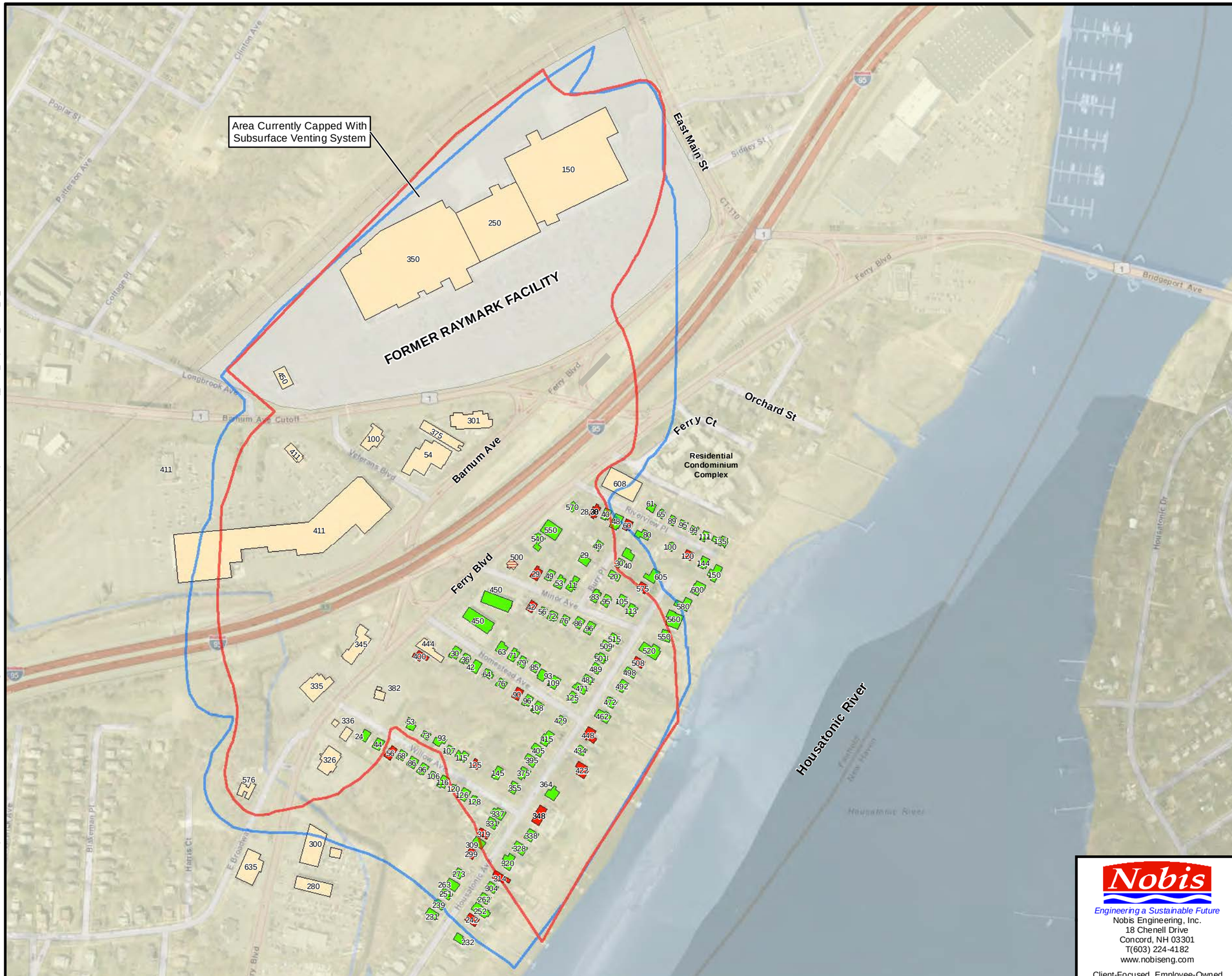
3. Groundwater COCs = OU2 groundwater contaminants of concern based on industrial/commercial worker risks exceeding $1x10^{-6}$ or Hazard Quotient of 1.0 determined by modelling potential indoor air risks from maximum shallow groundwater data. The residential COCs are: 1,1-dichloroethane, 1,1-dichloroethene, trichloroethene, vinyl chloride, benzene, chlorobenzene, chloroform, and ethylbenzene.The industrial/commercial worker COCs are: 1,1-dichloroethane, trichloroethene, vinyl chloride, benzene, chlorobenzene, chloroform, and ethylbenzene.

4. Risks above threshold levels resulting from potential vapor intrusion of OU2 COCs exist where a potential for vapor intrusion at levels of concern has been identified (see Table 7) and the calculated risk from VOCs identified as OU2 COCs exceeds identified risk thresholds (cancer risk exceeding 1E-4 or organ-specific hazard indices exceeding 1.0).

5. The vapor intrusion pathway evaluation concluded that vapor intrusion of TCE may be occurring at concentrations exceeding comparison levels at these locations. At 300 Ferry Boulevard, an indoor air source of TCE also appears to be present. However, because calculated risks from VOCs identified as OU2 COCs were below risk thresholds, there are no risks above threshold levels resulting from potential vapor intrusion of OU2 COCs at these locations.

6. The vapor intrusion pathway evaluation concluded that vapor intrusion of TCE may be occurring at these locations, but not at concentrations exceeding comparison levels. The elevated levels of TCE in indoor air samples from Sleepy's and Payless; the consistently lower TCE concentrations (below comparison levels) in adjacent and nearby stores and in two of the three Payless samples; and the presence of several non-OU2 COCs in indoor air at these locations, but not in nearby groundwater or outdoor ambient air suggest a strong likelihood that the TCE detected in indoor air at the Sleepy's and Payless stores is primarily the result of indoor air sources such as off-gassing of VOCs from the products sold. See text section 4.2.2 for details of the vapor intrusion pathway evaluation. Calculated risks from VOCs identified as OU2 COCs were below risk thresholds for commercial exposures at the Payless store. The calculated non-cancer HI from VOCs identified as OU2 COCs of 1.5 at the Sleepy's store is entirely attributed to TCE. Because the vapor intrusion pathway evaluation concluded that TCE detected in indoor air is primarily the result of indoor air sources at both stores; there are no risks above threshold levels resulting from potential vapor intrusion of OU2 COCs at these locations.

FIGURES



Legend

- Residential Structure with SSD System
- Residential Structure Without SSD System
- Commercial Buildings
- Residential structure and zoning, but current commercial use (No SSD System)
- Indoor Air Area of Concern for Industrial/Commerical Receptors
- Indoor Air Areas of Concern for Residential Receptors
- Area Currently Capped and has Subsurface Venting System

Notes:

1. Estimated Indoor Air Areas of Concern based on groundwater vapor intrusion comparison levels corresponding to cancer risk levels of 1 x 10^{-6} and Hazard Quotients of 1.0 based on 2009 and 2012 groundwater sampling results for site COCs for Industrial/Commercial and Residential exposure scenarios.

2. SSD = Sub-slab depressurization vapor mitigation system.

3. Residential Sub-Slab Depressurization (SSD) Systems installed during 2003/2004 removal actions. Status shown is based on CTDEEP inspections in 2014/2015.

4. Current property use of 500 Ferry Boulevard is commercial, but zoning is residential.

N

0 200 400 800
Feet 1:4,800

Nobis
Engineering a Sustainable Future
Nobis Engineering, Inc.
18 Chenell Drive
Concord, NH 03301
T(603) 224-4182
www.nobiseng.com
Client-Focused, Employee-Owned

FIGURE ES-1

INDOOR AIR AREAS OF CONCERN BASED ON 1 x 10^{-6} CANCER RISK OR HAZARD QUOTIENT OF 1.0 COMPARISON LEVELS

RAYMARK - OU2 - GROUNDWATER
STRATFORD, CONNECTICUT

PREPARED BY: JH	CHECKED BY: DB
PROJECT NO. 80043	DATE: APRIL 2015

Path: R:\80000 Task Orders\80043 Raymark OU2 RI-FS\Technical Data\GIS Data\Figures\Revised 6-1 to 6-3 Figures for RI Update Rpt\January 2015 Revisions\Fig_ES-1_Raymark_Areas_of_Concern.mxd Date Printed: 4/13/2015

Legend

- Monitoring Well Installed and Sampled in 2012
- Existing Monitoring Well Sampled in 2012, but not in 2009/10
- Monitoring Well Sampled in both 2012 and in 2009/10
- Monitoring Well Sampled in 2009/10, but not in 2012
- DNAPL Recovery Well Included in 2012 Down-Hole Geophysical Survey

Notes:

1. This base plan compiled from the following: Diversified Tech. Corp., North Haven, CT; Geod-Photogrammetric Sciences Survey Tech., Newfoundland, NJ; Deluca-Hoffman Assoc., Inc. S. Portland, ME; and CT-GIS.

2. Aerial photography provided by ESRI

3. Locations of site features depicted hereon are approximate and given for illustrative purposes only.

N

0 200 400 800

Feet

1 inch = 400 feet

Nobis
Engineering a Sustainable Future
Nobis Engineering, Inc.
585 Middlesex Street
Lowell, MA 01851
T(978) 683-0891
www.nobiseng.com
Client-Focused, Employee-Owned

FIGURE 1

GROUNDWATER AND DNAPL INVESTIGATION LOCATIONS - 2009/10 AND 2012 SAMPLING EVENTS
RAYMARK - OU2 - GROUNDWATER
STRATFORD, CONNECTICUT

PREPARED BY: JH	CHECKED BY: DB
PROJECT NO. 80043	DATE: APRIL 2015

Path: R:\80000 Task Orders\80043 Raymark OU2 RI-FS\Technical Data\GIS Data\Figures\Revised 6-1 to 6-3 Figures for RI Update Rpt\January 2015 Revisions\Fig_1_Raymark_GW_Locations.mxd Date Printed: 4/8/2015

Legend

- 2012 Sub-Slab Soil Gas Summa Canister Sample Location
- 2012/13 Sub-Slab Soil Gas Summa Canister Sample Location
- 2009 Soil Gas Sampling Location
- Buildings in Which 2012/13 Indoor Air Sampling was Performed

Notes:

1. This base plan compiled from the following: Diversified Tech. Corp., North Haven, CT; Geod-Photogrammetric Sciences Survey Tech., Newfoundland, NJ; Deluca-Hoffman Assoc., Inc. S. Portland, ME; and CT-GIS.

2. Aerial photography provided by ESRI

3. Locations of site features depicted hereon are approximate and given for illustrative purposes only.

0 100 200 400
Feet
1:3,200

N

Nobis
Engineering a Sustainable Future
Nobis Engineering, Inc.
585 Middlesex Street
Lowell, MA 01851
T(978) 683-0891
www.nobiseng.com
Client-Focused, Employee-Owned

FIGURE 2

2009 SOIL GAS, 2012/13 SUB-SLAB SOIL GAS, AND 2012/13 INDOOR AIR SAMPLING LOCATIONS

RAYMARK - OU2 - GROUNDWATER
STRATFORD, CONNECTICUT

PREPARED BY: JH	CHECKED BY: DB
PROJECT NO. 80043	DATE: APRIL 2015

Path: R:\80000 Task Orders\80043 Raymark OU2 RI-FS\Technical Data\GIS Data\Figures\Revised 6-1 to 6-3 Figures for RI Update Rpt\January 2015 Revisions\Fig_2_Raymark_IA_SS_Locations.mxd Date Printed: 4/8/2015

Legend

Estimated Indoor Air Areas of Concern Based on Groundwater Vapor Intrusion Comparison Levels Corresponding to Cancer Risk Levels of 1 x 10^{-4} and Hazard Quotients of 1.0 Based on 2009 and 2012 Groundwater Sampling Results for site COCs. (COCs not listed do not exceed applicable comparison levels).

Estimated Areas of Concern:

Industrial:
22 µg/L Trichloroethene
250 µg/L Vinyl Chloride

Residential:
200 µg/L 1,1-Dichloroethene
140 µg/L Benzene
410 µg/L Chlorobenzene
5.2 µg/L Trichloroethene
15 µg/L Vinyl Chloride

Area Currently Capped and Equipped with Subsurface Venting System

COCs exceed applicable comparison levels, but evidence indicates off-site source (Industrial)

COCs exceed applicable comparison levels, but evidence indicates off-site source (Residential)

Residential Sub-Slab Depressurization (SSD) Systems Installed During 2003/2004 Removal Actions. Status Shown is Based on CTDEEP Inspections in 2014/2015

Residential Structure with SSD System

Residential Structure Without SSD System

Commercial/Industrial

Commercial Buildings

Residential structure and zoning, but current commercial use (No SSD System)

0 200 400 800
Feet 1:4,800

N

Nobis
Engineering a Sustainable Future
Nobis Engineering, Inc.
18 Chenell Drive
Concord, NH 03301
T(603) 224-4182
www.nobiseng.com
Client-Focused, Employee-Owned

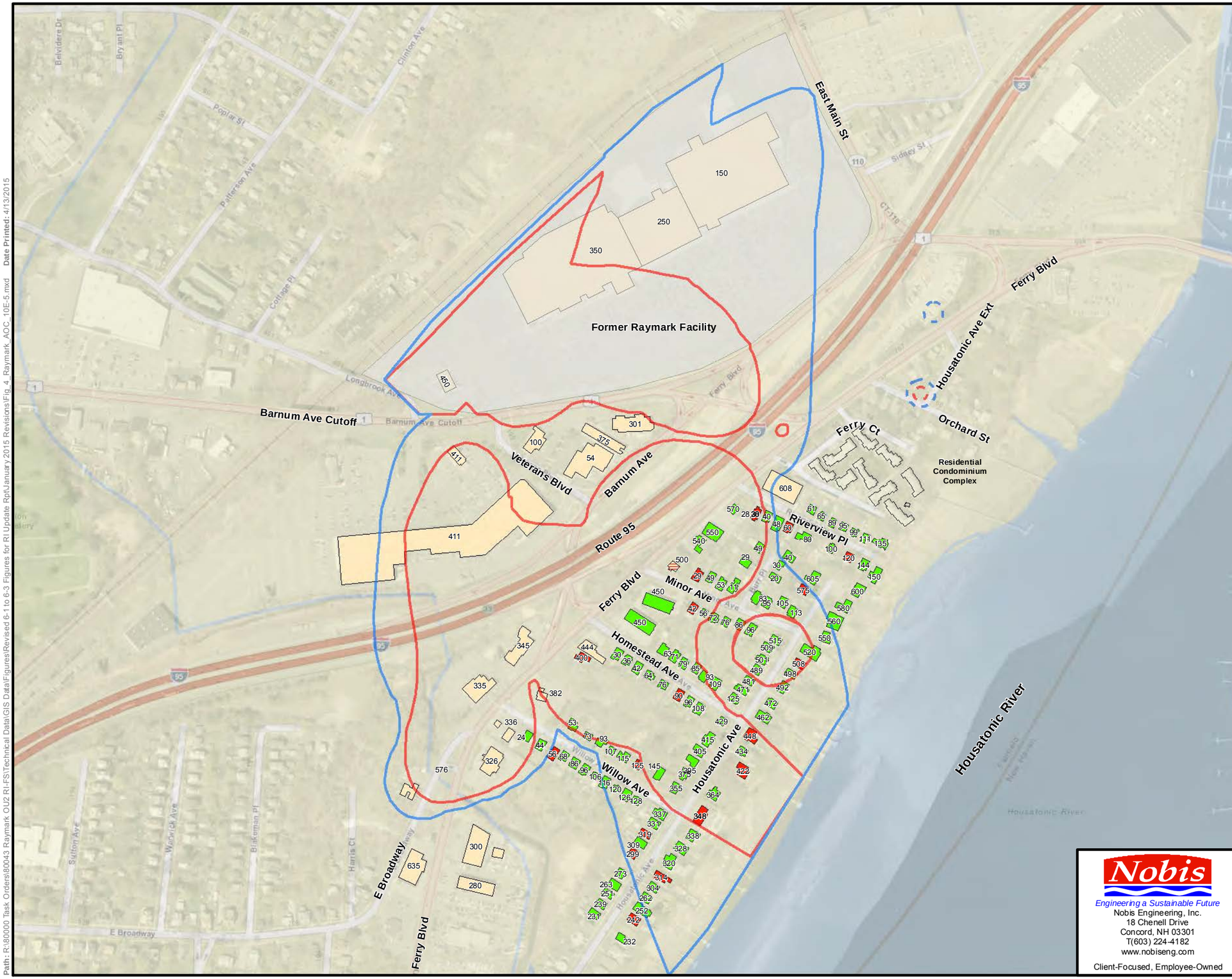
FIGURE 3

INDOOR AIR AREAS OF CONCERN BASED ON 2009-2012 GROUNDWATER 1 x 10^{-4} CANCER RISK OR HAZARD QUOTIENT OF 1.0 COMPARISON LEVELS FOR COCs

RAYMARK - OU2 - GROUNDWATER
STRATFORD, CONNECTICUT

PREPARED BY: JH	CHECKED BY: DB
PROJECT NO. 80043	DATE: ARPIL 2015

Path: R:\80000 Task Orders\80043 Raymark OU2 RI-FS\Technical Data\GIS Data\Figures\Revised 6-1 to 6-3 Figures for RI Update Rpt\January 2015 Revisions\Fig_3_Raymark_AOC_10E-4.mxd **Date Printed:** 4/10/2015



Legend

Estimated Indoor Air Areas of Concern Based on Groundwater Vapor Intrusion Comparison Levels Corresponding to Cancer Risk Levels of 1 x 10^{-5} and Hazard Quotients of 1.0 Based on 2009 and 2012 Groundwater Sampling Results for site COCs. (COCs not listed do not exceed applicable comparison levels).

Estimated Areas of Concern:

Industrial:
330 µg/L 1,1-Dichloroethane
69 µg/L Benzene
22 µg/L Trichloroethene
25 µg/L Vinyl Chloride

Residential:
76 µg/L 1,1-Dichloroethane
200 µg/L 1,1-Dichloroethene
16 µg/L Benzene
410 µg/L Chlorobenzene
8.1 µg/L Chloroform
35 µg/L Ethylbenzene
5.2 µg/L Trichloroethene
1.5 µg/L Vinyl Chloride

COCs exceed applicable comparison levels, but evidence indicates off-site source (Industrial)

COCs exceed applicable comparison levels, but evidence indicates off-site source (Residential)

Area Currently Capped and Equipped with Subsurface Venting System

Residential Sub-Slab Depressurization (SSD) Systems Installed During 2003/2004 Removal Actions. Status Shown is Based on CTDEEP Inspections in 2014/15.

Residential Structure with SSD System

Residential Structure Without SSD System

Commercial/Industrial

Commercial Buildings

Residential structure and zoning, but current commercial use (No SSD System)

0 200 400 800
Feet 1:4,800

N

Nobis
Engineering a Sustainable Future
Nobis Engineering, Inc.
18 Chenell Drive
Concord, NH 03301
T(603) 224-4182
www.nobiseng.com
Client-Focused, Employee-Owned

FIGURE 4

INDOOR AIR AREAS OF CONCERN BASED ON 2009-2012 GROUNDWATER 1 x 10^{-5} CANCER RISK OR HAZARD QUOTIENT OF 1.0 COMPARISON LEVELS FOR COCs

RAYMARK - OU2 - GROUNDWATER
STRATFORD, CONNECTICUT

PREPARED BY: JH	CHECKED BY: DB
PROJECT NO. 80043	DATE: APRIL 2015

Legend

Estimated Indoor Air Areas of Concern Based on Groundwater Vapor Intrusion Comparison Levels Corresponding to Cancer Risk Levels of 1 x 10^{-6} and Hazard Quotients of 1.0 Based on 2009 and 2012 Groundwater Sampling Results for site COCs. (COCs not listed do not exceed applicable comparison levels).

Estimated Areas of Concern:

Industrial:
33 µg/L 1,1-Dichloroethane
6.9 µg/L Benzene
3.6 µg/L Chloroform
15 µg/L Ethylbenzene
7.4 µg/L Trichloroethene
2.5 µg/L Vinyl Chloride

Residential:
7.6 µg/L 1,1-Dichloroethane
200 µg/L 1,1-Dichloroethene
1.6 µg/L Benzene
410 µg/L Chlorobenzene
0.81 µg/L Chloroform
3.5 µg/L Ethylbenzene
1.2 µg/L Trichloroethene
0.15 µg/L Vinyl Chloride

COCs excced applicable comparison levels, but evidence indicates off-site source (Industrial)

COCs excced applicable comparison levels, but evidence indicates off-site source (Residential)

Area Currently Capped and Equipped with Subsurface Venting System

Residential Sub-Slab Depressurization (SSD) Systems Installed During 2003/2004 Removal Actions. Status Shown is Based on CTDEEP Inspections in 2014/15.

Residential Structure with SSD System

Residential Structure Without SSD System

Commercial/Industrial

Commercial Buildings

Residential structure and zoning, but current commercial use (No SSD System)

0 200 400 800
Feet

N

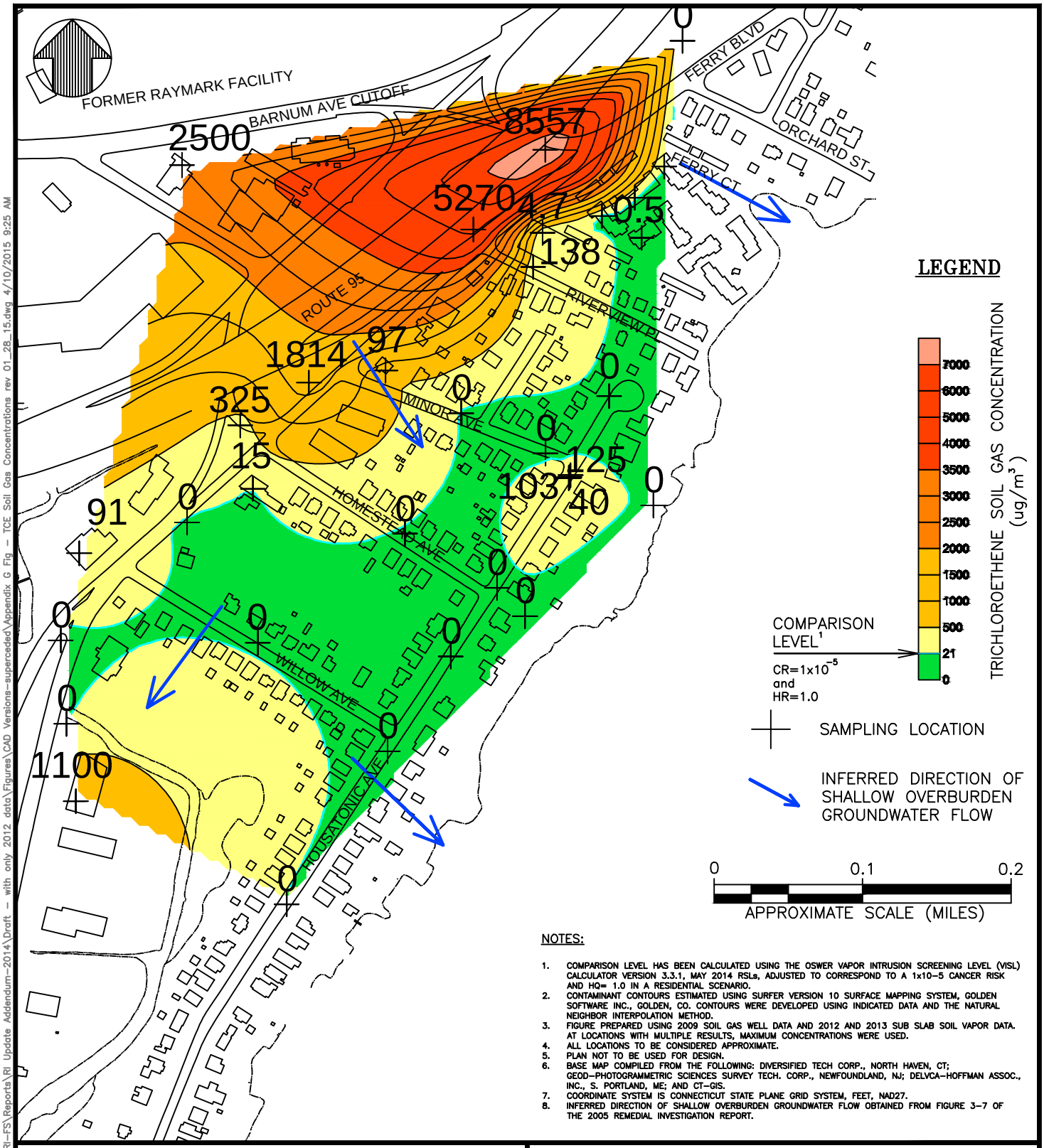
Nobis
Engineering a Sustainable Future
Nobis Engineering, Inc.
18 Chenell Drive
Concord, NH 03301
T(603) 224-4182
www.nobiseng.com
Client-Focused, Employee-Owned

FIGURE 5

INDOOR AIR AREAS OF CONCERN BASED ON 2009-2012 GROUNDWATER 1 x 10^{-6} CANCER RISK OR HAZARD QUOTIENT OF 1.0 COMPARISON LEVELS FOR COCs

RAYMARK - OU2 - GROUNDWATER
STRATFORD, CONNECTICUT

PREPARED BY: JH	CHECKED BY: DB
PROJECT NO. 80043	DATE: APRIL 2015



NOTES:

1. COMPARISON LEVEL HAS BEEN CALCULATED USING THE OSWER VAPOR INTRUSION SCREENING LEVEL (VISL) CALCULATOR VERSION 3.3.1, MAY 2014 RSLs, ADJUSTED TO CORRESPOND TO A 1x10-5 CANCER RISK AND HQ= 1.0 IN A RESIDENTIAL SCENARIO.
2. CONTAMINANT CONTOURS ESTIMATED USING SURFER VERSION 10 SURFACE MAPPING SYSTEM, GOLDEN SOFTWARE INC., GOLDEN, CO. CONTOURS WERE DEVELOPED USING INDICATED DATA AND THE NATURAL NEIGHBOR INTERPOLATION METHOD.
3. FIGURE PREPARED USING 2009 SOIL GAS WELL DATA AND 2012 AND 2013 SUB SLAB SOIL VAPOR DATA. AT LOCATIONS WITH MULTIPLE RESULTS, MAXIMUM CONCENTRATIONS WERE USED.
4. ALL LOCATIONS TO BE CONSIDERED APPROXIMATE.
5. PLAN NOT TO BE USED FOR DESIGN.
6. BASE MAP COMPILED FROM THE FOLLOWING: DIVERSIFIED TECH CORP., NORTH HAVEN, CT; GEOD-PHOTOGRAMMETRIC SCIENCES SURVEY TECH. CORP., NEWFOUNDLAND, NJ; DELVCA-HOFFMAN ASSOC., INC., S. PORTLAND, ME; AND CT-GIS.
7. COORDINATE SYSTEM IS CONNECTICUT STATE PLANE GRID SYSTEM, FEET, NAD27.
8. INFERRED DIRECTION OF SHALLOW OVERBURDEN GROUNDWATER FLOW OBTAINED FROM FIGURE 3-7 OF THE 2005 REMEDIAL INVESTIGATION REPORT.

Nobis

Engineering a Sustainable Future

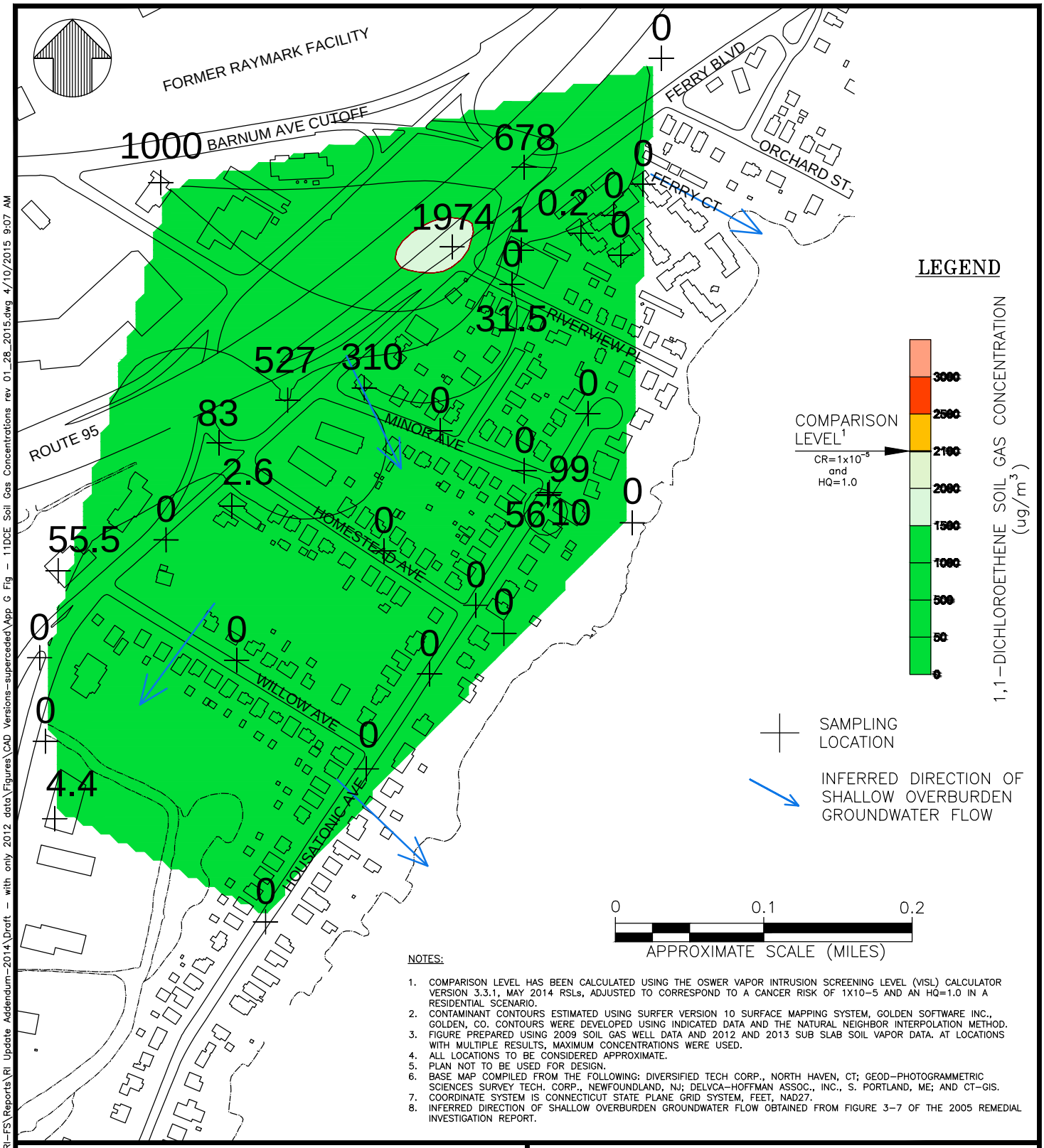
Client-Focused, Employee-Owned

FIGURE 6

2009 SOIL GAS AND 2012/13 SUB-SLAB SOIL GAS TRICHLOROETHENE CONCENTRATIONS
RAYMARK - OU2 - GROUNDWATER
STRATFORD, CONNECTICUT

DRAWN BY:	EHJ	APPROVED BY:	DB
PROJECT NO.	80043.09	DATE:	APRIL 2015

R:\80000 Task Orders\80043 Raymark OU2 RI-FS\Reports\RI Update Addendum-2014\Draft - with only 2012 data\Figures\CAD Versions-superceded\Appendix G Fig - TCE Soil Gas Concentrations rev 01_28_15.dwg 4/10/2015 9:25 AM



NOTES:

1. COMPARISON LEVEL HAS BEEN CALCULATED USING THE OSWER VAPOR INTRUSION SCREENING LEVEL (VISL) CALCULATOR VERSION 3.3.1, MAY 2014 RSLs, ADJUSTED TO CORRESPOND TO A CANCER RISK OF 1X10–5 AND AN HQ=1.0 IN A RESIDENTIAL SCENARIO.
2. CONTAMINANT CONTOURS ESTIMATED USING SURFER VERSION 10 SURFACE MAPPING SYSTEM, GOLDEN SOFTWARE INC., GOLDEN, CO. CONTOURS WERE DEVELOPED USING INDICATED DATA AND THE NATURAL NEIGHBOR INTERPOLATION METHOD.
3. FIGURE PREPARED USING 2009 SOIL GAS WELL DATA AND 2012 AND 2013 SUB SLAB SOIL VAPOR DATA. AT LOCATIONS WITH MULTIPLE RESULTS, MAXIMUM CONCENTRATIONS WERE USED.
4. ALL LOCATIONS TO BE CONSIDERED APPROXIMATE.
5. PLAN NOT TO BE USED FOR DESIGN.
6. BASE MAP COMPILED FROM THE FOLLOWING: DIVERSIFIED TECH CORP., NORTH HAVEN, CT; GEOD–PHOTOGRAMMETRIC SCIENCES SURVEY TECH. CORP., NEWFOUNDLAND, NJ; DELVCA–HOFFMAN ASSOC., INC., S. PORTLAND, ME; AND CT–GIS.
7. COORDINATE SYSTEM IS CONNECTICUT STATE PLANE GRID SYSTEM, FEET, NAD27.
8. INFERRED DIRECTION OF SHALLOW OVERBURDEN GROUNDWATER FLOW OBTAINED FROM FIGURE 3–7 OF THE 2005 REMEDIAL INVESTIGATION REPORT.

Nobis

Engineering a Sustainable Future

Client-Focused, Employee-Owned

FIGURE 7

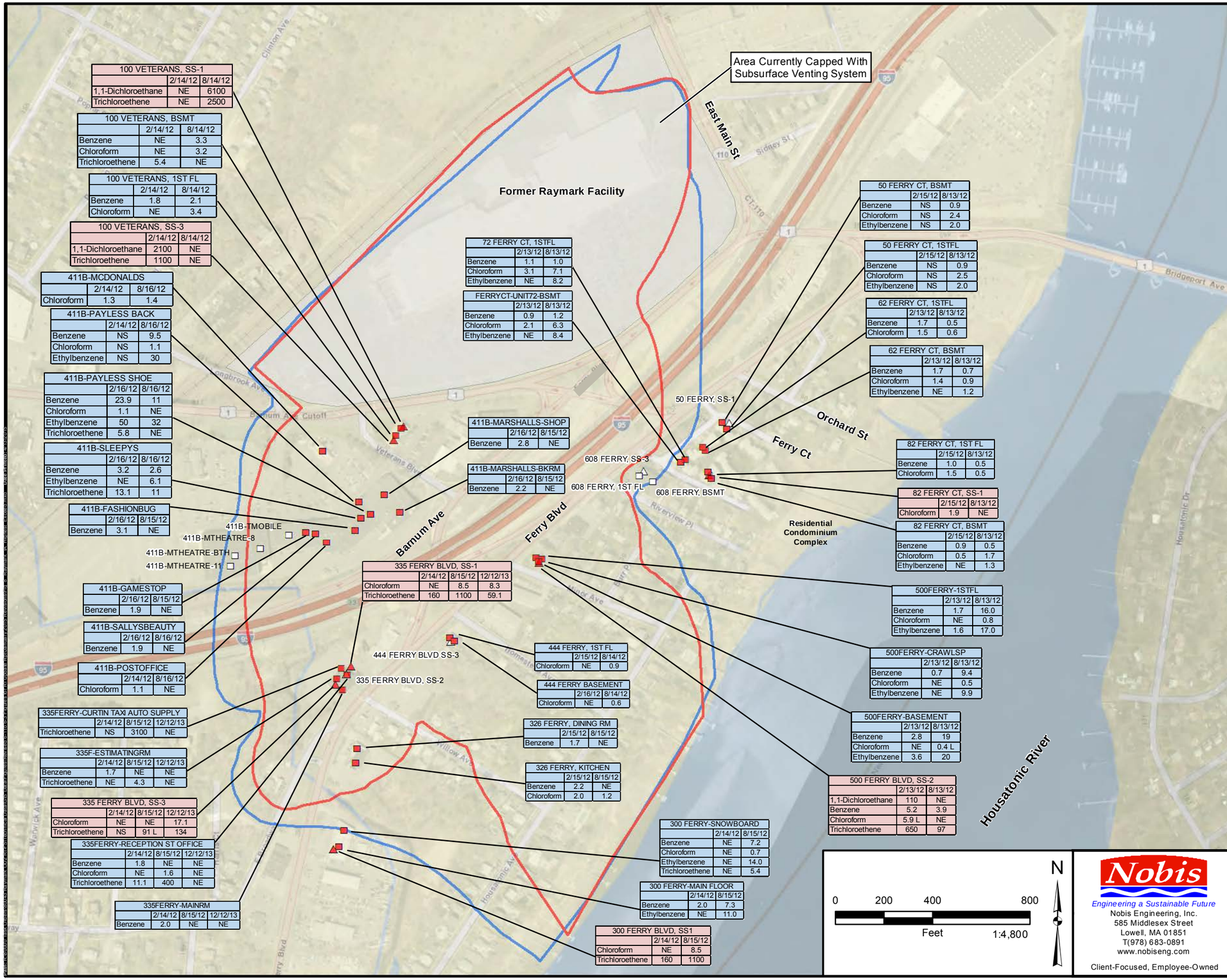
2009 SOIL GAS AND 2012/13 SUB-SLAB SOIL GAS 1,1-DICHLORETHENE CONCENTRATIONS

RAYMARK - OU2 - GROUNDWATER

STRATFORD, CONNECTICUT

DRAWN BY:	EHJ	APPROVED BY:	DB
PROJECT NO.	80043.09	DATE:	APRIL 2015

R:\80000 Task Orders\80043 Raymark OU2 RI-FS\Reports\RI Update Addendum-2014\Draft - with only 2012 data\Figures\CAD Versions-superceded\App G Fig - 11DCE Soil Gas Concentrations rev 01_28_2015.dwg 4/10/2015 9:07 AM



100 VETERANS, SS-1	2/14/12	8/14/12
1,1-Dichloroethane	NE	6100
Trichloroethene	NE	2500

100 VETERANS, BSMT	2/14/12	8/14/12
Benzene	NE	3.3
Chloroform	NE	3.2
Trichloroethene	5.4	NE

100 VETERANS, 1ST FL	2/14/12	8/14/12
Benzene	1.8	2.1
Chloroform	NE	3.4

100 VETERANS, SS-3	2/14/12	8/14/12
1,1-Dichloroethane	2100	NE
Trichloroethene	1100	NE

411B-MCDONALDS	2/14/12	8/16/12
Chloroform	1.3	1.4

411B-PAYLESS BACK	2/14/12	8/16/12
Benzene	NS	9.5
Chloroform	NS	1.1
Ethylbenzene	NS	30

411B-PAYLESS SHOE	2/16/12	8/16/12
Benzene	23.9	11
Chloroform	1.1	NE
Ethylbenzene	50	32
Trichloroethene	5.8	NE

411B-SLEEPYS	2/16/12	8/16/12
Benzene	3.2	2.6
Ethylbenzene	NE	6.1
Trichloroethene	13.1	11

411B-FASHIONBUG	2/16/12	8/15/12
Benzene	3.1	NE

411B-GAMESTOP	2/16/12	8/15/12
Benzene	1.9	NE

411B-SALLYSBEAUTY	2/16/12	8/16/12
Benzene	1.9	NE

411B-POSTOFFICE	2/14/12	8/16/12
Chloroform	1.1	NE

335FERRY-CURTIN TAXI AUTO SUPPLY	2/14/12	8/15/12	12/12/13
Trichloroethene	NS	3100	NE

335F-ESTIMATINGRM	2/14/12	8/15/12	12/12/13
Benzene	1.7	NE	NE
Trichloroethene	NE	4.3	NE

335 FERRY BLVD, SS-3	2/14/12	8/15/12	12/12/13
Chloroform	NE	NE	17.1
Trichloroethene	NS	91 L	134

335FERRY-RECEPTION ST OFFICE	2/14/12	8/15/12	12/12/13
Benzene	1.8	NE	NE
Chloroform	NE	1.6	NE
Trichloroethene	11.1	400	NE

335FERRY-MAINRM	2/14/12	8/15/12	12/12/13
Benzene	2.0	NE	NE

72 FERRY CT, 1STFL	2/13/12	8/13/12
Benzene	1.1	1.0
Chloroform	3.1	7.1
Ethylbenzene	NE	8.2

FERRYCT-UNIT72-BSMT	2/13/12	8/13/12
Benzene	0.9	1.2
Chloroform	2.1	6.3
Ethylbenzene	NE	8.4

411B-MARSHALLS-SHOP	2/16/12	8/15/12
Benzene	2.8	NE

411B-MARSHALLS-BKRM	2/16/12	8/15/12
Benzene	2.2	NE

335 FERRY BLVD, SS-1	2/14/12	8/15/12	12/12/13
Chloroform	NE	8.5	8.3
Trichloroethene	160	1100	59.1

444 FERRY, 1ST FL	2/15/12	8/14/12
Chloroform	NE	0.9

444 FERRY BASEMENT	2/16/12	8/14/12
Chloroform	NE	0.6

326 FERRY, DINING RM	2/15/12	8/15/12
Benzene	1.7	NE

326 FERRY, KITCHEN	2/15/12	8/15/12
Benzene	2.2	NE
Chloroform	2.0	1.2

300 FERRY-SNOWBOARD	2/14/12	8/15/12
Benzene	NE	7.2
Chloroform	NE	0.7
Ethylbenzene	NE	14.0
Trichloroethene	NE	5.4

300 FERRY-MAIN FLOOR	2/14/12	8/15/12
Benzene	2.0	7.3
Ethylbenzene	NE	11.0

300 FERRY BLVD, SS1	2/14/12	8/15/12
Chloroform	NE	8.5
Trichloroethene	160	1100

50 FERRY CT, BSMT	2/15/12	8/13/12
Benzene	NS	0.9
Chloroform	NS	2.4
Ethylbenzene	NS	2.0

50 FERRY CT, 1STFL	2/15/12	8/13/12
Benzene	NS	0.9
Chloroform	NS	2.5
Ethylbenzene	NS	2.0

62 FERRY CT, 1STFL	2/13/12	8/13/12
Benzene	1.7	0.5
Chloroform	1.5	0.6

62 FERRY CT, BSMT	2/13/12	8/13/12
Benzene	1.7	0.7
Chloroform	1.4	0.9
Ethylbenzene	NE	1.2

82 FERRY CT, 1ST FL	2/15/12	8/13/12
Benzene	1.0	0.5
Chloroform	1.5	0.5

82 FERRY CT, SS-1	2/15/12	8/13/12
Chloroform	1.9	NE

82 FERRY CT, BSMT	2/15/12	8/13/12
Benzene	0.9	0.5
Chloroform	0.5	1.7
Ethylbenzene	NE	1.3

500FERRY-1STFL	2/13/12	8/13/12
Benzene	1.7	16.0
Chloroform	NE	0.8
Ethylbenzene	1.6	17.0

500FERRY-CRAWLSP	2/13/12	8/13/12
Benzene	0.7	9.4
Chloroform	NE	0.5
Ethylbenzene	NE	9.9

500FERRY-BASEMENT	2/13/12	8/13/12
Benzene	2.8	19
Chloroform	NE	0.4 L
Ethylbenzene	3.6	20

500 FERRY BLVD, SS-2	2/13/12	8/13/12
1,1-Dichloroethane	110	NE
Benzene	5.2	3.9
Chloroform	5.9 L	NE
Trichloroethene	650	97

0 200 400 800
Feet 1:4,800

N

Nobis
Engineering a Sustainable Future
Nobis Engineering, Inc.
585 Middlesex Street
Lowell, MA 01851
T(978) 683-0891
www.nobiseng.com
Client-Focused, Employee-Owned

Legend

Indoor Air/Soil Gas Vapor Intrusion Comparison Levels Corresponding to Cancer Risk Levels of 1 x 10^{-6} and Hazard Quotients of 1.0

Sample Locations with Criteria Comparisons

- ▲ Sub-Slab Soil Gas (2012/13) with Exceedances
- △ Sub-Slab Soil Gas (2012/13) with no Exceedances
- ■ Indoor Air (2012/13) with Exceedances
- □ Indoor Air (2012/13) with no Exceedances

NS = not sampled
NE = no exceedance

TABLE 1
Indoor Air Comparison Levels (all units are µg/m³)

Analyte	Residential	Industrial
1,1-Dichloroethane	1.8	7.7
1,1-Dichloroethene	210	880
Benzene	0.36	1.6
Chlorobenzene	52	220
Chloroform	0.12	0.53
Ethylbenzene	1.1	4.9
Trichloroethene	0.48	3
Vinyl Chloride	0.17	2.8

TABLE 2
Soil Gas Comparison Levels (all units are µg/m³)

Analyte	Residential	Industrial
1,1-Dichloroethane	18	77
Benzene	3.6	16
Chloroform	1.2	5.3
Trichloroethene	4.8	30

Area Currently Capped and Equipped with Subsurface Venting System

Indoor Air Areas of Concern based on Groundwater Vapor Intrusion Comparison Levels Corresponding to Cancer Risk Levels of 1 x 10^{-6} and Hazard Quotients of 1.0. (COCs not listed do not exceed applicable comparison levels.)

Industrial:
33 µg/L 1,1-Dichloroethane
6.9 µg/L Benzene
3.6 µg/L Chloroform
15 µg/L Ethylbenzene
7.4 µg/L Trichloroethene
2.5 µg/L Vinyl Chloride

Residential:
7.6 µg/L 1,1-Dichloroethane
200 µg/L 1,1-Dichloroethene
1.6 µg/L Benzene
410 µg/L Chlorobenzene
0.81 µg/L Chloroform
3.5 µg/L Ethylbenzene
1.2 µg/L Trichloroethene
0.15 µg/L Vinyl Chloride

Notes:

1. Blue tags indicate Indoor Air exceedances based on Table #1 during the 2012/13 sampling event. Units are µg/m³.
2. Red tags indicate Sub-Slab Soil Gas results based on Table #2 during the 2012/13 sampling event based on table #2. Units are µg/m³.
3. 2012/13 sub-slab soil gas data are from fixed laboratory (EPA NERL).
4. Results with "L" qualifier indicates an estimated value, below the calibration range.
5. 500 Ferry Boulevard is currently a commercial property; however, it is zoned residential. Exceedances of residential comparison levels are shown.

FIGURE 8

2102/13 SUB-SLAB SOIL GAS AND INDOOR AIR RESULTS VS. COMPARISON LEVELS FOR 1 x 10^{-6} CANCER RISK OR HAZARD QUOTIENT OF 1.0

RAYMARK - OU2 - GROUNDWATER
STRATFORD, CONNECTICUT

PREPARED BY: JH	CHECKED BY: DB
PROJECT NO. 80043	DATE: APRIL 2015

APPENDIX A

BORING LOG

Nobis — Engineering a Sustainable Future

Project:	Raymark
Location:	Stratford, CT
Nobis Project No.:	80043.03
Boring No.:	**SB-601 (MW-601)**
Boring Location:	Village Condos, Ferry Ct.
Checked by:	
Date Start:	April 2, 2012
Date Finish:	April 2, 2012
Contractor:	Drilex Environmental, Inc.
Driller:	J. Jalutkewicz
Nobis Rep.:	J. Kalafatis
Rig Type / Model:	Truck / CME 55
Hammer Type:	Automatic Hammer
Hammer Hoist:	Automatic
Ground Surface Elev.:	
Datum:	NAVD 88

	Drilling Method	Sampler
Type	Casing	Split-Spoon
Size ID (in.)	4"	1-3/8
Advancement	Drive and Wash	140-lb Hammer

Groundwater Observations

Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
▽ 04/02/12	13:25	6.3	18	20	20 min
▼ 04/03/12	10:00	10.4	0	18	21 hrs
▼ 04/05/12	09:05	10.65	0	18	3 days

Depth (ft.)	Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	PID (ppm)	Ground Water	Stratum Elev. / Depth (ft.)	Sample Description and Remarks (Classification System: Modified Burmister)	Well Detail	Notes
	S-1	17	0-2	8	0		/ 0.2 - ASPHALT	S-1: Medium dense, brown, fine to coarse SAND and Gravel. dry. -	Cement Cap w/Flush Mount Road Box (0' to 0.5')	
1				5 -						
				5 -						
2				17 -						
	S-2	18	2-4	17 -	0			S-2: Very dense, brown, fine to coarse SAND and Gravel. - dry. -		
3				32 -						
				34 -						
4				20 -						
	S-3	17	4-6	35 -	0			S-3: Very dense, brown, fine to coarse SAND and Gravel. - moist. -	Bentonite Seal (0.5' to 6')	
5				33 -						
				25 -						
6				46 -						
	S-4	21	6-8	34 -	0	▽	SAND & - GRAVEL -	S-4: Very dense, brown, fine to coarse SAND and Gravel. - moist. -	Solid PVC Pipe (0' to 8')	
7				42 -						
				47 -						
8				53 -						
	S-5	17	8-10	19 -	0			S-5: Very dense, brown, fine to coarse SAND and Gravel, - trace Silt. moist. -		
9				27 -						
				38 -						
10				72 -						
	S-6	5	10-10.4	75/5" -	0.2	▼		S-6: Very dense, brown, GRAVEL, little fine to coarse - Sand, trace Silt. wet. -		
11										
12										
	S-7	15	12-14	7 -	0		/ 12.4 -	S-7(A) (5"): Medium dense, brown/gray, fine to coarse - SAND and Gravel, trace Silt. wet. -		
13				12 -				S-7(B) (10"): Medium dense, brown, fine to medium - SAND, trace Silt. wet. -	Filter Sand (6' to 18')	
				12 -						
14				12 -						
	S-8	12	14-16	9 -	0		SAND -	S-8: Medium dense, brown, fine to medium SAND, trace - Silt. wet. -	Screened PVC Pipe (8' to 18')	
15				9 -						
				8 -						
16				7 -			/ 16.0 -			
	S-9	18	16-18	3 -	0			S-9: Medium dense, brown, SILT, little fine Sand. - continuous 1/64" silt varves wet. -		
17				5 -			SILT -			
				7 -						
18				9 -			/ 18.0 -			
	S-10	14	18-20	11 -	0.1			S-10: Medium dense, brown, fine to medium SAND, some - coarse Sand, trace Silt. wet. -		
19				12 -			SAND -			
				9 -						
20				13 -			/ 20.0 -			
								Boring terminated at 20 feet. -		
21										
22										
23										
24										
25										

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:

Soil descriptions are based on visual classifications and should be considered approximate. Stratification lines are approximate boundaries between stratums; transitions may be gradual.

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 8/23/12 15:35 - R:\80000 TASK ORDERS\80043 RAYMARK OU2 RI-FS\TECHNICAL DATA\GINT\APRIL 2012 BORING LOGS.GPJ

BORING LOG

Nobis — Engineering a Sustainable Future

Project:	Raymark
Location:	Stratford, CT
Nobis Project No.:	80043.03
Boring No.:	**SB-602 (MW-602)**
Boring Location:	Village Condos, Ferry Ct.
Checked by:	
Date Start:	April 3, 2012
Date Finish:	April 3, 2012
Contractor:	Drilex Environmental, Inc.
Driller:	J. Jalutkewicz
Nobis Rep.:	J. Kalafatis
Rig Type / Model:	Truck / CME 55
Hammer Type:	Automatic Hammer
Hammer Hoist:	Automatic
Ground Surface Elev.:	
Datum:	NAVD 88

	Drilling Method	Sampler
Type	Casing	Split-Spoon
Size ID (in.)	4"	1-3/8
Advancement	Drive and Wash	140-lb Hammer

Groundwater Observations

Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
▼ 04/05/12	08:25	12.25	0	18	2 days

Depth (ft.)	Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	PID (ppm)	Ground Water	Stratum Elev. / Depth (ft.)	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	WELL DETAIL	NOTES
1	S-1	6	0-2	12 8 5 3	0.3		/ 0.1 - ASPHALT	S-1: Medium dense, brown, fine to coarse SAND, little Silt, trace Gravel. moist. (FILL).	Cement Cap w/Flush Mount Road Box (0' to 0.5')	
3	S-2	10	2-4	7 9 12 15	0.4		FILL / 4.0	S-2: Medium dense, brown, fine to coarse SAND, some Gravel, little Silt. moist. (FILL).		
5	S-3	14	4-6	36 21 25 28	0.4			S-3: Dense, brown, fine to coarse SAND, some Gravel, trace Silt. wet.	Bentonite Seal (0.5' to 6')	
7	S-4	22	6-8	23 38 34 46	0.6			S-4: Very dense, brown, fine to coarse SAND, some Gravel, trace Silt. wet.	Solid PVC Pipe (0' to 8')	
9	S-5	18	8-10	43 68 64 51	0.1			S-5: Very dense, brown, SAND and Gravel, trace Silt. wet.		
11	S-6	5	10-10.4	75/5"	0.1		SAND & GRAVEL	S-6: Spoon refusal, only drill cuttings recovered.		
13	S-7	12	12-14	9 16 8 10	0.8	▼		S-7: Medium dense, brown, fine to coarse SAND, little Silt. wet.	Filter Sand (6' to 18')	
15	S-8	12	14-16	9 8 7 6	0.9			S-8: Medium dense, brown, fine to coarse SAND, trace Gravel, trace Silt. wet.	Screened PVC Pipe (8' to 18')	
17	S-9	18	16-18	7 4 4 6	0.6		/ 18.0	S-9: Medium dense, brown, fine to coarse SAND, little Gravel, trace Silt. wet.		
19								Boring terminated at 18 feet.		

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:

Soil descriptions are based on visual classifications and should be considered approximate. Stratification lines are approximate boundaries between stratums; transitions may be gradual.

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 8/23/12 15:35 - R:\80000 TASK ORDERS\80043 RAYMARK OU2 RI-FS\TECHNICAL DATA\GINT\APRIL 2012 BORING LOGS.GPJ

BORING LOG

Nobis — Engineering a Sustainable Future

Project:	Raymark	Boring No.:	SB-603 (MW-603)
		Boring Location:	Village Condos, Ferry Ct.
Location:	Stratford, CT	Checked by:	
Nobis Project No.:	80043.03	Date Start:	April 3, 2012
		Date Finish:	April 3, 2012

Contractor:	Drilex Environmental, Inc.	Rig Type / Model:	Truck / CME 55	Ground Surface Elev.:	
Driller:	J. Jalutkewicz	Hammer Type:	Automatic Hammer		
Nobis Rep.:	J. Kalafatis	Hammer Hoist:	Automatic	Datum:	NAVD 88

	Drilling Method	Sampler
Type	Casing	Split-Spoon
Size ID (in.)	4"	1-3/8
Advancement	Drive and Wash	140-lb Hammer

Groundwater Observations

Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
▼ 04/05/12	09:10	8.05	0	18	2 days

Depth (ft.)	Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	PID (ppm)	Ground Water	Stratum Elev. / Depth (ft.)	Sample Description and Remarks (Classification System: Modified Burmister)	Well Detail	Notes
	S-1	16	0-2	7 12 15 17	0.3		/ 0.1 - ASPHALT; FILL / 2.0	S-1: Medium dense, brown, fine to coarse SAND, some Gravel, some Silt. moist. -	Cement Cap w/Flush Mount Road Box (0' to 0.5')	
	S-2	8	2-4	14 17 12 12	0.3		SAND & SILT / 6.0	S-2: Medium dense, brown, fine SAND, little Gravel. moist.	Bentonite Seal (0.5' to 6')	
	S-3	16	4-6	5 5 10 16	0.8			S-3: Medium dense, orangish brown, fine SAND and Silt, trace Gravel. -	Solid PVC Pipe (0' to 8')	
	S-4	12	6-8	10 15 17 18	0.4	▼	SAND	S-4: Dense, brown, fine to coarse SAND, trace Gravel, - trace Silt. wet. -		
	S-5	10	8-10	20 22 30 27	0.4			S-5: Very dense, brown, fine to coarse SAND, little Gravel, little Silt. wet. -		
	S-6	9	10-12	5 10 12 14	1			S-6: Medium dense, brown, fine to coarse SAND, trace - Silt. wet. -		
	S-7	16	12-14	7 9 9 11	0.7			S-7: Medium dense, brown, fine to coarse SAND, trace - Silt. wet. -	Filter Sand (6' to 18')	
	S-8	11	14-16	8 8 9 10	2.1			S-8: Medium dense, brown, fine to coarse SAND, trace - Silt. wet. -	Screened PVC Pipe (8' to 18')	
	S-9	20	16-18	6 6 8 11	5.5		/ 18.0	S-9: Medium dense, brown, fine to coarse SAND, little Silt. wet. -		
								Boring terminated at 18 feet.		

Soil	Percentage	Non-Soil
trace	5 - 10	very few -
little -	10 - 20	few
some	20 - 35	several -
and -	35 - 50	numerous

NOTES:

Soil descriptions are based on visual classifications and should be considered approximate. Stratification lines are approximate boundaries between stratums; transitions may be gradual.

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 8/23/12 15:35 - R:\80000 TASK ORDERS\80043 RAYMARK OU2 RI-FS\TECHNICAL DATA\GINT\APRIL 2012 BORING LOGS.GPJ

BORING LOG

Nobis — Engineering a Sustainable Future

Project:	Raymark
Location:	Stratford, CT
Nobis Project No.:	80043.03
Boring No.:	SB-604D (MW-604D)
Boring Location:	
Checked by:	
Date Start:	April 4, 2012
Date Finish:	April 4, 2012
Contractor:	Drilex Environmental, Inc.
Driller:	J. Jalutkewicz
Nobis Rep.:	J. Kalafatis
Rig Type / Model:	Truck / CME 55
Hammer Type:	Automatic Hammer
Hammer Hoist:	Automatic
Ground Surface Elev.:	
Datum:	NAVD 88

	Drilling Method	Sampler
Type	Casing	Split-Spoon
Size ID (in.)	4"	1-3/8
Advancement	Drive and Wash	140-lb Hammer

Groundwater Observations

Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
▼ 04/05/12	10:10	8.24	0	40	1 day

Depth (ft.)	Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	PID (ppm)	Ground Water	Stratum Elev. / Depth (ft.)	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	WELL DETAIL	NOTES
1	S-1	20	0-2	2 3 3 5	0.1		TOPSOIL / 2.0	S-1: Loose, brown, fine to coarse SAND, some Gravel. moist.	Cement Cap w/Flush Mount Road Box (0' to 0.5')	
3	S-2	0	2-4	17 32 27 24			SAND & GRAVEL	S-2: No Recovery.		
5	S-3	13	4-6	28 37 32 19	0.3			S-3: Very dense, brown, fine to coarse SAND and Gravel, trace Silt. moist.		
7	S-4	21	6-8	22 29 30 37	0.6			S-4: Very dense, brown, fine to coarse SAND, little Gravel, trace Silt. wet.		
9	S-5	11	8-10	32 23 22 29	48.1	▼		S-5: Dense, gray, fine to coarse SAND, little Gravel, trace Silt. wet.		
11	S-6	18	10-12	37 42 25 24	12.2		/ 12.0	S-6: Very dense, gray, fine to coarse SAND, trace Gravel, trace Silt. wet.		
13	S-7	16	12-14	17 14 12 12	1.7		SAND	S-7: Medium dense, brown, fine to coarse SAND, little Gravel, trace Silt. wet.		
15	S-8	11	14-16	6 8 9 10	6.1			S-8: Medium dense, brown, fine to coarse SAND, trace Silt. wet.		
17	S-9	19	16-18	6 6 8 9	2.2			S-9: Medium dense, brown, fine to coarse SAND, trace Silt. wet.	Bentonite Seal (1' to 28') Solid PVC Pipe (0' to 30')	
19	S-10	10	18-20	9 11 11 12	1.9			S-10: Medium dense, brown, fine to medium SAND, little Silt. wet.		
21	S-11	12	20-22	14 15 14 13	3.1			S-11: Medium dense, brown, fine to medium SAND, little Silt. wet.		
23	S-12	15	22-24	14 17 19 21	3.1			S-12: Dense, brown, fine SAND, some Silt. wet.		
25	S-13	12	24-26	7 9	0.2			S-13: Medium dense, brown, fine SAND, some Silt. wet.		

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:

Soil descriptions are based on visual classifications and should be considered approximate. Stratification lines are approximate boundaries between stratums; transitions may be gradual.

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 8/23/12 15:35 - R:\80000 TASK ORDERS\80043 RAYMARK OU2 RI-FS\TECHNICAL DATA\GINT\APRIL 2012 BORING LOGS.GPJ

BORING LOG

Nobis — Engineering a Sustainable Future

Project:	Raymark	Boring No.:	SB-604D (MW-604D)
		Boring Location:	
Location:	Stratford, CT	Checked by:	
Nobis Project No.:	80043.03	Date Start:	April 4, 2012
		Date Finish:	April 4, 2012

Contractor:	Drilex Environmental, Inc.	Rig Type / Model:	Truck / CME 55	Ground Surface Elev.:	
Driller:	J. Jalutkewicz	Hammer Type:	Automatic Hammer		
Nobis Rep.:	J. Kalafatis	Hammer Hoist:	Automatic	Datum:	NAVD 88

	Drilling Method	Sampler
Type	Casing	Split-Spoon
Size ID (in.)	4"	1-3/8
Advancement	Drive and Wash	140-lb Hammer

Groundwater Observations

Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
▼ 04/05/12	10:10	8.24	0	40	1 day

Depth (ft.)	Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	PID (ppm)	Ground Water	Graphic	Stratum Elev. / Depth (ft.)	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	WELL DETAIL	NOTES
				6							
26				6							
	S-14	16	26-28	4	1				S-14: Medium dense, brown, fine SAND, some Silt. wet.		
27				4							
				7							
28				9							
	S-15	12	28-30	7	0.9				S-15: Medium dense, brown, fine to coarse SAND, little Silt. wet.		
29				7							
				8							
30				8							
	S-16	13	30-32	22	3.4				S-16: Dense, brown, fine to coarse SAND, little Silt. wet.		
31				19							
				16							
32				18							
	S-17	12	32-34	17	3			SAND	S-17: Dense, brown, fine SAND, some Silt. wet.		
33				19							
				18							
34				18							
	S-18	15	34-36	10	0.3				S-18: Medium dense, brown, fine SAND, some Silt. wet.		
35				8							
				9						Filter Sand (28' to 40') Screened PVC Pipe (30' to 40')	
36				8							
	S-19	18	36-38	6	0.1				S-19: Medium dense, brown, fine SAND and Silt. wet.		
37				7							
				9							
38				8							
	S-20	14	38-40	7	0				S-20: Medium dense, brown, SILT and Sand. wet.		
39				8							
				9							
40				10				/ 40.0			
41									Boring terminated at 40 feet.		
42											
43											
44											
45											
46											
47											
48											
49											
50											

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:

Soil descriptions are based on visual classifications and should be considered approximate. Stratification lines are approximate boundaries between stratums; transitions may be gradual.

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 8/23/12 15:35 - R:\80000 TASK ORDERS\80043 RAYMARK OU2 RI-FS\TECHNICAL DATA\GINT\APRIL 2012 BORING LOGS.GPJ

BORING LOG

Nobis
Engineering a Sustainable Future

Project: Raymark
Location: Stratford, CT
Nobis Project No.: 80043.03

Boring No.: **MW-604s**
Boring Location: See SB-604D
Checked by:
Date Start: April 4, 2012
Date Finish: April 5, 2012

Contractor: Drilex Environmental, Inc.
Driller: J. Jalutkewicz
Nobis Rep.: J. Kalafatis

Rig Type / Model: Truck / CME 55
Hammer Type: Automatic Hammer
Hammer Hoist: Automatic

Ground Surface Elev.:
Datum: NAVD 88

	Drilling Method	Sampler
Type	Casing	
Size ID (in.)	4"	
Advancement	Drive and Wash	

Groundwater Observations

Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time

Depth (ft.)	SAMPLE INFORMATION: Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	Ground Water	LITHOLOGY: Graphic	Stratum Elev. / Depth (ft.)	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified ASTM)	WELL DETAIL	NOTES
1									Cement Cap w/Flush Mount Road Box (0' to 0.5')	
2										
3									Bentonite Seal (0.5' to 6')	
4										
5									Solid PVC Pipe (0' to 8')	
6										
7										
8										
9										
10										
11										
12										
13										
14									Filter Sand (6' to 18')	
15									Screened PVC Pipe (8' to 18')	
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:

Soil descriptions are based on visual classifications and should be considered approximate. Stratification lines are approximate boundaries between stratums; transitions may be gradual.

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 8/23/12 15:35 - R:\80000 TASK ORDERS\80043 RAYMARK OU2 RI-FS\TECHNICAL DATA\GINT\APRIL 2012 BORING LOGS.GPJ

APPENDIX B

APPENDIX B

EPA INDOOR AIR SOIL VAPOR INTRUSION STUDY REPORTS

B-1 Commercial Properties Indoor Air Vapor Soil Vapor Intrusion Study Report – February 2012 Sampling Event

B-2 Commercial Properties Indoor Air Vapor Soil Vapor Intrusion Study Report – August 2012 Sampling Event

B-3 335 Ferry Boulevard Indoor Air Vapor Soil Vapor Intrusion Study Report – December 2013 Sampling Event

Revision 1
Date 4/25/12

COMMERCIAL PROPERTIES INDOOR AIR SOIL VAPOR INTRUSION STUDY REPORT

Raymark Site, OU-2
Stratford, CT

February 2012

U.S. ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND REGIONAL LABORATORY
OFFICE OF ENVIRONMENTAL MEASUREMENT & EVALUATION
11 TECHNOLOGY DRIVE
NORTH CHELMSFORD, MASSACHUSETTS 01863

Prepared for: Office of Site Remediation & Restoration, Remedial Program
U.S. Environmental Protection Agency, New England

Prepared by: _____ Date: 4/25/12
Peter R. Kahn, ECA Air Monitoring Team Engineer

Reviewed by: _____ Date: 4/25/12
Robert Judge, ECA Air Monitoring Team Leader

TABLE OF CONTENTS

Section	Title	Page No.
1.0	Introduction	5
	1.1 Site Description and Background	5
2.0	Sampling Objective	6
	2.1 Target Compounds	8
	2.2 Data Use and Reporting	8
3.0	Sampling Locations	8
4.0	Canister VOC Air Sampling and Analytical Methodologies	22
	4.1 Description	22
	4.2 Canister Cleaning and Leak Certification Procedures	23
	4.2.1 Canister Cleaning Procedure	23
	4.2.2 Canister Leak Certification Procedure	23
	4.2.3 Canister Cleanliness Certification Procedure	23
	4.3 Canister Flow Controller Cleaning and Calibration Procedures	23
	4.3.1 Flow Controller Calibration Procedure	23
	4.3.2 Flow Controller Cleaning Procedure	24
	4.4 Canister Analysis Quality Control/Quality Assurance Results	24
	4.4.1 Laboratory Blank	24
	4.4.2 Data Reproducibility/Precision Results	24
	4.4.3 Data Accuracy Results	25
	4.4.4 Canister Surrogate Spiking Results	25
	4.4.5 Chain of Custody	25
	4.4.6 Data Validation and Usability	25
5.0	Air Grab Sampling and Analysis Methodology for VOCs	26
	5.1 Air Grab Sampling Procedures	26
	5.2 Air Grab Field Analytical Procedures	26
	5.3 Quality Control Procedures	26
6.0	Soil Gas Sampling and Analysis Methodology for VOCs	27
	6.1 Soil Gas Sampling Procedures	27
	6.1.1 Sub-Slab Soil Gas Sampling Procedures	27
	6.2 Soil Gas Field Analytical Procedures	27
	6.3 Quality Control Procedures	28
7.0	Meteorological Measurement	28
	7.1 Ambient Air Meteorological Data	28
8.0	Indoor Air and Soil Gas Sampling Results and Discussions	29
	8.1 Tetrachloroethene Sampling Results and Discussions	30
	8.2 1, 1-Dichloroethylene Sampling Results and Discussions	32
	8.3 Vinyl Chloride Sampling Results and Discussions	34
	8.4 Non-target Compounds Sampling Results and Discussions	36

TABLE OF CONTENTS

Section Title Page No.
Tables..... 45
Table 1 – EPA Method TO15 Target VOC List
Table 2A, 2B, 2C, 2D – Duplicate Air Sampling Results
Table 3 – Ambient Air Canister Air Sampling Results Summary
Table 4 – 500 Ferry Blvd. Canister Air Sampling Results Summary
Table 5 – 72 Ferry Court Canister Air Sampling Results Summary
Table 6 – 62 Ferry Court Canister Air Sampling Results Summary
Table 7 – 82 Ferry Court Canister Air Sampling Results Summary
Table 8 – 608 Ferry Blvd. Canister Air Sampling Results Summary
Table 9 – 335 Ferry Blvd. Canister Air Sampling Results Summary
Table 10 – 300 Ferry Blvd. Canister Air Sampling Results Summary
Table 11 – 100 Veterans Way Canister Air Sampling Results Summary
Table 12 – 326 Ferry Blvd. Canister Air Sampling Results Summary
Table 13 – 444 Ferry Blvd. Canister Air Sampling Results Summary
Table 14 – 411 Barnum Ave. McDonalds Restaurant Canister Air Sampling Results Summary
Table 15 – 411 Barnum Ave. US Postal Service Canister Air Sampling Results Summary
Table 16 – 411 Barnum Ave. Marshalls Canister Air Sampling Results Summary
Table 17 – 411 Barnum Ave. Payless Shoe Source Canister Air Sampling Results Summary
Table 18 – 411 Barnum Ave. Sleepy's Canister Air Sampling Results Summary
Table 19 – 411 Barnum Ave. Fashion Bug Canister Air Sampling Results Summary
Table 20 – 411 Barnum Ave. Sally's Beauty Canister Air Sampling Results Summary
Table 21 – 411 Barnum Ave. Game Stop Canister Air Sampling Results Summary
Table 22 – 411 Barnum Ave. T-Mobile Canister Air Sampling Results Summary
Table 23 – 411 Barnum Ave. Regal Cinema Canister Air Sampling Results Summary
Table 24 – 500 Ferry Blvd. Soil Gas Grab, Indoor Air Grab and 24-Hour Sampling Results
Table 25 – 72 Ferry Court Soil Gas Grab, Indoor Air Grab and 24-Hour Sampling Results
Table 26 – 62 Ferry Court Soil Gas Grab, Indoor Air Grab and 24-Hour Sampling Results
Table 27 – 82 Ferry Court Soil Gas Grab, Indoor Air Grab and 24-Hour Sampling Results
Table 28 – 608 Ferry Blvd. Soil Gas Grab, Indoor Air Grab and 8-Hour Sampling Results
Table 29 – 335 Ferry Blvd. Soil Gas Grab, Indoor Air Grab and 8-Hour Sampling Results
Table 30 – 300 Ferry Blvd. Soil Gas Grab, Indoor Air Grab and 8-Hour Sampling Results
Table 31 – 100 Veterans Way Soil Gas Grab, Indoor Air Grab and 8-Hour Sampling Results
Table 32 – 326 Ferry Blvd. Indoor Air 8-Hour Sampling Results
Table 33 – 444 Ferry Blvd. Soil Gas Grab, Indoor Air Grab and 8-Hour Sampling Results
Table 34 – 411 Barnum Ave. Indoor Air 8-Hour Sampling Results

TABLE OF CONTENTS

Appendix A - Building Sketches and Sampling Locations..... 46

Appendix B – Photographs 55

Appendix C – Meteorological Data..... 81

Appendix D – - Laboratory Analytical Report.....87

Appendix E – Soil Gas and Air Grab Samples Mobile Laboratory Analytical Report 88

Appendix F – Compound Product Use Description..... 92

1.0 Introduction

The week of February 13, 2012 at the request of Ron Jennings, Remedial Project Manager (RPM), the EPA New England, Office of Environmental Measurement and Evaluation (OEME) performed indoor air and, where feasible, sub-slab soil gas sampling inside nine commercial buildings and within three condominium/apartments to form lines of evidence for completion of a vapor intrusion pathway risk evaluation related to contaminants associated with the Raymark Site. Peter Kahn was the EPA sampling project manager for this study and was responsible for the following tasks: write the Sampling and Analysis Plan (SAP), communicate all aspects of the project to the RPM, coordinate EPA field and laboratory analytical support with OEME laboratory personnel, prepare and collect ambient and indoor air canister samples, canister confirmation soil gas samples and prepare the final report for these activities. Alysha Lynch assisted Peter Kahn with sampling and documentation. Scott Clifford was responsible for collecting indoor air and soil gas grab samples, and on-site analysis of these samples using the EPA Region 1 Mobile Laboratory. Dan Curran operated the EPA Region 1 Laboratory GC/MS which was used to analyze indoor air, ambient air and soil gas canister samples. This report will be distributed to Ron Jennings and all other interested parties.

1.1 Site Description and Background

The Raymark Industries, Inc. Superfund Site (the Site) consists of 500 plus acres of land located in Stratford, Fairfield County, Connecticut (CT). Raymark Industries, Inc. operated for 70 years from 1919 until 1989 manufacturing automotive and heavy brake friction components. During its operation, Raymark waste was disposed of as "fill" material in various locations in Stratford, including the Raymark Facility, various commercial and residential properties, and in wetlands adjacent to the Housatonic River. In 1993 the Agency for Toxic Substances and Disease Registry (ATSDR) performed a health assessment in response to a citizen petition and shortly thereafter issued a Public Health Advisory for the Raymark Facility and locations around the Town of Stratford where manufacturing wastes from the former Raymark Facility had come to be located. EPA listed the Site on EPA's National Priorities list (NPL) of Superfund sites on April 25, 1995. A public water supply provides drinking water to the area of concern for Raymark waste. There is no known use of groundwater for any purpose in the area. The Site includes the (former) Raymark Industries, Inc. Facility and other locations where Raymark waste has come to be located. Raymark Industries, Inc. is bankrupt, and the cleanup is being conducted by the EPA, in coordination with CTDEEP.

The site has been divided into nine parts or Operable Units (OUs). For the purposes of this Project, the work falls under Operable Unit 2: Groundwater (Site wide). The groundwater investigation focuses on a 500 acre area extending from the Facility to a surface water body (Ferry Creek) to the Housatonic River. Contaminants in the groundwater include volatile organic compounds (VOCs) and metals. During 2000-2002 extensive groundwater, soil gas, indoor air and sub-slab evaluations were performed, which found VOCs to be volatilizing from the groundwater into buildings (primarily residential dwellings). As a result, during 2003-2004, EPA and CTDEEP installed 106 sub-slab ventilation systems into residential homes, two of which were commercial buildings, to mitigate potential vapor intrusion and human health exposure. EPA is now in the process of focusing on additional commercial properties that have the

potential to be impacted by the VOCs volatilizing from the groundwater.

2.0 Sampling Objective

RPM Ron Jennings requested indoor air and, where feasible, sub-slab soil gas sampling inside nine commercial buildings and within three condominium/apartments to form lines of evidence for completion of a vapor intrusion pathway risk evaluation related to contaminants associated with the Site. Evaluations of the following buildings/addresses were requested:

Address	Current Building Use
411 Barnum Ave. (2 buildings)	Retail shopping plaza, restaurant
326 Ferry Blvd.	Restaurant/bar
444 Ferry Blvd.	Retail
500 Ferry Blvd.	Office space
608 Ferry Blvd.	Office space (currently unoccupied)
100 Veterans Way	Restaurant/bar
335 Ferry Blvd.	Office space (three separate businesses)
Village Square Condominiums	Residential
300 Ferry Blvd.	Retail

411 Barnum Ave. is a shopping plaza that contains 16 separate businesses and a 14 screen movie theatre. The property also has two separate buildings occupied by a McDonalds Restaurant and a 99 Restaurant. The study only focused on collecting samples inside 9 businesses, including the movie theatre, of the shopping plaza and inside the McDonalds Restaurant. Within the shopping plaza the following areas were sampled: Unit 1 (Payless Shoe Source), Unit 2 (Sleepys), Unit3/3A (Fashion Bug), Unit 4 (US Postal Service), Unit 6 (Sally Beauty), Unit 8 (Game Stop), Unit 11 (T-Mobile), Unit A (Marshalls) and Unit C (Regal Cinema). These two buildings are constructed on slab-on-grade foundations assumed to be 8 to 10 inches thick, with all interior floors covered with carpet, wood or tile. There is some evidence that the foundations have conduits incorporated into the slab at unknown locations. Considering the thickness of the slab, floor coverings, and the presence of conduits in the concrete slab, drilling holes into the slab for installing sub-slab sampling probes has been determined to be impractical. Therefore, only indoor air samples were collected within the two buildings at 411 Barnum Ave (shopping plaza and the McDonalds Restaurant).

The slab-on-grade concrete foundation of 326 Ferry Blvd. reportedly rests on driven piles. There reportedly is also a small, fairly inaccessible crawl space between the slab-on-grade foundation and the building floor. The building interior floors, which are all covered with carpet, wood, or tile, together with the inaccessible crawl space between the floor and foundation, make access to the slab impractical for installing sub-slab sampling probes. Therefore, only indoor air samples were collected at 326 Ferry Boulevard.

Buildings located at 444 Ferry Blvd. (Par Pool & Spa), 500 Ferry Blvd. (Risk International, Inc.), 608 Ferry Blvd. (unoccupied office building), 100 Veterans Way (VFW Post 9460), 335 Ferry Blvd. (Salce Building, three separate businesses), 300

Ferry Blvd. and Village Square Condominiums on Ferry Blvd. all have concrete slab basements or a slab on-grade foundation where sub-slab soil gas samples were collected. 500 Ferry Blvd. is the only building with a finished basement and zoned as both a residential/commercial property. Because of this, this property has been evaluated using the more stringent RSLs for residential usage.

At 444 Ferry Blvd., 500 Ferry Blvd., 100 Veterans Way, 608 Ferry Blvd., 335 Ferry Blvd., 300 Ferry Blvd. and within the Village Square Condominiums, soil gas grab samples were collected from 1 to 3 sub-slab sampling locations and indoor air samples were collected from the basement and/or first floor areas. The buildings located at 411 Barnum Ave. and 326 Ferry Blvd. only had samples collected from inside the buildings, no sub-slab samples were collected. Inside all the buildings, except at 500 Ferry Blvd. and the three units on Ferry Court as part of the Village Square Condominiums, 8-hour indoor air samples were collected. At 500 Ferry Blvd. and in the units on Ferry Court, indoor air samples were collected over a 24-hour period. In this report, indoor air data will be compared to background outdoor ambient air data that was collected during four separate 24-hour sampling periods. For quality control purposes, one collocated canister sample was collected on each day indoor air samples were collected. All canister samples were analyzed for the VOCs listed on Table 1 particularly the target compounds trichloroethene (TCE), 1, 1-dichloroethene (1, 1-DCE) and vinyl chloride (VC) using a GC/MS.

Sub-slab soil gas sampling probes were installed by Peter Kahn and Alysha Lynch at the locations described above. Soil gas samples were collected using EPA Region I Standard Operating Procedure for Sub-Slab Soil Gas Sampling, April 1, 2011, Revision 2. Scott Clifford collected the soil gas samples and immediately analyze them on-site using EPA's Mobile Laboratory. Confirmation canister grab samples were also collected at selected locations and then analyzed at the EPA Regional Laboratory using a GC/MS. In addition, indoor air grab samples were collected by Scott Clifford using a glass syringe from selected indoor air sampling locations. These samples were also analyzed on-site in the mobile lab.

The collected data will be compared to the EPA Regional Screening Levels (RSL). Screening levels for the target compounds are provided in the table below and on Table 1.

Compound	**EPA RSL Residential Air[1]**	**EPA RSL Industrial Air[1]**	**EPA Region 1 Reporting Limits[2]**
Trichloroethene	0.432 µg/m^3	2.99 µg/m^3	0.27 ug/m^3
1,1-Dichloroethene	210 µg/m^3	880 µg/m^3	0.20 ug/m^3
Vinyl Chloride	0.16 µg/m^3	2.8 µg/m^3	0.13 ug/m^3

[1] EPA RSL = EPA Regional Screening Level (November 2011); based on $1x10^{-6}$ cancer risk or hazard quotient of 1.0.
[2] Reporting limits are shown without dilutions; any sample dilutions will increase these limits.

2.1 Target Compounds

As noted above the primary contaminant of concern for this project are TCE, 1, 1-DCE, and VC.

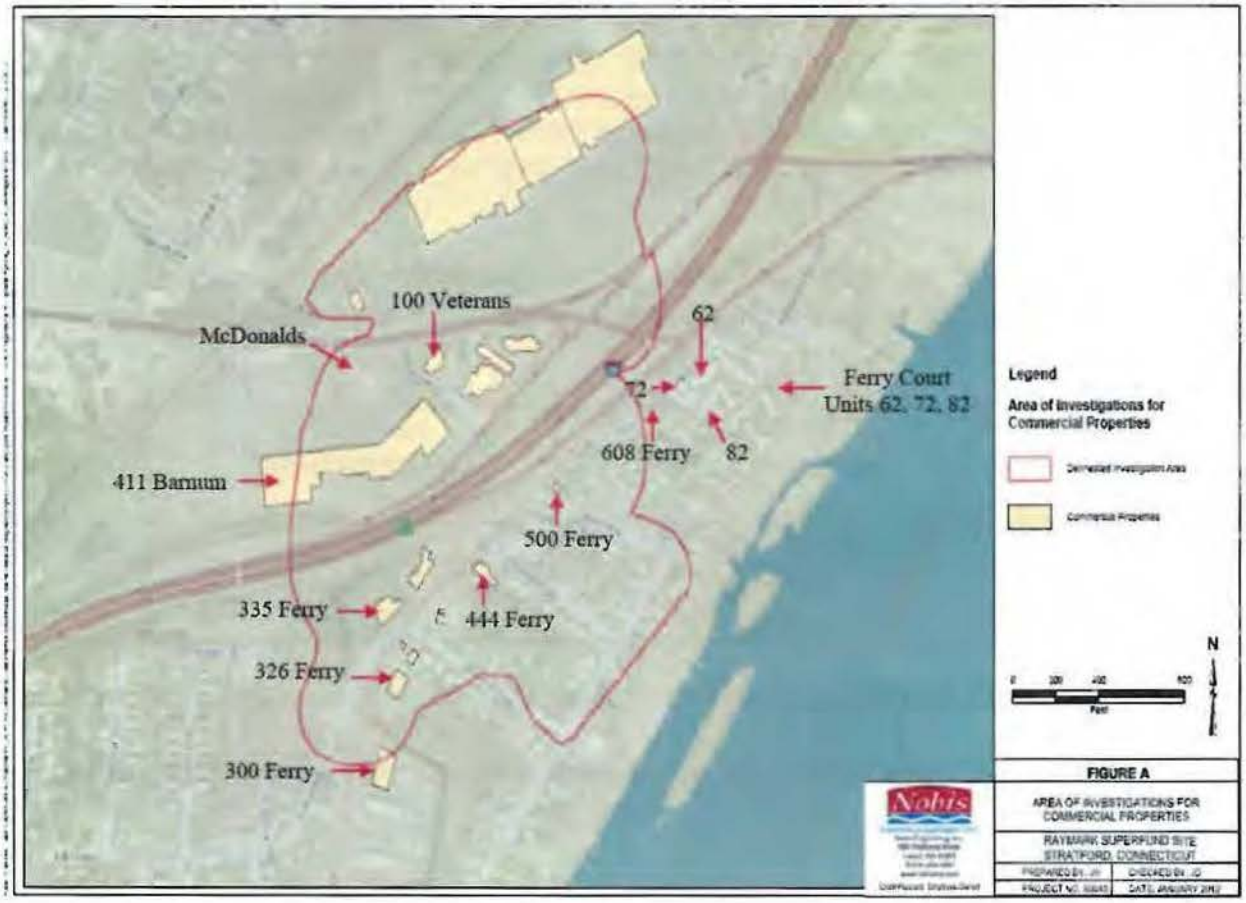
2.2 Data Use and Reporting

The results of the study are presented in this final report and will be provided to the EPA RPM and all other interested parties. This report describes the sampling and analytical procedures used for the study and the resulting data. In addition, all the sampling and quality assurance/quality control (QA/QC) data are reported in tabular form. The data reported in the laboratory's analytical report were further validated following the QC criteria described in Section 4.4. The air sampling and analytical techniques used for this study provided the necessary data to assist EPA with evaluating whether indoor air quality was adversely impacted.

3.0 Sampling Locations

Sampling locations within each building were selected to represent the concentration of target compounds in the soil gas underneath the building's concrete foundation, where feasible and the indoor air. An aerial view map of the investigation area showing the buildings where samples were collected is provided below.

Raymark Site, OU-2
Area of Investigation Map



A building sketch showing sampling locations for each building, except for 72, 62 and 82 Ferry Court are provided in Appendix A. Photographs are provided in Appendix B showing the indoor air, outdoor air and a few soil gas sampling locations. To obtain additional information about the building, the building owner or occupant was asked a series of questions regarding products used or stored inside the home, if any hobbies are performed, if recent remodeling was done, and any other information that would help determine if normal activities carried out inside the building would influence the sampling results. EPA field personnel also took an inventory of stored products inside the building and noted the type of HVAC system. Detailed descriptions of the sampling locations for each building are provided below.

500 Ferry Blvd.

> **Indoor Air/Crawl Space Samples**

Canister #6554 was collected in the basement 20 feet from the west wall, 10 feet from the north wall and 3 feet above the floor over a 24-hour period from 11:46 am on 2/13/12 to 11:46 am on 2/14/12. Also at this location, Canister #1587 was collected as a duplicate sample for obtaining precision data.

Canister #6566 was collected in the crawl space, which is located on the south side of the building, through a small access door 3 feet from the crawl space south interior wall and 3 inches above the concrete floor. The sample was collected over a 24-hour period from 11:47 am on 2/13/12 to 11:47 am on 2/14/12.

Canister #1565 was collected on the first floor 10 feet 6 inches from the west wall, 18 feet from the north wall and 3 feet 3 inches above the floor over a 24-hour period from 11:45 am on 2/13/12 to 11:45 am on 2/14/12.

> **Air Grab Samples**

Grab 1 was collected on 2/13/12 at the same location where the basement 24-hour canister samples were collected (Canister #6554 and #1587). A description of this location is described above.

Grab 2 was collected on 2/13/12 at the same location where the crawl space 24-hour canister sample was collected (Canister #6566). A description of this location is described above.

> **Sub-slab Soil Gas Samples**

SS-1: To prepare the sampling probe, on 2/6/12 a small section of carpet was cut before a 9 inch deep; 3/8 inch diameter hole was drilled through the floor. At this time it was determined the slab was only 1 inch thick and that only a temporary probe could be used. As a result, a temporary 1.5 inch long; ¼ inch diameter stainless steel probe and fittings were inserted into the pre-drilled hole the day of sampling. On 2/13/12 a sub-slab soil gas sample was collected below the concrete slab 15 feet 2 inches from the west wall, 9 feet 6 inches from the north wall and 1.5 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. A

duplicate syringe grab sample was collected after purging another 1 liter from the probe. An additional 1 liter was purged from the probe before collecting a syringe grab sample to be analyzed on different gas chromatograph (GC).

SS-2: To prepare the sampling probe, on 2/6/12 a small section of carpet was cut before a 9 inch deep; 3/8 inch diameter hole was drilled through the floor. At this time it was determined the slab was only 1 inch thick and that only a temporary probe could be used. As a result, a temporary 1.5 inch long; ¼ inch diameter stainless steel probe and fittings were inserted into the pre-drilled hole the day of sampling. On 2/13/12 a sub-slab soil gas sample was collected below the concrete slab 26 feet 2 inches from the west wall, 7 feet 6 inches from the north wall and 1.5 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. A duplicate syringe grab sample was collected after purging another 1 liter from the probe. An additional 1 liter was purged from the probe before collecting a syringe grab sample to be analyzed on different GC. Canister #12562 was then collected as a confirmation grab sample after purging another 1 liter from the probe.

72 Ferry Court (Village Square Condominiums)

> Indoor Air Samples

Canister #6547 was collected in the basement 14 feet from the east wall, 9 feet from the south wall and 4 feet 3 inches above the floor over a 24-hour period from 16:05 pm on 2/13/12 to 16:05 on 2/14/12.

Canister #1586 was collected on the first floor 2 feet from the east wall, 1 foot from the north wall and 3 feet 6 inches above the floor over a 24-hour period from 16:02 pm on 2/13/12 to 16:02 on 2/14/12.

> Air Grab Samples

Grab 1 was collected on 2/13/12 at the same location where the basement 24-hour canister sample was collected (Canister #6547). A description of this location is described above.

> Sub-slab Soil Gas Sample

SS-1: To prepare the sampling probe, on 2/7/12 a 9 inch deep; 3/8 inch diameter hole was drilled through the floor and sub-slab material into which a 4 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 2/13/12 a sub-slab soil gas sample was collected below the concrete slab in the utility room 9 feet from the west wall, 5 feet 3 inches from the south wall and 4 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. An additional 1 liter was purged from the probe before collecting a syringe grab sample to be analyzed on different GC. Canister #22683 was then collected as a confirmation grab sample after purging another 1 liter from the probe.

62 Ferry Court (Village Square Condominiums)

> Indoor Air Samples

Canister #5790 was collected in the basement 8 feet 6 inches from the south wall, 8 feet from the east wall and 3 feet 7 inches above the floor over a 24-hour period from 19:05 pm on 2/13/12 to 19:05 on 2/14/12.

Canister #5792 was collected on the first floor 16 feet from the south wall, 7 feet from the east wall and 4 feet 3 inches above the floor over a 24-hour period from 19:06 pm on 2/13/12 to 19:06 on 2/14/12.

> Air Grab Samples

Grab 1 was collected on 2/14/12 at the same location where the basement 24-hour canister sample was collected (Canister #5790). A description of this location is described above.

> Sub-slab Soil Gas Sample

SS-1: To prepare the sampling probe, on 2/13/12 a 12 inch deep, 3/8 inch diameter hole was drilled through the floor and sub-slab material into which an 8 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 2/14/12 a sub-slab soil gas sample was collected below the concrete slab, in the utility room 14 feet 10 inches from the north wall, 1 foot from the west wall and 8 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. An additional 1 liter was purged from the probe before collecting a syringe grab sample to be analyzed on different GC. Canister #15047 was then collected as a confirmation grab sample after purging another 1 liter from the probe.

82 Ferry Court (Village Square Condominiums)

> Indoor Air Samples

Canister #1592 was collected in the basement 8 feet from the north wall, 15 feet from the west wall and 4 feet 2 inches above the floor over a 24-hour period from 16:27 pm on 2/15/12 to 16:27 on 2/16/12.

Canister #1560 was collected on the first floor 12 feet 6 inches from the north wall, 8 feet from the east wall and 3 feet 3 inches above the floor over a 24-hour period from 16:20 on 2/15/12 to 16:20 on 2/16/12.

> Air Grab Samples

Grab 1 was collected on 2/15/12 at the same location where the basement 24-hour canister sample was collected (Canister #1592). A description of this location is described above.

> **Sub-slab Soil Gas Sample**

SS-1: To prepare the sampling probe, on 2/14/12 a 12 inch deep; 3/8 inch diameter hole was drilled through the floor and sub-slab material into which a 6 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 2/15/12 a sub-slab soil gas sample was collected below the concrete slab in the utility room 16 feet 9 inches from the north wall, 5 feet 9 inches from the east wall and 8 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. An additional 1 liter was purged from the probe before collecting a syringe grab sample to be analyzed on different GC. Canister #14901 was then collected as a confirmation grab sample after purging another 1 liter from the probe.

608 Ferry Blvd.

> **Indoor Air Samples**

Canister #5786 was collected in the basement 9 feet from the north wall, 7 feet from the east wall and 1 foot 9 inches above the floor over an 8-hour period from 08:20 to 16:20 on 2/14/12. Also at this location, Canister #3656 was collected as a duplicate sample for obtaining precision data. The basement area was comprised of two small rooms measuring 12 x 15.

Canister #1584 was collected on the first floor 16 feet from the north wall, 27 feet from the west wall and 1 foot 7 inches above the floor over an 8-hour period from 08:24 to 16:24 on 2/14/12.

> **Air Grab Samples**

Grab 1 was collected on 2/14/12 at the same location where the basement 8-hour canister samples were collected (Canister #5786 and #3656). A description of this location is described above.

> **Sub-slab Soil Gas Samples**

SS-1: To prepare the sampling probe, on 2/13/12 a 9 inch deep; 3/8 inch diameter hole was drilled through the floor and sub-slab material into which a 5.5 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 2/14/12 a sub-slab soil gas sample was collected in the basement area below the concrete slab 9 feet 6 inches from the east wall, 13 feet 7 inches from the south wall and 5.5 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. A second grab sample was collected after purging 1 liter from the probe for dilution purposes. A third grab sample was collected after purging 1 liter from the probe to be analyzed on different GC.

SS-2: To prepare the sampling probe, on 2/13/12 a 9 inch deep; 3/8 inch diameter hole was drilled through the floor and sub-slab material into which a 3 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 2/14/12 a sub-slab soil gas sample was collected on the first floor below the concrete slab on-grade foundation 19 feet from the north wall, 23 feet from the west wall and 3

inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. A second grab sample was collected after purging 1 liter from the probe to be analyzed on different GC.

SS-3: To prepare the sampling probe, on 2/13/12 a 9 inch deep; 3/8 inch diameter hole was drilled through the floor and sub-slab material into which a 6.5 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 2/14/12 a sub-slab soil gas sample was collected on the first floor below the concrete slab on-grade foundation 45 feet from the north wall, 10 feet 6 inches from the west wall and 6.5 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. A second grab sample was collected after purging 1 liter from the probe to be analyzed on different GC. Canister #22684 was then collected as a confirmation grab sample after purging another 1 liter from the probe.

335 Ferry Blvd.

> **Indoor Air Samples**

Canister #6460 was collected in the Curtin Taxi portion of the building on the ground floor 24 feet from the north wall, 18 feet from the east wall and 4 feet above the floor over an 8-hour period from 08:44 to 16:44 on 2/14/12.

Canister #6555 was collected in Salce's receptionist office on the ground floor near the front entrance against the south wall 22 feet from the west wall and 4 feet above the floor over an 8-hour period from 08:48 to 16:48 on 2/14/12.

Canister #4778 was collected in the Salce's Estimating Room located in the back of the building on the first floor above the garage area 17 feet from the north wall, 10 feet from the east wall and 4 feet above the floor over an 8-hour period from 08:53 to 16:53 on 2/14/12.

> **Air Grab Samples**

Grab 1 was collected on 2/14/12 at the same location where the 8-hour canister sample was collected (Canister #6460) in the Curtin Taxi. A description of this location is described above.

Grab 2 was collected on 2/14/12 in garage area 1 above the SS-1 sub-slab sampling location. A description of this location is described below.

> **Sub-slab Soil Gas Samples**

SS-1: To prepare the sampling probe, on 2/6/12 a 9 inch deep; 3/8 inch diameter hole was drilled through the concrete floor and sub-slab material into which a 6 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 2/14/12 a sub-slab soil gas sample was collected in garage area 1 (west end of building) below the concrete slab on-grade foundation 28 feet 6 inches from the north wall, 21 feet 9 inches from the west wall and 6 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. A second grab sample was

collected after purging 1 liter from the probe to be analyzed on different GC. Canister #22680 was then collected as a confirmation grab sample after purging another 1 liter from the probe.

SS-2: To prepare the sampling probe, on 2/6/12 a 9 inch deep; 3/8 inch diameter hole was drilled through the concrete floor and sub-slab material into which a 6 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 2/14/12 a sub-slab soil gas sample was collected in garage area 2 below the concrete slab on-grade foundation 23 feet 6 inches from the north wall, 13 feet 3 inches from the east interior wall, 8 feet 8 inches from the west interior wall and 6 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. A second grab sample was collected after purging 1 liter from the probe to be analyzed on different GC.

300 Ferry Blvd.

> **Indoor Air Samples**

Canister #1577 was collected in the main show room area on the ground floor 18 feet from the north wall, 31 feet from the east wall and 6 feet 8 inches above the floor over an 8-hour period from 09:15 to 17:15 on 2/14/12.

Canister #6580 was collected in the snow board area on the ground floor 17 feet from the west wall, 27 feet from the south interior wall and 6 feet 4 inches above the floor over an 8-hour period from 09:17 to 17:17 on 2/14/12.

> **Air Grab Samples**

Grab 1 was collected on 2/14/12 at the same location where the 8-hour canister sample was collected (Canister #1577) in the main show room. A description of this location is described above.

> **Sub-slab Soil Gas Samples**

SS-1: To prepare the sampling probe, on 2/6/12 a 9 inch deep; 3/8 inch diameter hole was drilled through the concrete floor and sub-slab material into which a 5.75 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 2/14/12 a sub-slab soil gas sample was collected in the snow board storage area below the concrete slab on-grade foundation 22 feet 1 inches from the west wall, 10 feet 3 inches from the south interior wall, 3 feet 5 inches from the east interior wall and 5.75 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. A second grab sample was collected after purging 1 liter from the probe to be analyzed on different GC. Canister #14902 was then collected as a confirmation grab sample after purging another 1 liter from the probe.

SS-2: To prepare the sampling probe, on 2/6/12 a 12 inch deep; 3/8 inch diameter hole was drilled through the concrete floor and sub-slab material into which a 10 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed.

On 2/14/12 a sub-slab soil gas sample was collected in the repair shop area of the building below the concrete slab on-grade foundation 7 feet 8 inches from the east wall, 14 feet 6 inches from the north interior wall and 10 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. A second grab sample was collected after purging 1 liter from the probe to be analyzed on different GC.

100 Veterans Way

> **Indoor Air Samples**

Canister #1594 was collected in the basement 2 feet 3 inches from the south wall, 13 feet from the east wall and 4 feet 9 inches above the floor over an 8-hour period from 09:36 to 17:36 on 2/14/12.

Canister #6583 was collected on the first floor in the function room 27 feet from the north wall, 13 feet from the south interior wall and 2 feet 9 inches above the floor over an 8-hour period from 09:40 to 17:40 on 2/14/12.

> **Air Grab Samples**

Grab 1 was collected on 2/14/12 at the same location where the basement 8-hour canister sample was collected (Canister #1594). A description of this location is described above.

> **Sub-slab Soil Gas Samples**

SS-1: To prepare the sampling probe, on 2/7/12 a 9 inch deep; 3/8 inch diameter hole was drilled through the floor and sub-slab material into which a 4.5 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 2/14/12 a sub-slab soil gas sample was collected in the basement area below the concrete slab 6 feet 4 inches from the south wall, 9 feet 8 inches from the east wall and 4.5 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. A second grab sample was collected after purging 1 liter from the probe for dilution purposes. A third grab sample was collected after purging 1 liter from the probe to be analyzed on different GC.

SS-2: To prepare the sampling probe, on 2/7/12 a 9 inch deep; 3/8 inch diameter hole was drilled through the floor and sub-slab material into which a 4.5 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 2/14/12 a sub-slab soil gas sample was collected in the basement area below the concrete slab 6 feet from the south wall, 20 feet 10 inches from the east wall and 4.5 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. A second grab sample was collected after purging 1 liter from the probe to be analyzed on different GC.

SS-3: To prepare the sampling probe, on 2/7/12 a 9 inch deep; 3/8 inch diameter hole was drilled through the floor and sub-slab material into which a 4.5 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On

2/14/12 a sub-slab soil gas sample was collected in the basement area below the concrete slab 5 feet 7 inches from the south wall, 33 feet 1 inch from the east wall and 4.5 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. A second grab sample was collected after purging 1 liter from the probe to be analyzed on different GC. Canister #15050 was then collected as a confirmation grab sample after purging another 1 liter from the probe.

326 Ferry Blvd.

> **Indoor Air Samples**

Canister #5810 was collected in the back dining room on the ground floor 19 feet from the south wall, 20 feet from the east wall and 3 feet 3 inches above the floor over an 8-hour period from 08:07 to 16:07 on 2/15/12.

Canister #6461 was collected in the kitchen area on the ground floor 4 feet 6 inches from the north wall, 24 feet from the west wall and 2 feet 7 inches above the floor over an 8-hour period from 08:10 to 16:10 on 2/15/12.

> **Air Grab Samples**

No grab samples were collected from this property.

> **Sub-slab Soil Gas Sample**

No soil gas samples were collected from this property.

444 Ferry Blvd.

> **Indoor Air Samples**

Canister #3092 was collected in the basement 17 feet 4 inches from the north wall, 10 feet 6 inches from the east wall and 1 foot 9 inches above the floor over an 8-hour period from 09:31 to 17:31 on 2/15/12. Canister #6568 was collected as a duplicate sample for obtaining precision data.

Canister #1582 was collected on the first floor in the office 1 foot 6 inches from the north wall, 15 feet from the east wall and 5 feet 6 inches above the floor over an 8-hour period from 09:32 to 17:32 on 2/15/12.

> **Air Grab Samples**

Grab 1 was collected on 2/15/12 at the same location where the basement 8-hour canister samples were collected (Canister #3092 and #6568). A description of this location is described above.

> **Sub-slab Soil Gas Samples**

SS-1: To prepare the sampling probe, on 2/7/12 a 9 inch deep; 3/8 inch diameter hole was drilled through the floor and sub-slab material into which a 4.5 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 2/15/12 a sub-slab soil gas sample was collected in the supply storage area below the concrete slab on-grade foundation 6 feet from the south wall, 50 feet from the east wall and 4.5 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. A second grab sample was collected after purging 1 liter from the probe to be analyzed on different GC.

SS-2: To prepare the sampling probe, on 2/7/12 a 9 inch deep; 3/8 inch diameter hole was drilled through the floor and sub-slab material into which a 2.25 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 2/15/12 a sub-slab soil gas sample was collected in the basement area below the concrete slab 6 feet 6 inches from the west wall, 11 feet 17 inches from the north wall and 2.25 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. A second grab sample was collected after purging 1 liter from the probe to be analyzed on different GC.

SS-3: To prepare the sampling probe, on 2/7/12 a 9 inch deep; 3/8 inch diameter hole was drilled through the floor and sub-slab material into which a 2.25 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 2/15/12 a sub-slab soil gas sample was collected in the basement area below the concrete slab 18 feet 5 inches from the west wall, 10 feet from the south wall and 2.25 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. A second grab sample was collected after purging 1 liter from the probe to be analyzed on different GC. Canister #20856 was then collected as a confirmation grab sample after purging another 1 liter from the probe.

411 Barnum Ave. (Stratford Square)

McDonalds Restaurant

> **Indoor Air Sample**

Canister #4743 was collected in the office area located adjacent to the kitchen 4 feet from the east wall and 5 feet 7 inches above the floor over an 8-hour period from 09:55 to 17:55 on 2/14/12.

> **Air Grab Samples**

No grab samples were collected from this building.

> **Sub-slab Soil Gas Sample**

No soil gas samples were collected from this building.

Marshall's

> **Indoor Air Samples**

Canister #6558 was collected in the backroom/loading area 21 feet from the west wall, 17 feet from the south wall and 4 feet 4 inches above the floor over an 8-hour period from 10:14 to 18:14 on 2/16/12. Canister #6548 was collected as a duplicate sample for obtaining precision data.

Canister #3048 was collected in the shopping area 63 feet from the south wall, 73 feet from the east wall, 73 feet from the west interior wall, 116 feet from the north wall and 7 feet above the floor over an 8-hour period from 10:15 to 18:15 on 2/16/12.

> **Air Grab Samples**

No grab samples were collected from this building.

> **Sub-slab Soil Gas Sample**

No soil gas samples were collected from this building.

Payless Shoe Source

> **Indoor Air Sample**

Canister #13498 was collected in the back of the store 86 feet from the north wall, 10 feet from the west interior wall, 6 inches from the south interior wall and 8 feet 8 inches above the floor over an 8-hour period from 10:18 to 18:18 on 2/16/12.

> **Air Grab Samples**

No grab samples were collected from this building.

> **Sub-slab Soil Gas Sample**

No soil gas samples were collected from this building.

Sleepy's

> **Indoor Air Sample**

Canister #20857 was collected in the show room area 56 feet from the south interior wall, 17 feet 8 inches from the west interior wall and 6 feet 8 inches above the floor over an 8-hour period from 10:21 to 18:21 on 2/16/12.

> **Air Grab Samples**

No grab samples were collected from this building.

> **Sub-slab Soil Gas Sample**

No soil gas samples were collected from this building.

Fashion Bug

> **Indoor Air Sample**

Canister #4742 was collected at the checkout area 78 feet from the north wall, 30 feet from the east interior wall and 4 feet 4 inches above the floor over an 8-hour period from 10:22 to 18:22 on 2/16/12.

> **Air Grab Samples**

No grab samples were collected from this building.

> **Sub-slab Soil Gas Sample**

No soil gas samples were collected from this building.

US Postal Service

> **Indoor Air Sample**

Canister #6569 was collected in the backroom mail sorting area 32 feet from the south wall, 10 feet from the west interior wall and 6 feet 6 inches above the floor over an 8-hour period from 07:56 to 16:00 on 2/14/12.

> **Air Grab Samples**

No grab samples were collected from this building.

> **Sub-slab Soil Gas Sample**

No soil gas samples were collected from this building.

Sally's Beauty

> **Indoor Air Sample**

Canister #5804 was collected on top of display rack 31 feet from the north wall, 44 feet from the south interior wall, 8 feet from the west interior wall and 7 feet 6 inches above the floor over an 8-hour period from 10:26 to 18:26 on 2/16/12.

> **Air Grab Samples**

No grab samples were collected from this building.

> **Sub-slab Soil Gas Sample**

No soil gas samples were collected from this building.

Game Stop

> **Indoor Air Sample**

Canister #1589 was collected behind the cashier counter on a shelf 35 feet 8 inches from the north wall, 1 foot from the east interior wall and 4 feet 5 inches above the floor over an 8-hour period from 10:28 to 18:28 on 2/16/12.

> **Air Grab Samples**

No grab samples were collected from this building.

> **Sub-slab Soil Gas Sample**

No soil gas samples were collected from this building.

T-Mobile

> **Indoor Air Sample**

Canister #6581 was collected behind the cashier counter on a shelf 44 feet from the north wall, 5 feet from the west interior wall and 4 feet above the floor over an 8-hour period from 10:32 to 18:32 on 2/16/12.

> **Air Grab Samples**

No grab samples were collected from this building.

> **Sub-slab Soil Gas Sample**

No soil gas samples were collected from this building.

Regal Cinema Theater #11

> **Indoor Air Sample**

Canister #6553 was collected on a seat in the front of the theater 10 feet 8 inches from the screen, 16 feet 6 inches from the east wall, 17 feet 6 inches from the west wall and 2 feet 5 inches above the floor over an 8-hour period from 11:47 to 19:47 on 2/16/12.

> **Air Grab Samples**

No grab samples were collected from this building.

> **Sub-slab Soil Gas Sample**

No soil gas samples were collected from this building.

Regal Cinema Theater #8

> **Indoor Air Sample**

Canister #6567 was collected on a seat in the front of the theater 10 feet from the screen, 18 feet from the north wall, 27 feet from the south wall and 2 feet 5 inches above the floor over an 8-hour period from 11:41 to 19:41 on 2/16/12.

> **Air Grab Samples**

No grab samples were collected from this building.

> **Sub-slab Soil Gas Sample**

No soil gas samples were collected from this building.

Regal Cinema Projection Booth

> **Indoor Air Sample**

Canister #6463 was collected on top of a transformer 9 feet from the south wall, 2 feet 5 inches from the north wall, 61 feet 5 inches from the west wall and 4 feet above the floor over an 8-hour period from 11:50 to 19:50 on 2/16/12.

> **Air Grab Samples**

No grab samples were collected from this building.

> **Sub-slab Soil Gas Sample**

No soil gas samples were collected from this building.

Ambient/Background Air Sample

Two ambient/background air sampling locations were established for this project to cover the indoor air sampling period from 2/13/12 through 2/16/12. Descriptions of these locations are provided below with the associated canister sampling numbers and their sampling times.

The following canister samples were collected at 500 Ferry Blvd on the front porch 25 feet 2 inches from the northeast corner of the building, 4 feet 5 inches north of the building and 7 feet 3 inches above the ground.

Canister #13482 was over a 24-hour period from 11:40 on 2/13/12 to 11:40 on 2/14/12.

Canister #13495 was over a 24-hour period from 12:09 on 2/14/12 to 12:10 on 2/15/12.

Canister #15048 was over a 24-hour period from 12:09 on 2/15/12 to 12:09 on 2/16/12.

The following canister sample was collected at 411 Barnum Ave. between the parking lot behind the building and interstate 95 approximately 18 yards north of interstate 95, 52 yards south of the Stratford Square Mall, directly behind Hallmark and 5 feet above the ground.

Canister #12566 was over a 24-hour period from 17:55 on 2/15/12 to 17:55 on 2/16/12.

4.0 Canister VOC Air Sampling and Analytical Methodologies

4.1 Description

EPA Region I Standard Operating Procedure (SOP) for Canister Sampling, ECASOP-Canister Sampling SOP5, September 19, 2011, Revision 5, was used to collect the air samples. Twenty four hour and eight hour time-weighted average (TWA) indoor air samples were collected in evacuated 6-liter canisters using mechanical flow controllers, following the procedures described in Part 2 of the Region I SOP. Detailed descriptions of the quality assurance procedures are provided in Part 3, Section 14 of the referenced SOP.

The TWA indoor air samples were collected using a 6-liter canister with a mechanical flow controller calibrated to 3.7 ml/min to obtain 24-hour samples and to 10 ml/min to obtain 8-hour samples. At the end of the sampling period, the final canister pressure should have been below atmospheric pressure. For this study the final canister pressures for the 24-hour samples were between -4 and -8 inches of mercury vacuum and between -6 and -14 inches of mercury vacuum. As a result, the data collected are representative of 24-hour and 8-hour average concentrations.

The indoor air, ambient air and soil gas confirmation canister samples were brought back to the EPA laboratory, properly logged in on 2/17/12 and analyzed on February 21, 22, 23, 27, 28 and 29, 2012 using a GC/MS following the EPA Region I Standard Operating Procedure, EIASOP-AIRCAN10. This analytical procedure was used to identify and quantify VOCs listed in Table 1. Prior to analyzing the canisters, they were pressurized with nitrogen. Indoor air and soil gas concentrations can be higher than outside ambient air. Therefore, in some cases a series of dilutions were made to keep concentrations within the calibration range. As a result, a dilution factor was calculated and applied to the data. When dilutions are made to samples, the compound reporting limits tend to be higher.

4.2 Canister Cleaning and Leak Certification Procedures

4.2.1 Canister Cleaning Procedure

Prior to the sampling event, all the canisters were cleaned by placing them in ovens maintained at 150°C, evacuated to at least 10^{-2} Torr and then pressurized with humidified nitrogen to approximately 30 psig. This process was repeated three times.

Detailed descriptions of these procedures are provided in the document entitled, "Canister Cleaning Standard Operating Procedures, ECASOP-Canister Cleaning SOP5, March 17, 2009, Revision 5."

4.2.2 Canister Leak Certification Procedure

At the end of the cleaning process described above, the canisters were evacuated to less than 10^{-2} Torr. A Pirani sensor was then used to measure the vacuum in each canister. The canisters were then placed on a shelf for at least 24 hours. At the conclusion of this period, the Pirani sensor was used again to measure the final canister vacuum which was compared to the initial reading to determine if the canisters show signs of leaking. Detailed descriptions of these procedures are provided in the document entitled, "Canister Leak Certification Standard Operating Procedures, ECASOP-Canister Leak SOP4, August 9, 2007, Revision 4."

4.2.3 Canister Cleanliness Certification Procedure

After all the canisters were certified leak free, each canister was pressurized with humidified nitrogen and then analyzed for contamination using the same GC/MS used to analyze the samples. Detailed descriptions of these procedures are provided in the document entitled, "Pressurized Canisters for Clean Certification Standard Operating Procedures, ECASOP-Canister Pressurizing SOP5, EPA-REG1-OEME/CANISTER-PREP-SOP, September 19, 2011, Revision 5."

Canisters were stored under pressure until February 9 and 10, when they were re-evacuated to less than 10^{-2} Torr. Detailed descriptions of these procedures are provided in the document entitled, "Canister Evacuation Standard Operating Procedures, ECASOP-Canister Evacuation SOP4, September 19, 2011, Revision 4."

4.3 Canister Flow Controller Cleaning and Calibration Procedures

4.3.1 Flow Controller Calibration Procedure

Flow controllers to be used with the 6-liter canisters were calibrated at the EPA laboratory to 3.7 ml/min to obtain 24-hour samples and to 10 ml/min. to obtain 8-hour samples following the procedures provided in the EPA Region I SOP for Canister Sampling, ECASOP-Canister Sampling SOP5, September 19, 2011, Revision 5, part 2, Section 14.1. Each flow controller was connected to a "dummy" evacuated canister and an Aalborg Electronic Mass Flow Meter, Model GFMs-010020, was attached to the flow controller's inlet port. As room air was drawn into the "dummy" canister, the flow controller needle valve was adjusted until the flow rate was maintained at the desired

rate.

In the field, each canister pressure was checked prior to and after the sampling event with a dedicated pressure/vacuum gauge. For this study the final canister pressures for the 24-hour samples were between -4 and -8 inches of mercury vacuum and between -6 and -14 inches of mercury vacuum. As a result, the data collected are representative of 24-hour and 8-hour average concentrations.

4.3.2 Flow Controller Cleaning Procedure

After the flow controllers were calibrated they were cleaned following the procedures provided in the EPA Region I SOP for Flow Controller Cleaning Standard Operating Procedures, ECASOP- Flow Controller Cleaning. SOP.Rev1, September 19, 2011. The flow controllers were placed in ovens maintained at 100°C and purged with humidified nitrogen for approximately one hour.

4.4 Canister Analysis Quality Control/Quality Assurance Results

4.4.1 Laboratory Blank

Humidified nitrogen was introduced into the analytical instrument inlet line prior to analyzing the canisters to serve as laboratory blanks. The laboratory blanks were analyzed to determine the background contamination present in the analytical system. Canister data were qualified as estimated and flagged with a "B", when the observed concentration in the sample was less then five times the concentration in the laboratory blank. Blank values were not subtracted from the reported sample concentrations.

The laboratory blank results are presented in the Laboratory Analytical Reports, provided in Appendix D. Twelve laboratory blanks were analyzed with the samples and no compounds were detected above the reporting limits. Therefore, no compounds were qualified as estimated based on the laboratory blank data.

4.4.2 Data Reproducibility/Precision Results

The following canisters were analyzed a second time for assessing analytical precision, namely: canister #12562 (Sample ID: AB27585), canister #15050 (Sample ID: AB27623) and canister #1589 (Sample ID: AB27644). The same sample aliquot was withdrawn from the canisters and analyzed in a similar manner. Compounds having values above their reporting limits are reported in a table at the end of the Laboratory Analytical Reports provided in Appendix A. The relative percent differences (RPD) were calculated and all are less than QC limits/acceptance criterion. Therefore, the analytical precision acceptance criterion has been satisfied and the data did not need to be qualified as estimated.

During the four day survey, one duplicate canister sample was collected each day over either a 24-hour or an 8-hour sampling period at four separate locations. Canister #1587 served as the duplicate sample and was collected in the basement at 500 Ferry Blvd. over a 24-hour period on 2/13/12 – 2/14/12. Canister #3656 served as the duplicate sample and was collected in the basement at 608 Ferry Blvd. over an 8-hour

period on 2/14/12. Canister #6568 served as the duplicate sample and was collected in the basement at 444 Ferry Blvd. over an 8-hour period on 2/15/12. Canister #6548 served as the duplicate sample and was collected in Marshall's backroom/loading area at 411 Barnum Ave. over an 8-hour period on 2/16/12. Tables 2A, 2B, 2C and 2D show the comparison data of compounds detected above their reporting limits in both samples with calculated RPDs.

The sampling precision data were evaluated by comparing data pairs with both values greater than ten times the reporting limit and then determine if the calculated RPD was within the 25% acceptance criteria. Based on these criteria, the only compounds with RPDs above 25% were the non-target compounds hexane, toluene and m/p-xylene reported in Table 2A for duplicate samples collected inside 500 Ferry Blvd. on 2/13/12. Reviewing the results for the other three duplicate samples collected on 2/14/12, 2/15/12 and 2/16/12, showed the acceptance criteria were satisfied. Even the RPDs for hexane, toluene and m/p-xylene were all well below the 25% acceptance criteria. Considering all the sampling and analytical precision data collected for this project, the data does not need to be qualified as estimated.

4.4.3 Data Accuracy Results

A quality control canister sample containing selected VOCs at known concentrations was analyzed with the canister samples to determine analytical accuracy. The results of the observed concentrations were compared to the known acceptable range and are reported in a table at the end of the Laboratory Analytical Report provided in Appendix D. The observed concentrations for all the compounds are considered acceptable.

4.4.4 Canister Surrogate Spike Results

Prior to analyzing each canister sample, surrogate compounds, 1, 2 dichloroethane d4, bromofluorobenzene and toluene d8 were added to the analytical system. The percent recovery data for the surrogate compounds are reported with each sample data sheet in Appendix D. The results show the recoveries for the three surrogate compounds were all determined to be acceptable.

4.4.5 Chain of Custody

Chain of custody documentation was completed by Peter Kahn. All canister samples were logged into the laboratory on February 17, 2012, transferring the sample custody to the laboratory personnel. A completed chain of custody form is included with the Laboratory Analytical Report provided in Appendix D.

4.4.6 Data Validation and Usability

The analytical report provided by the EPA Regional Laboratory was further validated by Peter Kahn. The data reported by the laboratory were compared to the data quality performance criteria specified in Sections 4.4.1, 4.4.2, 4.4.3 and 4.4.4 to evaluate data usability. All data collected for this project are presented in this report and qualified as needed, no data were rejected. The data presented in this report are of acceptable quality to represent the levels of volatile organic compounds present at the indoor air,

ambient air, and soil gas sampling locations. These levels may vary given differing site activities, environmental conditions and the time of year. Therefore, the data only represent the conditions prevailing at the time of sampling.

5.0 Air Grab Sampling and Analysis Methodology for VOCs

5.1 Air Grab Sampling Procedures

Indoor air grab samples were collected by drawing 200 micro liters of air at the selected sampling locations using an air tight glass syringe. Samples were manually injected and immediately analyzed on-site using a Shimadzu GC/ECD/PID and Photovac 10A10 GC/PID.

5.2 Air Grab Field Analytical Procedures

Air grab samples were analyzed using Region 1's standard air screening method, "Air Sample Analysis for Volatile Organic Compounds", EIASOP-FLDGRAB4. Vapor samples were collected in a 250 micro liter steel barreled glass syringe and were analyzed on-site using a Shimadzu 14B gas chromatograph (GC) equipped with a 30 meter, 0.53 mm DBPS 624 column, electron capture detector (ECD) and photo ionization detector (PID). Analysis was also performed using a Photovac 10A10 PID equipped with a 4 foot x 1/8 inch SE 30 column. To document the response of the GC's strip chart recorders were used to record the sample and standard chromatograms.

Concentrations of VOCs were calculated using the external standard technique. To tentatively identify compounds in a sample, professional judgment was used to identify the retention times of sample chromatogram peaks. These were then compared to the standard peak retention times. When a compound was tentatively identified, quantitation was performed by a peak height comparison. For this study the method tentatively identified and quantified the compounds shown below with their reporting limits.

Compound	Reporting Limit (ppb/v)	Reporting Limit (µg/m^3)
Trichloroethylene	0.7	3.8
1,1-Dichloroethylene	10	40
1,1,1-Trichloroethane	1.0	5.5
Tetrachloroethylene	0.4	2.7

5.3 Quality Control Procedures

The following quality control procedures were used for the on-site air grab sample analysis.

- Syringe blank injections were made after every 10 samples and as needed to assess carryover from high concentration samples. Blank values were subtracted from sample values when calculating compound concentrations.
- A one level calibration standard was run throughout the analysis period to maintain a consistent standard chromatogram.

- Duplicate/replicate analyses were performed to determine field precision. All of the relative percent differences (RPDs) were within the ± 20% acceptance criteria.

6.0 Soil Gas Sampling and Analysis Methodology for VOCs

6.1 Soil Gas Sampling Procedures

6.1.1 Sub-Slab Soil Gas Sampling Procedures

The installation of sub-slab soil gas sampling probes was performed using the EPA Region I Standard Operating Procedure for Sub-Slab Soil Gas Sampling, April 12, 2011, Revision 2. After the sampling probe was in place, a battery operated, portable vacuum pump, calibrated to approximately 1 liter per minute, was attached at the end of a "T" fitting to purge 1 liter from the sampling probe before collecting the sample. The pump continuously withdrew soil gas as a sample was collected. This was accomplished by inserting the needle of a glass syringe through the septa of the "T" fitting and extracting a sample from the soil gas path. Samples were then manually injected into a Shimadzu GC and Photovac GC.

At each soil gas sampling location, the sub-slab sampling probe remained in the same position and a new "T" fitting, made of a stainless steel flexible line and an in-line valve, was connected for collecting a canister grab sample. The vacuum pump was attached to one end of the "T" fitting and the flow controller/canister was connected to the other end of the "T" fitting. The canister valve remained closed as the pump purged 1 liter from the probe. Immediately after the in-line valve on the pump end of the "T" fitting was closed, the canister valve was opened to collect a grab sample. Using a flow controller on the canister calibrated to flow rate of approximately 600 ml/min. the canister reached atmospheric pressure within approximately 20 minutes. All of the soil gas canister grab samples were brought back to the OEME Laboratory for analysis following the procedure described in Section 4.1.

6.2 Soil Gas Field Analytical Procedures

The soil gas grab samples were analyzed using Region 1's standard air screening method, "Air Sample Analysis for Volatile Organic Compounds", EIASOP-FLDGRAB4. Vapor samples were collected in a 250 micro liter steel barreled glass syringe and were analyzed on-site using a Shimadzu 14B gas chromatograph (GC) equipped with a 30 meter, 0.53 mm DBPS 624 column, electron capture detector (ECD) and photo ionization detector (PID). Analysis was also performed using a Photovac 10A10 PID equipped with a 4 foot x 1/8 inch SE 30 column. To document the response of the GC's strip chart recorders were used to record the sample and standard chromatograms.

Concentrations of VOCs were calculated using the external standard technique. To tentatively identify compounds in a sample, professional judgment was used to identify the retention times of sample chromatogram peaks. These were then compared to the standard peak retention times. When a compound was tentatively identified, quantitation was performed by a peak height comparison. For this study the method

tentatively identified and quantified the compounds shown in the table above with their reporting limits.

6.3 Quality Control Procedures

The following quality control procedures were used for the on-site air grab sample analysis.

- Syringe blank injections were made after every 10 samples and as needed to assess carryover from high concentration samples. Blank values were subtracted from sample values when calculating compound concentrations.
- A one level calibration standard was run throughout the analysis period to maintain a consistent standard chromatogram.
- Duplicate/replicate analyses were performed to determine field precision. All of the relative percent differences (RPDs) were within the ± 20% acceptance criteria.

7.0 Meteorological Measurement

7.1 Ambient Air Meteorological Data

In general, sampling during winter months is the best strategy to maximize the probability of encountering "worse case" conditions. A key factor in this regard is the movement of gases in and out of the building basement or slab on-grade, to and from the surrounding subsurface environment. Meteorological conditions and observations during and prior to the sampling event provide some insight in this regard. With respect to encountering worse-case conditions, a change in barometric pressure can promote a modest "barometric pumping" action, where higher pressure gases in the subsurface migrate to lower pressure overlying areas (including structures). Also, moderate rainfall in the preceding days of a sampling event, moderate to high wind speeds around a structure and hot forced air heating systems cycling on and off within the structure during the sampling event could promote movement of subsurface vapors into structures.

Meteorological data were obtained from the Igor I. Sikorsky Memorial Airport in Bridgeport, CT using the following NOAA web Site, http://cdo.ncdc.noaa.gov/qclcd. The airport is between 2 and 2.5 miles south of the area under investigation. Five tables are provided in Appendix C showing the daily weather conditions for February 12 – 16, 2012. The data shown include: hourly temperature, dew point, relative humidity, wind direction, wind speed, atmospheric pressure and precipitation amounts. Thirty five hours prior to the first sampling event that began on February 13 at 11:40 am, no precipitation was recorded. Between 11:40 am on 2/13/12 and the end of the last sampling event at 19:50 on 2/16/12 only 0.13 inches of precipitation was recorded. As a result, the soil pore spaces were most likely not significantly saturated with moisture during any of the sampling events. Therefore, soil gases had a chance to accumulate in the soil pore spaces and had the potential to migrate into the buildings, if a pathway existed. Starting on 2/13/12 at 11:40 and over the next 24-hours the barometric pressure steadily increased from 29.93 inches of mercury to 30.11 inches of mercury

before it began to hold steady between 30.09 and 30.03 inches of mercury for the next 20-hours. At 06:52 on 2/15/12 the barometric pressure was 30.10 inches of mercury increasing to 30.28 inches of mercury on 2/16/12 at 08:52, 26-hours later. From there to the end of the last sampling period, the pressure dropped to 30.09 inches of mercury. The changes in barometric pressure over the course of the four days sampling took place, may have caused soil gases to begin moving out of the soil pore spaces and potentially into the buildings, if a pathway existed. In general, low wind speeds were measured on 2/14/12, 2/15/12 and 2/16/12, which most likely did not promote the movement of subsurface vapors into the structure. Slightly higher wind speeds were measured on 2/13/12 between 11:40 and 23:52, which may have had an influence on soil gas migration at 500 Ferry Blvd., 72 Ferry Court and 62 Ferry Court. The table below shows the average 24-hour meteorological conditions for the period February 12 – 16, 2012.

Time	Temp. (F)	Dew Point Temp. (F)	Relative Humidity (%)	Wind Speed (mph)	Wind Direction	Barometric Pressure (inches Hg)
2/12/12	26	4	39	15	NW	29.78
2/13/12	36	15	43	11	SW	29.94
2/14/12	39	22	51	4	SSE	30.05
2/15/12	42	34	73	4	SW	30.15
2/16/12	38	30	75	2	SSE	30.19

8.0 Indoor Air and Soil Gas Sampling Results and Discussions

February 13 – 16, 2012, indoor air and, where feasible, sub-slab soil gas sampling were performed inside nine commercial buildings and within three condominium/apartments to form lines of evidence for completion of a vapor intrusion pathway risk evaluation related to contaminants associated with the Site. Inside the residential properties located at 62 Ferry Court, 72 Ferry Court, 82 Ferry Court and the residential/commercial property at 500 Ferry Blvd., 24-hour indoor air samples were collected from the basement and first floor areas. Inside the commercial/industrial properties located at 608 Ferry Blvd., 335 Ferry Blvd., 300 Ferry Blvd., 326 Ferry Blvd., 444 Ferry Blvd., 100 Veterans Way, and inside nine businesses located at 411 Barnum Ave., 8-hour samples were collected from the basement, if one was present, and from the first floor/ground floor. In this section, indoor air data will be compared to 24-hour background outdoor air samples collected each day indoor air samples were collected. The collected data will also be compared to the EPA Regional Screening Levels (RSLs) for the target compounds, TCE, 1, 1-DCE and VC. All canister samples were analyzed for the VOCs listed on Table 1 using a GC/MS. The data presented in this report are of acceptable quality to represent the levels of VOCs present at the sampling locations under the specific conditions prevailing during sampling. These levels may vary given differing site activities, time of year, characteristics of the site and groundwater plume, meteorological conditions and building operations.

The indoor air and soil gas canister sampling analytical report is provided in Appendix D. The EPA Mobile Laboratory analytical report is provided in Appendix E. The 24-hour ambient air canister target and non-target compound data are summarized in

Table 3. Tables 4 – 23 show a summary of the indoor air, outside air canister data and soil gas confirmation canister data for all compounds (target and non-target) detected above their reporting limits for each property. Tables 24 - 34 show a summary of the air grab sampling data, indoor air canister data and sub-slab soil gas data for the target compounds, including 1,1,1-trichloroethane (1,1,1-TCA) and tetrachloroethylene (PCE) collected from each property.

8.1 Trichloroethylene Sampling Results and Discussions

The indoor air data were reviewed and compared to the TCE EPA RSL for residential and commercial/industrial properties where applicable, 0.432 µg/m^3 and 2.99 µg/m^3, respectively. The indoor air TCE concentrations inside the three residential properties, 62 Ferry Court, 72 Ferry Court and 82 Ferry Court and the residential/commercial property located at 500 Ferry Blvd., were not above the residential RSL, 0.432 µg/m^3. The only values detected were in the 500 Ferry Blvd. and 62 Ferry Court basements at estimated concentrations of 0.26 µg/m^3 and 0.27 µg/m^3, respectively. The method reporting limits for the indoor air samples collected at these locations were between 0.49 µg/m^3 and 0.54 µg/m^3, which are slightly above the residential RSL, making it difficult to perform an accurate vapor intrusion pathway risk evaluation. However, considering the detected sub-slab soil gas TCE concentrations at 500 Ferry Blvd. were between 269 µg/m^3 and 940 µg/m^3, does suggest soil gas migration into the building maybe occurring, although not significantly. In contrast, there were lower sub-slab soil gas concentrations detected under 72 Ferry Court at 0.51 µg/m^3 and an estimated concentration of 0.24 µg/m^3 under 82 Ferry Court, but not detected above the reporting limit 0.47 µg/m^3 at 62 Ferry Court. This data shows very little soil gas was accumulating under these condominiums and considering the low indoor air concentrations, there is no apparent adverse impact to indoor air quality. In addition, all of these properties have what appear to be solid foundations and finished basements. TCE was not detected above the reporting limit in the outside ambient air, so this was not a contributing factor to indoor air levels. Also, based on an inventory and discussions with the occupants of each building, the products used and or stored inside these buildings did not contribute to the TCE indoor air concentrations. TCE indoor air and soil gas results for these buildings are shown below. Note that in the table, ND = not detected, NA = not applicable and L = estimated value.

Residential TCE Concentrations

	500 Ferry Blvd. (µg/m^3)	**62 Ferry Court (µg/m^3)**	**72 Ferry Court (µg/m^3)**	**82 Ferry Court (µg/m^3)**
Basement 24-Hour Indoor Air	0.26 L	0.27 L	ND (0.52)	ND (0.54)
Crawl Space 24-Hour Indoor Air	ND (0.49)	NA	NA	NA
First Floor 24-Hour Indoor Air	ND (0.54)	ND (0.54)	ND (0.50)	ND (0.53)
Sub-Slab Soil Gas SS-1	269	ND (0.47)	0.51	0.24 L
Sub-Slab Soil Gas SS-2	940	NA	NA	NA
Outside Ambient Air	ND (0.54)	ND (0.54)	ND (0.54)	ND (0.51)

EPA RSL Residential Air for TCE is 0.432 µg/m^3

The TCE indoor air data collected from the commercial/industrial properties were compared to the EPA RSL, 2.99 µg/m^3. The properties with indoor air values above the RSL were within Curtin Taxi located at 335 Ferry Blvd. (11 µg/m^3), in the basement at 100 Veterans Way (5.4 µg/m^3) and in the Payless Shoe Source Store (5.7 µg/m^3) and the Sleepy's Store (13 µg/m^3) located in Stratford Square at 411 Barnum Ave. At 335 Ferry Blvd. there was evidence that TCE was present in the soil gas below the buildings slab at concentrations between 1.6 µg/m^3 and 22 µg/m^3, which are similar to the concentration inside Curtin Taxi. Considering the concrete slab at 335 Ferry Blvd. was thick and intact, the rate of soil gas migration would be low. Also, comparing the indoor air to soil gas concentrations suggest a possible source, not observed inside Curtin Taxi, is contributing more too indoor concentrations than from the soil gas underneath. At 100 Veterans Way the sub-slab soil gas concentrations were much higher, between 1069 µg/m^3 and 1236 µg/m^3, compared to what was detected inside the building. There were no sub-slab soil gas samples collected at 411 Barnum Ave., but what is interesting is the two stores described above are next to one another within the building complex. The reporting limits for the commercial/industrial properties were between 0.49 µg/m^3 and 0.86 µg/m^3, which are well below the commercial/industrial RSL. Therefore, the indoor air data can be used to effectively evaluate the vapor intrusion pathway risk. TCE was not detected above the reporting limits in the outside ambient air samples collected between 2/13/12 and 2/16/12, so this was not a contributing factor to indoor air levels. There is a possibility that the products sold inside the Payless Shoe Source and Sleepy's Stores where off gassing VOCs, thus contributing to the measured TCE indoor air concentrations. TCE indoor air and soil gas results for the commercial/ industrial buildings are shown below. Note that in the table, ND = not detected, NA = not applicable and L = estimated value.

Commercial/Industrial TCE Concentrations

	608 Ferry Blvd. (µg/m^3)	**100 Veterans Way (µg/m^3)**	**444 Ferry Blvd. (µg/m^3)**
Basement 8-Hour Indoor Air	ND (0.54)	5.4	ND (0.59)
First Floor 8-Hour Indoor Air	ND (0.50)	1.2	ND (0.64)
Sub-Slab Soil Gas SS-1	161	1236	ND (3.8)
Sub-Slab Soil Gas SS-2	ND (3.8)	1236	ND (3.8)
Sub-Slab Soil Gas SS-3	1.4	1100	2.6
Outside Ambient Air	ND (0.54)	ND (0.54)	ND (0.51)

EPA RSL Commercial/Industrial Air for TCE is 2.99 µg/m^3

	335 Ferry Blvd. (µg/m^3)	**300 Ferry Blvd. (µg/m^3)**	**326 Ferry Blvd. (µg/m^3)**
Ground Flr. 8-hr. Indoor Air	Curtin Taxi: 11	Main Rm: ND (0.70)	Dining Room: 0.24 L
Ground Flr. 8-hr. Indoor Air	Office: 0.23 L	Snow Board Area: ND (0.64)	Kitchen: ND (0.59)
Ground Flr. 8-hr. Indoor Air	Estimating Rm: ND (0.64)	NA	NA
Sub-Slab Soil Gas SS-1	Garage Area 1: 22	Snow Board Storage: 160	NA
Sub-Slab Soil Gas SS-2	Garage Area 2: 1.6	Repair Shop: 161	NA
Outside Ambient Air	ND (0.54)	ND (0.54)	ND (0.51)

EPA RSL Commercial/Industrial Air for TCE is 2.99 µg/m^3

Ground Floor 8-hour Indoor Air	411 Barnum Ave. (µg/m^3)
McDonalds	ND (0.59)
Marshalls Loading Area Marshalls Shopping Area	0.43 L ND (0.64)
Payless Shoe Source	5.7
Sleepy's	13
Fashion Bug	1.2
US Postal Service	ND (0.59)
Sally's Beauty	ND (0.64)
Game Stop	ND (0.86)
T-Mobile	ND (0.70)
Regal Cinema Theater #11 Regal Cinema Theater #8 Regal Cinema Projection Booth	ND (0.70) ND (0.59) ND (0.64)
Outside Ambient Air	0.29 L

EPA RSL Commercial/Industrial Air for TCE is 2.99 µg/m^3

8.2 1, 1-Dichloroethylene Sampling Results and Discussions

The indoor air data were reviewed and compared to the 1, 1-DCE EPA RSL for residential and commercial/industrial properties where applicable, 210 µg/m^3 and 880 µg/m^3, respectively. The indoor air 1, 1-DCE concentrations inside the three residential properties, 62 Ferry Court, 72 Ferry Court and 82 Ferry Court and the residential/ commercial property located at 500 Ferry Blvd., were not detected above the reporting limits or above the residential RSL, 210 µg/m^3. The reporting limits for these properties were between 0.33 µg/m^3 and 0.48 µg/m^3, which are well below the residential RSL. Therefore, the indoor air data can be used to effectively evaluate the vapor intrusion pathway risk. At 500 Ferry Blvd., like with TCE, high 1, 1-DCE sub-slab soil gas concentrations were detected, but not inside the building, which suggest soil gas migration into the building maybe occurring, although not significantly. There were lower sub-slab soil gas concentrations detected under 72 Ferry Court at an estimated value of 0.19 µg/m^3 and nothing was detected under 62 or 82 Ferry Court. This data shows very little if any soil gas was accumulating under these condominiums and considering nothing was detected inside the buildings, shows no apparent adverse impact to indoor air quality. 1, 1-DCE was not detected above the reporting limit in the outside ambient air, so this was not a contributing factor to indoor air levels. 1, 1-DCE indoor air and soil gas results for these buildings are shown below. Note that in the table, ND = not detected, NA = not applicable and L = estimated value.

Residential 1, 1-DCE Concentrations

	500 Ferry Blvd. (µg/m^3)	62 Ferry Court (µg/m^3)	72 Ferry Court (µg/m^3)	82 Ferry Court (µg/m^3)
Basement 24-Hour Indoor Air	ND (0.36)	ND (0.40)	ND (0.38)	ND (0.40)
Crawl Space 24-Hour Indoor Air	ND (0.36)	NA	NA	NA
First Floor 24-Hour Indoor Air	ND (0.40)	ND (0.40)	ND (0.37)	ND (0.39)
Sub-Slab Soil Gas SS-1	NA	ND (0.35)	0.19 L	ND (0.33)
Sub-Slab Soil Gas SS-2	377	NA	NA	NA
Outside Ambient Air	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.38)

EPA RSL Residential Air for 1,1-DCE is 210 µg/m^3

The 1, 1-DCE indoor air data collected from the commercial/industrial properties were compared to the EPA RSL, 880 µg/m^3. The indoor air 1, 1-DCE concentrations inside the commercial/industrial properties were not detected above the RSL. The only indoor air values detected above the reporting limits were in the basement and on the first floor at 100 Veterans Way at 2.6 µg/m^3 and 0.67 µg/m^3, respectively. The reporting limits for these properties were between 0.37 µg/m^3 and 0.63 µg/m^3, which are well below the commercial/industrial RSL. Therefore, the indoor air data can be used to effectively evaluate the vapor intrusion pathway risk. There was evidence that low 1, 1-DCE concentrations were present in the soil gas below the building slab at 608 Ferry Blvd. (0.99 – 79 µg/m^3) and at 444 Ferry Blvd. (0.67 µg/m^3). At 100 Veterans Way the sub-slab soil gas concentrations were higher, between 778 µg/m^3 and 1000 µg/m^3, compared to what was detected inside the building. 1, 1-DCE was not detected above the reporting limit in the outside ambient air, so this was not a contributing factor to indoor air levels. 1, 1-DCE indoor air and soil gas results for these buildings are shown below. Note that in the table, ND = not detected, NA = not applicable and L = estimated value.

Commercial/Industrial 1, 1- DCE Concentrations

	608 Ferry Blvd. (µg/m^3)	100 Veterans Way (µg/m^3)	444 Ferry Blvd. (µg/m^3)
Basement 8-Hour Indoor Air	ND (0.40)	2.6	ND (0.44)
First Floor 8-Hour Indoor Air	ND (0.37)	0.67	ND (0.48)
Sub-Slab Soil Gas SS-1	79	778	ND (0.40)
Sub-Slab Soil Gas SS-2	ND (40)	881	ND (0.40)
Sub-Slab Soil Gas SS-3	0.99	1000	0.67
Outside Ambient Air	ND (0.40)	ND (0.40)	ND (0.38)

EPA RSL Commercial/Industrial Air for 1, 1-DCE is 880 µg/m^3

	335 Ferry Blvd. (µg/m^3)	300 Ferry Blvd. (µg/m^3)	326 Ferry Blvd. (µg/m^3)
Ground Flr. 8-hr. Indoor Air	Curtin Taxi: ND (0.44)	Main Rm: ND (0.52)	Dining Room: ND (0.48)
Ground Flr. 8-hr. Indoor Air	Office: ND (0.48)	Snow Board Area: ND (0.48)	Kitchen: ND (0.44)
Ground Flr. 8-hr. Indoor Air	Estimating Rm: ND (0.48)	NA	NA
Sub-Slab Soil Gas SS-1	Garage Area 1: ND (5.9)	Snow Board Storage: ND (3.0)	NA
Sub-Slab Soil Gas SS-2	Garage Area 2: ND (40)	Repair Shop: ND (40)	NA
Outside Ambient Air	ND (0.40)	ND (0.40)	ND (0.38)

EPA RSL Commercial/Industrial Air for 1, 1-DCE is 880 µg/m^3

Ground Floor 8-hour Indoor Air	411 Barnum Ave. (µg/m^3)
McDonalds	ND (0.44)
Marshalls Loading Area Marshalls Shopping Area	ND (0.48) ND (0.48)
Payless Shoe Source	ND (0.48)
Sleepy's	ND (0.44)
Fashion Bug	ND (0.48)
US Postal Service	ND (0.44)
Sally's Beauty	ND (0.48)
Game Stop	ND (0.63)
T-Mobile	ND (0.52)
Regal Cinema Theater #11 Regal Cinema Theater #8 Regal Cinema Projection Booth	ND (0.52) ND (0.44) ND (0.48)
Outside Ambient Air	ND (0.40)

EPA RSL Commercial/Industrial Air for 1, 1-DCE is 880 µg/m^3

8.3 Vinyl Chloride Sampling Results and Discussions

The indoor air data were reviewed and compared to the VC EPA RSL for residential and commercial/industrial properties where applicable, 0.16 µg/m^3 and 2.8 µg/m^3, respectively. The indoor air VC concentrations inside the three residential properties, 62 Ferry Court, 72 Ferry Court and 82 Ferry Court and the residential/commercial property located at 500 Ferry Blvd., were not detected above the reporting limits or above the residential RSL, 0.16 µg/m^3. The method reporting limits for the indoor air samples collected at these locations were between 0.23 µg/m^3 and 0.26 µg/m^3, which are slightly above the residential RSL, making it difficult to perform an accurate vapor intrusion pathway risk evaluation. However, VC was also not detected above the reporting limits (0.21 – 4.1 µg/m^3) in any of the sub-slab soil gas samples collected underneath these buildings. Considering the indoor air and soil gas data it does not appear indoor air was being adversely impacted. VC was not detected above the reporting limit in the outside ambient air, so this was not a contributing factor to indoor air levels. VC indoor air and soil gas results for these buildings are shown below. Note that in the table, ND = not detected, NA = not applicable and L = estimated value.

Residential VC Concentrations

	500 Ferry Blvd. (µg/m^3)	62 Ferry Court (µg/m^3)	72 Ferry Court (µg/m^3)	82 Ferry Court (µg/m^3)
Basement 24-Hour Indoor Air	ND (0.23)	ND (0.26)	ND (0.24)	ND (0.26)
Crawl Space 24-Hour Indoor Air	ND (0.23)	NA	NA	NA
First Floor 24-Hour Indoor Air	ND (0.26)	ND (0.26)	ND (0.24)	ND (0.25)
Sub-Slab Soil Gas SS-1	NA	ND (0.22)	ND (0.21)	ND (0.21)
Sub-Slab Soil Gas SS-2	ND (4.1)	NA	NA	NA
Outside Ambient Air	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.24)

EPA RSL Residential Air for VC is 0.16 µg/m^3

The VC indoor air data collected from the commercial/industrial properties were compared to the EPA RSL, 2.8 µg/m^3. The indoor air VC concentrations inside the commercial/industrial properties were not detected above the RSL. The only indoor air values detected above the reporting limits were in the Receptionist Office and in the Estimating Room at 335 Ferry Blvd. at estimated values 0.12 µg/m^3 and 0.11 µg/m^3, respectively. The reporting limits for these properties were between 0.24 µg/m^3 and 0.48 µg/m^3, which are well below the commercial/industrial RSL. Therefore, the indoor air data can be used to effectively evaluate the vapor intrusion pathway risk. VC was also not detected above the reporting limits (0.20 – 69 µg/m^3) in any of the sub-slab soil gas samples collected underneath the selected buildings. Considering the indoor air and soil gas data it does not appear indoor air was being adversely impacted. VC was not detected above the reporting limit in the outside ambient air, so this was not a contributing factor to indoor air levels. VC indoor air and soil gas results for these buildings are shown below. Note that in the table, ND = not detected, NA = not applicable and L = estimated value.

Commercial/Industrial VC Concentrations

	608 Ferry Blvd. (µg/m^3)	100 Veterans Way (µg/m^3)	444 Ferry Blvd. (µg/m^3)
Basement 8-Hour Indoor Air	ND (0.26)	ND (0.31)	ND (0.28)
First Floor 8-Hour Indoor Air	ND (0.24)	ND (0.28)	ND (0.31)
Sub-Slab Soil Gas SS-1	NA	NA	NA
Sub-Slab Soil Gas SS-2	NA	NA	NA
Sub-Slab Soil Gas SS-3	ND (0.20)	ND (69)	ND (0.22)
Outside Ambient Air	ND (0.26)	ND (0.26)	ND (0.24)

EPA RSL Commercial/Industrial Air for VC is 2.8 µg/m^3

	335 Ferry Blvd. (µg/m^3)	300 Ferry Blvd. (µg/m^3)	326 Ferry Blvd. (µg/m^3)
Ground Flr. 8-hr. Indoor Air	Curtin Taxi: ND (0.28)	Main Rm: ND (0.33)	Dining Room: ND (0.31)
Ground Flr. 8-hr. Indoor Air	Office: 0.12 L	Snow Board Area: ND (0.31)	Kitchen: ND (0.28)
Ground Flr. 8-hr. Indoor Air	Estimating Rm: 0.11 L	NA	NA
Sub-Slab Soil Gas SS-1	Garage Area 1: ND (3.8)	Snow Board Storage: ND (1.9)	NA
Sub-Slab Soil Gas SS-2	Garage Area 2: NA	Repair Shop: NA	NA
Outside Ambient Air	ND (0.26)	ND (0.26)	ND (0.24)

EPA RSL Commercial/Industrial Air for VC is 2.8 µg/m^3

Ground Floor 8-hour Indoor Air	411 Barnum Ave. (µg/m^3)
McDonalds	ND (0.28)
Marshalls Loading Area Marshalls Shopping Area	ND (0.31) ND (0.31)
Payless Shoe Source	ND (0.31)
Sleepy's	ND (0.28)
Fashion Bug	ND (0.31)
US Postal Service	ND (0.28)
Sally's Beauty	ND (0.31)
Game Stop	ND (0.41)
T-Mobile	ND (0.33)
Regal Cinema Theater #11 Regal Cinema Theater #8 Regal Cinema Projection Booth	ND (0.33) ND (0.28) ND (0.31)
Outside Ambient Air	ND (0.26)

EPA RSL Commercial/Industrial Air for VC is 2.8 µg/m^3

8.4 Non Target Compounds Sampling Results and Discussions

In addition to the target compounds detected in the indoor air and in the soil gas mentioned above, a number of non-target compounds were also detected inside the buildings. The indoor air concentrations are compared to the ambient/background air concentrations to help determine if a source of these compounds exists inside the building. In addition, the soil gas data are also compared to the indoor air data to further help assess the source of these compounds.

500 Ferry Blvd.

Table 4 shows a summary of the 24-hour indoor air, sub-slab soil gas and the sampling day ambient air non-target and target compound canister data, collected from this building. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix F. There were several compounds detected in the sub-slab soil gas samples at much higher concentrations than in the indoor air, namely 1, 1, 1-trichloroethane (1, 1, 1 -TCA), 1, 1-dichloroethane (1,1-DCA), tetrachloroethylene (PCE) and cis-1, 2-Dichloroethylene (cis-1, 2-DCE). Similarly, as described above in Sections

8.1 and 8.2, TCE and 1, 1-DCE indoor air and soil gas data also suggest soil gas migration into the building maybe occurring, although not significantly. There were a number of compounds that were detected at slightly higher concentrations in the basement verses on the first floor, that could be placed into the petroleum hydrocarbon category, including: 1, 2, 4-trimethylbenzene, 1, 3, 5-trimethylbenzene, 4-ethyltoluene, benzene, cyclohexane, ethylbenzene, hexane, toluene and xylene's. These compounds can volatilize from gasoline and other petroleum products. Stored in the basement of this property are gasoline powered equipment, which the owner claimed no gasoline was stored in the tanks. However, they could still be the source for the compounds detected.

The concentrations detected for other non-target compounds inside the building were similar or slightly lower than the ambient air concentrations, namely: dichlorodifluoromethane, methylchloride, methylene chloride, trichlorofluoromethane and trichlorotrifluoroethane. There have been studies showing levels of indoor pollutants can be 25% – 62% higher than outdoor air pollutant levels. Outdoor air continually infiltrates a typical building bringing with it pollutants that will accumulate, resulting in measurable levels that are higher inside than out. In general, the non-target compounds detected inside the building are most likely associated with sources inside or outside the building and not from contaminated soils or groundwater beneath or adjacent to the building.

72 Ferry Court

Table 5 shows a summary of the 24-hour indoor air, sub-slab soil gas and the sampling day ambient air non-target and target compound canister data, collected from this home. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix F. In general, the few non-target compounds that were detected in the sub-slab soil gas sample had concentrations that were less than what was detected in the basement and on the first floor. The indoor air concentrations of the non-target compounds detected in the basement and on the first floor were very similar and in some cases were similar to the ambient air. There have been studies showing levels of indoor pollutants can be 25% – 62% higher than outdoor air pollutant levels. Outdoor air continually infiltrates a typical building bringing with it pollutants that will accumulate, resulting in measurable levels that are higher inside than out. The compounds detected inside the building are most likely associated with sources inside or outside the building and not from contaminated soils or groundwater beneath or adjacent to the building. This home has a soil vapor extraction system/radon mitigation system installed, which will aid in the removal of soil gas from beneath the home.

62 Ferry Court

Table 6 shows a summary of the 24-hour indoor air, sub-slab soil gas and the sampling day ambient air non-target and target compound canister data, collected from this home. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix F. In general, the non-target compounds detected in the sub-slab soil gas sample had concentrations that were less than what was detected in the

basement and on the first floor, with the exception of tetrachloroethylene. The indoor air concentrations of the non-target compounds detected in the basement and on the first floor were very similar and in some cases were higher than ambient air. There have been studies showing levels of indoor pollutants can be 25% – 62% higher than outdoor air pollutant levels. Outdoor air continually infiltrates a typical building bringing with it pollutants that will accumulate, resulting in measurable levels that are higher inside than out. The compounds detected inside the home are most likely associated with sources inside or outside the building and not from contaminated soils or groundwater beneath or adjacent to the building. According to the home owner, cigarettes are occasionally smoked inside the home and every few months clothes are dry cleaned. Tetrachloroethylene used in the dry cleaning industry will off gas from clothes for a period of time after they have been brought home. Cigarette smoke contains benzene, cyclohexane, toluene and xylene's, which were detected inside the home.

82 Ferry Court

Table 7 shows a summary of the 24-hour indoor air, sub-slab soil gas and the sampling day ambient air non-target and target compound canister data, collected from this home. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix F. In general, the non-target compounds detected in the sub-slab soil gas sample had concentrations that were similar or less than what was detected in the basement and on the first floor. The indoor air concentrations of the non-target compounds detected in the basement and on the first floor were very similar and in some cases were higher than ambient air, with the exception of methylene chloride and tetrahydrofuran. There have been studies showing levels of indoor pollutants can be 25% – 62% higher than outdoor air pollutant levels. Outdoor air continually infiltrates a typical building bringing with it pollutants that will accumulate, resulting in measurable levels that are higher inside than out. The compounds detected inside the home are most likely associated with sources inside or outside the building and not from contaminated soils or groundwater beneath or adjacent to the building. According to the home owner 2 days prior to the sampling event clothes had been dry cleaned and brought into the home. Tetrachloroethylene used in the dry cleaning industry will off gas from clothes for a period of time after they have been brought home, which may account for the higher levels detected on the first floor compared to the basement.

608 Ferry Blvd.

Table 8 shows a summary of the 8-hour indoor air, sub-slab soil gas and the sampling day ambient air non-target and target compound canister data, collected from this building. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix F. At the time sampling took place this building was vacant, not being heated, all furnishing had been removed, the floors were not covered with carpet, wood or tile, just exposed concrete and the walls were not finished, just exposed cinder blocks. There were several compounds detected in the sub-slab soil gas samples at higher concentrations than in the indoor air, namely 1, 1-dichloroethane (1, 1-DCA) and cis-1, 2-Dichloroethylene (cis-1, 2-DCE). Similarly, as described above in Sections 8.1

and 8.2, TCE and 1, 1-DCE indoor air and soil gas data also suggest soil gas migration into the building maybe occurring, although not significantly. The indoor air concentrations of the other non-target compounds detected in the basement and on the first floor were very similar and in some cases were higher than ambient air. There have been studies showing levels of indoor pollutants can be 25% – 62% higher than outdoor air pollutant levels. Outdoor air continually infiltrates a typical building bringing with it pollutants that will accumulate, resulting in measurable levels that are higher inside than out. In general, the compounds detected inside the building are most likely associated with sources inside or outside the building and not from contaminated soils or groundwater beneath or adjacent to the building.

335 Ferry Blvd.

Table 9 shows a summary of the 8-hour indoor air, sub-slab soil gas and the sampling day ambient air non-target and target compound canister data, collected from this building. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix F. This building does not have a basement. The lower level is constructed on a slab on-grade foundation, which has three separate garage bays and one area used as office space by Curtin Taxi. A level above this, which is at ground level, is intended as office and retail space. There were several compounds detected in the sub-slab soil gas samples at higher concentrations than in the indoor air, namely 1, 1, 1-trichloroethane (1, 1, 1 -TCA), 1, 1-dichloroethane (1, 1-DCA), cyclohexane, tetrachloroethylene (PCE) and cis-1, 2-Dichloroethylene (cis-1, 2-DCE). As described above in Sections 8.1, the TCE indoor air concentration in the Curtin Taxi portion of the building was above the RSL and with TCE detected in the soil gas at similar concentrations, there is possibly a source, not observed inside Curtin Taxi, contributed more too indoor concentrations than from the soil gas underneath. Also, comparing the concentrations of 1, 1, 1 –TCA, 1, 1-DCA, cyclohexane, PCE and cis-1, 2-DCE in the soil gas to inside Curtin Taxi, supports this idea.

The indoor air concentrations of the other non-target compounds detected in the basement and on the first floor were very similar and in some cases were higher than ambient air. There have been studies showing levels of indoor pollutants can be 25% – 62% higher than outdoor air pollutant levels. Outdoor air continually infiltrates a typical building bringing with it pollutants that will accumulate, resulting in measurable levels that are higher inside than out. In general, the compounds detected inside the building are most likely associated with sources inside or outside the building and not from contaminated soils or groundwater beneath or adjacent to the building.

300 Ferry Blvd.

Table 10 shows a summary of the 8-hour indoor air, sub-slab soil gas and the sampling day ambient air non-target and target compound canister data, collected from this building. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix F. This building is constructed on a slab on-grade foundation and is currently being used as ski and snow board retail store and repair shop. There were a few compounds detected in the sub-slab soil gas sample at higher

concentrations than in the indoor air, namely 1, 1-dichloroethane (1, 1-DCA), dichlorodifluoromethane, methyl-t-butyl ether (MTBE), tetrachloroethylene (PCE) and cis-1, 2-Dichloroethylene (cis-1, 2-DCE). Similarly, as described above in Sections 8.1 TCE indoor air and soil gas data also suggest soil gas migration into the building maybe occurring, although not significantly. MTBE was only detected in the soil gas, which suggests an old gasoline spill may have occurred in the area. MTBE was discontinued as fuel additive in 2006 and can persist in groundwater for many years.

The indoor air concentrations of the other non-target compounds detected at the two sampling locations on the ground floor were very similar and in some cases were similar or higher than ambient air. There have been studies showing levels of indoor pollutants can be 25% – 62% higher than outdoor air pollutant levels. Outdoor air continually infiltrates a typical building bringing with it pollutants that will accumulate, resulting in measurable levels that are higher inside than out. In general, the compounds detected inside the building are most likely associated with sources inside or outside the building and not from contaminated soils or groundwater beneath or adjacent to the building.

100 Veterans Way

Table 11 shows a summary of the 8-hour indoor air, sub-slab soil gas and the sampling day ambient air non-target and target compound canister data, collected from this building. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix F. There were several compounds detected in the sub-slab soil gas samples at much higher concentrations than in the indoor air, namely 1, 1, 1-trichloroethane (1, 1, 1 -TCA), 1, 1-dichloroethane (1,1-DCA) and cis-1, 2-Dichloroethylene (cis-1, 2-DCE). Similarly, as described above in Sections 8.1 and 8.2, TCE and 1, 1-DCE indoor air and soil gas data also suggest soil gas migration into the building maybe occurring, although not significantly.

The concentrations detected for other non-target compounds were similar or slightly higher in the basement than on the first floor and were similar or higher than the ambient air. There have been studies showing levels of indoor pollutants can be 25% – 62% higher than outdoor air pollutant levels. Outdoor air continually infiltrates a typical building bringing with it pollutants that will accumulate, resulting in measurable levels that are higher inside than out. In general the non-target compounds detected inside the building are most likely associated with sources inside or outside the building and not from contaminated soils or groundwater beneath or adjacent to the building.

326 Ferry Blvd.

Table 12 shows a summary of the 8-hour indoor air and the sampling day ambient air non-target and target compound canister data, collected from this building. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix F. No sub-slab soil gas samples were collected from this building, only indoor air from two locations. The concentrations detected for the non-target compounds were similar in both the kitchen and dining room with the exception of chloroform which was slightly higher in the kitchen. The concentrations inside the building were generally

similar or higher than the ambient air. There have been studies showing levels of indoor pollutants can be 25% – 62% higher than outdoor air pollutant levels. Outdoor air continually infiltrates a typical building bringing with it pollutants that will accumulate, resulting in measurable levels that are higher inside than out. In general the non-target compounds detected inside the building are most likely associated with sources inside or outside the building and not from contaminated soils or groundwater beneath or adjacent to the building.

444 Ferry Blvd.

Table 13 shows a summary of the 8-hour indoor air, sub-slab soil gas and the sampling day ambient air non-target and target compound canister data, collected from this building. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix F. There were two compounds detected in the sub-slab soil gas samples at higher concentrations than in the indoor air, namely 1, 1, 1-trichloroethane (1, 1, 1 -TCA) and tetrachloroethylene (PCE). Similarly, as described above in Sections 8.1 and 8.2, TCE and 1, 1-DCE indoor air and soil gas data also suggest soil gas migration into the building maybe occurring, although not significantly.

The concentrations detected for other non-target compounds were similar in the basement than on the first floor and were similar or higher than the ambient air. There have been studies showing levels of indoor pollutants can be 25% – 62% higher than outdoor air pollutant levels. Outdoor air continually infiltrates a typical building bringing with it pollutants that will accumulate, resulting in measurable levels that are higher inside than out. In general the non-target compounds detected inside the building are most likely associated with sources inside or outside the building and not from contaminated soils or groundwater beneath or adjacent to the building.

411 Barnum Ave.

Tables 14 – 23 show a summary of the 8-hour indoor air and the sampling day ambient air non-target and target compound canister data, collected from the McDonalds Restaurant, a separate building on the property and from eight retail stores and a movie theater all located within the same building (Stratford Square) also on the property. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix F. No sub-slab soil gas samples were collected from either building, only indoor air.

McDonalds Restaurant

Table 14 shows a summary of the 8-hour indoor air and the sampling day ambient air non-target and target compound canister data, collected from this building. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix F. The concentrations inside McDonalds were generally similar or slightly higher than the ambient air. 1, 1, 1-Trichloroethane in particular was much higher inside the building at 2.7 $\mu g/m^3$ compared to not detected above the reporting limits outside. There have been studies showing levels of indoor pollutants can be 25% – 62% higher

than outdoor air pollutant levels. Outdoor air continually infiltrates a typical building bringing with it pollutants that will accumulate, resulting in measurable levels that are higher inside than out. In general the non-target compounds detected inside the building are most likely associated with sources inside or outside the building.

Marshalls

Table 16 shows a summary of the 8-hour indoor air and the sampling day ambient air non-target and target compound canister data, collected from this store. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix F. Samples were collected from two locations, in a backroom used for storage and as a receiving, loading and storage area, and in the general shopping area. Concentrations detected were similar in both areas sampled, with the exception of 1, 1, 1-trichloroethane (1, 1, 1 –TCA) and toluene which were much higher in the shopping area compared to the receiving/loading area. Toluene, compared to the other non-target compounds, overall had much higher concentrations, 140 – 210 $\mu g/m^3$. It was not evident as to the toluene source within the building; it was not detected at a very high concentration outside, so this was not a contributing factor. Comparing the other non-target compounds detected inside the building to the ambient air, the concentrations inside were similar or higher than outside. There have been studies showing levels of indoor pollutants can be 25% – 62% higher than outdoor air pollutant levels. Outdoor air continually infiltrates a typical building bringing with it pollutants that will accumulate, resulting in measurable levels that are higher inside than out. In general the non-target compounds detected inside the building are most likely associated with sources inside or outside the building.

Payless Shoe Source

Table 17 shows a summary of the 8-hour indoor air and the sampling day ambient air non-target and target compound canister data, collected from this building. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix F. A sample was collected towards the back of the store. The concentrations inside the store were much higher than outside, particularly for the compounds, 1, 2, 4-trimethylbenzene, 1, 2-dichloroethane, 1, 2-dichloropropane, 1, 3, 5-trimethylbenzene, 4-ethyltoluene, benzene, cyclohexane, ethylbenzene, heptane, methyl ethyl ketone, methylene chloride, styrene, toluene, trichlorofluoromethane and xylene's. Toluene had the highest concentration at 2900 $\mu g/m^3$. Upon entering the store to set-up the samplers there was an overwhelming odor, smelling like rubber, which is most likely from all of the shoes displayed in the store. It is possible the compounds detected inside this store are most likely associated with off-gassing from the shoes.

Sleepy's

Table 18 shows a summary of the 8-hour indoor air and the sampling day ambient air non-target and target compound canister data, collected from this building. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix F. A sample was collected from the show room area, where beds/mattresses are on display in an open area. The concentrations inside the store were much higher than outside, particularly for the compounds, 1, 2, 4-trimethylbenzene, 1, 2-

dichloroethane, 1, 2-dichloropropane, 4-ethyltoluene, benzene, cyclohexane, ethylbenzene, heptane, methyl ethyl ketone, toluene, trichlorofluoromethane and xylene's. Toluene had the highest concentration at 270 µg/m^3. It is possible the compounds detected inside this store are most likely associated with off-gassing from the mattresses and other materials. There is also the possibility that being next to the Payless Shoe Source Store may have contributed to the levels detected inside Sleepy's.

Fashion Bug

Table 19 shows a summary of the 8-hour indoor air and the sampling day ambient air non-target and target compound canister data, collected from this building. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix F. A sample was collected in the back of the store where the register is located. The concentrations inside the store were generally higher than outside, particularly for the compounds, 1, 2-dichloroethane, benzene, ethylbenzene, methyl ethyl ketone, toluene, trichlorofluoromethane and xylene's. Toluene had the highest concentration at 110 µg/m^3. It is possible the compounds detected inside this store are most likely associated with off-gassing from shoes, clothes and other materials displayed in the store. There is also the possibility that being next to the Sleepy's Store may have contributed to the levels detected inside Fashion Bug. There also may have been some infiltration of outside air into the building that contributed slightly to the levels detected inside.

US Postal Service

Table 15 shows a summary of the 8-hour indoor air and the sampling day ambient air non-target and target compound canister data, collected from this building. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix F. A sample was collected in the back, within the mail sorting area. The concentrations inside this area were similar or higher than outside. In particular, 1, 1, 1-trichloroethane, hexane, toluene, trichlorofluoromethane and m/p-xylene were much higher inside than outside. Relative to the toluene concentrations, there is a noticeable downward trend moving from Payless Shoe Source to the US Postal Service. There may have been some infiltration of outside air into the building that contributed slightly to the levels detected inside. However, there may be sources present within the building also contributing to the indoor air concentrations.

Sally's Beauty

Table 20 shows a summary of the 8-hour indoor air and the sampling day ambient air non-target and target compound canister data, collected from this building. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix F. A sample was collected in the middle of the store, on top of a shelf displaying beauty supplies. The concentrations inside this area were similar or higher than outside. In particular, heptane, methyl ethyl ketone, methylene chloride, toluene, and xylene's were much higher inside than outside. There may be sources, such as the beauty supplies, present within the store also contributing to the indoor air concentrations.

Game Stop
Table 21 shows a summary of the 8-hour indoor air and the sampling day ambient air non-target and target compound canister data, collected from this building. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix F. A sample was collected in the middle of the store, on top of a shelf behind the register. The concentrations inside this area were similar or higher than outside. In particular, benzene, methyl ethyl ketone, methylene chloride, toluene, and xylene's were much higher inside than outside. There may be sources within the store also contributing to the indoor air concentrations.

T-Mobile
Table 22 shows a summary of the 8-hour indoor air and the sampling day ambient air non-target and target compound canister data, collected from this building. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix F. A sample was collected in the middle of the store, on top of a shelf behind the register. The concentrations inside this area were similar or higher than outside. In particular, benzene, methyl ethyl ketone, methylene chloride, and toluene were much higher inside than outside. There may be sources within the store also contributing to the indoor air concentrations.

Regal Cinema
Table 23 shows a summary of the 8-hour indoor air and the sampling day ambient air non-target and target compound canister data, collected from this building. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix F. Three samples were collected, in two separate movie theaters and one in the projection booth. The concentrations within all three areas were generally similar and contained similar results to that of the ambient air sample.

TABLES

Table 1 – EPA Method TO15 Target VOC List
Table 2A, 2B, 2C, 2D – Duplicate Air Sampling Results
Table 3 – Ambient Air Canister Air Sampling Results Summary
Table 4 – 500 Ferry Blvd. Canister Air Sampling Results Summary
Table 5 – 72 Ferry Court Canister Air Sampling Results Summary
Table 6 – 62 Ferry Court Canister Air Sampling Results Summary
Table 7 – 82 Ferry Court Canister Air Sampling Results Summary
Table 8 – 608 Ferry Blvd. Canister Air Sampling Results Summary
Table 9 – 335 Ferry Blvd. Canister Air Sampling Results Summary
Table 10 – 300 Ferry Blvd. Canister Air Sampling Results Summary
Table 11 – 100 Veterans Way Canister Air Sampling Results Summary
Table 12 – 326 Ferry Blvd. Canister Air Sampling Results Summary
Table 13 – 444 Ferry Blvd. Canister Air Sampling Results Summary
Table 14 – 411 Barnum Ave. McDonalds Restaurant Canister Air Sampling Results Summary
Table 15 – 411 Barnum Ave. US Postal Service Canister Air Sampling Results Summary
Table 16 – 411 Barnum Ave. Marshalls Canister Air Sampling Results Summary
Table 17 – 411 Barnum Ave. Payless Shoe Source Canister Air Sampling Results Summary
Table 18 – 411 Barnum Ave. Sleepy's Canister Air Sampling Results Summary
Table 19 – 411 Barnum Ave. Fashion Bug Canister Air Sampling Results Summary
Table 20 – 411 Barnum Ave. Sally's Beauty Canister Air Sampling Results Summary
Table 21 – 411 Barnum Ave. Game Stop Canister Air Sampling Results Summary
Table 22 – 411 Barnum Ave. T-Mobile Canister Air Sampling Results Summary
Table 23 – 411 Barnum Ave. Regal Cinema Canister Air Sampling Results Summary
Table 24 – 500 Ferry Blvd. Soil Gas Grab, Indoor Air Grab and 24-Hour Sampling Results
Table 25 – 72 Ferry Court Soil Gas Grab, Indoor Air Grab and 24-Hour Sampling Results
Table 26 – 62 Ferry Court Soil Gas Grab, Indoor Air Grab and 24-Hour Sampling Results
Table 27 – 82 Ferry Court Soil Gas Grab, Indoor Air Grab and 24-Hour Sampling Results
Table 28 – 608 Ferry Blvd. Soil Gas Grab, Indoor Air Grab and 8-Hour Sampling Results
Table 29 – 335 Ferry Blvd. Soil Gas Grab, Indoor Air Grab and 8-Hour Sampling Results
Table 30 – 300 Ferry Blvd. Soil Gas Grab, Indoor Air Grab and 8-Hour Sampling Results
Table 31 – 100 Veterans Way Soil Gas Grab, Indoor Air Grab and 8-Hour Sampling Results
Table 32 – 326 Ferry Blvd. Indoor Air 8-Hour Sampling Results
Table 33 – 444 Ferry Blvd. Soil Gas Grab, Indoor Air Grab and 8-Hour Sampling Results
Table 34 – 411 Barnum Ave. Indoor Air 8-Hour Sampling Results

EPA METHOD TO15 TARGET VOC LIST

EPA Region I TO-15 VOC Reported Compounds	CAS No.	EPA RSL Residential Air (ug/m^3)	EPA RSL Industrial Air (ug/m^3)	Toxicity Basis
1, 1, 1-Trichloroethane	71-55-6	5200	22000	nc
1, 1, 2, 2-Tetrachloroethane	79-34-5	0.042	0.21	c
1, 1, 2-Trichloroethane	79-00-5	0.15	0.77	c
1, 1-Dichloroethane	75-34-3	1.5	7.7	c
1, 1-Dichloroethylene	75-35-4	210	880	nc
1, 2, 4-Trichlorobenzene	120-82-1	2.1	8.8	nc
1, 2, 4-Trimethylbenzene	95-63-6	7.3	31	nc
1, 2-Dibromoethane	106-93-4	0.0041	0.02	c
1, 2-Dichlorobenzene	95-50-1	210	880	nc
1, 2-Dichloroethane	107-06-2	0.094	0.47	c
1, 2-Dichloropropane	78-87-5	0.24	1.2	c
1, 3, 5-Trimethylbenzene	108-67-8	NA	NA	nc
1, 3-Butadiene	106-99-0	0.081	0.41	c
1, 3-Dichlorobenzene (m-Dichlorobenzene)	541-73-1	NA	NA	NA
1, 4-Dichlorobenzene (p-Dichlorobenzene)	106-46-7	0.22	1.1	c
2-Hexanone	591-78-6	31	130	nc
4-Ethyl Toluene	622-96-8	NA	NA	NA
Acrylonitrile	107-13-1	0.036	0.18	c
Allyl Chloride	107-05-1	0.41	2.0	c
Benzene	71-43-2	0.31	1.6	c
Benzylchloride	100-44-7	0.05	0.25	c
Bromodichloromethane	75-27-4	0.066	0.33	c
Bromoform	75-25-2	2.2	11	c
Carbon Tetrachloride	56-23-5	0.41	2.0	c
Chlorobenzene	108-90-7	52	220	nc
Chloroethane (Ethyl chloride)	75-00-3	10000	44000	nc
Chloroform	67-66-3	0.11	0.53	c
Cyclohexane	110-82-7	6300	26000	nc
Dibromochloromethane	124-48-1	0.09	0.45	c
Dichlorodifluoromethane (F12)	1320-37-2	100	440	nc
Dichlorotetrafluoroethane	1320-37-2	NA	NA	NA
Ethylbenzene	100-41-4	0.97	4.9	c
Heptane	142-82-5	NA	NA	NA
Hexachloro-1, 3-butadiene (Hexachlorobutadiene)	87-68-3	0.11	0.56	c
Hexane (n-Hexane)	110-54-3	730	3100	nc
Methyl Ethyl Ketone (2-butanone)	78-93-3	5200	22000	nc
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1	3100	13000	nc
Methyl-t-butyl ether	1634-04-4	9.4	47	c
Methylbromide (Bromomethane)	74-83-9	5.2	22	nc
Methylchloride (Chloromethane)	74-87-3	94	390	nc
Methylene Chloride	75-09-2	5.2	26	c
Styrene	100-42-5	1000	4400	nc
Tetrachloroethene	127-18-4	0.41	2.1	c
Tetrahydrofuran	109-99-9	NA	NA	NA
Toluene	108-88-3	5200	22000	nc
Trichloroethene	79-01-6	0.432	2.99	c
Trichlorofluoromethane	75-69-4	730	3100	nc
Trichlorotrifluoroethane	76-13-1	NA	NA	NA
Vinyl Bromide	593-60-2	0.076	0.38	c
Vinyl chloride	75-01-4	0.16	2.8	c
cis-1, 2-Dichloroethene	156-59-2	NA	NA	NA
cis-1,3-Dichloropropene	10061-01-5	NA	NA	NA
1, 3-Dichloropropene	542-75-6	0.61	3.1	c
m, p-Xylene (Xylene, mixture)	1330-20-7	100	440	nc
m-Xylene	108-38-3	100	440	nc
p-Xylene	106-42-3	100	440	nc
o-Xylene	95-47-6	100	440	nc
trans-1, 2-Dichloroethene	156-60-5	63	260	nc
trans-1, 3-Dichloropropene	10061-02-6	NA	NA	NA

NA = Not Available

nc = non-cancer health effect (for Hazard Quotient = 1)

c = cancer health effect (for 1×10^{-6} incremental lifetime cancer risk)

EPA RSL = EPA Regional Screening Level (November 21, 2011)

http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm

TABLE 2A
DUPLICATE SAMPLING RESULTS
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 500 FERRY BLVD. CANISTER #6554 13-Feb-12 24-HOUR AVG.		INDOOR AIR 500 FERRY BLVD. DUPLICATE CANISTER #1587 13-Feb-12 24-HOUR AVG.		RPD
	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)	(%)
Trichloroethene	**0.05 L**	**0.26 L**	**ND (0.092)**	**ND (0.49)**	**NA**
1,1,-Dichloroethylene	**ND (0.12)**	**ND (0.48)**	**ND (0.092)**	**ND (0.36)**	**NA**
Vinyl Chloride	**ND (0.12)**	**ND (0.31)**	**ND (0.092)**	**ND (0.23)**	**NA**
1,2,4-Trimethylbenzene	0.59	2.9	0.27	1.3	74
1,3,5-Trimethylbenzene	0.19	0.93	0.09	0.45	70
1,3-Butadiene	0.04 L	0.10 L	ND (0.18)	ND (0.40)	NA
4-Ethyltoluene	0.58	2.8	0.31	1.5	61
Benzene	0.87	2.8	0.67	2.1	26
Carbon Tetrachloride	0.07 L	0.46 L	0.06 L	0.37 L	23
Cyclohexane	0.43	1.5	0.32	1.1	29
Dichlorodifluoromethane	0.46	2.3	0.36	1.8	24
Ethylbenzene	0.81	3.5	0.55	2.4	38
Hexane	1.8	6.4	1.3	4.7	32
Methylchloride	0.29	0.60	0.28	0.58	4
Methylene Chloride	0.63	2.2	0.45	1.6	33
Toluene	5.3	20	3.7	14	36
Trichlorofluoromethane	0.19	1.1	0.16	0.90	17
Trichlorotrifluoroethane	0.07 L	0.50 L	0.06 L	0.42 L	NA
m/p-Xylenes	2.5	11	1.7	7.3	38
o-Xylene	0.88	3.8	0.57	2.5	43

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
NA = not applicable, concentrations for these compounds were either less than 10 times the reporting limit or not detected above the reporting limits to calcualte an RPD
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 2B
DUPLICATE SAMPLING RESULTS
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 608 FERRY BLVD. CANISTER #5786 14-Feb-12 8-HOUR AVG.				INDOOR AIR 608 FERRY BLVD. DUPLICATE CANISTER #3656 14-Feb-12 8-HOUR AVG.				RPD
	(ppb/v)		(ug/m^3)		(ppb/v)		(ug/m^3)		(%)
Trichloroethene	**ND (0.10)**		**ND (0.54)**		**ND (0.10)**		**ND (0.54)**		**NA**
1,1,-Dichloroethylene	**ND (0.10)**		**ND (0.40)**		**ND (0.10)**		**ND (0.40)**		**NA**
Vinyl Chloride	**ND (0.10)**		**ND (0.26)**		**ND (0.10)**		**ND (0.26)**		**NA**
1,1,1-Trichloroethane	0.12		0.66		0.11		0.60		9
Benzene	0.19		0.61		0.17		0.54		11
Carbon Tetrachloride	0.06	L	0.37	L	0.06	L	0.37	L	0
Dichlorodifluoromethane	0.59		2.9		0.48		2.4		21
Hexane	1.4		4.9		1.3		4.5		7
Methylchloride	0.23		0.48		0.22		0.45		4
Methylene Chloride	0.50		1.7		0.47		1.6		6
Tetrahydrofuran	0.24		0.71		0.23		0.68		4
Toluene	0.23		0.87		0.20		0.75		14
Trichlorofluoromethane	0.19		1.1		0.18		1.0		5
Trichlorotrifluoroethane	0.06	L	0.43	L	0.05	L	0.41	L	6
m/p-Xylenes	0.09	L	0.40	L	0.09	L	0.39	L	4

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
NA = not applicable, concentrations for these compounds were either less than 10 times the reporting limit or not detected above the reporting limits to calcualte an RPD
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 2C
DUPLICATE SAMPLING RESULTS
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 444 FERRY BLVD. CANISTER #3092 15-Feb-12 8-HOUR AVG.				INDOOR AIR 444 FERRY BLVD. DUPLICATE CANISTER #6568 15-Feb-12 8-HOUR AVG.				RPD
	(ppb/v)		(ug/m^3)		(ppb/v)		(ug/m^3)		(%)
Trichloroethene	**ND (0.11)**		**ND (0.59)**		**ND (0.11)**		**ND (0.59)**		**NA**
1,1,-Dichloroethylene	**ND (0.11)**		**ND (0.44)**		**ND (0.11)**		**ND (0.44)**		**NA**
Vinyl Chloride	**ND (0.11)**		**ND (0.28)**		**ND (0.11)**		**ND (0.28)**		**NA**
1,1,1-Trichloroethane	0.27		1.5		0.05	L	0.29	L	138
1,2,4-Trimethylbenzene	0.59		2.9		0.45		2.2		27
1,3,5-Trimethylbenzene	0.35		1.7		0.31		1.5		12
1,3-Butadiene	0.08	L	0.18	L	0.08	L	0.18	L	0
4-Ethyltoluene	1.1		5.2		0.91		4.5		19
Benzene	0.40		1.3		0.41		1.3		2
Carbon Tetrachloride	0.06	L	0.40	L	0.07	L	0.43	L	8
Cyclohexane	0.15		0.52		0.14		0.48		7
Dichlorodifluoromethane	0.38		1.9		0.38		1.9		0
Ethylbenzene	0.20		0.87		0.19		0.82		5
Hexane	0.51		1.8		0.58		2.0		13
Methyl ethyl ketone	0.93		2.7		0.68		2.0		31
Methylchloride	0.26		0.54		0.28		0.58		7
Methylene Chloride	2.8		9.8		2.8		9.6		0
Styrene	0.06	L	0.24	L	0.06	L	0.23	L	4
Tetrachloroethylene	0.06	L	0.41	L	0.07	L	0.46	L	13
Toluene	1.5		5.7		1.5		5.7		0
Trichlorofluoromethane	0.17		0.96		0.18		1.0		6
Trichlorotrifluoroethane	0.06	L	0.43	L	0.06	L	0.44	L	2
m/p-Xylenes	0.60		2.6		0.58		2.5		3
o-Xylene	0.25		1.1		0.24		1.0		4

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
NA = not applicable, concentrations for these compounds were either less than 10 times the reporting limit or not detected above the reporting limits to calcualte an RPD
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 2D
DUPLICATE SAMPLING RESULTS
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 411 BARNUM AVE. CANISTER #6558 16-Feb-12 8-HOUR AVG.				INDOOR AIR 411 BARNUM AVE. DUPLICATE CANISTER #6548 16-Feb-12 8-HOUR AVG.				RPD
	(ppb/v)		(ug/m^3)		(ppb/v)		(ug/m^3)		(%)
Trichloroethene	**0.08**	**L**	**0.43**	**L**	**0.08**	**L**	**0.42**	**L**	1
1,1,-Dichloroethylene	**ND (0.13)**		**ND (0.52)**		**ND (0.12)**		**ND (0.48)**		**NA**
Vinyl Chloride	**ND (0.13)**		**ND (0.33)**		**ND (0.12)**		**ND (0.31)**		**NA**
1,2,4-Trimethylbenzene	ND (0.13)		ND (0.64)		0.12		0.59		NA
1,2-Dichloroethane	1.5		6.0		1.5		6.1		0
1,2-Dichloropropane	0.38		1.8		0.39		1.8		3
1,3-Butadiene	0.06	L	0.13	L	0.06	L	0.12	L	4
4-Ethyltoluene	0.08	L	0.37	L	0.10	L	0.49	L	27
Benzene	0.68		2.2		0.65		2.1		5
Carbon Tetrachloride	0.06	L	0.04	L	0.06	L	0.38	L	5
Cyclohexane	0.32		1.1		0.31		1.1		3
Dichlorodifluoromethane	0.56		2.8		0.67		3.3		18
Ethylbenzene	0.53		2.3		0.54		2.3		2
Hexane	0.53		1.9		0.53		1.9		0
Methyl ethyl ketone	1.0		3.1		1.6		4.7		46
Methyl Isobutyl Ketone	ND (0.13)		ND (0.53)		0.05	L	0.21	L	NA
Methylchloride	0.37		0.76		0.35		0.72		6
Methylene Chloride	0.74		2.6		0.69		2.4		7
Styrene	0.37		1.6		0.44		1.9		17
Tetrachloroethylene	0.08	L	0.52	L	0.08	L	0.53	L	1
Toluene	42		160		38		140		10
Trichlorofluoromethane	0.97		5.5		0.91		5.1		6
Trichlorotrifluoroethane	0.06	L	0.47	L	0.06	L	0.46		2
m/p-Xylenes	1.1		4.6		1.1		4.9		0
o-Xylene	0.36		1.6		0.40		1.7		11

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
NA = not applicable, concentrations for these compounds were either less than 10 times the reporting limit or not detected above the reporting limits to calcualte an RPD
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 3
AMBIENT/BACKGROUND AIR DATA SUMMARY
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	AMBIENT AIR OUTSIDE 500 FERRY BLVD. CANISTER #13482 2/13/12 - 2/14/12 24-HOUR AVG.(11:40-12:10)		AMBIENT AIR OUTSIDE 500 FERRY BLVD. CANISTER #13495 2/14/12 - 2/15/12 24-HOUR AVG.(12:09-12:10)		AMBIENT AIR OUTSIDE 500 FERRY BLVD. CANISTER #15048 2/15/12 - 2/16/12 24-HOUR AVG.(12:09-12:09)		AMBIENT AIR OUTSIDE 411 BARNUM AVE. CANISTER #12566 2/15/12 - 2/16/12 24-HOUR AVG.(17:55-17:55)	
	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)
Trichloroethene	**ND (0.10)**	**ND (0.54)**	**ND (0.10)**	**ND (0.54)**	**ND (0.095)**	**ND (0.51)**	**0.05 L**	**0.29 L**
1,1,-Dichloroethylene	**ND (0.10)**	**ND (0.40)**	**ND (0.10)**	**ND (0.40)**	**ND (0.095)**	**ND (0.38)**	**ND (0.11)**	**ND (0.44)**
Vinyl Chloride	**ND (0.10)**	**ND (0.26)**	**ND (0.10)**	**ND (0.26)**	**ND (0.095)**	**ND (0.24)**	**ND (0.11)**	**ND (0.28)**
1,1,1-Trichloroethane	ND (0.10)	ND (0.55)	ND (0.10)	ND (0.55)	ND (0.095)	ND (0.52)	0.20	1.1
1,3-Butadiene	ND (0.20)	ND (0.44)	0.06 L	0.12 L	0.05 L	0.12 L	ND (0.22)	ND (0.49)
Benzene	0.24	0.77	0.30	0.96	0.30	0.96	0.07 L	0.21 L
Carbon Tetrachloride	ND (0.10)	ND (0.62)	0.04 L	0.28 L	0.05 L	0.33 L	ND (0.11)	ND (0.69)
Chloroform	ND (0.10)	ND (0.49)	ND (0.10)	ND (0.49)	ND (0.095)	ND (0.46)	0.46	2.2
Dichlorodifluoromethane	0.38	1.9	0.38	1.9	0.34	1.7	0.43	2.1
Ethylbenzene	0.05 L	0.20 L	0.06 L	0.25 L	0.06 L	0.24 L	ND (0.11)	ND (0.48)
Hexane	0.17	0.60	0.16	0.56	0.16	0.56	0.48	1.7
Methyl Ethyl Ketone	ND (0.10)	ND (0.30)	0.19	0.56	0.19	0.56	0.23	0.68
Methylchloride	0.32	0.66	0.27	0.56	0.35	0.72	0.07 L	0.14 L
Methylene Chloride	0.61	2.1	0.57	2.0	5.0	17	0.05 L	0.18 L
Styrene	ND (0.10)	ND (0.43)	ND (0.10)	ND (0.43)	ND (0.095)	ND (0.41)	0.39	1.7
Tetrachloroethylene	ND (0.10)	ND (0.68)	ND (0.10)	ND (0.68)	ND (0.095)	ND (0.64)	0.13	0.88
Tetrahydrofuran	ND (0.10)	ND (0.30)	ND (0.10)	ND (0.30)	2.6	7.6	ND (0.11)	ND (0.32)
Toluene	0.41	1.5	0.40	1.5	0.47	1.8	0.22	0.83
Trichlorofluoromethane	0.17	0.96	0.17	0.96	0.19	1.1	0.27	1.5
Trichlorotrifluoroethane	0.06 L	0.42 L	0.05 L	0.40 L	0.06 L	0.45 L	ND (0.11)	ND (0.84)
m&p-Xylene	0.16 L	0.69 L	0.17 L	0.74 L	0.17 L	0.74 L	ND (0.22)	ND (0.95)
o-Xylene	0.06 L	0.24 L	0.06 L	0.26 L	0.06 L	0.25 L	ND (0.11)	ND (0.48)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 4
INDOOR AIR, AMBIENT AIR AND SOIL GAS CANISTER SAMPLING RESULTS SUMMARY
500 FERRY BLVD.
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR BASEMENT CANISTER #6554 2/13/12 - 2/14/12 24-HOUR AVG.		INDOOR AIR BASEMENT DUPLICATE CANISTER #1587 2/13/12 - 2/14/12 24-HOUR AVG.		INDOOR AIR CRAWL SPACE CANISTER #6566 2/13/12 - 2/14/12 24-HOUR AVG.		INDOOR AIR FIRST FLOOR CANISTER #1565 2/13/12 - 2/14/12 24-HOUR AVG.		SUB-SLAB SOIL GAS SS-2 BASEMENT CANISTER #12562 13-Feb-12 GRAB SAMPLE		AMBIENT AIR OUTSIDE 500 FERRY. BLVD. CANISTER #13482 2/13/12 - 2/14/12 24-HOUR AVG.(11:40-11:40)	
	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)
Trichloroethene	**0.05 L**	**0.26 L**	**ND (0.092)**	**ND (0.49)**	**ND (0.092)**	**ND (0.49)**	**ND (0.10)**	**ND (0.54)**	**120**	**640**	**ND (0.10)**	**ND (0.54)**
1,1,-Dichloroethylene	**ND (0.12)**	**ND (0.48)**	**ND (0.092)**	**ND (0.36)**	**ND (0.092)**	**ND (0.36)**	**ND (0.10)**	**ND (0.40)**	**78**	**310**	**ND (0.10)**	**ND (0.40)**
Vinyl Chloride	**ND (0.12)**	**ND (0.31)**	**ND (0.092)**	**ND (0.23)**	**ND (0.092)**	**ND (0.23)**	**ND (0.10)**	**ND (0.26)**	**ND (1.6)**	**ND (4.1)**	**ND (0.10)**	**ND (0.26)**
1,1,1-Trichloroethane	ND (0.12)	ND (0.66)	ND (0.092)	ND (0.50)	ND (0.092)	ND (0.50)	ND (0.10)	ND (0.55)	57	310	ND (0.10)	ND (0.55)
1,1-Dichloroethane	ND (0.12)	ND (0.49)	ND (0.092)	ND (0.37)	ND (0.092)	ND (0.37)	ND (0.10)	ND (0.41)	28	110	ND (0.10)	ND (0.41)
1,2,4-Trimethylbenzene	0.59	2.9	0.27	1.3	ND (0.092)	ND (0.45)	0.05 L	0.25 L	ND (1.6)	ND (7.9)	ND (0.10)	ND (0.49)
1,3,5-Trimethylbenzene	0.19	0.93	0.09	0.45	ND (0.092)	ND (0.45)	0.06 L	0.26 L	ND (1.6)	ND (7.9)	ND (0.10)	ND (0.49)
1,3-Butadiene	0.04 L	0.10 L	ND (0.18)	ND (0.40)	ND (0.18)	ND (0.40)	ND (0.20)	ND (0.44)	ND (3.2)	ND (7.1)	ND (0.20)	ND (0.44)
4-Ethyltoluene	0.58	2.8	0.31	1.5	ND (0.092)	ND (0.45)	0.18	0.88	ND (1.6)	ND (7.9)	ND (0.10)	ND (0.49)
Benzene	0.87	2.8	0.67	2.1	0.23	0.73	0.52	1.7	1.6	5.1	0.24	0.77
Carbon Tetrachloride	0.07 L	0.46 L	0.06 L	0.37 L	0.06 L	0.38 L	0.06 L	0.40 L	ND (1.6)	ND (10)	ND (0.10)	ND (0.62)
Chloroform	ND (0.12)	ND (0.59)	ND (0.092)	ND (0.45)	ND (0.092)	ND (0.45)	ND (0.10)	ND (0.49)	1.2 L	5.9 L	ND (0.10)	ND (0.49)
Cyclohexane	0.43	1.5	0.32	1.1	ND (0.092)	ND (0.32)	0.22	0.76	ND (1.6)	ND (5.5)	ND (0.10)	ND (0.34)
Dichlorodifluoromethane	0.46	2.3	0.36	1.8	0.40	2.0	0.38	1.9	ND (1.6)	ND (7.9)	0.38	1.9
Ethylbenzene	0.81	3.5	0.55	2.4	0.07 L	0.28 L	0.36	1.6	ND (1.6)	ND (6.9)	0.05 L	0.20 L
Hexane	1.8	6.4	1.3	4.7	0.22	0.77	0.95	3.3	2.6	9.1	0.17	0.60
Methyl Ethyl Ketone	ND (0.12)	ND (0.35)	ND (0.092)	ND (0.27)	ND (0.092)	ND (0.27)	0.10 L	0.29 L	ND (1.6)	ND (4.7)	ND (0.10)	ND (0.30)
Methylchloride	0.29	0.60	0.28	0.58	0.28	0.58	0.32	0.66	ND (1.6)	ND (3.3)	0.32	0.66
Methylene Chloride	0.63	2.2	0.45	1.6	0.54	1.9	0.64	2.2	ND (1.6)	ND (5.6)	0.61	2.1
Tetrachloroethylene	ND (0.12)	ND (0.81)	ND (0.092)	ND (0.62)	ND (0.092)	ND (0.62)	ND (0.10)	ND (0.68)	1.9	13	ND (0.10)	ND (0.68)
Toluene	5.3	20	3.7	14	0.53	2.0	2.7	10	4.3	16	0.41	1.5
Trichlorofluoromethane	0.19	1.1	0.16	0.90	0.17	0.96	0.18	1.0	ND (1.6)	ND (9.0)	0.17	0.96
Trichlorotrifluoroethane	0.07 L	0.50 L	0.06 L	0.42 L	0.06 L	0.42 L	0.06 L	0.45 L	ND (1.6)	ND (12.3)	0.06 L	0.42 L
c-1,2-Dichloroethylene	ND (0.12)	ND (0.48)	ND (0.092)	ND (0.36)	ND (0.092)	ND (0.36)	ND (0.10)	ND (0.40)	21	83	ND (0.10)	ND (0.40)
m/p-Xylenes	2.5	11	1.7	7.3	0.20	0.87	1.1	4.9	2.8 L	12 L	0.16 L	0.69 L
o-Xylene	0.88	3.8	0.57	2.5	0.07 L	0.30 L	0.37	1.6	ND (1.6)	ND (6.9)	0.06 L	0.24 L

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 5
INDOOR AIR, AMBIENT AIR AND SOIL GAS CANISTER SAMPLING RESULTS SUMMARY
72 FERRY COURT
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR BASEMENT CANISTER #6547 2/13/12 - 2/14/12 24-HOUR AVG.		INDOOR AIR FIRST FLOOR CANISTER #1586 2/13/12 - 2/14/12 24-HOUR AVG.		SUB-SLAB SOIL GAS SS-1 BASEMENT CANISTER #22683 13-Feb-12 GRAB SAMPLE		AMBIENT AIR OUTSIDE 500 FERRY. BLVD. CANISTER #13482 2/13/12 - 2/14/12 24-HOUR AVG.(11:40-11:40)	
	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)
Trichloroethene	**ND (0.097)**	**ND (0.52)**	**ND (0.094)**	**ND (0.50)**	**0.10**	**0.51**	**ND (0.10)**	**ND (0.54)**
1,1,-Dichloroethylene	**ND (0.097)**	**ND (0.38)**	**ND (0.094)**	**ND (0.37)**	**0.05 L**	**0.19 L**	**ND (0.10)**	**ND (0.40)**
Vinyl Chloride	**ND (0.097)**	**ND (0.24)**	**ND (0.094)**	**ND (0.24)**	**ND (0.082)**	**ND (0.21)**	**ND (0.10)**	**ND (0.26)**
1,1,1-Trichloroethane	ND (0.097)	ND (0.52)	ND (0.094)	ND (0.51)	0.09	0.47	ND (0.10)	ND (0.55)
1,2-Dichloroethane	0.19	0.77	0.15	0.61	ND (0.082)	ND (0.33)	ND (0.10)	ND (0.41)
1,3-Butadiene	0.04 L	0.09 L	0.05 L	0.10 L	ND (0.16)	ND (0.35)	ND (0.20)	ND (0.44)
Benzene	0.29	0.92	0.33	1.1	ND (0.082)	ND (0.26)	0.24	0.77
Bromodichloromethane	0.06 L	0.38 L	0.09 L	0.58 L	ND (0.082)	ND (0.54)	ND (0.10)	ND (0.66)
Carbon Tetrachloride	0.06 L	0.36 L	0.06 L	0.40 L	ND (0.082)	ND (0.51)	ND (0.10)	ND (0.62)
Chloroform	0.42	2.1	0.63	3.1	ND (0.082)	ND (0.40)	ND (0.10)	ND (0.49)
Cyclohexane	0.08 L	0.28 L	0.10	0.34	ND (0.082)	ND (0.28)	ND (0.10)	ND (0.34)
Dichlorodifluoromethane	0.37	1.8	0.46	2.3	0.34	1.7	0.38	1.9
Ethylbenzene	0.11	0.48	0.12	0.52	ND (0.082)	ND (0.35)	0.05 L	0.20 L
Hexane	0.27	0.95	0.33	1.2	ND (0.082)	ND (0.28)	0.17	0.60
Methyl Ethyl Ketone	ND (0.097)	ND (0.28)	ND (0.094)	ND (0.27)	0.05 L	0.14 L	ND (0.10)	ND (0.30)
Methylchloride	0.40	0.83	0.38	0.79	0.05 L	0.10 L	0.32	0.66
Methylene Chloride	0.65	2.3	0.70	2.4	ND (0.082)	ND (0.28)	0.61	2.1
Styrene	0.07 L	0.31 L	0.07 L	0.29 L	ND (0.082)	ND (0.34)	ND (0.10)	ND (0.43)
Tetrahydrofuran	ND (0.097)	ND (0.28)	0.29	0.86	ND (0.082)	ND (0.24)	ND (0.10)	ND (0.30)
Toluene	2.2	8.4	2.1	8.1	ND (0.082)	ND (0.30)	0.41	1.5
Trichlorofluoromethane	0.24	1.3	0.29	1.6	0.16	0.90	0.17	0.96
Trichlorotrifluoroethane	0.05 L	0.39 L	0.06 L	0.44 L	0.05 L	0.38 L	0.06 L	0.42 L
m/p-Xylenes	0.23	1.0	0.26	1.1	ND (0.16)	ND (0.69)	0.16 L	0.69 L
o-Xylene	0.09 L	0.38 L	0.09 L	0.40 L	ND (0.082)	ND (0.35)	0.06 L	0.24 L

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 6
INDOOR AIR, AMBIENT AIR AND SOIL GAS CANISTER SAMPLING RESULTS SUMMARY
62 FERRY COURT
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR BASEMENT CANISTER #5790 2/13/12 - 2/14/12 24-HOUR AVG.		INDOOR AIR FIRST FLOOR CANISTER #5792 2/13/12 - 2/14/12 24-HOUR AVG.		SUB-SLAB SOIL GAS SS-1 BASEMENT CANISTER #15047 14-Feb-12 GRAB SAMPLE		AMBIENT AIR OUTSIDE 500 FERRY. BLVD. CANISTER #13482 2/13/12 - 2/14/12 24-HOUR AVG.(11:40-11:40)	
	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)
Trichloroethene	**0.05 L**	**0.27 L**	**ND (0.10)**	**ND (0.54)**	**ND (0.089)**	**ND (0.47)**	**ND (0.10)**	**ND (0.54)**
1,1,-Dichloroethylene	**ND (0.10)**	**ND (0.40)**	**ND (0.10)**	**ND (0.40)**	**ND (0.089)**	**ND (0.35)**	**ND (0.10)**	**ND (0.40)**
Vinyl Chloride	**ND (0.10)**	**ND (0.26)**	**ND (0.10)**	**ND (0.26)**	**ND (0.089)**	**ND (0.22)**	**ND (0.10)**	**ND (0.26)**
1,3-Butadiene	0.33	0.73	0.41	0.91	ND (0.18)	ND (0.39)	ND (0.20)	ND (0.44)
4-Ethyltoluene	ND (0.10)	ND (0.49)	0.07 L	0.34 L	ND (0.089)	ND (0.43)	ND (0.10)	ND (0.49)
Acrylonitrile	0.21	0.46	0.21	0.46	ND (0.089)	ND (0.19)	ND (0.10)	ND (0.21)
Benzene	0.51	1.6	0.52	1.7	0.13	0.42	0.24	0.77
Carbon Tetrachloride	0.08 L	0.50 L	0.06 L	0.38 L	0.04 L	0.26 L	ND (0.10)	ND (0.62)
Chloroform	0.29	1.4	0.30	1.5	0.05 L	0.23 L	ND (0.10)	ND (0.49)
Cyclohexane	0.08 L	0.27 L	0.06 L	0.20 L	ND (0.089)	ND (0.31)	ND (0.10)	ND (0.34)
Dichlorodifluoromethane	0.44	2.2	0.36	1.8	0.20	0.99	0.38	1.9
Ethylbenzene	0.25	1.1	0.17	0.74	ND (0.089)	ND (0.38)	0.05 L	0.20 L
Hexane	0.33	1.2	0.32	1.1	0.18	0.63	0.17	0.60
Methyl Ethyl Ketone	0.91	2.7	0.82	2.4	0.14	0.41	ND (0.10)	ND (0.30)
Methylchloride	0.54	1.1	0.67	1.4	0.14	0.29	0.32	0.66
Methylene Chloride	0.81	2.8	0.66	2.3	0.18	0.63	0.61	2.1
Styrene	0.12	0.51	0.10 L	0.41 L	ND (0.089)	ND (0.37)	ND (0.10)	ND (0.43)
Tetrachloroethylene	0.13	0.88	0.09 L	0.59 L	0.27	1.8	ND (0.10)	ND (0.68)
Tetrahydrofuran	0.80	2.4	0.79	2.3	ND (0.089)	ND (0.26)	ND (0.10)	ND (0.30)
Toluene	1.2	4.4	1.1	4.3	0.26	0.98	0.41	1.5
Trichlorofluoromethane	0.18	1.0	0.18	1.0	0.32	1.8	0.17	0.96
Trichlorotrifluoroethane	0.06 L	0.45 L	0.06 L	0.42 L	0.06 L	0.42 L	0.06 L	0.42 L
c-1,2-Dichloroethylene	ND (0.10)	ND (0.40)	ND (0.10)	ND (0.40)	0.04 L	0.17 L	ND (0.10)	ND (0.40)
m/p-Xylenes	0.91	3.9	0.60	2.6	0.10 L	0.43 L	0.16 L	0.69 L
o-Xylene	0.21	0.91	0.14	0.61	ND (0.089)	ND (0.38)	0.06 L	0.24 L

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 7
INDOOR AIR, AMBIENT AIR AND SOIL GAS CANISTER SAMPLING RESULTS SUMMARY
82 FERRY COURT
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR BASEMENT CANISTER #1592 2/15/12 - 2/16/12 24-HOUR AVG.		INDOOR AIR FIRST FLOOR CANISTER #1560 2/15/12 - 2/16/12 24-HOUR AVG.		SUB-SLAB SOIL GAS SS-1 BASEMENT CANISTER #14901 15-Feb-12 GRAB SAMPLE		AMBIENT AIR OUTSIDE 500 FERRY. BLVD. CANISTER #15048 2/15/12 - 2/16/12 24-HOUR AVG.(12:09-12:09)	
	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)
Trichloroethene	**ND (0.10)**	**ND (0.54)**	**ND (0.098)**	**ND (0.53)**	**0.05 L**	**0.24 L**	**ND (0.095)**	**ND (0.51)**
1,1,-Dichloroethylene	**ND (0.10)**	**ND (0.40)**	**ND (0.098)**	**ND (0.39)**	**ND (0.083)**	**ND (0.33)**	**ND (0.095)**	**ND (0.38)**
Vinyl Chloride	**ND (0.10)**	**ND (0.26)**	**ND (0.098)**	**ND (0.25)**	**ND (0.083)**	**ND (0.21)**	**ND (0.095)**	**ND (0.24)**
1,1,1-Trichloroethane	ND (0.10)	ND (0.55)	ND (0.098)	ND (0.54)	0.16	0.87	ND (0.095)	ND (0.52)
1,2,4-Trimethylbenzene	0.04 L	0.22 L	ND (0.098)	ND (0.48)	ND (0.083)	ND (0.41)	ND (0.095)	ND (0.47)
1,2-Dichloroethane	0.11	0.45	0.44	1.8	ND (0.083)	ND (0.34)	ND (0.095)	ND (0.38)
1,3-Butadiene	0.04 L	0.10 L	ND (0.20)	ND (0.44)	ND (0.166)	ND (0.37)	0.05 L	0.12 L
Benzene	0.29	0.92	0.32	1.0	0.05 L	0.17 L	0.30	0.96
Carbon Tetrachloride	0.06 L	0.37 L	0.06 L	0.40 L	ND (0.083)	ND (0.52)	0.05 L	0.33 L
Chloroform	0.11	0.54	0.30	1.5	0.38	1.9	ND (0.095)	ND (0.46)
Cyclohexane	ND (0.10)	ND (0.34)	0.04 L	0.15 L	ND (0.083)	ND (0.29)	ND (0.095)	ND (0.33)
Dichlorodifluoromethane	0.37	1.8	0.34	1.7	0.40	2.0	0.34	1.7
Ethylbenzene	0.07 L	0.30 L	0.09 L	0.37 L	ND (0.083)	ND (0.36)	0.06 L	0.24 L
Hexane	0.21	0.74	0.25	0.88	0.38	1.3	0.16	0.56
Methyl Ethyl Ketone	0.19	0.56	0.37	1.1	0.18	0.53	0.19	0.56
Methylchloride	0.27	0.56	0.31	0.64	0.05 L	0.11 L	0.35	0.72
Methylene Chloride	0.22	0.76	0.23	0.80	0.04 L	0.14 L	5	17
Styrene	0.09 L	0.36 L	0.14	0.60	0.32	1.4	ND (0.095)	ND (0.41)
Tetrachloroethylene	0.08 L	0.52 L	0.23	1.6	0.11	0.75	ND (0.095)	ND (0.64)
Tetrahydrofuran	ND (0.10)	ND (0.30)	ND (0.098)	ND (0.29)	ND (0.083)	ND (0.24)	2.6	7.6
Toluene	0.79	3.0	0.96	3.6	0.18	0.68	0.47	1.8
Trichlorofluoromethane	0.16	0.90	0.16	0.90	0.21	1.2	0.19	1.1
Trichlorotrifluoroethane	0.05 L	0.39 L	0.06 L	0.44	ND (0.083)	ND (0.64)	0.06 L	0.45 L
m/p-Xylenes	0.19 L	0.82 L	0.23	1.0	ND (0.166)	ND (0.72	0.17 L	0.74 L
o-Xylene	0.06 L	0.26 L	0.08 L	0.33 L	ND (0.083)	ND (0.36)	0.06 L	0.25 L

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 8
INDOOR AIR, AMBIENT AIR AND SOIL GAS CANISTER SAMPLING RESULTS SUMMARY
608 FERRY BLVD.
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR BASEMENT CANISTER #5786 14-Feb-12 8-HOUR AVG.		INDOOR AIR BASEMENT DUPLICATE CANISTER #3656 14-Feb-12 8-HOUR AVG.		INDOOR AIR FIRST FLOOR CANISTER #1584 14-Feb-12 8-HOUR AVG.		SUB-SLAB SOIL GAS SS-3 BASEMENT CANISTER #22684 14-Feb-12 GRAB SAMPLE		AMBIENT AIR OUTSIDE 500 FERRY. BLVD. CANISTER #13495 2/14/12 - 2/15/12 24-HOUR AVG.(12:09-12:10)	
	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)
Trichloroethene	**ND (0.10)**	**ND (0.54)**	**ND (0.10)**	**ND (0.54)**	**ND (0.093)**	**ND (0.50)**	**0.26**	**1.4**	**ND (0.10)**	**ND (0.54)**
1,1,-Dichloroethylene	**ND (0.10)**	**ND (0.40)**	**ND (0.10)**	**ND (0.40)**	**ND (0.093)**	**ND (0.37)**	**0.25**	**0.99**	**ND (0.10)**	**ND (0.40)**
Vinyl Chloride	**ND (0.10)**	**ND (0.26)**	**ND (0.10)**	**ND (0.26)**	**ND (0.093)**	**ND (0.24)**	**ND (0.077)**	**ND (0.20)**	**ND (0.10)**	**ND (0.26)**
1,1,1-Trichloroethane	0.12	0.66	0.11	0.60	0.07 L	0.39 L	0.16	0.87	ND (0.10)	ND (0.55)
1,1-Dichloroethane	ND (0.10)	ND (0.41)	ND (0.10)	ND (0.41)	ND (0.093)	ND (0.37)	0.52	2.1	ND (0.10)	ND (0.41)
1,3-Butadiene	ND (0.20)	ND (0.44)	ND (0.20)	ND (0.44)	ND (0.19)	ND (0.42)	ND (0.15)	ND (0.33)	0.06 L	0.12 L
Benzene	0.19	0.61	0.17	0.54	0.18	0.57	ND (0.077)	ND (0.25)	0.30	0.96
Carbon Tetrachloride	0.06 L	0.37 L	0.06 L	0.37 L	0.05 L	0.33 L	0.05 L	0.33 L	0.04 L	0.28 L
Dichlorodifluoromethane	0.59	2.9	0.48	2.4	0.56	2.8	0.60	3.0	0.38	1.9
Ethylbenzene	ND (0.10)	ND (0.43)	ND (0.10)	ND (0.43)	ND (0.093)	ND (0.40)	ND (0.077)	ND (0.33)	0.06 L	0.25 L
Hexane	1.4	4.9	1.3	4.5	0.91	3.2	ND (0.077)	ND (0.27)	0.16	0.56
Methyl Ethyl Ketone	ND (0.10)	ND (0.30)	ND (0.10)	ND (0.30)	ND (0.093)	ND (0.27)	0.06 L	0.19 L	0.19	0.56
Methylchloride	0.23	0.48	0.22	0.45	0.23	0.48	ND (0.077)	ND (0.16)	0.27	0.56
Methylene Chloride	0.50	1.7	0.47	1.6	0.43	1.5	0.30	1.0	0.57	2.0
Tetrachloroethylene	ND (0.10)	ND (0.68)	ND (0.10)	ND (0.68)	ND (0.093)	ND (0.63)	0.06 L	0.43 L	ND (0.10)	ND (0.68)
Tetrahydrofuran	0.24	0.71	0.23	0.68	ND (0.093)	ND (0.27)	ND (0.077)	ND (0.23)	ND (0.10)	ND (0.30)
Toluene	0.23	0.87	0.20	0.75	0.25	0.94	ND (0.077)	ND (0.29)	0.40	1.5
Trichlorofluoromethane	0.19	1.1	0.18	1.0	0.16	0.90	0.18	1.0	0.17	0.96
Trichlorotrifluoroethane	0.06 L	0.43 L	0.05 L	0.41 L	0.05 L	0.38 L	0.05 L	0.41 L	0.05 L	0.40 L
c-1,2-Dichloroethylene	ND (0.10)	ND (0.40)	ND (0.10)	ND (0.40)	ND (0.093)	ND (0.37)	1.2	4.9	ND (0.10)	ND (0.40)
m/p-Xylenes	0.09 L	0.40 L	0.09 L	0.39 L	0.11	0.48	ND (0.15)	ND (0.65)	0.17 L	0.74 L
o-Xylene	ND (0.10)	ND (0.43)	ND (0.10)	ND (0.43)	0.04 L	0.17 L	ND (0.077)	ND (0.33)	0.06 L	0.26 L

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 9
INDOOR AIR, AMBIENT AIR AND SOIL GAS CANISTER SAMPLING RESULTS SUMMARY
335 FERRY BLVD.
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR CURTIN TAXI CANISTER #6460 14-Feb-12 8-HOUR AVG.		INDOOR AIR RECEPTIONIST OFFICE CANISTER #6555 14-Feb-12 8-HOUR AVG.		INDOOR AIR ESTIMATING ROOM CANISTER #4778 14-Feb-12 8-HOUR AVG.		SUB-SLAB SOIL GAS SS-1 GARAGE AREA 1 CANISTER #22680 14-Feb-12 GRAB SAMPLE		AMBIENT AIR OUTSIDE 500 FERRY. BLVD. CANISTER #13495 2/14/12 - 2/15/12 24-HOUR AVG.(12:09-12:10)	
	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)
Trichloroethene	**2.1**	**11**	**0.04 L**	**0.23 L**	**ND (0.12)**	**ND (0.64)**	**4.2**	**22**	**ND (0.10)**	**ND (0.54)**
1,1,-Dichloroethylene	**ND (0.11)**	**ND (0.44)**	**ND (0.12)**	**ND (0.48)**	**ND (0.12)**	**ND (0.48)**	**ND (1.5)**	**ND (5.9)**	**ND (0.10)**	**ND (0.40)**
Vinyl Chloride	**ND (0.11)**	**ND (0.28)**	**0.05 L**	**0.12 L**	**0.04 L**	**0.11 L**	**ND (1.5)**	**ND (3.8)**	**ND (0.10)**	**ND (0.26)**
1,1,1-Trichloroethane	0.33	1.8	0.29	1.6	0.14	0.76	90	490	ND (0.10)	ND (0.55)
1,1-Dichloroethane	ND (0.11)	ND (0.44)	ND (0.12)	ND (0.49)	ND (0.12)	ND (0.49)	1.4 L	5.6 L	ND (0.10)	ND (0.41)
1,2,4-Trimethylbenzene	0.18	0.88	0.07 L	0.33 L	0.18	0.88	ND (1.5)	ND (7.4)	ND (0.10)	ND (0.49)
1,3,5-Trimethylbenzene	0.08 L	0.37 L	ND (0.12)	ND (0.59)	0.06 L	0.30 L	ND (1.5)	ND (7.4)	ND (0.10)	ND (0.49)
1,3-Butadiene	0.13 L	0.29 L	0.11 L	0.24 L	0.11 L	0.24 L	ND (3.0)	ND (6.6)	0.06 L	0.12 L
4-Ethyltoluene	0.17	0.74	0.09 L	0.42 L	0.14 L	0.69	ND (1.5)	ND (7.4)	ND (0.10)	ND (0.49)
Benzene	0.56	1.8	0.62	2.0	0.53	1.7	ND (1.5)	ND (4.8)	0.30	0.96
Carbon Tetrachloride	0.07 L	0.42 L	0.07 L	0.43 L	0.07 L	0.42 L	ND (1.5)	ND (9.4)	0.04 L	0.28 L
Chloroform	0.09 L	0.44 L	ND (0.12)	ND (0.59)	ND (0.12)	ND (0.59)	ND (1.5)	ND (7.3)	ND (0.10)	ND (0.49)
Cyclohexane	1.5	5.3	0.19	0.65	0.16	0.55	6.0	21	ND (0.10)	ND (0.34)
Dichlorodifluoromethane	0.35	1.7	0.59	2.9	0.38	1.9	ND (1.5)	ND (7.4)	0.38	1.9
Ethylbenzene	0.25	1.1	0.22	0.95	0.20	0.87	ND (1.5)	ND (6.5)	0.06 L	0.25 L
Hexane	2.2	7.7	2.4	8.4	2.0	7.0	ND (1.5)	ND (5.3)	0.16	0.56
Methyl Ethyl Ketone	ND (0.11)	ND (0.32)	ND (0.12)	ND (0.35)	ND (0.12)	ND (0.35)	ND (1.5)	ND (4.4)	0.19	0.56
Methyl Isobutyl Ketone	0.09 L	0.35 L	ND (0.12)	ND (0.49)	ND (0.12)	ND (0.49)	ND (1.5)	ND (6.1)	ND (0.10)	ND (0.41)
Methylchloride	0.36	0.74	0.40	0.83	0.33	0.68	ND (1.5)	ND (3.1)	0.27	0.56
Methylene Chloride	0.14	0.49	0.46	1.6	0.44	1.5	ND (1.5)	ND (5.2)	0.57	2.0
Styrene	0.05 L	0.23 L	ND (0.12)	ND (0.51)	ND (0.12)	ND (0.51)	ND (1.5)	ND (6.4)	ND (0.10)	ND (0.43)
Tetrachloroethylene	0.05 L	0.33 L	0.06 L	0.40 L	0.06 L	0.39 L	0.97 L	6.6 L	ND (0.10)	ND (0.68)
Toluene	1.2	4.6	1.9	7.0	1.5	5.7	ND (1.5)	ND (5.6)	0.40	1.5
Trichlorofluoromethane	0.22	1.2	0.52	2.9	0.57	3.2	ND (1.5)	ND (8.4)	0.17	0.96
Trichlorotrifluoroethane	0.05 L	0.40 L	0.06 L	0.48 L	0.06 L	0.45 L	ND (1.5)	ND (11)	0.05 L	0.40 L
c-1,2-Dichloroethylene	ND (0.11)	ND (0.44)	ND (0.12)	ND (0.48)	ND (0.12)	ND (0.48)	2.7	11	ND (0.10)	ND (0.40)
m/p-Xylenes	0.72	3.1	0.68	2.9	0.67	2.9	ND (3.0)	ND (13)	0.17 L	0.74 L
o-Xylene	0.25	1.1	0.22	0.95	0.22	0.95	ND (1.5)	ND (6.5)	0.06 L	0.26 L

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 10
INDOOR AIR, AMBIENT AIR AND SOIL GAS CANISTER SAMPLING RESULTS SUMMARY
300 FERRY BLVD.
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR MAIN SHOW ROOM CANISTER #1577 14-Feb-12 8-HOUR AVG.		INDOOR AIR SNOW BOARD AREA CANISTER #6580 14-Feb-12 8-HOUR AVG.		SUB-SLAB SOIL GAS SS-1 SNOW BOARD STORAGE CANISTER #14902 14-Feb-12 GRAB SAMPLE		AMBIENT AIR OUTSIDE 500 FERRY. BLVD. CANISTER #13495 2/14/12 - 2/15/12 24-HOUR AVG.(12:09-12:10)	
	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)
Trichloroethene	**ND (0.13)**	**ND (0.70)**	**ND (0.12)**	**ND (0.64)**	**29**	**160**	**ND (0.10)**	**ND (0.54)**
1,1,-Dichloroethylene	**ND (0.13)**	**ND (0.52)**	**ND (0.12)**	**ND (0.48)**	**ND (0.75)**	**ND (3.0)**	**ND (0.10)**	**ND (0.40)**
Vinyl Chloride	**ND (0.13)**	**ND (0.33)**	**ND (0.12)**	**ND (0.31)**	**ND (0.75)**	**ND (1.9)**	**ND (0.10)**	**ND (0.26)**
1,1,1-Trichloroethane	0.16	0.87	0.12	0.66	ND (0.75)	ND (4.1)	ND (0.10)	ND (0.55)
1,1-Dichloroethane	ND (0.13)	ND (0.53)	ND (0.12)	ND (0.49)	0.93	3.8	ND (0.10)	ND (0.41)
1,2,4-Trimethylbenzene	0.10 L	0.49 L	0.10 L	0.49 L	ND (0.75)	ND (3.7)	ND (0.10)	ND (0.49)
1,3,5-Trimethylbenzene	0.05 L	0.26 L	ND (0.12)	ND (0.59)	ND (0.75)	ND (3.7)	ND (0.10)	ND (0.49)
1,3-Butadiene	0.08 L	0.17 L	0.08 L	0.19 L	ND (1.5)	ND (3.3)	0.06 L	0.12 L
4-Ethyltoluene	0.09 L	0.46 L	0.10 L	0.49 L	ND (0.75)	ND (3.7)	ND (0.10)	ND (0.49)
Benzene	0.63	2.0	0.51	1.6	ND (0.75)	ND (2.4)	0.30	0.96
Carbon Tetrachloride	0.09 L	0.54 L	0.06 L	0.36 L	ND (0.75)	ND (4.7)	0.04 L	0.28 L
Chloroform	0.06 L	0.27 L	ND (0.12)	ND (0.59)	ND (0.75)	ND (3.7)	ND (0.10)	ND (0.49)
Cyclohexane	0.14	0.48	0.12	0.41	ND (0.75)	ND (2.6)	ND (0.10)	ND (0.34)
Dichlorodifluoromethane	0.55	2.7	0.42	2.1	3.2	16	0.38	1.9
Ethylbenzene	0.31	1.3	0.30	1.3	ND (0.75)	ND (3.3)	0.06 L	0.25 L
Hexachloro-1,3-butadiene	0.04 L	0.44 L	ND (0.12)	ND (1.3)	ND (0.75)	ND (8.0)	ND (0.10)	ND (1.1)
Hexane	1.4	4.7	1.2	4.0	ND (0.75)	ND (2.6)	0.16	0.56
Methyl Ethyl Ketone	0.26	0.77	0.35	1.0	ND (0.75)	ND (2.2)	0.19	0.56
Methyl-t-Butyl Ether	ND (0.13)	ND (0.47)	ND (0.12)	ND (0.43)	1.4	5.0	ND (0.10)	ND (0.36)
Methylchloride	0.37	0.76	0.36	0.74	ND (0.75)	ND (1.5)	0.27	0.56
Methylene Chloride	0.93	3.2	1.1	3.8	ND (0.75)	ND (2.6)	0.57	2.0
Styrene	0.08 L	0.35 L	0.08 L	0.34 L	ND (0.75)	ND (3.2)	ND (0.10)	ND (0.43)
Tetrachloroethylene	0.09 L	0.60 L	0.05 L	0.37 L	0.60 L	4.1 L	ND (0.10)	ND (0.68)
Toluene	3.4	13	3.4	13	ND (0.75)	ND (2.8)	0.40	1.5
Trichlorofluoromethane	0.19	1.1	0.16	0.90	ND (0.75)	ND (4.2)	0.17	0.96
Trichlorotrifluoroethane	0.06 L	0.45 L	0.05 L	0.41 L	ND (0.75)	ND (5.7)	0.05 L	0.40 L
c-1,2-Dichloroethylene	ND (0.13)	ND (0.51)	ND (0.12)	ND (0.48)	0.87	3.4	ND (0.10)	ND (0.40)
m/p-Xylenes	0.94	4.1	1.0	4.3	ND (1.5)	ND (6.5)	0.17 L	0.74 L
o-Xylene	0.30	1.3	0.29	1.3	ND (0.75)	ND (3.3)	0.06 L	0.26 L

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 11
INDOOR AIR, AMBIENT AIR AND SOIL GAS CANISTER SAMPLING RESULTS SUMMARY
100 VETERANS WAY
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR BASEMENT CANISTER #1594 14-Feb-12 8-HOUR AVG.		INDOOR AIR FIRST FLOOR CANISTER #6583 14-Feb-12 8-HOUR AVG.		SUB-SLAB SOIL GAS SS-3 BASEMENT CANISTER #15050 14-Feb-12 GRAB SAMPLE		AMBIENT AIR OUTSIDE 500 FERRY. BLVD. CANISTER #13495 2/14/12 - 2/15/12 24-HOUR AVG.(12:09-12:10)	
	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)
Trichloroethene	**1.0**	**5.4**	**0.22**	**1.2**	**200**	**1100**	**ND (0.10)**	**ND (0.54)**
1,1,-Dichloroethylene	**0.65**	**2.6**	**0.17**	**0.67**	**260**	**1000**	**ND (0.10)**	**ND (0.40)**
Vinyl Chloride	**ND (0.12)**	**ND (0.31)**	**ND (0.11)**	**ND (0.28)**	**ND (27)**	**ND (69)**	**ND (0.10)**	**ND (0.26)**
1,1,1-Trichloroethane	0.43	2.3	0.13	0.71	130	710	ND (0.10)	ND (0.55)
1,1-Dichloroethane	1.4	5.8	0.41	1.7	510	2100	ND (0.10)	ND (0.41)
1,2,4-Trimethylbenzene	0.10 L	0.49 L	0.05 L	0.25 L	ND (27)	ND (133)	ND (0.10)	ND (0.49)
1,3,5-Trimethylbenzene	0.06 L	0.29 L	ND (0.11)	ND (0.54)	ND (27)	ND (133)	ND (0.10)	ND (0.49)
1,3-Butadiene	0.13 L	0.29 L	0.54	1.2	ND (54)	ND (119)	0.06 L	0.12 L
1,4-Dichlorobenzene	ND (0.12)	ND (0.72)	0.05 L	0.29 L	ND (27)	ND (162)	ND (0.10)	ND (0.60)
4-Ethyltoluene	0.10 L	0.48 L	0.05 L	0.27 L	ND (27)	ND (133)	ND (0.10)	ND (0.49)
Acrylonitrile	ND (0.12)	ND (0.26)	0.19	0.41	ND (27)	ND (59)	ND (0.10)	ND (0.22)
Benzene	0.43	1.4	0.57	1.8	ND (27)	ND (86)	0.30	0.96
Carbon Tetrachloride	0.08 L	0.50 L	0.07 L	0.41 L	ND (27)	ND (169)	0.04 L	0.28 L
Chloroform	0.06 L	0.27 L	0.10 L	0.49 L	ND (27)	ND (132)	ND (0.10)	ND (0.49)
Cyclohexane	0.16	0.55	0.08 L	0.28 L	ND (27)	ND (93)	ND (0.10)	ND (0.34)
Dichlorodifluoromethane	0.55	2.7	0.40	2.0	ND (27)	ND (134)	0.38	1.9
Ethylbenzene	0.25	1.1	0.12	0.52	ND (27)	ND (117)	0.06 L	0.25 L
Hexane	1.7	5.8	1.1	3.9	ND (27)	ND (95)	0.16	0.56
Methyl Ethyl Ketone	0.21	0.62	0.30	0.89	ND (27)	ND (80)	0.19	0.56
Methylchloride	0.40	0.83	0.51	1.1	ND (27)	ND (56)	0.27	0.56
Methylene Chloride	0.72	2.5	0.20	0.69	ND (27)	ND (94)	0.57	2.0
Styrene	2.1	8.8	0.24	1.0	ND (27)	ND (115)	ND (0.10)	ND (0.43)
Tetrachloroethylene	0.05 L	0.32 L	ND (0.11)	ND (0.75)	ND (27)	ND (183)	ND (0.10)	ND (0.68)
Toluene	2.0	7.6	1.4	5.2	ND (27)	ND (102)	0.40	1.5
Trichlorofluoromethane	0.36	2.0	0.19	1.1	ND (27)	ND (152)	0.17	0.96
Trichlorotrifluoroethane	0.07 L	0.54 L	0.06 L	0.42 L	ND (27)	ND (207)	0.05 L	0.40 L
c-1,2-Dichloroethylene	3.5	14	0.98	3.9	1300	5200	ND (0.10)	ND (0.40)
m/p-Xylenes	0.82	3.6	0.40	1.7	ND (54)	ND (234)	0.17 L	0.74 L
o-Xylene	0.24	1.0	0.11	0.48	ND (27)	ND (117)	0.06 L	0.26 L

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 12
INDOOR AIR AND AMBIENT AIR CANISTER SAMPLING RESULTS SUMMARY
326 FERRY BLVD.
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR DINING ROOM CANISTER #5810 15-Feb-12 8-HOUR AVG.		INDOOR AIR KITCHEN CANISTER #6461 15-Feb-12 8-HOUR AVG.		AMBIENT AIR OUTSIDE 500 FERRY. BLVD. CANISTER #15048 2/15/12 - 2/16/12 24-HOUR AVG.(12:09-12:09)	
	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)
Trichloroethene	**0.04 L**	**0.24 L**	**ND (0.11)**	**ND (0.59)**	**ND (0.095)**	**ND (0.51)**
1,1,-Dichloroethylene	**ND (0.12)**	**ND (0.48)**	**ND (0.11)**	**ND (0.44)**	**ND (0.095)**	**ND (0.38)**
Vinyl Chloride	**ND (0.12)**	**ND (0.31)**	**ND (0.11)**	**ND (0.28)**	**ND (0.095)**	**ND (0.24)**
1,1,1-Trichloroethane	0.10 L	0.52 L	0.05 L	0.26 L	ND (0.095)	ND (0.52)
1,2,4-Trimethylbenzene	0.10 L	0.49 L	ND (0.11)	ND (0.54)	ND (0.095)	ND (0.27)
1,3,5-Trimethylbenzene	0.04 L	0.21 L	ND (0.11)	ND (0.54)	ND (0.095)	ND (0.27)
1,3-Butadiene	0.16 L	0.35 L	0.18 L	0.40 L	0.05 L	0.12 L
4-Ethyltoluene	0.08 L	0.38 L	0.06 L	0.31 L	ND (0.095)	ND (0.47)
Benzene	0.53	1.7	0.67	2.1	0.30	0.96
Carbon Tetrachloride	0.08 L	0.51 L	0.07 L	0.43 L	0.05 L	0.33 L
Chloroform	0.08 L	0.41 L	0.40	2.0	ND (0.095)	ND (0.46)
Cyclohexane	0.10 L	0.34 L	0.07 L	0.25 L	ND (0.095)	ND (0.33)
Dichlorodifluoromethane	0.41	2.0	0.42	2.1	0.34	1.7
Ethylbenzene	0.12	0.52	0.10 L	0.43 L	0.06 L	0.24 L
Hexane	0.72	2.5	0.66	2.3	0.16	0.56
Methyl Ethyl Ketone	0.38	1.1	0.52	1.5	0.19	0.56
Methyl Isobutyl Ketone	0.04 L	0.17 L	ND (0.11)	ND (0.45)	ND (0.095)	ND (0.39)
Methylchloride	0.32	0.66	0.42	0.87	0.35	0.72
Methylene Chloride	1.4	4.7	1.5	5.0	5.0	17
Styrene	0.08 L	0.34 L	0.05 L	0.23 L	ND (0.095)	ND (0.41)
Tetrachloroethylene	0.17	1.2	0.16	1.1	ND (0.095)	ND (0.64)
Tetrahydrofuran	ND (0.12)	ND (0.35)	ND (0.11)	ND (0.32)	2.6	7.6
Toluene	0.88	3.3	0.79	3.0	0.47	1.8
Trichlorofluoromethane	0.19	1.1	0.19	1.1	0.19	1.1
Trichlorotrifluoroethane	0.07 L	0.57 L	0.06 L	0.48 L	0.06 L	0.45 L
m/p-Xylenes	0.36	1.6	0.31	1.3	0.17 L	0.74 L
o-Xylene	0.15	0.65	0.11	0.48	0.06 L	0.25 L

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 13
INDOOR AIR, AMBIENT AIR AND SOIL GAS CANISTER SAMPLING RESULTS SUMMARY
444 FERRY BLVD.
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR BASEMENT CANISTER #3092 15-Feb-12 8-HOUR AVG.		INDOOR AIR BASEMENT DUPLICATE CANISTER #6568 15-Feb-12 8-HOUR AVG.		INDOOR AIR FIRST FLOOR CANISTER #1582 15-Feb-12 8-HOUR AVG.		SUB-SLAB SOIL GAS SS-3 BASEMENT CANISTER #20856 15-Feb-12 GRAB SAMPLE		AMBIENT AIR OUTSIDE 500 FERRY. BLVD. CANISTER #15048 2/15/12 - 2/16/12 24-HOUR AVG.(12:09-12:09)	
	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)
Trichloroethene	**ND (0.11)**	**ND (0.59)**	**ND (0.11)**	**ND (0.59)**	**ND (0.12)**	**ND (0.64)**	**0.48**	**2.6**	**ND (0.095)**	**ND (0.51)**
1,1,-Dichloroethylene	**ND (0.11)**	**ND (0.44)**	**ND (0.11)**	**ND (0.44)**	**ND (0.12)**	**ND (0.48)**	**0.17**	**0.67**	**ND (0.095)**	**ND (0.38)**
Vinyl Chloride	**ND (0.11)**	**ND (0.28)**	**ND (0.11)**	**ND (0.28)**	**ND (0.12)**	**ND (0.31)**	**ND (0.088)**	**ND (0.22)**	**ND (0.095)**	**ND (0.24)**
1,1,1-Trichloroethane	0.27	1.5	0.05 L	0.29 L	0.16	0.87	3.7	20	ND (0.095)	ND (0.52)
1,1-Dichloroethane	ND (0.11)	ND (0.44)	ND (0.11)	ND (0.44)	ND (0.12)	ND (0.49)	0.05 L	0.20 L	ND (0.095)	ND (0.38)
1,2,4-Trimethylbenzene	0.59	2.9	0.45	2.2	0.49	2.4	ND (0.088)	ND (0.43)	ND (0.095)	ND (0.47)
1,3,5-Trimethylbenzene	0.35	1.7	0.31	1.5	0.30	1.5	ND (0.088)	ND (0.43)	ND (0.095)	ND (0.47)
1,3-Butadiene	0.08 L	0.18 L	0.08 L	0.18 L	0.08 L	0.18 L	ND (0.18)	ND (0.40)	0.05 L	0.12 L
4-Ethyltoluene	1.1	5.2	0.91	4.5	0.81	4.0	ND (0.088)	ND (0.43)	ND (0.095)	ND (0.47)
Benzene	0.40	1.3	0.41	1.3	0.41	1.3	ND (0.088)	ND (0.28)	0.30	0.96
Carbon Tetrachloride	0.06 L	0.40 L	0.07 L	0.43 L	0.06 L	0.40 L	ND (0.088)	ND (0.55)	0.05 L	0.33 L
Cyclohexane	0.15	0.52	0.14	0.48	0.15	0.52	ND (0.088)	ND (0.30)	ND (0.095)	ND (0.33)
Dichlorodifluoromethane	0.38	1.9	0.38	1.9	0.41	2.0	0.32	1.6	0.34	1.7
Ethylbenzene	0.20	0.87	0.19	0.82	0.18	0.78	ND (0.088)	ND (0.38)	0.06 L	0.24 L
Hexane	0.51	1.8	0.58	2.0	0.62	2.2	0.07 L	0.24 L	0.16	0.56
Methyl Ethyl Ketone	0.93	2.7	0.68	2.0	1.5	4.5	0.07 L	0.21 L	0.19	0.56
Methyl Isobutyl Ketone	ND (0.11)	ND (0.45)	ND (0.11)	ND (0.45)	0.06 L	0.25 L	ND (0.088)	ND (0.36)	ND (0.095)	ND (0.39)
Methylchloride	0.26	0.54	0.28	0.58	0.31	0.64	ND (0.088)	ND (0.18)	0.35	0.72
Methylene Chloride	2.8	9.8	2.8	9.6	3.5	12	0.14	0.49	5.0	17
Styrene	0.06 L	0.24 L	0.06 L	0.23 L	0.08 L	0.33 L	0.10	0.43	ND (0.095)	ND (0.41)
Tetrachloroethylene	0.06 L	0.41 L	0.07 L	0.46 L	0.06 L	0.38 L	0.24	1.6	ND (0.095)	ND (0.64)
Tetrahydrofuran	ND (0.11)	ND (0.32)	ND (0.11)	ND (0.32)	ND (0.12)	ND (0.35)	ND (0.088)	ND (0.26)	2.6	7.6
Toluene	1.5	5.7	1.5	5.7	1.4	5.3	0.06 L	0.20 L	0.47	1.8
Trichlorofluoromethane	0.17	0.96	0.18	1.0	0.19	1.1	0.17	0.96	0.19	1.1
Trichlorotrifluoroethane	0.06 L	0.43 L	0.06 L	0.44 L	0.06 L	0.44 L	0.05 L	0.36 L	0.06 L	0.45 L
m/p-Xylenes	0.60	2.6	0.58	2.5	0.55	2.4	ND (0.18)	ND (0.78)	0.17 L	0.74 L
o-Xylene	0.25	1.1	0.24	1.0	0.23	1.0	ND (0.088)	ND (0.38)	0.06 L	0.25 L

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 14
INDOOR AIR AND AMBIENT AIR CANISTER SAMPLING RESULTS SUMMARY
411 BARNUM AVE. MCDONALDS RESTAURANT
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR OFFICE SPACE CANISTER #4743 14-Feb-12 8-HOUR AVG.				AMBIENT AIR OUTSIDE 500 FERRY. BLVD. CANISTER #13495 2/14/12 - 2/15/12 24-HOUR AVG.(12:09-12:10)			
	(ppb/v)		(ug/m^3)		(ppb/v)		(ug/m^3)	
Trichloroethene	**ND (0.11)**		**ND (0.59)**		**ND (0.10)**		**ND (0.54)**	
1,1,-Dichloroethylene	**ND (0.11)**		**ND (0.44)**		**ND (0.10)**		**ND (0.40)**	
Vinyl Chloride	**ND (0.11)**		**ND (0.28)**		**ND (0.10)**		**ND (0.26)**	
1,1,1-Trichloroethane	0.49		2.7		ND (0.10)		ND (0.55)	
1,3-Butadiene	0.05	L	0.10	L	0.06	L	0.12	L
Benzene	0.32		1.0		0.30		0.96	
Carbon Tetrachloride	0.07	L	0.45	L	0.04	L	0.28	L
Chloroform	0.27		1.3		ND (0.10)		ND (0.49)	
Dichlorodifluoromethane	0.44		2.2		0.38		1.9	
Ethylbenzene	0.06	L	0.26	L	0.06	L	0.25	L
Hexane	1.2		4.2		0.16		0.56	
Methyl Ethyl Ketone	0.14		0.41		0.19		0.56	
Methylchloride	0.37		0.76		0.27		0.56	
Methylene Chloride	0.37		1.3		0.57		2.0	
Tetrachloroethylene	0.04	L	0.30	L	ND (0.10)		ND (0.68)	
Toluene	0.51		1.9		0.40		1.5	
Trichlorofluoromethane	0.19		1.1		0.17		0.96	
Trichlorotrifluoroethane	0.06	L	0.48	L	0.05	L	0.40	L
m/p-Xylenes	0.16	L	0.69	L	0.17	L	0.74	L
o-Xylene	0.06	L	0.27	L	0.06	L	0.26	L

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 15
INDOOR AIR AND AMBIENT AIR CANISTER SAMPLING RESULTS SUMMARY
411 BARNUM AVE. STRATFORD SQUARE US POSTAL SERVICE
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR US POSTAL SERVICE CANISTER #6569 14-Feb-12 8-HOUR AVG.				AMBIENT AIR OUTSIDE 500 FERRY. BLVD. CANISTER #13495 2/14/12 - 2/15/12 24-HOUR AVG.(12:09-12:10)			
	(ppb/v)		(ug/m^3)		(ppb/v)		(ug/m^3)	
Trichloroethene	**ND (0.11)**		**ND (0.59)**		**ND (0.10)**		**ND (0.54)**	
1,1,-Dichloroethylene	**ND (0.11)**		**ND (0.44)**		**ND (0.10)**		**ND (0.40)**	
Vinyl Chloride	**ND (0.11)**		**ND (0.28)**		**ND (0.10)**		**ND (0.26)**	
1,1,1-Trichloroethane	0.76		4.1		ND (0.10)		ND (0.55)	
1,2-Dichloroethane	0.09	L	0.36	L	ND (0.10)		ND (0.40)	
1,3,5-Trimethylbenzene	0.04	L	0.20	L	ND (0.10)		ND (0.49)	
1,3-Butadiene	0.06	L	0.13	L	0.06	L	0.12	L
1,4-Dichlorobenzene	0.05	L	0.27	L	ND (0.10)		ND (0.60)	
4-Ethyltoluene	0.08	L	0.41	L	ND (0.10)		ND (0.49)	
Benzene	0.40		1.3		0.30		0.96	
Carbon Tetrachloride	0.06	L	0.38	L	0.04	L	0.28	L
Chloroform	0.23		1.1		ND (0.10)		ND (0.49)	
Cyclohexane	0.26		0.89		ND (0.10)		ND (0.34)	
Dichlorodifluoromethane	0.55		2.7		0.38		1.9	
Ethylbenzene	ND (0.11)		ND (0.48)		0.06	L	0.25	L
Hexane	1.6		5.7		0.16		0.56	
Methyl Ethyl Ketone	0.47		1.4		0.19		0.56	
Methylchloride	0.30		0.62		0.27		0.56	
Methylene Chloride	0.20		0.69		0.57		2.0	
Styrene	0.08	L	0.32	L	ND (0.10)		ND (0.43)	
Toluene	3.3		13		0.40		1.5	
Trichlorofluoromethane	1.0		5.8		0.17		0.96	
Trichlorotrifluoroethane	0.05	L	0.40	L	0.05	L	0.40	L
m/p-Xylenes	0.47		2.0		0.17	L	0.74	L
o-Xylene	0.16		0.69		0.06	L	0.26	L

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 16
INDOOR AIR AND AMBIENT AIR CANISTER SAMPLING RESULTS SUMMARY
411 BARNUM AVE. STRATFORD SQUARE MARSHALLS
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 411 BARNUM AVE. MARSHALLS BACKROOM CANISTER #6558 16-Feb-12 8-HOUR AVG.		INDOOR AIR 411 BARNUM AVE. MARSHALLS BACKROOM DUPLICATE CANISTER #6548 16-Feb-12 8-HOUR AVG.		INDOOR AIR 411 BARNUM AVE. MARSHALLS SHOPPING AREA CANISTER #3048 16-Feb-12 8-HOUR AVG.		AMBIENT AIR OUTSIDE 411 BARNUM AVE. CANISTER #12566 2/15/12 - 2/16/12 24-HOUR AVG.(17:55-17:55)	
	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)
Trichloroethene	**0.08 L**	**0.43 L**	**0.08 L**	**0.42 L**	**ND (0.12)**	**ND (0.64)**	**0.05 L**	**0.29 L**
1,1,-Dichloroethylene	**ND (0.13)**	**ND (0.52)**	**ND (0.12)**	**ND (0.48)**	**ND (0.12)**	**ND (0.48)**	**ND (0.11)**	**ND (0.44)**
Vinyl Chloride	**ND (0.13)**	**ND (0.33)**	**ND (0.12)**	**ND (0.31)**	**ND (0.12)**	**ND (0.31)**	**ND (0.11)**	**ND (0.28)**
1,1,1-Trichloroethane	ND (0.13)	ND (0.71)	ND (0.12)	ND (0.65)	0.66	3.6	0.20	1.1
1,2,4-Trimethylbenzene	ND (0.13)	ND (0.64)	0.12	0.59	ND (0.12)	ND (0.59)	ND (0.11)	ND (0.54)
1,2-Dichloroethane	1.5	6.0	1.5	6.1	1.3	5.1	ND (0.11)	ND (0.44)
1,2-Dichloropropane	0.38	1.8	0.39	1.8	0.50	2.3	ND (0.11)	ND (0.51)
1,3-Butadiene	0.06 L	0.13 L	0.06 L	0.12 L	ND (0.24)	ND (0.53)	ND (0.22)	ND (0.49)
4-Ethyltoluene	0.08 L	0.37 L	0.10 L	0.49 L	0.13	0.64	ND (0.11)	ND (0.54)
Benzene	0.68	2.2	0.65	2.1	0.86	2.7	0.07 L	0.21 L
Carbon Tetrachloride	0.06 L	0.04 L	0.06 L	0.38 L	ND (0.12)	ND (0.75)	ND (0.11)	ND (0.69)
Cyclohexane	0.32	1.1	0.31	1.1	0.37	1.3	ND (0.11)	ND (0.38)
Dichlorodifluoromethane	0.56	2.8	0.67	3.3	0.52	2.6	0.43	2.1
Ethylbenzene	0.53	2.3	0.54	2.3	0.66	2.9	ND (0.11)	ND (0.48)
Hexane	0.53	1.9	0.53	1.9	0.54	1.9	0.48	1.7
Methyl Ethyl Ketone	1.0	3.1	1.6	4.7	1.7	5.0	0.23	0.68
Methyl Isobutyl Ketone	ND (0.13)	ND (0.53)	0.05 L	0.21 L	ND (0.12)	ND (0.49)	ND (0.11)	ND (0.45)
Methylchloride	0.37	0.76	0.35	0.72	0.51	1.1	0.07 L	0.14 L
Methylene Chloride	0.74	2.6	0.69	2.4	0.68	2.4	0.05 L	0.18 L
Styrene	0.37	1.6	0.44	1.9	0.23	0.98	0.39	1.7
Tetrachloroethylene	0.08 L	0.52 L	0.08 L	0.53 L	ND (0.12)	ND (0.81)	0.13	0.88
Toluene	42	160	38	140	55	210	0.22	0.83
Trichlorofluoromethane	0.97	5.5	0.91	5.1	0.69	3.9	0.27	1.5
Trichlorotrifluoroethane	0.06 L	0.47 L	0.06 L	0.46	ND (0.12)	ND (0.92)	ND (0.11)	ND (0.84)
m/p-Xylenes	1.1	4.6	1.1	4.9	1.3	5.8	ND (0.22)	ND (0.95)
o-Xylene	0.36	1.6	0.40	1.7	0.46	2.1	ND (0.11)	ND (0.48)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 17
INDOOR AIR AND AMBIENT AIR CANISTER SAMPLING RESULTS SUMMARY
411 BARNUM AVE. STRATFORD SQUARE PAYLESS SHOE
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 411 BARNUM AVE. PAYLESS SHOE CANISTER #13498 16-Feb-12 8-HOUR AVG.		AMBIENT AIR OUTSIDE 411 BARNUM AVE. CANISTER #12566 2/15/12 - 2/16/12 24-HOUR AVG.(17:55-17:55)	
	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)
Trichloroethene	**1.1**	**5.7**	**0.05 L**	**0.29 L**
1,1,-Dichloroethylene	**ND (0.12)**	**ND (0.48)**	**ND (0.11)**	**ND (0.44)**
Vinyl Chloride	**ND (0.12)**	**ND (0.31)**	**ND (0.11)**	**ND (0.28)**
1,1,1-Trichloroethane	ND (0.12)	ND (0.65)	0.20	1.1
1,2,4-Trimethylbenzene	2.4	12	ND (0.11)	ND (0.54)
1,2-Dichloroethane	22	89	ND (0.11)	ND (0.44)
1,2-Dichloropropane	7.6	35	ND (0.11)	ND (0.51)
1,3,5-Trimethylbenzene	0.98	4.8	ND (0.11)	ND (0.54)
4-Ethyltoluene	2.2	11	ND (0.11)	ND (0.54)
Acrylonitrile	0.35	0.76	ND (0.11)	ND (0.24)
Benzene	7.4	24	0.07 L	0.21 L
Chloroform	0.23	1.1	0.46	2.2
Cyclohexane	6.8	23	ND (0.11)	ND (0.38)
Dichlorodifluoromethane	1.9	9.4	0.43	2.1
Ethylbenzene	11	49	ND (0.11)	ND (0.48)
Heptane	14	57	ND (0.11)	ND (0.45)
Hexane	1.3	4.5	0.48	1.7
Methyl Ethyl Ketone	55	162	0.23	0.68
Methylchloride	0.41	0.85	0.07 L	0.14 L
Methylene Chloride	2.4	8.2	0.05 L	0.18 L
Styrene	5.3	23	0.39	1.7
Toluene	770	2900	0.22	0.83
Trichlorofluoromethane	4.5	25	0.27	1.5
m/p-Xylenes	16	17	ND (0.22)	ND (0.95)
o-Xylene	8.0	35	ND (0.11)	ND (0.48)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 18
INDOOR AIR AND AMBIENT AIR CANISTER SAMPLING RESULTS SUMMARY
411 BARNUM AVE. STRATFORD SQUARE SLEEPY'S
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 411 BARNUM AVE. SLEEPY'S CANISTER #20857 16-Feb-12 8-HOUR AVG.		AMBIENT AIR OUTSIDE 411 BARNUM AVE. CANISTER #12566 2/15/12 - 2/16/12 24-HOUR AVG.(17:55-17:55)	
	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)
Trichloroethene	**2.4**	**13**	**0.05 L**	**0.29 L**
1,1,-Dichloroethylene	**ND (0.11)**	**ND (0.44)**	**ND (0.11)**	**ND (0.44)**
Vinyl Chloride	**ND (0.11)**	**ND (0.28)**	**ND (0.11)**	**ND (0.28)**
1,1,1-Trichloroethane	0.11	0.60	0.20	1.1
1,2,4-Trimethylbenzene	0.24	1.2	ND (0.11)	ND (0.54)
1,2-Dichloroethane	1.8	7.3	ND (0.11)	ND (0.44)
1,2-Dichloropropane	1.3	6.1	ND (0.11)	ND (0.51)
4-Ethyltoluene	0.21	1.0	ND (0.11)	ND (0.54)
Benzene	1.0	3.2	0.07 L	0.21 L
Chloroform	ND (0.11)	ND (0.54)	0.46	2.2
Cyclohexane	0.63	2.2	ND (0.11)	ND (0.38)
Dichlorodifluoromethane	0.87	4.3	0.43	2.1
Ethylbenzene	0.95	4.1	ND (0.11)	ND (0.48)
Heptane	2.8	12	ND (0.11)	ND (0.45)
Hexane	0.57	2.0	0.48	1.7
Methyl Ethyl Ketone	4.4	13	0.23	0.68
Methylchloride	0.31	0.64	0.07 L	0.14 L
Methylene Chloride	0.56	1.9	0.05 L	0.18 L
Styrene	0.29	1.2	0.39	1.7
Toluene	71	270	0.22	0.83
Trichlorofluoromethane	2.4	13	0.27	1.5
m/p-Xylenes	1.6	6.9	ND (0.22)	ND (0.95)
o-Xylene	0.65	2.8	ND (0.11)	ND (0.48)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 19
INDOOR AIR AND AMBIENT AIR CANISTER SAMPLING RESULTS SUMMARY
411 BARNUM AVE. STRATFORD SQUARE FASHION BUG
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 411 BARNUM AVE. FASHION BUG CANISTER #4742 16-Feb-12 8-HOUR AVG.		AMBIENT AIR OUTSIDE 411 BARNUM AVE. CANISTER #12566 2/15/12 - 2/16/12 24-HOUR AVG.(17:55-17:55)	
	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)
Trichloroethene	**0.23**	**1.2**	**0.05 L**	**0.29 L**
1,1,-Dichloroethylene	**ND (0.12)**	**ND (0.48)**	**ND (0.11)**	**ND (0.44)**
Vinyl Chloride	**ND (0.12)**	**ND (0.31)**	**ND (0.11)**	**ND (0.28)**
1,1,1-Trichloroethane	0.11	0.60	0.20	1.1
1,2,4-Trimethylbenzene	0.16	0.79	ND (0.11)	ND (0.54)
1,2-Dichloroethane	1.1	4.4	ND (0.11)	ND (0.44)
4-Ethyltoluene	0.15	0.74	ND (0.11)	ND (0.54)
Benzene	0.96	3.1	0.07 L	0.21 L
Chloroform	ND (0.12)	ND (0.59)	0.46	2.2
Cyclohexane	0.25	0.86	ND (0.11)	ND (0.38)
Dichlorodifluoromethane	0.83	4.1	0.43	2.1
Ethylbenzene	0.51	2.2	ND (0.11)	ND (0.48)
Hexane	0.57	2.0	0.48	1.7
Methyl Ethyl Ketone	1.9	5.7	0.23	0.68
Methylchloride	0.35	0.72	0.07 L	0.14 L
Methylene Chloride	0.50	1.7	0.05 L	0.18 L
Styrene	0.13	0.55	0.39	1.7
Toluene	30	110	0.22	0.83
Trichlorofluoromethane	2.1	12	0.27	1.5
m/p-Xylenes	0.88	3.8	ND (0.22)	ND (0.95)
o-Xylene	0.37	1.6	ND (0.11)	ND (0.48)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 20
INDOOR AIR AND AMBIENT AIR CANISTER SAMPLING RESULTS SUMMARY
411 BARNUM AVE. STRATFORD SQUARE SALLY'S BEAUTY
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 411 BARNUM AVE. SALLY'S BEAUTY CANISTER #5804 16-Feb-12 8-HOUR AVG.				AMBIENT AIR OUTSIDE 411 BARNUM AVE. CANISTER #12566 2/15/12 - 2/16/12 24-HOUR AVG.(17:55-17:55)			
	(ppb/v)		(ug/m^3)		(ppb/v)		(ug/m^3)	
Trichloroethene	**ND (0.12)**		**ND (0.64)**		**0.05**	**L**	**0.29**	**L**
1,1,-Dichloroethylene	**ND (0.12)**		**ND (0.48)**		**ND (0.11)**		**ND (0.44)**	
Vinyl Chloride	**ND (0.12)**		**ND (0.31)**		**ND (0.11)**		**ND (0.28)**	
1,1,1-Trichloroethane	ND (0.12)		ND (0.65)		0.20		1.1	
1,2,4-Trimethylbenzene	0.23		1.1		ND (0.11)		ND (0.54)	
4-Ethyltoluene	0.21		1.0		ND (0.11)		ND (0.54)	
Acrylonitrile	0.14		0.30		ND (0.11)		ND (0.24)	
Benzene	0.60		1.9		0.07	L	0.21	L
Chloroform	ND (0.12)		ND (0.59)		0.46		2.2	
Cyclohexane	0.24		0.83		ND (0.11)		ND (0.38)	
Dichlorodifluoromethane	0.46		2.3		0.43		2.1	
Ethylbenzene	0.31		1.3		ND (0.11)		ND (0.48)	
Heptane	1.6		6.7		ND (0.11)		ND (0.45)	
Hexane	0.76		2.7		0.48		1.7	
Methyl Ethyl Ketone	18		53		0.23		0.68	
Methylchloride	0.48		0.99		0.07	L	0.14	L
Methylene Chloride	1.1		3.8		0.05	L	0.18	L
Styrene	0.20		0.85		0.39		1.7	
Toluene	3.8	J	14	J	0.22		0.83	
Trichlorofluoromethane	0.45		2.5		0.27		1.5	
m/p-Xylenes	0.70		3.0		ND (0.22)		ND (0.95)	
o-Xylene	0.30		1.3		ND (0.11)		ND (0.48)	

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
J = Estimated value, did meet CCV specifications
Compounds in bold type are target compounds for project.

TABLE 21
INDOOR AIR AND AMBIENT AIR CANISTER SAMPLING RESULTS SUMMARY
411 BARNUM AVE. STRATFORD SQUARE GAME STOP
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 411 BARNUM AVE. GAME STOP CANISTER #1589 16-Feb-12 8-HOUR AVG.				AMBIENT AIR OUTSIDE 411 BARNUM AVE. CANISTER #12566 2/15/12 - 2/16/12 24-HOUR AVG.(17:55-17:55)			
	(ppb/v)		(ug/m^3)		(ppb/v)		(ug/m^3)	
Trichloroethene	**ND (0.16)**		**ND (0.86)**		**0.05**	**L**	**0.29**	**L**
1,1,-Dichloroethylene	**ND (0.16)**		**ND (0.63)**		**ND (0.11)**		**ND (0.44)**	
Vinyl Chloride	**ND (0.16)**		**ND (0.41)**		**ND (0.11)**		**ND (0.28)**	
1,1,1-Trichloroethane	ND (0.16)		ND (0.87)		0.20		1.1	
1,2-Dichloroethane	0.10	L	0.41	L	ND (0.11)		ND (0.44)	
1,3-Butadiene	0.11	L	0.24	L	ND (0.22)		ND (0.49)	
4-Ethyltoluene	0.11	L	0.54	L	ND (0.11)		ND (0.54)	
Benzene	0.59		1.9		0.07	L	0.21	L
Chloroform	ND (0.16)		ND (0.78)		0.46		2.2	
Cyclohexane	0.21		0.72		ND (0.11)		ND (0.38)	
Dichlorodifluoromethane	0.51		2.5		0.43		2.1	
Ethylbenzene	0.22		0.95		ND (0.11)		ND (0.48)	
Hexane	0.80		2.8		0.48		1.7	
Methyl Ethyl Ketone	0.85		2.5		0.23		0.68	
Methylchloride	0.40		0.83		0.07	L	0.14	L
Methylene Chloride	0.74		2.6		0.05	L	0.18	L
Styrene	0.14	L	0.60	L	0.39		1.7	
Toluene	2.9	J	11	J	0.22		0.83	
Trichlorofluoromethane	0.37		2.1		0.27		1.5	
m/p-Xylenes	0.63		2.7		ND (0.22)		ND (0.95)	
o-Xylene	0.25		1.1		ND (0.11)		ND (0.48)	

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
J = Estimated value, did meet CCV specifications
Compounds in bold type are target compounds for project.

TABLE 22
INDOOR AIR AND AMBIENT AIR CANISTER SAMPLING RESULTS SUMMARY
411 BARNUM AVE. STRATFORD SQUARE T-MOBILE
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 411 BARNUM AVE. T-MOBILE CANISTER #6581 16-Feb-12 8-HOUR AVG.				AMBIENT AIR OUTSIDE 411 BARNUM AVE. CANISTER #12566 2/15/12 - 2/16/12 24-HOUR AVG.(17:55-17:55)			
	(ppb/v)		(ug/m^3)		(ppb/v)		(ug/m^3)	
Trichloroethene	**ND (0.13)**		**ND (0.70)**		**0.05**	**L**	**0.29**	**L**
1,1,-Dichloroethylene	**ND (0.13)**		**ND (0.52)**		**ND (0.11)**		**ND (0.44)**	
Vinyl Chloride	**ND (0.13)**		**ND (0.33)**		**ND (0.11)**		**ND (0.28)**	
1,1,1-Trichloroethane	ND (0.13)		ND (0.71)		0.20		1.1	
1,2-Dichloroethane	0.10	L	0.41	L	ND (0.11)		ND (0.44)	
Benzene	0.48		1.5		0.07	L	0.21	L
Chloroform	ND (0.13)		ND (0.63)		0.46		2.2	
Dichlorodifluoromethane	0.42		2.1		0.43		2.1	
Ethylbenzene	0.15		0.65		ND (0.11)		ND (0.48)	
Hexane	0.49		1.7		0.48		1.7	
Methyl Ethyl Ketone	0.48		1.4		0.23		0.68	
Methylchloride	0.40		0.83		0.07	L	0.14	L
Methylene Chloride	0.56		1.9		0.05	L	0.18	L
Styrene	0.23		0.98		0.39		1.7	
Toluene	0.29	J	11	J	0.22		0.83	
Trichlorofluoromethane	0.38		2.9		0.27		1.5	
m/p-Xylenes	0.40		1.7		ND (0.22)		ND (0.95)	
o-Xylene	0.14		0.61		ND (0.11)		ND (0.48)	

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
J = Estimated value, did meet CCV specifications
Compounds in bold type are target compounds for project.

TABLE 23
INDOOR AIR AND AMBIENT AIR CANISTER SAMPLING RESULTS SUMMARY
411 BARNUM AVE. STRATFORD SQUARE REGAL CINEMA
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 411 BARNUM AVE. REGAL CINEMA THEATER #11 CANISTER #6553 16-Feb-12 8-HOUR AVG.		INDOOR AIR 411 BARNUM AVE. REGAL CINEMA THEATER #8 CANISTER #6567 16-Feb-12 8-HOUR AVG.		INDOOR AIR 411 BARNUM AVE. REGAL CINEMA PROJECTION BOOTH CANISTER #6463 16-Feb-12 8-HOUR AVG.		AMBIENT AIR OUTSIDE 411 BARNUM AVE. CANISTER #12566 2/15/12 - 2/16/12 24-HOUR AVG.(17:55-17:55)	
	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)	(ppb/v)	(ug/m^3)
Trichloroethene	**ND (0.13)**	**ND (0.70)**	**ND (0.11)**	**ND (0.59)**	**ND (0.12)**	**ND (0.64)**	**0.05 L**	**0.29 L**
1,1,-Dichloroethylene	**ND (0.13)**	**ND (0.52)**	**ND (0.11)**	**ND (0.44)**	**ND (0.12)**	**ND (0.48)**	**ND (0.11)**	**ND (0.44)**
Vinyl Chloride	**ND (0.13)**	**ND (0.33)**	**ND (0.11)**	**ND (0.28)**	**ND (0.12)**	**ND (0.31)**	**ND (0.11)**	**ND (0.28)**
1,1,1-Trichloroethane	ND (0.13)	ND (0.71)	0.36	2.0	ND (0.12)	ND (0.65)	0.20	1.1
1,3-Butadiene	ND (0.26)	ND (0.57)	0.04 L	0.10 L	ND (0.24)	ND (0.53)	ND (0.22)	ND (0.49)
Benzene	0.28	0.89	0.31	0.99	0.30	0.96	0.07 L	0.21 L
Carbon Tetrachloride	ND (0.13)	ND (0.81	0.07 L	0.42 L	ND (0.12)	ND (0.75)	ND (0.11)	ND (0.69)
Chloroform	ND (0.13)	ND (0.63)	ND (0.11)	ND (0.54)	ND (0.12)	ND (0.59)	0.46	2.2
Dichlorodifluoromethane	0.39	1.9	0.48	2.4	0.73	3.6	0.43	2.1
Hexane	0.35	1.2	0.36	1.3	0.41	1.4	0.48	1.7
Methyl Ethyl Ketone	ND (0.13)	ND (0.38)	0.25	0.74	0.20	0.59	0.23	0.68
Methylchloride	0.29	0.60	0.37	0.76	0.36	0.74	0.07 L	0.14 L
Methylene Chloride	0.28	0.97	0.28	0.97	0.25	0.87	0.05 L	0.18 L
Styrene	ND (0.13)	ND (0.55)	0.07 L	0.30 L	ND (0.12)	ND (0.51)	0.39	1.7
Tetrachloroethylene	ND (0.13)	ND (0.88)	0.07 L	0.49 L	ND (0.12)	ND (0.81)	0.13	0.88
Toluene	0.57 J	2.1 J	0.88	3.3	0.69	2.6	0.22	0.83
Trichlorofluoromethane	0.19	1.1	0.26	1.5	0.26	1.5	0.27	1.5
Trichlorotrifluoroethane	ND (0.13)	ND (0.99)	0.06 L	0.48 L	ND (0.12)	ND (0.92)	ND (0.11)	ND (0.84)
m/p-Xylenes	0.17 L	0.74 L	0.21	0.91	0.21 L	0.91 L	ND (0.22)	ND (0.95)
o-Xylene	ND (0.13)	ND (0.56)	0.08 L	0.33 L	ND (0.12)	ND (0.52)	ND (0.11)	ND (0.48)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
J = Estimated value, did meet CCV specifications
Compounds in bold type are target compounds for project.

Table 24
February 13 - 14, 2012
500 FERRY BLVD.
RAYMARK SITE, OU-2
STRATFORD, CT
Soil Gas Grab, Indoor Air Grab and Indoor Air 24-Hour Sampling Data

Sample Location	TCE (ug/m^3)	1,1-DCE (ug/m^3)	VC (ug/m^3)	1,1,1-TCA (ug/m^3)	PCE (ug/m^3)
Basement					
Grab-1: indoor air syringe grab sample at canister samples	ND (3.8)	ND (40)	NA	ND (5.5)	ND (2.7)
Indoor air 24-hour canister sample (canister #6554)	0.26 L	ND (0.48)	ND (0.31)	ND (0.66)	ND (0.81)
Indoor air 24-hour canister sample (canister #1587 duplicate sample)	ND (0.49)	ND (0.36)	ND (0.23)	ND (0.50)	ND (0.62)
SS-1: Sub-slab soil gas syringe grab sample	269	NA	NA	300	9.5
SS-1: Sub-slab soil gas syringe grab duplicate sample	258	NA	NA	300	8.8
SS-2: Sub-slab soil gas syringe grab sample	940	377	NA	507	13.6
SS-2: Sub-slab soil gas syringe grab duplicate sample	892	353	NA	486	15.6
SS-2: canister confirmation sub-slab grab sample (canister #12562)	640	310	ND (4.1)	310	13
Crawl Space					
Grab-2: indoor air syringe grab sample at canister sample	ND (3.8)	ND (40)	NA	ND (5.5)	ND (2.7)
Indoor air 24-hour canister sample (canister #6566)	ND (0.49)	ND (0.36)	ND (0.23)	ND (0.50)	ND (0.62)
First Floor					
Indoor air 24-hour canister sample (canister #1565)	ND (0.54)	ND (0.40)	ND (0.26)	ND (0.55)	ND (0.68)
Outside/Ambient Air					
Ambient air 24-hour canister sample (canister #13482)	ND (0.54)	ND (0.40)	ND (0.26)	ND (0.55)	ND (0.68)

NOTES:

ND = Not detected above reporting limits; reporting limit in parentheses
NA = Compound was not analyzed using on-site analytical methods
TCE = Trichloroethylene, 1,1-DCE = 1,1-Dichloroethylene, VC = Vinyl Chloride, 1,1,1-TCA = 1,1,1-Trichloroethane, PCE = Tetrachloroethylene
L = Estimated value, is below the calibration range

Table 25
February 13 - 14, 2012
72 FERRY COURT
RAYMARK SITE, OU-2
STRATFORD, CT
Soil Gas Grab, Indoor Air Grab and Indoor Air 24-Hour Sampling Data

Sample Location	TCE (ug/m^3)	1,1-DCE (ug/m^3)	VC (ug/m^3)	1,1,1-TCA (ug/m^3)	PCE (ug/m^3)
Basement					
Grab-1: indoor air syringe grab sample at canister samples	ND (3.8)	ND (40)	NA	ND (5.5)	ND (2.7)
Indoor air 24-hour canister sample (canister #6547)	ND (0.52)	ND (0.38)	ND (0.24)	ND (0.52)	ND (0.65)
SS-1: Sub-slab soil gas syringe grab sample	ND (3.8)	ND (40)	NA	ND (5.5)	ND (2.7)
SS-1: canister confirmation sub-slab grab sample (canister #22683)	0.51	0.19 L	ND (0.21)	0.47	ND (0.55)
First Floor					
Indoor air 24-hour canister sample (canister #1586)	ND (0.50)	ND (0.37)	ND (0.24)	ND (0.51)	ND (0.64)
Outside/Ambient Air					
Ambient air 24-hour canister sample (canister #13482)	ND (0.54)	ND (0.40)	ND (0.26)	ND (0.55)	ND (0.68)

NOTES:

ND = Not detected above reporting limits; reporting limit in parentheses
NA = Compound was not analyzed using on-site analytical methods
TCE = Trichloroethylene, 1,1-DCE = 1,1-Dichloroethylene, VC = Vinyl Chloride, 1,1,1-TCA = 1,1,1-Trichloroethane, PCE = Tetrachloroethylene
L = Estimated value, is below the calibration range

Table 26
February 13 - 14, 2012
62 FERRY COURT
RAYMARK SITE, OU-2
STRATFORD, CT
Soil Gas Grab, Indoor Air Grab and Indoor Air 24-Hour Sampling Data

Sample Location	TCE (ug/m^3)	1,1-DCE (ug/m^3)	VC (ug/m^3)	1,1,1-TCA (ug/m^3)	PCE (ug/m^3)
Basement					
Grab-1: indoor air syringe grab sample at canister samples	ND (3.8)	ND (40)	NA	ND (5.5)	ND (2.7)
Indoor air 24-hour canister sample (canister #5790)	0.27 L	ND (0.40)	ND (0.26)	ND (0.55)	0.88
SS-1: Sub-slab soil gas syringe grab sample	ND (3.8)	ND (40)	NA	ND (5.5)	5.4
SS-1: canister confirmation sub-slab grab sample (canister #15047)	ND (0.47)	ND (0.35)	ND (0.22)	ND (0.49)	1.8
First Floor					
Indoor air 24-hour canister sample (canister #5792)	ND (0.54)	ND (0.40)	ND (0.26)	ND (0.55)	0.59 L
Outside/Ambient Air					
Ambient air 24-hour canister sample (canister #13482)	ND (0.54)	ND (0.40)	ND (0.26)	ND (0.55)	ND (0.68)

NOTES:

ND = Not detected above reporting limits; reporting limit in parentheses
NA = Compound was not analyzed using on-site analytical methods
TCE = Trichloroethylene, 1,1-DCE = 1,1-Dichloroethylene, VC = Vinyl Chloride, 1,1,1-TCA = 1,1,1-Trichloroethane, PCE = Tetrachloroethylene
L = Estimated value, is below the calibration range

Table 27
February 15 - 16, 2012
82 FERRY COURT
RAYMARK SITE, OU-2
STRATFORD, CT
Soil Gas Grab, Indoor Air Grab and Indoor Air 24-Hour Sampling Data

Sample Location	TCE (ug/m^3)	1,1-DCE (ug/m^3)	VC (ug/m^3)	1,1,1-TCA (ug/m^3)	PCE (ug/m^3)
Basement					
Grab-1: indoor air syringe grab sample at canister samples	ND (3.8)	ND (40)	NA	ND (5.5)	ND (2.7)
Indoor air 24-hour canister sample (canister #1592)	ND (0.54)	ND (0.40)	ND (0.26)	ND (0.55)	0.52 L
SS-1: Sub-slab soil gas syringe grab sample	ND (3.8)	ND (40)	NA	ND (5.5)	ND (2.7)
SS-1: canister confirmation sub-slab grab sample (canister #14901)	0.24 L	ND (0.33)	ND (0.21)	0.87	0.75
First Floor					
Indoor air 24-hour canister sample (canister #1560)	ND (0.53)	ND (0.39)	ND (0.25)	ND (0.54)	1.6
Outside/Ambient Air					
Ambient air 24-hour canister sample (canister #15048)	ND (0.51)	ND (0.38)	ND (0.24)	ND (0.52)	ND (0.64)

NOTES:

ND = Not detected above reporting limits; reporting limit in parentheses
NA = Compound was not analyzed using on-site analytical methods
TCE = Trichloroethylene, 1,1-DCE = 1,1-Dichloroethylene, VC = Vinyl Chloride, 1,1,1-TCA = 1,1,1-Trichloroethane, PCE = Tetrachloroethylene
L = Estimated value, is below the calibration range

Table 28
February 14, 2012
608 FERRY BLVD.
RAYMARK SITE, OU-2
STRATFORD, CT
Soil Gas Grab, Indoor Air Grab and Indoor Air 8-Hour Sampling Data

Sample Location	TCE (ug/m^3)	1,1-DCE (ug/m^3)	VC (ug/m^3)	1,1,1-TCA (ug/m^3)	PCE (ug/m^3)
Basement					
Grab-1: indoor air syringe grab sample at canister samples	ND (3.8)	ND (40)	NA	ND (5.5)	ND (2.7)
Indoor air 8-hour canister sample (canister #5786)	ND (0.54)	ND (0.40)	ND (0.26)	0.66	ND (0.68)
Indoor air 8-hour canister sample (canister #3656 duplicate sample)	ND (0.54)	ND (0.40)	ND (0.26)	0.60	ND (0.68)
SS-1: Sub-slab soil gas syringe grab sample	161	79	NA	147	13
First Floor					
Indoor air 8-hour canister sample (canister #1584)	ND (0.50)	ND (0.37)	ND (0.24)	0.39 L	ND (0.63)
SS-2: Sub-slab soil gas syringe grab sample	ND (3.8)	ND (40)	NA	7.1	ND (2.7)
SS-3: Sub-slab soil gas syringe grab sample	ND (3.8)	ND (40)	NA	ND (5.5)	ND (2.7)
SS-3: canister confirmation sub-slab grab sample (canister #22684)	1.4	0.99	ND (0.20)	0.87	0.43 L
Outside/Ambient Air					
Ambient air 24-hour canister sample (canister #13495)	ND (0.54)	ND (0.40)	ND (0.26)	ND (0.55)	ND (0.68)

NOTES:

ND = Not detected above reporting limits; reporting limit in parentheses
NA = Compound was not analyzed using on-site analytical methods
TCE = Trichloroethylene, 1,1-DCE = 1,1-Dichloroethylene, VC = Vinyl Chloride, 1,1,1-TCA = 1,1,1-Trichloroethane, PCE = Tetrachloroethylene
L = Estimated value, is below the calibration range

Table 29
February 14, 2012
335 FERRY BLVD.
RAYMARK SITE, OU-2
STRATFORD, CT
Soil Gas Grab, Indoor Air Grab and Indoor Air 8-Hour Sampling Data

Sample Location	TCE (ug/m^3)	1,1-DCE (ug/m^3)	VC (ug/m^3)	1,1,1-TCA (ug/m^3)	PCE (ug/m^3)
Curtin Taxi					
Grab-1: indoor air syringe grab sample at canister samples	17	ND (40)	NA	ND (5.5)	ND (2.7)
Indoor air 8-hour canister sample (canister #6460)	11	ND (0.44)	ND (0.28)	1.8	0.33 L
Garage Area 1					
Grab-2: indoor air syringe grab sample above SS-1	ND (3.8)	ND (40)	NA	ND (5.5)	ND (2.7)
SS-1: Sub-slab soil gas syringe grab sample	14	ND (40)	NA	551	6.8
SS-1: canister confirmation sub-slab grab sample (canister #22680)	22	ND (5.9)	ND (3.8)	490	6.6 L
Garage Area 2					
SS-2: Sub-slab soil gas syringe grab sample	1.6	ND (40)	NA	316	2.7
Receptionist Office					
Indoor air 8-hour canister sample (canister #6555)	0.23 L	ND (0.48)	0.12 L	1.6	0.40 L
Estimating Room					
Indoor air 8-hour canister sample (canister #4778)	ND (0.64)	ND (0.48)	0.11 L	0.76	0.39 L
Outside/Ambient Air					
Ambient air 24-hour canister sample (canister #13495)	ND (0.54)	ND (0.40)	ND (0.26)	ND (0.55)	ND (0.68)

NOTES:

ND = Not detected above reporting limits; reporting limit in parentheses
NA = Compound was not analyzed using on-site analytical methods
TCE = Trichloroethylene, 1,1-DCE = 1,1-Dichloroethylene, VC = Vinyl Chloride, 1,1,1-TCA = 1,1,1-Trichloroethane, PCE = Tetrachloroethylene
L = Estimated value, is below the calibration range

Table 30
February 14, 2012
300 FERRY BLVD.
RAYMARK SITE, OU-2
STRATFORD, CT
Soil Gas Grab, Indoor Air Grab and Indoor Air 8-Hour Sampling Data

Sample Location	TCE (ug/m^3)	1,1-DCE (ug/m^3)	VC (ug/m^3)	1,1,1-TCA (ug/m^3)	PCE (ug/m^3)
Main Show Room					
Grab-1: indoor air syringe grab sample at canister samples	ND (3.8)	ND (40)	NA	ND (5.5)	ND (2.7)
Indoor air 8-hour canister sample (canister #1577)	ND (0.70)	ND (0.52)	ND (0.33)	0.87	0.60 L
Snow Board Area					
Indoor air 8-hour canister sample (canister #6580)	ND (0.64)	ND (0.48)	ND (0.31)	0.66	0.37 L
Snow Board Storage Area					
SS-1: Sub-slab soil gas syringe grab sample	129	ND (40)	NA	ND (5.5)	5.4
SS-1: canister confirmation sub-slab grab sample (canister #14902)	160	ND (3.0)	ND (1.9)	ND (4.1)	4.1 L
Repair Shop					
SS-2: Sub-slab soil gas syringe grab sample	161	ND (40)	NA	ND (5.5)	5.4
Outside/Ambient Air					
Ambient air 24-hour canister sample (canister #13495)	ND (0.54)	ND (0.40)	ND (0.26)	ND (0.55)	ND (0.68)

NOTES:

ND = Not detected above reporting limits; reporting limit in parentheses
NA = Compound was not analyzed using on-site analytical methods
TCE = Trichloroethylene, 1,1-DCE = 1,1-Dichloroethylene, VC = Vinyl Chloride, 1,1,1-TCA = 1,1,1-Trichloroethane, PCE = Tetrachloroethylene
L = Estimated value, is below the calibration range

Table 31
February 14, 2012
100 VETERANS WAY
RAYMARK SITE, OU-2
STRATFORD, CT
Soil Gas Grab, Indoor Air Grab and Indoor Air 8-Hour Sampling Data

Sample Location	TCE (ug/m^3)	1,1-DCE (ug/m^3)	VC (ug/m^3)	1,1,1-TCA (ug/m^3)	PCE (ug/m^3)	cis-1,2-DCE (ug/m^3)
Basement						
Grab-1: indoor air syringe grab sample at canister samples	4.3	ND (40)	NA	ND (5.5)	ND (2.7)	NA
Indoor air 8-hour canister sample (canister #1594)	5.4	2.6	ND (0.31)	2.3	0.32 L	14
SS-1: Sub-slab soil gas syringe grab sample	1236	778	NA	562	15	8922
SS-2: Sub-slab soil gas syringe grab sample	1236	881	NA	633	ND (20)	7435
SS-3: Sub-slab soil gas syringe grab sample	1069	948	NA	698	15	4461
SS-3: canister confirmation sub-slab grab sample (canister #15050)	1100	1000	ND (69)	710	ND (183)	5200
First Floor						
Indoor air 8-hour canister sample (canister #6583)	1.2	0.67	ND (0.28)	0.71	ND (0.75)	3.9
Outside/Ambient Air						
Ambient air 24-hour canister sample (canister #13495)	ND (0.54)	ND (0.40)	ND (0.26)	ND (0.55)	ND (0.68)	ND (0.40)

NOTES:

ND = Not detected above reporting limits; reporting limit in parentheses
NA = Compound was not analyzed using on-site analytical methods
TCE = Trichloroethylene, 1,1-DCE = 1,1-Dichloroethylene, VC = Vinyl Chloride, 1,1,1-TCA = 1,1,1-Trichloroethane,
PCE = Tetrachloroethylene, cis-1,2-DCE = cis-1,2-Dichloroethylene
L = Estimated value, is below the calibration range

Table 32
February 15, 2012
326 FERRY BLVD.
RAYMARK SITE, OU-2
STRATFORD, CT
Indoor Air 8-Hour Sampling Data

Sample Location	TCE (ug/m^3)	1,1-DCE (ug/m^3)	VC (ug/m^3)	1,1,1-TCA (ug/m^3)	PCE (ug/m^3)
Dining Room					
Indoor air 8-hour canister sample (canister #5810)	0.24 L	ND (0.48)	ND (0.31)	0.52 L	1.2
Kitchen					
Indoor air 8-hour canister sample (canister #6461)	ND (0.59)	ND (0.44)	ND (0.28)	0.26 L	1.1
Outside/Ambient Air					
Ambient air 24-hour canister sample (canister #15048)	ND (0.51)	ND (0.38)	ND (0.24)	ND (0.52)	ND (0.64)

NOTES:

ND = Not detected above reporting limits; reporting limit in parentheses
NA = Compound was not analyzed using on-site analytical methods
TCE = Trichloroethylene, 1,1-DCE = 1,1-Dichloroethylene, VC = Vinyl Chloride, 1,1,1-TCA = 1,1,1-Trichloroethane, PCE = Tetrachloroethylene
L = Estimated value, is below the calibration range

Table 33
February 15, 2012
444 FERRY BLVD.
RAYMARK SITE, OU-2
STRATFORD, CT
Soil Gas Grab, Indoor Air Grab and Indoor Air 8-Hour Sampling Data

Sample Location	TCE (ug/m^3)	1,1-DCE (ug/m^3)	VC (ug/m^3)	1,1,1-TCA (ug/m^3)	PCE (ug/m^3)
Basement					
Grab-1: indoor air syringe grab sample at canister samples	ND (3.8)	ND (40)	NA	ND (5.5)	ND (2.7)
Indoor air 8-hour canister sample (canister #3092)	ND (0.59)	ND (0.44)	ND (0.28)	1.5	0.41 L
Indoor air 8-hour canister sample (canister #6568 duplicate sample)	ND (0.59)	ND (0.44)	ND (0.28)	0.29 L	0.46 L
SS-2: Sub-slab soil gas syringe grab sample	ND (3.8)	ND (40)	NA	65	8.1
SS-3: Sub-slab soil gas syringe grab sample	ND (3.8)	ND (40)	NA	41	1.4
SS-3: canister confirmation sub-slab grab sample (canister #20856)	2.6	0.67	ND (0.22)	20	1.6
First Floor					
Indoor air 8-hour canister sample (canister #1582)	ND (0.64)	ND (0.48)	ND (0.31)	0.87	0.38 L
SS-1: Sub-slab soil gas syringe grab sample	ND (3.8)	ND (40)	NA	ND (5.5)	ND (2.7)
Outside/Ambient Air					
Ambient air 24-hour canister sample (canister #15048)	ND (0.51)	ND (0.38)	ND (0.24)	ND (0.52)	ND (0.64)

NOTES:

ND = Not detected above reporting limits; reporting limit in parentheses
NA = Compound was not analyzed using on-site analytical methods
TCE = Trichloroethylene, 1,1-DCE = 1,1-Dichloroethylene, VC = Vinyl Chloride, 1,1,1-TCA = 1,1,1-Trichloroethane, PCE = Tetrachloroethylene
L = Estimated value, is below the calibration range

Table 34
2/14,15,16/2012
411 BARNUM AVE. (STRATFORD SQUARE)
RAYMARK SITE, OU-2
STRATFORD, CT
Indoor Air 8-Hour Sampling Data

Sample Location	TCE (ug/m^3)	1,1-DCE (ug/m^3)	VC (ug/m^3)	1,1,1-TCA (ug/m^3)	PCE (ug/m^3)
McDonalds (2/14/12)					
Office Area: Indoor air 8-hour canister sample (canister #4743)	ND (0.59)	ND (0.44)	ND (0.28)	2.7	0.30 L
Marshalls (2/16/12)					
Loading Area: Indoor air 8-hour canister sample (canister #6558)	0.43 L	ND (0.52)	ND (0.33)	ND (0.71)	0.52 L
Loading Area: Indoor air 8-hour canister sample (canister #6548 duplicate sample)	0.42 L	ND (0.48)	ND (0.31)	ND (0.65)	0.53 L
Shopping Area: Indoor air 8-hour canister sample (canister #3048)	ND (0.64)	ND (0.48)	ND (0.31)	3.6	ND (0.81)
Payless Shoe Source (2/16/12)					
Back of Store: Indoor air 8-hour canister sample (canister #13498)	5.7	ND (0.48)	ND (0.31)	ND (0.65)	ND (0.81)
Sleepy's (2/16/12)					
Show Room: Indoor air 8-hour canister sample (canister #20857)	13	ND (0.44)	ND (0.28)	0.60	ND (0.75)
Fashion Bug (2/16/12)					
Check Out Area: Indoor air 8-hour canister sample (canister #4742)	1.2	ND (0.48)	ND (0.31)	0.60	ND (0.81)
US Postal Service (2/14/12)					
Mail Sorting Area: Indoor air 8-hour canister sample (canister #6569)	ND (0.59)	ND (0.44)	ND (0.28)	4.1	ND (0.75)
Sally's Beauty (2/16/12)					
Top of Display Rack: Indoor air 8-hour canister sample (canister #5804)	ND (0.64)	ND (0.48)	ND (0.31)	ND (0.65)	ND (0.81)
Game Stop (2/16/12)					
Behind Cashier Counter: Indoor air 8-hour canister sample (canister #1589)	ND (0.86)	ND (0.63)	ND (0.41)	ND (0.87)	ND (1.1)
T-Mobile (2/16/12)					
Behind Cashier Counter: Indoor air 8-hour canister sample (canister #6581)	ND (0.70)	ND (0.52)	ND (0.33)	ND (0.71)	ND (0.88)
Regal Cinema (2/16/12)					
Theater #11: Indoor air 8-hour canister sample (canister #6553)	ND (0.70)	ND (0.52)	ND (0.33)	ND (0.71)	ND (0.88)
Theater #8: Indoor air 8-hour canister sample (canister #6567)	ND (0.59)	ND (0.44)	ND (0.28)	2.0	0.49 L
Projection Booth: Indoor air 8-hour canister sample (canister #6463)	ND (0.64)	ND (0.48)	ND (0.31)	ND (0.65)	ND (0.81)
Outside/Ambient Air					
Ambient air 24-hour canister sample (canister #13495) 2/14-15/12	ND (0.54)	ND (0.40)	ND (0.26)	ND (0.55)	ND (0.68)
Ambient air 24-hour canister sample (canister #12566) 2/15-16/12	0.29 L	ND (0.44)	ND (0.28)	1.1	0.88

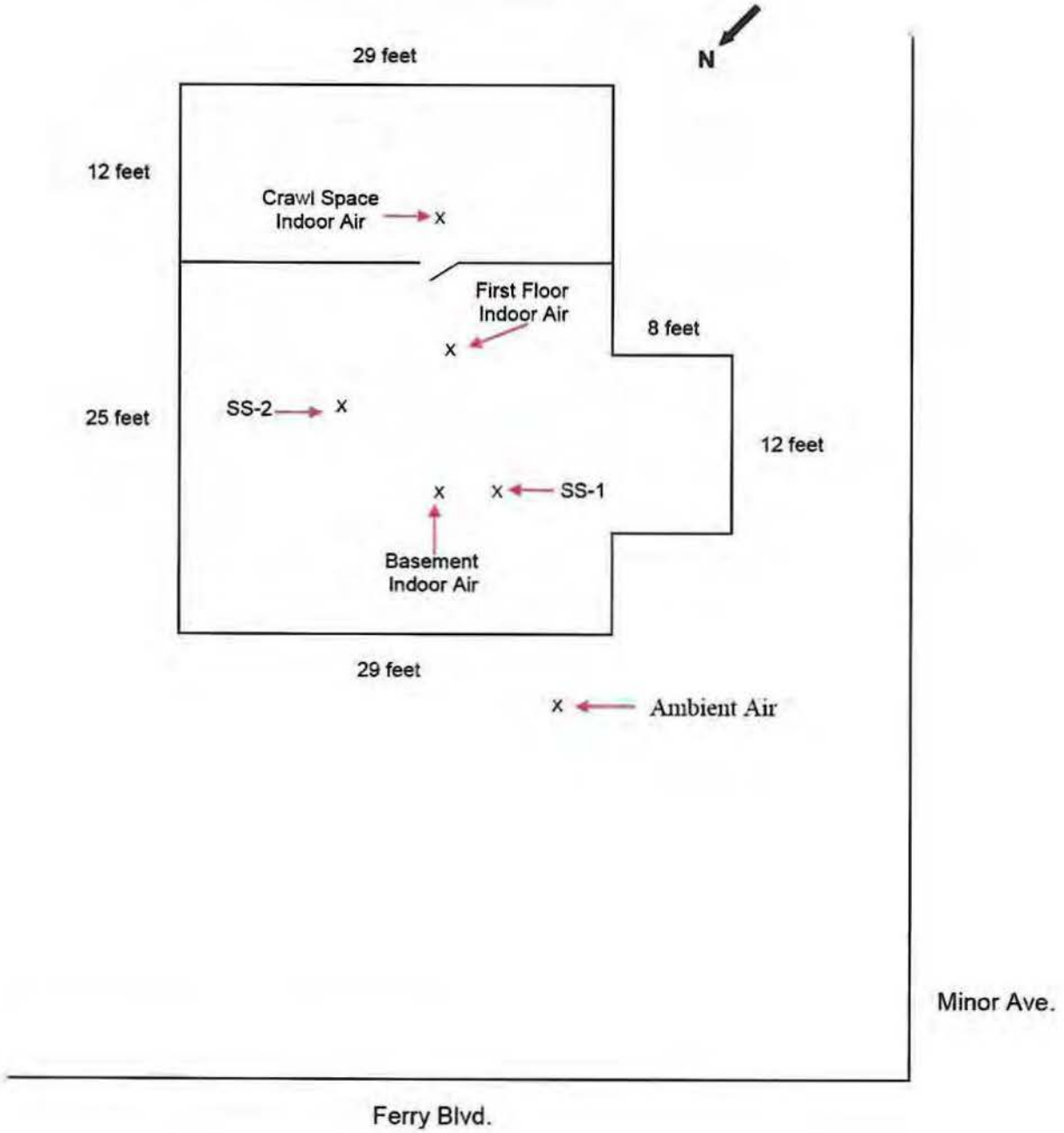
NOTES:

ND = Not detected above reporting limits; reporting limit in parentheses
NA = Compound was not analyzed using on-site analytical methods
TCE = Trichloroethylene, 1,1-DCE = 1,1-Dichloroethylene, VC = Vinyl Chloride, 1,1,1-TCA = 1,1,1-Trichloroethane, PCE = Tetrachloroethylene
L = Estimated value, is below the calibration range

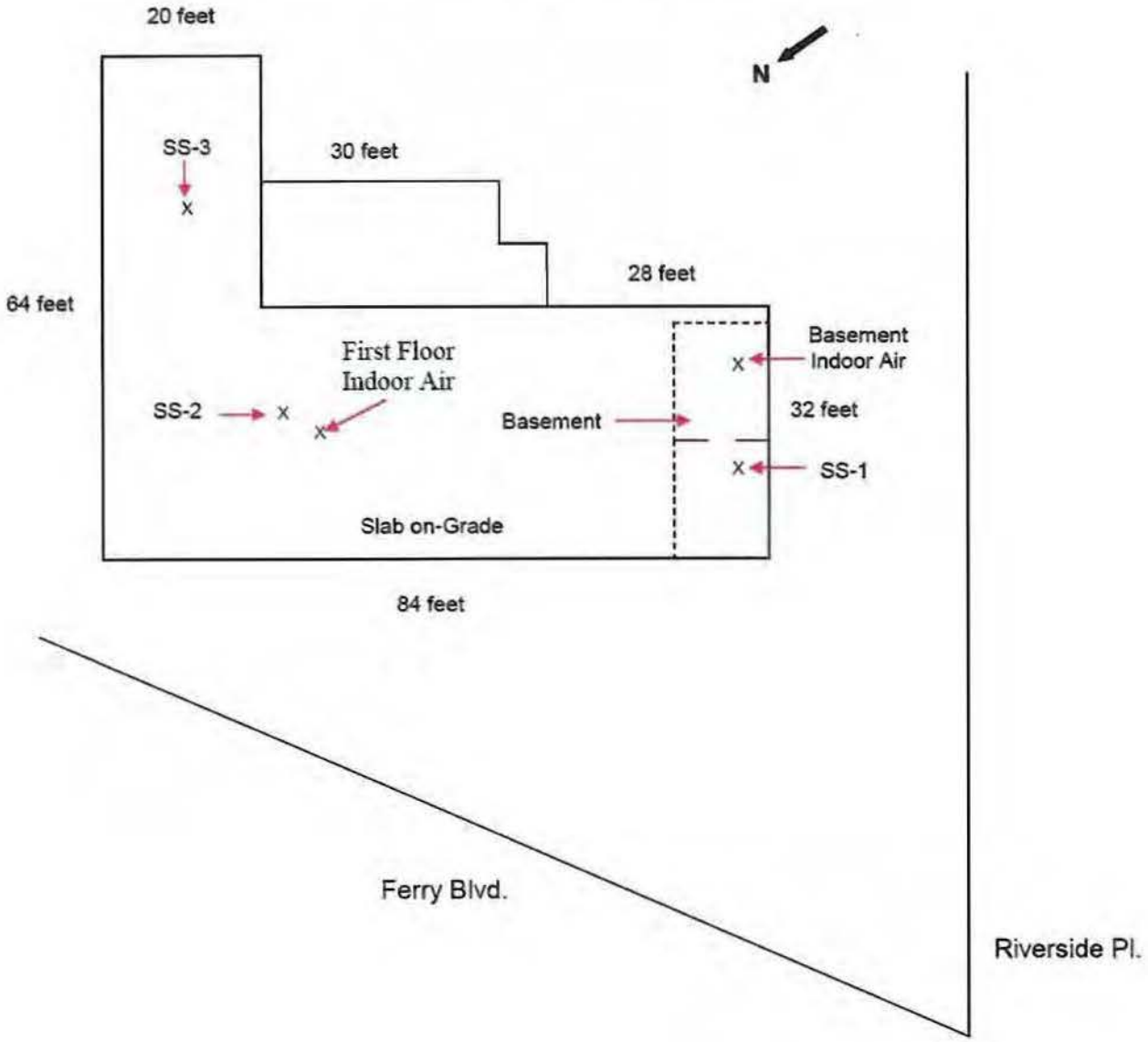
APPENDIX A

BUILDING SKETCHES
and
SAMPLING LOCATIONS

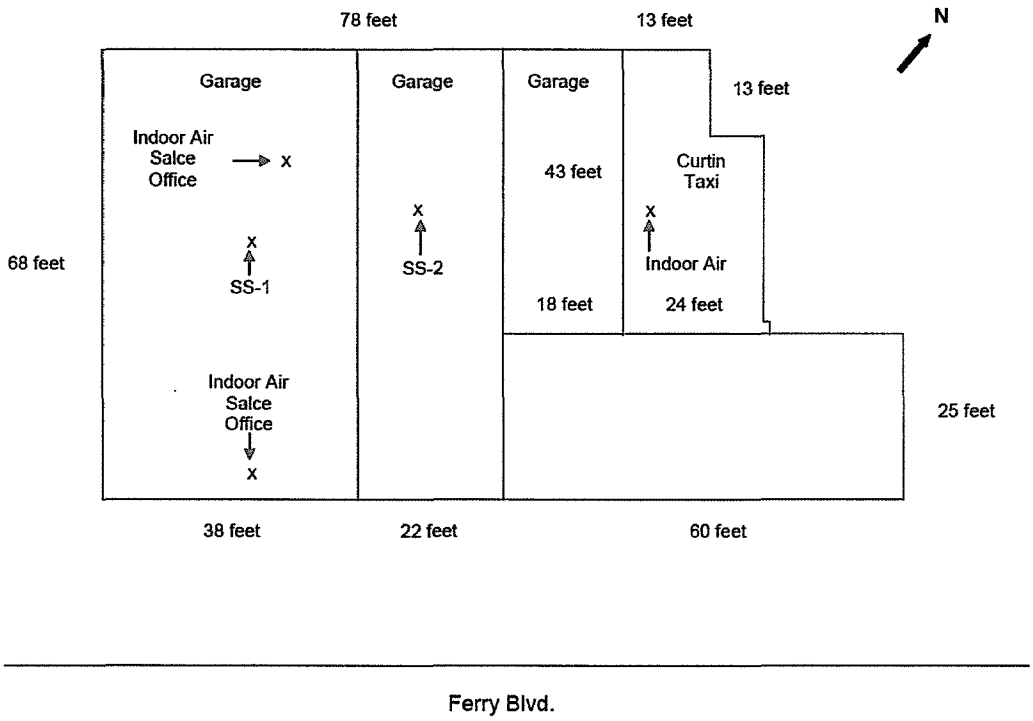
500 Ferry Blvd. Building Sampling Locations



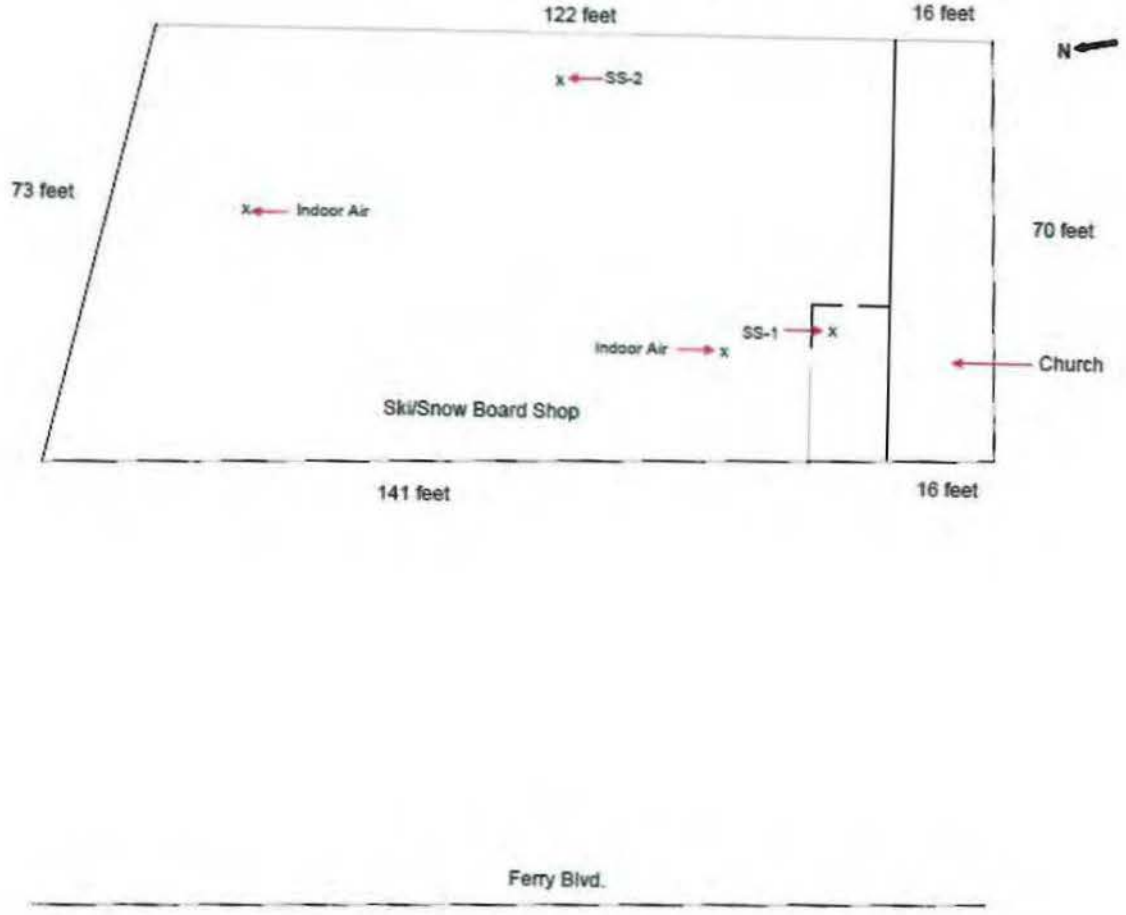
608 Ferry Blvd. Building Sampling Locations



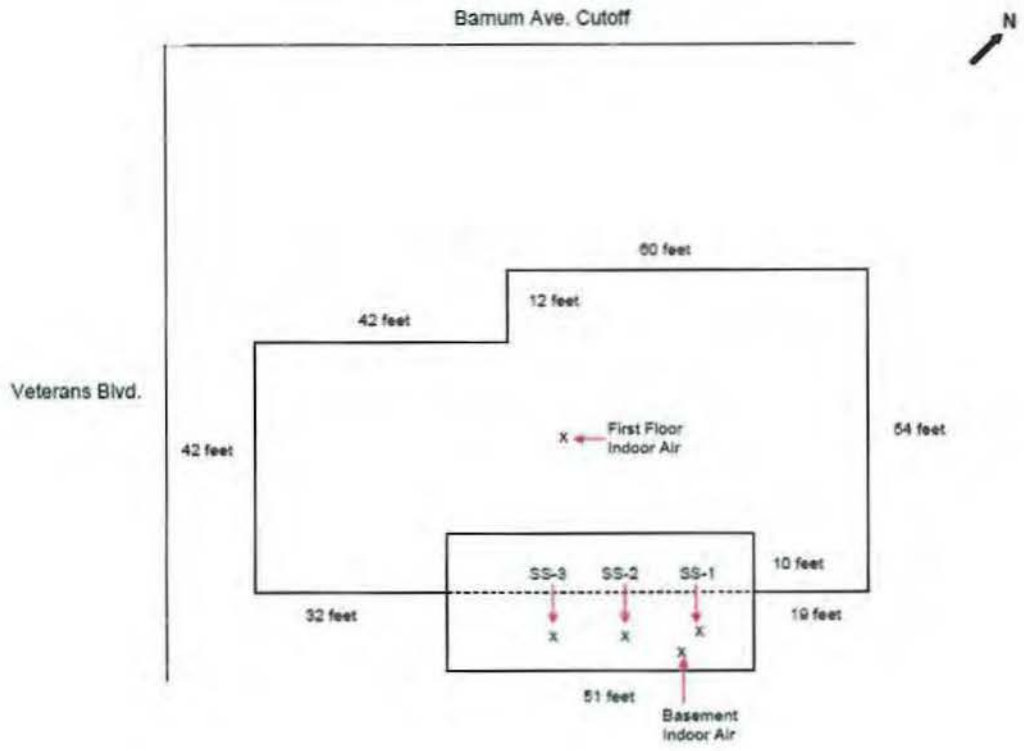
335 Ferry Blvd. Building Sampling Locations



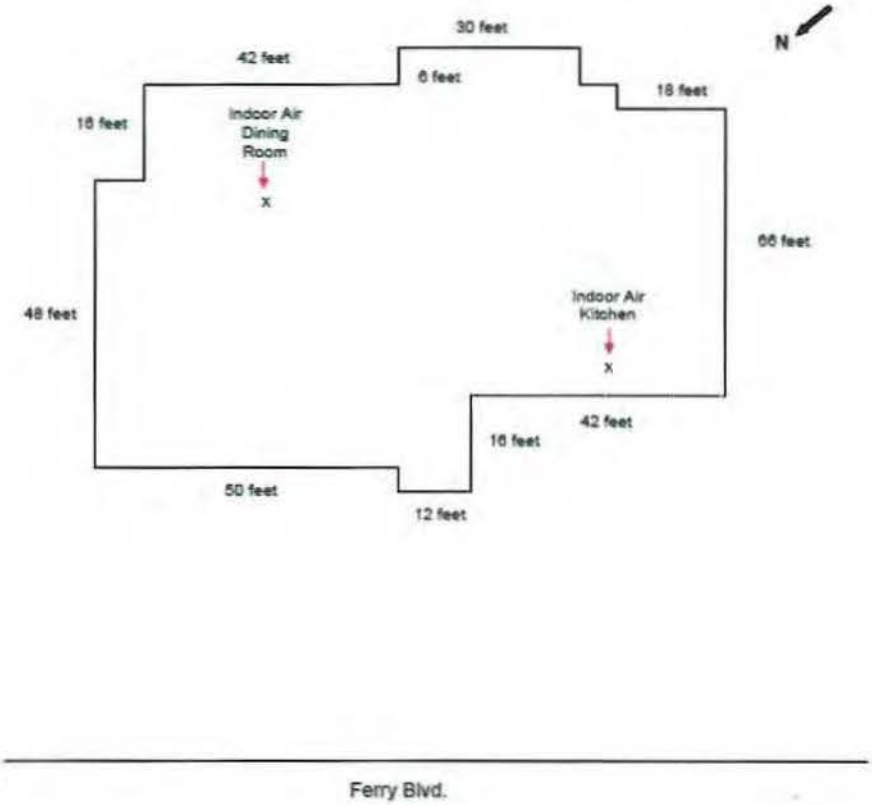
300 Ferry Blvd. Building Sampling Locations



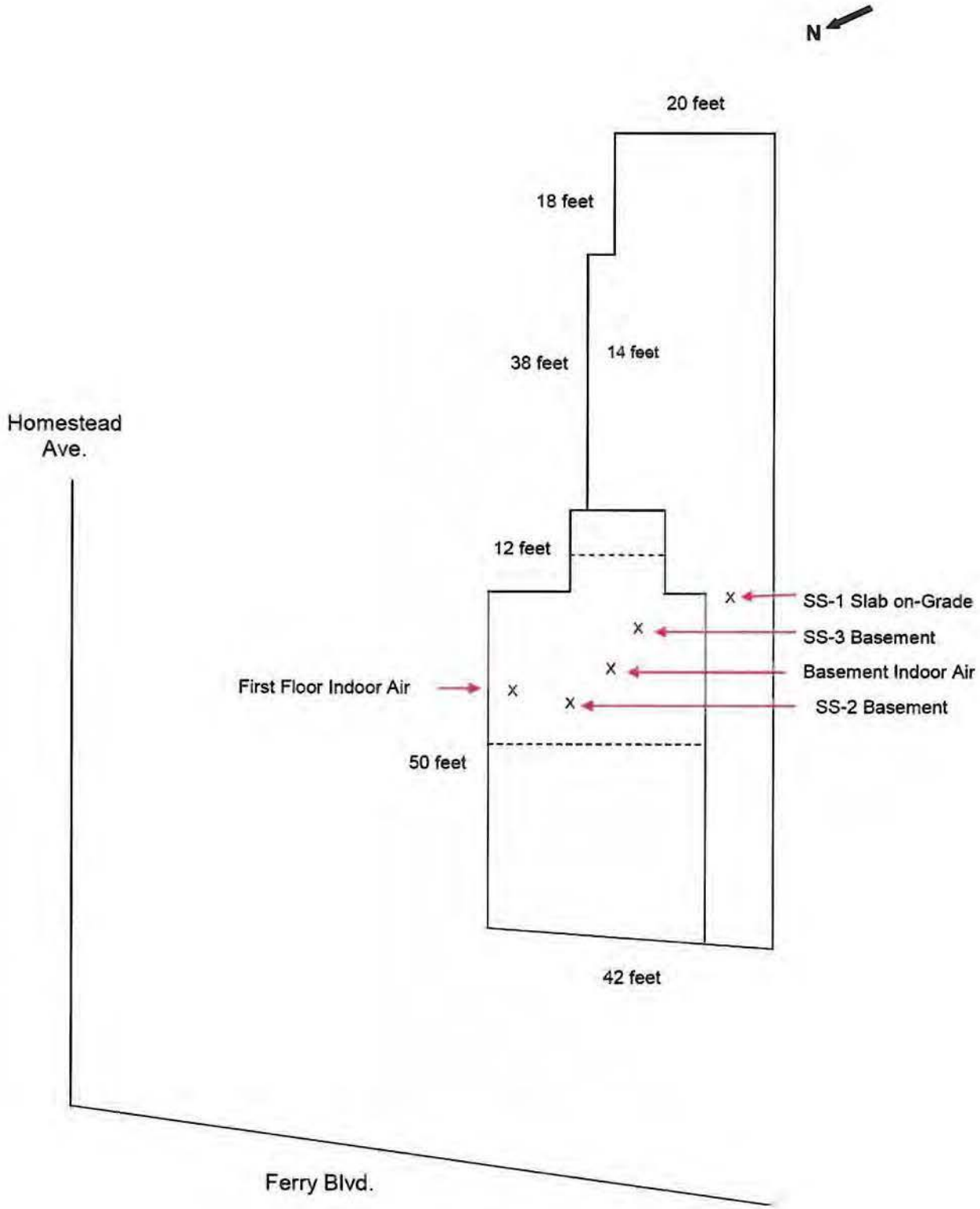
100 Veterans Blvd. Sampling Locations



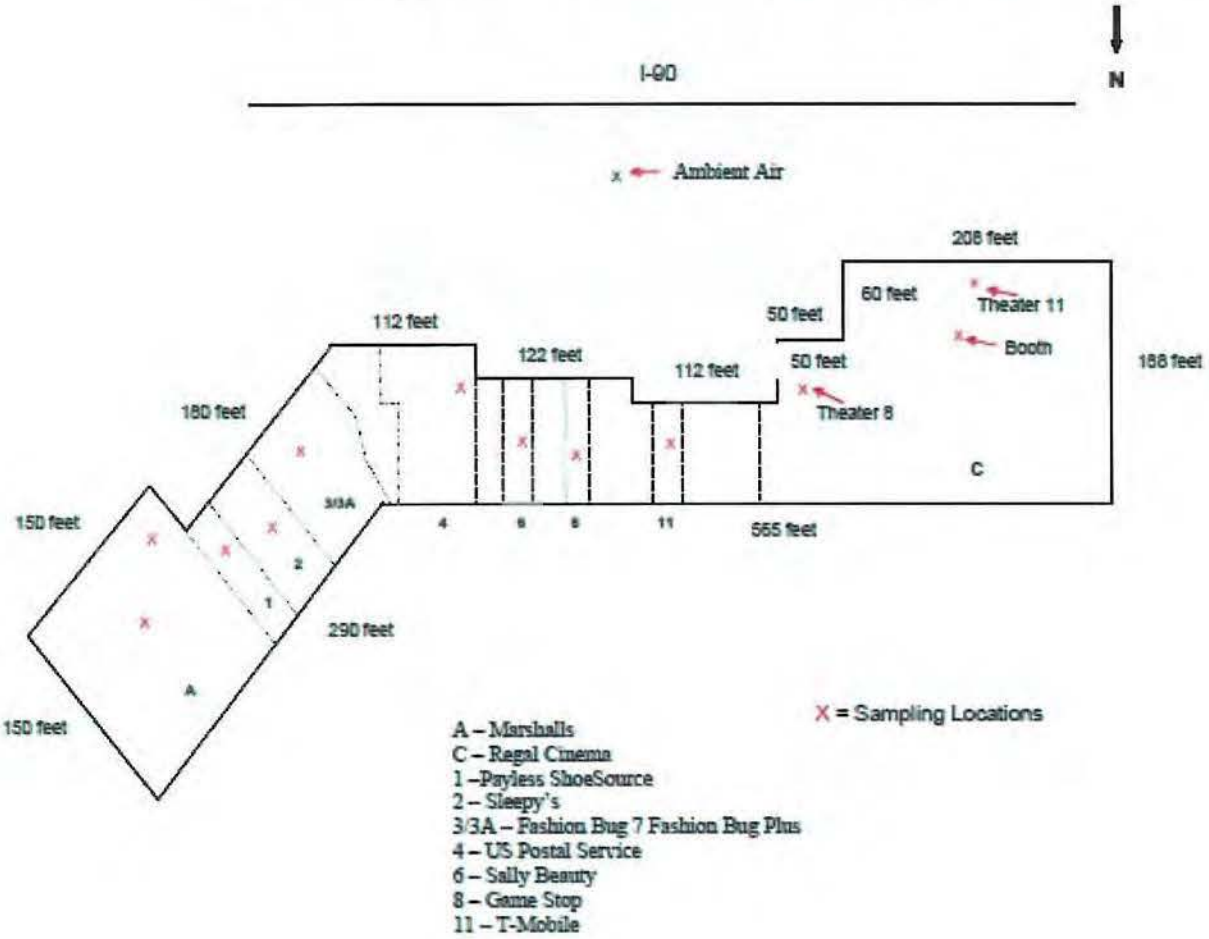
326 Ferry Blvd. Building Sampling Locations



444 Ferry Blvd. Building Sampling Locations



411 Barnum Ave. Stratford Square Building Sampling Locations



APPENDIX B

PHOTOGRAPHS

500 Ferry Blvd.

Basement Indoor Air Sampling Location

Crawl Space Indoor Air Sampling Location

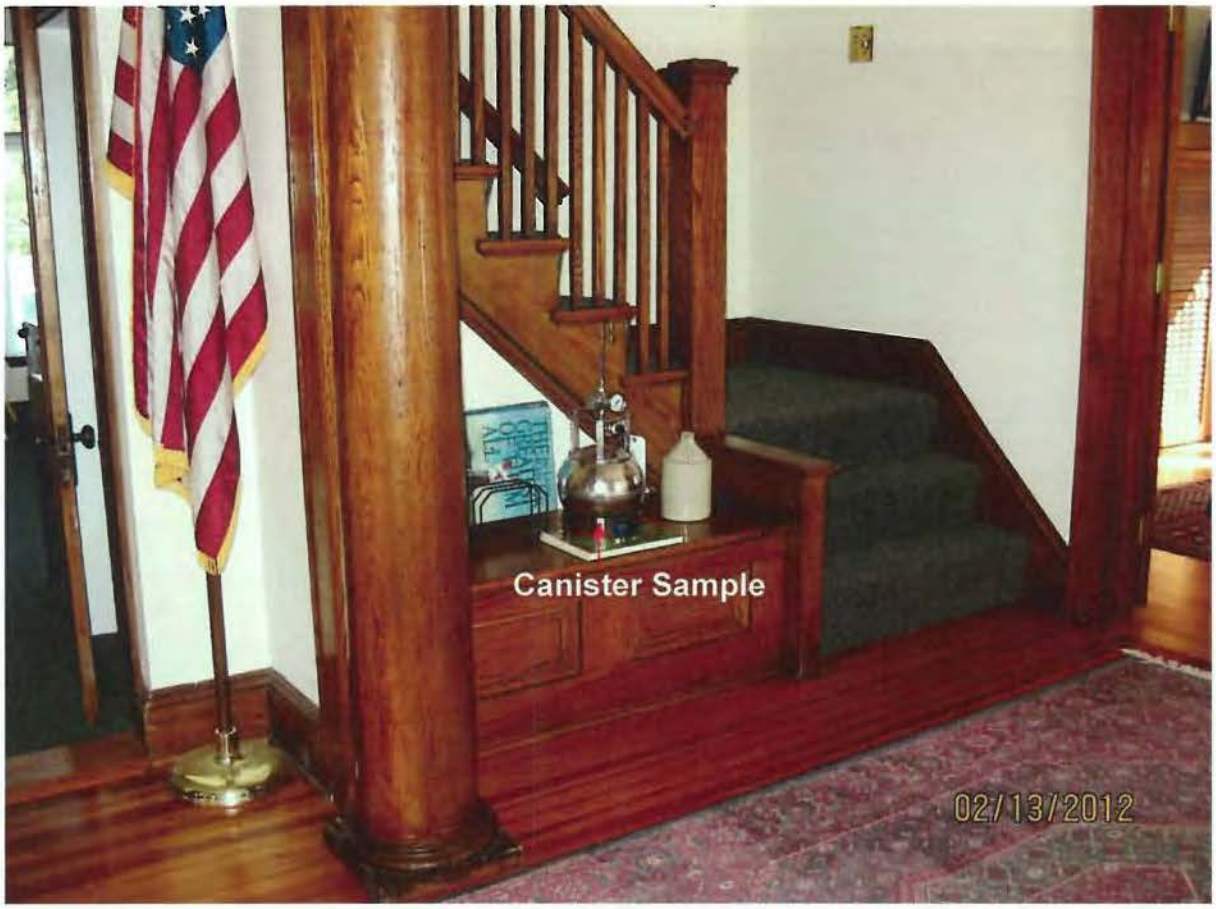
500 Ferry Blvd.

Basement Sub-Slab SS-1 Sampling Location

Basement Sub-Slab SS-2 Sampling Location

500 Ferry Blvd.

First Floor Indoor Air Sampling Location

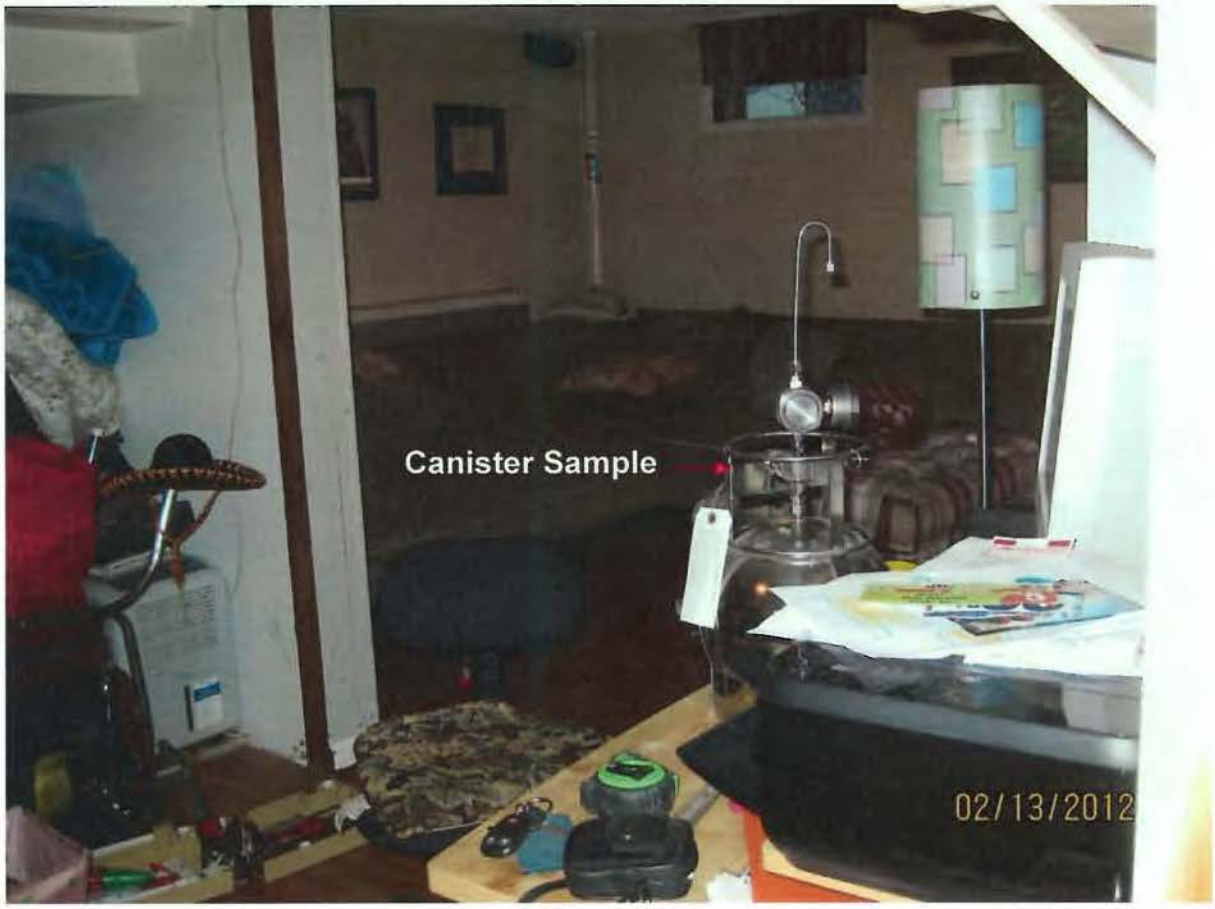


500 Ferry Blvd.

Ambient/Backgroud Air Sampling Location

72 Ferry Court

Basement Indoor Air Sampling Location



Basement Sub-Slab SS-1 Sampling Location

72 Ferry Court

First Floor Indoor Air Sampling Location

62 Ferry Court

Basement Indoor Air Sampling Location

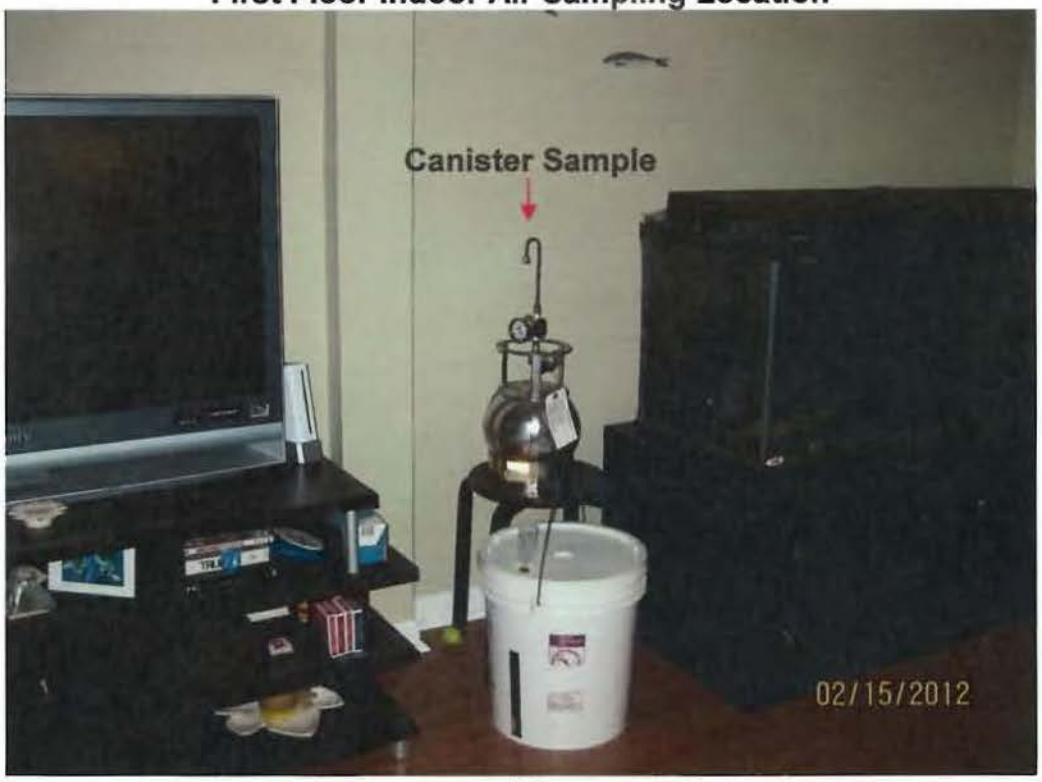
First Floor Indoor Air Sampling Location

82 Ferry Court

Basement Indoor Air Sampling Location

82 Ferry Court

First Floor Indoor Air Sampling Location



608 Ferry Blvd.

Basement Indoor Air Sampling Location

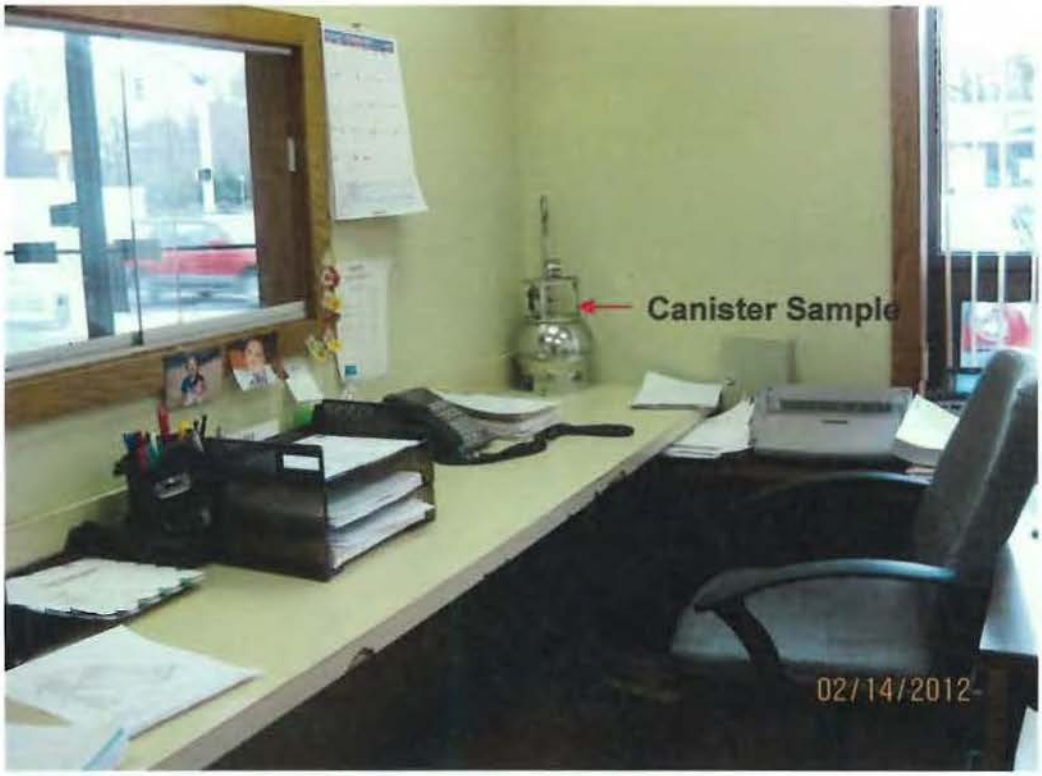
First Floor Indoor Air Sampling Location

335 Ferry Blvd.

Curtis Taxi Indoor Air Sampling Location

335 Ferry Blvd.

Salce Front Office Indoor Air Sampling Location



Salce Estimating Room Indoor Air Sampling Location

300 Ferry Blvd.

Main Floor Show Room Indoor Air Sampling Location

Snowboard Area Indoor Air Sampling Location

100 Veterans Way
Basement Indoor Air Sample Location

100 Veterans Way
First Floor Function Room Indoor Air Sample Location

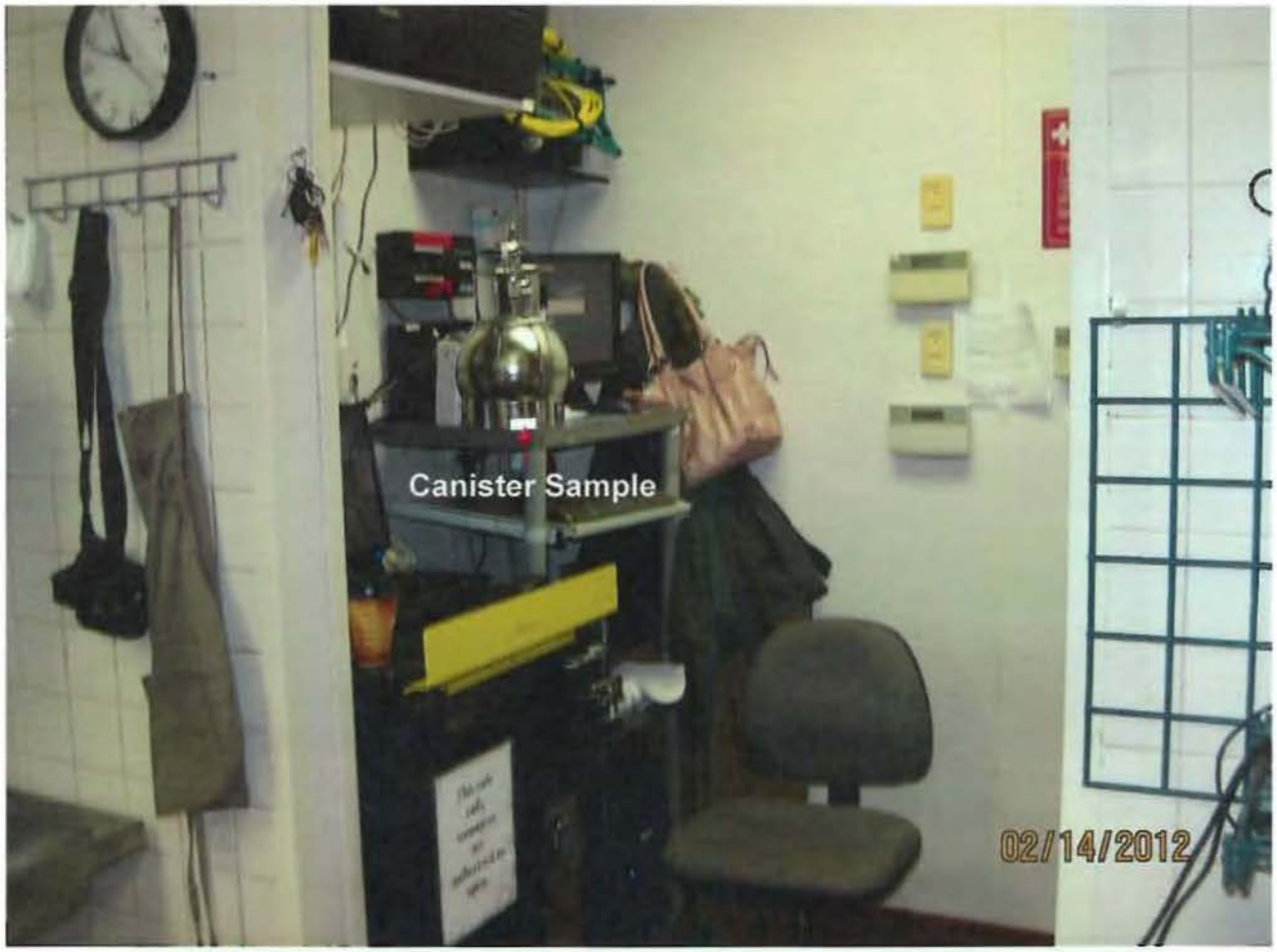
326 Ferry Blvd.
First Floor Dinning Room Indoor Air Sample Location

326 Ferry Blvd.
First Floor Kitchen Area Indoor Air Sample Location

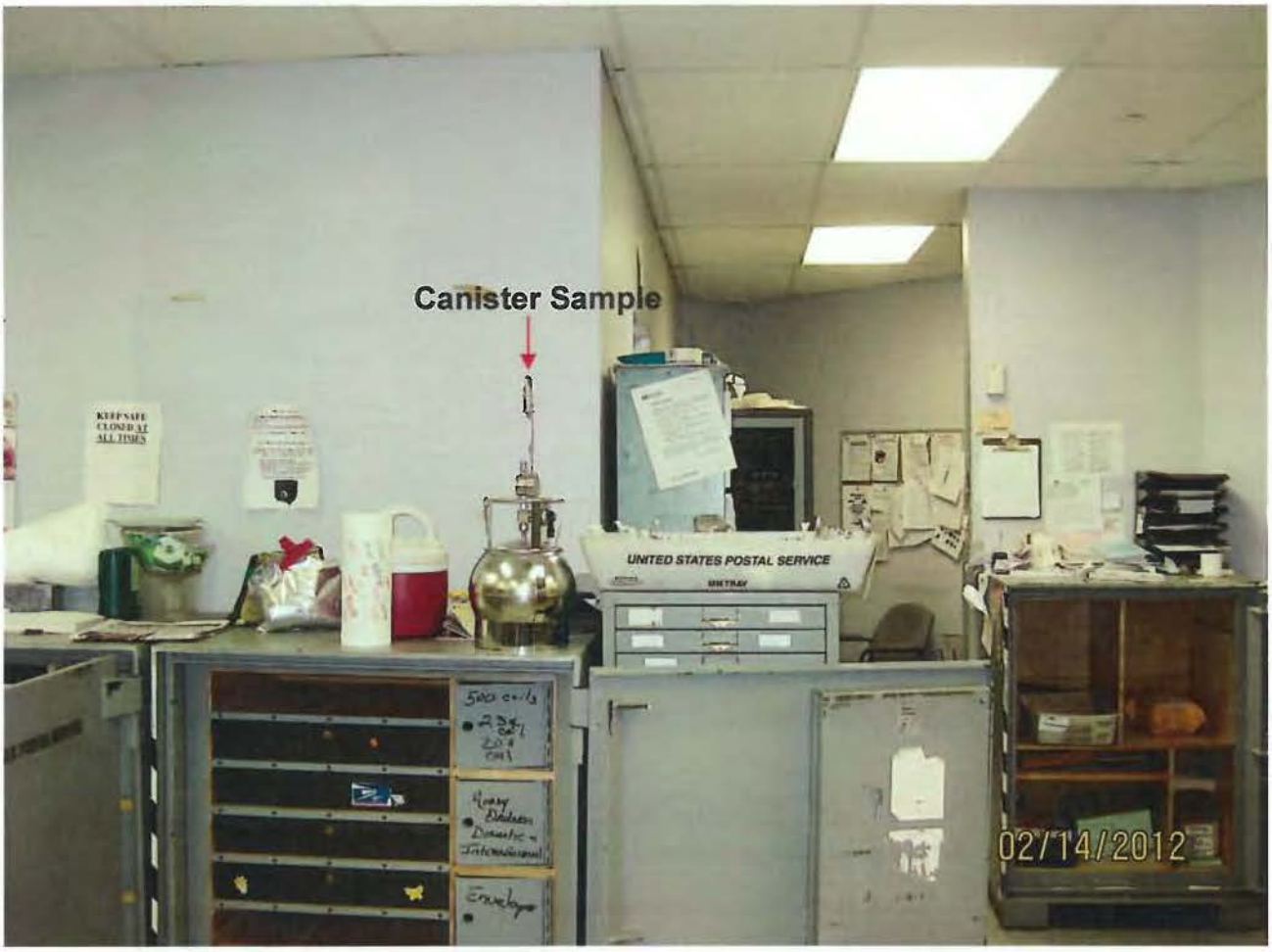
444 Ferry Blvd.
Basement Indoor Air Sample Location

444 Ferry Blvd.
First Floor Office Indoor Air Sample Location

411 Barnum Ave. McDonalds Restaurant
Indoor Air Sample Location



411 Barnum Ave. Post Office
Indoor Air Sample Location



411 Barnum Ave. Marshall's
Backroom/Loading Area Indoor Air Sample Location

411 Barnum Ave. Marshall's
Shopping Area Indoor Air Sample Location

411 Barnum Ave. Payless Shoe
Indoor Air Sample Location

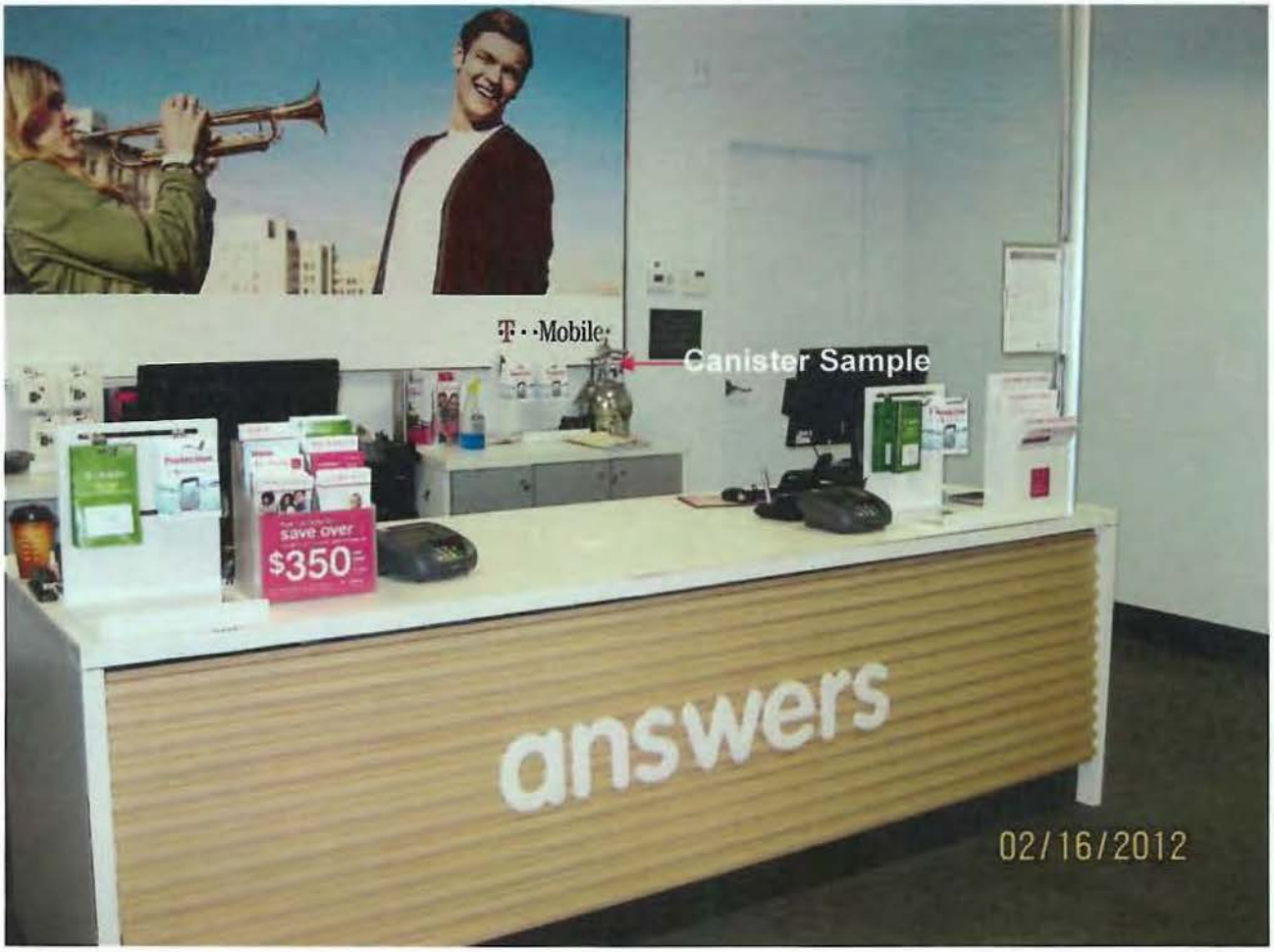
411 Barnum Ave. Sleepy's
Indoor Air Sample Location

411 Barnum Ave. Fashion Bug
Indoor Air Sample Location

411 Barnum Ave. Sally's Beauty
Indoor Air Sample Location

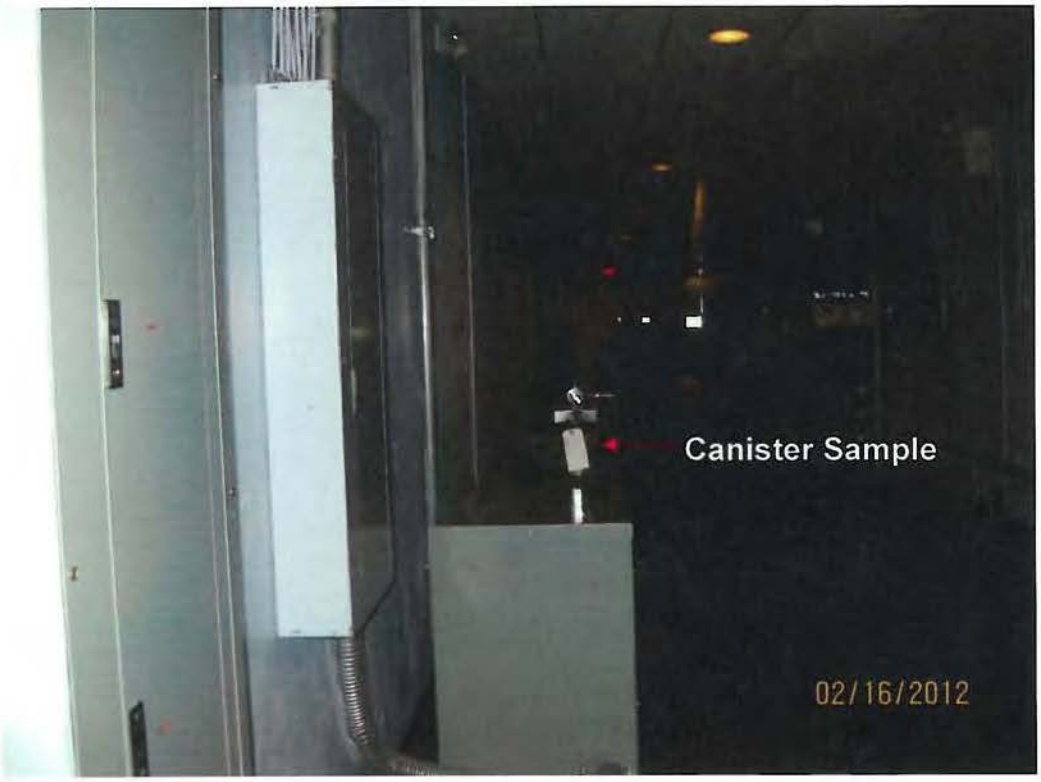
411 Barnum Ave. Game Stop
Indoor Air Sample Location

411 Barnum Ave. T-Mobile
Indoor Air Sample Location



411 Barnum Ave. Movie Theater #8
Indoor Air Sample Location

411 Barnum Ave. Movie Theater Booth
Indoor Air Sample Location



APPENDIX C

METEOROLOGICAL DATA

IGOR I. SIKORSKY MEMORIAL AIRPORT
BRIDGEPORT, CT

Pre-Sampling Period Meteorological Data

Date	Time (LST)	Dry Bulb Temp (F)	Wet Bulb Temp (F)	Dew Point Temp (F)	Relative Humidity (%)	Wind Speed (MPH)	Wind Direction (degrees)	Wind Gusts (MPH)	Atmospheric Pressure (in. hg)	Precipitation Total (in)
2/12/2012	0:52	28	24	14	56	17	330	26	29.64	
	1:52	26	21	10	51	25	330	37	29.65	
	2:52	23	19	6	48	20	330	32	29.69	
	3:52	21	16	0	40	16	320	24	29.73	
	4:52	20	15	-7	30	22	320	31	29.75	
	5:52	19	14	-6	32	8	330		29.77	
	6:52	18	13	-5	35	7	320		29.79	
	7:52	20	15	-3	36	7	320		29.81	
	8:52	22	17	-1	36	11	320		29.81	
	9:52	25	19	2	37	14	300	20	29.80	
	10:52	29	22	4	34	15	290	22	29.78	
	11:52	31	24	6	35	21	300	29	29.74	
	12:52	31	24	7	36	15	270	28	29.74	
	13:52	31	25	10	41	15	260	25	29.71	
	14:52	33	26	9	36	16	290	26	29.71	
	15:52	33	26	8	35	17	290	31	29.71	
	16:52	32	26	12	43	15	280	29	29.74	
	17:52	31	25	10	41	20	300	29	29.77	
	18:52	29	22	3	33	20	290	34	29.81	
	19:52	28	22	5	37	23	300	29	29.85	
	20:52	26	20	3	37	20	300	29	29.89	
	21:52	25	19	3	38	8	280	18	29.92	
	22:52	24	19	4	42	6	280		29.93	
	23:52	25	20	6	44	8	250		29.93	
Average		**26**	**21**	**4**	**39**	**15**	**300**	**28**	**29.78**	
Total										**0.00**

IGOR I. SIKORSKY MEMORIAL AIRPORT
BRIDGEPORT, CT
February 13, 2012 Meteorological Data

Date	Time (LST)	Dry Bulb Temp (F)	Wet Bulb Temp (F)	Dew Point Temp (F)	Relative Humidity (%)	Wind Speed (MPH)	Wind Direction (degrees)	Wind Gusts (MPH)	Atmospheric Pressure (in. hg)	Precipitation Total (in)
2/13/2012	0:52	26	21	10	51	11	260		29.93	
	1:52	27	23	12	53	9	260		29.92	
	2:52	28	23	13	53	6	280	17	29.91	
	3:52	30	25	14	51	15	240	25	29.92	
	4:52	30	25	14	51	17	240	28	29.93	
	5:52	31	26	15	51	17	240	24	29.94	
	6:52	30	25	14	51	14	240	22	29.95	
	7:52	31	26	16	54	15	240	26	29.97	
	8:52	32	27	15	49	15	240	25	29.97	
	9:52	35	28	15	44	13	260	26	29.96	
	10:52	38	30	14	37	14	270	21	29.95	
	11:52	40	31	13	33	17	270	24	29.93	
	12:52	42	32	12	29	13	260	21	29.90	
	13:52	45	33	10	24	16	290	25	29.87	
	14:52	45	33	10	24	10	280		29.88	
	15:52	45	34	11	25	11	250	21	29.89	
	16:52	44	33	10	25	8	260		29.90	
	17:52	41	33	18	40	7	250		29.92	
	18:52	40	34	24	53	7	240		29.95	
	19:52	40	32	18	41	8	250		29.96	
	20:52	39	33	23	53	6	240		29.99	
	21:52	38	31	19	46	7	260		29.99	
	22:52	37	30	17	44	8	250		29.99	
	23:52	37	30	17	44	7	250		30.00	
Average		**36**	**29**	**15**	**43**	**11**	**255**	**23**	**29.94**	
Total										**0.00**

IGOR I. SIKORSKY MEMORIAL AIRPORT
BRIDGEPORT, CT
February 14, 2012 Meteorological Data

Date	Time (LST)	Dry Bulb Temp (F)	Wet Bulb Temp (F)	Dew Point Temp (F)	Relative Humidity (%)	Wind Speed (MPH)	Wind Direction (degrees)	Wind Gusts (MPH)	Atmospheric Pressure (in. hg)	Precipitation Total (in)
2/14/2012	0:52	35	29	17	48	3	250		30.01	
	1:52	38	32	20	48	6	230		30.03	
	2:52	38	32	20	48	5	240		30.04	
	3:52	38	31	17	43	6	260		30.04	
	4:52	37	29	14	39	3	240		30.05	
	5:52	37	30	17	44	3	240		30.05	
	6:52	36	29	15	42	3	260		30.07	
	7:52	37	30	16	42	3	60		30.07	
	8:52	39	30	12	33	3	200		30.09	
	9:52	40	32	17	39	7	230		30.11	
	10:52	40	32	17	39	7	210		30.10	
	11:52	40	33	19	43	6	230		30.09	
	12:52	42	32	13	31	0	Calm		30.06	
	13:52	42	32	13	31	5	100		30.04	
	14:52	42	33	15	33	6	80		30.03	
	15:52	41	34	21	45	8	100		30.02	
	16:52	41	35	25	53	7	90		30.03	
	17:52	38	34	29	70	6	80		30.02	
	18:52	41	37	32	70	3	60		30.03	
	19:52	41	38	33	73	3	80		30.04	
	20:52	39	36	32	76	3	90		30.05	
	21:52	40	37	33	76	5	70		30.05	
	22:52	40	38	35	82	0	Calm		30.07	Trace
	23:52	41	38	35	79	5	250		30.08	Trace
Average		**39**	**33**	**22**	**51**	**4**	**166**		**30.05**	
Total										**Trace**

IGOR I. SIKORSKY MEMORIAL AIRPORT
BRIDGEPORT, CT
February 15, 2012 Meteorological Data

Date	Time (LST)	Dry Bulb Temp (F)	Wet Bulb Temp (F)	Dew Point Temp (F)	Relative Humidity (%)	Wind Speed (MPH)	Wind Direction (degrees)	Wind Gusts (MPH)	Atmospheric Pressure (in. hg)	Precipitation Total (in)
2/15/2012	0:52	40	38	35	82	0	Calm		30.06	0.01
	1:52	39	37	35	86	0	Calm		30.07	Trace
	2:52	39	37	35	86	0	Calm		30.06	
	3:52	40	38	36	86	3	40		30.07	Trace
	4:52	38	37	35	89	0	Calm		30.08	
	5:52	38	36	34	86	3	10		30.09	
	6:52	38	36	34	86	3	20		30.1	
	7:52	39	37	35	86	3	360		30.12	
	8:52	42	39	36	79	0	Calm		30.13	
	9:52	44	41	36	74	0	Calm		30.15	
	10:52	43	40	36	76	5	210		30.16	
	11:52	44	40	35	71	6	220		30.15	
	12:52	44	41	36	74	7	220		30.14	
	13:52	43	40	36	76	9	230		30.14	
	14:52	44	41	37	77	7	230		30.14	
	15:52	48	42	34	59	5	300		30.15	
	16:52	47	41	32	56	7	320		30.15	
	17:52	46	40	32	58	5	320		30.18	
	18:52	43	38	31	63	7	310		30.21	
	19:52	43	38	31	63	0	Calm		30.23	
	20:52	44	39	31	60	6	320		30.24	
	21:52	44	38	30	58	7	330		30.24	
	22:52	42	37	29	60	6	330		30.24	
	23:52	40	36	29	65	5	350		30.25	
Average		**42**	**39**	**34**	**73**	**4**	**242**		**30.15**	
Total										**0.01**

IGOR I. SIKORSKY MEMORIAL AIRPORT
BRIDGEPORT, CT
February 16, 2012 Meteorological Data

Date	Time (LST)	Dry Bulb Temp (F)	Wet Bulb Temp (F)	Dew Point Temp (F)	Relative Humidity (%)	Wind Speed (MPH)	Wind Direction (degrees)	Wind Gusts (MPH)	Atmospheric Pressure (in. hg)	Precipitation Total (in)
2/16/2012	0:52	38	34	27	65	6	20		30.25	
	1:52	37	33	26	65	6	20		30.26	
	2:52	36	32	26	67	0	Calm		30.27	
	3:52	35	32	26	70	5	260		30.28	
	4:52	33	30	26	75	0	Calm		30.27	
	5:52	33	30	25	72	3	260		30.26	
	6:52	32	29	25	75	0	Calm		30.27	
	7:52	34	31	27	76	0	Calm		30.28	
	8:52	36	33	28	73	0	Calm		30.28	
	9:52	39	35	29	67	0	Calm		30.26	
	10:52	40	35	26	57	0	Calm		30.25	
	11:52	40	34	25	55	5	240		30.24	
	12:52	39	35	28	65	6	230		30.21	
	13:52	40	36	29	65	0	Calm		30.17	Trace
	14:52	39	36	32	76	0	Calm		30.15	0.02
	15:52	39	36	32	76	0	Calm		30.12	0.03
	16:52	39	37	33	79	0	Calm		30.12	0.01
	17:52	38	36	34	86	5	140		30.12	0.03
	18:52	39	37	35	86	6	110		30.09	0.01
	19:52	40	39	37	89	3	130		30.09	0.02
	20:52	40	39	37	89	0	Calm		30.08	0.03
	21:52	40	39	37	89	3	160		30.06	0.03
	22:52	41	40	38	89	0	Calm		30.04	Trace
	23:52	40	38	36	86	0	Calm		30.02	
Average		**38**	**35**	**30**	**75**	**2**	**157**		**30.19**	
Total										**0.18**

APPENDIX D

LABORATORY ANALYTICAL REPORT

Provided in three separate electronic files; attached to this report.

APPENDIX E

SOIL GAS AND AIR GRAB SAMPLES MOBILE LABORATORY ANALYTICAL REPORT

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 1
OFFICE OF ENVIRONMENTAL MEASUREMENT & EVALUATION
NORTH CHELMSFORD, MASSACHUSETTS 01863-2431

MEMORANDUM

DATE: 02/24/2012

SUBJECT: **Raymark, Stratford, CT. - Volatile Organics Analysis of Air Samples**

FROM: Scott Clifford, Chemist SC 2/24/12

TO: Ron Jennings, RPM

THRU: Dan Boudreau, Chemistry Team Leader DB 2/27/12

PROJECT NUMBER: 12020028

DATE OF ANALYSIS: 02/13/12 - 02/15/12

ANALYTICAL PROCEDURE:

Air samples were analyzed using Region I's standard air screening method, Air Sample Analysis for Volatile Organic Compounds, (EIA-FLDGRAB4.WPD). Air samples were collected in a 250 microliter steel barreled glass syringe. Samples were analyzed on site using a Shimadzu GC 14B gas chromatograph equipped with a 30 meter, 0.53mm DBPS-624 column, electron capture, and photoionization detectors. Samples were also analyzed on a Photovac 10A10 equipped with a 4' 1/8 " SE 30 column and photoionization detector. Concentrations of volatile organics were calculated using the external standard technique.

File: K:\CHEMISTRY\REPORTS\FIELD\12020028fvoaa.xls

Target Compounds and Approximate Reporting Limits

Raymark, Stratford, CT - Air Target Compounds And Approximate Reporting Limits	
Compound	**Reporting Limit (ppb/v)**
111 Trichloroethane (111TCA)	**1.0**
Trichloroethylene (TCE)	**0.7**
Tetrachloroethylene (C_2Cl_4)	**0.4**
1,1 Dichloroethylene (11 DCEE)	**10.0**

Results: The results in tables are Tentatively Identified Compounds and Approximate Concentrations

ND ( ) = Nothing detected above reporting limit. Reporting limit in parenthesis.

N/A = Not analyzed

cis 12DCEE = cis 12 Dichloroethylene

Raymark, Stratford, CT - Air Sample Results (ppb/v)
02/13/12 - 02/15/12

Sample #	111 TCA	TCE	C_2Cl_4	11 DCEE	Other Notes
500 FERRY BLVD-SS-1	55	50	1.4	N/A	
500 FERRY BLVD-SS-1 FIELD DUPLICATE	55	48	1.3	N/A	
500 FERRY BLVD-SS-2	93	175	2.0	95	
500 FERRY BLVD-SS-2-FIELD DUPLICATE	89	166	2.3	89	
500 FERRY BLVD-GRAB1 (AT CANS)	ND(1)	ND(0.7)	ND(0.4)	ND(10)	
500 FERRY BLVD-GRAB2 (CRAWL SPACE)	ND(1)	ND(0.7)	ND(0.4)	ND(10)	
72 FERRY COURT-SS-1	ND(1)	ND(0.7)	ND(0.4)	ND(10)	
72 FERRY COURT-GRAB1	ND(1)	ND(0.7)	ND(0.4)	ND(10)	
BACKGROUND AMBIENT (RIVER VIEW PLACE, FERRY BLVD. INTERSECTION)	ND(1)	ND(0.7)	ND(0.4)	ND(10)	
335 FERRY BLVD-AMBIENT-BACKGROUND	ND(1)	ND(0.7)	ND(0.4)	ND(10)	
335 FERRY BLVD-GRAB1 (AT CAN)	ND(1)	3.2	ND(0.4)	ND(10)	
335 FERRY BLVD-GRAB2	ND(1)	ND(0.7)	ND(0.4)	ND(10)	
335 FERRY BLVD-SS-1	101	2.6	1.0	ND(10)	
335 FERRY BLVD-SS-2	58	0.3	0.4	ND(10)	
300 FERRY BLVD-GRAB1	ND(1)	ND(0.7)	ND(0.4)	ND(10)	
300 FERRY BLVD-SS-1	ND(1)	24	0.8	ND(10)	
300 FERRY BLVD-SS-2	ND(1)	30	0.8	ND(10)	
VFW-GRAB1	ND(1)	0.8	ND(0.4)	ND(10)	
VFW-SS-1	103	230	2.2	196	cis 12 DCEE = 2250
VFW-SS-2	116	230	ND(3)	222	cis 12DCEE = 1875
VFW-SS-3	128	199	2.2	239	cis 12DCEE = 1125
608 FERRY BLVD-GRAB1	ND(1)	ND(0.7)	ND(0.4)	ND(10)	
608 FERRY BLVD-SS-1	27	30	1.9	20	
608 FERRY BLVD-SS-2	1.3	ND(0.7)	ND(0.4)	ND(10)	
608 FERRY BLVD-SS-3	ND(1)	ND(0.7)	ND(0.4)	ND(10)	
62 FERRY CT-GRAB1	ND(1)	ND(0.7)	ND(0.4)	ND(10)	
62 FERRY CT-SS-1	ND(1)	ND(0.7)	0.8	ND(10)	
444 FERRY BLVD-GRAB1	ND(1)	ND(0.7)	ND(0.4)	ND(10)	
444 FERRY BLVD-AMBIENT BACKGROUND	ND(1)	ND(0.7)	ND(0.4)	ND(10)	
444 FERRY BLVD-SS-1	ND(1)	ND(0.7)	ND(0.4)	ND(10)	
444 FERRY BLVD-SS-2	12	ND(0.7)	1.2	ND(10)	
444 FERRY BLVD-SS-3	7.5	ND(0.7)	0.2	ND(10)	
82 FERRY CT-GRAB1	ND(1)	ND(0.7)	ND(0.4)	ND(10)	
82 FERRY CT-SS-1	ND(1)	ND(0.7)	ND(0.4)	ND(10)	

APPENDIX F

COMPOUND PRODUCT USE DESCRIPTION

COMPOUND	PRODUCT USE
1, 1,1-trichloroethane	no 1,1,1-trichloroethane is supposed to be manufactured for domestic use in the US after January 1, 2002; it had many industrial and household uses, including use as a solvent to dissolve other substances, such as glues and paints, to remove oil or grease from manufactured metal parts and as an ingredient of household products such as spot cleaners, glues, and aerosol sprays
1,1,2,2-tetrachloroethane	in the past was used in large amounts to produce other chemicals, as an industrial solvent to clean and degrease metals and as an ingredient in paints and pesticides; commercial production for these uses has stopped in the US, presently used only as a chemical intermediate in the production of other chemicals
1,1,2-trichloroethane	used as a solvent and as an intermediate in the production of the chemical 1,1-dichloroethane; is sometimes present as an impurity in other chemicals and it may be formed when another chemical breaks down in the environment under conditions where there is no air
1,1-dichloroethane	in the past was used as a surgical anesthetic, but it is no longer used this way; today it is used primarily to make other chemicals, to dissolve substances such as paint, varnish, and finish removers, and to remove grease
1,1-dichloroethylene	used to make certain plastics, such as flexible films like food wrap and in packaging materials; used to make flame retardant coatings for fiber and carpet backings and in piping, coating for steel pipes and in adhesive applications
1,2,4-trichlorobenzene	used as a solvent to make dyes, pesticides and other chemicals, added to dielectric fluids, transformer oils, cleaners, and lubricants; a gasoline additive; occurs naturally in coal tar and petroleum
1, 2, 4-trimethylbenzene	used as an industrial solvent, paint thinner and in the manufacture of dyes, perfumes, resins, chemical intermediates and pharmaceuticals; enters the environment primarily from gasoline evaporation and as an emission from gasoline-powered vehicles, municipal waste-treatment plants, and coal-fired power stations; emitted from many building materials including: vinyl & rubber molding, particle board, linoleum tile, tar paper, telephone cable, latex paint, foam & duct insulation, urethane sealant, adhesives, latex caulk, and carpet occurs
1,2-dibromoethane	manufactured chemical and also occurs naturally in small amounts in the ocean where it is formed, probably by algae and kelp; used as a pesticide in soil and on citrus, vegetable and grain crops, most of these uses have been stopped by the EPA since 1984; was used as an additive in leaded gasoline, however since leaded gasoline is now banned, it is no longer used for this purpose; uses today include treatment of logs for termites and beetles, control of moths in beehives, as a solvent, as a preparation for dyes and waxes and in waterproofing preparations
1,2-dichlorobenzene	used as a fumigant, solvent, chemical intermediate and to make insecticides
1,2-dichloroethane	manufactured chemical that is not found naturally in the environment; most common use is in the production of vinyl chloride which is used to make a variety of plastic and vinyl products including PVC pipes, furniture and automobile upholstery, wall coverings, house wares and automobile parts; used as a solvent, fumigant, degreaser, paint thinner; added to leaded gasoline to remove lead

COMPOUND	PRODUCT USE
1,2-dichloropropane	does not occur naturally in the environment; production in the US has declined over the past 20 years; was used in the past as a soil fumigant, chemical intermediate and industrial solvent and was found in paint strippers, varnishes and furniture finish removers; most of these uses were discontinued; today used as a chemical intermediate to make perchloroethylene and several other related chlorinated chemical
1, 3, 5-trimethylbenzene	used as an industrial solvent, paint thinner and in the manufacture of dyes, perfumes, resins, chemical intermediates and pharmaceuticals; enters the environment primarily from gasoline evaporation and as an emission from gasoline-powered vehicles, municipal waste-treatment plants, and coal-fired power stations; emitted from many building materials including: vinyl & rubber molding, particle board, linoleum tile, tar paper, telephone cable, latex paint, foam & duct insulation, urethane sealant, adhesives, latex caulk and carpet
1, 3-butadiene	made from the processing of petroleum; about 75% manufactured is used to make synthetic rubber, which is widely used for tires on cars and trucks; used to make plastics including acrylics; small amounts are found in gasoline, automobile exhaust, cigarette smoke and wood fires
1,3-dichlorobenzene	used to make herbicides, insecticides, medicine and dyes
1,4-dichlorobenzene	used as a fumigant to control mildew and mold; used to make insecticides
2-hexanone	used in the past in paint and paint thinner, to make other chemical substances and to dissolve oils and waxes; no longer made or used in the US because it has harmful health effects; formed as a waste product resulting from industrial activities such as making wood pulp and producing gas from coal and in oil shale operations
4-ethyltoluene	man-made chemical used principally as an additive to petroleum; used as a solvent in a variety of industrial, agricultural and domestic products; major release route to the atmosphere is from evaporation of petroleum during production, transport and refueling and from car exhausts; released when used as a solvent
acrylonitrile	used to make other chemicals such as plastics, synthetic rubber and acrylic fibers; a mixture of acrylonitrile and carbon tetrachloride was used as a pesticide in the past; all uses in pesticide have stopped
ally chloride	used to make epichlorohydrin and glycerin; used in the synthesis of allyl compounds such as allyl alcohol, allyl amines, allyl esters and polyesters; derivatives are found in varnish, plastics, adhesives, perfumes, insecticides and pharmaceuticals
benzene	widely used in the US; some industries use it to make other chemicals which are used to make plastics, resins, nylon and synthetic fibers; used to make some types of rubbers, lubricants, dyes, detergents, drugs and pesticides; natural sources include volcanoes and forest fires; a natural part of crude oil and gasoline; found in industrial emissions, waste and storage operations, motor vehicle exhaust, evaporation from gasoline service stations and tobacco smoke
benzylchloride	used as a chemical intermediate in the manufacture of certain dyes, lubricants, gasoline and pharmaceutical products and as a photographic developer; emissions from floor tile plasticized by butyl benzyl phthalate have been reported; has been detected in emissions from the burning of polyvinyl chloride, neoprene and rigid urethane foam compounds

COMPOUND	PRODUCT USE
bromodichloromethane	small amounts are formed naturally by algae in the oceans; only small quantities are produced in the US; small quantities that are produced are used in laboratories or to make other chemicals; most is formed as a by-product when chlorine is added to drinking water to kill bacteria
bromoform	small amounts are formed naturally by plants in the ocean; formed as byproducts when chlorine is added to drinking water to kill bacteria; were used in the past as solvents and flame retardants, or to make other chemicals; small quantities are produced in the US and used mainly as laboratory reagents
carbon tetrachloride	manufactured chemical that does not occur naturally; was used in the production of refrigeration fluid and propellants for aerosol cans, as a pesticide, as a cleaning fluid and degreasing agent, in fire extinguishers and in spot removers; these uses are now banned and it is only used in some industrial applications
chlorobenzene	does not occur naturally in the environment; production in the US has declined by more than 60% from its peak in 1960; was used in the past to make other chemicals, such as phenol and DDT; now chlorobenzene is used as a solvent for some pesticide formulations, to degrease automobile parts, and as a chemical intermediate to make several other chemicals
chloroethane	In the past was used in leaded gasoline; used in the production of cellulose, dyes, medicinal drugs, and other commercial products and as a solvent and refrigerant; used to numb the skin before medical procedures such as ear piercing and skin biopsies and as a treatment in sports injuries
chloroform	used to make other chemicals and can also be formed in small amounts when chlorine is added to water
cyclohexane	occurs naturally in petroleum crude oil, in volcanic gases, and in cigarette smoke; used to make nylon, benzene, cyclohexanone, nitrocyclohexane, adhesives and perfumes; added to lacquers and resins, paint and varnish removers and fungicides; used as a fuel for camp stoves
dibromochloromethane	small amounts are formed naturally by plants in the ocean; formed as byproducts when chlorine is added to drinking water to kill bacteria; were used in the past as solvents and flame retardants or to make other chemicals; small quantities are produced in the US and used mainly as laboratory reagents
dichlorodifluoromethane	used as a refrigerant in air conditioning systems, as a blowing or foaming agent for aerosols, in fire extinguishers; banned in the US along with many other countries in 1994
dichlorotetrafluoromethane	used as a refrigerant in air conditioning systems, as a blowing or foaming agent for aerosols, in fire extinguishers
dichlorotetrafluoroethane	primary use has been as a refrigerant; found in consumer products, such as hair mousse and hairspray aerosol
ethylbenzene	found in natural products such as coal tar and petroleum; found in manufactured products such as inks, insecticides and paints; used primarily to make styrene; used as a solvent and in fuels; releases into the air occur from burning oil, gas and coal

COMPOUND	PRODUCT USE
heptane	produced and used as a solvent in organic synthesis and as a standard for octane-rating determinations; found in gasoline and petroleum-based products
hexachloro-1,3-butadiene	not found naturally in the environment, formed when other chemicals are made; mainly used to make rubber compounds; used as a solvent and to make lubricants, used in gyroscopes, as a heat transfer liquid and as a hydraulic fluid
hexane	made from crude oil; pure *n*-Hexane is used in laboratories; mixed with similar chemicals called solvents and used to extract vegetable oils from crops such as soybeans; these solvents are also used as cleaning agents in the printing, textile, furniture, and shoemaking industries; used in certain kinds of special glues used in the roofing, shoe and leather industries; contained in several consumer products, such as gasoline, quick-drying glues and rubber cement, used in various hobbies
methyl ethyl ketone	manufactured chemical but it is also present in the environment from natural sources; produced in large quantities, nearly half of its use is in paints and other coatings; used in glues and as a cleaning agent; made by some trees and found in some fruits and vegetables in small amounts; also released to the air from car and truck exhausts
methyl isobutyl ketone	occurs naturally in certain foods and beverages; added to protective surface coatings, adhesives, printing ink, and special lubricating oils; used to make pesticides and to separate and purify several other organic; used to make textiles and leather; exposure can occur when people use certain paints, varnishes, or glues
methyl-t-butyl ether	was used since the 1980s as an additive for unleaded gasoline to achieve more efficient burning, today it is not being used and has been replaced by ethanol
methylbromide	manufactured chemical; also occurs naturally in small amounts in the ocean where it is formed, probably by algae and kelp; used to kill a variety of pests including rats, insects and fungi; used to make other chemicals or as a solvent to get oil out of nuts, seeds, and wool
methylchloride	used as a methylating agent, laboratory reagent, refrigerant, aerosol propellant, pesticide, fumigant, fire-extinguishing agent, anesthetic, degreaser, blowing agent for plastic foam and chemical intermediate; present at very low concentrations throughout the atmosphere
methylene chloride	does not occur naturally in the environment; used as an industrial solvent and as a paint stripper; found in some aerosol and pesticide products; used in the manufacture of photographic film
styrene	found in insulation, fiberglass, plastic pipes, automobile parts, shoes, drinking cups and other food containers, carpet backing, tobacco smoke, automobile exhaust and off gases from photocopy machines; used to make plastics and rubber; occurs naturally in a variety of foods such as fruits, vegetables, nuts, beverages and meats
tetrachloroethene	used in dry cleaning and metal degreasing; used to make other chemicals and is used in some consumer products
tetrahydrofuran	used as a solvent for PVC, natural and synthetic resins; used as a monomer and chemical intermediate; used in varnishes
toluene	occurs naturally in crude oil and in the tolu tree; produced in the process of making gasoline and other fuels from crude oil and making coke from coal; used in making paints, paint thinners, fingernail polish, lacquers, adhesives and rubber and in some printing and leather tanning processes; found in automobile exhaust and tobacco smoke

COMPOUND	PRODUCT USE
trichloroethene	used mainly as a solvent to remove grease from metal parts, is an ingredient in adhesives, paint removers, typewriter correction fluids and spot removers
trichlorofluoromethane	was used in consumer products including hair sprays, deodorants and cosmetics, in products to control home and garden insects and pests, in cleaners, spray paints and floor and furniture polish; in industry it was used as a refrigerant, to make foam and as an active part of liquid-type fire extinguishers; it is no longer made in the US
trichlorotrifluoroethane	does not occur naturally; EPA restricted production and after 1995 was significantly lower; used to clean metal surfaces, as a coolant in commercial and industrial air conditioners, as an ingredient in aerosols sprays, by foam makers as a blowing agent, to make high temperature lubricants and fluorocarbon resins and as a dry cleaning solvent
vinyl bromide	used primarily in the production of polymers and copolymers; used in polymers as a flame retardant and in the production of monoacrylic fibers for carpet-backing material; combined with acrylonitrile as a co-monomer, used to produce fabrics and fabric blends used in sleepwear (mostly children's) and home furnishings; when copolymerized with vinyl acetate and maleic anhydride, used to produce granular products; copolymers of vinyl chloride and vinyl bromide are used to prepare films, for impregnating or laminating fibers, and as rubber substitutes; used in leather and fabricated metal products
vinyl chloride	manufactured substance that does not occur naturally; formed when other substances such as trichloroethane, trichloroethylene, and tetrachloroethylene are broken down; used to make PVC, which is used to make a variety of plastic products, including pipes, wire and cable coatings and packaging materials.
cis-1,2-dichloroethene	used to produce solvents and in chemical mixtures
cis-1,3-dichloropropene	used mainly in farming as a pesticide
m/p/o-xylenes	occurs naturally in petroleum and coal tar; chemical industries produce xylene from petroleum; used as a solvent and in the printing, rubber, and leather industries; used as a cleaning agent, a thinner for paint and in paints and varnishes; found in small amounts in airplane fuel and gasoline and cigarette smoke
trans-1,2-dichloroethene	used to produce solvents and in chemical mixtures
trans-1,3-dichloropropene	used mainly in farming as a pesticide

Information Sources: http://www.atsdr.cdc.gov
http://www.epa.gov/chemicalfact/
http://www.epa.gov/ttn/atw/
http://web.doh.state.nj.us

COMMERCIAL PROPERTIES INDOOR AIR SOIL VAPOR INTRUSION STUDY REPORT

Raymark Site, OU-2
Stratford, CT

August 2012

U.S. ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND REGIONAL LABORATORY
OFFICE OF ENVIRONMENTAL MEASUREMENT & EVALUATION
11 TECHNOLOGY DRIVE
NORTH CHELMSFORD, MASSACHUSETTS 01863

Prepared for: Office of Site Remediation & Restoration, Remedial Program
U.S. Environmental Protection Agency, New England

Prepared by: _____ Date: 9/28/12
Peter R. Kahn, ECA Air Monitoring Team Engineer

Reviewed by: _____ Date: 9/28/12
Robert Judge, ECA Air Monitoring Team Leader

TABLE OF CONTENTS

Section	Title	Page No.
1.0	Introduction	5
	1.1 Site Description and Background	5
2.0	Sampling Objective	6
	2.1 Target Compounds	8
	2.2 Data Use and Reporting	8
3.0	Sampling Locations	8
4.0	Canister VOC Air Sampling and Analytical Methodologies	24
	4.1 Description	24
	4.2 Canister Cleaning and Leak Certification Procedures	25
	4.2.1 Canister Cleaning Procedure	25
	4.2.2 Canister Leak Certification Procedure	25
	4.2.3 Canister Cleanliness Certification Procedure	25
	4.3 Canister Flow Controller Cleaning and Calibration Procedures	25
	4.3.1 Flow Controller Calibration Procedure	25
	4.3.2 Flow Controller Cleaning Procedure	26
	4.4 Canister Analysis Quality Control/Quality Assurance Results	26
	4.4.1 Laboratory Blank	26
	4.4.2 Data Reproducibility/Precision Results	26
	4.4.3 Data Accuracy Results	27
	4.4.4 Canister Surrogate Spiking Results	27
	4.4.5 Chain of Custody	27
	4.4.6 Data Validation and Usability	27
5.0	Air Grab Sampling and Analysis Methodology for VOCs	28
	5.1 Air Grab Sampling Procedures	28
	5.2 Air Grab Field Analytical Procedures	28
	5.3 Quality Control Procedures	28
6.0	Soil Gas Sampling and Analysis Methodology for VOCs	29
	6.1 Soil Gas Sampling Procedures	29
	6.1.1 Sub-Slab Soil Gas Sampling Procedures	29
	6.2 Soil Gas Field Analytical Procedures	29
	6.3 Quality Control Procedures	30
7.0	Meteorological Measurement	30
	7.1 Ambient Air Meteorological Data	30
8.0	Indoor Air and Soil Gas Sampling Results and Discussions	31
	8.1 Tetrachloroethene Sampling Results and Discussions	32
	8.2 1, 1-Dichloroethylene Sampling Results and Discussions	35
	8.3 1, 1-Dichloroethane Sampling Results and Discussions	37
	8.4 Benzene Sampling Results and Discussions	39
	8.5 Chlorobenzene Sampling Results and Discussions	42
	8.6 Chloroform Sampling Results and Discussions	44

TABLE OF CONTENTS

Section Title Page No.
8.7 Ethylbenzene Sampling Results and Discussions..... 48
8.8 Vinyl Chloride Sampling Results and Discussions..... 51
8.9 Indoor Air and Soil Gas February August 2012 COC Data Comparison.. 54
8.10 Non-target Compounds Sampling Results and Discussions..... 60

Tables..... 70
Table 1 – EPA Method TO15 Target VOC List
Table 2A, 2B, 2C, 2D – Duplicate Air Sampling Results
Table 3 – Ambient Air Canister Air Sampling Results Summary
Table 4 – 500 Ferry Blvd. Canister Air Sampling Results Summary
Table 5 – 82 Ferry Court Canister Air Sampling Results Summary
Table 6 – 72 Ferry Court Canister Air Sampling Results Summary
Table 7 – 50 Ferry Court Canister Air Sampling Results Summary
Table 8 – 62 Ferry Court Canister Air Sampling Results Summary
Table 9 – 100 Veterans Way Canister Air Sampling Results Summary
Table 10 – 608 Ferry Blvd. Canister Air Sampling Results Summary
Table 11 – 335 Ferry Blvd. Canister Air Sampling Results Summary
Table 12 – 300 Ferry Blvd. Canister Air Sampling Results Summary
Table 13 – 326 Ferry Blvd. Canister Air Sampling Results Summary
Table 14 – 444 Ferry Blvd. Canister Air Sampling Results Summary
Table 15 – 411 Barnum Ave. McDonalds Restaurant Canister Air Sampling Results Summary
Table 16 – 411 Barnum Ave. US Postal Service Canister Air Sampling Results Summary
Table 17 – 411 Barnum Ave. Marshalls Canister Air Sampling Results Summary
Table 18 – 411 Barnum Ave. Payless Shoe Source Canister Air Sampling Results Summary
Table 19 – 411 Barnum Ave. Sleepy's Canister Air Sampling Results Summary
Table 20 – 411 Barnum Ave. Fashion Bug Canister Air Sampling Results Summary
Table 21 – 411 Barnum Ave. Sally's Beauty Canister Air Sampling Results Summary
Table 22 – 411 Barnum Ave. Game Stop Canister Air Sampling Results Summary
Table 23 – 411 Barnum Ave. T-Mobile Canister Air Sampling Results Summary
Table 24 – 411 Barnum Ave. Regal Cinema Canister Air Sampling Results Summary
Table 25 – 500 Ferry Blvd. Soil Gas Grab, Indoor Air Grab and 24-Hour Sampling Results
Table 26 – 608 Ferry Blvd. Soil Gas Grab, Indoor Air Grab and 8-Hour Sampling Results
Table 27 – 335 Ferry Blvd. Soil Gas Grab, Indoor Air Grab and 8-Hour Sampling Results
Table 28 – 300 Ferry Blvd. Soil Gas Grab, Indoor Air Grab and 8-Hour Sampling Results
Table 29 – 100 Veterans Way Soil Gas Grab, Indoor Air Grab and 8-Hour Sampling Results
Table 30 – 326 Ferry Blvd. Indoor Air 8-Hour Sampling Results

TABLE OF CONTENTS

Section Title Page No.
Table 31 – 444 Ferry Blvd. Soil Gas Grab, Indoor Air Grab and 8-Hour Sampling Results
Table 32 – 411 Barnum Ave. Indoor Air 8-Hour Sampling Results
Table 33 – 50 Ferry Court Soil Gas Grab, Indoor Air Grab and 24-Hour Sampling Results
Table 34 – 72 Ferry Court Soil Gas Grab, Indoor Air Grab and 24-Hour Sampling Results
Table 35 – 62 Ferry Court Soil Gas Grab, Indoor Air Grab and 24-Hour Sampling Results
Table 36 – 82 Ferry Court Soil Gas Grab, Indoor Air Grab and 24-Hour Sampling Results

Appendix A - Building Sketches and Sampling Locations..... 71

Appendix B – Photographs 80

Appendix C – Meteorological Data..... 107

Appendix D – - Laboratory Analytical Report..... 113

Appendix E – Soil Gas and Air Grab Samples Mobile Laboratory Analytical Report 114

Appendix F – Indoor Air and Soil Gas February and August 2012 COC Data Comparison Tables..... 117

Appendix G – Compound Product Use Description..... 118

1.0 Introduction

The week of August 13, 2012 at the request of Ron Jennings, Remedial Project Manager (RPM), the EPA New England, Office of Environmental Measurement and Evaluation (OEME) performed indoor air and, where feasible, sub-slab soil gas sampling inside nine commercial buildings and within four condominium/apartments to represent a non-heating season. The week of February 13, 2012 the same sampling was performed to obtain data representative of the heating season. The results of both the February (heating season) and August (non-heating season) sampling will be used to form lines of evidence for completion of a vapor intrusion pathway risk evaluation related to contaminants associated with the Raymark Site. Peter Kahn was the EPA sampling project manager for this study and was responsible for the following tasks: write the Sampling and Analysis Plan (SAP), communicate all aspects of the project to the RPM, coordinate EPA field and laboratory analytical support with OEME laboratory personnel, prepare and collect ambient and indoor air canister samples, canister confirmation soil gas samples and prepare the final report for these activities. Dan Curran assisted Peter Kahn with sampling and documentation. Scott Clifford was responsible for collecting indoor air and soil gas grab samples, and on-site analysis of these samples using the EPA Region 1 Mobile Laboratory. Dan Curran operated the EPA Region 1 Laboratory GC/MS which was used to analyze indoor air, ambient air and soil gas canister samples. This report will be distributed to Ron Jennings and all other interested parties.

1.1 Site Description and Background

The Raymark Industries, Inc. Superfund Site (the Site) consists of 500 plus acres of land located in Stratford, Fairfield County, Connecticut (CT). Raymark Industries, Inc. operated for 70 years from 1919 until 1989 manufacturing automotive and heavy brake friction components. During its operation, Raymark waste was disposed of as "fill" material in various locations in Stratford, including the Raymark Facility, various commercial and residential properties, and in wetlands adjacent to the Housatonic River. In 1993 the Agency for Toxic Substances and Disease Registry (ATSDR) performed a health assessment in response to a citizen petition and shortly thereafter issued a Public Health Advisory for the Raymark Facility and locations around the Town of Stratford where manufacturing wastes from the former Raymark Facility had come to be located. EPA listed the Site on EPA's National Priorities list (NPL) of Superfund sites on April 25, 1995. A public water supply provides drinking water to the area of concern for Raymark waste. There is no known use of groundwater for any purpose in the area. The Site includes the (former) Raymark Industries, Inc. Facility and other locations where Raymark waste has come to be located. Raymark Industries, Inc. is bankrupt, and the cleanup is being conducted by the EPA, in coordination with CTDEEP.

The site has been divided into nine parts or Operable Units (OUs). For the purposes of this Project, the work falls under Operable Unit 2: Groundwater (Site wide). The groundwater investigation focuses on a 500 acre area extending from the Facility to a surface water body (Ferry Creek) to the Housatonic River. Contaminants in the groundwater include volatile organic compounds (VOCs) and metals. During 2000-2002 extensive groundwater, soil gas, indoor air and sub-slab evaluations were performed, which found VOCs to be volatilizing from the groundwater into buildings (primarily residential dwellings). As a result, during 2003-2004, EPA and CTDEEP

installed 106 sub-slab ventilation systems into residential homes, two of which were commercial buildings, to mitigate potential vapor intrusion and human health exposure. EPA is now in the process of focusing on additional commercial properties that have the potential to be impacted by the VOCs volatilizing from the groundwater.

2.0 Sampling Objective

RPM Ron Jennings requested indoor air and, where feasible, sub-slab soil gas sampling inside nine commercial buildings and within four condominium/apartments during February (heating season) and August (non-heating season) to form lines of evidence for completion of a vapor intrusion pathway risk evaluation related to contaminants associated with the Site. Evaluations of the following buildings/addresses were requested:

Address	Current Building Use
411 Barnum Ave. (2 buildings)	Retail shopping plaza, restaurant
326 Ferry Blvd.	Restaurant/bar
444 Ferry Blvd.	Retail
500 Ferry Blvd.	Office space
608 Ferry Blvd.	Office space (currently unoccupied)
100 Veterans Way	Restaurant/bar
335 Ferry Blvd.	Office space (three separate businesses)
Village Square Condominiums	Residential (Units 50, 62, 72, 82)
300 Ferry Blvd.	Retail

411 Barnum Ave. is a shopping plaza that contains 16 separate businesses and a 14 screen movie theatre. The property also has two separate buildings occupied by a McDonalds Restaurant and a 99 Restaurant. The study only focused on collecting samples inside 9 businesses, including the movie theatre, of the shopping plaza and inside the McDonalds Restaurant. Within the shopping plaza the following areas were sampled: Unit 1 (Payless Shoe Source), Unit 2 (Sleepys), Unit3/3A (Fashion Bug), Unit 4 (US Postal Service), Unit 6 (Sally Beauty), Unit 8 (Game Stop), Unit 11 (T-Mobile), Unit A (Marshalls) and Unit C (Regal Cinema). These two buildings are constructed on slab-on-grade foundations assumed to be 8 to 10 inches thick, with the majority of the interior floors covered with carpet, wood or tile. There is some evidence that the foundations have conduits incorporated into the slab at unknown locations. Considering the thickness of the slab, floor coverings, and the presence of conduits in the concrete slab, drilling holes into the slab for installing sub-slab sampling probes has been determined to be impractical. Therefore, only indoor air samples were collected within the two buildings at 411 Barnum Ave (shopping plaza and the McDonalds Restaurant).

The slab-on-grade concrete foundation of 326 Ferry Blvd. reportedly rests on driven piles. There reportedly is also a small, fairly inaccessible crawl space between the slab-on-grade foundation and the building floor. The building interior floors, which are all covered with carpet, wood, or tile, together with the inaccessible crawl space between the floor and foundation, make access to the slab impractical for installing sub-slab sampling probes. Therefore, only indoor air samples were collected at 326 Ferry Boulevard.

Buildings located at 444 Ferry Blvd. (Par Pool & Spa), 500 Ferry Blvd. (Risk International, Inc.), 608 Ferry Blvd. (unoccupied office building), 100 Veterans Way (VFW Post 9460), 335 Ferry Blvd. (Salce Building, three separate businesses), 300 Ferry Blvd. and Village Square Condominiums on Ferry Court all have concrete slab basements or a slab on-grade foundation where sub-slab soil gas samples were collected. 500 Ferry Blvd. is the only building with a finished basement and zoned as both a residential/commercial property. Because of this, this property has been evaluated using the more stringent RSLs for residential usage.

At 444 Ferry Blvd., 500 Ferry Blvd., 100 Veterans Way, 608 Ferry Blvd., 335 Ferry Blvd., 300 Ferry Blvd., and within the Village Square Condominiums, soil gas grab samples were collected from 1 to 3 sub-slab sampling locations and indoor air samples were collected from the basement and/or first floor areas. The buildings located at 411 Barnum Ave. and 326 Ferry Blvd. only had samples collected from inside the buildings, no sub-slab samples were collected. Inside all the buildings, except at 500 Ferry Blvd. and the four units on Ferry Court as part of the Village Square Condominiums, 8-hour indoor air samples were collected. At 500 Ferry Blvd. and in the units on Ferry Court, indoor air samples were collected over a 24-hour period. In this report, the August indoor air data will be compared to background outdoor ambient air data that was collected during three separate 24-hour sampling periods and an 8-hour period on 8/16/12. For quality control purposes, one collocated canister sample was collected on each day indoor air samples were collected. All canister samples were analyzed for the VOCs listed on Table 1 particularly the target compounds trichloroethene (TCE), 1, 1-dichloroethene (1, 1-DCE), 1,1-dichloroethane (1,1-DCA), benzene, chlorobenzene, chloroform, ethylbenzene and vinyl chloride (VC) using a GC/MS.

Sub-slab soil gas sampling probes were installed by Peter Kahn at the locations described above. Soil gas samples were collected using EPA Region I Standard Operating Procedure for Sub-Slab Soil Gas Sampling, April 1, 2011, Revision 2. Scott Clifford collected the soil gas samples and immediately analyze them on-site using EPA's Mobile Laboratory. Confirmation canister grab samples were also collected at selected locations and then analyzed at the EPA Regional Laboratory using a GC/MS. In addition, indoor air grab samples were collected by Scott Clifford using a glass syringe from selected indoor air sampling locations. These samples were also analyzed on-site in the mobile lab.

The collected data will be compared to the EPA Regional Screening Levels (RSL). Screening levels for the target compounds are provided in the table below and on Table 1.

Compound	EPA RSL Residential Air[1]	EPA RSL Industrial Air[1]	EPA Region 1 Reporting Limits[2]
Trichloroethene	0.43 µg/m^3	3.0 µg/m^3	0.27 µg/m^3
1,1-Dichloroethene	210 µg/m^3	880 µg/m^3	0.20 µg/m^3
1,1-Dichloroethane	1.5 µg/m^3	7.7 µg/m^3	0.20 µg/m^3
Benzene	0.31 µg/m^3	1.6 µg/m^3	0.16 µg/m^3
Chlorobenzene	52 µg/m^3	220 µg/m^3	0.23 µg/m^3
Chloroform	0.11 µg/m^3	0.53 µg/m^3	0.24 µg/m^3
Ethylbenzene	0.97 µg/m^3	4.9 µg/m^3	0.22 µg/m^3
Vinyl Chloride	0.16 µg/m^3	2.8 µg/m^3	0.13 µg/m^3

[1] EPA RSL = EPA Regional Screening Level (May 2012); based on $1x10^{-6}$ cancer risk or hazard quotient of 1.0.
[2] Reporting limits are shown without dilutions; any sample dilutions will increase these limits.

2.1 Target Compounds

As noted above the primary contaminant of concern for this project are TCE, 1, 1-DCE, 1, 1-DCA, benzene, chlorobenzene, chloroform, ethylbenzene and VC.

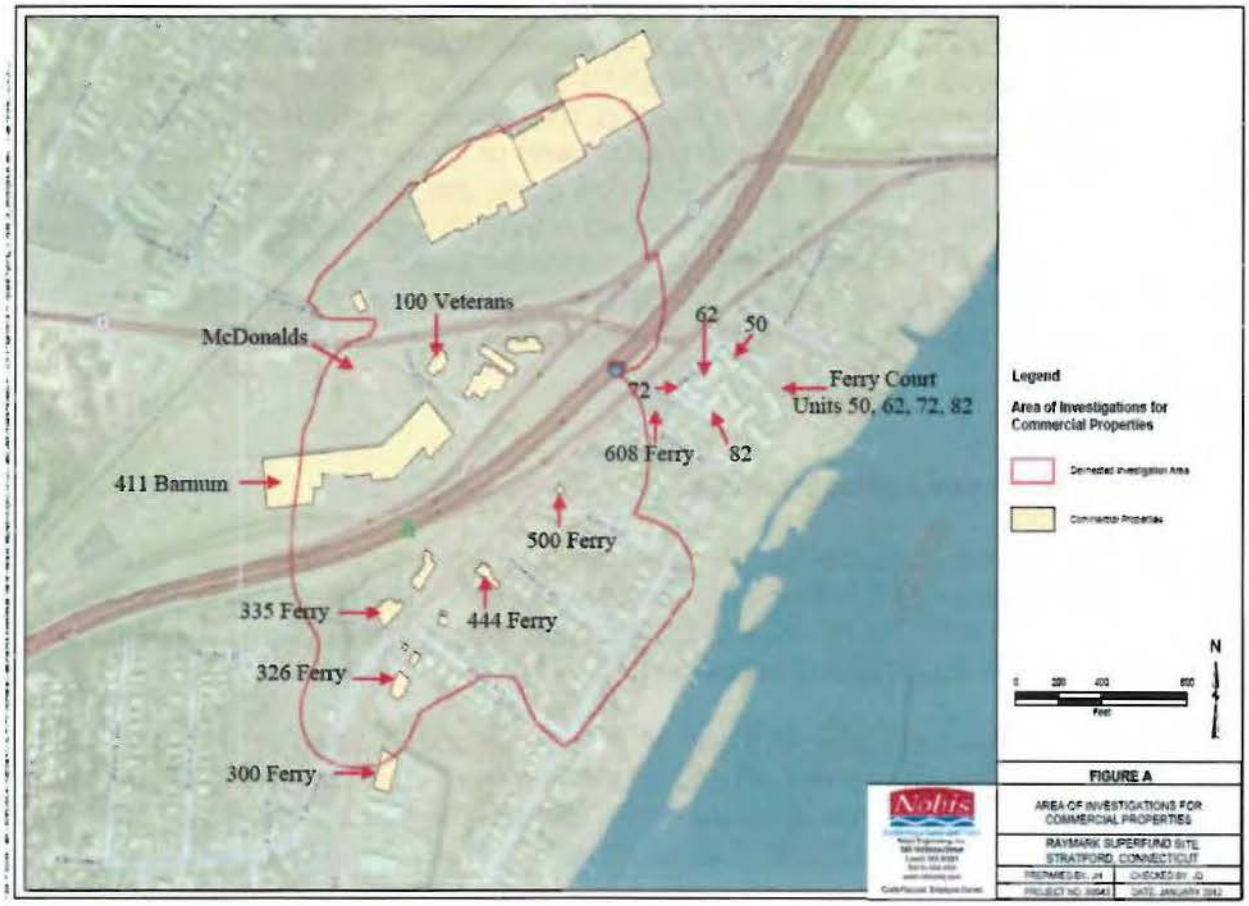
2.2 Data Use and Reporting

The results of the study are presented in this final report and will be provided to the EPA RPM and all other interested parties. This report describes the sampling and analytical procedures used for the study and the resulting data. In addition, all the sampling and quality assurance/quality control (QA/QC) data are reported in tabular form. The data reported in the laboratory's analytical report were further validated following the QC criteria described in Section 4.4. The air sampling and analytical techniques used for this study provided the necessary data to assist EPA with evaluating whether indoor air quality was adversely impacted. The data collected during February and August will be compared to show if concentrations varied.

3.0 Sampling Locations

Sampling locations within each building were selected to represent the concentration of target compounds in the soil gas underneath the building's concrete foundation, where feasible and the indoor air. The same sampling locations established in February were used during the August study, with the addition of unit 50 in the Village Square Condominiums on Ferry Court, a sub-slab sampling location at 335 Ferry Blvd, indoor air sampling location inside 411 Barnum Ave. Payless Shoes and the 8/16/12 ambient air sampling location was moved because of heavy vegetation. An aerial view map of the investigation area showing the buildings where samples were collected is provided on the following page.

Raymark Site, OU-2
Area of Investigation Map



A building sketch showing sampling locations for each building, except for 50, 72, 62 and 82 Ferry Court are provided in Appendix A. Three photographs were taken during the August study, the new and February sampling locations inside Payless Shoes and two showing the 8/16/12 ambient air sampling location; these are provided in Appendix B. The pictures shown in the February Report also apply to the August sampling. To obtain additional information about the building, the building owner or occupant was asked a series of questions regarding products used or stored inside the home, if any hobbies are performed, if recent remodeling was done, and any other information that would help determine if normal activities carried out inside the building would influence the sampling results. EPA field personnel also took an inventory of stored products inside the building and noted the type of HVAC system. Detailed descriptions of the sampling locations for each building are provided below.

500 Ferry Blvd.

> **Indoor Air/Crawl Space Samples**

Canister #6548 was collected in the basement 20 feet from the west wall, 10 feet from the north wall and 3 feet above the floor over a 24-hour period from 11:48 on 8/13/12 to 11:48 on 8/14/12. Also at this location, Canister #3656 was collected as a duplicate sample for obtaining precision data.

Canister #1587 was collected in the crawl space, which is located on the south side of the building, through a small access door 3 feet from the crawl space south interior wall and 3 inches above the concrete floor. The sample was collected over a 24-hour period from 11:50 on 8/13/12 to 11:50 on 8/14/12.

Canister #4742 was collected on the first floor 10 feet 6 inches from the west wall, 18 feet from the north wall and 3 feet 3 inches above the floor over a 24-hour period from 11:46 on 8/13/12 to 11:46 on 8/14/12.

> **Air Grab Samples**

Grab 1 was collected on 8/13/12 at the same location where the basement 24-hour canister samples were collected (Canister #6548 and #3656). A description of this location is described above.

> **Sub-slab Soil Gas Samples**

SS-1: To prepare the sampling probe, on 2/6/12 a small section of carpet was cut before a 9 inch deep; 3/8 inch diameter hole was drilled through the floor. At this time it was determined the slab was only 1 inch thick and that only a temporary probe could be used. As a result, a temporary 1.5 inch long; ¼ inch diameter stainless steel probe and fittings were inserted into the pre-drilled hole the day of sampling. On 8/13/12 a sub-slab soil gas sample was collected below the concrete slab 15 feet 2 inches from the west wall, 9 feet 6 inches from the north wall and 1.5 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. An additional 1 liter was purged from the probe before collecting a syringe grab sample to be analyzed on different gas chromatograph (GC).

SS-2: To prepare the sampling probe, on 2/6/12 a small section of carpet was cut before a 9 inch deep; 3/8 inch diameter hole was drilled through the floor. At this time it was determined the slab was only 1 inch thick and that only a temporary probe could be used. As a result, a temporary 1.5 inch long; ¼ inch diameter stainless steel probe and fittings were inserted into the pre-drilled hole the day of sampling. On 8/13/12 a sub-slab soil gas sample was collected below the concrete slab 26 feet 2 inches from the west wall, 7 feet 6 inches from the north wall and 1.5 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. An additional 1 liter was purged from the probe before collecting a syringe grab sample to be analyzed on different GC. Canister #13498 was then collected as a confirmation grab sample after purging another 1 liter from the probe.

82 Ferry Court (Village Square Condominiums)

> Indoor Air Samples

Canister #6582 was collected in the basement 8 feet from the north wall, 15 feet from the west wall and 4 feet 2 inches above the floor over a 24-hour period from 13:36 on 8/13/12 to 13:36 on 8/14/12.

Canister #1576 was collected on the first floor 12 feet 6 inches from the north wall, 8 feet from the east wall and 3 feet 3 inches above the floor over a 24-hour period from 13:44 on 8/13/12 to 13:44 on 8/14/12.

> Air Grab Samples

Grab 1 was collected on 8/13/12 at the same location where the basement 24-hour canister sample was collected (Canister #6582). A description of this location is described above.

> Sub-slab Soil Gas Sample

SS-1: To prepare the sampling probe, on 2/14/12 a 12 inch deep; 3/8 inch diameter hole was drilled through the floor and sub-slab material into which a 6 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 8/13/12 a sub-slab soil gas sample was collected below the concrete slab in the utility room 16 feet 9 inches from the north wall, 5 feet 9 inches from the east wall and 8 inches below the slab. A syringe grab sample was collected after purging 1.4 liters from the probe. An additional 1 liter was purged from the probe before collecting a syringe grab sample to be analyzed on different GC. Canister #12562 was then collected as a confirmation grab sample after purging another 1 liter from the probe.

72 Ferry Court (Village Square Condominiums)

> Indoor Air Samples

Canister #1586 was collected in the basement 14 feet from the east wall, 9 feet from the south wall and 4 feet 3 inches above the floor for approximately a 24-hour period from 16:23 on 8/13/12 to 16:18 on 8/14/12.

Canister #3092 was collected on the first floor 2 feet from the east wall, 1 foot from the north wall and 3 feet 6 inches above the floor for approximately a 24-hour period from 16:25 pm on 8/13/12 to 16:19 on 8/14/12.

> **Air Grab Samples**

Grab 1 was collected on 8/13/12 at the same location where the basement 24-hour canister sample was collected (Canister #1586). A description of this location is described above.

> **Sub-slab Soil Gas Sample**

SS-1: To prepare the sampling probe, on 2/7/12 a 9 inch deep; 3/8 inch diameter hole was drilled through the floor and sub-slab material into which a 4 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 8/13/12 a sub-slab soil gas sample was collected below the concrete slab in the utility room 9 feet from the west wall, 5 feet 3 inches from the south wall and 4 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. An additional 1 liter was purged from the probe before collecting a syringe grab sample to be analyzed on different GC. Canister #12569 was then collected as a confirmation grab sample after purging another 1 liter from the probe.

50 Ferry Court (Village Square Condominiums)

> **Indoor Air Samples**

Canister #6566 was collected in the basement 5 feet 8 inches feet from the east wall, 1 foot 7 inches from the south interior wall, 12 feet from the west interior wall and 3 feet 4 inches above the floor for over a 24-hour period from 17:18 on 8/13/12 to 17:18 on 8/14/12.

Canister #6553 was collected on the first floor 12 feet6 inches from the south wall, 5 feet from the west interior wall and 4 feet 4 inches above the floor over a 24-hour period from 17:20 pm on 8/13/12 to 17:20 on 8/14/12.

> **Air Grab Samples**

Grab 1 was collected on 8/13/12 at the same location where the basement 24-hour canister sample was collected (Canister #6566). A description of this location is described above.

> **Sub-slab Soil Gas Sample**

SS-1: To prepare the sampling probe, on 8/13/12 a 9 inch deep; 3/8 inch diameter hole was drilled through the floor and sub-slab material into which a 4.5 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 8/13/12 a sub-slab soil gas sample was collected below the concrete slab in the utility room 3 feet 6 inches from the west interior wall, 2 feet 3 inches from the north interior wall and 4.5 inches below the slab. A syringe grab sample was collected after

purging 1 liter from the probe. An additional 1 liter was purged from the probe before collecting a syringe grab sample to be analyzed on different GC. Canister #13500 was then collected as a confirmation grab sample after purging another 1 liter from the probe.

62 Ferry Court (Village Square Condominiums)

> **Indoor Air Samples**

Canister #1594 was collected in the basement 8 feet 6 inches from the south wall, 8 feet from the east wall and 3 feet 7 inches above the floor over a 24-hour period from 19:00 on 8/13/12 to 19:05 on 8/14/12.

Canister #6581 was collected on the first floor 16 feet from the south wall, 7 feet from the east wall and 4 feet 3 inches above the floor over a 24-hour period from 19:01on 8/13/12 to 19:04 on 8/14/12.

> **Air Grab Samples**

Grab 1 was collected on 8/13/12 at the same location where the basement 24-hour canister sample was collected (Canister #1594). A description of this location is described above.

> **Sub-slab Soil Gas Sample**

SS-1: To prepare the sampling probe, on 2/13/12 a 12 inch deep, 3/8 inch diameter hole was drilled through the floor and sub-slab material into which an 8 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 8/13/12 a sub-slab soil gas sample was collected below the concrete slab, in the utility room 14 feet 10 inches from the north wall, 1 foot from the west wall and 8 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe to be analyzed on different GC. Canister #22153 was then collected as a confirmation grab sample after purging another 1 liter from the probe.

100 Veterans Way

> **Indoor Air Samples**

Canister #6547 was collected in the basement 2 feet 3 inches from the south wall, 13 feet from the east wall and 4 feet 9 inches above the floor over an 8-hour period from 08:37 to 16:37 on 8/14/12. Also at this location, Canister #6555 was collected as a duplicate sample for obtaining precision data.

Canister #6558 was collected on the first floor in the function room 27 feet from the north wall, 13 feet from the south interior wall and 2 feet 9 inches above the floor over an 8-hour period from 08:36 to 16:36 on 8/14/12.

> **Air Grab Samples**

Grab 1 was collected on 8/14/12 at the same location where the basement 8-hour canister samples were collected (Canister #6547 and #6555). A description of this location is described above.

> **Sub-slab Soil Gas Samples**

SS-1: To prepare the sampling probe, on 2/7/12 a 9 inch deep; 3/8 inch diameter hole was drilled through the floor and sub-slab material into which a 4.5 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 8/14/12 a sub-slab soil gas sample was collected in the basement area below the concrete slab 6 feet 4 inches from the south wall, 9 feet 8 inches from the east wall and 4.5 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. A second grab sample was collected after purging 1 liter from the probe to be analyzed on different GC. Two more grab samples were collected to serve as duplicate grab samples; a 1 liter purge was taken before analyzing the sample on the GC. Canister #20860 was then collected as a confirmation grab sample after purging another 1 liter from the probe.

SS-2: To prepare the sampling probe, on 2/7/12 a 9 inch deep; 3/8 inch diameter hole was drilled through the floor and sub-slab material into which a 4.5 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 8/14/12 a sub-slab soil gas sample was collected in the basement area below the concrete slab 6 feet from the south wall, 20 feet 10 inches from the east wall and 4.5 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. A second grab sample was collected after purging 1 liter from the probe to be analyzed on different GC.

SS-3: To prepare the sampling probe, on 2/7/12 a 9 inch deep; 3/8 inch diameter hole was drilled through the floor and sub-slab material into which a 4.5 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 8/14/12 a sub-slab soil gas sample was collected in the basement area below the concrete slab 5 feet 7 inches from the south wall, 33 feet 1 inch from the east wall and 4.5 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. A second grab sample was collected after purging 1 liter from the probe to be analyzed on different GC.

444 Ferry Blvd.

> **Indoor Air Samples**

Canister #6461 was collected in the basement 17 feet 4 inches from the north wall, 10 feet 6 inches from the east wall and 1 foot 9 inches above the floor over an 8-hour period from 10:08 to 18:08 on 8/14/12.

Canister #6567 was collected on the first floor in the office 1 foot 6 inches from the north wall, 15 feet from the east wall and 5 feet 6 inches above the floor over an 8-hour period from 10:09 to 18:09 on 8/14/12.

> **Air Grab Samples**

No indoor air grab samples were collected inside this building.

> **Sub-slab Soil Gas Samples**

SS-1: To prepare the sampling probe, on 2/7/12 a 9 inch deep; 3/8 inch diameter hole was drilled through the floor and sub-slab material into which a 4.5 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 8/14/12 a sub-slab soil gas sample was collected in the supply storage area below the concrete slab on-grade foundation 6 feet from the south wall, 50 feet from the east wall and 4.5 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. A second grab sample was collected after purging 1 liter from the probe to be analyzed on different GC.

SS-2: To prepare the sampling probe, on 2/7/12 a 9 inch deep; 3/8 inch diameter hole was drilled through the floor and sub-slab material into which a 2.25 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 8/14/12 a sub-slab soil gas sample was collected in the basement area below the concrete slab 6 feet 6 inches from the west wall, 11 feet 17 inches from the north wall and 2.25 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. A second grab sample was collected after purging 1 liter from the probe to be analyzed on different GC.

SS-3: To prepare the sampling probe, on 2/7/12 a 9 inch deep; 3/8 inch diameter hole was drilled through the floor and sub-slab material into which a 2.25 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 8/14/12 a sub-slab soil gas sample was collected in the basement area below the concrete slab 18 feet 5 inches from the west wall, 10 feet from the south wall and 2.25 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. A second grab sample was collected after purging 1 liter from the probe to be analyzed on different GC. Canister #22105 was then collected as a confirmation grab sample after purging another 1 liter from the probe.

326 Ferry Blvd.

> **Indoor Air Samples**

Canister #5790 was collected in the back dining room on the ground floor 19 feet from the south wall, 20 feet from the east wall and 3 feet 3 inches above the floor over an 8-hour period from 11:00 to 19:00 on 8/14/12.

Canister #1560 was collected in the kitchen area on the ground floor 4 feet 6 inches from the north wall, 24 feet from the west wall and 2 feet 7 inches above the floor over an 8-hour period from 10:59 to 18:59 on 8/14/12.

> **Air Grab Samples**

No grab samples were collected from this property.

> **Sub-slab Soil Gas Sample**

No soil gas samples were collected from this property.

608 Ferry Blvd.

> **Indoor Air Samples**

Canister #6569 was collected in the basement 9 feet from the north wall, 7 feet from the east wall and 1 foot 9 inches above the floor over an 8-hour period from 07:18 to 15:18 on 2/15/12. Also at this location, Canister #1574 was collected as a duplicate sample for obtaining precision data. The basement area was comprised of two small rooms measuring 12 x 15.

Canister #1565 was collected on the first floor 16 feet from the north wall, 27 feet from the west wall and 1 foot 7 inches above the floor over an 8-hour period from 07:19 to 15:19 on 2/15/12.

> **Air Grab Samples**

No air grab samples were collected inside the building.

> **Sub-slab Soil Gas Samples**

SS-1: To prepare the sampling probe, on 2/13/12 a 9 inch deep; 3/8 inch diameter hole was drilled through the floor and sub-slab material into which a 5.5 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 8/15/12 a sub-slab soil gas sample was collected in the basement area below the concrete slab 9 feet 6 inches from the east wall, 13 feet 7 inches from the south wall and 5.5 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. A second grab sample was collected after purging 1 liter from the probe to be analyzed on different GC.

SS-2: To prepare the sampling probe, on 2/13/12 a 9 inch deep; 3/8 inch diameter hole was drilled through the floor and sub-slab material into which a 3 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 8/15/12 a sub-slab soil gas sample was collected on the first floor below the concrete slab on-grade foundation 19 feet from the north wall, 23 feet from the west wall and 3 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. A second grab sample was collected after purging 1 liter from the probe to be analyzed on different GC.

SS-3: To prepare the sampling probe, on 2/13/12 a 9 inch deep; 3/8 inch diameter hole was drilled through the floor and sub-slab material into which a 6.5 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 8/15/12 a sub-slab soil gas sample was collected on the first floor below the concrete slab on-grade foundation 45 feet from the north wall, 10 feet 6 inches from the west wall and 6.5 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. A second grab sample was collected after purging 1

liter from the probe to be analyzed on different GC. Canister #22681 was then collected as a confirmation grab sample after purging another 1 liter from the probe.

335 Ferry Blvd.

> **Indoor Air Samples**

Canister #1577 was collected in the Curtin Taxi portion of the building on the ground floor 24 feet from the north wall, 18 feet from the east wall and 4 feet above the floor over an 8-hour period from 08:35 to 16:35 on 8/15/12.

Canister #1584 was collected in Salce's receptionist office on the ground floor near the front entrance against the south wall 22 feet from the west wall and 4 feet above the floor over an 8-hour period from 08:36 to 16:36 on 8/15/12.

Canister #6568 was collected in the Salce's Estimating Room located in the back of the building on the first floor above the garage area 17 feet from the north wall, 10 feet from the east wall and 4 feet above the floor over an 8-hour period from 08:37 to 16:37 on 2/14/12.

> **Air Grab Samples**

Grab 1 was collected on 8/15/12 at the same location where the 8-hour canister sample was collected (Canister #1577) in the Curtin Taxi. A description of this location is described above. Also at this location Grab 2 was collected to serve as duplicate garb sample.

Grab 3 was collected on 8/15/12 in the BrenAir rental unit office area, which was located towards the back of the garage area near where sub-slab sampling location SS-3 was located.

Grab 4 was collected on 8/15/12 in the Curtin Taxi auto storage closet located along the north wall. Also at this location Grab 7 was collected to serve as duplicate garb sample. Canister #14896 was collected as a confirmation grab sample.

Grab 5 was collected on 8/15/12 in the Curtin Taxi utility closet across the hall from the auto storage closet.

Grab 6 was collected on 8/15/12 in the Curtin Taxi managers' office.

> **Sub-slab Soil Gas Samples**

SS-1: To prepare the sampling probe, on 2/6/12 a 9 inch deep; 3/8 inch diameter hole was drilled through the concrete floor and sub-slab material into which a 6 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 8/15/12 a sub-slab soil gas sample was collected in garage area 1 (west end of building) below the concrete slab on-grade foundation 28 feet 6 inches from the north wall, 21 feet 9 inches from the west wall and 6 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. A second grab sample was

collected after purging 1 liter from the probe to be analyzed on different GC.

SS-2: To prepare the sampling probe, on 2/6/12 a 9 inch deep; 3/8 inch diameter hole was drilled through the concrete floor and sub-slab material into which a 6 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 8/15/12 a sub-slab soil gas sample was collected in garage area 2 below the concrete slab on-grade foundation 23 feet 6 inches from the north wall, 13 feet 3 inches from the east interior wall, 8 feet 8 inches from the west interior wall and 6 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. A second grab sample was collected after purging 1 liter from the probe to be analyzed on different GC.

SS-3: To prepare the sampling probe, on 8/15/12 a 12 inch deep; 3/8 inch diameter hole was drilled through the concrete floor and sub-slab material into which a 9 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 8/5/12 a sub-slab soil gas sample was collected in a garage area/office rental space occupied by BrenAir below the concrete slab on-grade foundation 28 feet from the north interior wall, 17 feet 6 inches from the east wall, 53 feet 8 inches from the west wall and 9 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. A second grab sample was collected after purging 1 liter from the probe to be analyzed on different GC. Two more grab samples were collected to serve as duplicate grab samples; a 1 liter purge was taken before analyzing the sample on the GC. Canister #12565 was then collected as a confirmation grab sample after purging another 1 liter from the probe.

300 Ferry Blvd.

> **Indoor Air Samples**

Canister #6463 was collected in the main show room area on the ground floor 18 feet from the north wall, 31 feet from the east wall and 6 feet 8 inches above the floor over an 8-hour period from 09:35 to 17:35 on 8/15/12.

Canister #6460 was collected in the snow board area on the ground floor 17 feet from the west wall, 27 feet from the south interior wall and 6 feet 4 inches above the floor over an 8-hour period from 09:36 to 17:36 on 8/15/12.

> **Air Grab Samples**

Grab 1 was collected on 8/15/12 at the same location where the 8-hour canister sample was collected (Canister #6460) in the snow board room. A description of this location is described above.

> **Sub-slab Soil Gas Samples**

SS-1: To prepare the sampling probe, on 2/6/12 a 9 inch deep; 3/8 inch diameter hole was drilled through the concrete floor and sub-slab material into which a 5.75 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 8/15/12 a sub-slab soil gas sample was collected in the snow board

storage area below the concrete slab on-grade foundation 22 feet 1 inches from the west wall, 10 feet 3 inches from the south interior wall, 3 feet 5 inches from the east interior wall and 5.75 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. A second grab sample was collected after purging 1 liter from the probe to be analyzed on different GC. Canister #22692 was then collected as a confirmation grab sample after purging another 1 liter from the probe.

SS-2: To prepare the sampling probe, on 2/6/12 a 12 inch deep; 3/8 inch diameter hole was drilled through the concrete floor and sub-slab material into which a 10 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 8/15/12 a sub-slab soil gas sample was collected in the repair shop area of the building below the concrete slab on-grade foundation 7 feet 8 inches from the east wall, 14 feet 6 inches from the north interior wall and 10 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe. A second grab sample was collected after purging 1 liter from the probe to be analyzed on different GC.

411 Barnum Ave. (Stratford Square)

McDonalds Restaurant

> **Indoor Air Sample**

Canister #20841 was collected in the office area located adjacent to the kitchen 4 feet from the east wall and 5 feet 7 inches above the floor over an 8-hour period from 08:32 to 16:32 on 8/16/12.

> **Air Grab Samples**

No grab samples were collected from this building.

> **Sub-slab Soil Gas Sample**

No soil gas samples were collected from this building.

US Postal Service

> **Indoor Air Sample**

Canister #15055 was collected in the backroom mail sorting area 32 feet from the south wall, 10 feet from the west interior wall and 6 feet 6 inches above the floor over an 8-hour period from 08:36 to 16:36 on 8/16/12.

> **Air Grab Samples**

No grab samples were collected from this building.

> **Sub-slab Soil Gas Sample**

No soil gas samples were collected from this building.

Sally's Beauty

> **Indoor Air Sample**

Canister #20844 was collected on top of display rack 31 feet from the north wall, 44 feet from the south interior wall, 8 feet from the west interior wall and 7 feet 6 inches above the floor over an 8-hour period from 09:02 to 17:02 on 8/16/12.

> **Air Grab Samples**

No grab samples were collected from this building.

> **Sub-slab Soil Gas Sample**

No soil gas samples were collected from this building.

Sleepy's

> **Indoor Air Sample**

Canister #20849 was collected in the show room area 56 feet from the south interior wall, 17 feet 8 inches from the west interior wall and 6 feet 8 inches above the floor over an 8-hour period from 09:30 to 17:30 on 2/16/12.

> **Air Grab Samples**

No grab samples were collected from this building.

> **Sub-slab Soil Gas Sample**

No soil gas samples were collected from this building.

Payless Shoe Source

> **Indoor Air Sample**

Canister #15049 was collected in the back of the store 86 feet from the north wall, 10 feet from the west interior wall, 6 inches from the south interior wall and 8 feet 8 inches above the floor over an 8-hour period from 10:11 to 18:11 on 8/16/12.

Canister #15054 was collected 80 feet from the north wall, 10 feet from the west interior wall, 17 feet 6 inches from the south interior wall, 7 feet 6 inches from the east interior wall and 8 feet 6 inches above the floor over an 8-hour period from 10:13 to 18:18 on 8/16/12.

> **Air Grab Samples**

No grab samples were collected from this building.

> **Sub-slab Soil Gas Sample**

No soil gas samples were collected from this building.

Fashion Bug

> **Indoor Air Sample**

Canister #22687 was collected at the checkout area 78 feet from the north wall, 30 feet from the east interior wall and 4 feet 4 inches above the floor over an 8-hour period from 10:07 to 18:07 on 8/16/12.

> **Air Grab Samples**

No grab samples were collected from this building.

> **Sub-slab Soil Gas Sample**

No soil gas samples were collected from this building.

Game Stop

> **Indoor Air Sample**

Canister #12568 was collected behind the cashier counter on a shelf 35 feet 8 inches from the north wall, 1 foot from the east interior wall and 4 feet 5 inches above the floor over an 8-hour period from 10:04 to 18:04 on 8/16/12.

> **Air Grab Samples**

No grab samples were collected from this building.

> **Sub-slab Soil Gas Sample**

No soil gas samples were collected from this building.

T-Mobile

> **Indoor Air Sample**

Canister #14891 was collected behind the cashier counter on a shelf 44 feet from the north wall, 5 feet from the west interior wall and 4 feet above the floor over an 8-hour period from 10:02 to 18:02 on 2/16/12.

> **Air Grab Samples**

No grab samples were collected from this building.

> **Sub-slab Soil Gas Sample**

No soil gas samples were collected from this building.

Marshall's

> **Indoor Air Samples**

Canister #5792 was collected in the backroom/loading area 21 feet from the west wall, 17 feet from the south wall and 4 feet 4 inches above the floor over an 8-hour period from 09:40 to 17:40 on 8/16/12. Canister #1114 was collected as a duplicate sample for obtaining precision data.

Canister #22684 was collected in the shopping area 63 feet from the south wall, 73 feet from the east wall, 73 feet from the west interior wall, 116 feet from the north wall and 7 feet above the floor over an 8-hour period from 09:38 to 17:38 on 8/16/12.

> **Air Grab Samples**

No grab samples were collected from this building.

> **Sub-slab Soil Gas Sample**

No soil gas samples were collected from this building.

Regal Cinema Theater #11

> **Indoor Air Sample**

Canister #20850 was collected on a seat in the front of the theater 10 feet 8 inches from the screen, 16 feet 6 inches from the east wall, 17 feet 6 inches from the west wall and 2 feet 5 inches above the floor over an 8-hour period from 10:43 to 18:43 on 8/16/12.

> **Air Grab Samples**

No grab samples were collected from this building.

> **Sub-slab Soil Gas Sample**

No soil gas samples were collected from this building.

Regal Cinema Theater #8

> **Indoor Air Sample**

Canister #15053 was collected on a seat in the front of the theater 10 feet from the screen, 18 feet from the north wall, 27 feet from the south wall and 2 feet 5 inches above the floor over an 8-hour period from 10:45 to 18:48 on 8/16/12.

> **Air Grab Samples**

No grab samples were collected from this building.

> **Sub-slab Soil Gas Sample**

No soil gas samples were collected from this building.

Regal Cinema Projection Booth

> **Indoor Air Sample**

Canister #20846 was collected on top of a transformer 9 feet from the south wall, 2 feet 5 inches from the north wall, 61 feet 5 inches from the west wall and 4 feet above the floor over an 8-hour period from 10:52 to 18:52 on 8/16/12.

> **Air Grab Samples**

No grab samples were collected from this building.

> **Sub-slab Soil Gas Sample**

No soil gas samples were collected from this building.

Ambient/Background Air Sample

Two ambient/background air sampling locations were established for this project to cover the indoor air sampling period from 8/13/12 through 8/16/12. Descriptions of these locations are provided below with the associated canister sampling numbers and their sampling times.

The following canister samples were collected at 500 Ferry Blvd on the front porch 25 feet 2 inches from the northeast corner of the building, 4 feet 5 inches north of the building and 7 feet 3 inches above the ground.

Canister #22680 was over a 24-hour period from 11:40 on 8/13/12 to 11:40 on 8/14/12.

Canister #13484 was over a 24-hour period from 11:35 on 8/14/12 to 11:35 on 8/15/12.

Canister #22690 was over a 24-hour period from 11:33 on 8/15/12 to 11:33 on 8/16/12.

The following canister sample was collected at 411 Barnum Ave. between the parking lot behind the building and interstate 95 approximately 17 yards north of interstate 95, 51 yards south of the Stratford Square Mall and 5 feet above the ground.

Canister #20846 was over an 8-hour period from 10:52 to 18:52 on 8/16/12.

4.0 Canister VOC Air Sampling and Analytical Methodologies

4.1 Description

EPA Region I Standard Operating Procedure (SOP) for Canister Sampling, ECASOP-Canister Sampling SOP5, September 19, 2011, Revision 5, was used to collect the air samples. Twenty four hour and eight hour time-weighted average (TWA) indoor air samples were collected in evacuated 6-liter canisters using mechanical flow controllers, following the procedures described in Part 2 of the Region I SOP. Detailed descriptions of the quality assurance procedures are provided in Part 3, Section 14 of the referenced SOP.

The TWA indoor air samples were collected using a 6-liter canister with a mechanical flow controller calibrated to 3.7 ml/min to obtain 24-hour samples and to 10 ml/min to obtain 8-hour samples. At the end of the sampling period, the final canister pressure should have been below atmospheric pressure. For this study the final canister pressures for the 24-hour samples were between -1 and -9 inches of mercury vacuum, except for duplicate sample collected at 500 Ferry Blvd, which was zero gauge pressure. The final canister pressures for the 8-hour samples were between -2 and -25 inches of mercury vacuum, except for one of the samples collected at Payless Shoes, which was zero gauge pressure. As a result, the data collected are representative of 24-hour and 8-hour average concentrations, except for those samples that had ending pressures of zero. The data associated with these samples are considered estimated and not representative of their averaging times.

The indoor air, ambient air and soil gas confirmation canister samples were brought back to the EPA laboratory, properly logged in on 8/17/12 and analyzed on August 20, 21, 22, 2012 using a GC/MS following the EPA Region I Standard Operating Procedure, EIASOP-AIRCAN10. This analytical procedure was used to identify and quantify VOCs listed in Table 1. Prior to analyzing the canisters, they were pressurized with nitrogen. Indoor air and soil gas concentrations can be higher than outside ambient air. Therefore, in some cases a series of dilutions were made to keep concentrations within the calibration range. As a result, a dilution factor was calculated and applied to the data. When dilutions are made to samples, the compound reporting limits tend to be higher.

4.2 Canister Cleaning and Leak Certification Procedures

4.2.1 Canister Cleaning Procedure

Prior to the sampling event, all the canisters were cleaned by placing them in ovens maintained at 150°C, evacuated to at least 10^{-2} Torr and then pressurized with humidified nitrogen to approximately 30 psig. This process was repeated three times.

Detailed descriptions of these procedures are provided in the document entitled, "Canister Cleaning Standard Operating Procedures, ECASOP-Canister Cleaning SOP5, March 17, 2009, Revision 5."

4.2.2 Canister Leak Certification Procedure

At the end of the cleaning process described above, the canisters were evacuated to less than 10^{-2} Torr. A Pirani sensor was then used to measure the vacuum in each canister. The canisters were then placed on a shelf for at least 24 hours. At the conclusion of this period, the Pirani sensor was used again to measure the final canister vacuum which was compared to the initial reading to determine if the canisters show signs of leaking. Detailed descriptions of these procedures are provided in the document entitled, "Canister Leak Certification Standard Operating Procedures, ECASOP-Canister Leak SOP4, August 9, 2007, Revision 4."

4.2.3 Canister Cleanliness Certification Procedure

After all the canisters were certified leak free, each canister was pressurized with humidified nitrogen and then analyzed for contamination using the same GC/MS used to analyze the samples. Detailed descriptions of these procedures are provided in the document entitled, "Pressurized Canisters for Clean Certification Standard Operating Procedures, ECASOP-Canister Pressurizing SOP5, EPA-REG1-OEME/CANISTER-PREP-SOP, September 19, 2011, Revision 5."

Canisters were stored under pressure until February 9 and 10, when they were re-evacuated to less than 10^{-2} Torr. Detailed descriptions of these procedures are provided in the document entitled, "Canister Evacuation Standard Operating Procedures, ECASOP-Canister Evacuation SOP4, September 19, 2011, Revision 4."

4.3 Canister Flow Controller Cleaning and Calibration Procedures

4.3.1 Flow Controller Calibration Procedure

Flow controllers to be used with the 6-liter canisters were calibrated at the EPA laboratory to 3.7 ml/min to obtain 24-hour samples and to 10 ml/min. to obtain 8-hour samples following the procedures provided in the EPA Region I SOP for Canister Sampling, ECASOP-Canister Sampling SOP5, September 19, 2011, Revision 5, part 2, Section 14.1. Each flow controller was connected to a "dummy" evacuated canister and an Aalborg Electronic Mass Flow Meter, Model GFMs-010020, was attached to the flow controller's inlet port. As room air was drawn into the "dummy" canister, the flow controller needle valve was adjusted until the flow rate was maintained at the desired

rate.

In the field, each canister pressure was checked prior to and after the sampling event with a dedicated pressure/vacuum gauge. For this study the final canister pressures for the 24-hour samples were between -1 and -9 inches of mercury vacuum, except for duplicate sample collected at 500 Ferry Blvd, which was zero gauge pressure. The final canister pressures for the 8-hour samples were between -2 and -25 inches of mercury vacuum, except for one of the samples collected at Payless Shoes, which was zero gauge pressure. As a result, the data collected are representative of 24-hour and 8-hour average concentrations, except for those samples that had ending pressures of zero. The data associated with these samples are considered estimated and not representative of their averaging times.

4.3.2 Flow Controller Cleaning Procedure

After the flow controllers were calibrated they were cleaned following the procedures provided in the EPA Region I SOP for Flow Controller Cleaning Standard Operating Procedures, ECASOP- Flow Controller Cleaning. SOP.Rev1, September 19, 2011. The flow controllers were placed in ovens maintained at 100°C and purged with humidified nitrogen for approximately one hour.

4.4 Canister Analysis Quality Control/Quality Assurance Results

4.4.1 Laboratory Blank

Humidified nitrogen was introduced into the analytical instrument inlet line prior to analyzing the canisters to serve as laboratory blanks. The laboratory blanks were analyzed to determine the background contamination present in the analytical system. Canister data were qualified as estimated and flagged with a "B", when the observed concentration in the sample was less then five times the concentration in the laboratory blank. Blank values were not subtracted from the reported sample concentrations.

The laboratory blank results are presented in the Laboratory Analytical Reports, provided in Appendix D. Nineteen laboratory blanks were analyzed with the samples and no compounds were detected above the reporting limits. Therefore, no compounds were qualified as estimated based on the laboratory blank data.

4.4.2 Data Reproducibility/Precision Results

The following canisters were analyzed a second time for assessing analytical precision, namely: canister #22680 (Sample ID: AB32039), canister #14896 (Sample ID: AB32070) and canister #22690 (Sample ID: AB32074). The same sample aliquot was withdrawn from the canisters and analyzed in a similar manner. Compounds having values above their reporting limits are reported in a table at the end of the Laboratory Analytical Reports provided in Appendix A. The relative percent differences (RPD) were calculated and all are less than QC limits/acceptance criterion. Therefore, the analytical precision acceptance criterion has been satisfied and the data did not need to be qualified as estimated.

During the four day survey, one duplicate canister sample was collected each day over either a 24-hour or an 8-hour sampling period at four separate locations. Canister #3656 served as the duplicate sample and was collected in the basement at 500 Ferry Blvd. over a 24-hour period on 8/13/12 – 8/14/12. Canister #6555 served as the duplicate sample and was collected in the basement at 100 Veterans Way over an 8-hour period on 8/14/12. Canister #1574 served as the duplicate sample and was collected in the basement at 608 Ferry Blvd. over an 8-hour period on 8/15/12. Canister #1114 served as the duplicate sample and was collected in Marshall's backroom/ loading area at 411 Barnum Ave. over an 8-hour period on 8/16/12. Tables 2A, 2B, 2C and 2D show the comparison data of compounds detected above their reporting limits in both samples with calculated RPDs.

The sampling precision data were evaluated by comparing data pairs with both values greater than ten times the reporting limit and then determine if the calculated RPD was within the 25% acceptance criteria. Based on these criteria, the acceptance criteria was satisfied for all the duplicate samples.

4.4.3 Data Accuracy Results

A quality control canister sample containing selected VOCs at known concentrations was analyzed with the canister samples to determine analytical accuracy. The results of the observed concentrations were compared to the known acceptable range and are reported in a table at the end of the Laboratory Analytical Report provided in Appendix D. The observed concentrations for 1, 2, 4-trichlorobenzene did not meet spec for the three times the QC sample was analyzed. Also, dichlorotetrafluoroethane and hexachloro-1, 3-butadiene did meet spec either in separate QC sample analysis. The laboratory report indicates the NIST 1804 QC SRM expired in September 2011. At this time there are no vendors providing a NIST cylinder with TO-15 compounds.

4.4.4 Canister Surrogate Spike Results

Prior to analyzing each canister sample, surrogate compounds, 1, 2 dichloroethane d4, bromofluorobenzene and toluene d8 were added to the analytical system. The percent recovery data for the surrogate compounds are reported with each sample data sheet in Appendix D. The results show the recoveries for the three surrogate compounds were all determined to be acceptable.

4.4.5 Chain of Custody

Chain of custody documentation was completed by Peter Kahn. All canister samples were logged into the laboratory on August 17, 2012, transferring the sample custody to the laboratory personnel. A completed chain of custody form is included with the Laboratory Analytical Report provided in Appendix D.

4.4.6 Data Validation and Usability

The analytical report provided by the EPA Regional Laboratory was further validated by Peter Kahn. The data reported by the laboratory were compared to the data quality performance criteria specified in Sections 4.4.1, 4.4.2, 4.4.3 and 4.4.4 to evaluate data

usability. All data collected for this project are presented in this report and qualified as needed, no data were rejected. The data presented in this report are of acceptable quality to represent the levels of volatile organic compounds present at the indoor air, ambient air, and soil gas sampling locations. These levels may vary given differing site activities, environmental conditions and the time of year. Therefore, the data only represent the conditions prevailing at the time of sampling.

5.0 Air Grab Sampling and Analysis Methodology for VOCs

5.1 Air Grab Sampling Procedures

Indoor air grab samples were collected by drawing 200 micro liters of air at the selected sampling locations using an air tight glass syringe. Samples were manually injected and immediately analyzed on-site using a Shimadzu GC/ECD/PID and Photovac 10A10 GC/PID.

5.2 Air Grab Field Analytical Procedures

Air grab samples were analyzed using Region 1's standard air screening method, "Air Sample Analysis for Volatile Organic Compounds", EIASOP-FLDGRAB4. Vapor samples were collected in a 250 micro liter steel barreled glass syringe and were analyzed on-site using a Shimadzu 14B gas chromatograph (GC) equipped with a 30 meter, 0.53 mm DBPS 624 column, electron capture detector (ECD). Analysis was also performed using a Photovac 10A10 PID equipped with a 4 foot x 1/8 inch SE 30 column. To document the response of the GC's strip chart recorders were used to record the sample and standard chromatograms.

Concentrations of VOCs were calculated using the external standard technique. To tentatively identify compounds in a sample, professional judgment was used to identify the retention times of sample chromatogram peaks. These were then compared to the standard peak retention times. When a compound was tentatively identified, quantitation was performed by a peak height comparison. For this study the method tentatively identified and quantified the compounds shown below with their reporting limits.

Compound	Reporting Limit (ppb/v)	Reporting Limit (µg/m^3)
Trichloroethylene	0.7	3.8
1,1,1-Trichloroethane	1.0	5.5
Tetrachloroethylene	0.4	2.7

5.3 Quality Control Procedures

The following quality control procedures were used for the on-site air grab sample analysis.

- Syringe blank injections were made after every 10 samples and as needed to assess carryover from high concentration samples. Blank values were subtracted from sample values when calculating compound concentrations.

- A one level calibration standard was run throughout the analysis period to maintain a consistent standard chromatogram.
- Duplicate/replicate analyses were performed to determine field precision. All of the relative percent differences (RPDs) were within the ± 20% acceptance criteria.

6.0 Soil Gas Sampling and Analysis Methodology for VOCs

6.1 Soil Gas Sampling Procedures

6.1.1 Sub-Slab Soil Gas Sampling Procedures

The installation of sub-slab soil gas sampling probes was performed using the EPA Region I Standard Operating Procedure for Sub-Slab Soil Gas Sampling, April 12, 2011, Revision 2. After the sampling probe was in place, a battery operated, portable vacuum pump, calibrated to approximately 1 liter per minute, was attached at the end of a "T" fitting to purge 1 liter from the sampling probe before collecting the sample. The pump continuously withdrew soil gas as a sample was collected. This was accomplished by inserting the needle of a glass syringe through the septa of the "T" fitting and extracting a sample from the soil gas path. Samples were then manually injected into a Shimadzu GC and Photovac GC.

At each soil gas sampling location, the sub-slab sampling probe remained in the same position and a new "T" fitting, made of a stainless steel flexible line and an in-line valve, was connected for collecting a canister grab sample. The vacuum pump was attached to one end of the "T" fitting and the flow controller/canister was connected to the other end of the "T" fitting. The canister valve remained closed as the pump purged 1 liter from the probe. Immediately after the in-line valve on the pump end of the "T" fitting was closed, the canister valve was opened to collect a grab sample. Using a flow controller on the canister calibrated to flow rate of approximately 600 ml/min. the canister reached atmospheric pressure within approximately 20 minutes. All of the soil gas canister grab samples were brought back to the OEME Laboratory for analysis following the procedure described in Section 4.1.

6.2 Soil Gas Field Analytical Procedures

The soil gas grab samples were analyzed using Region 1's standard air screening method, "Air Sample Analysis for Volatile Organic Compounds", EIASOP-FLDGRAB4. Vapor samples were collected in a 250 micro liter steel barreled glass syringe and were analyzed on-site using a Shimadzu 14B gas chromatograph (GC) equipped with a 30 meter, 0.53 mm DBPS 624 column, electron capture detector (ECD). Analysis was also performed using a Photovac 10A10 PID equipped with a 4 foot x 1/8 inch SE 30 column. To document the response of the GC's strip chart recorders were used to record the sample and standard chromatograms.

Concentrations of VOCs were calculated using the external standard technique. To tentatively identify compounds in a sample, professional judgment was used to identify the retention times of sample chromatogram peaks. These were then compared to the

standard peak retention times. When a compound was tentatively identified, quantitation was performed by a peak height comparison. For this study the method tentatively identified and quantified the compounds shown in the table above with their reporting limits.

6.3 Quality Control Procedures

The following quality control procedures were used for the on-site air grab sample analysis.

- Syringe blank injections were made after every 10 samples and as needed to assess carryover from high concentration samples. Blank values were subtracted from sample values when calculating compound concentrations.
- A one level calibration standard was run throughout the analysis period to maintain a consistent standard chromatogram.
- Duplicate/replicate analyses were performed to determine field precision. All of the relative percent differences (RPDs) were within the ± 20% acceptance criteria.

7.0 Meteorological Measurement

7.1 Ambient Air Meteorological Data

In general, sampling during winter months is the best strategy to maximize the probability of encountering "worse case" conditions. A key factor in this regard is the movement of gases in and out of the building basement or slab on-grade, to and from the surrounding subsurface environment. Meteorological conditions and observations during and prior to the sampling event provide some insight in this regard. With respect to encountering worse-case conditions, a change in barometric pressure can promote a modest "barometric pumping" action, where higher pressure gases in the subsurface migrate to lower pressure overlying areas (including structures). Also, moderate rainfall in the preceding days of a sampling event, moderate to high wind speeds around a structure and hot forced air heating systems cycling on and off within the structure during the sampling event could promote movement of subsurface vapors into structures.

Meteorological data were obtained from the Igor I. Sikorsky Memorial Airport in Bridgeport, CT using the following NOAA web Site, http://cdo.ncdc.noaa.gov/qclcd. The airport is between 2 and 2.5 miles south of the area under investigation. Five tables are provided in Appendix C showing the daily weather conditions for August 12 – 16, 2012. The data shown include: hourly temperature, dew point, relative humidity, wind direction, wind speed, atmospheric pressure and precipitation amounts. Thirty five hours prior to the first sampling event that began on August 13 at 11:40, 0.40 inches of precipitation was recorded. Between 11:40 on 8/13/12 and the end of the last sampling event at 18:52 on 8/16/12 only 0.22 inches of precipitation was recorded. As a result, the soil pore spaces were most likely not significantly saturated with moisture prior to or during the sampling events. Therefore, soil gases had a chance to accumulate in the soil pore spaces and had the potential to migrate into the buildings, if a pathway existed.

Throughout the 4 days of sampling barometric pressure fluctuations were noticed, but definitive trend up or down was observed. These fluctuations in pressure may have caused soil gases to begin moving out of the soil pore spaces and potentially into the buildings, if a pathway existed. Average wind speeds between 3 and 6 mph were recorded over the four days of sampling, which most likely did not promote the movement of subsurface vapors into the structure. The table below shows the average 24-hour meteorological conditions for the period August 12 – 16, 2012.

Time	Temp. (F)	Dew Point Temp. (F)	Relative Humidity (%)	Wind Speed (mph)	Wind Direction	Barometric Pressure (inches Hg)
8/12/12	80	67	67	8	WSW	29.88
8/13/12	77	63	64	6	WSW	29.93
8/14/12	75	66	74	3	SSW	29.92
8/15/12	73	69	87	6	SSE	29.85
8/16/12	77	64	67	6	WNW	29.84

8.0 Indoor Air and Soil Gas Sampling Results and Discussions

August 13 – 16, 2012, indoor air and, where feasible, sub-slab soil gas sampling were performed inside nine commercial buildings and within four condominium/apartments to form lines of evidence for completion of a vapor intrusion pathway risk evaluation related to contaminants associated with the Site. At 444 Ferry Blvd., 500 Ferry Blvd., 100 Veterans Way, 608 Ferry Blvd., 335 Ferry Blvd., 300 Ferry Blvd. and within the Village Square Condominiums, soil gas grab samples were collected from 1 to 3 sub-slab sampling locations and indoor air samples were collected from the basement and/or first floor areas. The buildings located at 411 Barnum Ave. and 326 Ferry Blvd. only had samples collected from inside the buildings, no sub-slab samples were collected. Inside all the buildings, except at 500 Ferry Blvd. and the four units on Ferry Court as part of the Village Square Condominiums, 8-hour indoor air samples were collected. At 500 Ferry Blvd. and in the units on Ferry Court, indoor air samples were collected over a 24-hour period. In this section, the August indoor air data will be compared to background outdoor ambient air data that was collected during three separate 24-hour sampling periods and an 8-hour period on 8/16/12. The collected data will also be compared to the EPA Regional Screening Levels (RSLs) for the target compounds, TCE, 1, 1-DCE, 1, 1-DCA, benzene, chlorobenzene, chloroform, ethylbenzene and VC. All canister samples were analyzed for the VOCs listed on Table 1 using a GC/MS. The data presented in this report are of acceptable quality to represent the levels of VOCs present at the sampling locations under the specific conditions prevailing during sampling. These levels may vary given differing site activities, time of year, characteristics of the site and groundwater plume, meteorological conditions and building operations.

The indoor air and soil gas canister sampling analytical report is provided in Appendix D. The EPA Mobile Laboratory analytical report is provided in Appendix E. The 24-hour ambient air canister target and non-target compound data are summarized in Table 3. Tables 4 – 24 show a summary of the indoor air, outside air canister data and soil gas confirmation canister data for all compounds (target and non-target) detected

above their reporting limits for each property. Tables 25 - 36 show a summary of the air grab sampling data, indoor air canister data and sub-slab soil gas data for the target compounds, including 1,1,1-trichloroethane (1,1,1-TCA) and tetrachloroethylene (PCE) collected from each property.

8.1 Trichloroethylene Sampling Results and Discussions

The indoor air data were reviewed and compared to the TCE EPA RSL for residential and commercial/industrial properties where applicable, 0.43 µg/m^3 and 3.0 µg/m^3, respectively. The indoor air TCE concentrations inside the four residential properties, 62 Ferry Court, 72 Ferry Court, 82 Ferry Court and 50 Ferry Court and the residential/commercial property located at 500 Ferry Blvd., were not above the residential RSL, 0.43 µg/m^3. The only values detected above the reporting limits were in the 72 Ferry Court basement and on the first floor at the same estimated concentration 0.43 µg/m^3. The method reporting limits for the indoor air samples collected at these locations were between 0.43 µg/m^3 and 0.59 µg/m^3, which are at or slightly above the residential RSL, making it difficult to perform an accurate vapor intrusion pathway risk evaluation. Sub-slab soil gas TCE concentrations were detected at 500 Ferry Blvd. between 31 µg/m^3 and 177 µg/m^3, which are above the target sub-slab soil gas residential RSL of 4.3 µg/m^3. Comparing the indoor air and sub-slab soil gas concentrations does not suggest soil gas migration into the building is occurring. In contrast, there were lower sub-slab soil gas concentrations detected beneath 82 Ferry Court at 0.46 µg/m^3 and not detected above the reporting limits at 62, 50 and 72 Ferry Court. This data shows very little soil gas was accumulating under these condominiums and considering the low indoor air concentrations, there is no apparent adverse impact to indoor air quality. In addition, all of these properties have what appear to be solid foundations and finished basements. TCE was not detected above the reporting limit in the outside ambient air, so this was not a contributing factor to indoor air levels. Also, based on an inventory and discussions with the occupants of each building, the products used and or stored inside these buildings did not contribute to the TCE indoor air concentrations. TCE indoor air and soil gas results for these buildings are shown below. Note that in the table, ND = not detected, NA = not applicable and L = estimated value.

Residential TCE Concentrations

	500 Ferry Blvd. (µg/m^3)	62 Ferry Court (µg/m^3)	72 Ferry Court (µg/m^3)	82 Ferry Court (µg/m^3)	50 Ferry Court (µg/m^3)
Basement 24-Hour Indoor Air	ND (0.43)	ND (0.59)	0.43 L	ND (0.59)	ND (0.48)
Crawl Space 24-Hour Indoor Air	ND (0.48)	NA	NA	NA	NA
First Floor 24-Hour Indoor Air	ND (0.48)	ND (0.48)	0.43 L	ND (0.54)	ND (0.59)
Sub-Slab Soil Gas SS-1	31	ND (0.48)	ND (0.43)	0.46	ND (0.48)
Sub-Slab Soil Gas SS-2	177	NA	NA	NA	NA
Outside Ambient Air	ND (0.59)	ND (0.59)	ND (0.59)	ND (0.59)	ND (0.59)

EPA RSL Residential Indoor Air for TCE is 0.43 µg/m^3
EPA RSL Residential Target Sub-Slab Soil Gas for TCE is 4.3 µg/m^3

The TCE indoor air data collected from the commercial/industrial properties were compared to the EPA RSL, 3.0 µg/m^3. The properties with indoor air values above the RSL were within Curtin Taxi (400 µg/m^3) and in the Estimating Room (4.3 µg/m^3) located at 335 Ferry Blvd., the Snowboard Area at 300 Ferry Blvd. (5.4 µg/m^3) and in the Sleepy's Store (11 µg/m^3) located in Stratford Square at 411 Barnum Ave. At 335 Ferry Blvd. there was evidence that TCE was present in the soil gas below the buildings slab at concentrations between 53 µg/m^3 and 91 µg/m^3, which are much lower than the concentration inside Curtin Taxi. After taking several indoor air grab samples in various rooms/closets within Curtin Taxi, high TCE concentrations were identified coming from the auto supply room. An inventory of products stored in the auto supply room indentified the source of the TCE indoor air concentrations to be from a 32 ounce container of "Tru-Flate Universal Cement, Type C" with a label indicating it contains TCE. The levels of TCE in the various rooms/closets within Curtis Taxi were as follows: 3,063 µg/m^3 in the auto supply room; 607 µg/m^3 in the utility closet across the hall from the auto supply room; 451 µg/m^3 in the small office and 400 µg/m^3 in the large main room. The concentration detected in the Estimating Room at 335 Ferry Blvd. was much lower, but still above the RSL. Considering the discovery of a product containing TCE is being used inside the building strongly suggest the source of the TCE indoor air concentrations within 335 Ferry Blvd. is from this product and not from sources beneath or adjacent to the building.

At 300 Ferry Blvd. the TCE sub-slab soil gas concentrations were much higher, between 597 µg/m^3 and 1100 µg/m^3, compared to the 5.4 µg/m^3 detected inside the building. During the February round of sampling the sub-slab soil gas TCE concentrations were much lower, 160 µg/m^3 and TCE was not detected above the reporting limits inside the building. There is a possibility soil gas is migrating into the building, but a very slow rate and when soil concentrations are higher.

The only store in the Stratford Square Mall at 411 Barnum Ave. that detected TCE above the RSL was Sleepy's at a concentration of 11 µg/m^3. During the February round of sampling TCE was detected inside Sleepy's at a similar concentration, 13 µg/m^3. There were other stores at 411 Barnum Ave. that had detectable levels of TCE, but below the RSL, namely: McDonalds (1.1 µg/m^3), the Post Office (1.3 µg/m^3), Payless Shoes (1.3 µg/m^3 and 1.7 µg/m^3), Fashion Bug (0.7 µg/m^3) and T-Mobile (2.7 µg/m^3). TCE was detected in the outside ambient air at 1.7 µg/m^3, which could be contributing to the indoor air levels at 411 Barnum Ave. No sub-slab soil gas samples were collected at 411 Barnum Ave., so it is difficult to determine if indoor air concentrations are associated with contamination underneath the building or from products stored or used inside the building.

The TCE reporting limits for the commercial/industrial properties were between 0.43 µg/m^3 and 1.1 µg/m^3, which are well below the commercial/industrial RSL. Therefore, the indoor air data can be used to effectively evaluate the vapor intrusion pathway risk. TCE indoor air and soil gas results for the commercial/industrial buildings are shown below. Note that in the table, ND = not detected, NA = not applicable and L = estimated value.

Commercial/Industrial TCE Concentrations

	608 Ferry Blvd. (µg/m³)	100 Veterans Way (µg/m³)	444 Ferry Blvd. (µg/m³)
Basement 8-Hour Indoor Air	1.3	1.7	ND (0.59)
First Floor 8-Hour Indoor Air	ND (0.91)	0.54	ND (0.59)
Sub-Slab Soil Gas SS-1	570	2,500	ND (3.8)
Sub-Slab Soil Gas SS-2	33	2,349	ND (3.8)
Sub-Slab Soil Gas SS-3	47.	2,859	15
Outside Ambient Air	ND (0.64)	ND (0.54)	ND (0.54)

EPA RSL Commercial/Industrial Air for TCE is 3.0 µg/m³
EPA RSL Commercial/Industrial Target Sub-Slab Soil Gas for TCE is 30 µg/m³

	335 Ferry Blvd. (µg/m³)	300 Ferry Blvd. (µg/m³)	326 Ferry Blvd. (µg/m³)
Ground Flr. 8-hr. Indoor Air	Curtin Taxi Main Rm: 400	Main Rm: ND (1.1)	Dining Room: ND (0.59)
Indoor Air Grab	Curtin Taxi Auto Supply Rm: 3,063	NA	NA
Indoor Air Grab	Curtin Taxi Utility Closet: 607	NA	NA
Indoor Air Grab	Curtin Taxi Small Office: 451	NA	NA
Ground Flr. 8-hr. Indoor Air	Office: 1.6	Snow Board Area: 5.4	Kitchen: ND (0.64)
Ground Flr. 8-hr. Indoor Air	Estimating Rm: 4.3	NA	NA
Sub-Slab Soil Gas SS-1	Garage Area 1: 53	Snow Board Storage: 1,100	NA
Sub-Slab Soil Gas SS-2	Garage Area 2: ND (7.5)	Repair Shop: 597	NA
Sub-Slab Soil Gas SS-3	BrenAir Area: 91 L	NA	NA
Outside Ambient Air	ND (0.64)	ND (0.64)	ND (0.54)

EPA RSL Commercial/Industrial Air for TCE is 3.0 µg/m³
EPA RSL Commercial/Industrial Target Sub-Slab Soil Gas for TCE is 30 µg/m³

Ground Floor 8-hour Indoor Air	411 Barnum Ave. (µg/m³)
McDonalds	1.1
Marshalls Loading Area Marshalls Shopping Area	ND (0.54) ND (0.48)
Payless Shoe Source Back of Store Payless Shoe Source Middle of Store	1.3 1.7
Sleepy's	11
Fashion Bug	0.70
US Postal Service	1.3
Sally's Beauty	ND (0.70)
Game Stop	ND (0.54)
T-Mobile	2.7
Regal Cinema Theater #11 Regal Cinema Theater #8 Regal Cinema Projection Booth	ND (0.59) ND (0.54) ND (0.59)
Outside Ambient Air	1.7

EPA RSL Commercial/Industrial Air for TCE is 3.0 µg/m³

8.2 1, 1-Dichloroethylene Sampling Results and Discussions

The indoor air data were reviewed and compared to the 1, 1-DCE EPA RSL for residential and commercial/industrial properties where applicable, 210 µg/m^3 and 880 µg/m^3, respectively. The indoor air 1, 1-DCE concentrations inside the four residential properties, 62 Ferry Court, 72 Ferry Court, 82 Ferry Court and 50 Ferry Court and the residential/commercial property located at 500 Ferry Blvd., were not above the residential RSL or above the reporting limits. The reporting limits for these properties were between 0.32 µg/m^3 and 0.59 µg/m^3, which are well below the residential RSL. Therefore, the indoor air data can be used to effectively evaluate the vapor intrusion pathway risk. At 500 Ferry Blvd., 1, 1-DCE sub-slab soil gas concentrations were detected at 6.5 µg/m^3, but not inside the building, which suggest soil gas migration into the building could occur if a pathway exists. There were no detectable concentrations of 1, 1-DCE beneath the condominiums at 62 Ferry Court, 72 Ferry Court, 82 Ferry Court or 50 Ferry Court. This data shows no soil gas was accumulating under these condominiums and considering nothing was detected inside the buildings, shows no apparent adverse impact to indoor air quality. 1, 1-DCE was not detected above the reporting limit in the outside ambient air, so this was not a contributing factor to indoor air levels. 1, 1-DCE indoor air and soil gas results for these buildings are shown below. Note that in the table, ND = not detected and NA = not applicable.

Residential 1, 1-DCE Concentrations

	500 Ferry Blvd. (µg/m^3)	62 Ferry Court (µg/m^3)	72 Ferry Court (µg/m^3)	82 Ferry Court (µg/m^3)	50 Ferry Court (µg/m^3)
Basement 24-Hour Indoor Air	ND (0.32)	ND (0.44)	ND (0.40)	ND (0.44)	ND (0.36)
Crawl Space 24-Hour Indoor Air	ND (0.36)	NA	NA	NA	NA
First Floor 24-Hour Indoor Air	ND (0.36)	ND (0.36)	ND (0.40)	ND (0.40)	ND (0.44)
Sub-Slab Soil Gas SS-1	NA	ND (0.36)	ND (0.32)	ND (0.32)	ND (0.36)
Sub-Slab Soil Gas SS-2	6.5	NA	NA	NA	NA
Outside Ambient Air	ND (0.44)	ND (0.44)	ND (0.44)	ND (0.44)	ND (0.44)

EPA RSL Residential Air for 1, 1-DCE is 210 µg/m^3
EPA RSL Residential Target Sub-Slab Soil Gas for 1, 1-DCE is 2100 µg/m^3

The 1, 1-DCE indoor air data collected from the commercial/industrial properties were compared to the EPA RSL, 880 µg/m^3. The indoor air 1, 1-DCE concentrations inside the commercial/industrial properties were not detected above the RSL or above the reporting limits. The reporting limits for these properties were between 0.36 µg/m^3 and 1.7 µg/m^3, which are well below the commercial/industrial RSL. Therefore, the indoor air data can be used to effectively evaluate the vapor intrusion pathway risk. There was evidence that low 1, 1-DCE concentrations were present in the soil gas below the building slab at 300 Ferry Blvd. (4.4 µg/m^3) and at 444 Ferry Blvd. (2.6 µg/m^3). At 100 Veterans Way the sub-slab soil gas concentrations were higher, between 44 µg/m^3 and 1,000 µg/m^3, compared to what was detected inside the building. 1, 1-DCE was not detected above the reporting limit in the outside ambient air, so this was not a contributing factor to indoor air levels. 1, 1-DCE indoor air and soil gas results for these buildings are shown below. Note that in the table, ND = not detected and NA = not applicable.

Commercial/Industrial 1, 1- DCE Concentrations

	608 Ferry Blvd. (µg/m^3)	100 Veterans Way (µg/m^3)	444 Ferry Blvd. (µg/m^3)
Basement 8-Hour Indoor Air	ND (0.44)	ND (0.44)	ND (0.44)
First Floor 8-Hour Indoor Air	ND (0.67)	ND (0.40)	ND (0.44)
Sub-Slab Soil Gas SS-1	NA	1000	NA
Sub-Slab Soil Gas SS-2	NA	44	NA
Sub-Slab Soil Gas SS-3	ND (0.60)	52	2.6
Outside Ambient Air	ND (0.48)	ND (0.40)	ND (0.40)

EPA RSL Commercial/Industrial Air for 1, 1-DCE is 880 µg/m^3
EPA RSL Commercial/Industrial Target Sub-Slab Soil Gas for 1, 1-DCE is 8000 µg/m^3

	335 Ferry Blvd. (µg/m^3)	300 Ferry Blvd. (µg/m^3)	326 Ferry Blvd. (µg/m^3)
Ground Flr. 8-hr. Indoor Air	Curtin Taxi Main Rm: ND (0.71)	Main Rm: ND (0.79)	Dining Room: ND (0.44)
Indoor Air Grab	Curtin Taxi Auto Supply Rm: ND (52)	NA	NA
Indoor Air Grab	Curtin Taxi Utility Closet: NA	NA	NA
Indoor Air Grab	Curtin Taxi Small Office: NA	NA	NA
Ground Flr. 8-hr. Indoor Air	Office: ND (0.64)	Snow Board Area: ND (0.44)	Kitchen: ND (0.48)
Ground Flr. 8-hr. Indoor Air	Estimating Rm: ND (0.40)	NA	NA
Sub-Slab Soil Gas SS-1	Garage Area 1: NA	Snow Board Storage: 4.4	NA
Sub-Slab Soil Gas SS-2	Garage Area 2: NA	Repair Shop: NA	NA
Sub-Slab Soil Gas SS-3	BrenAir Area: ND (0.40)	NA	NA
Outside Ambient Air	ND (0.48)	ND (0.48)	ND (0.40)

EPA RSL Commercial/Industrial Air for 1, 1-DCE is 880 µg/m^3
EPA RSL Commercial/Industrial Target Sub-Slab Soil Gas for 1, 1-DCE is 8000 µg/m^3

Ground Floor 8-hour Indoor Air	411 Barnum Ave. (µg/m^3)
McDonalds	ND (0.48)
Marshalls Loading Area Marshalls Shopping Area	ND (0.40) ND (0.36)
Payless Shoe Source Back of Store Payless Shoe Source Middle of Store	ND (0.44) ND (0.36)
Sleepy's	ND (0.95)
Fashion Bug	ND (0.36)
US Postal Service	ND (0.44)
Sally's Beauty	ND (0.52)
Game Stop	ND (0.40)
T-Mobile	ND (1.7)
Regal Cinema Theater #11 Regal Cinema Theater #8 Regal Cinema Projection Booth	ND (0.44) ND (0.40) ND (0.44)
Outside Ambient Air	ND (0.60)

EPA RSL Commercial/Industrial Air for 1, 1-DCE is 880 µg/m^3

8.3 1, 1-Dichloroethane Sampling Results and Discussions

The indoor air data were reviewed and compared to the 1, 1-DCA EPA RSL for residential and commercial/industrial properties where applicable, 1.5 µg/m^3 and 7.7 µg/m^3, respectively. The indoor air 1, 1-DCA concentrations inside the four residential properties, 62 Ferry Court, 72 Ferry Court, 82 Ferry Court and 50 Ferry Court and the residential/commercial property located at 500 Ferry Blvd., were not above the residential RSL or above the reporting limits. The reporting limits for these properties were between 0.32 µg/m^3 and 0.44 µg/m^3, which are well below the residential RSL. Therefore, the indoor air data can be used to effectively evaluate the vapor intrusion pathway risk. At 500 Ferry Blvd., 1, 1-DCA sub-slab soil gas concentrations were detected at 3.1 µg/m^3, but not inside the building, which suggest soil gas migration into the building could occur if a pathway exists. There were no detectable concentrations of 1, 1-DCA beneath the condominiums at 62 Ferry Court, 72 Ferry Court, 82 Ferry Court or 50 Ferry Court. This data shows no soil gas was accumulating under these condominiums and considering nothing was detected inside the buildings, shows no apparent adverse impact to indoor air quality. 1, 1-DCA was not detected above the reporting limit in the outside ambient air, so this was not a contributing factor to indoor air levels. 1, 1-DCA indoor air and soil gas results for these buildings are shown below. Note that in the table, ND = not detected and NA = not applicable.

Residential 1, 1-DCA Concentrations

	500 Ferry Blvd. (µg/m^3)	62 Ferry Court (µg/m^3)	72 Ferry Court (µg/m^3)	82 Ferry Court (µg/m^3)	50 Ferry Court (µg/m^3)
Basement 24-Hour Indoor Air	ND (0.32)	ND (0.44)	ND (0.40)	ND (0.44)	ND (0.36)
Crawl Space 24-Hour Indoor Air	ND (0.36)	NA	NA	NA	NA
First Floor 24-Hour Indoor Air	ND (0.36)	ND (0.36)	ND (0.40)	ND (0.40)	ND (0.44)
Sub-Slab Soil Gas SS-1	NA	ND (0.36)	ND (0.32)	ND (0.37)	ND (0.36)
Sub-Slab Soil Gas SS-2	3.1	NA	NA	NA	NA
Outside Ambient Air	ND (0.44)	ND (0.44)	ND (0.44)	ND (0.44)	ND (0.44)

EPA RSL Residential Air for 1, 1-DCA is 1.5 µg/m^3
EPA RSL Residential Target Sub-Slab Soil Gas for 1, 1-DCA is 15 µg/m^3

The 1, 1-DCA indoor air data collected from the commercial/industrial properties were compared to the EPA RSL, 7.7 µg/m^3. The indoor air 1, 1-DCA concentrations inside the commercial/industrial properties were not detected above the RSL. Detectable concentrations of 1, 1-DCA were measured inside 100 Veterans Way in the basement at 1.0 µg/m^3 and 0.36 µg/m^3 on the first floor and in the 608 Ferry Blvd. basement at 0.22 µg/m^3. The reporting limits for these properties were between 0.36 µg/m^3 and 0.73 µg/m^3, which are below the commercial/industrial RSL. Therefore, the indoor air data can be used to effectively evaluate the vapor intrusion pathway risk. There was evidence that low 1, 1-DCA concentrations were present in the soil gas below the building slab at 444 Ferry Blvd. (15 µg/m^3). At 100 Veterans Way the sub-slab soil gas concentrations were higher at 6,100 µg/m^3. 1, 1-DCA was not detected above the reporting limit in the outside ambient air, so this was not a contributing factor to indoor air levels. 1, 1-DCA indoor air and soil gas results for these buildings are shown below. Note that in the table, ND = not detected, NA = not applicable and L = estimated value.

Commercial/Industrial 1, 1- DCA Concentrations

	608 Ferry Blvd. (µg/m^3)	100 Veterans Way (µg/m^3)	444 Ferry Blvd. (µg/m^3)
Basement 8-Hour Indoor Air	0.22 L	1.0	ND (0.44)
First Floor 8-Hour Indoor Air	ND (0.69)	0.36 L	ND (0.44)
Sub-Slab Soil Gas SS-1	NA	6100	NA
Sub-Slab Soil Gas SS-2	NA	NA	NA
Sub-Slab Soil Gas SS-3	ND (0.60)	NA	15
Outside Ambient Air	ND (0.48)	ND (0.40)	ND (0.40)

EPA RSL Commercial/Industrial Air for 1, 1-DCA is 7.7 µg/m^3
EPA RSL Commercial/Industrial Target Sub-Slab Soil Gas for 1, 1-DCA is 77 µg/m^3

	335 Ferry Blvd. (µg/m^3)	300 Ferry Blvd. (µg/m^3)	326 Ferry Blvd. (µg/m^3)
Ground Flr. 8-hr. Indoor Air	Curtin Taxi Main Rm: ND (0.73)	Main Rm: ND (0.81)	Dining Room: ND (0.44)
Indoor Air Grab	Curtin Taxi Auto Supply Rm: ND (53)	NA	NA
Indoor Air Grab	Curtin Taxi Utility Closet: NA	NA	NA
Indoor Air Grab	Curtin Taxi Small Office: NA	NA	NA
Ground Flr. 8-hr. Indoor Air	Office: ND (0.65)	Snow Board Area: ND (0.44)	Kitchen: ND (0.48)
Ground Flr. 8-hr. Indoor Air	Estimating Rm: ND (0.40)	NA	NA
Sub-Slab Soil Gas SS-1	Garage Area 1: NA	Snow Board Storage: 10	NA
Sub-Slab Soil Gas SS-2	Garage Area 2: NA	Repair Shop: NA	NA
Sub-Slab Soil Gas SS-3	BrenAir Area: 1.3	NA	NA
Outside Ambient Air	ND (0.48)	ND (0.48)	ND (0.40)

EPA RSL Commercial/Industrial Air for 1, 1-DCA is 7.7 µg/m^3
EPA RSL Commercial/Industrial Target Sub-Slab Soil Gas for 1, 1-DCA is 77 µg/m^3

Ground Floor 8-hour Indoor Air	411 Barnum Ave. (µg/m^3)
McDonalds	ND (0.48)
Marshalls Loading Area Marshalls Shopping Area	ND (0.40) ND (0.36)
Payless Shoe Source Back of Store Payless Shoe Source Middle of Store	ND (0.44) ND (0.36)
Sleepy's	ND (0.97)
Fashion Bug	ND (0.36)
US Postal Service	ND (0.44)
Sally's Beauty	ND (0.52)
Game Stop	ND (0.40)
T-Mobile	ND (1.7)
Regal Cinema Theater #11 Regal Cinema Theater #8 Regal Cinema Projection Booth	ND (0.44) ND (0.40) ND (0.44)
Outside Ambient Air	ND (0.60)

EPA RSL Commercial/Industrial Air for 1, 1-DCA is 7.7 µg/m^3

8.4 Benzene Sampling Results and Discussions

The indoor air data were reviewed and compared to the benzene EPA RSL for residential and commercial/industrial properties where applicable, 0.31 µg/m^3 and 1.6 µg/m^3, respectively. The indoor air benzene concentrations inside the four residential properties, 62 Ferry Court, 72 Ferry Court, 82 Ferry Court and 50 Ferry Court and the residential/commercial property located at 500 Ferry Blvd., were all above the residential RSL, 0.31 µg/m^3. Sub-slab soil gas benzene concentrations were only detected at 500 Ferry Blvd. at 3.9 µg/m^3, which is slightly above the target sub-slab soil gas residential RSL of 3.1 µg/m^3. Indoor air concentrations inside 500 Ferry Blvd. were between 9.4 and 19 µg/m^3. Comparing the indoor air and sub-slab soil gas concentrations does not suggest soil gas migration into the building is occurring. At the time samples were being collected there were two 4 wheelers/ATVs stored in the basement with gasoline in the tanks and an odor of gasoline noticed. The benzene levels detected inside 500 Ferry Blvd. are most likely the result of the gasoline and not sources beneath or adjacent to the building. In addition, the background ambient air sample collected outside the building detected benzene at 0.61 µg/m^3, which could also be contributing to the indoor air concentrations.

The indoor air concentrations inside the four condominiums were much lower than at 500 Ferry Blvd., with the basement and first floor levels being very similar. At 62 Ferry Court the benzene concentration was 0.73 µg/m^3 in the basement and 0.48 µg/m^3 on the first floor; at 72 Ferry Court the basement detected 1.2 µg/m^3 in the basement and 1.0 µg/m^3 on the first floor; at 82 Ferry Court the concentration in the basement and on the first floor was 0.45 µg/m^3; at 50 Ferry Court benzene was detected at 0.93 µg/m^3 in the basement and 0.92 µg/m^3 on the first floor. The background ambient air sample detected benzene at 0.61 µg/m^3, which is most likely contributing to the indoor air concentrations inside the condominiums. In addition, considering benzene was not detected in soil gas beneath the buildings shows there is no apparent adverse impact to indoor air quality associated with sources beneath or adjacent to the buildings. Also, all of these properties have what appear to be solid foundations and finished basements and based on an inventory and discussions with the occupants of each building, the products used and or stored inside these buildings did not contribute to the benzene indoor air concentrations. One possible exception would be at 62 Ferry Court the occupant is a cigarette smoker which can be a contributor to the benzene levels detected inside the home. Benzene indoor air and soil gas results for these buildings are shown below. Note that in the table, ND = not detected and NA = not applicable.

Residential Benzene Concentrations

	500 Ferry Blvd. (µg/m³)	62 Ferry Court (µg/m³)	72 Ferry Court (µg/m³)	82 Ferry Court (µg/m³)	50 Ferry Court (µg/m³)
Basement 24-Hour Indoor Air	19	0.73	1.2	0.45	0.93
Crawl Space 24-Hour Indoor Air	9.4	NA	NA	NA	NA
First Floor 24-Hour Indoor Air	16	0.48	1.0	0.45	0.92
Sub-Slab Soil Gas SS-1	NA	ND (0.29)	ND (0.25)	ND (0.25)	ND (0.29)
Sub-Slab Soil Gas SS-2	3.9	NA	NA	NA	NA
Outside Ambient Air	0.61	0.61	0.61	0.61	0.61

EPA RSL Residential Indoor Air for benzene is 0.31 µg/m^3
EPA RSL Residential Target Sub-Slab Soil Gas for benzene is 3.1 µg/m^3

The benzene indoor air data collected from the commercial/industrial properties were compared to the EPA RSL, 1.6 µg/m^3. The properties with indoor air values above the RSL were within 300 Ferry Blvd. Main Show Room (7.3 µg/m^3) and the Snowboard Area at (7.2 µg/m^3), at 100 Veterans Way in the basement at 3.3 µg/m^3 and on the first floor at 2.1 µg/m^3, at 411 Barnum Ave. within the Sleepy's store (2.6 µg/m^3) and Payless Shoe store (9.5 - 11 µg/m^3). At 300 Ferry Blvd. there was evidence that benzene was present in the soil gas below the buildings slab at 2.2 µg/m^3, which is much lower than the concentration inside the building. At the time samples were being collected there were three motorcycles stored in the area with gasoline in the tanks. During the February round of sampling benzene indoor air levels were lower between 1.6 and 2.0 µg/m^3, without the motorcycles present. The benzene levels detected inside 300 Ferry Blvd. are most likely the result of the gasoline and not sources beneath or adjacent to the building. In addition, the background ambient air sample detected benzene at 0.48 µg/m^3, which also could be contributing to the indoor air concentrations.

At 100 Veterans Way benzene was detected at similar concentrations in the basement at 3.3 µg/m^3 and on the first floor at 2.1 µg/m^3. Benzene was not detected above the reporting limit (128 µg/m^3) in the sub-slab soil gas sample, which is too high to accurately assess the sub-slab soil gas concentration. There were no products stored or used inside the building that would contribute in the indoor air levels. Also, benzene was not detected above the reporting limit in the outside ambient air, so this was not a contributing factor to indoor air levels. During the February round of sampling benzene indoor air levels were lower between 0.52 and 1.1 µg/m^3. Considering the uncertainty of whether sub-slab soil gas concentrations are high enough to cause the detectable indoor air levels, it is difficult to accurately determine if sources of benzene beneath and adjacent to the building are adversely impacting indoor air quality.

As mentioned above, in the Stratford Square Mall at 411 Barnum Ave. benzene was detected above the RSL in Sleepy's at a concentration of 2.6 µg/m^3 and the Payless Shoe store between 9.5 - 11 µg/m^3. During the February round of sampling benzene was detected inside Sleepy's at a similar concentration to the August results at 3.2 µg/m^3. At the Payless Shoe store, the February concentration was much higher at 24 µg/m^3. There were other stores at 411 Barnum Ave. that had detectable levels of benzene, but below the RSL, namely: McDonalds (0.32 µg/m^3), Marshall's (1.1 µg/m^3),

Fashion Bug (0.67 µg/m^3), the Post Office (0.61 µg/m^3), Sally's (0.77 µg/m^3), Game Stop (0.45 µg/m^3), T-Mobile (0.64 µg/m^3) and the Regal Cinema (ND (0.32 µg/m^3 – 0.32 µg/m^3). Benzene was detected in the outside ambient air between 0.32 µg/m^3 and 0.48 µg/m^3, which could be contributing to the indoor air levels at 411 Barnum Ave. No sub-slab soil gas samples were collected at 411 Barnum Ave., so it is difficult to determine if indoor air concentrations are associated with contamination underneath the building or from products stored or used inside the building.

The benzene reporting limits for the commercial/industrial properties were between 0.26 µg/m^3 and 1.3 µg/m^3, which are below the commercial/industrial RSL. Therefore, the indoor air data can be used to effectively evaluate the vapor intrusion pathway risk. Benzene indoor air and soil gas results for the commercial/industrial buildings are shown below. Note that in the table, ND = not detected, NA = not applicable and L = estimated value.

Commercial/Industrial Benzene Concentrations

	608 Ferry Blvd. (µg/m^3)	**100 Veterans Way (µg/m^3)**	**444 Ferry Blvd. (µg/m^3)**
Basement 8-Hour Indoor Air	ND (0.35)	3.3	1.4
First Floor 8-Hour Indoor Air	ND (0.54)	2.1	1.4
Sub-Slab Soil Gas SS-1	NA	ND (128)	NA
Sub-Slab Soil Gas SS-2	NA	NA	NA
Sub-Slab Soil Gas SS-3	ND (0.48)	NA	ND (0.32)
Outside Ambient Air	0.48	ND (0.32)	ND (0.32)

EPA RSL Commercial/Industrial Air for benzene is 1.6 µg/m^3
EPA RSL Commercial/Industrial Target Sub-Slab Soil Gas for benzene is 16 µg/m^3

	335 Ferry Blvd. (µg/m^3)	**300 Ferry Blvd. (µg/m^3)**	**326 Ferry Blvd. (µg/m^3)**
Ground Flr. 8-hr. Indoor Air	Curtin Taxi Main Rm: 1.4	Main Rm: 7.3	Dining Room: 1.0
Indoor Air Grab	Curtin Taxi Auto Supply Rm: ND (41)	NA	NA
Indoor Air Grab	Curtin Taxi Utility Closet: NA	NA	NA
Indoor Air Grab	Curtin Taxi Small Office: NA	NA	NA
Ground Flr. 8-hr. Indoor Air	Office: ND (0.51)	Snow Board Area: 7.2	Kitchen: 1.3
Ground Flr. 8-hr. Indoor Air	Estimating Rm: 0.48	NA	NA
Sub-Slab Soil Gas SS-1	Garage Area 1: NA	Snow Board Storage: 2.2	NA
Sub-Slab Soil Gas SS-2	Garage Area 2: NA	Repair Shop: NA	NA
Sub-Slab Soil Gas SS-3	BrenAir Area: 0.48	NA	NA
Outside Ambient Air	0.48	0.48	ND (0.32)

EPA RSL Commercial/Industrial Air for benzene is 1.6 µg/m^3
EPA RSL Commercial/Industrial Target Sub-Slab Soil Gas for benzene is 16 µg/m^3

Commercial/Industrial Benzene Concentrations

Ground Floor 8-hour Indoor Air	411 Barnum Ave. (µg/m^3)
McDonalds	0.32 L
Marshalls Loading Area Marshalls Shopping Area	1.1 1.1
Payless Shoe Source Back of Store Payless Shoe Source Middle of Store	9.5 11
Sleepy's	2.6
Fashion Bug	0.67
US Postal Service	0.61
Sally's Beauty	0.77
Game Stop	0.45
T-Mobile	0.67 L
Regal Cinema Theater #11 Regal Cinema Theater #8 Regal Cinema Projection Booth	0.32 L ND (0.32) 0.26 L
Outside Ambient Air	0.38 L

EPA RSL Commercial/Industrial Air for benzene is 1.6 µg/m^3

8.5 Chlorobenzene Sampling Results and Discussions

The indoor air data were reviewed and compared to the chlorobenzene EPA RSL for residential and commercial/industrial properties where applicable, 52 µg/m^3 and 220 µg/m^3, respectively. The indoor air chlorobenzene concentrations inside the four residential properties, 62 Ferry Court, 72 Ferry Court, 82 Ferry Court and 50 Ferry Court and the residential/commercial property located at 500 Ferry Blvd., were not above the residential RSL or above the reporting limits. The reporting limits for these properties were between 0.34 µg/m^3 and 0.51 µg/m^3, which are well below the residential RSL. Therefore, the indoor air data can be used to effectively evaluate the vapor intrusion pathway risk. Chlorobenzene was also not detected above the reporting limits (0.37 – 0.42 µg/m^3) in the sub-slab samples collected from these properties. This data shows no soil gas was accumulating under these condominiums and considering nothing was detected inside the buildings, shows no apparent adverse impact to indoor air quality. Chlorobenzene was not detected above the reporting limit in the outside ambient air, so this was not a contributing factor to indoor air levels. Chlorobenzene indoor air and soil gas results for these buildings are shown below. Note that in the table, ND = not detected and NA = not applicable.

Residential Chlorobenzene Concentrations

	500 Ferry Blvd. (µg/m³)	62 Ferry Court (µg/m³)	72 Ferry Court (µg/m³)	82 Ferry Court (µg/m³)	50 Ferry Court (µg/m³)
Basement 24-Hour Indoor Air	ND (0.37)	ND (0.51)	ND (0.34)	ND (0.51)	ND (0.42)
Crawl Space 24-Hour Indoor Air	ND (0.42)	NA	NA	NA	NA
First Floor 24-Hour Indoor Air	ND (0.42)	ND (0.42)	ND (0.34)	ND (0.34)	ND (0.51)
Sub-Slab Soil Gas SS-1	NA	ND (0.42)	ND (0.37)	ND (0.37)	ND (0.42)
Sub-Slab Soil Gas SS-2	ND (0.37)	NA	NA	NA	NA
Outside Ambient Air	ND (0.51)	ND (0.51)	ND (0.51)	ND (0.51)	ND (0.51)

EPA RSL Residential Air for chlorobenzene is 52 µg/m^3
EPA RSL Residential Target Sub-Slab Soil Gas for chlorobenzene is 520 µg/m^3

The chlorobenzene indoor air data collected from the commercial/industrial properties were compared to the EPA RSL, 220 µg/m^3. The indoor air chlorobenzene concentrations inside the commercial/industrial properties were not detected above the RSL or above the reporting limits. The reporting limits for these properties were between 0.42 µg/m^3 and 1.1 µg/m^3, which are well below the commercial/industrial RSL. Therefore, the indoor air data can be used to effectively evaluate the vapor intrusion pathway risk. The only sub-slab soil gas sample that detected chlorobenzene above the reporting limits was one underneath 300 Ferry Blvd. at 18 µg/m^3, which is well below the Commercial/Industrial Target Sub-Slab Soil Gas RSL 2200 µg/m^3. Chlorobenzene was not detected above the reporting limit in the outside ambient air, so this was not a contributing factor to indoor air levels. Chlorobenzene indoor air and soil gas results for these buildings are shown below. Note that in the table, ND = not detected and NA = not applicable.

Commercial/Industrial Chlorobenzene Concentrations

	608 Ferry Blvd. (µg/m³)	100 Veterans Way (µg/m³)	444 Ferry Blvd. (µg/m³)
Basement 8-Hour Indoor Air	ND (0.51)	ND (0.51)	ND (0.51)
First Floor 8-Hour Indoor Air	ND (0.79)	ND (0.46)	ND (0.51)
Sub-Slab Soil Gas SS-1	NA	ND (186)	NA
Sub-Slab Soil Gas SS-2	NA	NA	NA
Sub-Slab Soil Gas SS-3	ND (0.70)	NA	ND (0.46)
Outside Ambient Air	ND (0.56)	ND (0.46)	ND (0.46)

EPA RSL Commercial/Industrial Air for chlorobenzene is 220 µg/m^3
EPA RSL Commercial/Industrial Target Sub-Slab Soil Gas for chlorobenzene 2200 µg/m^3

Commercial/Industrial Chlorobenzene Concentrations

	335 Ferry Blvd. (µg/m^3)	300 Ferry Blvd. (µg/m^3)	326 Ferry Blvd. (µg/m^3)
Ground Flr. 8-hr. Indoor Air	Curtin Taxi Main Rm: ND (0.84)	Main Rm: ND (0.93)	Dining Room: ND (0.51)
Indoor Air Grab	Curtin Taxi Auto Supply Rm: ND (61)	NA	NA
Indoor Air Grab	Curtin Taxi Utility Closet: NA	NA	NA
Indoor Air Grab	Curtin Taxi Small Office: NA	NA	NA
Ground Flr. 8-hr. Indoor Air	Office: ND (0.75)	Snow Board Area: ND (0.51)	Kitchen: ND (0.56)
Ground Flr. 8-hr. Indoor Air	Estimating Rm: ND (0.46)	NA	NA
Sub-Slab Soil Gas SS-1	Garage Area 1: NA	Snow Board Storage: 18	NA
Sub-Slab Soil Gas SS-2	Garage Area 2: NA	Repair Shop: NA	NA
Sub-Slab Soil Gas SS-3	BrenAir Area: ND (0.46)	NA	NA
Outside Ambient Air	ND (0.56)	ND (0.56)	ND (0.46)

EPA RSL Commercial/Industrial Air for chlorobenzene is 220 µg/m^3
EPA RSL Commercial/Industrial Target Sub-Slab Soil Gas for chlorobenzene 2200 µg/m^3

Ground Floor 8-hour Indoor Air	411 Barnum Ave. (µg/m^3)
McDonalds	ND (0.56)
Marshalls Loading Area Marshalls Shopping Area	ND (0.46) ND (0.42)
Payless Shoe Source Back of Store Payless Shoe Source Middle of Store	ND (0.51) ND (0.42)
Sleepy's	ND (1.1)
Fashion Bug	ND (0.42)
US Postal Service	ND (0.51)
Sally's Beauty	ND (0.61)
Game Stop	ND (0.46)
T-Mobile	ND (2.0)
Regal Cinema Theater #11 Regal Cinema Theater #8 Regal Cinema Projection Booth	ND (0.51) ND (0.46) ND (0.51)
Outside Ambient Air	ND (0.70)

EPA RSL Commercial/Industrial Air for chlorobenzene is 220 µg/m^3

8.6 Chloroform Sampling Results and Discussions

The indoor air data were reviewed and compared to the chloroform EPA RSL for residential and commercial/industrial properties where applicable, 0.11 µg/m^3 and 0.53 µg/m^3, respectively. The indoor air chloroform concentrations inside the four residential properties, 62 Ferry Court, 72 Ferry Court, 82 Ferry Court and 50 Ferry Court and the residential/commercial property located at 500 Ferry Blvd., were all above the residential RSL, 0.11 µg/m^3. Sub-slab soil gas chloroform concentrations were detected underneath all the residential properties above the reporting limits, but not above the

Residential Target Sub-Slab Soil Gas RSL 1.1 µg/m^3. The sub-slab soil gas concentrations underneath the residential properties were all very similar, between 0.33 and 0.93 µg/m^3. Comparing the indoor air and sub-slab soil gas concentrations does not suggest soil gas migration into the building is occurring. Chloroform can off gas from drinking water containing chlorine, so this maybe the source of the indoor air concentrations. Chloroform was not detected above the reporting limit in the outside ambient air, so this was not a contributing factor to indoor air levels. Chloroform indoor air and soil gas results for these buildings are shown below. Note that in the table, ND = not detected, NA = not applicable and L = estimated value.

Residential Chloroform Concentrations

	500 Ferry Blvd. (µg/m^3)	62 Ferry Court (µg/m^3)	72 Ferry Court (µg/m^3)	82 Ferry Court (µg/m^3)	50 Ferry Court (µg/m^3)
Basement 24-Hour Indoor Air	0.40 L	0.88	6.3	1.7	2.4
Crawl Space 24-Hour Indoor Air	0.49	NA	NA	NA	NA
First Floor 24-Hour Indoor Air	0.78	0.64	7.1	0.54	2.5
Sub-Slab Soil Gas SS-1	NA	0.93	0.88	0.35 L	0.33 L
Sub-Slab Soil Gas SS-2	0.93	NA	NA	NA	NA
Outside Ambient Air	ND (0.54)	ND (0.54)	ND (0.54)	ND (0.54)	0.61

EPA RSL Residential Indoor Air for chloroform is 0.11 µg/m^3
EPA RSL Residential Target Sub-Slab Soil Gas for chloroform is 1.1 µg/m^3

The chloroform indoor air data collected from the commercial/industrial properties were compared to the EPA RSL, 0.53 µg/m^3. The properties with indoor air values above the RSL were within the 300 Ferry Blvd. Snowboard Area at 0.68 µg/m^3, at 335 Ferry Blvd. in Curtin Taxi at 1.6 µg/m^3, 326 Ferry Blvd. in the kitchen at 1.2 µg/m^3, 444 Ferry Blvd. in the basement at 0.59 µg/m^3 and on the first floor at 0.88 µg/m^3, 100 Veterans Way in the basement at 3.2 µg/m^3 and on the first floor at 3.4 µg/m^3, and at 411 Barnum Ave. within McDonalds at 1.4 µg/m^3 and the Payless Shoe store at 1.1 µg/m^3. Chloroform was not detected above the reporting limit in the outside ambient air, so this was not a contributing factor to indoor air levels. At some of the commercial properties the reporting limits were above the RSL, making it difficult to perform an accurate vapor intrusion pathway risk evaluation. This would affect the following properties: 608 Ferry Blvd.; the Main Show Room at 300 Ferry Blvd.; the Receptionist Office at 335 Ferry Blvd.; Marshalls, Sleepy's, Post Office, Sally's, T-Mobile and Regal Cinema at 411 Barnum Ave.

At 300 Ferry Blvd. chloroform was not detected above the reporting limit 0.98 µg/m^3 in the Main Show Room, but was detected at 0.68 µg/m^3 in the Snowboard Area. The sub-slab soil gas concentration underneath the building in the Snowboard area was 8.5 µg/m^3, which is slightly above the Commercial/Industrial Target Sub-Slab Soil Gas RSL 5.3 µg/m^3. Comparing the indoor air and sub-slab soil gas results suggest soil gas maybe migrating into the building, but at very slow rate. However, consideration should be given to that chloroform can off gas from drinking water containing chlorine, so this maybe a contributing source of indoor air and soil gas concentrations.

At 335 Ferry Blvd. chloroform was only detected inside Curtin Taxi at 1.6 µg/m^3 and not above the reporting limit 0.78 µg/m^3 in the Receptionist Office or in the Estimating Room above 0.49 µg/m^3. The sub-slab soil gas concentration underneath the building in the BrenAir Unit was 3.9 µg/m^3, which is below the Commercial/Industrial Target Sub-Slab Soil Gas RSL 5.3 µg/m^3. Comparing the indoor air and sub-slab soil gas results suggest soil gas maybe migrating into the building, but at very slow rate. However, consideration should be given to that chloroform can off gas from drinking water containing chlorine, so this maybe a contributing source of indoor air and soil gas concentrations.

At 326 Ferry Blvd. chloroform was detected in the kitchen area at 1.2 µg/m^3 and in the dining room at an estimated concentration of 0.38 µg/m^3. No sub-slab soil gas samples were collected at 326 Ferry Blvd., so it is difficult to determine if indoor air concentrations are associated with contamination underneath the building or from products stored or used inside the building. However, consideration should be given to that chloroform can off gas from drinking water containing chlorine, so this maybe a contributing source of indoor air and soil gas concentrations. In addition, considering this property is a restaurant and the chloroform levels were higher in the kitchen, where water is used for cooking and dish washing, compared to the dining room, the source of chloroform indoor air levels are most likely from chlorinated water.

At 444 Ferry Blvd. chloroform was detected in the basement at 0.59 µg/m^3 and on the first floor at 0.88 µg/m^3. The sub-slab soil gas sample collected underneath the building did not detect chloroform above the reporting limit 0.49 µg/m^3. Comparing the indoor air and sub-slab soil gas results suggest soil gas is not migrating into the building. The source of chloroform detected inside the building maybe coming from products containing chlorine being stored inside. Considering the property is currently a pool supply store, this is most likely the case.

At 100 Veterans Way chloroform was detected at similar concentrations in the basement at 3.1 µg/m^3 and on the first floor at 3.4 µg/m^3. Chloroform was not detected above the reporting limit (195 µg/m^3) in the sub-slab soil gas sample, which is too high to accurately assess the sub-slab soil gas concentration. Chloroform was not detected above the reporting limit in the outside ambient air, so this was not a contributing factor to indoor air levels. During the February round of sampling chloroform indoor air levels were lower between 0.27 and 0.49 µg/m^3. Considering the uncertainty of whether sub-slab soil gas concentrations are high enough to cause the detectable indoor air levels, it is difficult to accurately determine if sources of chloroform beneath and adjacent to the building are adversely impacting indoor air quality. However, consideration should be given to that chloroform can off gas from drinking water containing chlorine, so this maybe a contributing source of indoor air.

As mentioned above, in the Stratford Square Mall at 411 Barnum Ave. chloroform was detected above the RSL within McDonalds at 1.4 µg/m^3 and the Payless Shoe store at 1.1 µg/m^3. During the February round of sampling chloroform was detected inside McDonalds at a similar concentration to the August results at 1.3 µg/m^3. At the Payless Shoe store, the February results were exactly the same, 1.1 µg/m^3. No sub-slab soil gas samples were collected at 411 Barnum Ave., so it is difficult to determine if indoor air concentrations are associated with contamination underneath the building or from

products stored or used inside the building. Considering McDonalds is a restaurant where chlorinated water is most likely used for cleaning and other purposes, this maybe the source the chloroform indoor air levels.

Chloroform indoor air and soil gas results for the commercial/industrial buildings are shown below. Note that in the table, ND = not detected, NA = not applicable and L = estimated value.

Commercial/Industrial Chloroform Concentrations

	608 Ferry Blvd. (µg/m^3)	100 Veterans Way (µg/m^3)	444 Ferry Blvd. (µg/m^3)
Basement 8-Hour Indoor Air	ND (0.54)	3.2	0.59
First Floor 8-Hour Indoor Air	ND (0.83)	3.4	0.88
Sub-Slab Soil Gas SS-1	NA	ND (195)	NA
Sub-Slab Soil Gas SS-2	NA	NA	NA
Sub-Slab Soil Gas SS-3	0.44 L	NA	ND (0.49)
Outside Ambient Air	ND (0.59)	ND (0.49)	ND (0.49)

EPA RSL Commercial/Industrial Air for chloroform is 0.53 µg/m^3
EPA RSL Commercial/Industrial Target Sub-Slab Soil Gas for benzene is 5.3 µg/m^3

	335 Ferry Blvd. (µg/m^3)	300 Ferry Blvd. (µg/m^3)	326 Ferry Blvd. (µg/m^3)
Ground Flr. 8-hr. Indoor Air	Curtin Taxi Main Rm: 1.6	Main Rm: ND (0.98)	Dining Room: 0.38 L
Indoor Air Grab	Curtin Taxi Auto Supply Rm: ND (63)	NA	NA
Indoor Air Grab	Curtin Taxi Utility Closet: NA	NA	NA
Indoor Air Grab	Curtin Taxi Small Office: NA	NA	NA
Ground Flr. 8-hr. Indoor Air	Office: ND (0.78)	Snow Board Area: 0.68	Kitchen: 1.2
Ground Flr. 8-hr. Indoor Air	Estimating Rm: ND (0.49)	NA	NA
Sub-Slab Soil Gas SS-1	Garage Area 1: NA	Snow Board Storage: 8.5	NA
Sub-Slab Soil Gas SS-2	Garage Area 2: NA	Repair Shop: NA	NA
Sub-Slab Soil Gas SS-3	BrenAir Area: 3.9	NA	NA
Outside Ambient Air	ND (0.59)	ND (0.59)	ND (0.49)

EPA RSL Commercial/Industrial Air for chloroform is 0.53 µg/m^3
EPA RSL Commercial/Industrial Target Sub-Slab Soil Gas for chloroform is 5.3 µg/m^3

Commercial/Industrial Chloroform Concentrations

Ground Floor 8-hour Indoor Air	411 Barnum Ave. (µg/m^3)
McDonalds	1.4
Marshalls Loading Area Marshalls Shopping Area	ND (0.49) ND (0.44)
Payless Shoe Source Back of Store Payless Shoe Source Middle of Store	1.1 ND (0.44)
Sleepy's	ND (1.2)
Fashion Bug	ND (0.44)
US Postal Service	ND (0.54)
Sally's Beauty	ND (0.64)
Game Stop	ND (0.49)
T-Mobile	ND (2.1)
Regal Cinema Theater #11 Regal Cinema Theater #8 Regal Cinema Projection Booth	ND (0.54) ND (0.49) ND (0.54)
Outside Ambient Air	ND (0.73)

EPA RSL Commercial/Industrial Air for chloroform is 0.53 µg/m^3

8.7 Ethylbenzene Sampling Results and Discussions

The indoor air data were reviewed and compared to the ethylbenzene EPA RSL for residential and commercial/industrial properties where applicable, 0.97 µg/m^3 and 4.9 µg/m^3, respectively. The indoor air ethylbenzene concentrations inside the four residential properties, 62 Ferry Court, 72 Ferry Court, 82 Ferry Court and 50 Ferry Court and the residential/commercial property located at 500 Ferry Blvd., were all above the residential RSL, 0.97 µg/m^3. Sub-slab soil gas ethylbenzene concentrations were only detected at 500 Ferry Blvd. at 3.4 µg/m^3, which is less than the target sub-slab soil gas residential RSL of 9.7 µg/m^3. Indoor air concentrations inside 500 Ferry Blvd. were between 9.9 and 20 µg/m^3. Comparing the indoor air and sub-slab soil gas concentrations does not suggest soil gas migration into the building is occurring. At the time samples were being collected there were two 4 wheelers/ATVs stored in the basement with gasoline in the tanks and an odor of gasoline noticed. The ethylbenzene levels detected inside 500 Ferry Blvd. are most likely the result of the gasoline and not sources beneath or adjacent to the building. Ethylbenzene was not detected above the reporting limit in background ambient air sample, so this was not a contributing factor to indoor air levels. Similar conclusions were drawn after reviewing the benzene results described in Section 8.4.

The indoor air concentrations inside the four condominiums were lower than at 500 Ferry Blvd., with the basement levels similar or slightly higher than the first floor. At 62 Ferry Court the ethylbenzene concentration was 1.2 µg/m^3 in the basement and 0.65 µg/m^3 on the first floor; at 72 Ferry Court the basement detected 8.4 µg/m^3 in the basement and 8.2 µg/m^3 on the first floor; at 82 Ferry the basement detected 1.3 µg/m^3 in the basement and 0.34 µg/m^3 on the first floor; at 50 Ferry Court ethylbenzene was detected at 2.0 µg/m^3 in the basement and on the first floor. Ethylbenzene was not

detected above the reporting limit in background ambient air sample, so this was not a contributing factor to indoor air levels. In addition, considering ethylbenzene was not detected in soil gas beneath the buildings shows there is no apparent adverse impact to indoor air quality associated with sources beneath or adjacent to the buildings. Also, all of these properties have what appear to be solid foundations and finished basements and based on an inventory and discussions with the occupants of each building, the products used and or stored inside these buildings did not contribute to the ethylbenzene indoor air concentrations. Ethylbenzene indoor air and soil gas results for these buildings are shown below. Note that in the table, ND = not detected, NA = not applicable and L = estimated value.

Residential Ethylbenzene Concentrations

	500 Ferry Blvd. (µg/m^3)	62 Ferry Court (µg/m^3)	72 Ferry Court (µg/m^3)	82 Ferry Court (µg/m^3)	50 Ferry Court (µg/m^3)
Basement 24-Hour Indoor Air	20	1.2	8.4	1.3	2.0
Crawl Space 24-Hour Indoor Air	9.9	NA	NA	NA	NA
First Floor 24-Hour Indoor Air	17	0.65	8.2	0.34 L	2.0
Sub-Slab Soil Gas SS-1	NA	ND (0.39)	ND (0.35)	ND (0.35)	ND (0.39)
Sub-Slab Soil Gas SS-2	3.4	NA	NA	NA	NA
Outside Ambient Air	0.32 L	0.32 L	0.32 L	0.32 L	0.32 L

EPA RSL Residential Indoor Air for ethylbenzene is 0.97 µg/m^3
EPA RSL Residential Target Sub-Slab Soil Gas for ethylbenzene is 9.7 µg/m^3

The ethylbenzene indoor air data collected from the commercial/industrial properties were compared to the EPA RSL, 4.9 µg/m^3. The properties with indoor air values above the RSL were within the 300 Ferry Blvd. Main Show Room at 11 µg/m^3 and the Snowboard Area at 14 µg/m^3, at 411 Barnum Ave. within the Sleepy's store (6.1 µg/m^3) and Payless Shoe store (30 - 32 µg/m^3). At 300 Ferry Blvd. ethylbenzene was not detected above the reporting limit 0.48 µg/m^3 in the sub-soil gas sample collected underneath the building. At the time samples were being collected there were three motorcycles stored in the area with gasoline in the tanks. During the February round of sampling ethylbenzene indoor air levels were lower in both areas at 1.3 µg/m^3, without the motorcycles present. The ethylbenzene levels detected inside 300 Ferry Blvd. are most likely the result of the gasoline and not sources beneath or adjacent to the building.

As mentioned above, in the Stratford Square Mall at 411 Barnum Ave. ethylbenzene was detected above the RSL in Sleepy's at a concentration of 6.1 µg/m^3 and the Payless Shoe store between 30 - 32 µg/m^3. During the February round of sampling ethylbenzene was detected inside Sleepy's at a similar concentration to the August results at 4.1 µg/m^3. At the Payless Shoe store, the February results were slightly higher at 49 µg/m^3. There were other stores at 411 Barnum Ave. that had detectable levels of ethylbenzene, but below the RSL, namely: Marshall's (2.1 -2.3 µg/m^3), Fashion Bug (0.82 µg/m^3), the Post Office (0.56 µg/m^3), Sally's (1.3 µg/m^3) and Game Stop (0.39 µg/m^3). Ethylbenzene was not detected above the reporting limit in background ambient air sample, so this was not a contributing factor to indoor air levels. No sub-slab soil gas samples were collected at 411 Barnum Ave., so it is difficult to determine if

indoor air concentrations are associated with contamination underneath the building or from products stored or used inside the building.

The ethylbenzene reporting limits for the commercial/industrial properties were below the commercial/industrial RSL. Therefore, the indoor air data can be used to effectively evaluate the vapor intrusion pathway risk. Ethylbenzene indoor air and soil gas results for the commercial/industrial buildings are shown below. Note that in the table, ND = not detected, NA = not applicable and L = estimated value.

Commercial/Industrial Ethylbenzene Concentrations

	608 Ferry Blvd. (µg/m^3)	**100 Veterans Way (µg/m^3)**	**444 Ferry Blvd. (µg/m^3)**
Basement 8-Hour Indoor Air	ND (0.48)	2.6	1.1
First Floor 8-Hour Indoor Air	ND (0.74)	1.5	1.3
Sub-Slab Soil Gas SS-1	NA	ND (174)	NA
Sub-Slab Soil Gas SS-2	NA	NA	NA
Sub-Slab Soil Gas SS-3	ND (0.65)	NA	ND (0.43)
Outside Ambient Air	ND (0.52)	ND (0.43)	ND (0.43)

EPA RSL Commercial/Industrial Air for ethylbenzene is 4.9 µg/m^3
EPA RSL Commercial/Industrial Target Sub-Slab Soil Gas for ethylbenzene is 49 µg/m^3

	335 Ferry Blvd. (µg/m^3)	**300 Ferry Blvd. (µg/m^3)**	**326 Ferry Blvd. (µg/m^3)**
Ground Flr. 8-hr. Indoor Air	Curtin Taxi Main Rm: 4.2	Main Rm: 11	Dining Room: 0.95
Indoor Air Grab	Curtin Taxi Auto Supply Rm: ND (56)	NA	NA
Indoor Air Grab	Curtin Taxi Utility Closet: NA	NA	NA
Indoor Air Grab	Curtin Taxi Small Office: NA	NA	NA
Ground Flr. 8-hr. Indoor Air	Office: ND (0.70)	Snow Board Area: 14	Kitchen: 1.1
Ground Flr. 8-hr. Indoor Air	Estimating Rm: 0.52	NA	NA
Sub-Slab Soil Gas SS-1	Garage Area 1: NA	Snow Board Storage: ND (0.48)	NA
Sub-Slab Soil Gas SS-2	Garage Area 2: NA	Repair Shop: NA	NA
Sub-Slab Soil Gas SS-3	BrenAir Area: ND (0.43)	NA	NA
Outside Ambient Air	ND (0.52)	ND (0.52)	ND (0.32)

EPA RSL Commercial/Industrial Air for ethylbenzene is 4.9 µg/m^3
EPA RSL Commercial/Industrial Target Sub-Slab Soil Gas for benzene is 49 µg/m^3

Commercial/Industrial Ethylbenzene Concentrations

Ground Floor 8-hour Indoor Air	411 Barnum Ave. (µg/m^3)
McDonalds	ND (0.52)
Marshalls Loading Area Marshalls Shopping Area	2.3 2.1
Payless Shoe Source Back of Store Payless Shoe Source Middle of Store	30 32
Sleepy's	6.1
Fashion Bug	0.82
US Postal Service	0.56
Sally's Beauty	1.3
Game Stop	0.39 L
T-Mobile	ND (1.8)
Regal Cinema Theater #11 Regal Cinema Theater #8 Regal Cinema Projection Booth	ND (0.48) ND (0.43) ND (0.48)
Outside Ambient Air	ND (0.65)

EPA RSL Commercial/Industrial Air for ethylbenzene is 4.9 µg/m^3

8.8 Vinyl Chloride Sampling Results and Discussions

The indoor air data were reviewed and compared to the VC EPA RSL for residential and commercial/industrial properties where applicable, 0.16 µg/m^3 and 2.8 µg/m^3, respectively. The indoor air VC concentrations inside the four residential properties, 62 Ferry Court, 72 Ferry Court, 82 Ferry Court and 50 Ferry Court and the residential/ commercial property located at 500 Ferry Blvd., were not detected above the reporting limits or above the residential RSL, 0.16 µg/m^3. The method reporting limits for the indoor air samples collected at these locations were between 0.20 µg/m^3 and 0.28 µg/m^3, which are slightly above the residential RSL, making it difficult to perform an accurate vapor intrusion pathway risk evaluation. However, VC was also not detected above the reporting limits (0.20 – 23 µg/m^3) in any of the sub-slab soil gas samples collected underneath these buildings. Considering the indoor air and soil gas data it does not appear indoor air was being adversely impacted. VC was not detected above the reporting limit in the outside ambient air, so this was not a contributing factor to indoor air levels. VC indoor air and soil gas results for these buildings are shown below. Note that in the table, ND = not detected and NA = not applicable.

Residential VC Concentrations

	500 Ferry Blvd. (µg/m^3)	62 Ferry Court (µg/m^3)	72 Ferry Court (µg/m^3)	82 Ferry Court (µg/m^3)	50 Ferry Court (µg/m^3)
Basement 24-Hour Indoor Air	ND (0.20)	ND (0.28)	ND (0.26)	ND (0.28)	ND (0.23)
Crawl Space 24-Hour Indoor Air	ND (0.23)	NA	NA	NA	NA
First Floor 24-Hour Indoor Air	ND (0.23)	ND (0.23)	ND (0.26)	ND (0.26)	ND (0.28)
Sub-Slab Soil Gas SS-1	NA	ND (0.23)	ND (0.20)	ND (0.20)	ND (0.23)
Sub-Slab Soil Gas SS-2	ND (0.20)	NA	NA	NA	NA
Outside Ambient Air	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)

EPA RSL Residential Air for VC is 0.16 µg/m^3
EPA RSL Residential Target Sub-Slab Soil Gas for VC is 1.6 µg/m^3

The VC indoor air data collected from the commercial/industrial properties were compared to the EPA RSL, 2.8 µg/m^3. The indoor air VC concentrations inside the commercial/industrial properties were not detected above the RSL. The only indoor air values detected above the reporting limits were in the Estimating Room at 335 Ferry Blvd. at 1.6 µg/m^3, in the 300 Ferry Blvd. snowboard area at 2.1 µg/m^3 and in the McDonalds restaurant at 1.0 µg/m^3. The reporting limits for these properties were between 0.23 µg/m^3 and 1.1 µg/m^3, which are below the commercial/industrial RSL. Therefore, the indoor air data can be used to effectively evaluate the vapor intrusion pathway risk. At 300 Ferry Blvd. VC was not detected above the reporting limit 0.51 µg/m^3 in the Main Show Room, but was detected at 2.1 µg/m^3 in the Snowboard Area. The sub-slab soil gas concentration underneath the building in the Snowboard area was 330 µg/m^3, which is above the Commercial/Industrial Target Sub-Slab Soil Gas RSL 28 µg/m^3. Comparing the indoor air and sub-slab soil gas results suggest soil gas maybe migrating into the building, but at very slow rate. At 608 Ferry Blvd. VC was not detected above the reporting limits inside the building, but was detected in the sub-slab soil gas at 0.92 µg/m^3. Considering the indoor air and soil gas data it does not appear indoor air was being adversely impacted. VC was not detected above the reporting limit in the outside ambient air, so this was not a contributing factor to indoor air levels for all the properties, except for samples collected on 8/16/12 at 411 Barnum Ave. The outside ambient air concentrations on 8/16/12 was 0.28 µg/m^3, which may have contributed to the indoor air levels at 411 Barnum Ave. VC indoor air and soil gas results for these buildings are shown below. Note that in the table, ND = not detected, NA = not applicable and L = estimated value.

Commercial/Industrial VC Concentrations

	608 Ferry Blvd. (µg/m³)	100 Veterans Way (µg/m³)	444 Ferry Blvd. (µg/m³)
Basement 8-Hour Indoor Air	ND (0.28)	ND (0.28)	ND (0.28)
First Floor 8-Hour Indoor Air	ND (0.44)	ND (0.26)	ND (0.28)
Sub-Slab Soil Gas SS-1	NA	NA	NA
Sub-Slab Soil Gas SS-2	NA	NA	NA
Sub-Slab Soil Gas SS-3	0.92	ND (102)	ND (0.26)
Outside Ambient Air	ND (0.31)	ND (0.26)	ND (0.26)

EPA RSL Residential Air for VC is 2.8 µg/m^3
EPA RSL Residential Target Sub-Slab Soil Gas for VC is 28 µg/m^3

	335 Ferry Blvd. (µg/m³)	300 Ferry Blvd. (µg/m³)	326 Ferry Blvd. (µg/m³)
Ground Flr. 8-hr. Indoor Air	Curtin Taxi: ND (0.86)	Main Rm: ND (0.51)	Dining Room: ND (0.28)
Ground Flr. 8-hr. Indoor Air	Office: ND (0.41)	Snow Board Area: 2.1	Kitchen: ND (0.31)
Ground Flr. 8-hr. Indoor Air	Estimating Rm: 1.6	NA	NA
Sub-Slab Soil Gas SS-1	Garage Area 1: NA	Snow Board Storage: 330	NA
Sub-Slab Soil Gas SS-2	Garage Area 2: NA	Repair Shop: NA	NA
Sub-Slab Soil Gas SS-3	BrenAir Area: ND (0.43)	NA	NA
Outside Ambient Air	ND (0.31)	ND (0.31)	ND (0.26)

EPA RSL Commercial/Industrial Air for VC is 2.8 µg/m^3
EPA RSL Residential Target Sub-Slab Soil Gas for VC is 28 µg/m^3

Ground Floor 8-hour Indoor Air	411 Barnum Ave. (µg/m³)
McDonalds	1.0
Marshalls Loading Area Marshalls Shopping Area	ND (0.26) ND (0.23)
Payless Shoe Source Back of Store Payless Shoe Source Middle of Store	ND (0.28) ND (0.23)
Sleepy's	ND (0.61)
Fashion Bug	ND (0.23)
US Postal Service	ND (0.28)
Sally's Beauty	ND (0.33)
Game Stop	ND (0.26)
T-Mobile	ND (1.1)
Regal Cinema Theater #11 Regal Cinema Theater #8 Regal Cinema Projection Booth	ND (0.28) ND (0.26) ND (0.28)
Outside Ambient Air	0.28 L

EPA RSL Commercial/Industrial Air for VC is 2.8 µg/m^3

8.9 Indoor Air and Soil Gas February and August 2012 COC Data Comparison

Appendix F shows for each property investigated, except for 50 Ferry Court, tables comparing the February and August 2012 COC data. 50 Ferry Court was not sampled during the February round of sampling; therefore it is not included in the comparison discussion. Below is a summary, by property, how the data compared between the heating (February) and non-heating (August) seasons.

500 Ferry Blvd.

Comparing the concentrations of those compounds with values above their reporting limits shows benzene, chloroform and ethylbenzene concentrations detected during the August round of sampling were higher inside the building compared to February. However, this was just the opposite for the sub-slab soil gas data, with values higher in February compared to August. As explained in Sections 8.4 and 8.7, considering the indoor air, sub-slab soil gas data and identified sources within the building, it appears benzene and ethylbenzene levels detected inside 500 Ferry Blvd. are most likely the result of gasoline stored in the ATVs fuel tanks and not sources beneath or adjacent to the building. Considering chloroform can off gas from drinking water containing chlorine, this maybe the source of the indoor air chloroform concentrations.

72 Ferry Court

Comparing the indoor air concentrations of those compounds with values above their reporting limits shows benzene concentrations were relatively the same for both the February and August sampling rounds. Benzene sub-slab soil gas was not detected beneath the building during the February and August rounds. Chloroform and ethylbenzene concentrations detected during August were much higher inside the building compared to February. This was also the case for the chloroform sub-slab soil gas data with non-detectable in February and 0.88 $\mu g/m^3$ in August. TCE and 1, 1-DCE were detected at low concentrations in the sub-slab soil gas in February at 0.51 $\mu g/m^3$ and 0.19 $\mu g/m^3$, respectively. But they were not detected above the reporting limits during the August sampling round. Considering the indoor air, sub-slab soil gas concentrations and that this unit has a functioning Radon Mitigation System, it is unlikely indoor air is being adversely impacted from sources beneath or adjacent to the building.

62 Ferry Court

Comparing the indoor air concentrations of those compounds with values above their reporting limits shows ethylbenzene concentrations were about the same during the February and August sampling rounds. Ethylbenzene sub-slab soil gas was not detected beneath the building during February or August. Benzene and chloroform concentrations detected during the February round of sampling were slightly higher inside the building compared to August. This was also the case for the benzene sub-slab soil gas data with non-detectable in August and 0.42 $\mu g/m^3$ in February. The chloroform sub-slab soil gas data was just the opposite, with values slightly higher in August (0.93 $\mu g/m^3$) compared to February (0.23 $\mu g/m^3$). Considering the indoor air

and sub-slab soil gas concentrations, it is unlikely indoor air is being adversely impacted from sources beneath or adjacent to the building.

82 Ferry Court

Comparing the indoor air concentrations of those compounds with values above their reporting limits shows 1, 1-DCA was only detected in the basement during February at 0.45 µg/m^3; benzene concentrations were slightly higher in February compared to August in the basement and on the first floor; chloroform was higher in August compared to February in the basement, but higher in February than August on the first floor; and ethylbenzene was slightly higher in August than February in the basement and about the same concentration on the first floor during February and August. TCE was detected in the sub-slab soil gas at slightly higher concentrations in August compared to February, but was not detected inside the building in either sampling round. The chloroform sub-slab soil gas data was higher in February compared to August. Ethylbenzene and 1, 1-DCA were not detected in the sub-soil gas during the February and August rounds of sampling. Considering the indoor air and sub-slab soil gas concentrations, it is unlikely indoor air is being adversely impacted from sources beneath or adjacent to the building.

608 Ferry Blvd.

Comparing the indoor air concentrations of those compounds with values above their reporting limits shows TCE was only detected in the basement during August at 1.3 µg/m^3; 1, 1-DCA was also only detected in the basement during August at an estimated concentration of 0.22 µg/m^3; and benzene concentrations were slightly higher in February compared to August in the basement and on the first floor. TCE was detected in the sub-slab soil gas at higher concentrations in August compared to February. The 1, 1-DCA and 1, 1-DCE sub-slab soil gas data collected in the basement area were higher in February compared to August. Benzene was not detected above the reporting limits in the sub-slab soil gas at any time. Chloroform and vinyl chloride were detected in the sub-slab soil gas at higher concentrations in August compared to February, but were not detected inside the building during either sampling round. Considering the indoor air and sub-slab soil gas concentrations and the RSLs, it is unlikely indoor air is being adversely impacted from sources beneath or adjacent to the building.

335 Ferry Blvd.

Comparing the indoor air concentrations of those compounds with values above their reporting limits shows TCE concentrations detected during the August round of sampling were higher in Curtin Taxi, the Receptionist Office and the Estimating Room compared to February. As discussed in Section 8.1, during the August sampling round there was evidence that TCE was present in the soil gas below the buildings slab at concentrations between 53 µg/m^3 and 91 µg/m^3, which are much lower than the concentration inside Curtin Taxi. After taking several indoor air grab samples in various rooms/closets within Curtin Taxi, high TCE concentrations were identified coming from the auto supply room. An inventory of products stored in the auto supply room indentified the source of the TCE indoor air concentrations to be from a 32 ounce container of "Tru-Flate Universal Cement, Type C" with a label indicating it contains

TCE. The concentration detected in the Estimating Room at 335 Ferry Blvd. was much less, but still above the RSL. Considering the discovery of a product containing TCE is being used inside the building strongly suggest the source of the TCE indoor air concentrations within the building is from this product and not from sources beneath or adjacent to the building.

Benzene concentrations were higher in February compared to August in Curtin Taxi, the Receptionist Office and the Estimating Room and were at relatively the same concentration (1.8, 2.0, 1.7 $\mu g/m^3$) in all three areas during February. The levels detected in February were slightly above the RSL and below the RSL during the August round of sampling. Benzene sub-slab soil gas concentration was not detected in February and was well below the commercial/industrial target sub-slab soil gas RSL 16 $\mu g/m^3$ in August at 0.48 $\mu g/m^3$. Considering the indoor air and sub-slab soil gas concentrations and the RSLs, it is unlikely indoor air is being adversely impacted by benzene from sources beneath or adjacent to the building.

Chloroform was only detected in Curtin Taxi above the reporting limit and the concentration was slightly higher in August compared to February. Chloroform was not detected above the reporting limit beneath Garage Area 1 during the February round of sampling, but was beneath the BrenAir Unit at 3.9 $\mu g/m^3$ during August, which is below commercial/industrial target sub-slab soil gas RSL 5.3 $\mu g/m^3$. Comparing the indoor air and sub-slab soil gas results suggest soil gas maybe migrating into the building, but at very slow rate. However, consideration should be given to that chloroform can off gas from drinking water containing chlorine, so this maybe a contributing source of indoor air and soil gas concentrations.

Ethylbenzene was detected at higher concentrations in Curtin Taxi during the August round of sampling compared to February. However, the concentrations were slightly higher in February compared to August in the Receptionist Office and the Estimating Room. Ethylbenzene was not detected above the reporting limits in sub-slab soil gas during either the February or August sampling rounds. Concentrations detected inside the building during February and August were not above the indoor air RSL. Therefore, considering the indoor air, sub-slab soil gas data and the RSLs, it is unlikely indoor air is being adversely impacted by ethylbenzene from sources beneath or adjacent to the building.

Vinyl Chloride was detected at higher concentrations in the Estimating Room during the August round of sampling compared to February. Vinyl chloride was not detected above the reporting limits in sub-slab soil gas during either the February or August sampling rounds. Concentrations detected inside the building during February and August were not above the indoor air RSL. Therefore, considering the indoor air, sub-slab soil gas data and the RSLs, it is unlikely indoor air is being adversely impacted by vinyl chloride from sources beneath or adjacent to the building.

300 Ferry Blvd.

Comparing the concentrations of those compounds with values above their reporting limits shows benzene, chloroform, ethylbenzene, TCE and vinyl chloride concentrations detected during the August round of sampling were higher inside the building compared

to February. In general, sub-slab soil gas concentrations were also higher in August compared to February. As explained in Sections 8.4 and 8.7, at the time samples were being collected there were three motorcycles stored in the area with gasoline in the tanks. During the February round of sampling benzene and ethylbenzene indoor air levels were lower, without the motorcycles present. The benzene and ethylbenzene levels detected inside the building are most likely the result of the gasoline and not sources beneath or adjacent to the building.

TCE and VC were detected above the reporting limits in the Snowboard Area and not in the Main Show Room during the August sampling round. TCE and VC were also detected at higher concentrations in the sub-slab soil gas beneath the building during the August sampling round compared to February. TCE was above the indoor air RSL and VC was not. Comparing the indoor air and sub-slab soil gas results suggest soil gas maybe migrating into the building, but at very slow rate.

100 Veterans Way

Comparing the concentrations of those compounds with values above their reporting limits shows benzene, chloroform and ethylbenzene concentrations detected during the August round of sampling were higher inside the building compared to February. The sub-slab soil gas benzene, chloroform and ethylbenzene concentrations were not detected above the reporting limits during February or August; however the reporting limits were on the high side. TCE and 1, 1-DCE and 1, 1-DCA indoor air concentrations were higher in February compared to August and levels were higher in the basement than on the first floor. In contrast, the sub-slab soil gas TCE and 1, 1-DCA concentrations were higher in August than in February, but 1, 1,-DCE concentrations, on average, were higher in February than in August. TCE, 1, 1-DCE and 1, 1-DCA indoor air concentrations were not above the RSL. Comparing the indoor air and sub-slab soil gas results suggest soil gas maybe migrating into the building, but at very slow rate.

326 Ferry Blvd.

Comparing the concentrations of those compounds with values above their reporting limits shows the benzene, chloroform and ethylbenzene concentrations detected in February and August were very similar. Chloroform was detected above the RSL in the kitchen area during both the February and August sampling rounds. Consideration should be given to that chloroform can off gas from drinking water containing chlorine, so this maybe a contributing source of indoor air concentrations. In addition, considering this property is a restaurant and the chloroform levels were higher in the kitchen, where water is used for cooking and dish washing, the source of chloroform indoor air levels are most likely from chlorinated water. Benzene was detected above the RSL in both the kitchen and the dining room during the February round of sampling, but not in the August. No sub-slab soil gas samples were collected beneath the building, so it is difficult to determine if indoor air concentrations are associated with contamination underneath the building or from products stored or used inside the building.

444 Ferry Blvd.

Comparing the concentrations of those compounds with values above their reporting limits shows benzene indoor air concentrations detected in February and August were very similar. Chloroform and ethylbenzene indoor air concentrations were higher in August compared to the February round of sampling. Chloroform was detected above the RSL in the basement and on the first floor during the August sampling round. The sub-slab soil gas sample collected underneath the building did not detect chloroform above the reporting limit. The source of chloroform detected inside the building maybe coming from products containing chlorine being stored inside. Considering the property is currently a pool supply store, this is most likely the case. Benzene and ethylbenzene were not detected above the reporting limits in either the February or August sub-slab soil gas. TCE, 1, 1-DCE and 1, 1-DCA were detected in the sub-slab soil gas at higher concentrations during the August sampling round compared to February, but were not detected in any of the indoor air samples. Comparing the indoor air and sub-slab soil gas results suggest soil gas is not migrating into the building.

411 Barnum Ave.

Indoor air samples were collected from the McDonalds Restaurant, a separate building on the property and from eight retail stores and a movie theater all located within the same building (Stratford Square) also on the property. No sub-slab soil gas samples were collected from either building.

McDonalds Restaurant
Comparing the concentrations of those compounds with values above their reporting limits shows TCE and VC were higher during the August sampling round compared to February. Benzene and ethylbenzene were higher in February than in August. Chloroform concentrations were relatively the same during the February and August sampling rounds. Chloroform was the only compound detected above the RSL in both sampling rounds. Considering McDonalds is a restaurant where chlorinated water is most likely used for cleaning and other purposes, this maybe the source of chloroform indoor air levels.

Marshalls
Comparing the concentrations of those compounds with values above their reporting limits shows benzene and ethylbenzene were slightly higher in February than in August. Benzene was the only compound detected above the RSL during the February sampling round. Benzene was also detected in the ambient/background air during February and August, so this may have contributed to the indoor air concentrations.

Payless Shoe Source
Comparing the concentrations of those compounds with values above their reporting limits shows TCE, benzene and ethylbenzene were higher in February than in August. Chloroform concentrations were the same during February and August. Benzene, ethylbenzene and chloroform concentrations were above the RSLs during the February and August rounds of sampling. The TCE concentration was above the RSL in February, not in August. TCE and benzene were also detected in the ambient/ background air during February and August, so this may have contributed to the indoor

air concentrations.

Sleepy's
Comparing the concentrations of those compounds with values above their reporting limits shows TCE, benzene and ethylbenzene were slightly higher in February than in August. TCE, benzene and ethylbenzene concentrations were above the RSLs during the February and August rounds of sampling. TCE and benzene were also detected in the ambient/background air during February and August, so this may have contributed to the indoor air concentrations.

Fashion Bug
Comparing the concentrations of those compounds with values above their reporting limits shows TCE, benzene and ethylbenzene were higher in February than in August. Only the benzene concentration was above the RSL during the February round of sampling, not in August. TCE and benzene were also detected in the ambient/ background air during February and August, so this may have contributed to the indoor air concentrations.

US Postal Service
Comparing the concentrations of those compounds with values above their reporting limits shows TCE and ethylbenzene were higher in August than in February. Benzene and chloroform concentrations were higher in February than in August. Only the chloroform concentration was above the RSL during the February round of sampling, not in August. Chloroform was also detected in the ambient/background air during February, so this may have contributed to the indoor air concentrations. Consideration should be given to that chloroform can off gas from drinking water containing chlorine, so this may also be a contributing source of indoor air concentrations. TCE and benzene were also detected in the ambient/background air during February and August, so this may have contributed to the indoor air concentrations.

Sally's Beauty
Comparing the concentrations of those compounds with values above their reporting limits shows benzene was higher in February than in August and was above the RSL. The ethylbenzene concentrations were the same during the February and August rounds of sampling. Benzene was also detected in the ambient/background air during February and August, so this may have contributed to the indoor air concentrations.

Game Stop
Comparing the concentrations of those compounds with values above their reporting limits shows benzene was higher in February than in August and was above the RSL. The ethylbenzene concentration was higher in February compared to August, but was below the RSL. Benzene was also detected in the ambient/background air during February and August, so this may have contributed to the indoor air concentrations.

T-Mobile
Comparing the concentrations of those compounds with values above their reporting limits shows benzene and ethylbenzene were higher in February than in August. The TCE concentration was higher in August compared to February. TCE, benzene and ethylbenzene values detected above the reporting limits were not above the RSLs.

TCE and benzene were also detected in the ambient/background air during February and August, so this may have contributed to the indoor air concentrations.

Regal Cinema
Comparing the concentrations of those compounds with values above their reporting limits shows benzene was higher in February than in August. Benzene values detected above the reporting limits were not above the RSL. Benzene was also detected in the ambient/background air during February and August, so this may have contributed to the indoor air concentrations.

8.10 Non Target Compounds Sampling Results and Discussions

In addition to the target compounds detected in the indoor air and in the soil gas, a number of non-target compounds were also detected during the August round of sampling. The indoor air concentrations are compared to the ambient/background air concentrations to help determine if a source of these compounds exists inside the building. In addition, the soil gas data are also compared to the indoor air data to further help assess the source of these compounds.

500 Ferry Blvd.

Table 4 shows a summary of the 24-hour indoor air, sub-slab soil gas and the sampling day ambient air non-target and target compound canister data, collected from this building. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix G. There were several compounds detected in the sub-slab soil gas sample at much higher concentrations than in the indoor air, namely 1, 1, 1-trichloroethane (1, 1, 1 -TCA), tetrachloroethylene (PCE) and cis-1, 2-Dichloroethylene (cis-1, 2-DCE). These compounds were not detected inside the building above the reporting limits. Comparing the sub-slab soil gas and indoor air data suggests these compounds are not migrating into the building. There were a number of compounds that were detected at slightly higher concentrations in the basement verses on the first floor, that could be placed into the petroleum hydrocarbon category, including: 1, 2, 4-trimethylbenzene, 1, 3, 5-trimethylbenzene, 4-ethyltoluene, cyclohexane, heptanes, hexane, toluene and xylene's. These compounds can volatilize from gasoline and other petroleum products. At the time samples were being collected there were two 4 wheelers/ATVs stored in the basement with gasoline in the tanks and an odor of gasoline noticed. The levels detected in the building for the compounds identified above are most likely the result of the gasoline and not sources beneath or adjacent to the building.

The concentrations detected for other non-target compounds inside the building were similar or slightly higher than the ambient air concentrations, namely: dichlorodifluoromethane and methylchloride. There have been studies showing levels of indoor pollutants can be 25% – 62% higher than outdoor air pollutant levels. Outdoor air continually infiltrates a typical building bringing with it pollutants that will accumulate, resulting in measurable levels that are higher inside than out. In general, the non-target compounds detected inside the building are most likely associated with sources inside or outside the building and not from contaminated soils or groundwater beneath or

adjacent to the building.

82 Ferry Court

Table 5 shows a summary of the 24-hour indoor air, sub-slab soil gas and the sampling day ambient air non-target and target compound canister data, collected from this home. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix G. The non-target compounds detected in the sub-slab soil gas sample with concentrations that were less than what was detected in the basement and on the first floor were as follows: 1, 2, 4-trimethylbenzene,1, 2-dichloroethane, 4-ethyltoluene, cyclohexane, hexane, methyl ethyl ketone, methylchloride, methylene chloride, styrene, toluene and xylene's. This suggests that sources within the building are contributing to indoor air levels and not sources beneath or adjacent to the building. The indoor air concentrations of the non-target compounds detected in the basement and on the first floor were very similar and in some cases were higher than ambient air, with the exception of methylene chloride. There have been studies showing levels of indoor pollutants can be 25% – 62% higher than outdoor air pollutant levels. Outdoor air continually infiltrates a typical building bringing with it pollutants that will accumulate, resulting in measurable levels that are higher inside than out. The compounds detected inside the home are most likely associated with sources inside or outside the building and not from contaminated soils or groundwater beneath or adjacent to the building.

72 Ferry Court

Table 6 shows a summary of the 24-hour indoor air, sub-slab soil gas and the sampling day ambient air non-target and target compound canister data, collected from this home. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix G. In general, the few non-target compounds that were detected in the sub-slab soil gas sample had concentrations that were similar or less than what was detected in the basement and on the first floor. The indoor air concentrations of the non-target compounds detected in the basement and on the first floor were very similar and in some cases were similar or slightly higher than the ambient air. There have been studies showing levels of indoor pollutants can be 25% – 62% higher than outdoor air pollutant levels. Outdoor air continually infiltrates a typical building bringing with it pollutants that will accumulate, resulting in measurable levels that are higher inside than out. The compounds detected inside the building are most likely associated with sources inside or outside the building and not from contaminated soils or groundwater beneath or adjacent to the building. This home has a soil vapor extraction system/radon mitigation system installed, which will aid in the removal of soil gas from beneath the home.

50 Ferry Court

Table 7 shows a summary of the 24-hour indoor air, sub-slab soil gas and the sampling day ambient air non-target and target compound canister data, collected from this home. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is

presented in Appendix G. Comparing the sub-slab soil gas data to the indoor air data shows several compounds with concentrations higher inside than underneath the building, namely: 1, 2, 4-trimethylbenzene, 1, 3, 5-trimethylbenzene, 1, 4-dichlorobenzene, 4-ethyltoluene, bromodichloromethane, cyclohexane, carbon tetrachloride, dichlorodifluoromethane, hexane, methyl ethyl ketone, methylchloride, styrene, toluene, trichlorofluoromethane and xylene's. This suggests that sources within the building are contributing to indoor air levels and not sources beneath or adjacent to the building. The indoor air concentrations of the non-target compounds detected in the basement and on the first floor were very similar and in some cases were similar or slightly higher than the ambient air. There have been studies showing levels of indoor pollutants can be 25% – 62% higher than outdoor air pollutant levels. Outdoor air continually infiltrates a typical building bringing with it pollutants that will accumulate, resulting in measurable levels that are higher inside than out. The compounds detected inside the building are most likely associated with sources inside or outside the building and not from contaminated soils or groundwater beneath or adjacent to the building.

62 Ferry Court

Table 8 shows a summary of the 24-hour indoor air, sub-slab soil gas and the sampling day ambient air non-target and target compound canister data, collected from this home. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix G. Comparing the sub-slab soil gas data to the indoor air data shows several compounds with concentrations higher inside than underneath the building, namely: 1, 2, 4-trimethylbenzene, 4-ethyltoluene, cyclohexane, dichlorodifluoromethane, hexane, methyl ethyl ketone, methylchloride, styrene, toluene, trichlorofluoromethane and xylene's. This suggests that sources within the building are contributing to indoor air levels and not sources beneath or adjacent to the building. The tetrachloroethylene concentration was higher in the sub-slab soil gas compared to the indoor air levels. The non-target compound indoor air concentrations detected in the basement were similar or slightly higher than on the first floor. The indoor air concentrations were generally similar or slightly higher than the ambient air. There have been studies showing levels of indoor pollutants can be 25% – 62% higher than outdoor air pollutant levels. Outdoor air continually infiltrates a typical building bringing with it pollutants that will accumulate, resulting in measurable levels that are higher inside than out. The compounds detected inside the building are most likely associated with sources inside or outside the building and not from contaminated soils or groundwater beneath or adjacent to the building. According to the home owner, cigarettes are occasionally smoked inside the home and every few months clothes are dry cleaned. Tetrachloroethylene used in the dry cleaning industry will off gas from clothes for a period of time after they have been brought home. Cigarette smoke contains benzene, cyclohexane, toluene and xylene's, which were detected inside the home.

100 Veterans Way

Table 9 shows a summary of the 8-hour indoor air, sub-slab soil gas and the sampling day ambient air non-target and target compound canister data, collected from this

building. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix G. There were several compounds detected in the sub-slab soil gas samples at much higher concentrations than in the indoor air, namely 1, 1, 1-TCA and cis-1, 2-DCE. Similarly, the target compounds, TCE 1,1-DCE and 1, 1-DCA also had much higher concentrations detected in the sub-slab soil gas compared to indoor air, which suggest soil gas migration into the building maybe occurring, although not significantly.

The concentrations detected for other non-target compounds were similar or slightly higher in the basement than on the first floor and were similar or higher than the ambient air. There have been studies showing levels of indoor pollutants can be 25% – 62% higher than outdoor air pollutant levels. Outdoor air continually infiltrates a typical building bringing with it pollutants that will accumulate, resulting in measurable levels that are higher inside than out. The sub-slab soil gas sample reporting limits for the non-target compounds were high making it difficult to accurately determine if they were present in the soil gas at low levels and migrating into the building. In general, the non-target compounds detected inside the building maybe migrating into the building, but at very slow rate.

608 Ferry Blvd.

Table 10 shows a summary of the 8-hour indoor air, sub-slab soil gas and the sampling day ambient air non-target and target compound canister data, collected from this building. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix G. At the time sampling took place this building was vacant, not being heated or air conditioned, all furnishings had been removed, the floors were not covered with carpet, wood or tile, just exposed concrete and the walls were not finished, just exposed cinder blocks. The following compounds were detected at higher concentrations inside the building than underneath, hexane, methyl ethyl ketone, methylchloride, methylene chloride and toluene. These compounds were also detected in the ambient/background air. There were several compounds detected in the sub-slab soil gas samples at similar or higher concentrations than in the indoor air, namely 1, 1, 1-TCA, 4-ethyltoluene, carbon tetrachloride, dichlorodifluoromethane, PCE, trichlorofluoromethane, trichlorotrifluoroethane and cis-1, 2-DCE. The target compounds TCE, chloroform and vinyl chloride were detected in the soil gas and were either not detected inside the building or at very low concentrations. The non-target compound indoor air concentrations were either similar or higher in the basement compared to the first floor. Considering the sub-soil gas, indoor air and ambient air data, suggest soil gas migration into the building maybe occurring, although not significantly and outside air is contributing to indoor air levels.

335 Ferry Blvd.

Table 11 shows a summary of the 8-hour indoor air, sub-slab soil gas and the sampling day ambient air non-target and target compound canister data, collected from this building. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is

presented in Appendix G. This building does not have a basement. The lower level is constructed on a slab on-grade foundation, which has three separate garage bays and one area used as office space by Curtin Taxi. A level above this, which is at ground level, is intended as office and retail space. There were several compounds detected in the sub-slab soil gas sample at higher concentrations than in the indoor air, namely: 1, 1, 1 -TCA, dichlorodifluoromethane, PCE and trichlorofluoromethane. As discussed in Section 8.1, during the August sampling round there was evidence that TCE was present in the soil gas below the buildings slab at concentrations between 53 $\mu g/m^3$ and 91 $\mu g/m^3$, which are much lower than the concentration inside Curtin Taxi. After taking several indoor air grab samples in various rooms/closets within Curtin Taxi, high TCE concentrations were identified coming from the auto supply room. An inventory of products stored in the auto supply room indentified the source of the TCE indoor air concentrations to be from a 32 ounce container of "Tru-Flate Universal Cement, Type C" with a label indicating it contains TCE. The concentration detected in the Estimating Room at 335 Ferry Blvd. was much less, but still above the RSL. Considering the discovery of a product containing TCE is being used inside the building strongly suggest the source of the TCE indoor air concentrations within the building is from this product and not from sources beneath or adjacent to the building. It was also discovered that higher concentrations were present in the Curtin Taxi Auto Supply Room compared to other areas of the building for the compounds, dichlorodifluoromethane, hexane, methyl ethyl ketone, and toluene. In general, considering the indoor air, sub-slab soil gas and ambient/background air data, the compounds detected inside the building are most likely associated with sources inside or outside the building and not from contaminated soils or groundwater beneath or adjacent to the building.

300 Ferry Blvd.

Table 12 shows a summary of the 8-hour indoor air, sub-slab soil gas and the sampling day ambient air non-target and target compound canister data, collected from this building. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix G. This building is constructed on a slab on-grade foundation and is currently being used as ski and snowboard retail store and repair shop. The following compounds were detected in the sub-slab soil gas sample at higher concentrations than in the indoor air: 1, 1, 1-TCA, cyclohexane, MTBE, PCE, heptane, dichlorodifluoromethane, cis-1, 2-DCE, and trans-1, 2-DCE. These compounds were either not detected above the reporting limits or at very low concentrations inside the building, which suggest these compounds are not migrating into the building from underneath; if they are, only slightly. As described above in Section 8.1 TCE indoor air and soil gas data also suggest soil gas migration into the building maybe occurring, although not significantly. MTBE was only detected in the soil gas, which suggests an old gasoline spill may have occurred in the area. MTBE was discontinued as fuel additive in 2006 and can persist in groundwater for many years.

As explained in Sections 8.4 and 8.7, at the time samples were being collected there were three motorcycles stored in the area with gasoline in the tanks. During the February round of sampling benzene and ethylbenzene indoor air levels were lower, without the motorcycles present. The benzene and ethylbenzene levels detected inside the building are most likely the result of the gasoline and not sources beneath or

adjacent to the building. Similarly, the following compounds were detected at higher concentrations inside the building compared to the sub-slab soil gas or ambient/ background air and are also associated with gasoline: 1, 2, 4-trimethylbenzene, 4-ethyltoluene, 1, 3, 5-trimethylbenzene, hexane, toluene and xylene's. Other compounds were detected at higher concentrations inside the building compared to the sub-slab soil gas or ambient/background air, which are most likely associated with products stored or used within the building are: tetrahydrofuran, styrene and methyl ethyl ketone.

Methylchloride and methylene chloride were detected in the ambient/background air at higher or similar concentrations to the indoor air indicating outside is impacting indoor air quality. There have been studies showing levels of indoor pollutants can be 25% – 62% higher than outdoor air pollutant levels. Outdoor air continually infiltrates a typical building bringing with it pollutants that will accumulate, resulting in measurable levels that are higher inside than out.

326 Ferry Blvd.

Table 13 shows a summary of the 8-hour indoor air and the sampling day ambient air non-target and target compound canister data, collected from this building. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix G. No sub-slab soil gas samples were collected beneath the building, so it is difficult to determine if indoor air concentrations are associated with contamination underneath the building or from products stored or used inside the building. The concentrations detected for the non-target compounds were similar in both the kitchen and dining room. The concentrations inside the building were generally similar or higher than the ambient air. There have been studies showing levels of indoor pollutants can be 25% – 62% higher than outdoor air pollutant levels. Outdoor air continually infiltrates a typical building bringing with it pollutants that will accumulate, resulting in measurable levels that are higher inside than out.

444 Ferry Blvd.

Table 14 shows a summary of the 8-hour indoor air, sub-slab soil gas and the sampling day ambient air non-target and target compound canister data, collected from this building. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix G. There were three compounds detected in the sub-slab soil gas samples at higher concentrations than in the indoor air, namely 1, 1, 1 –TCA, cis-1, 2-DCE and PCE. The target compounds, TCE, 1, 1-DCE and 1, 1-DCA were also detected in the sub-slab soil gas at higher concentrations than inside. These six compounds were either not detected above the reporting limits or at very low concentrations inside the building, which suggest these compounds are not migrating into the building from underneath; if they are, only slightly.

The concentrations detected for other non-target compounds were slightly higher in the basement than on the first floor and were similar or higher than the ambient air. The following compounds were detected at higher concentrations inside the building compared to the sub-slab soil gas or ambient/background air: 1, 2, 4-trimethylbenzene,

1, 3, 5-trimethylbenzene, 4-ethyltoluene, carbon tetrachloride, cyclohexane, hexane, methyl ethyl ketone, toluene and xylene's. Considering the sub-soil gas, indoor air and ambient air data for these compounds, suggest soil gas migration into the building is not occurring. The indoor air and ambient/background air concentrations for methylchloride, dichlorodifluoromethane and trichlorofluoromethane were very similar; indicating outside air is contributing to indoor air levels. In general the non-target compounds detected inside the building are most likely associated with sources inside or outside the building and not from contaminated soils or groundwater beneath or adjacent to the building.

411 Barnum Ave.

Tables 15 – 24 show a summary of the 8-hour indoor air and the sampling day ambient air non-target and target compound canister data, collected from the McDonalds Restaurant, a separate building on the property and from eight retail stores and a movie theater all located within the same building (Stratford Square) also on the property. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix G. No sub-slab soil gas samples were collected beneath the building, so it is difficult to determine if indoor air concentrations are associated with contamination underneath the building or from products stored or used inside the building.

McDonalds Restaurant

Table 15 shows a summary of the 8-hour indoor air and the sampling day ambient air non-target and target compound canister data, collected from this building. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix G. The concentrations inside McDonalds were generally similar or slightly lower than the ambient air. In general the non-target compounds detected inside the building are most likely associated with sources inside or outside the building.

US Postal Service

Table 16 shows a summary of the 8-hour indoor air and the sampling day ambient air non-target and target compound canister data, collected from this building. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix G. A sample was collected in the back, within the mail sorting area. The concentrations inside this area were similar or higher than outside, with the exception of 1, 1, 1-TCA, dichlorodifluoromethane and hexane were slightly higher outside than inside. There may have been some infiltration of outside air into the building that contributed slightly to the levels detected inside. However, there may be sources present within the building also contributing to the indoor air concentrations.

Marshalls

Table 17 shows a summary of the 8-hour indoor air and the sampling day ambient air non-target and target compound canister data, collected from this store. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix G. Samples were collected from two locations, in a backroom used for

storage and as a receiving, loading and storage area, and in the general shopping area. Concentrations detected were similar in both areas sampled. Toluene, compared to the other non-target compounds, overall had much higher concentrations, 60 µg/m^3. It was not evident as to the toluene source within the building; it was detected at 3.8 µg/m^3 outside the building, so this may have been a slight contributing factor. Comparing the other non-target compounds detected inside the building to the ambient air, the concentrations inside were similar or higher than outside. There have been studies showing levels of indoor pollutants can be 25% – 62% higher than outdoor air pollutant levels. Outdoor air continually infiltrates a typical building bringing with it pollutants that will accumulate, resulting in measurable levels that are higher inside than out. In general the non-target compounds detected inside the building are most likely associated with sources inside or outside the building.

Payless Shoe Source

Table 18 shows a summary of the 8-hour indoor air and the sampling day ambient air non-target and target compound canister data, collected from this building. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix G. A sample was collected towards the back and middle of the store. The concentrations from these locations were very similar and much higher than outside, particularly for the compounds, 1, 2, 4-trimethylbenzene, 1, 2-dichloroethane, 1, 2-dichloropropane, 1, 3, 5-trimethylbenzene, 4-ethyltoluene, cyclohexane, heptane, methyl ethyl ketone, methylene chloride, styrene, toluene, trichlorofluoromethane and xylene's. Toluene had the highest concentration at 940 - 1600 µg/m^3. Upon entering the store to set-up the samplers there was an overwhelming odor, smelling like rubber, which is most likely from all of the shoes displayed in the store. It is possible the compounds detected inside this store are most likely associated with off-gassing from the shoes.

Sleepy's

Table 19 shows a summary of the 8-hour indoor air and the sampling day ambient air non-target and target compound canister data, collected from this building. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix G. A sample was collected from the show room area, where beds/mattresses are on display in an open area. The concentrations inside the store were much higher than outside, particularly for the compounds, 1, 2, 4-trimethylbenzene, 1, 2-dichloroethane, 1, 2-dichloropropane, 1, 3, 5-trimethylbenzene, 4-ethyltoluene, cyclohexane, methyl ethyl ketone, methylene chloride, toluene, trichlorofluoromethane and xylene's. Toluene had the highest concentration at 320 µg/m^3. It is possible the compounds detected inside this store are most likely associated with off-gassing from the mattresses and other materials. A similar conclusion was drawn after reviewing the data from the Payless Shoe Store. There is a possibility that being next to the Payless Shoe Source Store may have contributed to the levels detected inside Sleepy's.

Fashion Bug

Table 20 shows a summary of the 8-hour indoor air and the sampling day ambient air non-target and target compound canister data, collected from this building. The compounds listed are those that were detected above the reporting limits in at least one

of the samples. A description of the product use for these compounds is presented in Appendix G. A sample was collected in the back of the store where the register is located. The concentrations inside the store were generally higher than outside, particularly for the compounds, 1, 2, 4-trimethylbenzene, 1, 3, 5-trimethylbenzene, 4-ethyltoluene, cyclohexane, methyl ethyl ketone, toluene, trichlorofluoromethane and m/p-xylene. Toluene and Trichlorofluoromethane had the highest concentrations, 20 and 19 µg/m^3, respectively. It is possible the compounds detected inside this store are most likely associated with off-gassing from shoes, clothes and other materials displayed in the store. There is also the possibility that being next to the Sleepy's Store may have contributed to the levels detected inside Fashion Bug. There also may have been some infiltration of outside air into the building that contributed slightly to the levels detected inside.

Sally's Beauty

Table 21 shows a summary of the 8-hour indoor air and the sampling day ambient air non-target and target compound canister data, collected from this building. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix G. A sample was collected in the middle of the store, on top of a shelf displaying beauty supplies. The concentrations inside this area were similar or higher than outside. In particular, 4-ethyltoluene, cyclohexane, heptane, methyl ethyl ketone, tetrahydrofuran, toluene, trichlorofluoromethane and xylene's were much higher inside than outside. Methyl ethyl ketone and toluene had the highest concentrations, 77 and 20 µg/m^3, respectively. There may be sources, such as the beauty supplies, present within the store also contributing to the indoor air concentrations.

Game Stop

Table 22 shows a summary of the 8-hour indoor air and the sampling day ambient air non-target and target compound canister data, collected from this building. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix G. A sample was collected in the middle of the store, on top of a shelf behind the register. The concentrations inside this area were similar or higher than outside. In particular, the methyl ethyl ketone concentration was much higher at 11 µg/m^3 compared to outside at 0.91 µg/m^3. There may be sources outside the building and within the store contributing to the indoor air concentrations.

T-Mobile

Table 23 shows a summary of the 8-hour indoor air and the sampling day ambient air non-target and target compound canister data, collected from this building. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix G. A sample was collected in the middle of the store, on top of a shelf behind the register. In general, the concentrations inside this area were similar or higher than outside. In particular, methyl ethyl ketone, toluene and trichlorofluoromethane were higher inside than outside. There may be sources outside the building and within the store contributing to the indoor air concentrations.

Regal Cinema

Table 24 shows a summary of the 8-hour indoor air and the sampling day ambient air non-target and target compound canister data, collected from this building. The compounds listed are those that were detected above the reporting limits in at least one of the samples. A description of the product use for these compounds is presented in Appendix G. Three samples were collected, in two separate movie theaters and one in the projection booth. The concentrations within all three areas were generally similar and contained similar results to that of the ambient air sample.

TABLES

Table 1 – EPA Method TO15 Target VOC List
Table 2A, 2B, 2C, 2D – Duplicate Air Sampling Results
Table 3 – Ambient Air Canister Air Sampling Results Summary
Table 4 – 500 Ferry Blvd. Canister Air Sampling Results Summary
Table 5 – 82 Ferry Court Canister Air Sampling Results Summary
Table 6 – 72 Ferry Court Canister Air Sampling Results Summary
Table 7 – 50 Ferry Court Canister Air Sampling Results Summary
Table 8 – 62 Ferry Court Canister Air Sampling Results Summary
Table 9 – 100 Veterans Way Canister Air Sampling Results Summary
Table 10 – 608 Ferry Blvd. Canister Air Sampling Results Summary
Table 11 – 335 Ferry Blvd. Canister Air Sampling Results Summary
Table 12 – 300 Ferry Blvd. Canister Air Sampling Results Summary
Table 13 – 326 Ferry Blvd. Canister Air Sampling Results Summary
Table 14 – 444 Ferry Blvd. Canister Air Sampling Results Summary
Table 15 – 411 Barnum Ave. McDonalds Restaurant Canister Air Sampling Results Summary
Table 16 – 411 Barnum Ave. US Postal Service Canister Air Sampling Results Summary
Table 17 – 411 Barnum Ave. Marshalls Canister Air Sampling Results Summary
Table 18 – 411 Barnum Ave. Payless Shoe Source Canister Air Sampling Results Summary
Table 19 – 411 Barnum Ave. Sleepy's Canister Air Sampling Results Summary
Table 20 – 411 Barnum Ave. Fashion Bug Canister Air Sampling Results Summary
Table 21 – 411 Barnum Ave. Sally's Beauty Canister Air Sampling Results Summary
Table 22 – 411 Barnum Ave. Game Stop Canister Air Sampling Results Summary
Table 23 – 411 Barnum Ave. T-Mobile Canister Air Sampling Results Summary
Table 24 – 411 Barnum Ave. Regal Cinema Canister Air Sampling Results Summary
Table 25 – 500 Ferry Blvd. Soil Gas Grab, Indoor Air Grab and 24-Hour Sampling Results
Table 26 – 608 Ferry Blvd. Soil Gas Grab, Indoor Air Grab and 8-Hour Sampling Results
Table 27 – 335 Ferry Blvd. Soil Gas Grab, Indoor Air Grab and 8-Hour Sampling Results
Table 28 – 300 Ferry Blvd. Soil Gas Grab, Indoor Air Grab and 8-Hour Sampling Results
Table 29 – 100 Veterans Way Soil Gas Grab, Indoor Air Grab and 8-Hour Sampling Results
Table 30 – 326 Ferry Blvd. Indoor Air 8-Hour Sampling Results
Table 31 – 444 Ferry Blvd. Soil Gas Grab, Indoor Air Grab and 8-Hour Sampling Results
Table 32 – 411 Barnum Ave. Indoor Air 8-Hour Sampling Results
Table 33 – 50 Ferry Court Soil Gas Grab, Indoor Air Grab and 24-Hour Sampling Results
Table 34 – 72 Ferry Court Soil Gas Grab, Indoor Air Grab and 24-Hour Sampling Results
Table 35 – 62 Ferry Court Soil Gas Grab, Indoor Air Grab and 24-Hour Sampling Results
Table 36 – 82 Ferry Court Soil Gas Grab, Indoor Air Grab and 24-Hour Sampling Results

EPA METHOD TO15 TARGET VOC LIST

EPA Region I TO-15 VOC Reported Compounds	CAS No.	EPA RSL Residential Air ($\mu g/m^3$)	EPA RSL Industrial Air ($\mu g/m^3$)	Toxicity Basis
1, 1, 1-Trichloroethane	71-55-6	5200	22000	nc
1, 1, 2, 2-Tetrachloroethane	79-34-5	0.042	0.21	c
1, 1, 2-Trichloroethane	79-00-5	0.15	0.77	c
1, 1-Dichloroethane	75-34-3	1.5	7.7	c
1, 1-Dichloroethylene	75-35-4	210	880	nc
1, 2, 4-Trichlorobenzene	120-82-1	2.1	8.8	nc
1, 2, 4-Trimethylbenzene	95-63-6	7.3	31	nc
1, 2-Dibromoethane	106-93-4	0.0041	0.020	c
1, 2-Dichlorobenzene	95-50-1	210	880	nc
1, 2-Dichloroethane	107-06-2	0.094	0.47	c
1, 2-Dichloropropane	78-87-5	0.24	1.2	c
1, 3, 5-Trimethylbenzene	108-67-8	NA	NA	nc
1, 3-Butadiene	106-99-0	0.081	0.41	c
1, 3-Dichlorobenzene (m-Dichlorobenzene)	541-73-1	NA	NA	NA
1, 4-Dichlorobenzene (p-Dichlorobenzene)	106-46-7	0.22	1.1	c
2-Hexanone	591-78-6	31	130	nc
4-Ethyl Toluene	622-96-8	NA	NA	NA
Acrylonitrile	107-13-1	0.036	0.18	c
Allyl Chloride	107-05-1	0.41	2.0	c
Benzene	71-43-2	0.31	1.6	c
Benzylchloride	100-44-7	0.05	0.25	c
Bromodichloromethane	75-27-4	0.066	0.33	c
Bromoform	75-25-2	2.2	11	c
Carbon Tetrachloride	56-23-5	0.41	2.0	c
Chlorobenzene	108-90-7	52	220	nc
Chloroethane (Ethyl chloride)	75-00-3	10000	44000	nc
Chloroform	67-66-3	0.11	0.53	c
Cyclohexane	110-82-7	6300	26000	nc
Dibromochloromethane	124-48-1	0.09	0.45	c
Dichlorodifluoromethane (F12)	1320-37-2	100	440	nc
Dichlorotetrafluoroethane	1320-37-2	NA	NA	NA
Ethylbenzene	100-41-4	0.97	4.9	c
Heptane	142-82-5	NA	NA	NA
Hexachloro-1, 3-butadiene (Hexachlorobutadiene)	87-68-3	0.11	0.56	c
Hexane (n-Hexane)	110-54-3	730	3100	nc
Methyl Ethyl Ketone (2-butanone)	78-93-3	5200	22000	nc
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1	3100	13000	nc
Methyl-t-butyl ether	1634-04-4	9.4	47	c
Methylbromide (Bromomethane)	74-83-9	5.2	22	nc
Methylchloride (Chloromethane)	74-87-3	94	390	nc
Methylene Chloride	75-09-2	96	1200	c
Styrene	100-42-5	1000	4400	nc
Tetrachloroethene	127-18-4	9.4	47	c
Tetrahydrofuran	109-99-9	2100	8800	nc
Toluene	108-88-3	5200	22000	nc
Trichloroethene	79-01-6	0.43	3.0	c
Trichlorofluoromethane	75-69-4	730	3100	nc
Trichlorotrifluoroethane	76-13-1	NA	NA	NA
Vinyl Bromide	593-60-2	0.076	0.38	c
Vinyl chloride	75-01-4	0.16	2.8	c
cis-1, 2-Dichloroethene	156-59-2	NA	NA	NA
cis-1,3-Dichloropropene	10061-01-5	NA	NA	NA
1, 3-Dichloropropene	542-75-6	0.61	3.1	c
m, p-Xylene (Xylene, mixture)	1330-20-7	100	440	nc
m-Xylene	108-38-3	100	440	nc
p-Xylene	106-42-3	100	440	nc
o-Xylene	95-47-6	100	440	nc
trans-1, 2-Dichloroethene	156-60-5	63	260	nc
trans-1, 3-Dichloropropene	10061-02-6	NA	NA	NA

NA = Not Available

nc = non-cancer health effect (for Hazard Quotient = 1)

c = cancer health effect (for 1×10^{-6} incremental lifetime cancer risk)

EPA RSL = EPA Regional Screening Level (May, 2012)

http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm

TABLE 2A
DUPLICATE SAMPLING RESULTS
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 500 FERRY BLVD. CANISTER #6548 13-Aug-12 24-HOUR AVG. (ppb/v)		INDOOR AIR 500 FERRY BLVD. DUPLICATE CANISTER #3656 13-Aug-12 24-HOUR AVG. (ppb/v)		RPD (%)
		(µg/m³)		(µg/m³)	
Trichloroethene	**ND (0.08)**	**ND (0.43)**	**ND (0.09)**	**ND (0.48)**	**NA**
1,1-Dichloroethylene	**ND (0.08)**	**ND (0.32)**	**ND (0.09)**	**ND (0.36)**	**NA**
1,1-Dichloroethane	**ND (0.08)**	**ND (0.32)**	**ND (0.09)**	**ND (0.36)**	**NA**
Benzene	**5.9**	**19**	**5.9**	**19**	0
Chorobenzene	**ND (0.08)**	**ND (0.37)**	**ND (0.09)**	**ND (0.42)**	**NA**
Chloroform	**0.08 L**	**0.37 L**	**0.08 L**	**0.40 L**	9
Ethylbenzene	**4.6**	**20**	**4.6**	**20**	0
Vinyl Chloride	**ND (0.08)**	**ND (0.20)**	**ND (0.09)**	**ND (0.23)**	**NA**
1,2,4-Trichlorobenzene	0.06 L	0.45 L	0.06 L	0.42 L	5
1,2,4-Trimethylbenzene	3.7	18	3.7	18	0
1,3,5-Trimethylbenzene	1.0	5.0	ND (0.09)	ND (0.44)	NA
4-Ethyltoluene	3.9	19	3.8	18	3
Cyclohexane	2.7	9.3	2.8	9.6	4
Dichlorodifluoromethane	0.45	2.2	0.43	2.1	5
Heptane	9.0	37	8.9	36	1
Hexane	20	70	22	74	10
Methylchloride	0.40	0.83	0.40	0.83	0
Styrene	ND (0.08)	ND (0.34)	0.25	1.1	NA
Toluene	38	140	38	140	0
m/p-Xylenes	13	58	13	58	0
o-Xylene	4.7	20	4.7	20	0

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
NA = not applicable, concentrations for these compounds were either less than 10 times the reporting limit or not detected above the reporting limits to calcualte an RPD
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 2B
DUPLICATE SAMPLING RESULTS
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 100 VETERANS WAY CANISTER #6547 14-Aug-12 8-HOUR AVG.		INDOOR AIR 100 VETERANS WAY DUPLICATE CANISTER #6555 14-Aug-12 8-HOUR AVG.		RPD
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(%)
Trichloroethene	**0.32**	**1.7**	**0.30**	**1.6**	**NA**
1,1-Dichloroethylene	**ND (0.11)**	**ND (0.44)**	**ND (0.11)**	**ND (0.44)**	**NA**
1,1-Dichloroethane	**0.24**	**0.97**	**0.25**	**1.0**	**4**
Benzene	**1.0**	**3.2**	**1.0**	**3.3**	**0**
Chorobenzene	**ND (0.11)**	**ND (0.51)**	**ND (0.11)**	**ND (0.51)**	**NA**
Chloroform	**0.64**	**3.1**	**0.65**	**3.2**	**2**
Ethylbenzene	**0.60**	**2.6**	**0.53**	**2.3**	**12**
Vinyl Chloride	**ND (0.11)**	**ND (0.28)**	**ND (0.11)**	**ND (0.28)**	**NA**
1,1,1-Trichloroethane	0.06 L	0.33 L	0.06 L	0.31 L	7
1,2,4-Trichlorobenzene	0.05 L	0.38 L	ND (0.11)	ND (0.82)	NA
1,2,4-Trimethylbenzene	ND (0.11)	ND (0.54)	0.31	1.5	NA
1,2-Dichloroethane	1.3	5.4	1.3	5.4	0
1,3,5-Trimethylbenzene	0.12	0.59	0.13	0.64	8
1,4-Dichlorobenzene	0.20	1.2	0.19	1.1	5
4-Ethyltoulene	0.32	1.6	0.31	1.5	3
Carbon Tetrachloride	ND (0.11)	ND (0.69)	0.07 L	0.41 L	NA
Cyclohexane	0.22	0.76	0.21	0.72	5
Dichlorodifluoromethane	0.92	4.5	0.78	3.9	16
Hexane	3.4	12	3.4	12	0
Methyl Ethyl Ketone	1.2	3.5	1.1	3.2	9
Methylchloride	0.67	1.4	0.63	1.3	6
Methylene Chloride	0.30	1.0	0.28	0.97	7
Styrene	0.60	2.6	0.54	2.3	11
Toluene	3.9	15	3.8	14	3
Trichlorofluoromethane	0.39	2.2	0.36	2.0	8
c-1,2-Dichloroethene	0.86	3.4	0.85	3.4	1
m/p-Xylenes	1.7	7.4	1.6	7.0	6
o-Xylenes	0.50	2.2	0.47	2.0	6

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
NA = not applicable, concentrations for these compounds were either less than 10 times the reporting limit or not detected above the reporting limits to calcualte an RPD
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 2C
DUPLICATE SAMPLING RESULTS
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 608 FERRY BLVD. CANISTER #6569 15-Aug-12 8-HOUR AVG.		INDOOR AIR 608 FERRY BLVD. DUPLICATE CANISTER #1574 15-Aug-12 8-HOUR AVG.		RPD
	(ppb/v)	($\mu g/m^3$)	(ppb/v)	($\mu g/m^3$)	(%)
Trichloroethene	**0.25**	**1.3**	**0.17**	**0.91**	**38**
1,1-Dichloroethylene	**ND (0.11)**	**ND (0.44)**	**ND (0.11)**	**ND (0.44)**	**NA**
1,1-Dichloroethane	**0.06 L**	**0.22 L**	**ND (0.11)**	**ND (0.44)**	**NA**
Benzene	**ND (0.11)**	**ND (0.35)**	**ND (0.11)**	**ND (0.35)**	**NA**
Chorobenzene	**ND (0.11)**	**ND (0.51)**	**ND (0.11)**	**ND (0.51)**	**NA**
Chloroform	**ND (0.11)**	**ND (0.54)**	**ND (0.11)**	**ND (0.54)**	**NA**
Ethylbenzene	**ND (0.11)**	**ND (0.48)**	**ND (0.11)**	**ND (0.48)**	**NA**
Vinyl Chloride	**ND (0.11)**	**ND (0.28)**	**ND (0.11)**	**ND (0.28)**	**NA**
1,1,1-Trichloroethane	0.48	2.6	0.26	1.4	59
4-Ethyltoulene	0.05 L	0.26 L	0.05 L	0.25 L	2
Carbon Tetrachloride	0.06 L	0.40 L	ND (0.11)	ND (0.69)	NA
Dichlorodifluoromethane	0.47	2.3 L	0.35	1.7	29
Hexane	2.3	8.2	1.8	6.5	24
Methyl Ethyl Ketone	0.33	0.97	0.15	0.44	75
Methylchloride	0.39	0.81	0.26	0.54	40
Methylene Chloride	0.50	1.7	1.4	5.0	95
Toluene	0.16	0.60	0.13	0.49	21
Trichlorofluoromethane	0.19	1.1	0.14	0.79	30
Trichlorotrifluorothane	0.05 L	0.41 L	ND (0.11)	ND (0.84)	NA
m/p-Xylenes	0.08 L	0.35 L	0.06 L	0.28 L	23

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
NA = not applicable, concentrations for these compounds were either less than 10 times the reporting limit or not detected above the reporting limits to calcualte an RPD
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 2D
DUPLICATE SAMPLING RESULTS
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 411 BARNUM AVE. MARSHALLS BACKROOM CANISTER #5792 16-Aug-12 8-HOUR AVG.		INDOOR AIR 411 BARNUM AVE. MARSHALLS BACKROOM DUPLICATE CANISTER #1114 16-Aug-12 8-HOUR AVG.		RPD
	(ppb/v)	(µg/m^3)	(ppb/v)	(µg/m^3)	(%)
Trichloroethene	**ND (0.10)**	**ND (0.54)**	**ND (0.12)**	**ND (0.64)**	**NA**
1,1-Dichloroethylene	**ND (0.10)**	**ND (0.40)**	**ND (0.12)**	**ND (0.48)**	**NA**
1,1-Dichloroethane	**ND (0.10)**	**ND (0.40)**	**ND (0.12)**	**ND (0.48)**	**NA**
Benzene	**0.32**	**1.0**	**0.33**	**1.1**	**3**
Chorobenzene	**ND (0.10)**	**ND (0.46)**	**ND (0.12)**	**ND (0.56)**	**NA**
Chloroform	**ND (0.10)**	**ND (0.49)**	**ND (0.12)**	**ND (0.59)**	**NA**
Ethylbenzene	**0.50**	**2.2**	**0.53**	**2.3**	**6**
Vinyl Chloride	**ND (0.10)**	**ND (0.26)**	**ND (0.12)**	**ND (0.31)**	**NA**
1,1,1-Trichloroethane	ND (0.10)	ND (0.55)	ND (0.12)	ND (0.66)	NA
1,2,4-Trimethylbenzene	0.24	1.2	0.24	1.2	0
1,2-Dichloroethane	1.4	5.7	1.4	5.5	0
1,2-Dichloropropane	0.25	1.2	0.26	1.2	4
4-Ethyltoulene	0.21	1.0	0.23	1.1	9
Cyclohexane	ND (0.10)	ND (0.34)	0.20	0.69	NA
Dichlorodifluoromethane	0.99	4.9	0.84	4.2	16
Hexane	0.22	0.77	ND (0.12)	ND (0.42)	NA
Methyl Ethyl Ketone	1.3	3.7	1.3	3.9	0
Methylchloride	0.36	0.74	0.35	0.72	3
Styrene	0.53	2.3	0.54	2.3	2
Tetrahydrofuran	ND (0.10)	ND (0.30)	0.86	2.5	NA
Toluene	14	52	16	60	13
Trichlorofluoromethane	2.3	13	2.3	13	0
m/p-Xylenes	0.85	3.7	0.89	3.9	5
o-Xylenes	0.38	1.6	0.41	1.8	8

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
NA = not applicable, concentrations for these compounds were either less than 10 times the reporting limit or not detected above the reporting limits to calcualte an RPD
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 3
AMBIENT/BACKGROUND AIR DATA SUMMARY
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	AMBIENT AIR OUTSIDE 500 FERRY BLVD. CANISTER #22680 8/13/12 - 8/14/12 24-HOUR AVG.(11:40-11:40)		AMBIENT AIR OUTSIDE 500 FERRY BLVD. CANISTER #13484 8/14/12 - 8/15/12 24-HOUR AVG.(11:35-11:35)		AMBIENT AIR OUTSIDE 500 FERRY BLVD. CANISTER #22690 8/15/12 - 8/16/12 24-HOUR AVG.(11:33-11:33)		AMBIENT AIR OUTSIDE 411 BARNUM AVE. CANISTER #20846 16-Aug-12 8-HOUR AVG.(10:52-18:52)	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)
Trichloroethene	**ND (0.11)**	**ND (0.59)**	**ND (0.10)**	**ND (0.54)**	**ND (0.12)**	**ND (0.64)**	**0.31**	**1.7**
1,1-Dichloroethylene	**ND (0.11)**	**ND (0.44)**	**ND (0.10)**	**ND (0.40)**	**ND (0.12)**	**ND (0.48)**	**ND (0.15)**	**ND (0.60)**
1,1-Dichloroethane	**ND (0.11)**	**ND (0.44)**	**ND (0.10)**	**ND (0.40)**	**ND (0.12)**	**ND (0.48)**	**ND (0.15)**	**ND (0.60)**
Benzene	**0.19**	**0.61**	**ND (0.10)**	**ND (0.32)**	**0.15**	**0.48**	**0.12 L**	**0.38 L**
Chorobenzene	**ND (0.11)**	**ND (0.51)**	**ND (0.10)**	**ND (0.46)**	**ND (0.12)**	**ND (0.56)**	**ND (0.15)**	**ND (0.70)**
Chloroform	**ND (0.11)**	**ND (0.54)**	**ND (0.10)**	**ND (0.49)**	**ND (0.12)**	**ND (0.59)**	**ND (0.15)**	**ND (0.73)**
Ethylbenzene	**0.07 L**	**0.32 L**	**ND (0.10)**	**ND (0.43)**	**ND (0.12)**	**ND (0.52)**	**ND (0.15)**	**ND (0.65)**
Vinyl Chloride	**ND (0.11)**	**ND (0.28)**	**ND (0.10)**	**ND (0.26)**	**ND (0.12)**	**ND (0.31)**	**0.11 L**	**0.28 L**
1,1,1-Trichloroethane	ND (0.11)	ND (0.60)	ND (0.10)	ND (0.55)	ND (0.12)	ND (0.66)	0.40	2.2
1,2,4-Trimethylbenzene	0.06 L	0.30 L	ND (0.10)	ND (0.49)	0.07 L	0.32 L	ND (0.15)	ND (0.74)
4-Ethyltoluene	0.07 L	0.36 L	0.06 L	0.29 L	0.08 L	0.37 L	ND (0.15)	ND (0.74)
Carbon Tetrachloride	ND (0.11)	ND (0.69)	ND (0.10)	ND (0.63)	ND (0.12)	ND (0.75)	0.08 L	0.49 L
Cyclohexane	0.06 L	0.19 L	ND (0.10)	ND (0.34)	ND (0.12)	ND (0.41)	ND (0.15)	ND (0.52)
Dichlorodifluoromethane	0.34	1.7	0.36	1.8	0.39	1.9	0.88	4.4
Hexane	0.26	0.92	0.16	0.56	0.14	0.49	1.3	4.5
Methyl Ethyl Ketone	ND (0.11)	ND (0.32)	0.20	0.59	0.19	0.56	0.31	0.91
Methylchloride	0.32	0.66	0.35	0.72	0.49	1.0	0.34	0.70
Methylene Chloride	ND (0.11)	ND (0.38)	1.5	5.3	3.4	12	ND (0.15)	ND (0.52)
Toluene	0.48	1.8	0.28	1.1	0.40	1.5	1.0	3.8
Trichlorofluoromethane	0.15	0.84	0.17	0.96	0.16	0.90	0.30	1.7
Trichlorotrifluoroethane	ND (0.11)	ND (0.84)	ND (0.10)	ND (0.77)	ND (0.12)	ND (0.92)	0.06 L	0.45 L
c-1,2-Dichloroethylene	ND (0.11)	ND (0.44	ND (0.10)	ND (0.40)	ND (0.12)	ND (0.48)	0.11 L	0.44 L
m&p-Xylene	0.21 L	0.91 L	0.11 L	0.48 L	0.17 L	0.74 L	0.09 L	0.41 L
o-Xylene	0.07 L	0.32 L	ND (0.10)	ND (0.43)	0.06 L	0.26 L	ND (0.15)	ND (0.65)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 4
INDOOR AIR, AMBIENT AIR AND SOIL GAS CANISTER SAMPLING RESULTS SUMMARY
500 FERRY BLVD.
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR BASEMENT CANISTER #6548 8/13/12 - 8/14/12 24-HOUR AVG.		INDOOR AIR BASEMENT DUPLICATE CANISTER #3656 8/13/12 - 8/14/12 24-HOUR AVG.		INDOOR AIR CRAWL SPACE CANISTER #1587 8/13/12 - 8/14/12 24-HOUR AVG.		INDOOR AIR FIRST FLOOR CANISTER #4742 8/13/12 - 8/14/12 24-HOUR AVG.		SUB-SLAB SOIL GAS SS-2 BASEMENT CANISTER #13498 13-Aug-12 GRAB SAMPLE		AMBIENT AIR OUTSIDE 500 FERRY. BLVD. CANISTER #22680 8/13/12 - 8/14/12 24-HOUR AVG.(11:40-11:40)	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)
Trichloroethene	ND (0.08)	ND (0.43)	ND (0.09)	ND (0.48)	ND (0.09)	ND (0.48)	ND (0.09)	ND (0.48)	18	97	ND (0.11)	ND (0.59)
1,1-Dichloroethylene	ND (0.08)	ND (0.32)	ND (0.09)	ND (0.36)	ND (0.09)	ND (0.36)	ND (0.09)	ND (0.36)	1.6	6.5	ND (0.11)	ND (0.44)
1,1-Dichloroethane	ND (0.08)	ND (0.32)	ND (0.09)	ND (0.36)	ND (0.09)	ND (0.36)	ND (0.09)	ND (0.36)	0.77	3.1	ND (0.11)	ND (0.44)
Benzene	5.9	19	5.9	19	3.0	9.4	5.1	16	1.2	3.9	0.19	0.61
Chorobenzene	ND (0.08)	ND (0.37)	ND (0.09)	ND (0.42)	ND (0.09)	ND (0.42)	ND (0.09)	ND (0.42)	ND (0.08)	ND (0.37)	ND (0.11)	ND (0.51)
Chloroform	0.08 L	0.37 L	0.08 L	0.40 L	0.10	0.49	0.16	0.78	0.19	0.93	ND (0.11)	ND (0.54)
Ethylbenzene	4.6	20	4.6	20	2.3	9.9	3.9	17	0.78	3.4	0.07 L	0.32 L
Vinyl Chloride	ND (0.08)	ND (0.20)	ND (0.09)	ND (0.23)	ND (0.09)	ND (0.23)	ND (0.09)	ND (0.23)	ND (0.08)	ND (0.20)	ND (0.11)	ND (0.28)
1,1,1-Trichloroethane	ND (0.08)	ND (0.44)	ND (0.09)	ND (0.49)	ND (0.09)	ND (0.49)	ND (0.09)	ND (0.49)	3.7	20	ND (0.11)	ND (0.60)
1,2,4-Trichlorobenzene	0.06 L	0.45 L	0.06 L	0.42 L	ND (0.09)	ND (0.67)	0.05 L	0.39 L	ND (0.08)	ND (0.59)	ND (0.11)	ND (0.82)
1,2,4-Trimethylbenzene	3.7	18	3.7	18	1.8	8.8	2.9	14	0.53	2.6	0.06 L	0.30 L
1,3,5-Trimethylbenzene	1.0	5.0	ND (0.09)	ND (0.44)	0.52	2.6	0.88	4.3	ND (0.08)	ND (0.39)	ND (0.11)	ND (0.54)
4-Ethyltoluene	3.9	19	3.8	18	1.8	8.8	3.1	15	0.58	2.8	0.07 L	0.36 L
Carbon Tetrachloride	ND (0.08)	ND (0.50)	ND (0.09)	ND (0.56)	0.05 L	0.34 L	ND (0.09)	ND (0.56)	ND (0.08)	ND (0.50)	ND (0.11)	ND (0.69)
Cyclohexane	2.7	9.3	2.8	9.6	1.5	5.0	2.7	9.2	1.1	3.6	0.06 L	0.19 L
Dichlorodifluoromethane	0.45	2.2	0.43	2.1	0.32	1.6	0.51	2.5	0.30	1.5	0.34	1.7
Heptane	9.0	37	8.9	36	ND (0.09)	ND (0.37)	7.8	32	ND (0.08)	ND (0.33)	ND (0.11)	ND (0.45)
Hexachloro-1,3-butadiene	ND (0.08)	ND (0.85)	ND (0.09)	ND (0.96)	ND (0.09)	ND (0.96)	0.05 L	0.56 L	ND (0.08)	ND (0.85)	ND (0.11)	ND (1.2)
Hexane	20	70	22	74	8.7	30	15	53	7.4	26	0.26	0.92
Methylchloride	0.40	0.83	0.40	0.83	0.32	0.66	0.44	0.91	0.13	0.27	0.32	0.66
Styrene	ND (0.08)	ND (0.34)	0.25	1.1	ND (0.09)	ND (0.38)	ND (0.09)	ND (0.38)	0.33	1.4	ND (0.11)	ND (0.47)
Tetrachloroethene	ND (0.08)	ND (0.54)	ND (0.09)	ND (0.61)	ND (0.09)	ND (0.61)	ND (0.09)	ND (0.61)	0.24	1.6	ND (0.11)	ND (0.75)
Toluene	38	140	38	140	24	90	31	120	5.7	22	0.48	1.8
c-1,2-Dichloroethene	ND (0.08)	ND (0.32)	ND (0.09)	ND (0.36)	ND (0.09)	ND (0.36)	ND (0.09)	ND (0.36)	0.30	1.2	ND (0.11)	ND (0.44)
m/p-Xylenes	13	58	13	58	6.8	29	11	49	2.3	10	0.21 L	0.91 L
o-Xylene	4.7	20	4.7	20	2.3	10	3.9	17	0.83	3.6	0.07 L	0.32 L

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 5
INDOOR AIR, AMBIENT AIR AND SOIL GAS CANISTER SAMPLING RESULTS SUMMARY
82 FERRY COURT
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR BASEMENT CANISTER #6582 8/13/12 - 8/14/12 24-HOUR AVG.		INDOOR AIR FIRST FLOOR CANISTER #1576 8/13/12 - 8/14/12 24-HOUR AVG.		SUB-SLAB SOIL GAS SS-1 BASEMENT CANISTER #12562 13-Aug-12 GRAB SAMPLE		AMBIENT AIR OUTSIDE 500 FERRY. BLVD. CANISTER #22680 8/13/12 - 8/14/12 24-HOUR AVG.(11:40-11:40)	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)
Trichloroethene	**ND (0.11)**	**ND (0.59)**	**ND (0.10)**	**ND (0.54)**	**0.09**	**0.46**	**ND (0.11)**	**ND (0.59)**
1,1-Dichloroethylene	**ND (0.11)**	**ND (0.44)**	**ND (0.10)**	**ND (0.40)**	**ND (0.08)**	**ND (0.32)**	**ND (0.11)**	**ND (0.44)**
1,1-Dichloroethane	**ND (0.11)**	**ND (0.44)**	**ND (0.10)**	**ND (0.40)**	**ND (0.08)**	**ND (0.32)**	**ND (0.11)**	**ND (0.44)**
Benzene	**0.14**	**0.45**	**0.14**	**0.45**	**ND (0.08)**	**ND (0.25)**	**0.19**	**0.61**
Chorobenzene	**ND (0.11)**	**ND (0.51)**	**ND (0.10)**	**ND (0.34)**	**ND (0.08)**	**ND (0.37)**	**ND (0.11)**	**ND (0.51)**
Chloroform	**0.35**	**1.7**	**0.11**	**0.54**	**0.07 L**	**0.35 L**	**ND (0.11)**	**ND (0.54)**
Ethylbenzene	**0.29**	**1.3**	**0.08 L**	**0.34 L**	**ND (0.08)**	**ND (0.35)**	**0.07 L**	**0.32 L**
Vinyl Chloride	**ND (0.11)**	**ND (0.28)**	**ND (0.10)**	**ND (0.26)**	**ND (0.08)**	**ND (0.20)**	**ND (0.11)**	**ND (0.28)**
1,1,1-Trichloroethane	ND (0.11)	ND (0.60)	ND (0.10)	ND (0.55)	0.16	0.87	ND (0.11)	ND (0.60)
1,2,4-Trimethylbenzene	0.17	0.83	ND (0.10)	ND (0.49)	ND (0.08)	ND (0.39)	0.06 L	0.30 L
1,2-Dichloroethane	0.13	0.53	0.19	0.77	ND (0.08)	ND (0.32)	ND (0.11)	ND (0.44)
4-Ethyltoluene	0.11	0.54	0.07 L	0.35 L	ND (0.08)	ND (0.39)	0.07 L	0.36 L
Bromodichloromethane	0.06 L	0.39 L	ND (0.10)	ND (0.66)	ND (0.08)	ND (0.53)	ND (0.11)	ND (0.73)
Cyclohexane	0.07 L	0.25 L	0.06 L	0.19 L	ND (0.08)	ND (0.28)	0.06 L	0.19 L
Carbon Tetrachloride	ND (0.11)	ND (0.69)	ND (0.10)	ND (0.62)	0.05 L	0.33 L	ND (0.11)	ND (0.69)
Dichlorodifluoromethane	0.26	1.3	0.30	1.5	0.47	2.3	0.34	1.7
Hexane	0.35	1.2	0.24	0.84	0.07 L	0.23 L	0.26	0.92
Methyl Ethyl Ketone	0.81	2.4	0.39	1.2	0.12	0.35	ND (0.11)	ND (0.32)
Methylchloride	0.32	0.66	0.26	0.54	0.11	0.23	0.32	0.66
Methylene Chloride	0.90	3.1	0.39	1.4	ND (0.08)	ND (0.28)	ND (0.11)	ND (0.38)
Styrene	0.27	1.1	0.14	0.60	ND (0.08)	ND (0.34)	ND (0.11)	ND (0.47)
Tetrachloroethylene	ND (0.11)	ND (0.75)	ND (0.10)	ND (0.68)	0.08	0.56	ND (0.11)	ND (0.75)
Toluene	1.2	4.6	0.69	2.6	ND (0.08)	ND (0.30)	0.48	1.8
Trichlorofluoromethane	0.11	0.62	0.10 L	0.54 L	0.21	1.2	0.15	0.84
m/p-Xylenes	0.45	2.0	0.19 L	0.82 L	ND (0.16)	ND (0.69)	0.21 L	0.91 L
o-Xylene	0.22	0.95	0.08 L	0.33 L	ND (0.08)	ND (0.35)	0.07 L	0.32 L

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 6
INDOOR AIR, AMBIENT AIR AND SOIL GAS CANISTER SAMPLING RESULTS SUMMARY
72 FERRY COURT
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR BASEMENT CANISTER #1586 8/13/12 - 8/14/12 24-HOUR AVG.		INDOOR AIR FIRST FLOOR CANISTER #3092 8/13/12 - 8/14/12 24-HOUR AVG.		SUB-SLAB SOIL GAS SS-1 BASEMENT CANISTER #12569 13-Aug-12 GRAB SAMPLE		AMBIENT AIR OUTSIDE 500 FERRY. BLVD. CANISTER #22680 8/13/12 - 8/14/12 24-HOUR AVG.(11:40-11:40)	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)
Trichloroethene	**0.08 L**	**0.43 L**	**0.08 L**	**0.43 L**	**ND (0.08)**	**ND (0.43)**	**ND (0.11)**	**ND (0.59)**
1,1-Dichloroethylene	**ND (0.10)**	**ND (0.40)**	**ND (0.10)**	**ND (0.40)**	**ND (0.08)**	**ND (0.32)**	**ND (0.11)**	**ND (0.44)**
1,1-Dichloroethane	**ND (0.10)**	**ND (0.40)**	**ND (0.10)**	**ND (0.40)**	**ND (0.08)**	**ND (0.32)**	**ND (0.11)**	**ND (0.44)**
Benzene	**0.37**	**1.2**	**0.32**	**1.0**	**ND (0.08)**	**ND (0.25)**	**0.19**	**0.61**
Chorobenzene	**ND (0.10)**	**ND (0.34)**	**ND (0.10)**	**ND (0.34)**	**ND (0.08)**	**ND (0.37)**	**ND (0.11)**	**ND (0.51)**
Chloroform	**1.3**	**6.3**	**1.5**	**7.1**	**0.18**	**0.88**	**ND (0.11)**	**ND (0.54)**
Ethylbenzene	**1.9**	**8.4**	**1.9**	**8.2**	**ND (0.08)**	**ND (0.35)**	**0.07 L**	**0.32 L**
Vinyl Chloride	**ND (0.10)**	**ND (0.26)**	**ND (0.10)**	**ND (0.26)**	**ND (0.08)**	**ND (0.20)**	**ND (0.11)**	**ND (0.28)**
1,1,1-Trichloroethane	ND (0.10)	ND (0.55)	ND (0.10)	ND (0.55)	ND (0.08)	ND (0.44)	ND (0.11)	ND (0.60)
1,2,4-Trichlorobenzene	0.05 L	0.37 L	0.06 L	0.41 L	ND (0.08)	ND (0.59)	ND (0.11)	ND (0.82)
1,2,4-Trimethylbenzene	0.59	2.9	0.54	2.7	ND (0.08)	ND (0.39)	0.06 L	0.30 L
1,2-Dichloroethane	1.1	4.5	0.83	3.4	ND (0.08)	ND (0.32)	ND (0.11)	ND (0.44)
1,3,5-Trimethylbenzene	0.14	0.69	0.13	0.64	ND (0.08)	ND (0.39)	ND (0.11)	ND (0.54)
1,4-Dichlorobenzene	0.16	0.96	0.15	0.90	ND (0.08)	ND (0.48)	ND (0.11)	ND (0.66)
4-Ethyltoluene	0.37	1.8	0.33	1.6	ND (0.08)	ND (0.39)	0.07 L	0.36 L
Bromodichloromethane	0.19	1.3	0.21	1.4	ND (0.08)	ND (0.53)	ND (0.11)	ND (0.73)
Cyclohexane	0.17	0.58	0.17	0.58	ND (0.08)	ND (0.28)	0.06 L	0.19 L
Carbon Tetrachloride	0.08 L	0.50 L	0.08 L	0.52 L	0.08	0.52	ND (0.11)	ND (0.69)
Dichlorodifluoromethane	0.57	2.8	0.41	2.0	0.53	2.6	0.34	1.7
Hexane	0.70	2.5	0.66	2.3	ND (0.08)	ND (0.28)	0.26	0.92
Methyl Ethyl Ketone	3.4	10	3.3	9.7	0.15	0.44	ND (0.11)	ND (0.32)
Methylchloride	0.54	1.1	0.53	1.1	0.05 L	0.11 L	0.32	0.66
Methylene Chloride	2.7	9.4	1.6	5.6	ND (0.08)	ND (0.28)	ND (0.11)	ND (0.38)
Styrene	0.60	2.6	0.56	2.4	ND (0.08)	ND (0.34)	ND (0.11)	ND (0.47)
Tetrachloroethylene	ND (0.10)	ND (0.68)	ND (0.10)	ND (0.68)	0.05 L	0.36 L	ND (0.11)	ND (0.75)
Toluene	4.7	18	4.1	15	ND (0.08)	ND (0.30)	0.48	1.8
Trichlorofluoromethane	0.36	2.0	0.39	2.2	0.51	2.9	0.15	0.84
Trichlorotrifluoroethane	ND (0.10)	ND (0.77)	ND (0.10)	ND (0.77)	0.05 L	0.38 L	ND (0.11)	ND (0.84)
m/p-Xylenes	1.9	8.1	1.8	7.8	ND (0.16)	ND (0.69)	0.21 L	0.91 L
o-Xylene	0.72	3.1	0.74	3.2	ND (0.08)	ND (0.35)	0.07 L	0.32 L

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 7
INDOOR AIR, AMBIENT AIR AND SOIL GAS CANISTER SAMPLING RESULTS SUMMARY
50 FERRY COURT
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR BASEMENT CANISTER #6566 8/13/12 - 8/14/12 24-HOUR AVG.		INDOOR AIR FIRST FLOOR CANISTER #6553 8/13/12 - 8/14/12 24-HOUR AVG.		SUB-SLAB SOIL GAS SS-1 BASEMENT CANISTER #13500 13-Aug-12 GRAB SAMPLE		AMBIENT AIR OUTSIDE 500 FERRY. BLVD. CANISTER #22680 8/13/12 - 8/14/12 24-HOUR AVG.(11:40-11:40)	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)
Trichloroethene	**ND (0.09)**	**ND (0.48)**	**ND (0.11)**	**ND (0.59)**	**ND (0.09)**	**ND (0.48)**	**ND (0.11)**	**ND (0.59)**
1,1-Dichloroethylene	**ND (0.09)**	**ND (0.36)**	**ND (0.11)**	**ND (0.44)**	**ND (0.09)**	**ND (0.36)**	**ND (0.11)**	**ND (0.44)**
1,1-Dichloroethane	**ND (0.09)**	**ND (0.36)**	**ND (0.11)**	**ND (0.44)**	**ND (0.09)**	**ND (0.36)**	**ND (0.11)**	**ND (0.44)**
Benzene	**0.29**	**0.93**	**0.29**	**0.92**	**ND (0.09)**	**ND (0.29)**	**0.19**	**0.61**
Chorobenzene	**ND (0.09)**	**ND (0.42)**	**ND (0.11)**	**ND (0.51)**	**ND (0.09)**	**ND (0.42)**	**ND (0.11)**	**ND (0.51)**
Chloroform	**0.49**	**2.4**	**0.51**	**2.5**	**0.07 L**	**0.33 L**	**ND (0.11)**	**ND (0.54)**
Ethylbenzene	**0.45**	**2.0**	**0.47**	**2.0**	**ND (0.09)**	**ND (0.39)**	**0.07 L**	**0.32 L**
Vinyl Chloride	**ND (0.09)**	**ND (0.23)**	**ND (0.11)**	**ND (0.28)**	**ND (0.09)**	**ND (0.23)**	**ND (0.11)**	**ND (0.28)**
1,1,1-Trichloroethane	ND (0.09)	ND (0.49)	ND (0.11)	ND (0.60)	0.20	1.1	ND (0.11)	ND (0.60)
1,2,4-Trichlorobenzene	ND (0.09)	ND (0.67)	0.05 L	0.38 L	ND (0.09)	ND (0.67)	ND (0.11)	ND (0.82)
1,2,4-Trimethylbenzene	0.27	1.3	0.27	1.3	ND (0.09)	ND (0.44)	0.06 L	0.30 L
1,3,5-Trimethylbenzene	0.06 L	0.28 L	0.07 L	0.34 L	ND (0.09)	ND (0.44)	ND (0.11)	ND (0.54)
1,4-Dichlorobenzene	0.16	0.96	0.15	0.90	ND (0.09)	ND (0.54)	ND (0.11)	ND (0.66)
4-Ethyltoluene	0.19	0.93	0.17	0.83	ND (0.09)	ND (0.44)	0.07 L	0.36 L
Bromodichloromethane	0.07 L	0.48 L	0.07 L	0.46 L	ND (0.09)	ND (0.60)	ND (0.11)	ND (0.73)
Cyclohexane	0.08 L	0.27 L	0.09 L	0.31 L	ND (0.09)	ND (0.31)	0.06 L	0.19 L
Carbon Tetrachloride	0.06 L	0.36 L	ND (0.11)	ND (0.69)	ND (0.09)	ND (0.56)	ND (0.11)	ND (0.69)
Dichlorodifluoromethane	0.36	1.9	0.40	2.0	0.50	2.5	0.34	1.7
Hexane	0.46	1.6	0.45	1.6	ND (0.09)	ND (0.32)	0.26	0.92
Methyl Ethyl Ketone	1.2	3.7	1.2	3.6	0.19	0.56	ND (0.11)	ND (0.32)
Methylchloride	0.38	0.79	0.47	0.97	0.06 L	0.12 L	0.32	0.66
Styrene	0.33	1.4	0.34	1.4	ND (0.09)	ND (0.38)	ND (0.11)	ND (0.47)
Tetrachloroethylene	0.11	0.75	0.13	0.88	1.3	8.7	ND (0.11)	ND (0.75)
Toluene	2.2	8.4	2.5	9.2	ND (0.09)	ND (0.34)	0.48	1.8
Trichlorofluoromethane	0.34	1.9	0.26	1.5	0.42	2.4	0.15	0.84
Trichlorotrifluoroethane	ND (0.09)	ND (0.69)	ND (0.11)	ND (0.84)	0.07 L	0.52 L	ND (0.11)	ND (0.84)
m/p-Xylenes	1.1	4.9	1.4	6.0	ND (0.18)	ND (0.78)	0.21 L	0.91 L
o-Xylene	0.45	2.0	0.52	2.3	ND (0.09)	ND (0.39)	0.07 L	0.32 L

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 8
INDOOR AIR, AMBIENT AIR AND SOIL GAS CANISTER SAMPLING RESULTS SUMMARY
62 FERRY COURT
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR BASEMENT CANISTER #1594 8/13/12 - 8/14/12 24-HOUR AVG.		INDOOR AIR FIRST FLOOR CANISTER #6581 8/13/12 - 8/14/12 24-HOUR AVG.		SUB-SLAB SOIL GAS SS-1 BASEMENT CANISTER #22153 13-Aug-12 GRAB SAMPLE		AMBIENT AIR OUTSIDE 500 FERRY. BLVD. CANISTER #22680 8/13/12 - 8/14/12 24-HOUR AVG.(11:40-11:40)	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)
Trichloroethene	**ND (0.11)**	**ND (0.59)**	**ND (0.09)**	**ND (0.48)**	**ND (0.09)**	**ND (0.48)**	**ND (0.11)**	**ND (0.59)**
1,1-Dichloroethylene	**ND (0.11)**	**ND (0.44)**	**ND (0.09)**	**ND (0.36)**	**ND (0.09)**	**ND (0.36)**	**ND (0.11)**	**ND (0.44)**
1,1-Dichloroethane	**ND (0.11)**	**ND (0.44)**	**ND (0.09)**	**ND (0.36)**	**ND (0.09)**	**ND (0.36)**	**ND (0.11)**	**ND (0.44)**
Benzene	**0.23**	**0.73**	**0.15**	**0.48**	**ND (0.09)**	**ND (0.29)**	**0.19**	**0.61**
Chorobenzene	**ND (0.11)**	**ND (0.51)**	**ND (0.09)**	**ND (0.42)**	**ND (0.09)**	**ND (0.42)**	**ND (0.11)**	**ND (0.51)**
Chloroform	**0.18**	**0.88**	**0.13**	**0.64**	**0.19**	**0.93**	**ND (0.11)**	**ND (0.54)**
Ethylbenzene	**0.28**	**1.2**	**0.15**	**0.65**	**ND (0.09)**	**ND (0.39)**	**0.07 L**	**0.32 L**
Vinyl Chloride	**ND (0.11)**	**ND (0.28)**	**ND (0.09)**	**ND (0.23)**	**ND (0.09)**	**ND (0.23)**	**ND (0.11)**	**ND (0.28)**
1,2,4-Trimethylbenzene	0.08 L	0.41 L	0.06 L	0.29 L	ND (0.09)	ND (0.44)	0.06 L	0.30 L
4-Ethyltoluene	0.10 L	0.49 L	0.08 L	0.39 L	ND (0.09)	ND (0.44)	0.07 L	0.36 L
Cyclohexane	ND (0.11)	ND (0.38)	0.07 L	0.22 L	ND (0.09)	ND (0.31)	0.06 L	0.19 L
Dichlorodifluoromethane	0.45	2.2	0.29	1.4	0.32	1.6	0.34	1.7
Hexane	0.34	1.2	0.22	0.77	0.06 L	0.22 L	0.26	0.92
Methyl Ethyl Ketone	1.1	3.3	0.71	2.1	0.10	0.28	ND (0.11)	ND (0.32)
Methylchloride	0.40	0.83	0.31	0.64	ND (0.09)	ND (0.19)	0.32	0.66
Styrene	0.09 L	0.40 L	0.07 L	0.28 L	ND (0.09)	ND (0.38)	ND (0.11)	ND (0.47)
Tetrachloroethylene	0.13	0.88	0.09 L	0.58 L	0.44	3.0	ND (0.11)	ND (0.75)
Toluene	1.1	4.3	0.74	2.8	ND (0.09)	ND (0.34)	0.48	1.8
Trichlorofluoromethane	0.20	1.1	0.16	0.90	0.19	1.1	0.15	0.84
Trichlorotrifluoroethane	0.06 L	0.42 L	ND (0.09)	ND (0.69)	ND (0.09)	ND (0.69)	ND (0.11)	ND (0.84)
m/p-Xylenes	0.86	3.7	0.47	2.0	ND (0.18)	ND (0.78)	0.21 L	0.91 L
o-Xylene	0.21	0.91	0.12	0.52	ND (0.09)	ND (0.39)	0.07 L	0.32 L

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 9
INDOOR AIR, AMBIENT AIR AND SOIL GAS CANISTER SAMPLING RESULTS SUMMARY
100 VETERANS WAY
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR BASEMENT CANISTER #6547 14-Aug-12 8-HOUR AVG.		INDOOR AIR BASEMENT DUPLICATE CANISTER #6555 14-Aug-12 8-HOUR AVG.		INDOOR AIR FIRST FLOOR CANISTER #6558 14-Aug-12 8-HOUR AVG.		SUB-SLAB SOIL GAS SS-1 BASEMENT CANISTER #20860 14-Aug-12 GRAB SAMPLE		AMBIENT AIR OUTSIDE 500 FERRY. BLVD. CANISTER #13484 8/14/12 - 8/15/12 24-HOUR AVG.(11:35-11:35)	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)
Trichloroethene	**0.32**	**1.7**	**0.30**	**1.6**	**0.10**	**0.54**	**460**	**2500**	**ND (0.10)**	**ND (0.54)**
1,1-Dichloroethylene	**ND (0.11)**	**ND (0.44)**	**ND (0.11)**	**ND (0.44)**	**ND (0.10)**	**ND (0.40)**	**260**	**1000**	**ND (0.10)**	**ND (0.40)**
1,1-Dichloroethane	**0.24**	**0.97**	**0.25**	**1.0**	**0.09 L**	**0.36 L**	**1500**	**6100**	**ND (0.10)**	**ND (0.40)**
Benzene	**1.0**	**3.2**	**1.0**	**3.3**	**0.65**	**2.1**	**ND (40)**	**ND (128)**	**ND (0.10)**	**ND (0.32)**
Chorobenzene	**ND (0.11)**	**ND (0.51)**	**ND (0.11)**	**ND (0.51)**	**ND (0.10)**	**ND (0.46)**	**ND (40)**	**ND (186)**	**ND (0.10)**	**ND (0.46)**
Chloroform	**0.64**	**3.1**	**0.65**	**3.2**	**0.70**	**3.4**	**ND (40)**	**ND (195)**	**ND (0.10)**	**ND (0.49)**
Ethylbenzene	**0.60**	**2.6**	**0.53**	**2.3**	**0.34**	**1.5**	**ND (40)**	**ND (174)**	**ND (0.10)**	**ND (0.43)**
Vinyl Chloride	**ND (0.11)**	**ND (0.28)**	**ND (0.11)**	**ND (0.28)**	**ND (0.10)**	**ND (0.26)**	**ND (40)**	**ND (102)**	**ND (0.10)**	**ND (0.26)**
1,1,1-Trichloroethane	0.06 L	0.33 L	0.06 L	0.31 L	ND (0.10)	ND (0.55)	180	980	ND (0.10)	ND (0.55)
1,2,4-Trichlorobenzene	0.05 L	0.38 L	ND (0.11)	ND (0.82)	0.08 L	0.61 L	ND (40)	ND (297)	ND (0.10)	ND (0.74)
1,2,4-Trimethylbenzene	ND (0.11)	ND (0.54)	0.31	1.5	0.18	0.88	ND (40)	ND (197)	ND (0.10)	ND (0.49)
1,2-Dichloroethane	1.3	5.4	1.3	5.4	0.22	0.89	ND (40)	ND (162)	ND (0.10)	ND (0.41)
1,3,5-Trimethylbenzene	0.12	0.59	0.13	0.64	0.05 L	0.26 L	ND (40)	ND (197)	ND (0.10)	ND (0.49)
1,4-Dichlorobenzene	0.20	1.2	0.19	1.1	0.30	1.8	ND (40)	ND (240)	ND (0.10)	ND (0.60)
4-Ethyltoulene	0.32	1.6	0.31	1.5	0.20	0.98	ND (40)	ND (196)	0.06 L	0.29 L
Carbon Tetrachloride	ND (0.11)	ND (0.69)	0.07 L	0.41 L	0.07 L	0.46 L	ND (40)	ND (250)	ND (0.10)	ND (0.63)
Cyclohexane	0.22	0.76	0.21	0.72	0.15	0.52	ND (40)	ND (138)	ND (0.10)	ND (0.34)
Dichlorodifluoromethane	0.92	4.5	0.78	3.9	1.3	6.4	ND (40)	ND (198)	0.36	1.8
Dichlorotetrafluoroethane	ND (0.11)	ND (0.77)	ND (0.11)	ND (0.77)	2.1	14	ND (40)	ND (280)	ND (0.10)	ND (0.70)
Hexane	3.4	12	3.4	12	3.7	13	ND (40)	ND (141)	0.16	0.56
Methyl Ethyl Ketone	1.2	3.5	1.1	3.2	1.1	3.3	ND (40)	ND (318)	0.20	0.59
Methylchloride	0.67	1.4	0.63	1.3	0.73	1.5	ND (40)	ND (83)	0.35	0.72
Methylene Chloride	0.30	1.0	0.28	0.97	0.19	0.66	ND (40)	ND (139)	1.5	5.3
Styrene	0.60	2.6	0.54	2.3	0.34	1.4	ND (40)	ND (170)	ND (0.10)	ND (0.43)
Toluene	3.9	15	3.8	14	2.8	10	ND (40)	ND (151)	0.28	1.1
Trichlorofluoromethane	0.39	2.2	0.36	2.0	0.44	2.5	ND (40)	ND (225)	0.17	0.96
c-1,2-Dichloroethene	0.86	3.4	0.85	3.4	0.28	1.1	4000	16000	ND (0.10)	ND (0.40)
m/p-Xylenes	1.7	7.4	1.6	7.0	0.89	3.9	ND (80)	ND (347)	0.11 L	0.48 L
o-Xylenes	0.50	2.2	0.47	2.0	0.27	1.2	ND (40)	ND (174)	ND (0.10)	ND (0.43)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 10
INDOOR AIR, AMBIENT AIR AND SOIL GAS CANISTER SAMPLING RESULTS SUMMARY
608 FERRY BLVD.
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR BASEMENT CANISTER #6569 15-Aug-12 8-HOUR AVG.		INDOOR AIR BASEMENT DUPLICATE CANISTER #1574 15-Aug-12 8-HOUR AVG.		INDOOR AIR FIRST FLOOR CANISTER #1565 15-Aug-12 8-HOUR AVG.		SUB-SLAB SOIL GAS SS-3 BASEMENT CANISTER #22681 15-Aug-12 GRAB SAMPLE		AMBIENT AIR OUTSIDE 500 FERRY BLVD. CANISTER #22690 8/15/12 - 8/16/12 24-HOUR AVG.(11:33-11:33)	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)
Trichloroethene	0.25	1.3	0.17	0.91	ND (0.17)	ND (0.91)	0.87	4.7	ND (0.12)	ND (0.64)
1,1-Dichloroethylene	ND (0.11)	ND (0.44)	ND (0.11)	ND (0.44)	ND (0.17)	ND (0.67)	ND (0.15)	ND (0.60)	ND (0.12)	ND (0.48)
1,1-Dichloroethane	0.06 L	0.22 L	ND (0.11)	ND (0.44)	ND (0.17)	ND (0.69)	ND (0.15)	ND (0.60)	ND (0.12)	ND (0.48)
Benzene	ND (0.11)	ND (0.35)	ND (0.11)	ND (0.35)	ND (0.17)	ND (0.54)	ND (0.15)	ND (0.48)	0.15	0.48
Chorobenzene	ND (0.11)	ND (0.51)	ND (0.11)	ND (0.51)	ND (0.17)	ND (0.79)	ND (0.15)	ND (0.70)	ND (0.12)	ND (0.56)
Chloroform	ND (0.11)	ND (0.54)	ND (0.11)	ND (0.54)	ND (0.17)	ND (0.83)	0.09 L	0.44 L	ND (0.12)	ND (0.59)
Ethylbenzene	ND (0.11)	ND (0.48)	ND (0.11)	ND (0.48)	ND (0.17)	ND (0.74)	ND (0.15)	ND (0.65)	ND (0.12)	ND (0.52)
Vinyl Chloride	ND (0.11)	ND (0.28)	ND (0.11)	ND (0.28)	ND (0.17)	ND (0.44)	0.36	0.92	ND (0.12)	ND (0.31)
1,1,1-Trichloroethane	0.48	2.6	0.26	1.4	ND (0.17)	ND (0.93)	0.29	1.6	ND (0.12)	ND (0.65)
4-Ethyltoulene	0.05 L	0.26 L	0.05 L	0.25 L	ND (0.17)	ND (0.84)	0.05 L	0.27 L	0.08 L	0.37 L
Carbon Tetrachloride	0.06 L	0.40 L	ND (0.11)	ND (0.69)	ND (0.17)	ND (1.1)	0.08 L	0.52 L	ND (0.12)	ND (0.75)
Dichlorodifluoromethane	0.47	2.3 L	0.35	1.7	0.52	2.6	1.4	6.9	0.39	1.9
Hexane	2.3	8.2	1.8	6.5	2.1	7.2	0.09 L	0.32 L	0.14	0.49
Methyl Ethyl Ketone	0.33	0.97	0.15	0.44	0.35	1.0	0.16	0.47	0.19	0.56
Methylchloride	0.39	0.81	0.26	0.54	0.33	0.68	0.13	0.27	0.49	1.0
Methylene Chloride	0.50	1.7	1.4	5.0	0.35	1.2	ND (0.15)	ND (0.52)	3.4	12
Tetrachloroethene	ND (0.11)	ND (0.75)	ND (0.11)	ND (0.75)	ND (0.17)	ND (1.2)	1.5	9.8	ND (0.12)	ND (0.81)
Toluene	0.16	0.60	0.13	0.49	0.21	0.79	ND (0.15)	ND (0.56)	0.40	1.5
Trichlorofluoromethane	0.19	1.1	0.14	0.79	0.17	0.96	0.28	1.6	0.16	0.90
Trichlorotrifluorothane	0.05 L	0.41 L	ND (0.11)	ND (0.84)	ND (0.17)	ND (1.3)	0.07 L	0.53 L	ND (0.12)	ND (0.92)
c-1,2-Dichloroethene	ND (0.11)	ND (0.44)	ND (0.11)	ND (0.44)	ND (0.17)	ND (0.67)	0.24	0.95	ND (0.12)	ND (0.48)
m/p-Xylenes	0.08 L	0.35 L	0.064 L	0.28 L	ND (0.34)	ND (1.5)	ND (0.30)	ND (1.3)	0.17 L	0.74 L

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 11
INDOOR AIR, AMBIENT AIR AND SOIL GAS CANISTER SAMPLING RESULTS SUMMARY
335 FERRY BLVD.
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR CURTIN TAXI CANISTER #1577 15-Aug-12 8-HOUR AVG.		INDOOR AIR RECEPTIONIST OFFICE CANISTER #1584 15-Aug-12 8-HOUR AVG.		INDOOR AIR ESTIMATING ROOM CANISTER #6568 15-Aug-12 8-HOUR AVG.		INDOOR AIR CURTIN TAXI AUTO SUPPLY ROOM CANISTER #14896 15-Aug-12 GRAB SAMPLE		SUB-SLAB SOIL GAS SS-3 BREN AIR UNIT CANISTER #12565 15-Aug-12 GRAB SAMPLE		AMBIENT AIR OUTSIDE 500 FERRY BLVD. CANISTER #22690 8/15/12 - 8/16/12 24-HOUR AVG.(11:33-11:33)	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(ug/m³)	(ppb/v)	(µg/m³)
Trichloroethene	**74**	**400**	**0.29**	**1.6**	**0.80**	**4.3**	**570**	**3063**	**17 L**	**91 L**	**ND (0.12)**	**ND (0.64)**
1,1-Dichloroethylene	**ND (0.18)**	**ND (0.71)**	**ND (0.16)**	**ND (0.64)**	**ND (0.10)**	**ND (0.40)**	**ND (13)**	**ND (52)**	**ND (0.10)**	**ND (0.40)**	**ND (0.12)**	**ND (0.48)**
1,1-Dichloroethane	**ND (0.18)**	**ND (0.73)**	**ND (0.16)**	**ND (0.65)**	**ND (0.10)**	**ND (0.40)**	**ND (13)**	**ND (53)**	**0.31**	**1.3**	**ND (0.12)**	**ND (0.48)**
Benzene	**0.43**	**1.4**	**ND (0.16)**	**ND (0.51)**	**0.15**	**0.48**	**ND (13)**	**ND (41)**	**0.15**	**0.48**	**0.15**	**0.48**
Chorobenzene	**ND (0.18)**	**ND (0.84)**	**ND (0.16)**	**ND (0.75)**	**ND (0.10)**	**ND (0.46)**	**ND (13)**	**ND (61)**	**ND (0.10)**	**ND (0.46)**	**ND (0.12)**	**ND (0.56)**
Chloroform	**0.33**	**1.6**	**ND (0.16)**	**ND (0.78)**	**ND (0.10)**	**ND (0.49)**	**ND (13)**	**ND (63)**	**0.80**	**3.9**	**ND (0.12)**	**ND (0.59)**
Ethylbenzene	**0.98**	**4.2**	**ND (0.16)**	**ND (0.70)**	**0.12**	**0.52**	**ND (13)**	**ND (56)**	**ND (0.10)**	**ND (0.43)**	**ND (0.12)**	**ND (0.52)**
Vinyl Chloride	**ND (0.18)**	**ND (0.86)**	**ND (0.16)**	**ND (0.41)**	**0.64**	**1.6**	**ND (13)**	**ND (33)**	**ND (0.10)**	**ND (0.26)**	**ND (0.12)**	**ND (0.31)**
1,1,1-Trichloroethane	ND (0.18)	ND (0.98)	ND (0.16)	ND (0.87)	ND (0.10)	ND (0.55)	ND (13)	ND (71)	44	240	ND (0.12)	ND (0.66)
1,2,4-Trimethylbenzene	1.8	8.7	ND (0.16)	ND (0.79)	0.20	0.98	ND (13)	ND (64)	ND (0.10)	ND (0.49)	0.07 L	0.32 L
1,3,5-Trimethylbenzene	0.56	2.7	ND (0.16)	ND (0.79)	ND (0.10)	ND (0.49)	ND (13)	ND (64)	ND (0.10)	ND (0.49)	ND (0.12)	ND (0.59)
4-Ethyltoulene	1.4	7.1	ND (0.16)	ND (0.79)	0.16	0.79	ND (13)	ND (64)	ND (0.10)	ND (0.49)	0.08 L	0.37 L
Cyclohexane	2.4	8.3	ND (0.16)	ND (0.55)	0.10	0.34	ND (13)	ND (45)	ND (0.10)	ND (0.34)	ND (0.12)	ND (0.41)
Dichlorodifluoromethane	3.4	17	0.44	2.2	5.8	29	20	99	5400	27000	0.39	1.9
Hexane	4.7	17	0.23	0.81	0.57	2.0	25	88	0.74	2.6	0.14	0.49
Methyl Ethyl Ketone	11	32	0.36	1.1	0.44	1.3	30	88	ND (0.10)	ND (0.30)	0.19	0.56
Methylchloride	0.81	1.7	0.42	0.87	0.41	0.85	ND (13)	ND (27)	ND (0.10)	ND (0.21)	0.49	1.0
Methylene Chloride	2.8	9.6	0.35	1.2	0.82	2.8	ND (13)	ND (45)	ND (0.10)	ND (0.35)	3.4	12
Tetrachloroethene	0.20	1.4	ND (0.16)	ND (1.1)	ND (0.10)	ND (0.68)	ND (13)	ND (88)	0.92	6.2	ND (0.12)	ND (0.81)
Tetrahydrofuran	5.0	15	ND (0.16)	ND (0.47)	ND (0.10)	ND (0.30)	ND (13)	ND (38)	ND (0.10)	ND (0.30)	ND (0.12)	ND (0.35)
Toluene	5.5	21	0.58	2.2	0.67	2.5	16	60	0.19	0.72	0.40	1.5
Trichlorofluoromethane	11	60	0.53	3.0	0.88	4.9	ND (13)	ND (73)	34	190	0.16	0.90
c-1,2-Dichloroethene	ND (0.18)	ND (0.71)	ND (0.16)	ND (0.63)	0.34	1.3	ND (13)	ND (52)	ND (0.10)	ND (0.40)	ND (0.12)	ND (0.48)
m/p-Xylenes	3.1	13	0.27 L	1.2 L	0.41	1.8	ND (26)	ND (113)	ND (0.20)	ND (0.87)	0.17 L	0.74 L
o-Xylenes	1.3	5.6	ND (0.16)	ND (0.70)	0.15	0.65	ND (13)	ND (56)	ND (0.10)	ND (0.43)	0.06 L	0.26 L

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 12
INDOOR AIR, AMBIENT AIR AND SOIL GAS CANISTER SAMPLING RESULTS SUMMARY
300 FERRY BLVD.
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR MAIN SHOW ROOM CANISTER #6463 15-Aug-12 8-HOUR AVG.		INDOOR AIR SNOW BOARD AREA CANISTER #6460 15-Aug-12 8-HOUR AVG.		SUB-SLAB SOIL GAS SS-1 SNOW BOARD STORAGE CANISTER #22692 15-Aug-12 GRAB SAMPLE		AMBIENT AIR OUTSIDE 500 FERRY BLVD. CANISTER #22690 8/15/12 - 8/16/12 24-HOUR AVG.(11:33-11:33)	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)
Trichloroethene	**ND (0.20)**	**ND (1.1)**	**1.0**	**5.4**	**200**	**1100**	**ND (0.12)**	**ND (0.64)**
1,1-Dichloroethylene	**ND (0.20)**	**ND (0.79)**	**ND (0.11)**	**ND (0.44)**	**1.1**	**4.4**	**ND (0.12)**	**ND (0.48)**
1,1-Dichloroethane	**ND (0.20)**	**ND (0.81)**	**ND (0.11)**	**ND (0.44)**	**2.5**	**10**	**ND (0.12)**	**ND (0.48)**
Benzene	**2.3**	**7.3**	**2.3**	**7.2**	**0.69**	**2.2**	**0.15**	**0.48**
Chorobenzene	**ND (0.20)**	**ND (0.93)**	**ND (0.11)**	**ND (0.51)**	**3.9**	**18**	**ND (0.12)**	**ND (0.56)**
Chloroform	**ND (0.20)**	**ND (0.98)**	**0.14**	**0.68**	**1.8**	**8.5**	**ND (0.12)**	**ND (0.59)**
Ethylbenzene	**2.6**	**11**	**3.1**	**14**	**ND (0.11)**	**ND (0.48)**	**ND (0.12)**	**ND (0.52)**
Vinyl Chloride	**ND (0.20)**	**ND (0.51)**	**0.81**	**2.1**	**130**	**330**	**ND (0.12)**	**ND (0.31)**
1,1,1-Trichloroethane	ND (0.20)	ND (1.1)	0.18	0.98	0.58	3.2	ND (0.12)	ND (0.66)
1,2,4-Trichlorobenzene	ND (0.20)	ND (1.5)	0.06 L	0.46 L	ND (0.11)	ND (0.82)	ND (0.12)	ND (0.89)
1,2,4-Trimethylbenzene	1.9	9.3	2.8	14	0.44	2.2	0.07 L	0.32 L
1,2-Dichloroethane	ND (0.20)	ND (0.98)	0.11	0.45	ND (0.11)	ND (0.45)	ND (0.12)	ND (0.49)
1,3,5-Trimethylbenzene	0.60	2.9	0.77	3.8	ND (0.11)	ND (0.54)	ND (0.12)	ND (0.59)
4-Ethyltoulene	1.8	8.8	2.5	12	0.27	1.3	0.08 L	0.37 L
Carbon Tetrachloride	ND (0.20)	ND (1.3)	0.07 L	0.45 L	ND (0.11)	ND (0.69)	ND (0.12)	ND (0.75)
Cyclohexane	1.5	5.2	1.4	4.8	6.4	22	ND (0.12)	ND (0.41)
Dichlorodifluoromethane	1.1	5.4	1.2	5.9	9.3	46	0.39	1.9
Heptane	ND (0.20)	ND (0.82)	ND (0.11)	ND (0.45)	2.2	8.8	ND (0.12)	ND (0.49)
Hexane	6.4	22	6.9	24	1.4	4.9	0.14	0.49
Methyl Ethyl Ketone	2.9	8.6	3.6	11	ND (0.11)	ND (0.32)	0.19	0.56
Methyl Isobutyl Ketone	ND (0.20)	ND (0.82)	0.15	0.61	ND (0.11)	ND (0.35)	ND (0.12)	ND (0.49)
Methyl-t-Butyl Ether	ND (0.20)	ND (0.72)	ND (0.11)	ND (0.40)	3.2	11	ND (0.12)	ND (0.43)
Methylchloride	0.59	1.2	0.46	0.95	0.33	0.68	0.49	1.0
Methylene Chloride	ND (0.20)	ND (0.70)	3.9	13	ND (0.11)	ND(0.38)	3.4	12
Styrene	0.62	2.6	0.64	2.7	ND (0.11)	ND (0.47)	ND (0.12)	ND (0.51)
Tetrachloroethene	ND (0.20)	ND (1.4)	ND (0.11)	ND (0.75)	1.5	10	ND (0.12)	ND (0.81)
Tetrahydrofuran	6.0	18	ND (0.11)	ND (0.32)	ND (0.11)	ND (0.32)	ND (0.12)	ND (0.35)
Toluene	21	78	26	98	1.7	6.5	0.40	1.5
Trichlorofluoromethane	ND (0.20)	ND (1.1)	0.18	1.0	0.15	0.84	0.16	0.90
Trichlorotrifluoroethane	ND (0.20)	ND (1.5)	0.06 L	0.47 L	ND (0.11)	ND (0.84)	ND (0.12)	ND (0.92)
c-1,2-Dichloroethene	ND (0.20)	ND (0.79)	0.49	1.9	90	360	ND (0.12)	ND (0.48)
m/p-Xylenes	7.7	33	9.0	39	2.1	8.9	0.17 L	0.74 L
o-Xylenes	2.7	12	3.4	15	1.1	4.8	0.06 L	0.26 L
t-1,2-Dichloroethene	ND (0.20)	ND (0.79)	0.11	0.44	4.7	19	ND (0.12)	ND (0.48)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 13
INDOOR AIR AND AMBIENT AIR CANISTER SAMPLING RESULTS SUMMARY
326 FERRY BLVD.
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR DINING ROOM CANISTER #5790 14-Aug-12 8-HOUR AVG.		INDOOR AIR KITCHEN CANISTER #1560 14-Aug-12 8-HOUR AVG.		AMBIENT AIR OUTSIDE 500 FERRY. BLVD. CANISTER #13484 8/14/12 - 8/15/12 24-HOUR AVG.(11:35-11:35)	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)
Trichloroethene	**ND (0.11)**	**ND (0.59)**	**ND (0.12)**	**ND (0.64)**	**ND (0.10)**	**ND (0.54)**
1,1-Dichloroethylene	**ND (0.11)**	**ND (0.44)**	**ND (0.12)**	**ND (0.48)**	**ND (0.10)**	**ND (0.40)**
1,1-Dichloroethane	**ND (0.11)**	**ND (0.44)**	**ND (0.12)**	**ND (0.48)**	**ND (0.10)**	**ND (0.40)**
Benzene	**0.32**	**1.0**	**0.41**	**1.3**	**ND (0.10)**	**ND (0.32)**
Chorobenzene	**ND (0.11)**	**ND (0.51)**	**ND (0.12)**	**ND (0.56)**	**ND (0.10)**	**ND (0.46)**
Chloroform	**0.08 L**	**0.38 L**	**0.25**	**1.2**	**ND (0.10)**	**ND (0.49)**
Ethylbenzene	**0.22**	**0.95**	**0.26**	**1.1**	**ND (0.10)**	**ND (0.43)**
Vinyl Chloride	**ND (0.11)**	**ND (0.28)**	**ND (0.12)**	**ND (0.31)**	**ND (0.10)**	**ND (0.26)**
1,2,4-Trichlorobenzene	0.05 L	0.40 L	ND (0.12)	ND (0.89)	ND (0.10)	ND (0.74)
1,2,4-Trimethylbenzene	0.28	1.4	0.25	1.2	ND (0.10)	ND (0.49)
1,3,5-Trimethylbenzene	0.11	0.54	ND (0.12)	ND (0.59)	ND (0.10)	ND (0.49)
1,3-Butadiene	0.06 L	0.14 L	0.06 L	0.20 L	ND (0.20)	ND (0.44)
4-Ethyltoulene	0.25	1.2	0.28	1.4	0.06 L	0.29 L
Carbon Tetrachloride	0.06 L	0.40 L	0.06 L	0.35 L	ND (0.10)	ND (0.63)
Cyclohexane	0.37	1.3	0.18	0.62	ND (0.10)	ND (0.34)
Dichlorodifluoromethane	0.64	3.2	0.40	2.0	0.36	1.8
Hexane	4.5	16	5.7	20	0.16	0.56
Methyl Ethyl Ketone	0.47	1.4	0.56	1.7	0.20	0.59
Methylchloride	0.47	0.97	0.41	0.85	0.35	0.72
Styrene	0.64	2.7	0.15	0.64	ND (0.10)	ND (0.43)
Toluene	1.4	5.2	1.5	5.6	0.28	1.1
Trichlorofluoromethane	0.12	0.67	0.14	0.79	0.17	0.96
m/p-Xylenes	0.63	2.7	0.78	3.4	0.11 L	0.48 L
o-Xylenes	0.31	1.3	0.29	1.3	ND (0.10)	ND (0.43)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 14
INDOOR AIR, AMBIENT AIR AND SOIL GAS CANISTER SAMPLING RESULTS SUMMARY
444 FERRY BLVD.
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR BASEMENT CANISTER #6461 14-Aug-12 8-HOUR AVG.		INDOOR AIR FIRST FLOOR CANISTER #6567 14-Aug-12 8-HOUR AVG.		SUB-SLAB SOIL GAS SS-3 BASEMENT CANISTER #22105 14-Aug-12 GRAB SAMPLE		AMBIENT AIR OUTSIDE 500 FERRY. BLVD. CANISTER #13484 8/14/12 - 8/15/12 24-HOUR AVG.(11:35-11:35)	
	(ppb/v)	(µg/m^3)	(ppb/v)	(µg/m^3)	(ppb/v)	(µg/m^3)	(ppb/v)	(µg/m^3)
Trichloroethene	**ND (0.11)**	**ND (0.59)**	**ND (0.11)**	**ND (0.59)**	**2.8**	**15**	**ND (0.10)**	**ND (0.54)**
1,1-Dichloroethylene	**ND (0.11)**	**ND (0.44)**	**ND (0.11)**	**ND (0.44)**	**0.66**	**2.6**	**ND (0.10)**	**ND (0.40)**
1,1-Dichloroethane	**ND (0.11)**	**ND (0.44)**	**ND (0.11)**	**ND (0.44)**	**3.7**	**15**	**ND (0.10)**	**ND (0.40)**
Benzene	**0.45**	**1.4**	**0.44**	**1.4**	**ND (0.10)**	**ND (0.32)**	**ND (0.10)**	**ND (0.32)**
Chorobenzene	**ND (0.11)**	**ND (0.51)**	**ND (0.11)**	**ND (0.51)**	**ND (0.10)**	**ND (0.46)**	**ND (0.10)**	**ND (0.46)**
Chloroform	**0.12**	**0.59**	**0.18**	**0.88**	**ND (0.10)**	**ND (0.49)**	**ND (0.10)**	**ND (0.49)**
Ethylbenzene	**0.25**	**1.1**	**0.30**	**1.3**	**ND (0.10)**	**ND (0.43)**	**ND (0.10)**	**ND (0.43)**
Vinyl Chloride	**ND (0.11)**	**ND (0.28)**	**ND (0.11)**	**ND (0.28)**	**ND (0.10)**	**ND (0.26)**	**ND (0.10)**	**ND (0.26)**
1,1,1-Trichloroethane	ND (0.11)	ND (0.60)	0.14	0.76	5.4	30	ND (0.10)	ND (0.55)
1,2,4-Trimethylbenzene	1.1	5.2	0.52	2.6	ND (0.10)	ND (0.49)	ND (0.10)	ND (0.49)
1,3,5-Trimethylbenzene	0.76	3.7	0.30	1.5	ND (0.10)	ND (0.49)	ND (0.10)	ND (0.49)
4-Ethyltoulene	2.1	10	0.79	3.9	ND (0.10)	ND (0.49)	0.06 L	0.29 L
Carbon Tetrachloride	0.07 L	0.42 L	0.13	0.82	ND (0.10)	ND (0.63)	ND (0.10)	ND (0.63)
Cyclohexane	0.35	1.2	0.29	1.0	ND (0.10)	ND (0.34)	ND (0.10)	ND (0.34)
Dichlorodifluoromethane	0.38	1.9	0.48	2.4	0.42	2.1	0.36	1.8
Hexane	6.4	22	5.8	20	0.08 L	0.28 L	0.16	0.56
Methyl Ethyl Ketone	1.4	4.2	1.5	4.5	0.17	0.50	0.20	0.59
Methylchloride	0.37	0.76	0.39	0.81	0.11	0.23	0.35	0.72
Styrene	0.12	0.51	ND (0.11)	ND (0.47)	ND (0.10)	ND (0.47)	ND (0.10)	ND (0.43)
Tetrachloroethene	ND (0.11)	ND (0.75)	ND (0.11)	ND (0.75)	0.76	5.2	ND (0.10)	ND (0.68)
Toluene	3.0	11	2.7	10	ND (0.10)	ND (0.38)	0.28	1.1
Trichlorofluoromethane	0.16	0.90	0.22	1.2	0.26	1.5	0.17	0.96
Trichlorotrifluorothane	0.05 L	0.39 L	ND (0.11)	ND (0.84)	0.07 L	0.50 L	ND (0.10)	ND (0.77)
c-1,2-Dichloroethene	ND (0.11)	ND (0.44)	ND (0.11)	ND (0.44)	13	52	ND (0.10)	ND (0.40)
m/p-Xylenes	0.68	2.9	0.74	3.2	ND (0.20)	ND (0.87)	0.11 L	0.48 L
o-Xylenes	0.53	2.3	0.55	2.4	ND (0.10)	ND (0.43)	ND (0.10)	ND (0.43)
t-1,2-Dichloroethene	ND (0.11)	ND (0.44)	ND (0.11)	ND (0.44)	0.13	0.52	ND (0.10)	ND (0.40)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 15
INDOOR AIR AND AMBIENT AIR CANISTER SAMPLING RESULTS SUMMARY
411 BARNUM AVE. MCDONALDS RESTAURANT
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR OFFICE SPACE CANISTER #20841 16-Aug-12 8-HOUR AVG.		AMBIENT AIR OUTSIDE 411 BARNUM AVE. CANISTER #20846 16-Aug-12 8-HOUR AVG.(10:52-18:52)	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)
Trichloroethene	**0.21**	**1.1**	**0.31**	**1.7**
1,1-Dichloroethylene	**ND (0.12)**	**ND (0.48)**	**ND (0.15)**	**ND (0.60)**
1,1-Dichloroethane	**ND (0.12)**	**ND (0.48)**	**ND (0.15)**	**ND (0.60)**
Benzene	**0.10 L**	**0.32 L**	**0.12 L**	**0.38 L**
Chorobenzene	**ND (0.12)**	**ND (0.56)**	**ND (0.15)**	**ND (0.70)**
Chloroform	**0.28**	**1.4**	**ND (0.15)**	**ND (0.73)**
Ethylbenzene	**ND (0.12)**	**ND (0.52)**	**ND (0.15)**	**ND (0.65)**
Vinyl Chloride	**0.41**	**1.0**	**0.11 L**	**0.28 L**
1,1,1-Trichloroethane	ND (0.12)	ND (0.66)	0.40	2.2
1,2,4-Trimethylbenzene	0.05 L	0.27 L	ND (0.15)	ND (0.74)
4-Ethyltoulene	0.06 L	0.31 L	ND (0.15)	ND (0.74)
Carbon Tetrachloride	ND (0.12)	ND (0.75)	0.08 L	0.49 L
Dichlorodifluoromethane	0.36	1.8	0.88	4.4
Hexane	0.98	3.4	1.3	4.5
Methyl Ethyl Ketone	0.35	1.0	0.31	0.91
Methylchloride	0.29	0.60	0.34	0.70
Toluene	0.22	0.83	1.0	3.8
Trichlorofluoromethane	0.12	0.67	0.30	1.7
Trichlorotrifluorothane	ND (0.12)	ND (0.92)	0.06 L	0.45 L
c-1,2-Dichloroethene	ND (0.12)	ND (0.48)	0.11 L	0.44 L
m/p-Xylenes	0.11 L	0.48 L	0.09 L	0.41 L
o-Xylenes	0.06 L	0.26 L	ND (0.15)	ND (0.65)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 16
INDOOR AIR AND AMBIENT AIR CANISTER SAMPLING RESULTS SUMMARY
411 BARNUM AVE. STRATFORD SQUARE US POSTAL SERVICE
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR US POSTAL SERVICE CANISTER #15055 16-Aug-12 8-HOUR AVG.		AMBIENT AIR OUTSIDE 411 BARNUM AVE. CANISTER #20846 16-Aug-12 8-HOUR AVG.(10:52-18:52)	
	(ppb/v)	(µg/m^3)	(ppb/v)	(µg/m^3)
Trichloroethene	**0.25**	**1.3**	**0.31**	**1.7**
1,1-Dichloroethylene	**ND (0.11)**	**ND (0.44)**	**ND (0.15)**	**ND (0.60)**
1,1-Dichloroethane	**ND (0.11)**	**ND (0.44)**	**ND (0.15)**	**ND (0.60)**
Benzene	**0.19**	**0.61**	**0.12 L**	**0.38 L**
Chorobenzene	**ND (0.11)**	**ND (0.51)**	**ND (0.15)**	**ND (0.70)**
Chloroform	**ND (0.11)**	**ND (0.54)**	**ND (0.15)**	**ND (0.73)**
Ethylbenzene	**0.13**	**0.56**	**ND (0.15)**	**ND (0.65)**
Vinyl Chloride	**ND (0.11)**	**ND (0.28)**	**0.11 L**	**0.28 L**
1,1,1-Trichloroethane	0.27	1.5	0.40	2.2
1,2,4-Trimethylbenzene	0.35	1.7	ND (0.15)	ND (0.74)
1,3,5-Trimethylbenzene	0.20	0.98	ND (0.15)	ND (0.74)
4-Ethyltoulene	0.29	1.4	ND (0.15)	ND (0.74)
Carbon Tetrachloride	0.05 L	0.32 L	0.08 L	0.49 L
Dichlorodifluoromethane	0.62	3.1	0.88	4.4
Hexane	1.0	3.6	1.3	4.5
Methyl Ethyl Ketone	2.1	6.2	0.31	0.91
Methylchloride	0.37	0.76	0.34	0.70
Styrene	0.09 L	0.40 L	ND (0.15)	ND (0.64)
Toluene	3.9	15	1.0	3.8
Trichlorofluoromethane	1.2	6.7	0.30	1.7
Trichlorotrifluorothane	ND (0.11)	ND (0.84)	0.06 L	0.45 L
c-1,2-Dichloroethene	ND (0.11)	ND (0.44)	0.11 L	0.44 L
m/p-Xylenes	0.31	1.3	0.09 L	0.41 L
o-Xylenes	0.13	0.56	ND (0.15)	ND (0.65)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 17
INDOOR AIR AND AMBIENT AIR CANISTER SAMPLING RESULTS SUMMARY
411 BARNUM AVE. STRATFORD SQUARE MARSHALLS
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 411 BARNUM AVE. MARSHALLS BACKROOM CANISTER #5792 16-Aug-12 8-HOUR AVG.		INDOOR AIR 411 BARNUM AVE. MARSHALLS BACKROOM DUPLICATE CANISTER #1114 16-Aug-12 8-HOUR AVG.		INDOOR AIR 411 BARNUM AVE. MARSHALLS SHOPPING AREA CANISTER #22684 16-Aug-12 8-HOUR AVG.		AMBIENT AIR OUTSIDE 411 BARNUM AVE. CANISTER #20846 16-Aug-12 8-HOUR AVG.(10:52-18:52)	
	(ppb/v)	(µg/m^3)	(ppb/v)	(µg/m^3)	(ppb/v)	(µg/m^3)	(ppb/v)	(µg/m^3)
Trichloroethene	**ND (0.10)**	**ND (0.54)**	**ND (0.12)**	**ND (0.64)**	**ND (0.09)**	**ND (0.48)**	**0.31**	**1.7**
1,1-Dichloroethylene	**ND (0.10)**	**ND (0.40)**	**ND (0.12)**	**ND (0.48)**	**ND (0.09)**	**ND (0.36)**	**ND (0.15)**	**ND (0.60)**
1,1-Dichloroethane	**ND (0.10)**	**ND (0.40)**	**ND (0.12)**	**ND (0.48)**	**ND (0.09)**	**ND (0.36)**	**ND (0.15)**	**ND (0.60)**
Benzene	**0.32**	**1.0**	**0.33**	**1.1**	**0.34**	**1.1**	**0.12 L**	**0.38 L**
Chorobenzene	**ND (0.10)**	**ND (0.46)**	**ND (0.12)**	**ND (0.56)**	**ND (0.09)**	**ND (0.42)**	**ND (0.15)**	**ND (0.70)**
Chloroform	**ND (0.10)**	**ND (0.49)**	**ND (0.12)**	**ND (0.59)**	**ND (0.09)**	**ND (0.44)**	**ND (0.15)**	**ND (0.73)**
Ethylbenzene	**0.50**	**2.2**	**0.53**	**2.3**	**0.49**	**2.1**	**ND (0.15)**	**ND (0.65)**
Vinyl Chloride	**ND (0.10)**	**ND (0.26)**	**ND (0.12)**	**ND (0.31)**	**ND (0.09)**	**ND (0.23)**	**0.11 L**	**0.28 L**
1,1,1-Trichloroethane	ND (0.10)	ND (0.55)	ND (0.12)	ND (0.66)	ND (0.09)	ND (0.49)	0.40	2.2
1,2,4-Trimethylbenzene	0.24	1.2	0.24	1.2	0.27	1.3	ND (0.15)	ND (0.74)
1,2-Dichloroethane	1.4	5.7	1.4	5.5	0.94	3.8	ND (0.15)	ND (0.61)
1,2-Dichloropropane	0.25	1.2	0.26	1.2	0.28	1.3	ND (0.15)	ND (0.69)
4-Ethyltoulene	0.21	1.0	0.23	1.1	0.24	1.2	ND (0.15)	ND (0.74)
Cyclohexane	ND (0.10)	ND (0.34)	0.20	0.69	ND (0.09)	ND (0.31)	ND (0.15)	ND (0.52)
Carbon Tetrachloride	ND (0.10)	ND (0.63)	ND (0.12)	ND (0.75)	ND (0.09)	ND (0.56)	0.08 L	0.49 L
Dichlorodifluoromethane	0.99	4.9	0.84	4.2	0.50	2.5	0.88	4.4
Hexane	0.22	0.77	ND (0.12)	ND (0.42)	ND (0.09)	ND (0.32)	1.3	4.5
Methyl Ethyl Ketone	1.3	3.7	1.3	3.9	1.1	3.4	0.31	0.91
Methylchloride	0.36	0.74	0.35	0.72	0.36	0.74	0.34	0.70
Methylene Chloride	ND (0.10)	ND (0.35)	ND (0.12)	ND (0.42)	0.43	1.5	ND (0.15)	ND (0.52)
Styrene	0.53	2.3	0.54	2.3	0.38	1.6	ND (0.15)	ND (0.64)
Tetrahydrofuran	ND (0.10)	ND (0.30)	0.86	2.5	ND (0.09)	ND (0.27)	ND (0.15)	ND (0.44)
Toluene	14	52	16	60	16	60	1.0	3.8
Trichlorofluoromethane	2.3	13	2.3	13	0.86	4.8	0.30	1.7
Trichlorotrifluorothane	ND (0.10)	ND (0.77)	ND (0.12)	ND (0.92)	ND (0.09)	ND (0.69)	0.06 L	0.45 L
c-1,2-Dichloroethene	ND (0.10)	ND (1.7)	ND (0.12)	ND (0.48)	ND (0.09)	ND (0.36)	0.11 L	0.44 L
m/p-Xylenes	0.85	3.7	0.89	3.9	0.88	3.8	0.09 L	0.41 L
o-Xylenes	0.38	1.6	0.41	1.8	0.40	1.7	ND (0.15)	ND (0.65)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 18
INDOOR AIR AND AMBIENT AIR CANISTER SAMPLING RESULTS SUMMARY
411 BARNUM AVE. STRATFORD SQUARE PAYLESS SHOE
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 411 BARNUM AVE. PAYLESS SHOE BACK OF STORE CANISTER #15049 16-Aug-12 8-HOUR AVG.		INDOOR AIR 411 BARNUM AVE. PAYLESS SHOE CANISTER #15054 16-Aug-12 8-HOUR AVG.		AMBIENT AIR OUTSIDE 411 BARNUM AVE. CANISTER #20846 16-Aug-12 8-HOUR AVG.(10:52-18:52)	
	(ppb/v)	(µg/m^3)	(ppb/v)	(µg/m^3)	(ppb/v)	(µg/m^3)
Trichloroethene	**0.25**	**1.3**	**0.32**	**1.7**	**0.31**	**1.7**
1,1-Dichloroethylene	**ND (0.11)**	**ND (0.44)**	**ND (0.09)**	**ND (0.36)**	**ND (0.15)**	**ND (0.60)**
1,1-Dichloroethane	**ND (0.11)**	**ND (0.44)**	**ND (0.09)**	**ND (0.36)**	**ND (0.15)**	**ND (0.60)**
Benzene	**3.0**	**9.5**	**3.5**	**11**	**0.12 L**	**0.38 L**
Chorobenzene	**ND (0.11)**	**ND (0.51)**	**ND (0.09)**	**ND (0.42)**	**ND (0.15)**	**ND (0.70)**
Chloroform	**0.22**	**1.1**	**ND (0.09)**	**ND (0.44)**	**ND (0.15)**	**ND (0.73)**
Ethylbenzene	**7.0**	**30**	**7.4**	**32**	**ND (0.15)**	**ND (0.65)**
Vinyl Chloride	**ND (0.11)**	**ND (0.28)**	**ND (0.09)**	**ND (0.23)**	**0.11 L**	**0.28 L**
1,1,1-Trichloroethane	ND (0.11)	ND (0.60)	ND (0.09)	ND (0.49)	0.40	2.2
1,2,4-Trimethylbenzene	1.3	6.5	1.4	7.1	ND (0.15)	ND (0.74)
1,2-Dichloroethane	3.6	15	4.0	16	ND (0.15)	ND (0.61)
1,2-Dichloropropane	3.2	15	3.4	16	ND (0.15)	ND (0.69)
1,3,5-Trimethylbenzene	0.47	2.3	0.50	2.5	ND (0.15)	ND (0.74)
4-Ethyltoulene	1.4	6.9	1.4	7.1	ND (0.15)	ND (0.74)
Cyclohexane	1.4	4.8	1.7	5.7	ND (0.15)	ND (0.52)
Carbon Tetrachloride	ND (0.11)	ND (0.69)	ND (0.09)	ND (0.56)	0.08 L	0.49 L
Dichlorodifluoromethane	2.6	13	2.9	14	0.88	4.4
Heptane	4.8	20	6.1	25	ND (0.15)	ND (0.62)
Hexane	0.43	1.5	0.46	1.6	1.3	4.5
Methyl Ethyl Ketone	26 L	77 L	30	88	0.31	0.91
Methylchloride	0.51	1.1	0.56	1.2	0.34	0.70
Methylene Chloride	3.4 J	12 J	ND (0.09)	ND (0.31)	ND (0.15)	ND (0.52)
Styrene	3.2	14	3.7	16	ND (0.15)	ND (0.64)
Toluene	250	940	420	1600	1.0	3.8
Trichlorofluoromethane	7.3	41	9.0	51	0.30	1.7
Trichlorotrifluorothane	ND (0.11)	ND (0.84)	ND (0.09)	ND (0.69)	0.06 L	0.45 L
c-1,2-Dichloroethene	ND (0.11)	ND (0.44)	ND (0.09)	ND (0.36)	0.11 L	0.44 L
m/p-Xylenes	8.5	37	9.1	40	0.09 L	0.41 L
o-Xylenes	4.2	18	4.3	19	ND (0.15)	ND (0.65)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
J = Estimated value, CCV did not meet specification
Compounds in bold type are target compounds for project.

TABLE 19
INDOOR AIR AND AMBIENT AIR CANISTER SAMPLING RESULTS SUMMARY
411 BARNUM AVE. STRATFORD SQUARE SLEEPY'S
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 411 BARNUM AVE. SLEEPY'S CANISTER #20849 16-Aug-12 8-HOUR AVG.		AMBIENT AIR OUTSIDE 411 BARNUM AVE. CANISTER #20846 16-Aug-12 8-HOUR AVG.(10:52-18:52)	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)
Trichloroethene	**2.1**	**11**	**0.31**	**1.7**
1,1-Dichloroethylene	**ND (0.24)**	**ND (0.95)**	**ND (0.15)**	**ND (0.60)**
1,1-Dichloroethane	**ND (0.24)**	**ND (0.97)**	**ND (0.15)**	**ND (0.60)**
Benzene	**0.83**	**2.6**	**0.12 L**	**0.38 L**
Chorobenzene	**ND (0.24)**	**ND (1.1)**	**ND (0.15)**	**ND (0.70)**
Chloroform	**ND (0.24)**	**ND (1.2)**	**ND (0.15)**	**ND (0.73)**
Ethylbenzene	**1.4**	**6.1**	**ND (0.15)**	**ND (0.65)**
Vinyl Chloride	**ND (0.24)**	**ND (0.61)**	**0.11 L**	**0.28 L**
1,1,1-Trichloroethane	ND (0.24)	ND (1.3)	0.40	2.2
1,2,4-Trimethylbenzene	0.64	3.1	ND (0.15)	ND (0.74)
1,2-Dichloroethane	0.78	3.2	ND (0.15)	ND (0.61)
1,2-Dichloropropane	0.77	3.6	ND (0.15)	ND (0.69)
1,3,5-Trimethylbenzene	0.36	1.8	ND (0.15)	ND (0.74)
4-Ethyltoulene	0.66	3.2	ND (0.15)	ND (0.74)
Cyclohexane	0.35	1.2	ND (0.15)	ND (0.52)
Carbon Tetrachloride	ND (0.24)	ND (1.5)	0.08 L	0.49 L
Dichlorodifluoromethane	3.8	19	0.88	4.4
Hexane	0.27	0.95	1.3	4.5
Methyl Ethyl Ketone	3.7	11	0.31	0.91
Methylchloride	0.40	0.83	0.34	0.70
Methylene Chloride	1.8 J	6.1 J	ND (0.15)	ND (0.52)
Styrene	0.49	2.1	ND (0.15)	ND (0.64)
Toluene	85	320	1.0	3.8
Trichlorofluoromethane	14	78	0.30	1.7
Trichlorotrifluorothane	ND (0.24)	ND (1.8)	0.06 L	0.45 L
c-1,2-Dichloroethene	ND (0.24)	ND (0.95)	0.11 L	0.44 L
m/p-Xylenes	2.1	8.9	0.09 L	0.41 L
o-Xylenes	0.93	4.0	ND (0.15)	ND (0.65)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
J = Estimated value, CCV did not meet specification
Compounds in bold type are target compounds for project.

TABLE 20
INDOOR AIR AND AMBIENT AIR CANISTER SAMPLING RESULTS SUMMARY
411 BARNUM AVE. STRATFORD SQUARE FASHION BUG
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 411 BARNUM AVE. FASHION BUG CANISTER #22687 16-Aug-12 8-HOUR AVG.		AMBIENT AIR OUTSIDE 411 BARNUM AVE. CANISTER #20846 16-Aug-12 8-HOUR AVG.(10:52-18:52)	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)
Trichloroethene	**0.13**	**0.70**	**0.31**	**1.7**
1,1-Dichloroethylene	**ND (0.09)**	**ND (0.36)**	**ND (0.15)**	**ND (0.60)**
1,1-Dichloroethane	**ND (0.09)**	**ND (0.36)**	**ND (0.15)**	**ND (0.60)**
Benzene	**0.21**	**0.67**	**0.12 L**	**0.38 L**
Chorobenzene	**ND (0.09)**	**ND (0.42)**	**ND (0.15)**	**ND (0.70)**
Chloroform	**ND (0.09)**	**ND (0.44)**	**ND (0.15)**	**ND (0.73)**
Ethylbenzene	**0.19**	**0.82**	**ND (0.15)**	**ND (0.65)**
Vinyl Chloride	**ND (0.09)**	**ND (0.23)**	**0.11 L**	**0.28 L**
1,1,1-Trichloroethane	ND (0.09)	ND (0.49)	0.40	2.2
1,2,4-Trimethylbenzene	0.34	1.7	ND (0.15)	ND (0.74)
1,3,5-Trimethylbenzene	0.21	1.0	ND (0.15)	ND (0.74)
4-Ethyltoulene	0.31	1.5	ND (0.15)	ND (0.74)
Cyclohexane	0.63	2.2	ND (0.15)	ND (0.52)
Carbon Tetrachloride	0.06 L	0.39 L	0.08 L	0.49 L
Dichlorodifluoromethane	1.2	5.9	0.88	4.4
Hexane	0.26	0.92	1.3	4.5
Methyl Ethyl Ketone	0.70	2.1	0.31	0.91
Methylchloride	0.39	0.81	0.34	0.70
Styrene	0.12	0.51	ND (0.15)	ND (0.64)
Toluene	5.4	20	1.0	3.8
Trichlorofluoromethane	3.4	19	0.30	1.7
Trichlorotrifluorothane	ND (0.09)	ND (0.69)	0.06 L	0.45 L
c-1,2-Dichloroethene	ND (0.09)	ND (0.36)	0.11 L	0.44 L
m/p-Xylenes	0.26	1.1	0.09 L	0.41 L
o-Xylenes	0.14	0.61	ND (0.15)	ND (0.65)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 21
INDOOR AIR AND AMBIENT AIR CANISTER SAMPLING RESULTS SUMMARY
411 BARNUM AVE. STRATFORD SQUARE SALLY'S BEAUTY
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 411 BARNUM AVE. SALLY'S BEAUTY CANISTER #20844 16-Aug-12 8-HOUR AVG.		AMBIENT AIR OUTSIDE 411 BARNUM AVE. CANISTER #20846 16-Aug-12 8-HOUR AVG.(10:52-18:52)	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)
Trichloroethene	**ND (0.13)**	**ND (0.70)**	**0.31**	**1.7**
1,1-Dichloroethylene	**ND (0.13)**	**ND (0.52)**	**ND (0.15)**	**ND (0.60)**
1,1-Dichloroethane	**ND (0.13)**	**ND (0.52)**	**ND (0.15)**	**ND (0.60)**
Benzene	**0.24**	**0.77**	**0.12 L**	**0.38 L**
Chorobenzene	**ND (0.13)**	**ND (0.61)**	**ND (0.15)**	**ND (0.70)**
Chloroform	**ND (0.13)**	**ND (0.64)**	**ND (0.15)**	**ND (0.73)**
Ethylbenzene	**0.29**	**1.3**	**ND (0.15)**	**ND (0.65)**
Vinyl Chloride	**ND (0.13)**	**ND (0.33)**	**0.11 L**	**0.28 L**
1,1,1-Trichloroethane	ND (0.13)	ND (0.71)	0.40	2.2
1,3,5-Trimethylbenzene	0.08 L	0.40 L	ND (0.15)	ND (0.74)
4-Ethyltoulene	0.21	1.0	ND (0.15)	ND (0.74)
Cyclohexane	0.30	1.0	ND (0.15)	ND (0.52)
Carbon Tetrachloride	ND (0.13)	ND (0.81)	0.08 L	0.49 L
Dichlorodifluoromethane	0.78	3.9	0.88	4.4
Heptane	6.7	27	ND (0.15)	ND (0.62)
Hexane	ND (0.13)	ND (0.46)	1.3	4.5
Methyl Ethyl Ketone	26	77	0.31	0.91
Methylchloride	0.51	1.1	0.34	0.70
Styrene	0.21	0.89	ND (0.15)	ND (0.64)
Tetrahydrofuran	2.0	6.0	ND (0.15)	ND (0.44)
Toluene	5.4	20	1.0	3.8
Trichlorofluoromethane	0.88	4.9	0.30	1.7
Trichlorotrifluorothane	ND (0.13)	ND (1.0)	0.06 L	0.45 L
c-1,2-Dichloroethene	ND (0.13)	ND (0.52)	0.11 L	0.44 L
m/p-Xylenes	0.59	2.6	0.09 L	0.41 L
o-Xylenes	0.27	1.2	ND (0.15)	ND (0.65)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 22
INDOOR AIR AND AMBIENT AIR CANISTER SAMPLING RESULTS SUMMARY
411 BARNUM AVE. STRATFORD SQUARE GAME STOP
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 411 BARNUM AVE. GAME STOP CANISTER #12568 16-Aug-12 8-HOUR AVG.				AMBIENT AIR OUTSIDE 411 BARNUM AVE. CANISTER #20846 16-Aug-12 8-HOUR AVG.(10:52-18:52)			
	(ppb/v)		(µg/m³)		(ppb/v)		(µg/m³)	
Trichloroethene	**ND (0.10)**		**ND (0.54)**		**0.31**		**1.7**	
1,1-Dichloroethylene	**ND (0.10)**		**ND (0.40)**		**ND (0.15)**		**ND (0.60)**	
1,1-Dichloroethane	**ND (0.10)**		**ND (0.40)**		**ND (0.15)**		**ND (0.60)**	
Benzene	**0.14**		**0.45**		**0.12**	**L**	**0.38**	**L**
Chorobenzene	**ND (0.10)**		**ND (0.46)**		**ND (0.15)**		**ND (0.70)**	
Chloroform	**ND (0.10)**		**ND (0.49)**		**ND (0.15)**		**ND (0.73)**	
Ethylbenzene	**0.09**	**L**	**0.39**	**L**	**ND (0.15)**		**ND (0.65)**	
Vinyl Chloride	**ND (0.10)**		**ND (0.26)**		**0.11**	**L**	**0.28**	**L**
1,1,1-Trichloroethane	ND (0.10)		ND (0.55)		0.40		2.2	
1,2,4-Trimethylbenzene	0.09	L	0.44	L	ND (0.15)		ND (0.74)	
4-Ethyltoulene	0.09	L	0.45	L	ND (0.15)		ND (0.74)	
Cyclohexane	0.08	L	0.26	L	ND (0.15)		ND (0.52)	
Carbon Tetrachloride	0.06	L	0.38	L	0.08	L	0.49	L
Dichlorodifluoromethane	0.73		3.6		0.88		4.4	
Hexane	0.26		0.92		1.3		4.5	
Methyl Ethyl Ketone	3.8		11		0.31		0.91	
Methylchloride	0.40		0.83		0.34		0.70	
Styrene	0.12		0.51		ND (0.15)		ND (0.64)	
Toluene	1.3		5.0		1.0		3.8	
Trichlorofluoromethane	0.58		3.3		0.30		1.7	
Trichlorotrifluorothane	ND (0.10)		ND (0.77)		0.06	L	0.45	L
c-1,2-Dichloroethene	ND (0.10)		ND (0.40)		0.11	L	0.44	L
m/p-Xylenes	0.19	L	0.82	L	0.09	L	0.41	L
o-Xylenes	0.08	L	0.33	L	ND (0.15)		ND (0.65)	

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 23
INDOOR AIR AND AMBIENT AIR CANISTER SAMPLING RESULTS SUMMARY
411 BARNUM AVE. STRATFORD SQUARE T-MOBILE
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 411 BARNUM AVE. T-MOBILE CANISTER #14891 16-Feb-12 8-HOUR AVG.		AMBIENT AIR OUTSIDE 411 BARNUM AVE. CANISTER #20846 16-Aug-12 8-HOUR AVG.(10:52-18:52)	
	(ppb/v)	($\mu g/m^3$)	(ppb/v)	($\mu g/m^3$)
Trichloroethene	**0.50**	**2.7**	**0.31**	**1.7**
1,1-Dichloroethylene	**ND (0.42)**	**ND (1.7)**	**ND (0.15)**	**ND (0.60)**
1,1-Dichloroethane	**ND (0.42)**	**ND (1.7)**	**ND (0.15)**	**ND (0.60)**
Benzene	**0.21 L**	**0.67 L**	**0.12 L**	**0.38 L**
Chorobenzene	**ND (0.42)**	**ND (2.0)**	**ND (0.15)**	**ND (0.70)**
Chloroform	**ND (0.42)**	**ND (2.1)**	**ND (0.15)**	**ND (0.73)**
Ethylbenzene	**ND (0.42)**	**ND (1.8)**	**ND (0.15)**	**ND (0.65)**
Vinyl Chloride	**ND (0.42)**	**ND (1.1)**	**0.11 L**	**0.28 L**
1,1,1-Trichloroethane	ND (0.42)	ND (2.3)	0.40	2.2
Carbon Tetrachloride	ND (0.42)	ND (2.6)	0.08 L	0.49 L
Dichlorodifluoromethane	0.69	3.4	0.88	4.4
Hexane	ND (0.42)	ND (1.5)	1.3	4.5
Methyl Ethyl Ketone	1.3	3.7	0.31	0.91
Methylchloride	0.45	0.93	0.34	0.70
Toluene	1.9	7.1	1.0	3.8
Trichlorofluoromethane	0.76	4.3	0.30	1.7
Trichlorotrifluorothane	ND (0.42)	ND (3.2)	0.06 L	0.45 L
c-1,2-Dichloroethene	ND (0.42)	ND (1.7)	0.11 L	0.44 L
m/p-Xylenes	0.22 L	0.95 L	0.09 L	0.41 L

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 24
INDOOR AIR AND AMBIENT AIR CANISTER SAMPLING RESULTS SUMMARY
411 BARNUM AVE. STRATFORD SQUARE REGAL CINEMA
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 411 BARNUM AVE. REGAL CINEMA THEATER #11 CANISTER #20850 16-Aug-12 8-HOUR AVG.		INDOOR AIR 411 BARNUM AVE. REGAL CINEMA THEATER #8 CANISTER #15053 16-Aug-12 8-HOUR AVG.		INDOOR AIR 411 BARNUM AVE. REGAL CINEMA PROJECTION BOOTH CANISTER #22693 16-Aug-12 8-HOUR AVG.		AMBIENT AIR OUTSIDE 411 BARNUM AVE. CANISTER #20846 16-Aug-12 8-HOUR AVG.(10:52-18:52)	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)
Trichloroethene	**ND (0.11)**	**ND (0.59)**	**ND (0.10)**	**ND (0.54)**	**ND (0.11)**	**ND (0.59)**	**0.31**	**1.7**
1,1-Dichloroethylene	**ND (0.11)**	**ND (0.44)**	**ND (0.10)**	**ND (0.40)**	**ND (0.11)**	**ND (0.44)**	**ND (0.15)**	**ND (0.60)**
1,1-Dichloroethane	**ND (0.11)**	**ND (0.44)**	**ND (0.10)**	**ND (0.40)**	**ND (0.11)**	**ND (0.44)**	**ND (0.15)**	**ND (0.60)**
Benzene	**0.10 L**	**0.32 L**	**ND (0.10)**	**ND (0.32)**	**0.08 L**	**0.26 L**	**0.12 L**	**0.38 L**
Chorobenzene	**ND (0.11)**	**ND (0.51)**	**ND (0.10)**	**ND (0.46)**	**ND (0.11)**	**ND (0.51)**	**ND (0.15)**	**ND (0.70)**
Chloroform	**ND (0.11)**	**ND (0.54)**	**ND (0.10)**	**ND (0.49)**	**ND (0.11)**	**ND (0.54)**	**ND (0.15)**	**ND (0.73)**
Ethylbenzene	**ND (0.11)**	**ND (0.48)**	**ND (0.10)**	**ND (0.43)**	**ND (0.11)**	**ND (0.48)**	**ND (0.15)**	**ND (0.65)**
Vinyl Chloride	**ND (0.11)**	**ND (0.28)**	**ND (0.10)**	**ND (0.26)**	**ND (0.11)**	**ND (0.28)**	**0.11 L**	**0.28 L**
1,1,1-Trichloroethane	0.05 L	0.28 L	ND (0.10)	ND (0.55)	ND (0.11)	ND (0.60)	0.40	2.2
1,4-Dichlorobenzene	ND (0.11)	ND (0.66)	ND (0.10)	ND (0.60)	0.14	0.84	ND (0.15)	ND (0.90)
4-Ethyltoulene	0.05 L	0.27 L	ND (0.10)	ND (0.49)	0.05 L	0.27 L	ND (0.15)	ND (0.74)
Carbon Tetrachloride	0.06 L	0.37 L	ND (0.10)	ND (0.63)	ND (0.11)	ND (0.69)	0.08 L	0.49 L
Dichlorodifluoromethane	0.58	2.9	0.76	3.8	0.78	3.9	0.88	4.4
Hexane	1.0	3.5	0.21	0.74	0.96	3.4	1.3	4.5
Methyl Ethyl Ketone	0.23	0.68	0.33	0.97	0.34	1.0	0.31	0.91
Methylchloride	0.37	0.76	0.38	0.79	0.29	0.60	0.34	0.70
Methylene Chloride	0.10 L	0.35 L	ND (0.10)	ND (0.35)	ND (0.11)	ND (0.38)	ND (0.15)	ND (0.52)
Styrene	ND (0.11)	ND (0.47)	0.21	0.89	0.11	0.47	ND (0.15)	ND (0.64)
Toluene	0.46	1.7	0.82	3.1	0.34	1.3	1.0	3.8
Trichlorofluoromethane	0.19	1.1	0.52	2.9	0.32	1.8	0.30	1.7
Trichlorotrifluorothane	0.06 L	0.44 L	ND (0.10)	ND (0.77)	ND (0.11)	ND (0.84)	0.06 L	0.45 L
c-1,2-Dichloroethene	ND (0.11)	ND (0.44)	ND (0.10)	ND (0.40)	ND (0.11)	ND (0.44)	0.11 L	0.44 L
m/p-Xylenes	0.12 L	0.52 L	ND (0.20)	ND (0.87)	0.10 L	0.42 L	0.09 L	0.41 L
o-Xylenes	0.06 L	0.25 L	ND (0.10)	ND (0.43)	0.05 L	0.23 L	ND (0.15)	ND (0.65)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

Table 25
August 13 - 14, 2012
500 FERRY BLVD.
RAYMARK SITE, OU-2
STRATFORD, CT
Soil Gas Grab, Indoor Air Grab and Indoor Air 24-Hour Sampling Data

Sample Location	TCE ($\mu g/m^3$)	1,1-DCE ($\mu g/m^3$)	1,1-DCA ($\mu g/m^3$)	Benzene ($\mu g/m^3$)	Chlorobenzene ($\mu g/m^3$)	Chloroform ($\mu g/m^3$)	Ethylbenzene ($\mu g/m^3$)	VC ($\mu g/m^3$)	Other Non-COCs 1,1,1-TCA ($\mu g/m^3$)	PCE ($\mu g/m^3$)
Basement										
Grab-1: indoor air syringe grab sample at canister samples	ND (3.8)	NA	NA	NA	NA	NA	NA	NA	ND (5.5)	ND (2.7)
Indoor air 24-hour canister sample (canister #6548)	ND (0.43)	ND (0.32)	ND (0.32)	19	ND (0.37)	0.37 L	20	ND (0.20)	ND (0.44)	ND (0.54)
Indoor air 24-hour canister sample (canister #3656 duplicate sample)	ND (0.48)	ND (0.36)	ND (0.36)	19	ND (0.42)	0.40 L	20	ND (0.23)	ND (0.49)	ND (0.61)
SS-1: Sub-slab soil gas syringe grab sample	31	NA	NA	NA	NA	NA	NA	NA	ND (8.2)	ND (2.7)
SS-2: Sub-slab soil gas syringe grab sample	177	NA	NA	NA	NA	NA	NA	NA	43	3.8
SS-2: canister confirmation sub-slab grab sample (canister #13498)	97	6.5	3.1	3.9	ND (0.37)	0.93	3.4	ND (0.20)	20	1.6
Crawl Space										
Indoor air 24-hour canister sample (canister #1587)	ND (0.48)	ND (0.36)	ND (0.36)	9.4	ND (0.42)	0.49	9.9	ND (0.23)	ND (0.49)	ND (0.61)
First Floor										
Indoor air 24-hour canister sample (canister #4742)	ND (0.48)	ND (0.36)	ND (0.36)	16	ND (0.42)	0.78	17	ND (0.23)	ND (0.49)	ND (0.61)
Outside/Ambient Air										
Ambient air 24-hour canister sample (canister #22680)	ND (0.59)	ND (0.44)	ND (0.44)	0.61	ND (0.51)	ND (0.54)	0.32 L	ND (0.28)	ND (0.60)	ND (0.75)

NOTES:

ND = Not detected above reporting limits; reporting limit in parentheses
NA = Compound was not analyzed using on-site analytical methods
TCE = Trichloroethylene, 1,1-DCE = 1,1-Dichloroethylene, VC = Vinyl Chloride, 1,1,1-TCA = 1,1,1-Trichloroethane,
PCE = Tetrachloroethylene, 1,1-DCA = 1,1-Dichloroethane
L = Estimated value, is below the calibration range

Table 26
August 15, 2012
608 FERRY BLVD.
RAYMARK SITE, OU-2
STRATFORD, CT
Soil Gas Grab, Indoor Air Grab and Indoor Air 8-Hour Sampling Data

Sample Location	TCE ($\mu g/m^3$)	1,1-DCE ($\mu g/m^3$)	1,1-DCA ($\mu g/m^3$)	Benzene ($\mu g/m^3$)	Chlorobenzene ($\mu g/m^3$)	Chloroform ($\mu g/m^3$)	Ethylbenzene ($\mu g/m^3$)	VC ($\mu g/m^3$)	Other Non-COCs 1,1,1-TCA ($\mu g/m^3$)	PCE ($\mu g/m^3$)	c-1,2-DCE ($\mu g/m^3$)
Basement											
Indoor air 8-hour canister sample (canister #6569)	1.3	ND (0.44)	0.22 L	ND (0.35)	ND (0.51)	ND (0.54)	ND (0.48)	ND (0.28)	2.6	ND (0.75)	ND (0.44)
Indoor air 8-hour canister sample (canister #1574 duplicate sample)	0.91	ND (0.44)	ND (0.44)	ND (0.35)	ND (0.51)	ND (0.54)	ND (0.48)	ND (0.28)	1.4	ND (0.75)	ND (0.44)
SS-1: Sub-slab soil gas syringe grab sample	570	NA	NA	NA	NA	NA	NA	NA	142	45	25
First Floor											
Indoor air 8-hour canister sample (canister #1565)	ND (0.91)	ND (0.67)	ND (0.69)	ND (0.54)	ND (0.79)	ND (0.83)	ND (0.74)	ND (0.44)	ND (0.93)	ND 1.2)	ND (0.67)
SS-2: Sub-slab soil gas syringe grab sample	33	NA	NA	NA	NA	NA	NA	NA	ND (14)	21	ND (99)
SS-3: Sub-slab soil gas syringe grab sample	ND (13)	NA	NA	NA	NA	NA	NA	NA	ND (14)	15	ND (99)
SS-3: canister confirmation sub-slab grab sample (canister #22681)	4.7	ND (0.60)	ND (0.60)	ND (0.48)	ND (0.70)	0.44 L	ND (0.65)	0.92	1.6	9.8	0.95
Outside/Ambient Air											
Ambient air 24-hour canister sample (canister #22690)	ND (0.64)	ND (0.48)	ND (0.48)	0.48	ND (0.56)	ND (0.59)	ND (0.52)	ND (0.31)	ND (0.66)	ND (0.81)	ND (0.48)

NOTES:

ND = Not detected above reporting limits; reporting limit in parentheses
NA = Compound was not analyzed using on-site analytical methods
TCE = Trichloroethylene, 1,1-DCE = 1,1-Dichloroethylene, VC = Vinyl Chloride, 1,1,1-TCA = 1,1,1-Trichloroethane,
PCE = Tetrachloroethylene, 1,1-DCA = 1,1-Dichloroethane, c-1,2-DCE = cis-1,2-Dichloroethene
L = Estimated value, is below the calibration range

Table 27
August 15, 2012
335 FERRY BLVD.
RAYMARK SITE, OU-2
STRATFORD, CT
Soil Gas Grab, Indoor Air Grab and Indoor Air 8-Hour Sampling Data

Sample Location	TCE	1,1-DCE	1,1-DCA	Benzene	Chlorobenzene	Chloroform	Ethylbenzene	VC	Other Non-COCs	
									1,1,1-TCA	PCE
	(µg/m³)	(µg/m³)	(µg/m³)	(µg/m³)	(µg/m³)	(µg/m³)	(µg/m³)	(µg/m³)	(µg/m³)	(µg/m³)
Curtin Taxi										
Grab-1: indoor air syringe grab sample at canister samples	419	NA	NA	NA	NA	NA	NA	NA	ND (5.5)	ND (2.7)
Grab-2: indoor air syringe grab sample at canister samples (duplicate)	408	NA	NA	NA	NA	NA	NA	NA	ND (5.5)	ND (2.7)
Indoor air 8-hour canister sample (canister #1577)	400	ND (0.71)	ND (0.73)	1.4	ND (0.84)	1.6	4.2	ND (0.86)	ND (0.98)	1.4
Grab-4: indoor air syringe grab sample in auto supply room	2332	NA	NA	NA	NA	NA	NA	NA	ND (5.5)	ND (10)
Grab-7: indoor air syringe grab sample in auto supply room (duplicate)	2193	NA	NA	NA	NA	NA	NA	NA	ND (11)	ND (10)
Indoor air canister grab sample in auto supply room (canister #14896)	3063	ND (52)	ND (53)	ND (41)	ND (61)	ND (63)	ND (56)	ND (33)	ND (71)	ND (88)
Grab-5: indoor air syringe grab sample in utility closet	607	NA	NA	NA	NA	NA	NA	NA	ND (5.5)	ND (10)
Grab-6: indoor air syringe grab sample in small office	451	NA	NA	NA	NA	NA	NA	NA	ND (11)	ND (10)
Garage Area 1										
SS-1: Sub-slab soil gas syringe grab sample	53	NA	NA	NA	NA	NA	NA	NA	1288	18
Garage Area 2										
SS-2: Sub-slab soil gas syringe grab sample	ND (7.5)	NA	NA	NA	NA	NA	NA	NA	436	2.0
BrenAir Office and Storage Area										
Grab-3: indoor air syringe grab sample in office area	ND (7.5)	NA	NA	NA	NA	NA	NA	NA	ND (5.5)	ND (2.7)
SS-3: Sub-slab soil gas syringe grab sample	75	NA	NA	NA	NA	NA	NA	NA	349	11
SS-3: Sub-slab soil gas syringe grab sample (duplicate)	64	NA	NA	NA	NA	NA	NA	NA	338	9.5
SS-3: canister confirmation sub-slab grab sample (canister #12565)	91 L	ND (0.40)	1.3	0.48	ND (0.46)	3.9	ND (0.43)	ND (0.26)	240	6.2
Receptionist Office										
Indoor air 8-hour canister sample (canister #1584)	1.6	ND (0.64)	ND (0.65)	ND (0.51)	ND (0.75)	ND (0.78)	ND (0.70)	ND (0.41)	ND (0.87)	ND (1.1)
Estimating Room										
Indoor air 8-hour canister sample (canister #6568)	4.3	ND (0.40)	ND (0.40)	0.48	ND (0.46)	ND (0.49)	0.52	1.6	ND (0.55)	ND (0.68)
Outside/Ambient Air										
Ambient air 24-hour canister sample (canister #22690)	ND (0.64)	ND (0.48)	ND (0.48)	0.48	ND (0.56)	ND (0.59)	ND (0.52)	ND (0.31)	ND (0.66)	ND (0.81)

NOTES:

ND = Not detected above reporting limits; reporting limit in parentheses
NA = Compound was not analyzed using on-site analytical methods
TCE = Trichloroethylene, 1,1-DCE = 1,1-Dichloroethylene, VC = Vinyl Chloride, 1,1,1-TCA = 1,1,1-Trichloroethane,
PCE = Tetrachloroethylene, 1,1-DCA = 1,1-Dichloroethane
L = Estimated value, is below the calibration range

Table 28
August 18, 2012
300 FERRY BLVD.
RAYMARK SITE, OU-2
STRATFORD, CT
Soil Gas Grab, Indoor Air Grab and Indoor Air 8-Hour Sampling Data

Sample Location	TCE (µg/m³)	1,1-DCE (µg/m³)	1,1-DCA (µg/m³)	Benzene (µg/m³)	Chlorobenzene (µg/m³)	Chloroform (µg/m³)	Ethylbenzene (µg/m³)	VC (µg/m³)	Other Non-COCs 1,1,1-TCA (µg/m³)	PCE (µg/m³)	c-1,2-DCE (µg/m³)
Main Show Room											
Indoor air 8-hour canister sample (canister #6463)	ND (1.1)	ND (0.79)	ND (0.81)	7.3	ND (0.93)	ND (0.98)	11	ND (0.51)	ND (1.1)	ND (1.4)	ND (0.79)
Snow Board Area											
Grab-1: indoor air syringe grab sample at canister samples	ND (13)	NA	NA	NA	NA	NA	NA	NA	ND (14)	ND (10)	ND (99)
Indoor air 8-hour canister sample (canister #6460)	5.4	ND (0.44)	ND (0.44)	7.2	ND (0.51)	0.68	14	2.1	0.98	ND (0.75)	1.9
Snow Board Storage Area											
SS-1: Sub-slab soil gas syringe grab sample	795	NA	NA	NA	NA	NA	NA	NA	ND (14)	14	190
SS-1: canister confirmation sub-slab grab sample (canister #22692)	1100	4.4	10	2.2	18	8.5	ND (0.48)	330	3.2	10	360
Repair Shop											
SS-2: Sub-slab soil gas syringe grab sample	597	NA	NA	NA	NA	NA	NA	NA	ND (14)	14	63
Outside/Ambient Air											
Ambient air 24-hour canister sample (canister #22690)	ND (0.64)	ND (0.48)	ND (0.48)	0.48	ND (0.56)	ND (0.59)	ND (0.52)	ND (0.31)	ND (0.66)	ND (0.81)	ND (0.48)

NOTES:

ND = Not detected above reporting limits; reporting limit in parentheses
NA = Compound was not analyzed using on-site analytical methods
TCE = Trichloroethylene, 1,1-DCE = 1,1-Dichloroethylene, VC = Vinyl Chloride, 1,1,1-TCA = 1,1,1-Trichloroethane,
PCE = Tetrachloroethylene, 1,1-DCA = 1,1-Dichloroethane, c-1,2-DCE = cis-1,2-Dichloroethene
L = Estimated value, is below the calibration range

Table 29
August 14, 2012
100 VETERANS WAY
RAYMARK SITE, OU-2
STRATFORD, CT
Soil Gas Grab, Indoor Air Grab and Indoor Air 8-Hour Sampling Data

Sample Location	TCE ($\mu g/m^3$)	1,1-DCE ($\mu g/m^3$)	1,1-DCA ($\mu g/m^3$)	Benzene ($\mu g/m^3$)	Chlorobenzene ($\mu g/m^3$)	Chloroform ($\mu g/m^3$)	Ethylbenzene ($\mu g/m^3$)	VC ($\mu g/m^3$)	Other Non-COCs 1,1,1-TCA ($\mu g/m^3$)	PCE ($\mu g/m^3$)	c-1,2-DCE ($\mu g/m^3$)
Basement											
Grab-1: indoor air syringe grab sample at canister samples	ND (3.8)	NA	NA	NA	NA	NA	NA	NA	ND (5.5)	ND (2.7)	ND (99)
Indoor air 24-hour canister sample (canister #6547)	1.7	ND (0.44)	0.97	3.2	ND (0.51)	3.1	2.6	ND (0.28)	0.33 L	ND (0.75)	3.4
Indoor air 24-hour canister sample (canister #6555 duplicate sample)	1.6	ND (0.44)	1.0	3.3	ND (0.51)	3.2	2.3	ND (0.28)	0.31 L	ND (0.75)	3.4
SS-1: Sub-slab soil gas syringe grab sample	1467	44	NA	NA	NA	NA	NA	NA	824	24	8724
SS-1: Sub-slab soil gas syringe grab sample (duplicate)	1602	44	NA	NA	NA	NA	NA	NA	917	28	8961
SS-1: canister confirmation sub-slab grab sample (canister #20860)	2500	1000	6100	ND (128)	ND (186)	ND (195)	ND (174)	ND (102)	980	ND (271)	16000
SS-2: Sub-slab soil gas syringe grab sample	2349	44	NA	NA	NA	NA	NA	NA	1168	33	8961
SS-3: Sub-slab soil gas syringe grab sample	2859	52	NA	NA	NA	NA	NA	NA	1353	37	5551
First Floor											
Indoor air 8-hour canister sample (canister #6558)	0.54	ND (0.40)	0.36 L	2.1	ND (0.46)	3.4	1.5	ND (0.26)	ND (0.55)	ND (0.68)	1.1
Outside/Ambient Air											
Ambient air 24-hour canister sample (canister #13484)	ND (0.54)	ND (0.40)	ND (0.40)	ND (0.32)	ND (0.46)	ND (0.49)	ND (0.43)	ND (0.26)	ND (0.55)	ND (0.68)	ND (0.40)

NOTES:

ND = Not detected above reporting limits; reporting limit in parentheses
NA = Compound was not analyzed using on-site analytical methods
TCE = Trichloroethylene, 1,1-DCE = 1,1-Dichloroethylene, VC = Vinyl Chloride, 1,1,1-TCA = 1,1,1-Trichloroethane,
PCE = Tetrachloroethylene, 1,1-DCA = 1,1-Dichloroethane, c-1,2-DCE = cis-1,2-Dichloroethene
L = Estimated value, is below the calibration range

Table 30
August 14, 2012
326 FERRY BLVD.
RAYMARK SITE, OU-2
STRATFORD, CT
Indoor Air 8-Hour Sampling Data

Sample Location	TCE ($\mu g/m^3$)	1,1-DCE ($\mu g/m^3$)	1,1-DCA ($\mu g/m^3$)	Benzene ($\mu g/m^3$)	Chlorobenzene ($\mu g/m^3$)	Chloroform ($\mu g/m^3$)	Ethylbenzene ($\mu g/m^3$)	VC ($\mu g/m^3$)
Dining Room								
Indoor air 8-hour canister sample (canister #5790)	ND (0.59)	ND (0.44)	ND (0.44)	1.0	ND (0.51)	0.38 L	0.95	ND (0.28
Kitchen								
Indoor air 8-hour canister sample (canister #1560)	ND (0.64)	ND (0.48)	ND (0.48)	1.3	ND (0.56)	1.2	1.1	ND (0.31)
Outside/Ambient Air								
Ambient air 24-hour canister sample (canister #13484)	ND (0.54)	ND (0.40)	ND (0.40)	ND (0.32)	ND (0.46)	ND (0.49)	ND (0.43)	ND (0.26)

NOTES:

ND = Not detected above reporting limits; reporting limit in parentheses
NA = Compound was not analyzed using on-site analytical methods
TCE = Trichloroethylene, 1,1-DCE = 1,1-Dichloroethylene, VC = Vinyl Chloride
L = Estimated value, is below the calibration range

Table 31
August 14, 2012
444 FERRY BLVD.
RAYMARK SITE, OU-2
STRATFORD, CT
Soil Gas Grab, Indoor Air Grab and Indoor Air 8-Hour Sampling Data

Sample Location	TCE ($\mu g/m^3$)	1,1-DCE ($\mu g/m^3$)	1,1-DCA ($\mu g/m^3$)	Benzene ($\mu g/m^3$)	Chlorobenzene ($\mu g/m^3$)	Chloroform ($\mu g/m^3$)	Ethylbenzene ($\mu g/m^3$)	VC ($\mu g/m^3$)	Other Non-COCs 1,1,1-TCA ($\mu g/m^3$)	Other Non-COCs PCE ($\mu g/m^3$)
Basement										
Indoor air 8-hour canister sample (canister #6461)	ND (0.59)	ND (0.44)	ND (0.44)	1.4	ND (0.51)	0.59	1.1	ND (0.28)	ND (0.60)	ND (0.75)
SS-2: Sub-slab soil gas syringe grab sample	ND (3.8)	NA	NA	NA	NA	NA	NA	NA	126	26
SS-3: Sub-slab soil gas syringe grab sample	ND (3.8)	NA	NA	NA	NA	NA	NA	NA	45	6.8
SS-3: canister confirmation sub-slab grab sample (canister #22105)	15	2.6	15	ND (0.32)	ND (0.46)	ND (0.49)	ND (0.43)	ND (0.26)	30	5.2
First Floor										
Indoor air 8-hour canister sample (canister #6567)	ND (0.59)	ND (0.44)	ND (0.44)	1.4	ND (0.51)	0.88	1.3	ND (0.28)	0.76	ND (0.75)
SS-1: Sub-slab soil gas syringe grab sample	ND (3.8)	NA	NA	NA	NA	NA	NA	NA	13	5.4
Outside/Ambient Air										
Ambient air 24-hour canister sample (canister #13484)	ND (0.54)	ND (0.40)	ND (0.40)	ND (0.32)	ND (0.46)	ND (0.49)	ND (0.43)	ND (0.26)	ND (0.55)	ND (0.68)

NOTES:

ND = Not detected above reporting limits; reporting limit in parentheses
NA = Compound was not analyzed using on-site analytical methods
TCE = Trichloroethylene, 1,1-DCE = 1,1-Dichloroethylene, VC = Vinyl Chloride, 1,1,1-TCA = 1,1,1-Trichloroethane,
PCE = Tetrachloroethylene, 1,1-DCA = 1,1-Dichloroethane
L = Estimated value, is below the calibration range

Table 32
August 16, 2012
411 BARNUM AVE. (STRATFORD SQUARE)
RAYMARK SITE, OU-2
STRATFORD, CT
Indoor Air 8-Hour Sampling Data

Sample Location	TCE (µg/m³)	1,1-DCE (µg/m³)	1,1-DCA (µg/m³)	Benzene (µg/m³)	Chlorobenzene (µg/m³)	Chloroform (µg/m³)	Ethylbenzene (µg/m³)	VC (µg/m³)
McDonalds								
Office Area: Indoor air 8-hour canister sample (canister #20841)	1.1	ND (0.48)	ND (0.48)	0.32 L	ND (0.56)	1.4	ND (0.52)	1.0
Marshalls								
Loading Area: Indoor air 8-hour canister sample (canister #5792)	ND (0.54)	ND (0.40)	ND (0.40)	1.0	ND (0.46)	ND (0.49)	2.2	ND (0.26)
Loading Area: Indoor air 8-hour canister sample (canister #1114 duplicate sample)	ND (0.64)	ND (0.48)	ND (0.48)	1.1	ND (0.56)	ND (0.59)	2.3	ND (0.31)
Shopping Area: Indoor air 8-hour canister sample (canister #22684)	ND (0.48)	ND (0.36)	ND (0.36)	1.1	ND (0.42)	ND (0.44)	2.1	ND (0.23)
Payless Shoe Source								
Back of Store: Indoor air 8-hour canister sample (canister #15049)	1.3	ND (0.44)	ND (0.44)	9.5	ND (0.51)	1.1	30	ND (0.28)
Towards Middle of Store: Indoor air 8-hour canister sample (canister #15054)	1.7	ND (0.36)	ND (0.36)	11	ND (0.42)	ND (0.44)	32	ND (0.23)
Sleepy's								
Show Room: Indoor air 8-hour canister sample (canister #20849)	11	ND (0.95)	ND (0.97)	2.6	ND (1.1)	ND (1.2)	6.1	ND (0.61)
Fashion Bug								
Check Out Area: Indoor air 8-hour canister sample (canister #22687)	0.70	ND (0.36)	ND (0.36)	0.67	ND (0.42)	ND (0.44)	0.82	ND (0.23)
US Postal Service								
Mail Sorting Area: Indoor air 8-hour canister sample (canister #15055)	1.3	ND (0.44)	ND (0.44)	0.61	ND (0.51)	ND (0.54)	0.56	ND (0.28)
Sally's Beauty								
Top of Display Rack: Indoor air 8-hour canister sample (canister #20844)	ND (0.70)	ND (0.52)	ND (0.52)	0.77	ND (0.61)	ND (0.64)	1.3	ND (0.33)
Game Stop								
Behind Cashier Counter: Indoor air 8-hour canister sample (canister #12568)	ND (0.54)	ND (0.40)	ND (0.40)	0.45	ND (0.46)	ND (0.49)	0.39 L	ND (0.26)
T-Mobile								
Behind Cashier Counter: Indoor air 8-hour canister sample (canister #14891)	2.7	ND (1.7)	ND (1.7)	0.67 L	ND (2.0)	ND (2.1)	ND (1.8)	ND (1.1)
Regal Cinema								
Theater #11: Indoor air 8-hour canister sample (canister #20850)	ND (0.59)	ND (0.44)	ND (0.44)	0.32 L	ND (0.51)	ND (0.54)	ND (0.48)	ND (0.28)
Theater #8: Indoor air 8-hour canister sample (canister #15053)	ND (0.54)	ND (0.40)	ND (0.40)	ND (0.32)	ND (0.46)	ND (0.49)	ND (0.43)	ND (0.26)
Projection Booth: Indoor air 8-hour canister sample (canister #22693)	ND (0.59)	ND (0.44)	ND (0.44)	0.26 L	ND (0.51)	ND (0.54)	ND (0.48)	ND (0.28)
Outside/Ambient Air								
Ambient air 24-hour canister sample (canister #22690) 8/15-16/12	ND (0.64)	ND (0.48)	ND (0.48)	0.48	ND (0.56)	ND (0.59)	ND (0.52)	ND (0.31)
Ambient air 8-hour canister sample (canister #20846) 8/16/12	1.7	ND (0.60)	ND (0.60)	0.38 L	ND (0.70)	ND (0.73)	ND (0.65)	0.28 L

NOTES:

ND = Not detected above reporting limits; reporting limit in parentheses
NA = Compound was not analyzed using on-site analytical methods
TCE = Trichloroethylene, 1,1-DCE = 1,1-Dichloroethylene, VC = Vinyl Chloride, 1,1,1-TCA = 1,1,1-Trichloroethane,
PCE = Tetrachloroethylene, 1,1-DCA = 1,1-Dichloroethane
L = Estimated value, is below the calibration range

Table 33
August 13 - 14, 2012
50 FERRY COURT
RAYMARK SITE, OU-2
STRATFORD, CT
Soil Gas Grab, Indoor Air Grab and Indoor Air 24-Hour Sampling Data

Sample Location	TCE ($\mu g/m^3$)	1,1-DCE ($\mu g/m^3$)	1,1-DCA ($\mu g/m^3$)	Benzene ($\mu g/m^3$)	Chlorobenzene ($\mu g/m^3$)	Chloroform ($\mu g/m^3$)	Ethylbenzene ($\mu g/m^3$)	VC ($\mu g/m^3$)	Other Non-COCs 1,1,1-TCA ($\mu g/m^3$)	PCE ($\mu g/m^3$)
Basement										
Grab-1: indoor air syringe grab sample at canister samples	ND (3.8)	NA	NA	NA	NA	NA	NA	NA	ND (5.5)	ND (2.7)
Indoor air 24-hour canister sample (canister #6566)	ND (0.48)	ND (0.36)	ND (0.36)	0.93	ND (0.42)	2.4	2.0	ND (0.23)	ND (0.49)	0.75
SS-1: Sub-slab soil gas syringe grab sample	ND (3.8)	NA	NA	NA	NA	NA	NA	NA	ND (5.5)	23
SS-1: canister confirmation sub-slab grab sample (canister #13500)	ND (0.48)	ND (0.36)	ND (0.36)	ND (0.29)	ND (0.42)	0.33 L	ND (0.39)	ND (0.23)	1.1	8.7
First Floor										
Indoor air 24-hour canister sample (canister #6553)	ND (0.59)	ND (0.44)	ND (0.44)	0.92	ND (0.51)	2.5	2.0	ND (0.28)	ND (0.60)	0.88
Outside/Ambient Air										
Ambient air 24-hour canister sample (canister #22680)	ND (0.59)	ND (0.44)	ND (0.44)	0.61	ND (0.51)	ND (0.54)	0.32 L	ND (0.28)	ND (0.60)	ND (0.75)

NOTES:

ND = Not detected above reporting limits; reporting limit in parentheses
NA = Compound was not analyzed using on-site analytical methods
TCE = Trichloroethylene, 1,1-DCE = 1,1-Dichloroethylene, VC = Vinyl Chloride, 1,1,1-TCA = 1,1,1-Trichloroethane,
PCE = Tetrachloroethylene, 1,1-DCA = 1,1-Dichloroethane
L = Estimated value, is below the calibration range

Table 34
August 13 - 14, 2012
72 FERRY COURT
RAYMARK SITE, OU-2
STRATFORD, CT
Soil Gas Grab, Indoor Air Grab and Indoor Air 24-Hour Sampling Data

Sample Location	TCE ($\mu g/m^3$)	1,1-DCE ($\mu g/m^3$)	1,1-DCA ($\mu g/m^3$)	Benzene ($\mu g/m^3$)	Chlorobenzene ($\mu g/m^3$)	Chloroform ($\mu g/m^3$)	Ethylbenzene ($\mu g/m^3$)	VC ($\mu g/m^3$)	Other Non-COCs 1,1,1-TCA ($\mu g/m^3$)	PCE ($\mu g/m^3$)
Basement										
Grab-1: indoor air syringe grab sample at canister samples	ND (3.8)	NA	NA	NA	NA	NA	NA	NA	ND (5.5)	ND (2.7)
Indoor air 24-hour canister sample (canister #1586)	0.43 L	ND (0.40)	ND (0.40)	1.2	ND (0.34)	6.3	8.4	ND (0.26)	ND (0.55)	ND (0.68)
SS-1: Sub-slab soil gas syringe grab sample	ND (3.8)	NA	NA	NA	NA	NA	NA	NA	ND (5.5)	ND (2.7)
SS-1: canister confirmation sub-slab grab sample (canister #12569)	ND (0.43)	ND (0.32)	ND (0.32)	ND (0.25)	ND (0.37)	0.88	ND (0.35)	ND (0.20)	ND (0.44)	0.36 L
First Floor										
Indoor air 24-hour canister sample (canister #3092)	0.43 L	ND (0.40)	ND (0.40)	1.0	ND (0.34)	7.1	8.2	ND (0.26)	ND (0.55)	ND (0.68)
Outside/Ambient Air										
Ambient air 24-hour canister sample (canister #22680)	ND (0.59)	ND (0.44)	ND (0.44)	0.61	ND (0.51)	ND (0.54)	0.32 L	ND (0.28)	ND (0.60)	ND (0.75)

NOTES:

ND = Not detected above reporting limits; reporting limit in parentheses
NA = Compound was not analyzed using on-site analytical methods
TCE = Trichloroethylene, 1,1-DCE = 1,1-Dichloroethylene, VC = Vinyl Chloride, 1,1,1-TCA = 1,1,1-Trichloroethane,
PCE = Tetrachloroethylene, 1,1-DCA = 1,1-Dichloroethane
L = Estimated value, is below the calibration range

Table 35
August 13 - 14, 2012
62 FERRY COURT
RAYMARK SITE, OU-2
STRATFORD, CT
Soil Gas Grab, Indoor Air Grab and Indoor Air 24-Hour Sampling Data

Sample Location	TCE	1,1-DCE	1,1-DCA	Benzene	Chlorobenzene	Chloroform	Ethylbenzene	VC	Other Non-COCs	
									1,1,1-TCA	PCE
($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)
Basement										
Grab-1: indoor air syringe grab sample at canister samples	ND (3.8)	NA	NA	NA	NA	NA	NA	NA	ND (5.5)	ND (2.7)
Indoor air 24-hour canister sample (canister #1594)	ND (0.59)	ND (0.44)	ND (0.44)	0.73	ND (0.51)	0.88	1.2	ND (0.28)	ND (0.60)	0.88
SS-1: Sub-slab soil gas syringe grab sample	ND (3.8)	NA	NA	NA	NA	NA	NA	NA	ND (5.5)	6.8
SS-1: canister confirmation sub-slab grab sample (canister #22153)	ND (0.48)	ND (0.36)	ND (0.36)	ND (0.29)	ND (0.42)	0.93	ND (0.39)	ND (0.23)	ND (0.60)	3.0
First Floor										
Indoor air 24-hour canister sample (canister #6581)	ND (0.48)	ND (0.36)	ND (0.36)	0.48	ND (0.42)	0.64	0.65	ND (0.23)	ND (0.60)	0.58 L
Outside/Ambient Air										
Ambient air 24-hour canister sample (canister #22680)	ND (0.59)	ND (0.44)	ND (0.44)	0.61	ND (0.51)	ND (0.54)	0.32 L	ND (0.28)	ND (0.60)	ND (0.75)

NOTES:

ND = Not detected above reporting limits; reporting limit in parentheses
NA = Compound was not analyzed using on-site analytical methods
TCE = Trichloroethylene, 1,1-DCE = 1,1-Dichloroethylene, VC = Vinyl Chloride, 1,1,1-TCA = 1,1,1-Trichloroethane,
PCE = Tetrachloroethylene, 1,1-DCA = 1,1-Dichloroethane
L = Estimated value, is below the calibration range

Table 36
August 13 - 14, 2012
82 FERRY COURT
RAYMARK SITE, OU-2
STRATFORD, CT
Soil Gas Grab, Indoor Air Grab and Indoor Air 24-Hour Sampling Data

Sample Location	TCE ($\mu g/m^3$)	1,1-DCE ($\mu g/m^3$)	1,1-DCA ($\mu g/m^3$)	Benzene ($\mu g/m^3$)	Chlorobenzene ($\mu g/m^3$)	Chloroform ($\mu g/m^3$)	Ethylbenzene ($\mu g/m^3$)	VC ($\mu g/m^3$)	Other Non-COCs 1,1,1-TCA ($\mu g/m^3$)	PCE ($\mu g/m^3$)
Basement										
Grab-1: indoor air syringe grab sample at canister samples	ND (3.8)	NA	NA	NA	NA	NA	NA	NA	ND (5.5)	ND (2.7)
Indoor air 24-hour canister sample (canister #6582)	ND (0.59)	ND (0.44)	ND (0.44)	0.45	ND (0.51)	1.7	1.3	ND (0.28)	ND (0.60)	ND (0.75)
SS-1: Sub-slab soil gas syringe grab sample	ND (3.8)	NA	NA	NA	NA	NA	NA	NA	ND (5.5)	ND (2.7)
SS-1: canister confirmation sub-slab grab sample (canister #12562)	0.46	ND (0.32)	ND (0.32)	ND (0.25)	ND (0.37)	0.35 L	ND (0.35)	ND (0.20)	0.87	0.56
First Floor										
Indoor air 24-hour canister sample (canister #1576)	ND (0.54)	ND (0.40)	ND (0.40)	0.45	ND (0.34)	0.54	0.34 L	ND (0.26)	ND (0.55)	ND (0.68)
Outside/Ambient Air										
Ambient air 24-hour canister sample (canister #22680)	ND (0.59)	ND (0.44)	ND (0.44)	0.61	ND (0.51)	ND (0.54)	0.32 L	ND (0.28)	ND (0.60)	ND (0.75)

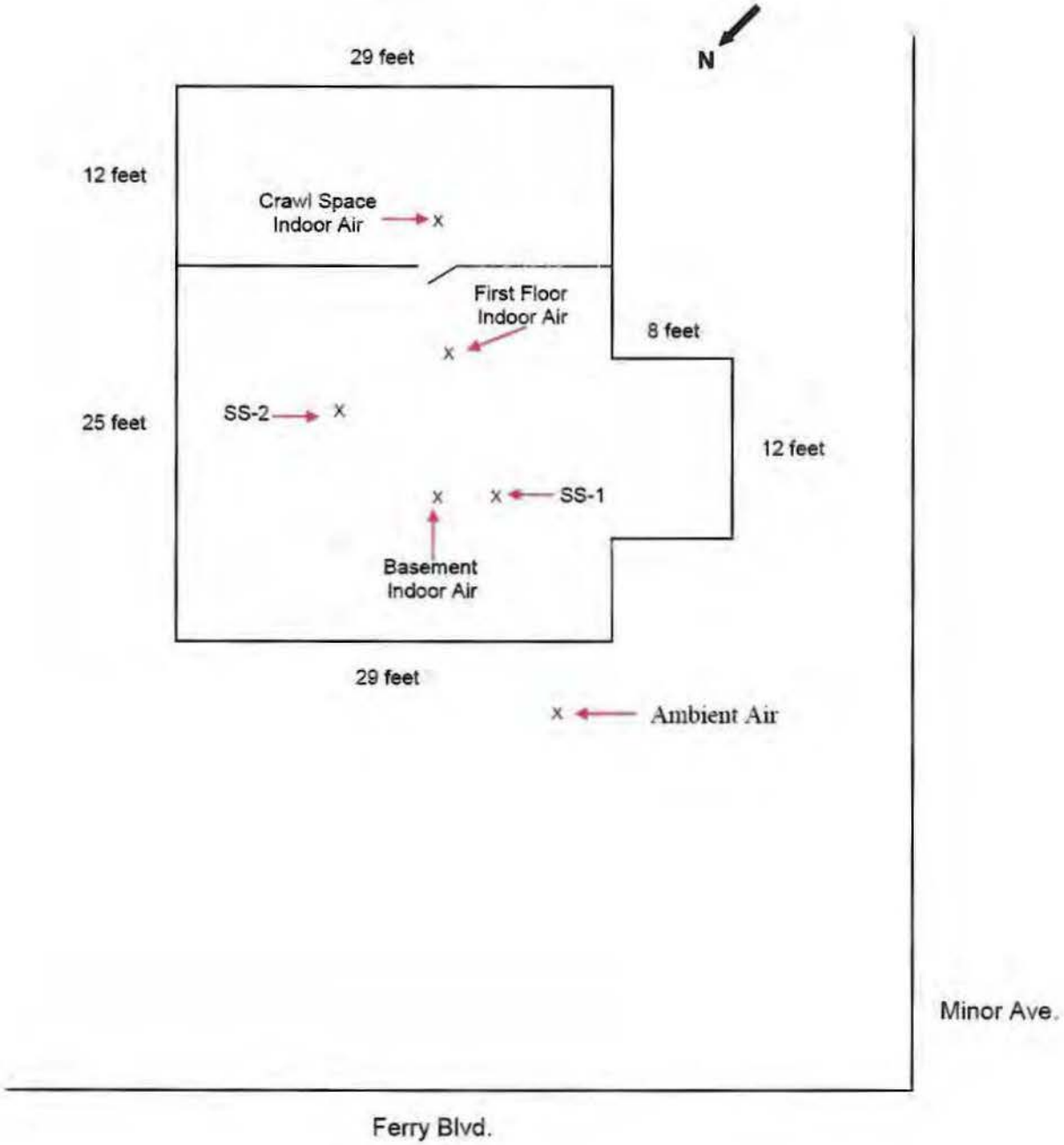
NOTES:

ND = Not detected above reporting limits; reporting limit in parentheses
NA = Compound was not analyzed using on-site analytical methods
TCE = Trichloroethylene, 1,1-DCE = 1,1-Dichloroethylene, VC = Vinyl Chloride, 1,1,1-TCA = 1,1,1-Trichloroethane,
PCE = Tetrachloroethylene, 1,1-DCA = 1,1-Dichloroethane
L = Estimated value, is below the calibration range

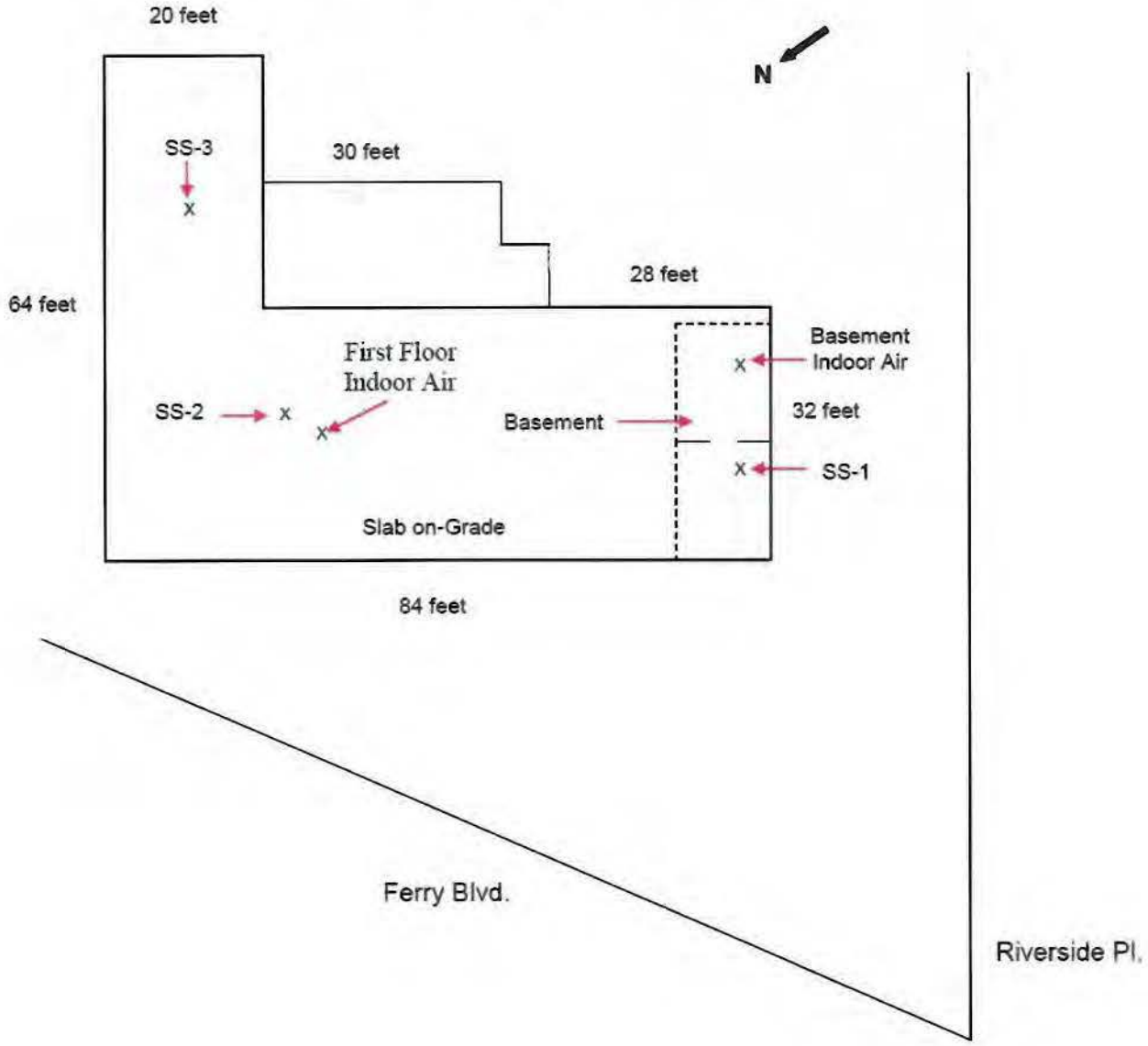
APPENDIX A

BUILDING SKETCHES
and
SAMPLING LOCATIONS

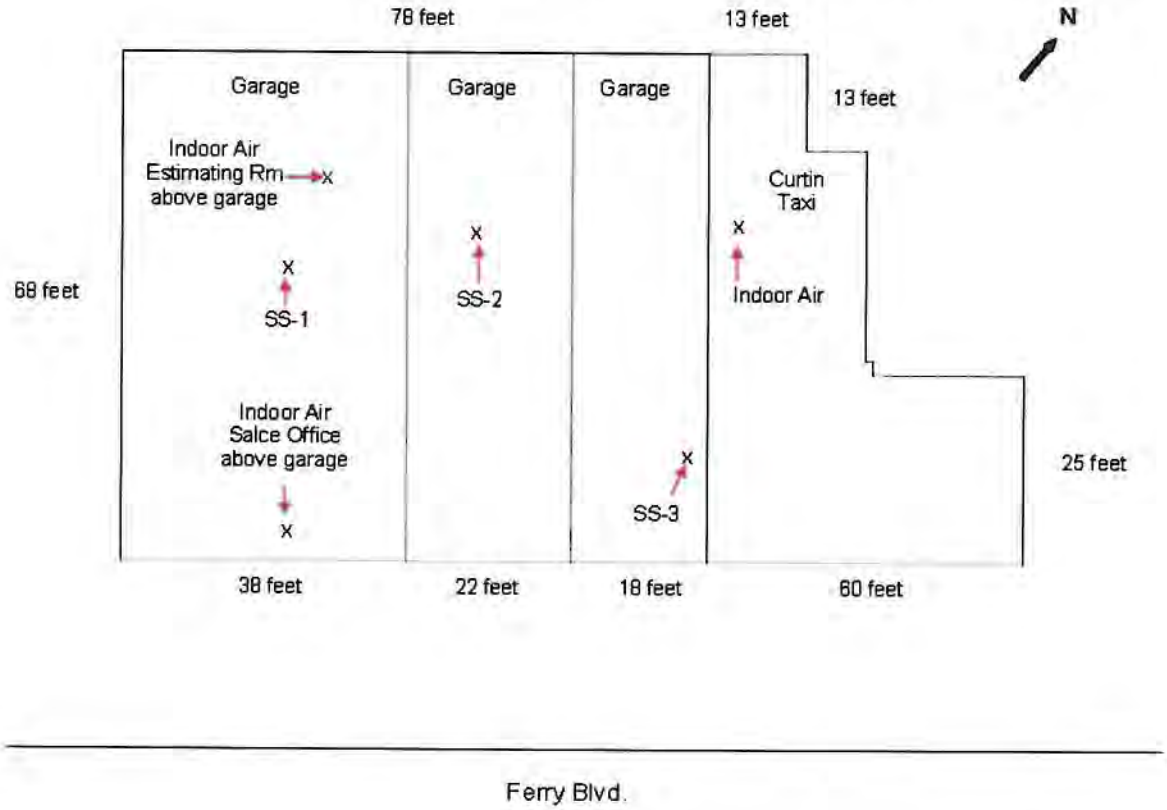
500 Ferry Blvd. Building Sampling Locations



608 Ferry Blvd. Building Sampling Locations

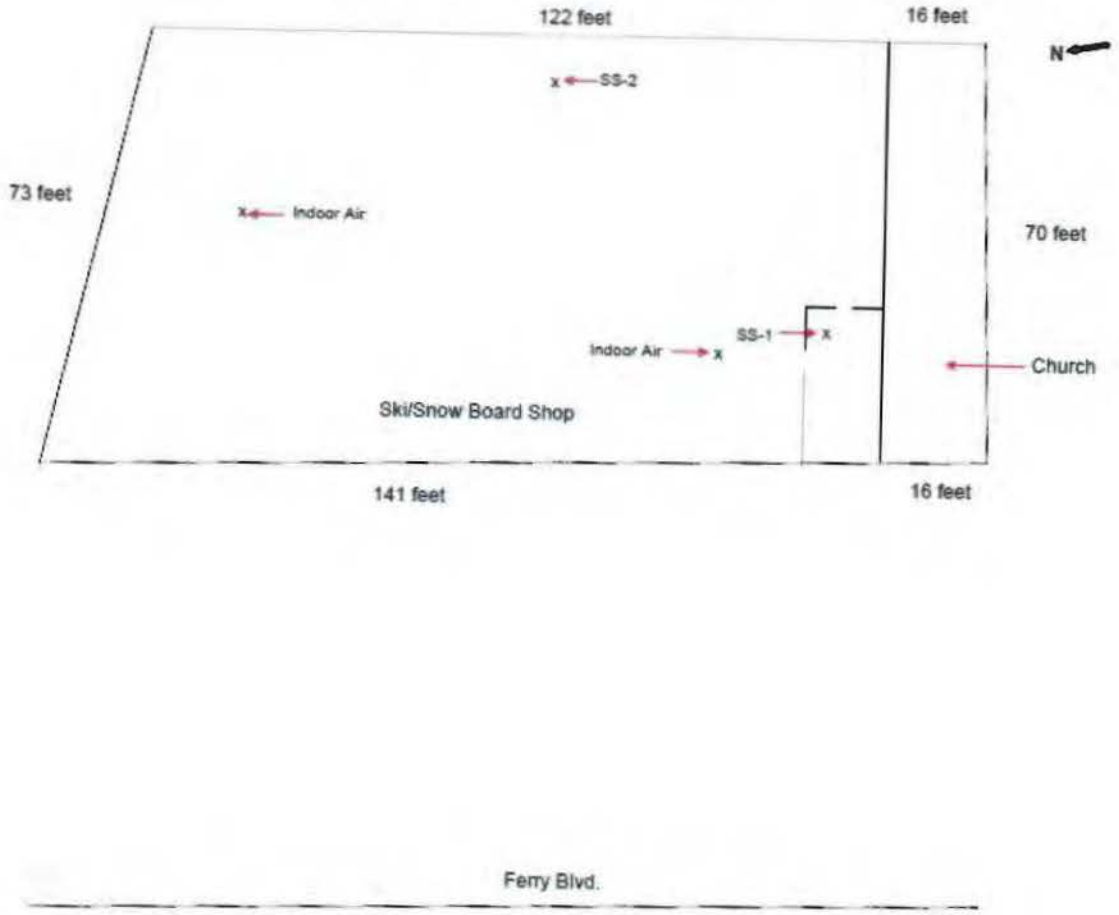


335 Ferry Blvd. Building Sampling Locations

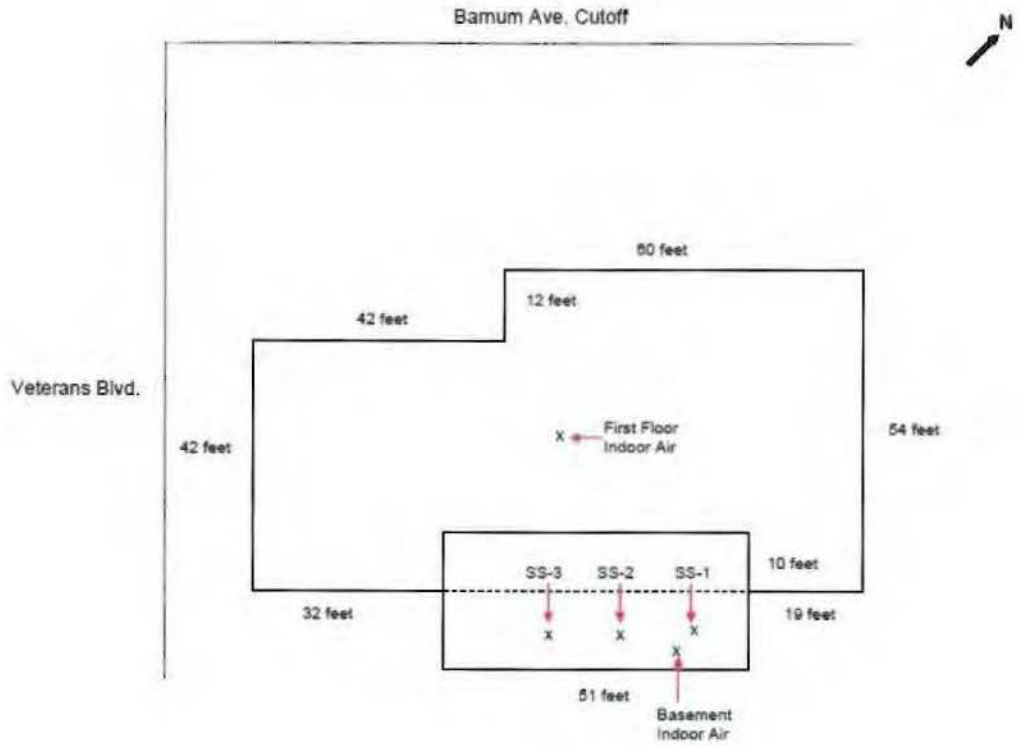


Scale: 1 inch = 20 feet

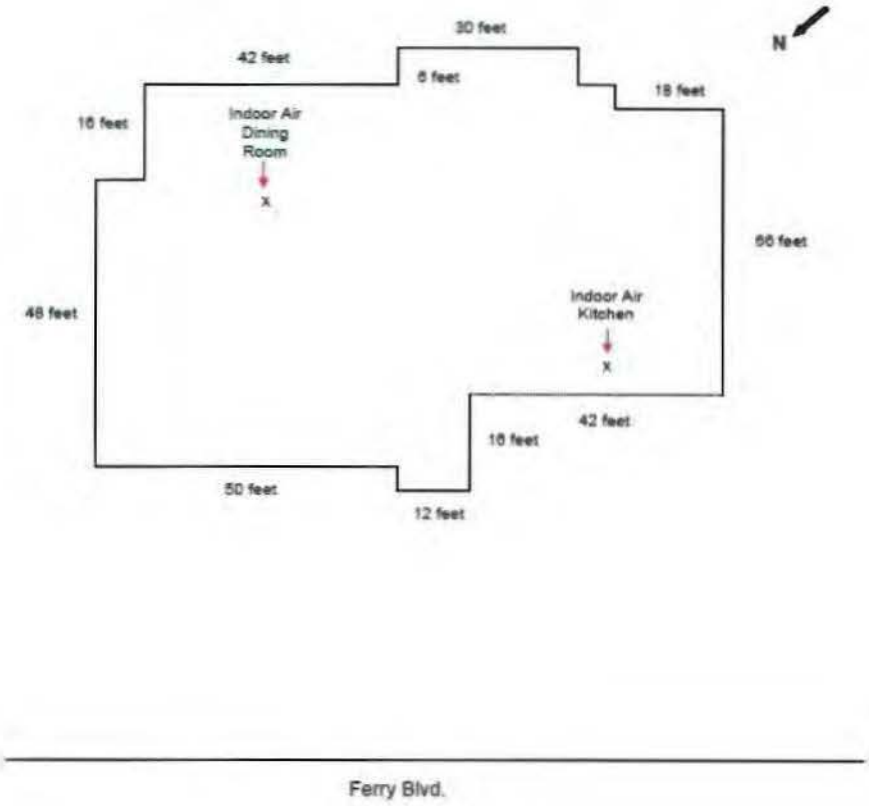
300 Ferry Blvd. Building Sampling Locations



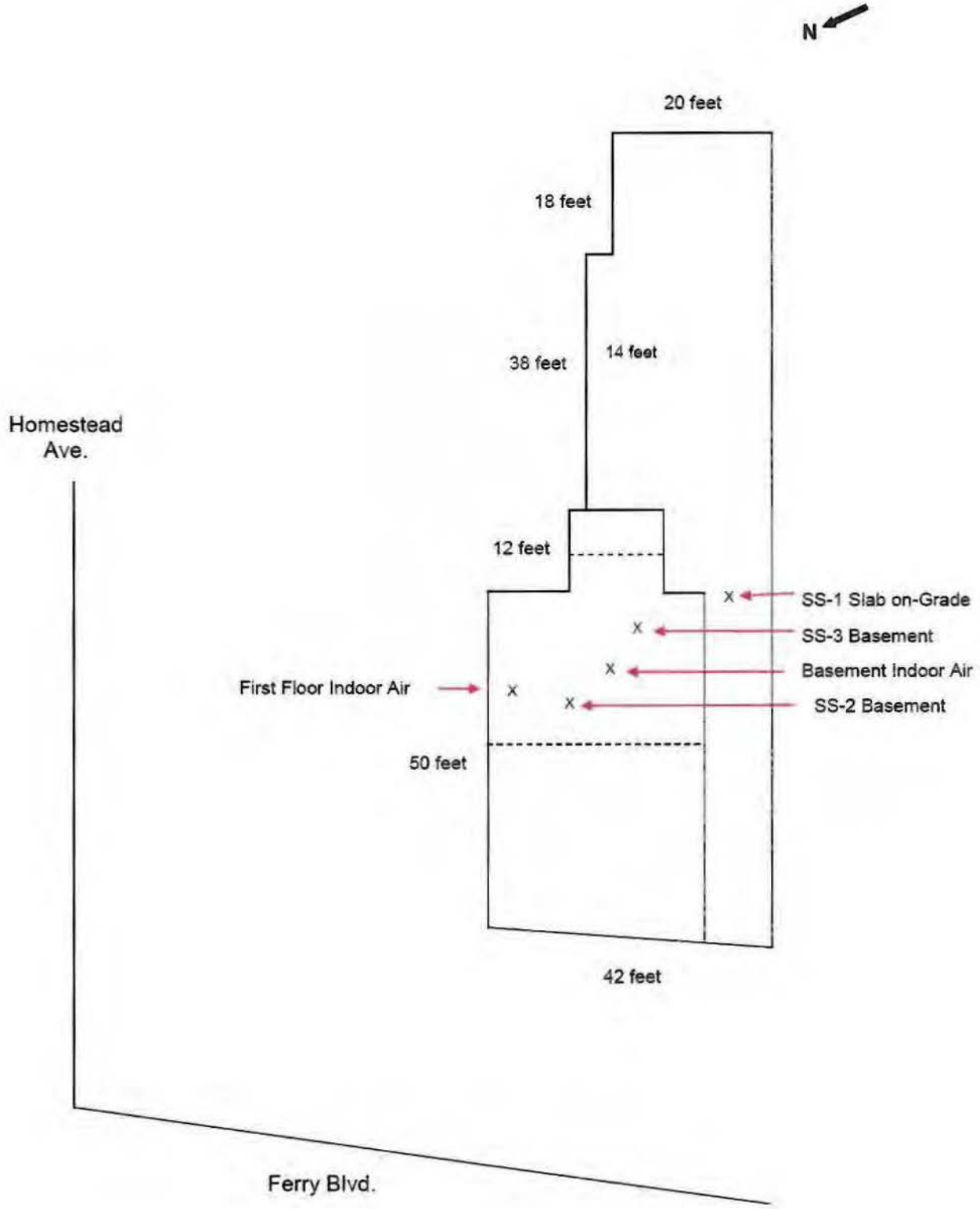
100 Veterans Blvd. Sampling Locations



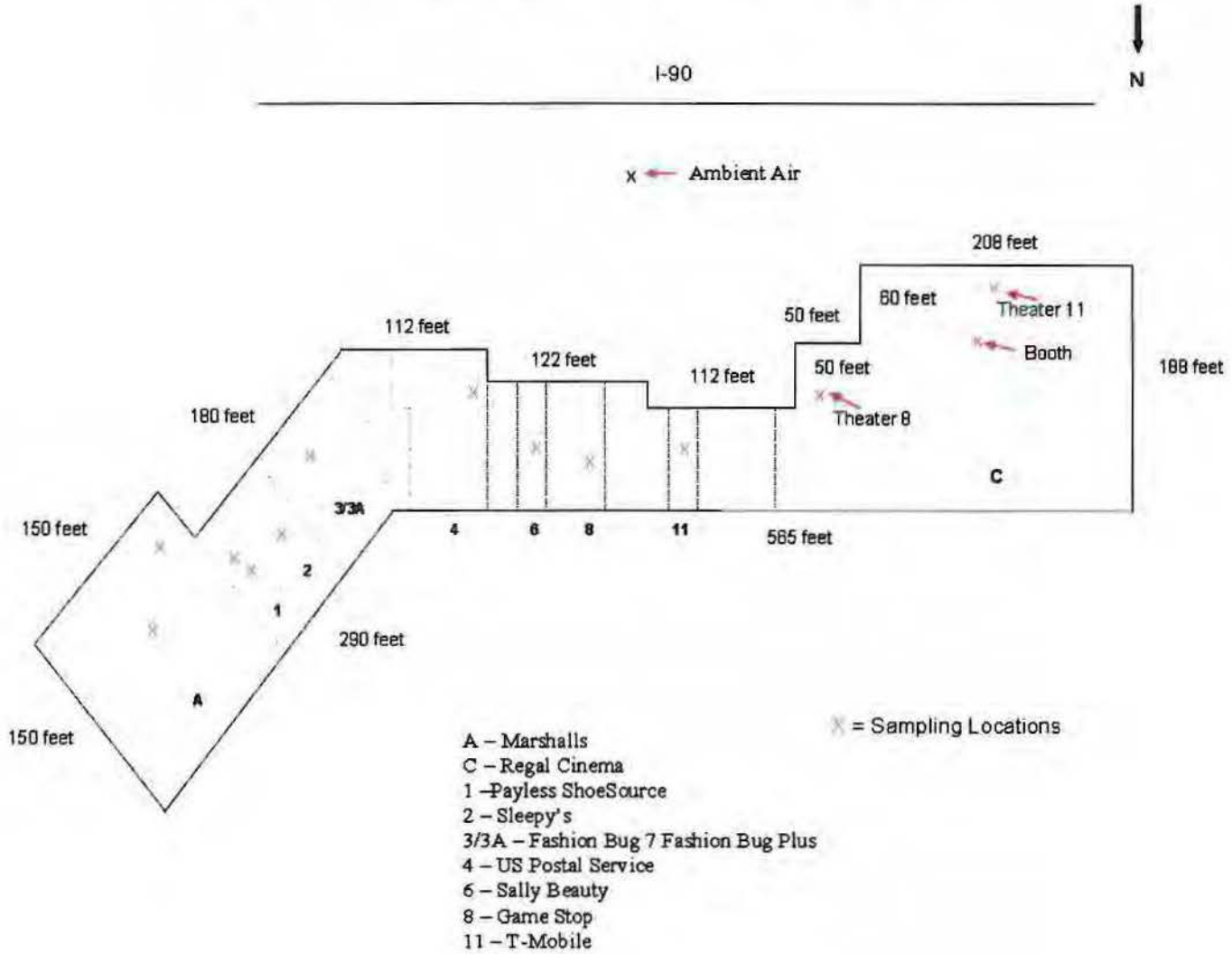
326 Ferry Blvd. Building Sampling Locations



444 Ferry Blvd. Building Sampling Locations



411 Barnum Ave. Stratford Square Building Sampling Locations



APPENDIX B

PHOTOGRAPHS

500 Ferry Blvd.

Basement Indoor Air Sampling Location

Crawl Space Indoor Air Sampling Location

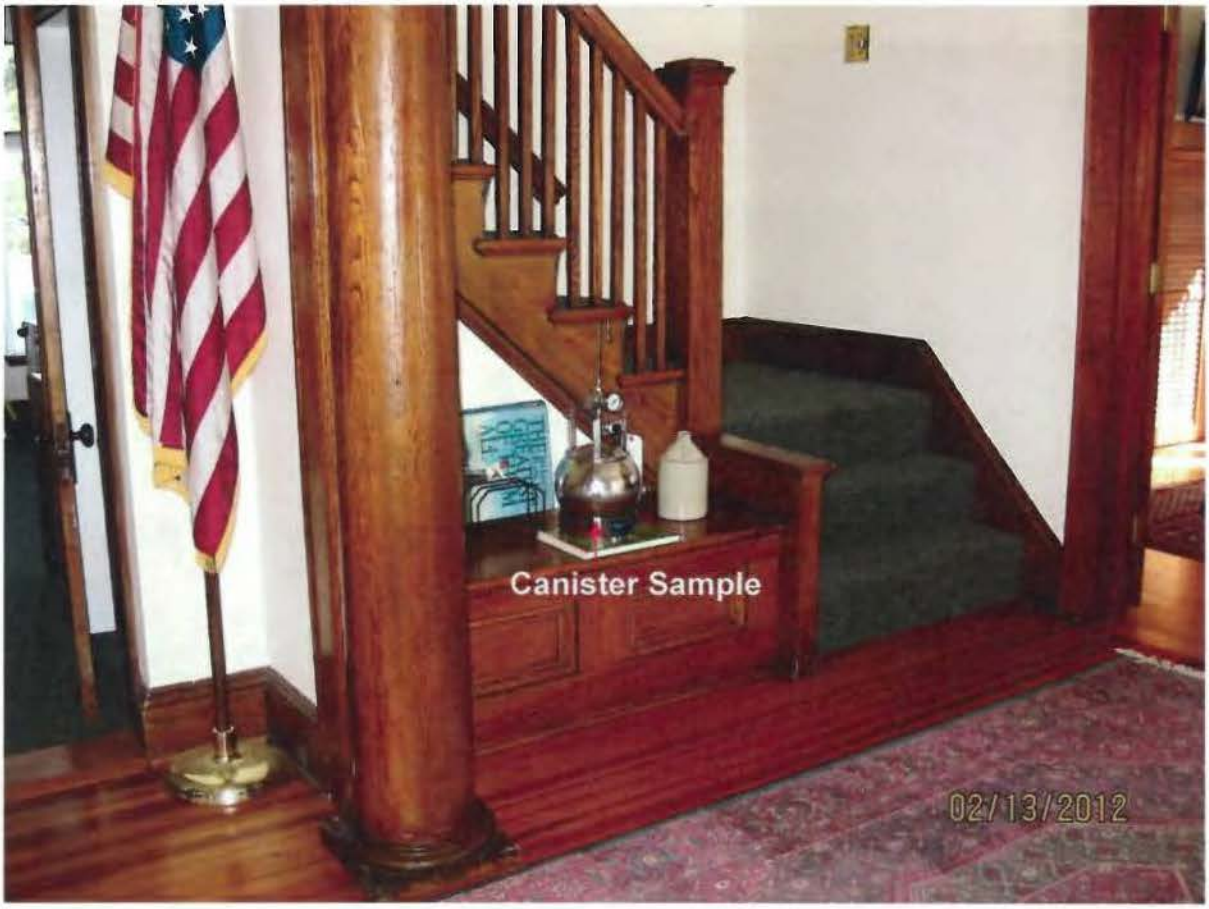
500 Ferry Blvd.

Basement Sub-Slab SS-1 Sampling Location

Basement Sub-Slab SS-2 Sampling Location

500 Ferry Blvd.

First Floor Indoor Air Sampling Location



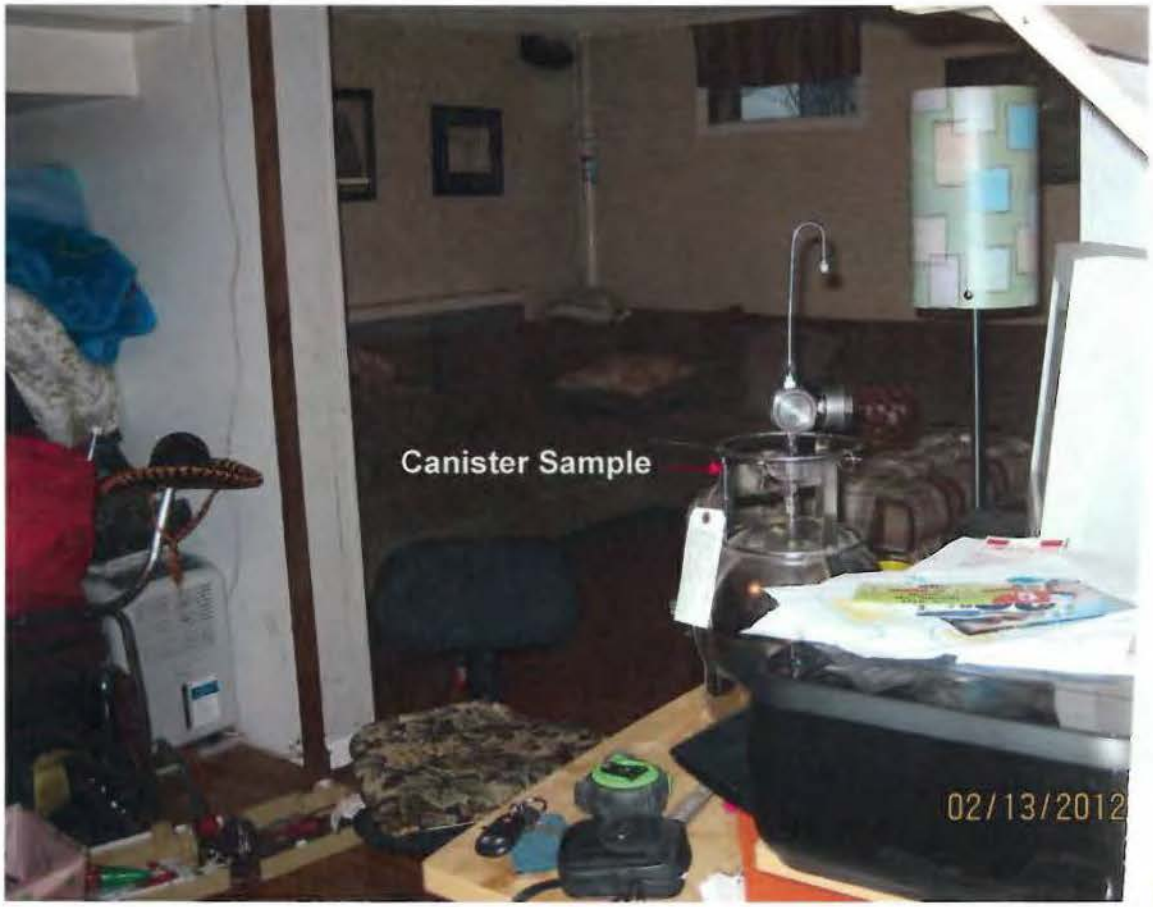
500 Ferry Blvd.

Ambient/Backgroud Air Sampling Location

411 Barnum Ave.
Ambient/Backgroud Air Sampling Location
Looking South Towards I-95

72 Ferry Court

Basement Indoor Air Sampling Location



Basement Sub-Slab SS-1 Sampling Location

72 Ferry Court

First Floor Indoor Air Sampling Location

62 Ferry Court

Basement Indoor Air Sampling Location

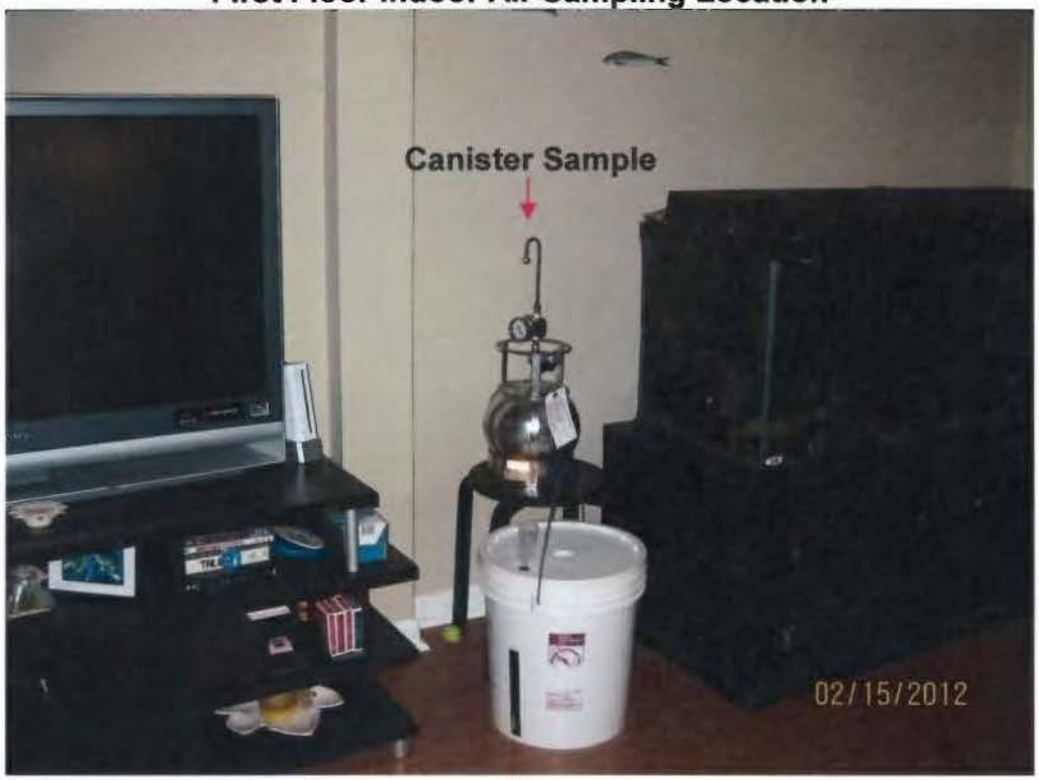
First Floor Indoor Air Sampling Location

82 Ferry Court

Basement Indoor Air Sampling Location

82 Ferry Court

First Floor Indoor Air Sampling Location



608 Ferry Blvd.

Basement Indoor Air Sampling Location

First Floor Indoor Air Sampling Location

335 Ferry Blvd.

Curtin Taxi Indoor Air Sampling Location

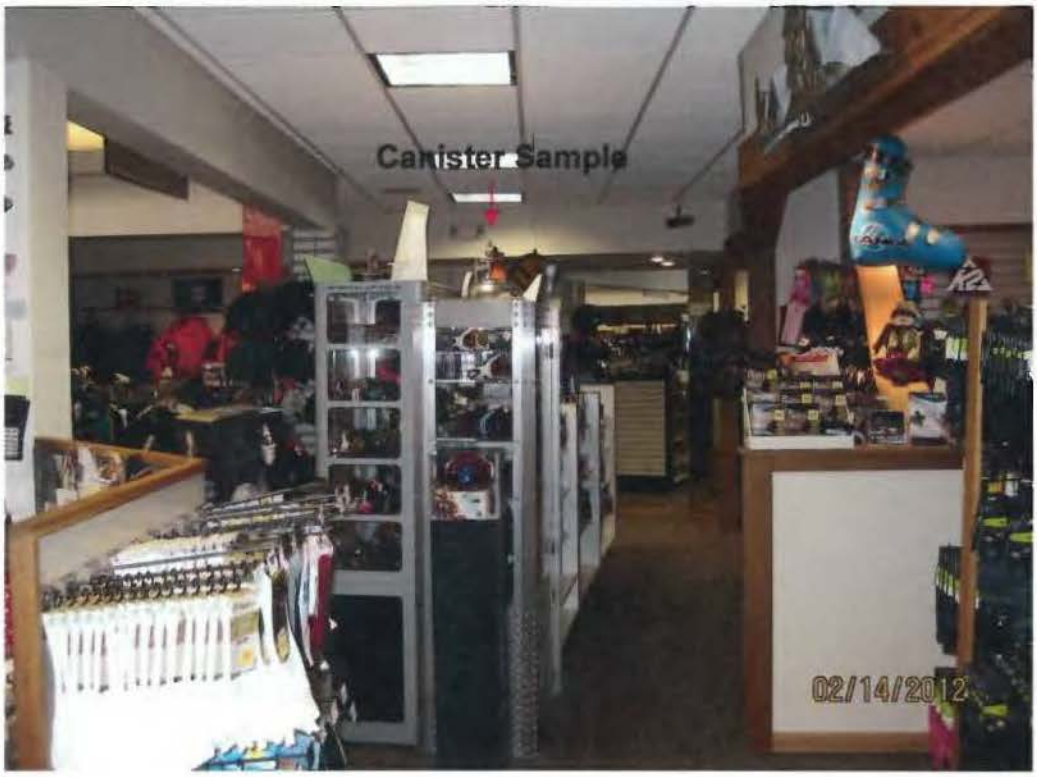
335 Ferry Blvd.

Salce Front Office Indoor Air Sampling Location

Salce Estimating Room Indoor Air Sampling Location

300 Ferry Blvd.

Main Floor Show Room Indoor Air Sampling Location



Snowboard Area Indoor Air Sampling Location

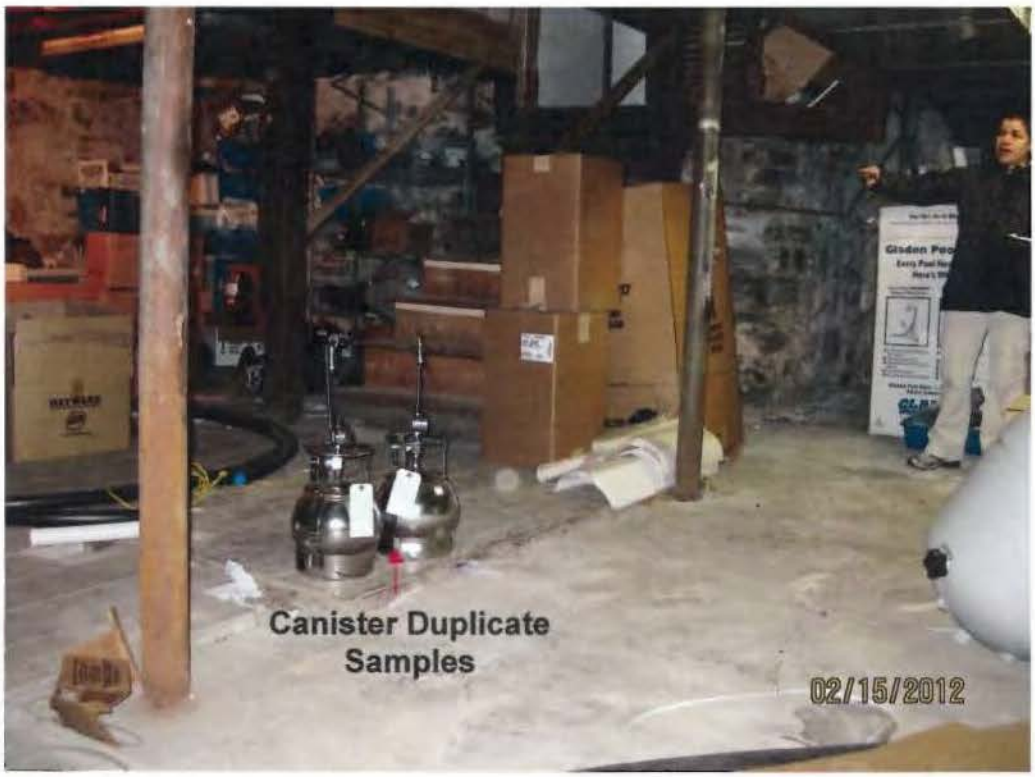
100 Veterans Way
Basement Indoor Air Sample Location

100 Veterans Way
First Floor Function Room Indoor Air Sample Location

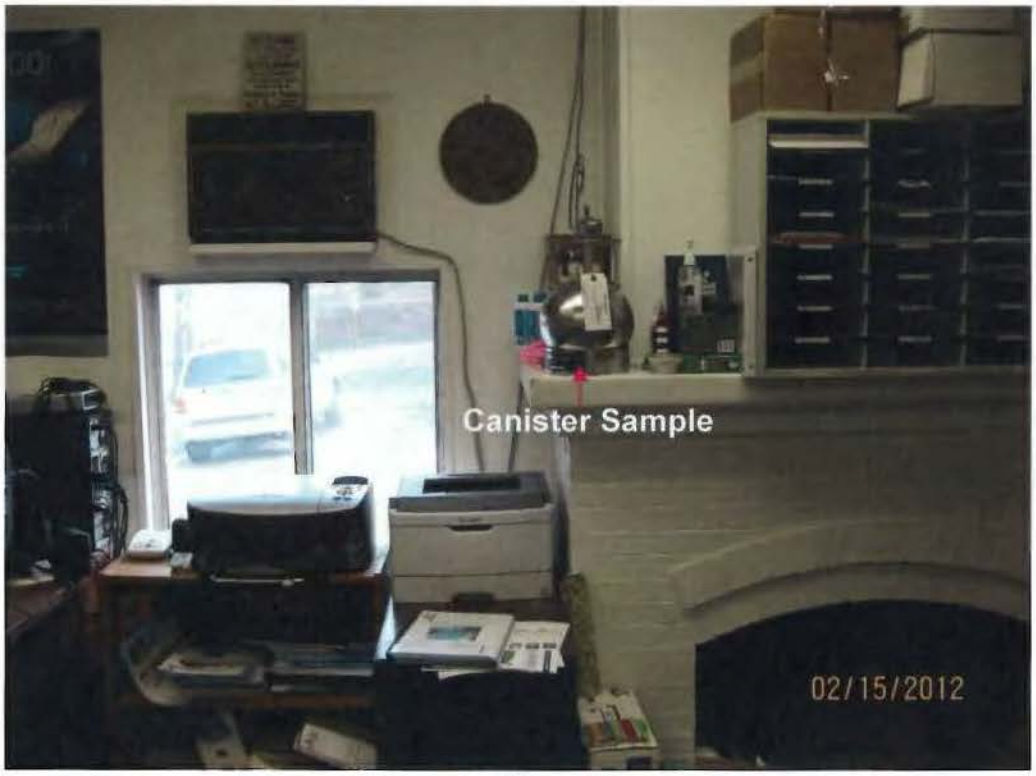
326 Ferry Blvd.
First Floor Dinning Room Indoor Air Sample Location

326 Ferry Blvd.
First Floor Kitchen Area Indoor Air Sample Location

444 Ferry Blvd.
Basement Indoor Air Sample Location



444 Ferry Blvd.
First Floor Office Indoor Air Sample Location



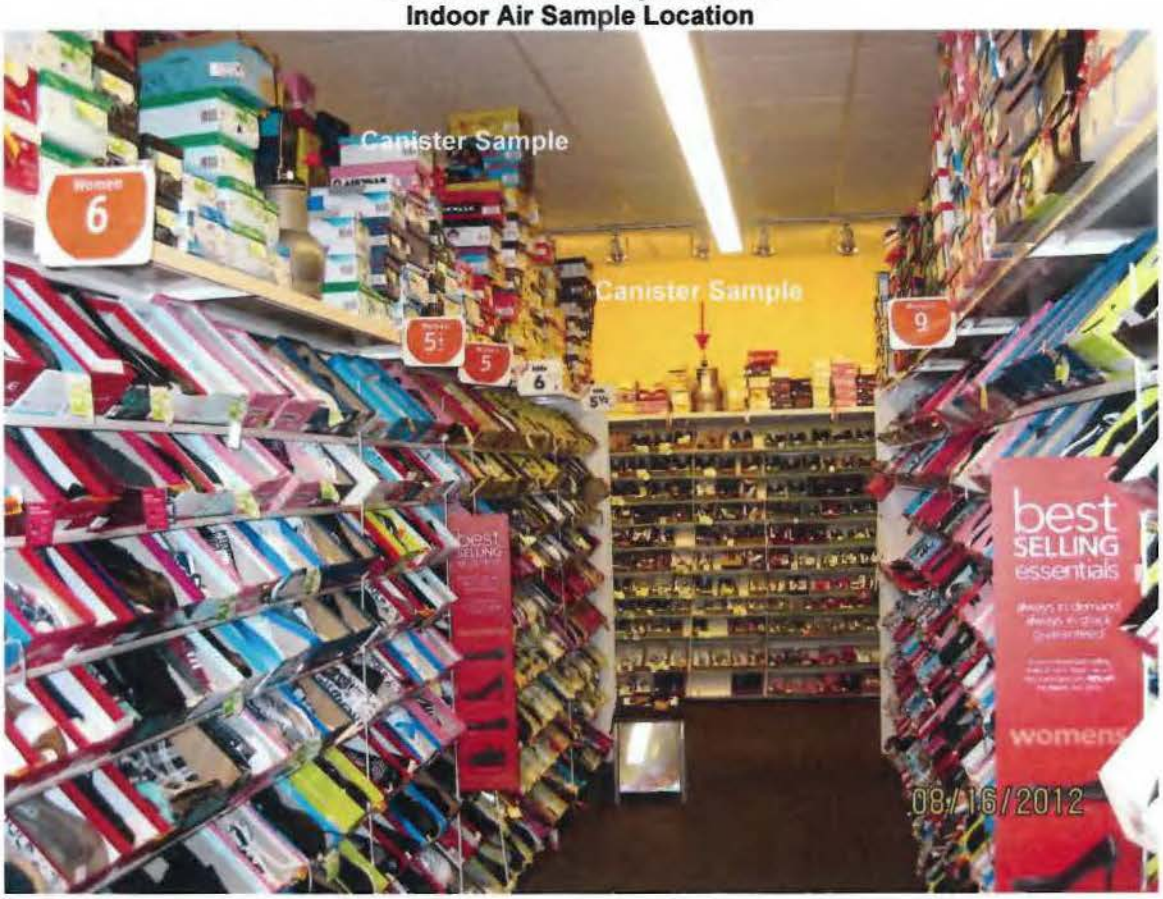
411 Barnum Ave. McDonalds Restaurant
Indoor Air Sample Location

411 Barnum Ave. Post Office
Indoor Air Sample Location

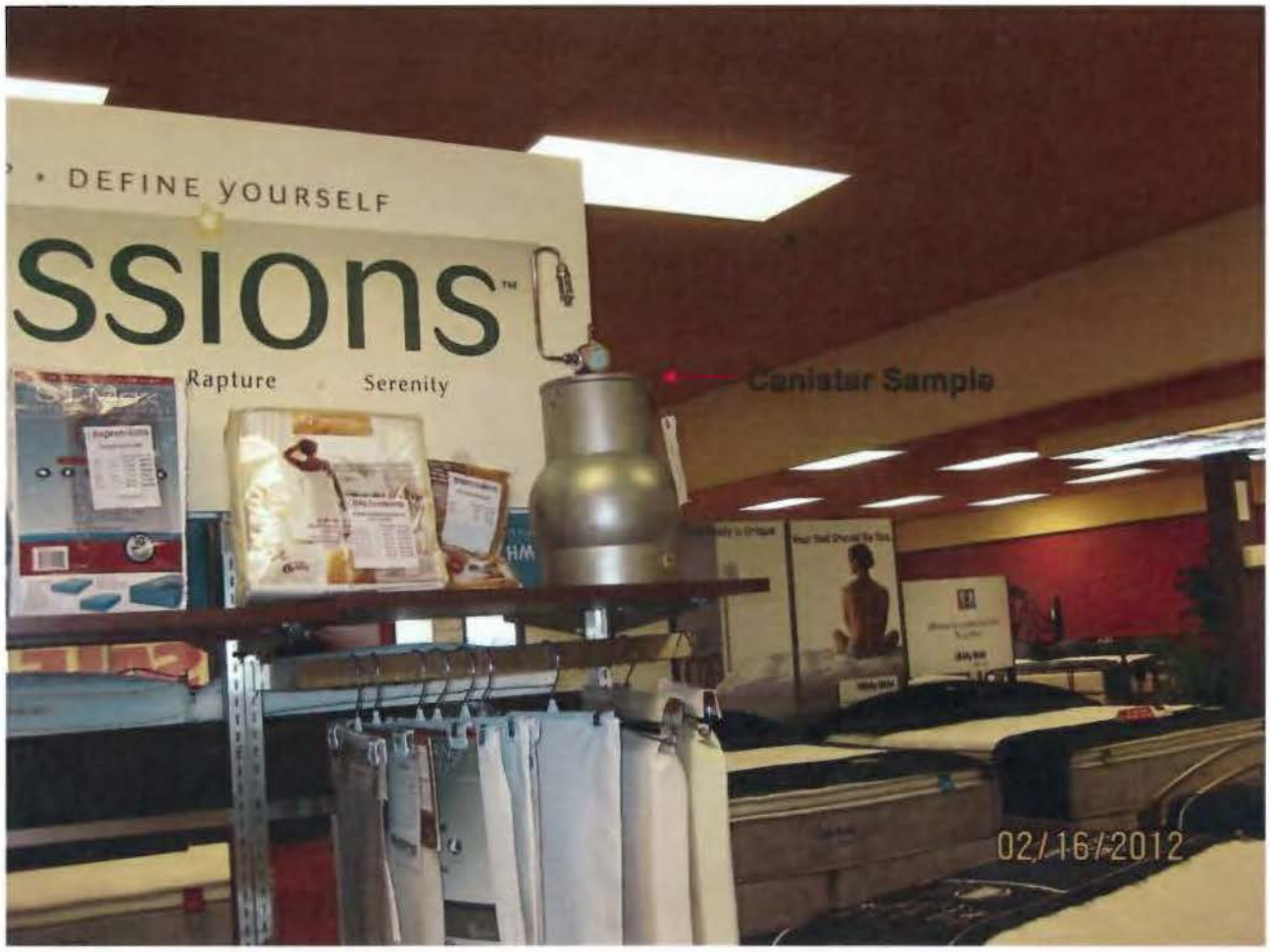
411 Barnum Ave. Marshall's
Backroom/Loading Area Indoor Air Sample Location

411 Barnum Ave. Marshall's
Shopping Area Indoor Air Sample Location

411 Barnum Ave. Payless Shoe
Indoor Air Sample Location



411 Barnum Ave. Sleepy's
Indoor Air Sample Location

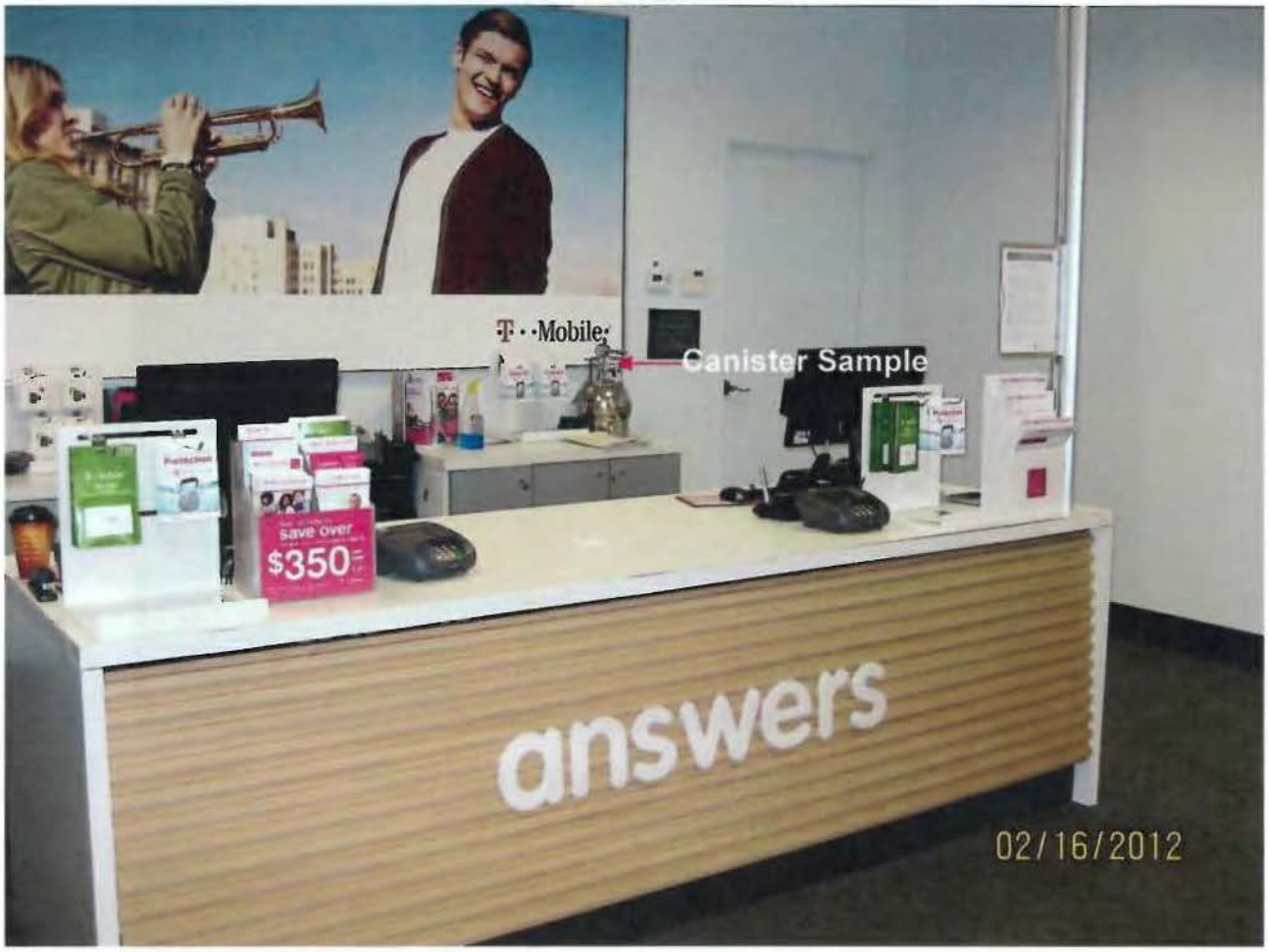


411 Barnum Ave. Fashion Bug
Indoor Air Sample Location

411 Barnum Ave. Sally's Beauty
Indoor Air Sample Location

411 Barnum Ave. Game Stop
Indoor Air Sample Location

411 Barnum Ave. T-Mobile
Indoor Air Sample Location



411 Barnum Ave. Movie Theater #8
Indoor Air Sample Location

411 Barnum Ave. Movie Theater Booth
Indoor Air Sample Location

APPENDIX C

METEOROLOGICAL DATA

IGOR I. SIKORSKY MEMORIAL AIRPORT
BRIDGEPORT, CT
Pre-Sampling Period Meteorological Data

Date	Time (LST)	Dry Bulb Temp (F)	Wet Bulb Temp (F)	Dew Point Temp (F)	Relative Humidity (%)	Wind Speed (MPH)	Wind Direction (degrees)	Wind Gusts (MPH)	Atmospheric Pressure (in. hg)	Precipitation Total (in)
2/12/2012	0:52	28	24	14	56	17	330	26	29.64	
	1:52	26	21	10	51	25	330	37	29.65	
	2:52	23	19	6	48	20	330	32	29.69	
	3:52	21	16	0	40	16	320	24	29.73	
	4:52	20	15	-7	30	22	320	31	29.75	
	5:52	19	14	-6	32	8	330		29.77	
	6:52	18	13	-5	35	7	320		29.79	
	7:52	20	15	-3	36	7	320		29.81	
	8:52	22	17	-1	36	11	320		29.81	
	9:52	25	19	2	37	14	300	20	29.80	
	10:52	29	22	4	34	15	290	22	29.78	
	11:52	31	24	6	35	21	300	29	29.74	
	12:52	31	24	7	36	15	270	28	29.74	
	13:52	31	25	10	41	15	260	25	29.71	
	14:52	33	26	9	36	16	290	26	29.71	
	15:52	33	26	8	35	17	290	31	29.71	
	16:52	32	26	12	43	15	280	29	29.74	
	17:52	31	25	10	41	20	300	29	29.77	
	18:52	29	22	3	33	20	290	34	29.81	
	19:52	28	22	5	37	23	300	29	29.85	
	20:52	26	20	3	37	20	300	29	29.89	
	21:52	25	19	3	38	8	280	18	29.92	
	22:52	24	19	4	42	6	280		29.93	
	23:52	25	20	6	44	8	250		29.93	
Average		**26**	**21**	**4**	**39**	**15**	**300**	**28**	**29.78**	
Total										**0.00**

IGOR I. SIKORSKY MEMORIAL AIRPORT
BRIDGEPORT, CT
August 13, 2012 Meteorological Data

Date	Time (LST)	Dry Bulb Temp (F)	Wet Bulb Temp (F)	Dew Point Temp (F)	Relative Humidity (%)	Wind Speed (MPH)	Wind Direction (degrees)	Wind Gusts (MPH)	Atmospheric Pressure (in. hg)	Precipitation Total (in)
8/13/2012	0:52	73	66	62	69	0	Calm		29.92	
	1:52	72	66	63	73	5	240		29.92	
	2:52	70	66	63	79	5	260		29.92	
	3:52	69	64	61	76	0	Calm		29.92	
	4:52	69	65	62	79	3	250		29.93	
	5:52	69	65	62	79	3	260		29.95	
	6:52	72	66	62	71	5	320		29.97	
	7:52	76	68	63	64	6	280		29.97	
	8:52	78	68	62	58	7	290		29.96	
	9:52	80	70	64	58	8	220		29.96	
	10:52	81	70	64	56	13	220		29.94	
	11:52	82	70	64	55	10	210		29.92	
	12:52	84	71	64	51	10	220		29.91	
	13:52	86	67	56	36	10	280		29.90	
	14:52	84	70	63	49	14	200		29.91	
	15:52	84	70	62	48	10	190		29.91	
	16:52	84	70	63	49	10	210		29.90	
	17:52	82	71	65	56	8	210		29.90	
	18:52	80	71	67	65	5	200		29.91	
	19:52	80	71	67	65	3	250		29.92	
	20:52	78	73	70	77	3	210		29.93	
	21:52	77	69	64	64	0	Calm		29.94	
	22:52	74	68	65	74	0	Calm		29.94	
	23:52	73	67	64	74	0	Calm		29.94	
Average		**77**	**68**	**63**	**64**	**6**	**238**	**0**	**29.93**	
Total										**0.00**

IGOR I. SIKORSKY MEMORIAL AIRPORT
BRIDGEPORT, CT
August 14, 2012 Meteorological Data

Date	Time (LST)	Dry Bulb Temp (F)	Wet Bulb Temp (F)	Dew Point Temp (F)	Relative Humidity (%)	Wind Speed (MPH)	Wind Direction (degrees)	Wind Gusts (MPH)	Atmospheric Pressure (in. hg)	Precipitation Total (in)
8/14/2012	0:52	72	67	64	76	0	Calm		29.93	
	1:52	70	66	63	79	0	Calm		29.94	
	2:52	69	65	63	81	3	360		29.93	
	3:52	68	66	64	87	0	Calm		29.93	
	4:52	68	65	63	84	0	Calm		29.94	
	5:52	70	66	64	81	3	360		29.95	
	6:52	72	67	64	76	3	360		29.95	
	7:52	75	69	65	71	0	Calm		29.95	
	8:52	76	69	65	69	0	Calm		29.94	
	9:52	76	68	64	67	0	Calm		29.96	
	10:52	79	69	63	58	0	Calm		29.95	
	11:52	78	69	64	62	5	80		29.93	
	12:52	80	70	64	58	3	100		29.92	Trace
	13:52	79	69	64	60	5	90		29.91	
	14:52	78	70	66	67	7	170		29.90	Trace
	15:52	78	70	65	64	3	170		29.90	Trace
	16:52	79	71	66	65	3	200		29.89	
	17:52	78	72	69	74	7	190		29.88	
	18:52	77	72	69	76	9	180		29.88	
	19:52	77	72	69	76	8	180		29.88	
	20:52	76	71	69	79	5	160		29.89	
	21:52	74	71	70	87	3	140		29.89	
	22:52	75	72	71	87	6	140		29.89	
	23:52	74	72	71	90	3	140		29.88	
Average		**75**	**69**	**66**	**74**	**3**	**189**	**0**	**29.92**	
Total										**Trace**

IGOR I. SIKORSKY MEMORIAL AIRPORT
BRIDGEPORT, CT
August 15, 2012 Meteorological Data

Date	Time (LST)	Dry Bulb Temp (F)	Wet Bulb Temp (F)	Dew Point Temp (F)	Relative Humidity (%)	Wind Speed (MPH)	Wind Direction (degrees)	Wind Gusts (MPH)	Atmospheric Pressure (in. hg)	Precipitation Total (in)
8/15/2012	0:52	75	73	72	90	5	160		29.86	Trace
	1:52	73	71	70	90	3	80		29.85	
	2:52	74	70	68	82	7	140		29.84	
	3:52	72	68	66	82	5	340		29.83	0.01
	4:52	73	69	67	82	0	Calm		29.83	Trace
	5:52	70	68	67	90	5	70		29.86	0.13
	6:52	69	68	67	93	7	40		29.86	0.06
	7:52	71	68	67	87	7	60		29.86	
	8:52	71	68	67	87	10	60		29.87	
	9:52	74	69	67	79	9	60		29.88	
	10:52	74	70	68	82	9	60		29.88	
	11:52	75	70	68	79	9	60		29.87	
	12:52	75	70	68	79	10	70		29.87	
	13:52	75	72	70	85	8	60		29.86	0.01
	14:52	75	71	69	82	10	80		29.84	
	15:52	74	71	70	87	9	70		29.83	
	16:52	74	72	71	90	7	30		29.84	0.01
	17:52	74	72	71	90	7	360		29.83	Trace
	18:52	74	72	71	90	7	140		29.81	
	19:52	74	71	70	87	6	10		29.84	Trace
	20:52	73	72	71	93	5	90		29.83	
	21:52	73	71	70	90	5	20		29.84	
	22:52	72	71	70	93	0	Calm		29.83	
	23:52	72	71	70	93	0	Calm		29.84	
Average		**73**	**70**	**69**	**87**	**6**	**98**	**0**	**29.85**	
Total										**0.22**

IGOR I. SIKORSKY MEMORIAL AIRPORT
BRIDGEPORT, CT
August 16, 2012 Meteorological Data

Date	Time (LST)	Dry Bulb Temp (F)	Wet Bulb Temp (F)	Dew Point Temp (F)	Relative Humidity (%)	Wind Speed (MPH)	Wind Direction (degrees)	Wind Gusts (MPH)	Atmospheric Pressure (in. hg)	Precipitation Total (in)
8/16/2012	0:52	71	70	70	97	5	310		29.83	
	1:52	70	69	69	97	3	310		29.83	
	2:52	70	69	69	97	0	Calm		29.82	
	3:52	70	68	67	90	3	330		29.83	
	4:52	70	67	66	87	5	330		29.84	
	5:52	71	67	65	81	7	350		29.85	
	6:52	72	68	65	79	10	330		29.86	
	7:52	76	70	66	71	8	350		29.86	
	8:52	77	69	65	67	10	350		29.87	
	9:52	79	71	66	65	8	340		29.86	
	10:52	82	71	65	56	8	350		29.85	
	11:52	82	70	63	53	13	310		29.84	
	12:52	83	69	61	48	8	310		29.84	
	13:52	84	69	60	44	10	310		29.84	
	14:52	85	69	59	41	11	290		29.83	
	15:52	85	69	60	43	7	320		29.82	
	16:52	85	69	59	41	8	280		29.83	
	17:52	83	68	60	46	7	270		29.83	
	18:52	81	69	62	53	0	Calm		29.82	
	19:52	77	71	68	74	5	210		29.83	
	20:52	76	72	70	82	0	Calm		29.84	
	21:52	76	68	64	67	0	Calm		29.85	
	22:52	75	68	64	69	5	260		29.86	
	23:52	72	66	62	71	3	250		29.86	
Average		**77**	**69**	**64**	**67**	**6**	**308**	**0**	**29.84**	
Total										**0.00**

APPENDIX D

LABORATORY ANALYTICAL REPORT

Provided in three separate electronic files; attached to this report.

APPENDIX E

SOIL GAS AND AIR GRAB SAMPLES MOBILE LABORATORY ANALYTICAL REPORT

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 1
OFFICE OF ENVIRONMENTAL MEASUREMENT & EVALUATION
NORTH CHELMSFORD, MASSACHUSETTS 01863-2431

MEMORANDUM

DATE: 08/24/2012

SUBJECT: **Raymark, Stratford, CT. - Volatile Organics Analysis of Air Samples**

FROM: Scott Clifford, Chemist SC 8/24/12

TO: Peter Kahn, ECA

THRU: Dan Boudreau, Chemistry Team Leader DB 8/24/12

PROJECT NUMBER: 12080043

DATE OF ANALYSIS: 08/13/12 - 08/15/12

ANALYTICAL PROCEDURE:

Air samples were analyzed using Region I's standard air screening method, Air Sample Analysis for Volatile Organic Compounds, (EIA-FLDGRAB4.WPD). Air samples were collected in a 250 microliter steel barreled glass syringe. Samples were analyzed on site using a Shimadzu GC 14A gas chromatograph equipped with a 30 meter, 0.53mm DBPS-624 column and electron capture detector. Samples were also analyzed on a Photovac 10A10 equipped with a 4' 1/8 " SE 30 column and photoionization detector. Concentrations of volatile organics were calculated using the external standard technique.

File: K:\CHEMISTRY\REPORTS\FIELD\12080043fvoaa.xls

Raymark, Stratford, CT - Air Sample Results (ppb/v)
08/13/12 - 08/15/12

	111 TCA	TCE	C_2Cl_4	Other Notes
500 Ferry Blvd SS-1	ND(1.5)	5.7	ND(0.4)	
500 Ferry Blvd SS-2	7.8	33	0.7	
500 Ferry Blvd Basement Grab at cans	ND(1)	ND(0.7)	ND(0.4)	
82 Ferry Ct Basement Grab at can	ND(1)	ND(0.7)	ND(0.4)	
82 Ferry Ct SS-1	ND(1)	ND(0.7)	ND(0.4)	
Background Ambient at Riverview Ferry	ND(1)	ND(0.7)	ND(0.4)	
72 Ferry Ct Basement Grab at can	ND(1)	ND(0.7)	ND(0.4)	
72 Ferry Ct SS-1	ND(1)	ND(0.7)	ND(0.4)	
50 Ferry Ct Basement Grab at can	ND(1)	ND(0.7)	ND(0.4)	
50 Ferry Ct SS-1	ND(1)	ND(0.7)	3.4	
62 Ferry Ct Basement Grab at can	ND(1)	ND(0.7)	ND(0.4)	
62 Ferry Ct SS-1	ND(1)	ND(0.7)	1.0	
VFW Basement Grab at cans	ND(1)	ND(0.7)	ND(0.4)	
VFW SS-1	151	273	3.6	11DCEE= 11, cis 12DCEE=2200
VFW SS-1 Duplicate	168	298	4.1	11DCEE= 11, cis 12DCEE=2260
VFW SS-2	214	437	4.9	11DCEE= 11, cis 12DCEE=2260
VFW SS-3	248	532	5.4	11DCEE= 13, cis 12DCEE=1400
444 Ferry Blvd SS-2	23	ND(0.7)	3.8	
444 Ferry Blvd SS-3	8.2	ND(0.7)	1.0	
444 Ferry Blvd SS-1	2.4	ND(0.7)	0.8	
608 Ferry Blvd SS-1	26	106	6.6	cis 12DCEE=6.2
608 Ferry Blvd SS-2	ND(2.5)	6.2	3.1	
608 Ferry Blvd SS-3	ND(2.5)	ND(2.5)	2.2	
335 Ferry Blvd SS-1	236	7.8	2.7	
335 Ferry Blvd SS-2	80	ND(1.4)	0.3	
335 Ferry Blvd Parking Lot Ambient	ND(1)	ND(1.4)	ND(0.4)	
335 Ferry Blvd Curtis Taxi Grab at can	ND(1)	78	ND(0.4)	
335 Ferry Blvd Curtis Taxi Grab at can - Duplicate	ND(1)	76	ND(0.4)	
335 Ferry Blvd Plumber Office Grab	ND(1)	ND(1.4)	ND(0.4)	
335 Ferry Blvd SS-3	64	14	1.6	
335 Ferry Blvd SS-3 - Duplicate	62	12	1.4	
335 Ferry Blvd Auto Storage closet Grab	ND(1)	434	ND(1.5)	
335 Ferry Blvd Utility closet Grab	ND(1)	113	ND(1.5)	
335 Ferry Blvd small office Grab	ND(2)	84	ND(1.5)	
335 Ferry Blvd Auto Storage closet Grab - Duplicate	ND(2)	408	ND(1.5)	
300 Ferry Blvd SS-1	ND(2.5)	148	2.0	cis 12DCEE = 48
300 Ferry Blvd SS-2	ND(2.5)	111	2.0	cis 12DCEE = 16
300 Ferry Blvd Snow Board Room Grab at can	ND(2.5)	ND(2.5)	ND(1.5)	

Page 1

APPENDIX F

INDOOR AIR AND SOIL GAS FEBRUARY and AUGUST 2012 COC DATA COMPARISON TABLES

INDOOR AIR and SOIL GAS FEBRUARY and AUGUST 2012 COC DATA COMPARISON
500 FERRY BLVD.
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR BASEMENT CANISTER #6554 2/13/12 - 2/14/12 24-HOUR AVG.		INDOOR AIR BASEMENT CANISTER #6548 8/13/12 - 8/14/12 24-HOUR AVG.		INDOOR AIR CRAWL SPACE CANISTER #6566 2/13/12 - 2/14/12 24-HOUR AVG.		INDOOR AIR CRAWL SPACE CANISTER #1587 8/13/12 - 8/14/12 24-HOUR AVG.		INDOOR AIR FIRST FLOOR CANISTER #1565 2/13/12 - 2/14/12 24-HOUR AVG.		INDOOR AIR FIRST FLOOR CANISTER #4742 8/13/12 - 8/14/12 24-HOUR AVG.	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)
Trichloroethene	0.05 L	0.26 L	ND (0.08)	ND (0.43)	ND (0.09)	ND (0.48)	ND (0.09)	ND (0.48)	ND (0.10)	ND (0.54)	ND (0.09)	ND (0.48)
1,1,-Dichloroethylene	ND (0.12)	ND (0.48)	ND (0.08)	ND (0.32)	ND (0.09)	ND (0.36)	ND (0.09)	ND (0.36)	ND (0.10)	ND (0.40)	ND (0.09)	ND (0.36)
1,1-Dichloroethane	ND (0.12)	ND (0.49)	ND (0.08)	ND (0.32)	ND (0.09)	ND (0.36)	ND (0.09)	ND (0.36)	ND (0.10)	ND (0.40)	ND (0.09)	ND (0.36)
Benzene	0.87	2.8	5.9	19	0.23	0.73	3.0	9.4	0.52	1.7	5.1	16
Chorobenzene	ND (0.12)	ND (0.56)	ND (0.08)	ND (0.37)	ND (0.09)	ND (0.42)	ND (0.09)	ND (0.42)	ND (0.10)	ND (0.47)	ND (0.09)	ND (0.42)
Chloroform	ND (0.12)	ND (0.59)	0.08 L	0.37 L	ND (0.09)	ND (0.45)	0.10	0.49	ND (0.10)	ND (0.49)	0.16	0.78
Ethylbenzene	0.81	3.5	4.6	20	0.07 L	0.28 L	2.3	9.9	0.36	1.6	3.9	17
Vinyl Chloride	ND (0.12)	ND (0.31)	ND (0.08)	ND (0.20)	ND (0.09)	ND (0.23)	ND (0.09)	ND (0.23)	ND (0.10)	ND (0.26)	ND (0.09)	ND (0.23)

COMPOUND	SUB-SLAB SOIL GAS SS-1 BASEMENT MOBILE LAB RESULTS 13-Feb-12 GRAB SAMPLE		SUB-SLAB SOIL GAS SS-1 BASEMENT MOBILE LAB RESULTS 13-Aug-12 GRAB SAMPLE		SUB-SLAB SOIL GAS SS-2 BASEMENT CANISTER #12562 13-Feb-12 GRAB SAMPLE		SUB-SLAB SOIL GAS SS-2 BASEMENT CANISTER #13498 13-Aug-12 GRAB SAMPLE	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)
Trichloroethene	50	269	5.7	31	120	640	18	97
1,1,-Dichloroethylene	NA	NA	NA	NA	78	310	1.6	6.5
1,1-Dichloroethane	NA	NA	NA	NA	28	110	0.77	3.1
Benzene	NA	NA	NA	NA	1.6	5.1	1.2	3.9
Chorobenzene	NA	NA	NA	NA	ND (1.6)	ND (7.4)	ND (0.08)	ND (0.37)
Chloroform	NA	NA	NA	NA	1.2 L	5.9 L	0.19	0.93
Ethylbenzene	NA	NA	NA	NA	ND (1.6)	ND (6.9)	0.78	3.4
Vinyl Chloride	NA	NA	NA	NA	ND (1.6)	ND (4.1)	ND (0.08)	ND (0.20)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range

INDOOR AIR and SOIL GAS FEBRUARY and AUGUST 2012 COC DATA COMPARISON
500 FERRY BLVD.
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR BASEMENT CANISTER #6554 2/13/12 - 2/14/12 24-HOUR AVG.		INDOOR AIR BASEMENT CANISTER #6548 8/13/12 - 8/14/12 24-HOUR AVG.		INDOOR AIR CRAWL SPACE CANISTER #6566 2/13/12 - 2/14/12 24-HOUR AVG.		INDOOR AIR CRAWL SPACE CANISTER #1587 8/13/12 - 8/14/12 24-HOUR AVG.		INDOOR AIR FIRST FLOOR CANISTER #1565 2/13/12 - 2/14/12 24-HOUR AVG.		INDOOR AIR FIRST FLOOR CANISTER #4742 8/13/12 - 8/14/12 24-HOUR AVG.	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)
Trichloroethene	0.05 L	0.26 L	ND (0.08)	ND (0.43)	ND (0.09)	ND (0.48)	ND (0.09)	ND (0.48)	ND (0.10)	ND (0.54)	ND (0.09)	ND (0.48)
1,1,-Dichloroethylene	ND (0.12)	ND (0.48)	ND (0.08)	ND (0.32)	ND (0.09)	ND (0.36)	ND (0.09)	ND (0.36)	ND (0.10)	ND (0.40)	ND (0.09)	ND (0.36)
1,1-Dichloroethane	ND (0.12)	ND (0.49)	ND (0.08)	ND (0.32)	ND (0.09)	ND (0.36)	ND (0.09)	ND (0.36)	ND (0.10)	ND (0.40)	ND (0.09)	ND (0.36)
Benzene	0.87	2.8	5.9	19	0.23	0.73	3.0	9.4	0.52	1.7	5.1	16
Chorobenzene	ND (0.12)	ND (0.56)	ND (0.08)	ND (0.37)	ND (0.09)	ND (0.42)	ND (0.09)	ND (0.42)	ND (0.10)	ND (0.47)	ND (0.09)	ND (0.42)
Chloroform	ND (0.12)	ND (0.59)	0.08 L	0.37 L	ND (0.09)	ND (0.45)	0.10	0.49	ND (0.10)	ND (0.49)	0.16	0.78
Ethylbenzene	0.81	3.5	4.6	20	0.07 L	0.28 L	2.3	9.9	0.36	1.6	3.9	17
Vinyl Chloride	ND (0.12)	ND (0.31)	ND (0.08)	ND (0.20)	ND (0.09)	ND (0.23)	ND (0.09)	ND (0.23)	ND (0.10)	ND (0.26)	ND (0.09)	ND (0.23)

COMPOUND	SUB-SLAB SOIL GAS SS-1 BASEMENT MOBILE LAB RESULTS 13-Feb-12 GRAB SAMPLE		SUB-SLAB SOIL GAS SS-1 BASEMENT MOBILE LAB RESULTS 13-Aug-12 GRAB SAMPLE		SUB-SLAB SOIL GAS SS-2 BASEMENT CANISTER #12562 13-Feb-12 GRAB SAMPLE		SUB-SLAB SOIL GAS SS-2 BASEMENT CANISTER #13498 13-Aug-12 GRAB SAMPLE	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)
Trichloroethene	50	269	5.7	31	120	640	18	97
1,1,-Dichloroethylene	NA	NA	NA	NA	78	310	1.6	6.5
1,1-Dichloroethane	NA	NA	NA	NA	28	110	0.77	3.1
Benzene	NA	NA	NA	NA	1.6	5.1	1.2	3.9
Chorobenzene	NA	NA	NA	NA	ND (1.6)	ND (7.4)	ND (0.08)	ND (0.37)
Chloroform	NA	NA	NA	NA	1.2 L	5.9 L	0.19	0.93
Ethylbenzene	NA	NA	NA	NA	ND (1.6)	ND (6.9)	0.78	3.4
Vinyl Chloride	NA	NA	NA	NA	ND (1.6)	ND (4.1)	ND (0.08)	ND (0.20)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range

INDOOR AIR and SOIL GAS FEBRUARY and AUGUST 2012 COC DATA COMPARISON
82 FERRY COURT
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR BASEMENT CANISTER #1592 2/15/12 - 2/16/12 24-HOUR AVG.		INDOOR AIR BASEMENT CANISTER #6582 8/13/12 - 8/14/12 24-HOUR AVG.		INDOOR AIR FIRST FLOOR CANISTER #1560 2/15/12 - 2/16/12 24-HOUR AVG.		INDOOR AIR FIRST FLOOR CANISTER #1576 8/13/12 - 8/14/12 24-HOUR AVG.	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)
Trichloroethene	ND (0.10)	ND (0.54)	ND (0.11)	ND (0.59)	ND (0.10)	ND (0.54)	ND (0.10)	ND (0.54)
1,1,-Dichloroethylene	ND (0.10)	ND (0.40)	ND (0.11)	ND (0.44)	ND (0.10)	ND (0.40)	ND (0.10)	ND (0.40)
1,1-Dichloroethane	0.11	0.45	ND (0.11)	ND (0.44)	ND (0.10)	ND (0.40)	ND (0.10)	ND (0.40)
Benzene	0.29	0.92	0.14	0.45	0.32	1.0	0.14	0.45
Chorobenzene	ND (0.10)	ND (0.47)	ND (0.11)	ND (0.51)	ND (0.10)	ND (0.47)	ND (0.10)	ND (0.34)
Chloroform	0.11	0.54	0.35	1.7	0.30	1.5	0.11	0.54
Ethylbenzene	0.07 L	0.30 L	0.29	1.3	0.09 L	0.37 L	0.08 L	0.34 L
Vinyl Chloride	ND (0.10)	ND (0.26)	ND (0.11)	ND (0.28)	ND (0.10)	ND (0.26)	ND (0.10)	ND (0.26)

COMPOUND	SUB-SLAB SOIL GAS SS-1 BASEMENT CANISTER #14901 15-Feb-12 GRAB SAMPLE		SUB-SLAB SOIL GAS SS-1 BASEMENT CANISTER #12562 13-Aug-12 GRAB SAMPLE	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)
Trichloroethene	0.05 L	0.24 L	0.09	0.46
1,1,-Dichloroethylene	ND (0.08)	ND (0.32)	ND (0.08)	ND (0.32)
1,1-Dichloroethane	ND (0.08)	ND (0.32)	ND (0.08)	ND (0.32)
Benzene	0.05 L	0.17 L	ND (0.08)	ND (0.25)
Chorobenzene	ND (0.08)	ND (0.37)	ND (0.08)	ND (0.37)
Chloroform	0.38	1.9	0.07 L	0.35 L
Ethylbenzene	ND (0.08)	ND (0.35)	ND (0.08)	ND (0.35)
Vinyl Chloride	ND (0.08)	ND (0.20)	ND (0.08)	ND (0.20)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range

INDOOR AIR and SOIL GAS FEBRUARY and AUGUST 2012 COC DATA COMPARISON
72 FERRY COURT
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR BASEMENT CANISTER #6547 2/13/12 - 2/14/12 24-HOUR AVG.		INDOOR AIR BASEMENT CANISTER #1586 8/13/12 - 8/14/12 24-HOUR AVG.		INDOOR AIR FIRST FLOOR CANISTER #1586 2/13/12 - 2/14/12 24-HOUR AVG.		INDOOR AIR FIRST FLOOR CANISTER #3092 8/13/12 - 8/14/12 24-HOUR AVG.	
	(ppb/v)	(µg/m^3)	(ppb/v)	(µg/m^3)	(ppb/v)	(µg/m^3)	(ppb/v)	(µg/m^3)
Trichloroethene	ND (0.10)	ND (0.54)	0.08 L	0.43 L	ND (0.09)	ND (0.48)	0.08 L	0.43 L
1,1,-Dichloroethylene	ND (0.10)	ND (0.40)	ND (0.10)	ND (0.40)	ND (0.09)	ND (0.36)	ND (0.10)	ND (0.40)
1,1-Dichloroethane	ND (0.10)	ND (0.40)	ND (0.10)	ND (0.40)	ND (0.09)	ND (0.36)	ND (0.10)	ND (0.40)
Benzene	0.29	0.92	0.37	1.2	0.33	1.1	0.32	1.0
Chorobenzene	ND (0.10)	ND (0.47)	ND (0.10)	ND (0.34)	ND (0.09)	ND (0.42)	ND (0.10)	ND (0.34)
Chloroform	0.42	2.1	1.3	6.3	0.63	3.1	1.5	7.1
Ethylbenzene	0.11	0.48	1.9	8.4	0.12	0.52	1.9	8.2
Vinyl Chloride	ND (0.10)	ND (0.26)	ND (0.10)	ND (0.26)	ND (0.09)	ND (0.23)	ND (0.10)	ND (0.26)

COMPOUND	SUB-SLAB SOIL GAS SS-1 BASEMENT CANISTER #22683 13-Feb-12 GRAB SAMPLE		SUB-SLAB SOIL GAS SS-1 BASEMENT CANISTER #12569 13-Aug-12 GRAB SAMPLE	
	(ppb/v)	(µg/m^3)	(ppb/v)	(µg/m^3)
Trichloroethene	0.10	0.51	ND (0.08)	ND (0.43)
1,1,-Dichloroethylene	0.05 L	0.19 L	ND (0.08)	ND (0.32)
1,1-Dichloroethane	ND (0.08)	ND (0.32)	ND (0.08)	ND (0.32)
Benzene	ND (0.08)	ND (0.25)	ND (0.08)	ND (0.25)
Chorobenzene	ND (0.08)	ND (0.37)	ND (0.08)	ND (0.37)
Chloroform	ND (0.08)	ND (0.39)	0.18	0.88
Ethylbenzene	ND (0.08)	ND (0.35)	ND (0.08)	ND (0.35)
Vinyl Chloride	ND (0.08)	ND (0.20)	ND (0.08)	ND (0.20)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range

INDOOR AIR and SOIL GAS FEBRUARY and AUGUST 2012 COC DATA COMPARISON
62 FERRY COURT
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR BASEMENT CANISTER #5790 2/13/12 - 2/14/12 24-HOUR AVG.		INDOOR AIR BASEMENT CANISTER #1594 8/13/12 - 8/14/12 24-HOUR AVG.		INDOOR AIR FIRST FLOOR CANISTER #5792 2/13/12 - 2/14/12 24-HOUR AVG.		INDOOR AIR FIRST FLOOR CANISTER #6581 8/13/12 - 8/14/12 24-HOUR AVG.	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)
Trichloroethene	0.05 L	0.27 L	ND (0.11)	ND (0.59)	ND (0.10)	ND (0.54)	ND (0.09)	ND (0.48)
1,1,-Dichloroethylene	ND (0.10)	ND (0.40)	ND (0.11)	ND (0.44)	ND (0.10)	ND (0.40)	ND (0.09)	ND (0.36)
1,1-Dichloroethane	ND (0.10)	ND (0.40)	ND (0.11)	ND (0.44)	ND (0.10)	ND (0.40)	ND (0.09)	ND (0.36)
Benzene	0.51	1.6	0.23	0.73	0.52	1.7	0.15	0.48
Chorobenzene	ND (0.10)	ND (0.47)	ND (0.11)	ND (0.51)	ND (0.10)	ND (0.47)	ND (0.09)	ND (0.42)
Chloroform	0.29	1.4	0.18	0.88	0.30	1.5	0.13	0.64
Ethylbenzene	0.25	1.1	0.28	1.2	0.17	0.74	0.15	0.65
Vinyl Chloride	ND (0.10)	ND (0.26)	ND (0.11)	ND (0.28)	ND (0.10)	ND (0.26)	ND (0.09)	ND (0.23)

COMPOUND	SUB-SLAB SOIL GAS SS-1 BASEMENT CANISTER #15047 14-Feb-12 GRAB SAMPLE		SUB-SLAB SOIL GAS SS-1 BASEMENT CANISTER #22153 13-Aug-12 GRAB SAMPLE	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)
Trichloroethene	ND (0.09)	ND (0.48)	ND (0.09)	ND (0.48)
1,1,-Dichloroethylene	ND (0.09)	ND (0.36)	ND (0.09)	ND (0.36)
1,1-Dichloroethane	ND (0.09)	ND (0.36)	ND (0.09)	ND (0.36)
Benzene	0.13	0.42	ND (0.09)	ND (0.29)
Chorobenzene	ND (0.09)	ND (0.42)	ND (0.09)	ND (0.42)
Chloroform	0.05 L	0.23 L	0.19	0.93
Ethylbenzene	ND (0.09)	ND (0.39)	ND (0.09)	ND (0.39)
Vinyl Chloride	ND (0.09)	ND (0.23)	ND (0.09)	ND (0.23)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range

INDOOR AIR and SOIL GAS FEBRUARY and AUGUST 2012 COC DATA COMPARISON
100 VETERANS WAY
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR BASEMENT CANISTER #1594 14-Feb-12 8-HOUR AVG.		INDOOR AIR BASEMENT CANISTER #6547 14-Aug-12 24-HOUR AVG.		INDOOR AIR FIRST FLOOR CANISTER #6583 14-Feb-12 8-HOUR AVG.		INDOOR AIR FIRST FLOOR CANISTER #6558 14-Aug-12 8-HOUR AVG.	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)
Trichloroethene	1.0	5.4	0.32	1.7	0.22	1.2	0.10	0.54
1,1,-Dichloroethylene	0.65	2.6	ND (0.11)	ND (0.44)	0.17	0.67	ND (0.10)	ND (0.40)
1,1-Dichloroethane	1.4	5.8	0.24	0.97	0.41	1.7	0.09 L	0.36 L
Benzene	0.43	1.4	1.0	3.2	0.57	1.8	0.65	2.1
Chorobenzene	ND (0.12)	ND (0.56)	ND (0.11)	ND (0.51)	ND (0.11)	ND (0.51)	ND (0.10)	ND (0.46)
Chloroform	0.06 L	0.27 L	0.64	3.1	0.10 L	0.49 L	0.70	3.4
Ethylbenzene	0.25	1.1	0.60	2.6	0.12	0.52	0.34	1.5
Vinyl Chloride	ND (0.12)	ND (0.31)	ND (0.11)	ND (0.28)	ND (0.11)	ND (0.28)	ND (0.10)	ND (0.26)

COMPOUND	SUB-SLAB SOIL GAS SS-1 BASEMENT MOBILE LAB RESULTS 14-Feb-12 GRAB SAMPLE		SUB-SLAB SOIL GAS SS-1 BASEMENT CANISTER #20860 14-Aug-12 GRAB SAMPLE		SUB-SLAB SOIL GAS SS-2 BASEMENT MOBILE LAB RESULTS 14-Feb-12 GRAB SAMPLE		SUB-SLAB SOIL GAS SS-2 BASEMENT MOBILE LAB RESULTS 14-Aug-12 GRAB SAMPLE		SUB-SLAB SOIL GAS SS-3 BASEMENT CANISTER #15050 14-Feb-12 GRAB SAMPLE		SUB-SLAB SOIL GAS SS-3 BASEMENT MOBILE LAB RESULTS 14-Aug-12 GRAB SAMPLE	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)
Trichloroethene	230	1236	460	2500	230	1236	437	2349	200	1100	532	2859
1,1,-Dichloroethylene	196	778	260	1000	222	881	11	44	260	1000	13	52
1,1-Dichloroethane	NA	NA	1500	6100	NA	NA	NA	NA	510	2100	NA	NA
Benzene	NA	NA	ND (40)	ND (128)	NA	NA	NA	NA	ND (27)	ND (86)	NA	NA
Chorobenzene	NA	NA	ND (40)	ND (186)	NA	NA	NA	NA	ND (27)	ND (126)	NA	NA
Chloroform	NA	NA	ND (40)	ND (195)	NA	NA	NA	NA	ND (27)	ND (132)	NA	NA
Ethylbenzene	NA	NA	ND (40)	ND (174)	NA	NA	NA	NA	ND (27)	ND (117)	NA	NA
Vinyl Chloride	NA	NA	ND (40)	ND (102)	NA	NA	NA	NA	ND (27)	ND (69)	NA	NA

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range

INDOOR AIR and SOIL GAS FEBRUARY and AUGUST 2012 COC DATA COMPARISON
444 FERRY BLVD.
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR BASEMENT CANISTER #3092 15-Feb-12 8-HOUR AVG.		INDOOR AIR BASEMENT CANISTER #6461 14-Aug-12 8-HOUR AVG.		INDOOR AIR FIRST FLOOR CANISTER #1582 15-Feb-12 8-HOUR AVG.		INDOOR AIR FIRST FLOOR CANISTER #6567 14-Aug-12 8-HOUR AVG.	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)
Trichloroethene	ND (0.11)	ND (0.59)	ND (0.11)	ND (0.59)	ND (0.12)	ND (0.64)	ND (0.11)	ND (0.59)
1,1,-Dichloroethylene	ND (0.11)	ND (0.44)	ND (0.11)	ND (0.44)	ND (0.12)	ND (0.48)	ND (0.11)	ND (0.44)
1,1-Dichloroethane	ND (0.11)	ND (0.44)	ND (0.11)	ND (0.44)	ND (0.12)	ND (0.49)	ND (0.11)	ND (0.44)
Benzene	0.40	1.3	0.45	1.4	0.41	1.3	0.44	1.4
Chorobenzene	ND (0.11)	ND (0.51)	ND (0.11)	ND (0.51)	ND (0.12)	ND (0.56)	ND (0.11)	ND (0.51)
Chloroform	ND (0.11)	ND (0.54)	0.12	0.59	ND (0.12)	ND (0.59)	0.18	0.88
Ethylbenzene	0.20	0.87	0.25	1.1	0.18	0.78	0.30	1.3
Vinyl Chloride	ND (0.11)	ND (0.28)	ND (0.11)	ND (0.28)	ND (0.12)	ND (0.31)	ND (0.11)	ND (0.28)

COMPOUND	SUB-SLAB SOIL GAS SS-1 BASEMENT MOBILE LAB RESULTS 15-Feb-12 GRAB SAMPLE		SUB-SLAB SOIL GAS SS-1 BASEMENT MOBILE LAB RESULTS 14-Aug-12 GRAB SAMPLE		SUB-SLAB SOIL GAS SS-2 BASEMENT MOBILE LAB RESULTS 15-Feb-12 GRAB SAMPLE		SUB-SLAB SOIL GAS SS-2 BASEMENT MOBILE LAB RESULTS 14-Aug-12 GRAB SAMPLE		SUB-SLAB SOIL GAS SS-3 BASEMENT CANISTER #20856 15-Feb-12 GRAB SAMPLE		SUB-SLAB SOIL GAS SS-3 BASEMENT CANISTER #22105 14-Aug-12 GRAB SAMPLE	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)
Trichloroethene	ND (0.7)	ND (3.8)	ND (0.7)	ND (3.8)	ND (0.7)	ND (3.8)	ND (0.7)	ND (3.8)	0.48	2.6	2.8	15
1,1,-Dichloroethylene	ND (10)	ND (40)	NA	NA	ND (10)	ND (40)	NA	NA	0.17	0.67	0.66	2.6
1,1-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	0.05 L	0.20 L	3.7	15
Benzene	NA	NA	NA	NA	NA	NA	NA	NA	ND (0.09)	ND (0.29)	ND (0.10)	ND (0.32)
Chorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	ND (0.09)	ND (0.42)	ND (0.10)	ND (0.46)
Chloroform	NA	NA	NA	NA	NA	NA	NA	NA	ND (0.09)	ND (0.44)	ND (0.10)	ND (0.49)
Ethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	ND (0.09)	ND (0.39)	ND (0.10)	ND (0.43)
Vinyl Chloride	NA	NA	NA	NA	NA	NA	NA	NA	ND (0.09)	ND (0.23)	ND (0.10)	ND (0.26)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range

INDOOR AIR and SOIL GAS FEBRUARY and AUGUST 2012 COC DATA COMPARISON
326 FERRY BLVD.
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR DINING ROOM CANISTER #5810 15-Feb-12 8-HOUR AVG.		INDOOR AIR DINING ROOM CANISTER #5790 14-Aug-12 8-HOUR AVG.		INDOOR AIR KITCHEN CANISTER #6461 15-Feb-12 8-HOUR AVG.		INDOOR AIR KITCHEN CANISTER #1560 14-Aug-12 8-HOUR AVG.	
	(ppb/v)	(µg/m^3)	(ppb/v)	(µg/m^3)	(ppb/v)	(µg/m^3)	(ppb/v)	(µg/m^3)
Trichloroethene	0.04 L	0.24 L	ND (0.11)	ND (0.59)	ND (0.11)	ND (0.59)	ND (0.12)	ND (0.64)
1,1,-Dichloroethylene	ND (0.12)	ND (0.48)	ND (0.11)	ND (0.44)	ND (0.11)	ND (0.44)	ND (0.12)	ND (0.48)
1,1-Dichloroethane	ND (0.12)	ND (0.49)	ND (0.11)	ND (0.44)	ND (0.11)	ND (0.44)	ND (0.12)	ND (0.49)
Benzene	0.53	1.7	0.32	1.0	0.67	2.1	0.41	1.3
Chorobenzene	ND (0.12)	ND (0.56)	ND (0.11)	ND (0.51)	ND (0.11)	ND (0.51)	ND (0.12)	ND (0.56)
Chloroform	0.08 L	0.41 L	0.08 L	0.38 L	0.40	2.0	0.25	1.2
Ethylbenzene	0.12	0.52	0.22	0.95	0.10 L	0.43 L	0.26	1.1
Vinyl Chloride	ND (0.12)	ND (0.31)	ND (0.11)	ND (0.28)	ND (0.11)	ND (0.28)	ND (0.12)	ND (0.31)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range

INDOOR AIR and SOIL GAS FEBRUARY and AUGUST 2012 COC DATA COMPARISON
608 FERRY BLVD.
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR BASEMENT CANISTER #5786 14-Feb-12 8-HOUR AVG.		INDOOR AIR BASEMENT CANISTER #6569 15-Aug-12 8-HOUR AVG.		INDOOR AIR FIRST FLOOR CANISTER #1584 14-Feb-12 8-HOUR AVG.		INDOOR AIR FIRST FLOOR CANISTER #1565 15-Aug-12 8-HOUR AVG.	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)
Trichloroethene	ND (0.10)	ND (0.54)	0.25	1.3	ND (0.09)	ND (0.48)	ND (0.17)	ND (0.91)
1,1,-Dichloroethylene	ND (0.10)	ND (0.40)	ND (0.11)	ND (0.44)	ND (0.09)	ND (0.36)	ND (0.17)	ND (0.67)
1,1-Dichloroethane	ND (0.10)	ND (0.40)	0.06 L	0.22 L	ND (0.09)	ND (0.36)	ND (0.17)	ND (0.69)
Benzene	0.19	0.61	ND (0.11)	ND (0.35)	0.18	0.57	ND (0.17)	ND (0.54)
Chorobenzene	ND (0.10)	ND (0.47)	ND (0.11)	ND (0.51)	ND (0.09)	ND (0.42)	ND (0.17)	ND (0.79)
Chloroform	ND (0.10)	ND (0.49)	ND (0.11)	ND (0.54)	ND (0.09)	ND (0.44)	ND (0.17)	ND (0.83)
Ethylbenzene	ND (0.10)	ND (0.43)	ND (0.11)	ND (0.48)	ND (0.09)	ND (0.39)	ND (0.17)	ND (0.74)
Vinyl Chloride	ND (0.10)	ND (0.26)	ND (0.11)	ND (0.28)	ND (0.09)	ND (0.23)	ND (0.17)	ND (0.44)

COMPOUND	SUB-SLAB SOIL GAS SS-1 BASEMENT MOBILE LAB RESULTS 14-Feb-12 GRAB SAMPLE		SUB-SLAB SOIL GAS SS-1 BASEMENT MOBILE LAB RESULTS 15-Aug-12 GRAB SAMPLE		SUB-SLAB SOIL GAS SS-2 FIRST FLOOR MOBILE LAB RESULTS 14-Feb-12 GRAB SAMPLE		SUB-SLAB SOIL GAS SS-2 FIRST FLOOR MOBILE LAB RESULTS 15-Aug-12 GRAB SAMPLE		SUB-SLAB SOIL GAS SS-3 FIRST FLOOR CANISTER #22684 14-Feb-12 GRAB SAMPLE		SUB-SLAB SOIL GAS SS-3 FIRST FLOOR CANISTER #22681 15-Aug-12 GRAB SAMPLE	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)
Trichloroethene	30	161	106	570	ND (0.7)	ND (3.8)	6.2	33	0.26	1.4	0.87	4.7
1,1,-Dichloroethylene	20	79	NA	NA	ND (10)	ND (40)	NA	NA	0.25	0.99	ND (0.15)	ND (0.60)
1,1-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	0.52	2.1	ND (0.15)	ND (0.60)
Benzene	NA	NA	NA	NA	NA	NA	NA	NA	ND (0.08)	ND (0.25)	ND (0.15)	ND (0.48)
Chorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	ND (0.08)	ND (0.37)	ND (0.15)	ND (0.70)
Chloroform	NA	NA	NA	NA	NA	NA	NA	NA	ND (0.08)	ND (0.39)	0.09 L	0.44 L
Ethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	ND (0.08)	ND (0.35)	ND (0.15)	ND (0.65)
Vinyl Chloride	NA	NA	NA	NA	NA	NA	NA	NA	ND (0.08)	ND (0.20)	0.36	0.92

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range

INDOOR AIR and SOIL GAS FEBRUARY and AUGUST 2012 COC DATA COMPARISON
335 FERRY BLVD.
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR CURTIN TAXI CANISTER #6460 14-Feb-12 8-HOUR AVG.		INDOOR AIR CURTIN TAXI CANISTER #1577 15-Aug-12 8-HOUR AVG.		INDOOR AIR RECEPTIONIST OFFICE CANISTER #6555 14-Feb-12 8-HOUR AVG.		INDOOR AIR RECEPTIONIST OFFICE CANISTER #1584 15-Aug-12 8-HOUR AVG.		INDOOR AIR ESTIMATING ROOM CANISTER #4778 14-Feb-12 8-HOUR AVG.		INDOOR AIR ESTIMATING ROOM CANISTER #6568 15-Aug-12 8-HOUR AVG.	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)
Trichloroethene	2.1	11	74	400	0.04 L	0.23 L	0.29	1.6	ND (0.12)	ND (0.64)	0.80	4.3
1,1,-Dichloroethylene	ND (0.11)	ND (0.44)	ND (0.18)	ND (0.71)	ND (0.12)	ND (0.48)	ND (0.16)	ND (0.64)	ND (0.12)	ND (0.48)	ND (0.10)	ND (0.40)
1,1-Dichloroethane	ND (0.11)	ND (0.44)	ND (0.18)	ND (0.73)	ND (0.12)	ND (0.49)	ND (0.16)	ND (0.65)	ND (0.12)	ND (0.49)	ND (0.10)	ND (0.40)
Benzene	0.56	1.8	0.43	1.4	0.62	2.0	ND (0.16)	ND (0.51)	0.53	1.7	0.15	0.48
Chorobenzene	ND (0.11)	ND (0.51)	ND (0.18)	ND (0.84)	ND (0.12)	ND (0.56)	ND (0.16)	ND (0.75)	ND (0.12)	ND (0.56)	ND (0.10)	ND (0.46)
Chloroform	0.09 L	0.44 L	0.33	1.6	ND (0.12)	ND (0.59)	ND (0.16)	ND (0.78)	ND (0.12)	ND (0.59)	ND (0.10)	ND (0.49)
Ethylbenzene	0.25	1.1	0.98	4.2	0.22	0.95	ND (0.16)	ND (0.70)	0.20	0.87	0.12	0.52
Vinyl Chloride	ND (0.11)	ND (0.28)	ND (0.18)	ND (0.86)	0.05 L	0.12 L	ND (0.16)	ND (0.41)	0.04 L	0.11 L	0.64	1.6

COMPOUND	SUB-SLAB SOIL GAS SS-1 GARAGE AREA 1 CANISTER #22680 14-Feb-12 GRAB SAMPLE		SUB-SLAB SOIL GAS SS-1 GARAGE AREA 1 MOBILE LAB RESULTS 15-Aug-12 GRAB SAMPLE		SUB-SLAB SOIL GAS SS-2 GARAGE AREA 2 MOBILE LAB RESULTS 14-Feb-12 GRAB SAMPLE		SUB-SLAB SOIL GAS SS-2 GARAGE AREA 2 MOBILE LAB RESULTS 15-Aug-12 GRAB SAMPLE		SUB-SLAB SOIL GAS SS-3 BREN AIR UNIT CANISTER #12565 15-Aug-12 GRAB SAMPLE	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(ug/m³)
Trichloroethene	4.2	22	7.8	53	0.30	1.6	ND (1.4)	ND (0.75)	17 L	91 L
1,1,-Dichloroethylene	ND (1.5)	ND (5.9)	NA	NA	ND (10)	ND (40)	NA	NA	ND (0.10)	ND (0.40)
1,1-Dichloroethane	1.4 L	5.6 L	NA	NA	NA	NA	NA	NA	0.31	1.3
Benzene	ND (1.5)	ND (4.8)	NA	NA	NA	NA	NA	NA	0.15	0.48
Chorobenzene	ND (1.5)	ND (7.0)	NA	NA	NA	NA	NA	NA	ND (0.10)	ND (0.46)
Chloroform	ND (1.5)	ND (7.3)	NA	NA	NA	NA	NA	NA	0.80	3.9
Ethylbenzene	ND (1.5)	ND (6.5)	NA	NA	NA	NA	NA	NA	ND (0.10)	ND (0.43)
Vinyl Chloride	ND (1.5)	ND (3.8)	NA	NA	NA	NA	NA	NA	ND (0.10)	ND (0.26)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range

INDOOR AIR and SOIL GAS FEBRUARY and AUGUST 2012 COC DATA COMPARISON
300 FERRY BLVD.
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR MAIN SHOW ROOM CANISTER #1577 14-Feb-12 8-HOUR AVG.		INDOOR AIR MAIN SHOW ROOM CANISTER #6463 15-Aug-12 8-HOUR AVG.		INDOOR AIR SNOW BOARD AREA CANISTER #6580 14-Feb-12 8-HOUR AVG.		INDOOR AIR SNOW BOARD AREA CANISTER #6460 15-Aug-12 8-HOUR AVG.	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)
Trichloroethene	ND (0.13)	ND (0.70)	ND (0.20)	ND (1.1)	ND (0.12)	ND (0.64)	1.0	5.4
1,1,-Dichloroethylene	ND (0.13)	ND (0.52)	ND (0.20)	ND (0.79)	ND (0.12)	ND (0.48)	ND (0.11)	ND (0.44)
1,1-Dichloroethane	ND (0.13)	ND (0.53)	ND (0.20)	ND (0.81)	ND (0.12)	ND (0.49)	ND (0.11)	ND (0.44)
Benzene	0.63	2.0	2.3	7.3	0.51	1.6	2.3	7.2
Chorobenzene	ND (0.13)	ND (0.61)	ND (0.20)	ND (0.93)	ND (0.12)	ND (0.56)	ND (0.11)	ND (0.51)
Chloroform	0.06 L	0.27 L	ND (0.20)	ND (0.98)	ND (0.12)	ND (0.59)	0.14	0.68
Ethylbenzene	0.31	1.3	2.6	11	0.30	1.3	3.1	14
Vinyl Chloride	ND (0.13)	ND (0.33)	ND (0.20)	ND (0.51)	ND (0.12)	ND (0.31)	0.81	2.1

COMPOUND	SUB-SLAB SOIL GAS SS-1 SNOW BOARD STORAGE CANISTER #14902 14-Feb-12 GRAB SAMPLE		SUB-SLAB SOIL GAS SS-1 SNOW BOARD STORAGE CANISTER #22692 15-Aug-12 GRAB SAMPLE		SUB-SLAB SOIL GAS SS-2 REPAIR SHOP MOBILE LAB RESULTS 14-Feb-12 GRAB SAMPLE		SUB-SLAB SOIL GAS SS-2 REPAIR SHOP MOBILE LAB RESULTS 15-Aug-12 GRAB SAMPLE	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)
Trichloroethene	29	160	200	1100	30	161	111	597
1,1,-Dichloroethylene	ND (0.75)	ND (3.0)	1.1	4.4	ND (10)	ND (40)	NA	NA
1,1-Dichloroethane	0.93	3.8	2.5	10	NA	NA	NA	NA
Benzene	ND (0.75)	ND (2.4)	0.69	2.2	NA	NA	NA	NA
Chorobenzene	ND (0.75)	ND (3.5)	3.9	18	NA	NA	NA	NA
Chloroform	ND (0.75)	ND (3.7)	1.8	8.5	NA	NA	NA	NA
Ethylbenzene	ND (0.75)	ND (3.3)	ND (0.11)	ND (0.48)	NA	NA	NA	NA
Vinyl Chloride	ND (0.75)	ND (1.9)	130	330	NA	NA	NA	NA

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range

INDOOR AIR and SOIL GAS FEBRUARY and AUGUST 2012 COC DATA COMPARISON
411 BARNUM AVE. STRATFORD SQUARE MCDONALDS
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 411 BARNUM AVE. OFFICE SPACE CANISTER #4743 14-Feb-12 8-HOUR AVG.		INDOOR AIR 411 BARNUM AVE. OFFICE SPACE CANISTER #20841 16-Aug-12 8-HOUR AVG.	
	(ppb/v)	($\mu g/m^3$)	(ppb/v)	($\mu g/m^3$)
Trichloroethene	ND (0.11)	ND (0.59)	0.21	1.1
1,1,-Dichloroethylene	ND (0.11)	ND (0.44)	ND (0.12)	ND (0.48)
1,1-Dichloroethane	ND (0.11)	ND (0.44)	ND (0.12)	ND (0.48)
Benzene	0.32	1.0	0.10 L	0.32 L
Chorobenzene	ND (0.11)	ND (0.51)	ND (0.12)	ND (0.56)
Chloroform	0.27	1.3	0.28	1.4
Ethylbenzene	0.06 L	0.26 L	ND (0.12)	ND (0.52)
Vinyl Chloride	ND (0.11)	ND (0.28)	0.41	1.0

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range

INDOOR AIR and SOIL GAS FEBRUARY and AUGUST 2012 COC DATA COMPARISON
411 BARNUM AVE. STRATFORD SQUARE US POSTAL SERVICE
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 411 BARNUM AVE. US POSTAL SERVICE CANISTER #6569 14-Feb-12 8-HOUR AVG.		INDOOR AIR 411 BARNUM AVE. US POSTAL SERVICE CANISTER #15055 16-Aug-12 8-HOUR AVG.	
	(ppb/v)	(µg/m^3)	(ppb/v)	(µg/m^3)
Trichloroethene	ND (0.11)	ND (0.59)	0.25	1.3
1,1,-Dichloroethylene	ND (0.11)	ND (0.44)	ND (0.11)	ND (0.44)
1,1-Dichloroethane	0.09 L	0.36 L	ND (0.11)	ND (0.44)
Benzene	0.40	1.3	0.19	0.61
Chorobenzene	ND (0.11)	ND (0.51)	ND (0.11)	ND (0.51)
Chloroform	0.23	1.1	ND (0.11)	ND (0.54)
Ethylbenzene	ND (0.11)	ND (0.48)	0.13	0.56
Vinyl Chloride	ND (0.11)	ND (0.28)	ND (0.11)	ND (0.28)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range

INDOOR AIR and SOIL GAS FEBRUARY and AUGUST 2012 COC DATA COMPARISON
411 BARNUM AVE. STRATFORD SQUARE SALLY'S BEAUTY
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 411 BARNUM AVE. SALLY'S BEAUTY CANISTER #5804 16-Feb-12 8-HOUR AVG.		INDOOR AIR 411 BARNUM AVE. SALLY'S BEAUTY CANISTER #20844 16-Aug-12 8-HOUR AVG.	
	(ppb/v)	($\mu g/m^3$)	(ppb/v)	($\mu g/m^3$)
Trichloroethene	ND (0.12)	ND (0.64)	ND (0.13)	ND (0.70)
1,1,-Dichloroethylene	ND (0.12)	ND (0.48)	ND (0.13)	ND (0.52)
1,1-Dichloroethane	ND (0.12)	ND (0.49)	ND (0.13)	ND (0.52)
Benzene	0.60	1.9	0.24	0.77
Chorobenzene	ND (0.12)	ND (0.56)	ND (0.13)	ND (0.61)
Chloroform	ND (0.12)	ND (0.59)	ND (0.13)	ND (0.64)
Ethylbenzene	0.31	1.3	0.29	1.3
Vinyl Chloride	ND (0.12)	ND (0.31)	ND (0.13)	ND (0.33)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range

INDOOR AIR and SOIL GAS FEBRUARY and AUGUST 2012 COC DATA COMPARISON
411 BARNUM AVE. STRATFORD SQUARE SLEEPY'S
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 411 BARNUM AVE. SLEEPY'S CANISTER #20857 16-Feb-12 8-HOUR AVG.		INDOOR AIR 411 BARNUM AVE. SLEEPY'S CANISTER #20849 16-Aug-12 8-HOUR AVG.	
	(ppb/v)	($\mu g/m^3$)	(ppb/v)	($\mu g/m^3$)
Trichloroethene	2.4	13	2.1	11
1,1,-Dichloroethylene	ND (0.11)	ND (0.44)	ND (0.24)	ND (0.95)
1,1-Dichloroethane	ND (0.11)	ND (0.44)	ND (0.24)	ND (0.95)
Benzene	1.0	3.2	0.83	2.6
Chorobenzene	ND (0.11)	ND (0.51)	ND (0.24)	ND (1.1)
Chloroform	ND (0.11)	ND (0.54)	ND (0.24)	ND (1.2)
Ethylbenzene	0.95	4.1	1.4	6.1
Vinyl Chloride	ND (0.11)	ND (0.28)	ND (0.24)	ND (0.61)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range

INDOOR AIR and SOIL GAS FEBRUARY and AUGUST 2012 COC DATA COMPARISON
411 BARNUM AVE. STRATFORD SQUARE PAYLESS SHOE
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 411 BARNUM AVE. PAYLESS SHOE BACK OF STORE CANISTER #13498 16-Feb-12 8-HOUR AVG.		INDOOR AIR 411 BARNUM AVE. PAYLESS SHOE BACK OF STORE CANISTER #15049 16-Aug-12 8-HOUR AVG.		INDOOR AIR 411 BARNUM AVE. PAYLESS SHOE CANISTER #15054 16-Aug-12 8-HOUR AVG.	
	(ppb/v)	(µg/m^3)	(ppb/v)	(µg/m^3)	(ppb/v)	(µg/m^3)
Trichloroethene	1.1	5.7	0.25	1.3	0.32	1.7
1,1,-Dichloroethylene	ND (0.12)	ND (0.48)	ND (0.11)	ND (0.44)	ND (0.09)	ND (0.36)
1,1-Dichloroethane	ND (0.12)	ND (0.48)	ND (0.11)	ND (0.44)	ND (0.09)	ND (0.36)
Benzene	7.4	24	3.0	9.6	3.5	11
Chorobenzene	ND (0.12)	ND (0.56)	ND (0.11)	ND (0.51)	ND (0.09)	ND (0.42
Chloroform	0.23	1.1	0.22	1.1	ND (0.09)	ND (0.44)
Ethylbenzene	11	49	7.0	30	7.4	32
Vinyl Chloride	ND (0.12)	ND (0.31)	ND (0.11)	ND (0.28)	ND (0.09)	ND (0.23)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range

INDOOR AIR and SOIL GAS FEBRUARY and AUGUST 2012 COC DATA COMPARISON
411 BARNUM AVE. STRATFORD SQUARE FASHION BUG
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 411 BARNUM AVE. FASHION BUG CANISTER #4742 16-Feb-12 8-HOUR AVG.		INDOOR AIR 411 BARNUM AVE. FASHION BUG CANISTER #22687 16-Aug-12 8-HOUR AVG.	
	(ppb/v)	($\mu g/m^3$)	(ppb/v)	($\mu g/m^3$)
Trichloroethene	0.23	1.2	0.13	0.70
1,1-Dichloroethylene	ND (0.12)	ND (0.48)	ND (0.09)	ND (0.36)
1,1-Dichloroethane	ND (0.12)	ND (0.48)	ND (0.09)	ND (0.36)
Benzene	0.96	3.1	0.21	0.67
Chorobenzene	ND (0.12)	ND (0.56)	ND (0.09)	ND (0.42)
Chloroform	ND (0.12)	ND (0.59)	ND (0.09)	ND (0.44)
Ethylbenzene	0.51	2.2	0.19	0.82
Vinyl Chloride	ND (0.12)	ND (0.31)	ND (0.09)	ND (0.23)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range

INDOOR AIR and SOIL GAS FEBRUARY and AUGUST 2012 COC DATA COMPARISON
411 BARNUM AVE. STRATFORD SQUARE MARSHALLS
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 411 BARNUM AVE. MARSHALLS BACKROOM CANISTER #6558 16-Feb-12 8-HOUR AVG.		INDOOR AIR 411 BARNUM AVE. MARSHALLS BACKROOM CANISTER #5792 16-Aug-12 8-HOUR AVG.		INDOOR AIR 411 BARNUM AVE. MARSHALLS SHOPPING AREA CANISTER #3048 16-Feb-12 8-HOUR AVG.		INDOOR AIR 411 BARNUM AVE. MARSHALLS SHOPPING AREA CANISTER #22684 16-Aug-12 8-HOUR AVG.	
	(ppb/v)	($\mu g/m^3$)	(ppb/v)	($\mu g/m^3$)	(ppb/v)	($\mu g/m^3$)	(ppb/v)	($\mu g/m^3$)
Trichloroethene	0.08 L	0.43 L	ND (0.10)	ND (0.54)	ND (0.12)	ND (0.64)	ND (0.09)	ND (0.48)
1,1-Dichloroethylene	ND (0.13)	ND (0.52)	ND (0.10)	ND (0.40)	ND (0.12)	ND (0.48)	ND (0.09)	ND (0.36)
1,1-Dichloroethane	ND (0.13)	ND (0.53)	ND (0.10)	ND (0.40)	ND (0.12)	ND (0.48)	ND (0.09)	ND (0.36)
Benzene	0.68	2.2	0.32	1.0	0.86	2.7	0.34	1.1
Chorobenzene	ND (0.13)	ND (0.61)	ND (0.10)	ND (0.46)	ND (0.12)	ND (0.56)	ND (0.09)	ND (0.42)
Chloroform	ND (0.13)	ND (0.64)	ND (0.10)	ND (0.49)	ND (0.12)	ND (0.59)	ND (0.09)	ND (0.44)
Ethylbenzene	0.53	2.3	0.50	2.2	0.66	2.9	0.49	2.1
Vinyl Chloride	ND (0.33)	ND (0.33)	ND (0.10)	ND (0.26)	ND (0.12)	ND (0.31)	ND (0.09)	ND (0.23)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range

INDOOR AIR and SOIL GAS FEBRUARY and AUGUST 2012 COC DATA COMPARISON
411 BARNUM AVE. STRATFORD SQUARE GAME STOP
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 411 BARNUM AVE. GAME STOP CANISTER #1589 16-Feb-12 8-HOUR AVG.		INDOOR AIR 411 BARNUM AVE. GAME STOP CANISTER #12568 16-Aug-12 8-HOUR AVG.	
	(ppb/v)	(µg/m^3)	(ppb/v)	(µg/m^3)
Trichloroethene	ND (0.16)	ND (0.86)	ND (0.10)	ND (0.54)
1,1-Dichloroethylene	ND (0.16)	ND (0.64)	ND (0.10)	ND (0.40)
1,1-Dichloroethane	ND (0.16)	ND (0.65)	ND (0.10)	ND (0.40)
Benzene	0.59	1.9	0.14	0.45
Chorobenzene	ND (0.16)	ND (0.75)	ND (0.10)	ND (0.46)
Chloroform	ND (0.16)	ND (0.78)	ND (0.10)	ND (0.49)
Ethylbenzene	0.22	0.95	0.09 L	0.39 L
Vinyl Chloride	ND (0.16)	ND (0.41)	ND (0.10)	ND (0.26)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range

INDOOR AIR and SOIL GAS FEBRUARY and AUGUST 2012 COC DATA COMPARISON
411 BARNUM AVE. STRATFORD SQUARE T-MOBILE
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 411 BARNUM AVE. T-MOBILE CANISTER #6581 16-Feb-12 8-HOUR AVG.		INDOOR AIR 411 BARNUM AVE. T-MOBILE CANISTER #14891 16-Aug-12 8-HOUR AVG.	
	(ppb/v)	(µg/m^3)	(ppb/v)	(µg/m^3)
Trichloroethene	ND (0.13)	ND (0.70)	0.50	2.7
1,1-Dichloroethylene	ND (0.13)	ND (0.52)	ND (0.42)	ND (1.7)
1,1-Dichloroethane	ND (0.13)	ND (0.52)	ND (0.42)	ND (1.7)
Benzene	0.48	1.5	0.21 L	0.67 L
Chorobenzene	ND (0.13)	ND (0.61)	ND (0.42)	ND (2.0)
Chloroform	ND (0.13)	ND (0.64)	ND (0.42)	ND (2.1)
Ethylbenzene	0.15	0.65	ND (0.42)	ND (1.8)
Vinyl Chloride	ND (0.13)	ND (0.33)	ND (0.42)	ND (1.1)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range

INDOOR AIR and SOIL GAS FEBRUARY and AUGUST 2012 COC DATA COMPARISON
411 BARNUM AVE. STRATFORD SQUARE REGAL CINEMA
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 411 BARNUM AVE. REGAL CINEMA THEATER #8 CANISTER #5567 16-Feb-12 8-HOUR AVG.		INDOOR AIR 411 BARNUM AVE. REGAL CINEMA THEATER #8 CANISTER #15053 16-Aug-12 8-HOUR AVG.		INDOOR AIR 411 BARNUM AVE. REGAL CINEMA THEATER #11 CANISTER #6553 16-Feb-12 8-HOUR AVG.		INDOOR AIR 411 BARNUM AVE. REGAL CINEMA THEATER #11 CANISTER #20850 16-Aug-12 8-HOUR AVG.		INDOOR AIR 411 BARNUM AVE. REGAL CINEMA PROJECTION BOOTH CANISTER #6463 16-Feb-12 8-HOUR AVG.		INDOOR AIR 411 BARNUM AVE. REGAL CINEMA PROJECTION BOOTH CANISTER #22693 16-Aug-12 8-HOUR AVG.	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)
Trichloroethene	ND (0.11)	ND (0.59)	ND (0.10)	ND (0.54)	ND (0.13)	ND (0.70)	ND (0.11)	ND (0.59)	ND (0.12)	ND (0.64)	ND (0.11)	ND (0.59)
1,1-Dichloroethylene	ND (0.11)	ND (0.44)	ND (0.10)	ND (0.40)	ND (0.13)	ND (0.52)	ND (0.11)	ND (0.44)	ND (0.12)	ND (0.48)	ND (0.11)	ND (0.44)
1,1-Dichloroethane	ND (0.11)	ND (0.44)	ND (0.10)	ND (0.40)	ND (0.13)	ND (0.52)	ND (0.11)	ND (0.44)	ND (0.12)	ND (0.48)	ND (0.11)	ND (0.44)
Benzene	0.31	0.99	ND (0.10)	ND (0.32)	0.28	0.89	0.10 L	0.32 L	0.30	0.96	0.08 L	0.26 L
Chorobenzene	ND (0.11)	ND (0.51)	ND (0.10)	ND (0.46)	ND (0.13)	ND (0.61)	ND (0.11)	ND (0.51)	ND (0.12)	ND (0.56)	ND (0.11)	ND (0.51)
Chloroform	ND (0.11)	ND (0.54)	ND (0.10)	ND (0.49)	ND (0.13)	ND (0.64)	ND (0.11)	ND (0.54)	ND (0.12)	ND (0.59)	ND (0.11)	ND (0.54)
Ethylbenzene	ND (0.11)	ND (0.48)	ND (0.10)	ND (0.43)	ND (0.13)	ND (0.57)	ND (0.11)	ND (0.48)	ND (0.12)	ND (0.52)	ND (0.11)	ND (0.48)
Vinyl Chloride	ND (0.11)	ND (0.28)	ND (0.10)	ND (0.26)	ND (0.13)	ND (0.33)	ND (0.11)	ND (0.28)	ND (0.12)	ND (0.31)	ND (0.11)	ND (0.28)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range

APPENDIX G

COMPOUND PRODUCT USE DESCRIPTION

COMPOUND	PRODUCT USE
1, 1,1-trichloroethane	no 1,1,1-trichloroethane is supposed to be manufactured for domestic use in the US after January 1, 2002; it had many industrial and household uses, including use as a solvent to dissolve other substances, such as glues and paints, to remove oil or grease from manufactured metal parts and as an ingredient of household products such as spot cleaners, glues, and aerosol sprays
1,1,2,2-tetrachloroethane	in the past was used in large amounts to produce other chemicals, as an industrial solvent to clean and degrease metals and as an ingredient in paints and pesticides; commercial production for these uses has stopped in the US, presently used only as a chemical intermediate in the production of other chemicals
1,1,2-trichloroethane	used as a solvent and as an intermediate in the production of the chemical 1,1-dichloroethane; is sometimes present as an impurity in other chemicals and it may be formed when another chemical breaks down in the environment under conditions where there is no air
1,1-dichloroethane	in the past was used as a surgical anesthetic, but it is no longer used this way; today it is used primarily to make other chemicals, to dissolve substances such as paint, varnish, and finish removers, and to remove grease
1,1-dichloroethylene	used to make certain plastics, such as flexible films like food wrap and in packaging materials; used to make flame retardant coatings for fiber and carpet backings and in piping, coating for steel pipes and in adhesive applications
1,2,4-trichlorobenzene	used as a solvent to make dyes, pesticides and other chemicals, added to dielectric fluids, transformer oils, cleaners, and lubricants; a gasoline additive; occurs naturally in coal tar and petroleum
1, 2, 4-trimethylbenzene	used as an industrial solvent, paint thinner and in the manufacture of dyes, perfumes, resins, chemical intermediates and pharmaceuticals; enters the environment primarily from gasoline evaporation and as an emission from gasoline-powered vehicles, municipal waste-treatment plants, and coal-fired power stations; emitted from many building materials including: vinyl & rubber molding, particle board, linoleum tile, tar paper, telephone cable, latex paint, foam & duct insulation, urethane sealant, adhesives, latex caulk, and carpet occurs
1,2-dibromoethane	manufactured chemical and also occurs naturally in small amounts in the ocean where it is formed, probably by algae and kelp; used as a pesticide in soil and on citrus, vegetable and grain crops, most of these uses have been stopped by the EPA since 1984; was used as an additive in leaded gasoline, however since leaded gasoline is now banned, it is no longer used for this purpose; uses today include treatment of logs for termites and beetles, control of moths in beehives, as a solvent, as a preparation for dyes and waxes and in waterproofing preparations
1,2-dichlorobenzene	used as a fumigant, solvent, chemical intermediate and to make insecticides
1,2-dichloroethane	manufactured chemical that is not found naturally in the environment; most common use is in the production of vinyl chloride which is used to make a variety of plastic and vinyl products including PVC pipes, furniture and automobile upholstery, wall coverings, house wares and automobile parts; used as a solvent, fumigant, degreaser, paint thinner; added to leaded gasoline to remove lead

COMPOUND	PRODUCT USE
1,2-dichloropropane	does not occur naturally in the environment; production in the US has declined over the past 20 years; was used in the past as a soil fumigant, chemical intermediate and industrial solvent and was found in paint strippers, varnishes and furniture finish removers; most of these uses were discontinued; today used as a chemical intermediate to make perchloroethylene and several other related chlorinated chemical
1, 3, 5-trimethylbenzene	used as an industrial solvent, paint thinner and in the manufacture of dyes, perfumes, resins, chemical intermediates and pharmaceuticals; enters the environment primarily from gasoline evaporation and as an emission from gasoline-powered vehicles, municipal waste-treatment plants, and coal-fired power stations; emitted from many building materials including: vinyl & rubber molding, particle board, linoleum tile, tar paper, telephone cable, latex paint, foam & duct insulation, urethane sealant, adhesives, latex caulk and carpet
1, 3-butadiene	made from the processing of petroleum; about 75% manufactured is used to make synthetic rubber, which is widely used for tires on cars and trucks; used to make plastics including acrylics; small amounts are found in gasoline, automobile exhaust, cigarette smoke and wood fires
1,3-dichlorobenzene	used to make herbicides, insecticides, medicine and dyes
1,4-dichlorobenzene	used as a fumigant to control mildew and mold; used to make insecticides
2-hexanone	used in the past in paint and paint thinner, to make other chemical substances and to dissolve oils and waxes; no longer made or used in the US because it has harmful health effects; formed as a waste product resulting from industrial activities such as making wood pulp and producing gas from coal and in oil shale operations
4-ethyltoluene	man-made chemical used principally as an additive to petroleum; used as a solvent in a variety of industrial, agricultural and domestic products; major release route to the atmosphere is from evaporation of petroleum during production, transport and refueling and from car exhausts; released when used as a solvent
acrylonitrile	used to make other chemicals such as plastics, synthetic rubber and acrylic fibers; a mixture of acrylonitrile and carbon tetrachloride was used as a pesticide in the past; all uses in pesticide have stopped
ally chloride	used to make epichlorohydrin and glycerin; used in the synthesis of allyl compounds such as allyl alcohol, allyl amines, allyl esters and polyesters; derivatives are found in varnish, plastics, adhesives, perfumes, insecticides and pharmaceuticals
benzene	widely used in the US; some industries use it to make other chemicals which are used to make plastics, resins, nylon and synthetic fibers; used to make some types of rubbers, lubricants, dyes, detergents, drugs and pesticides; natural sources include volcanoes and forest fires; a natural part of crude oil and gasoline; found in industrial emissions, waste and storage operations, motor vehicle exhaust, evaporation from gasoline service stations and tobacco smoke
benzylchloride	used as a chemical intermediate in the manufacture of certain dyes, lubricants, gasoline and pharmaceutical products and as a photographic developer; emissions from floor tile plasticized by butyl benzyl phthalate have been reported; has been detected in emissions from the burning of polyvinyl chloride, neoprene and rigid urethane foam compounds

COMPOUND	PRODUCT USE
bromodichloromethane	small amounts are formed naturally by algae in the oceans; only small quantities are produced in the US; small quantities that are produced are used in laboratories or to make other chemicals; most is formed as a by-product when chlorine is added to drinking water to kill bacteria
bromoform	small amounts are formed naturally by plants in the ocean; formed as byproducts when chlorine is added to drinking water to kill bacteria; were used in the past as solvents and flame retardants, or to make other chemicals; small quantities are produced in the US and used mainly as laboratory reagents
carbon tetrachloride	manufactured chemical that does not occur naturally; was used in the production of refrigeration fluid and propellants for aerosol cans, as a pesticide, as a cleaning fluid and degreasing agent, in fire extinguishers and in spot removers; these uses are now banned and it is only used in some industrial applications
chlorobenzene	does not occur naturally in the environment; production in the US has declined by more than 60% from its peak in 1960; was used in the past to make other chemicals, such as phenol and DDT; now chlorobenzene is used as a solvent for some pesticide formulations, to degrease automobile parts, and as a chemical intermediate to make several other chemicals
chloroethane	In the past was used in leaded gasoline; used in the production of cellulose, dyes, medicinal drugs, and other commercial products and as a solvent and refrigerant; used to numb the skin before medical procedures such as ear piercing and skin biopsies and as a treatment in sports injuries
chloroform	used to make other chemicals and can also be formed in small amounts when chlorine is added to water
cyclohexane	occurs naturally in petroleum crude oil, in volcanic gases, and in cigarette smoke; used to make nylon, benzene, cyclohexanone, nitrocyclohexane, adhesives and perfumes; added to lacquers and resins, paint and varnish removers and fungicides; used as a fuel for camp stoves
dibromochloromethane	small amounts are formed naturally by plants in the ocean; formed as byproducts when chlorine is added to drinking water to kill bacteria; were used in the past as solvents and flame retardants or to make other chemicals; small quantities are produced in the US and used mainly as laboratory reagents
dichlorodifluoromethane	used as a refrigerant in air conditioning systems, as a blowing or foaming agent for aerosols, in fire extinguishers; banned in the US along with many other countries in 1994
dichlorotetrafluoromethane	used as a refrigerant in air conditioning systems, as a blowing or foaming agent for aerosols, in fire extinguishers
dichlorotetrafluoroethane	primary use has been as a refrigerant; found in consumer products, such as hair mousse and hairspray aerosol
ethylbenzene	found in natural products such as coal tar and petroleum; found in manufactured products such as inks, insecticides and paints; used primarily to make styrene; used as a solvent and in fuels; releases into the air occur from burning oil, gas and coal

COMPOUND	PRODUCT USE
heptane	produced and used as a solvent in organic synthesis and as a standard for octane-rating determinations; found in gasoline and petroleum-based products
hexachloro-1,3-butadiene	not found naturally in the environment, formed when other chemicals are made; mainly used to make rubber compounds; used as a solvent and to make lubricants, used in gyroscopes, as a heat transfer liquid and as a hydraulic fluid
hexane	made from crude oil; pure *n*-Hexane is used in laboratories; mixed with similar chemicals called solvents and used to extract vegetable oils from crops such as soybeans; these solvents are also used as cleaning agents in the printing, textile, furniture, and shoemaking industries; used in certain kinds of special glues used in the roofing, shoe and leather industries; contained in several consumer products, such as gasoline, quick-drying glues and rubber cement, used in various hobbies
methyl ethyl ketone	manufactured chemical but it is also present in the environment from natural sources; produced in large quantities, nearly half of its use is in paints and other coatings; used in glues and as a cleaning agent; made by some trees and found in some fruits and vegetables in small amounts; also released to the air from car and truck exhausts
methyl isobutyl ketone	occurs naturally in certain foods and beverages; added to protective surface coatings, adhesives, printing ink, and special lubricating oils; used to make pesticides and to separate and purify several other organic; used to make textiles and leather; exposure can occur when people use certain paints, varnishes, or glues
methyl-t-butyl ether	was used since the 1980s as an additive for unleaded gasoline to achieve more efficient burning, today it is not being used and has been replaced by ethanol
methylbromide	manufactured chemical; also occurs naturally in small amounts in the ocean where it is formed, probably by algae and kelp; used to kill a variety of pests including rats, insects and fungi; used to make other chemicals or as a solvent to get oil out of nuts, seeds, and wool
methylchloride	used as a methylating agent, laboratory reagent, refrigerant, aerosol propellant, pesticide, fumigant, fire-extinguishing agent, anesthetic, degreaser, blowing agent for plastic foam and chemical intermediate; present at very low concentrations throughout the atmosphere
methylene chloride	does not occur naturally in the environment; used as an industrial solvent and as a paint stripper; found in some aerosol and pesticide products; used in the manufacture of photographic film
styrene	found in insulation, fiberglass, plastic pipes, automobile parts, shoes, drinking cups and other food containers, carpet backing, tobacco smoke, automobile exhaust and off gases from photocopy machines; used to make plastics and rubber; occurs naturally in a variety of foods such as fruits, vegetables, nuts, beverages and meats
tetrachloroethene	used in dry cleaning and metal degreasing; used to make other chemicals and is used in some consumer products
tetrahydrofuran	used as a solvent for PVC, natural and synthetic resins; used as a monomer and chemical intermediate; used in varnishes
toluene	occurs naturally in crude oil and in the tolu tree; produced in the process of making gasoline and other fuels from crude oil and making coke from coal; used in making paints, paint thinners, fingernail polish, lacquers, adhesives and rubber and in some printing and leather tanning processes; found in automobile exhaust and tobacco smoke

COMPOUND	PRODUCT USE
trichloroethene	used mainly as a solvent to remove grease from metal parts, is an ingredient in adhesives, paint removers, typewriter correction fluids and spot removers
trichlorofluoromethane	was used in consumer products including hair sprays, deodorants and cosmetics, in products to control home and garden insects and pests, in cleaners, spray paints and floor and furniture polish; in industry it was used as a refrigerant, to make foam and as an active part of liquid-type fire extinguishers; it is no longer made in the US
trichlorotrifluoroethane	does not occur naturally; EPA restricted production and after 1995 was significantly lower; used to clean metal surfaces, as a coolant in commercial and industrial air conditioners, as an ingredient in aerosols sprays, by foam makers as a blowing agent, to make high temperature lubricants and fluorocarbon resins and as a dry cleaning solvent
vinyl bromide	used primarily in the production of polymers and copolymers; used in polymers as a flame retardant and in the production of monoacrylic fibers for carpet-backing material; combined with acrylonitrile as a co-monomer, used to produce fabrics and fabric blends used in sleepwear (mostly children's) and home furnishings; when copolymerized with vinyl acetate and maleic anhydride, used to produce granular products; copolymers of vinyl chloride and vinyl bromide are used to prepare films, for impregnating or laminating fibers, and as rubber substitutes; used in leather and fabricated metal products
vinyl chloride	manufactured substance that does not occur naturally; formed when other substances such as trichloroethane, trichloroethylene, and tetrachloroethylene are broken down; used to make PVC, which is used to make a variety of plastic products, including pipes, wire and cable coatings and packaging materials.
cis-1,2-dichloroethene	used to produce solvents and in chemical mixtures
cis-1,3-dichloropropene	used mainly in farming as a pesticide
m/p/o-xylenes	occurs naturally in petroleum and coal tar; chemical industries produce xylene from petroleum; used as a solvent and in the printing, rubber, and leather industries; used as a cleaning agent, a thinner for paint and in paints and varnishes; found in small amounts in airplane fuel and gasoline and cigarette smoke
trans-1,2-dichloroethene	used to produce solvents and in chemical mixtures
trans-1,3-dichloropropene	used mainly in farming as a pesticide

Information Sources: http://www.atsdr.cdc.gov
http://www.epa.gov/chemicalfact/
http://www.epa.gov/ttn/atw/
http://web.doh.state.nj.us

335 FERRY BOULEVARD INDOOR AIR SOIL VAPOR INTRUSION STUDY REPORT

Raymark Site, OU-2
Stratford, CT

DECEMBER 12, 2013

U.S. ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND REGIONAL LABORATORY
OFFICE OF ENVIRONMENTAL MEASUREMENT & EVALUATION
11 TECHNOLOGY DRIVE
NORTH CHELMSFORD, MASSACHUSETTS 01863

Prepared for: Office of Site Remediation & Restoration, Remedial Program
U.S. Environmental Protection Agency, New England

Prepared by: _____ Date: 12/24/13
Peter R. Kahn, ECA Air Monitoring Team Engineer

Reviewed by: _____ Date: 12/24/13
Robert Judge, ECA Air Monitoring Team Leader

TABLE OF CONTENTS

Section	Title	Page No.
1.0	Introduction	4
	1.1 Site Description and Background	4
2.0	Sampling Objective	5
	2.1 Target Compounds	6
	2.2 Data Use and Reporting	6
3.0	Sampling Locations	6
4.0	Canister VOC Air Sampling and Analytical Methodologies	14
	4.1 Description	14
	4.2 Canister Cleaning and Leak Certification Procedures	14
	4.2.1 Canister Cleaning Procedure	14
	4.2.2 Canister Leak Certification Procedure	14
	4.2.3 Canister Cleanliness Certification Procedure	15
	4.3 Canister Flow Controller Cleaning and Calibration Procedures	15
	4.3.1 Flow Controller Calibration Procedure	15
	4.3.2 Flow Controller Cleaning Procedure	15
	4.4 Canister Analysis Quality Control/Quality Assurance Results	15
	4.4.1 Laboratory Blank	15
	4.4.2 Data Reproducibility/Precision Results	16
	4.4.3 Data Accuracy Results	16
	4.4.4 Canister Surrogate Spiking Results	16
	4.4.5 Chain of Custody	16
	4.4.6 Data Validation and Usability	17
5.0	Soil Gas Sampling and Analysis Methodology for VOCs	17
	5.1 Soil Gas Sampling Procedures	17
	5.1.1 Sub-Slab Soil Gas Sampling Procedures	17
6.0	Meteorological Measurement	17
	6.1 Ambient Air Meteorological Data	17
7.0	Indoor Air and Soil Gas Sampling Results and Discussions	18
	7.1 Tetrachloroethene Sampling Results and Discussions	19
	7.2 1, 1-Dichloroethylene Sampling Results and Discussions	19
	7.3 1, 1-Dichloroethane Sampling Results and Discussions	20
	7.4 Benzene Sampling Results and Discussions	21
	7.5 Chlorobenzene Sampling Results and Discussions	21
	7.6 Chloroform Sampling Results and Discussions	22
	7.7 Ethylbenzene Sampling Results and Discussions	23
	7.8 Vinyl Chloride Sampling Results and Discussions	24
	7.9 Indoor Air and Soil Gas February 2012, August 2012 and December 2013 COC Data Comparison	25
	7.10 Non-target Compounds Sampling Results and Discussions	26

TABLE OF CONTENTS

Section	Title	Page No.
Tables		27
Table 1 – EPA Method TO15 Target VOC List		28
Table 2 – Duplicate Air Sampling Results		29
Table 3 – Ambient/Background Air Data Summary		30
Table 4 – 335 Ferry Blvd. Indoor Air and Ambient Air Sampling Results Summary		31
Table 5 – 335 Ferry Blvd. Soil Gas Sampling Results		32
Table 6 – 335 Ferry Blvd. Indoor Air and Soil Gas February, August 2013 December 2013 COC Data Comparison		33
Appendix A – Meteorological Data		34
Appendix B – - Laboratory Analytical Report		37
Appendix C – Compound Product Use Description		67

1.0 Introduction

On December 12, 2013 at the request of Ron Jennings, Remedial Project Manager (RPM), the EPA New England, Office of Environmental Measurement and Evaluation (OEME) performed indoor air and sub-slab soil gas sampling inside the commercial building located at 335 Ferry Boulevard. During February and August 2012 the same sampling was performed to obtain data representative of the heating and non-heating seasons. After reviewing the 2012 data, EPA determined sampling should be performed again to evaluate whether target VOCs detected during the August survey were associated with sources identified inside the building or from the contaminated groundwater plume underlying the building. The results of the February (heating season), August (non-heating season) and the December 2013 third round of sampling will be used to form lines of evidence for completion of a vapor intrusion pathway risk evaluation related to contaminants associated with the Raymark Site. Peter Kahn was the EPA sampling project manager for this study and was responsible for the following tasks: write the Sampling and Analysis Plan (SAP), communicate all aspects of the project to the RPM, coordinate EPA laboratory analytical support with OEME laboratory personnel, collect ambient and indoor air canister samples, canister soil gas samples and prepare the final report for these activities. Dan Curran operated the EPA Region 1 Laboratory GC/MS which was used to analyze indoor air, ambient air and soil gas canister samples. This report will be distributed to Ron Jennings and all other interested parties.

1.1 Site Description and Background

The Raymark Industries, Inc. Superfund Site (the Site) consists of 500 plus acres of land located in Stratford, Fairfield County, Connecticut (CT). Raymark Industries, Inc. operated for 70 years from 1919 until 1989 manufacturing automotive and heavy brake friction components. During its operation, Raymark waste was disposed of as "fill" material in various locations in Stratford, including the Raymark Facility, various commercial and residential properties, and in wetlands adjacent to the Housatonic River. In 1993 the Agency for Toxic Substances and Disease Registry (ATSDR) performed a health assessment in response to a citizen petition and shortly thereafter issued a Public Health Advisory for the Raymark Facility and locations around the Town of Stratford where manufacturing wastes from the former Raymark Facility had come to be located. EPA listed the Site on EPA's National Priorities list (NPL) of Superfund sites on April 25, 1995. A public water supply provides drinking water to the area of concern for Raymark waste. There is no known use of groundwater for any purpose in the area. The Site includes the (former) Raymark Industries, Inc. Facility and other locations where Raymark waste has come to be located. Raymark Industries, Inc. is bankrupt, and the cleanup is being conducted by the EPA, in coordination with CTDEEP.

The site has been divided into nine parts or Operable Units (OUs). For the purposes of this SAP, the work falls under Operable Unit 2: Groundwater (Site wide). The groundwater investigation focuses on a 500 acre area extending from the Facility to a surface water body (Ferry Creek) to the Housatonic River. Contaminants in the groundwater include volatile organic compounds (VOCs) and metals. During 2000-2002 extensive groundwater, soil gas, indoor air and sub-slab evaluations were performed, which found VOCs to be volatilizing from the groundwater into buildings

(primarily residential dwellings). As a result, during 2003-2004, EPA and CTDEEP installed 106 sub-slab ventilation systems into residential homes, two of which were commercial buildings, to mitigate potential vapor intrusion and human health exposure. During February and August 2012 vapor intrusion sampling was performed by EPA New England OEME personnel at nine commercial properties and four condominium/ apartments to form lines of evidence for completion of a vapor intrusion pathway risk evaluation. After reviewing the 2012 data, EPA determined the commercial property located at 335 Ferry Boulevard should be sampled again to evaluate whether target VOCs detected during the survey continue to be associated with sources identified inside the building during the August 2012 survey or from the contaminated groundwater underlying the building.

2.0 Sampling Objective

RPM Ron Jennings requested indoor air and sub-slab soil gas sampling be collected inside the commercial building located at 335 Ferry Boulevard to form lines of evidence for completion of a vapor intrusion pathway risk evaluation related to contaminants associated with the Site. The building has a concrete slab on-grade foundation where three sub-slab soil gas sampling ports were installed by EPA.

Soil gas canister grab samples were collected from 3 sub-slab sampling locations and two indoor air samples were collected from the lower floor and two from the upper floor over an 8-hour period. Indoor air data will be compared to a corresponding background outdoor air sample that was collected outside the building. For quality control purposes, one collocated canister sample was collected. All canister samples were analyzed for the VOCs listed on Table 1, particularly the target compounds trichloroethene (TCE), 1,1-dichloroethene (1,1-DCE), 1, 1-dichloroethane (1, 1-DCA), benzene, chlorobenzene, chloroform, ethylbenzene and vinyl chloride (VC) using a GC/MS.

Three sub-slab soil gas sampling probes were installed thorough the lower floor concrete slab during February and August 2012 by Peter Kahn. Canister sub-slab soil gas samples were collected using EPA Region I Standard Operating Procedure for Sub-Slab Soil Gas Sampling, April 1, 2011, Revision 2. The samples were analyzed at the EPA Regional Laboratory using a GC/MS.

The collected data will be compared to the EPA Regional Screening Levels (RSL). Screening levels for the target compounds are provided in the table below and on Table 1.

Compound	EPA RSL Industrial Air[1]	EPA Region 1 Reporting Limits[2]
Trichloroethene	3.0 µg/m^3	0.27 µg/m^3
1,1-Dichloroethene	880 µg/m^3	0.20 µg/m^3
1,1-Dichloroethane	7.7 µg/m^3	0.20 µg/m^3
Benzene	1.6 µg/m^3	0.16 µg/m^3
Chlorobenzene	220 µg/m^3	0.23 µg/m^3
Chloroform	0.53 µg/m^3	0.24 µg/m^3
Ethylbenzene	4.9 µg/m^3	0.22 µg/m^3
Vinyl Chloride	2.8 µg/m^3	0.13 µg/m^3

[1] EPA RSL = EPA Regional Screening Level (May 2012); based on $1x10^{-6}$ cancer risk or hazard quotient of 1.0.
[2] Reporting limits are shown without dilutions; any sample dilutions will increase these limits.

2.1 Target Compounds

As noted above the primary contaminant of concern for this project are TCE, 1, 1-DCE, 1, 1-DCA, benzene, chlorobenzene, chloroform, ethylbenzene and VC.

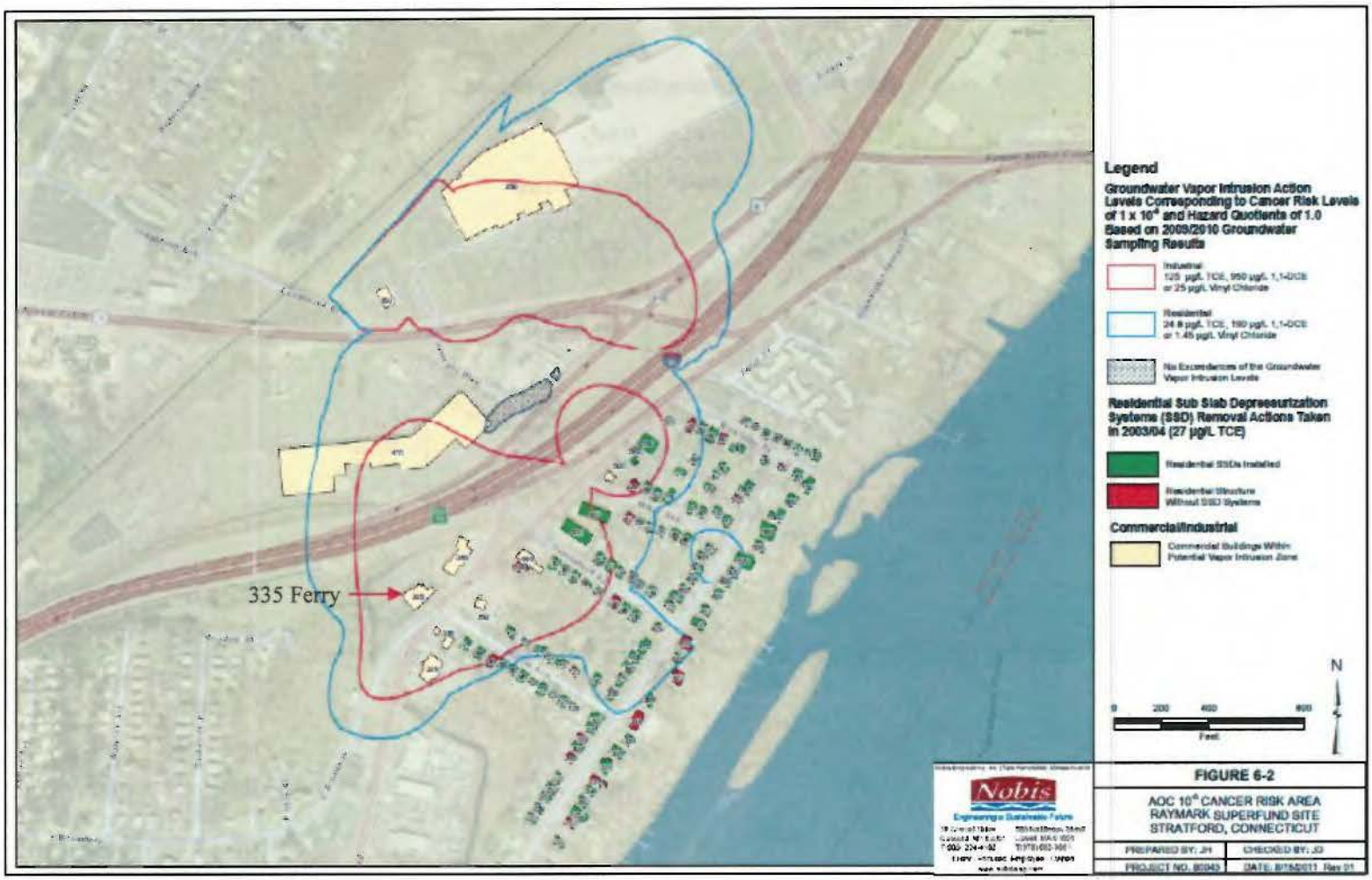
2.2 Data Use and Reporting

The results of the study are presented in this final report and will be provided to the EPA RPM and all other interested parties. This report describes the sampling and analytical procedures used for the study and the resulting data. In addition, all the sampling and quality assurance/quality control (QA/QC) data are reported in tabular form. The data reported in the laboratory's analytical report were further validated following the QC criteria described in Section 4.4. The air sampling and analytical techniques used for this study provided the necessary data to assist EPA with evaluating whether indoor air quality was adversely impacted. The data collected during February 2012, August 2012 and December 2013 will be compared to show if concentrations varied.

3.0 Sampling Locations

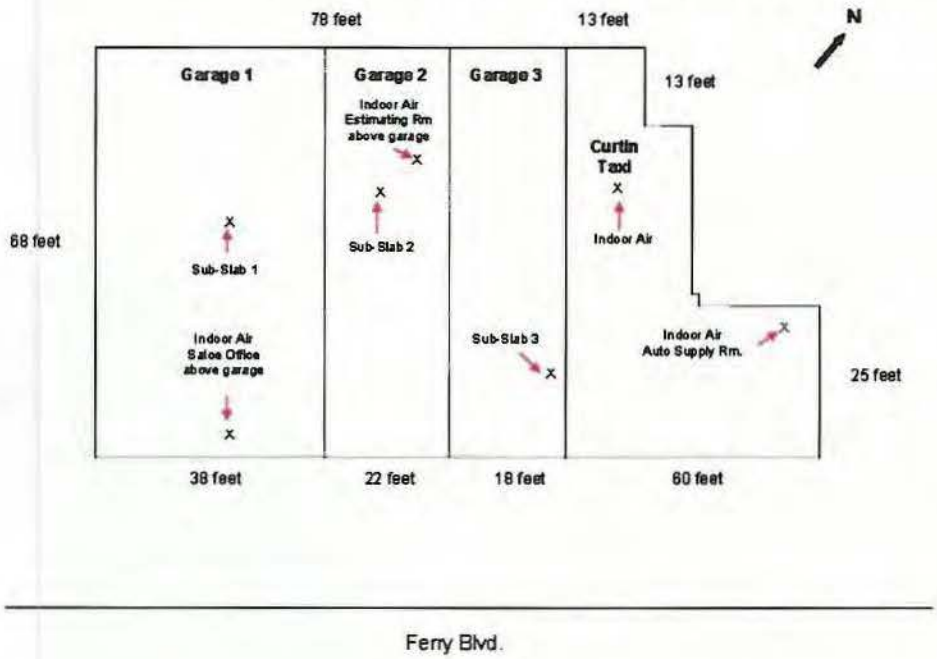
Sampling locations within the building located at 335 Ferry Boulevard were selected to represent the concentration of target compounds in the soil gas underneath the building's concrete foundation and the indoor air. The same sampling locations established for the February and August 2012 surveys were used during the December 2013 study, with the addition of an 8-hour indoor air sampling location in the former Curtin Taxi Auto Supply Room and an ambient air sampling location outside the building. An aerial view map of the investigation area showing the building where sampling took place is provided on the following page.

Raymark Site, OU-2
Area of Investigation Map



Provided below is a building sketch showing the sampling locations, detailed descriptions of the sampling locations and photographs of the indoor air and ambient air sampling locations.

335 Ferry Blvd. Building Sampling Locations



Scale: 1 inch = 20 feet

335 Ferry Blvd.
Back Parking Lot Looking South

Indoor Air Samples

Canister #15056 was collected in the former Curtin Taxi portion of the building, in the main room on the lower ground floor 24 feet from the north wall, 10 feet from the east wall, 9 feet from the west interior wall and 1 foot 7 inches above the floor over an 8-hour period from 08:04 to 16:04 on 12/12/13.

335 Ferry Blvd.
Indoor Air Sampling Location
Former Curtin Taxi

Canister #14898 was collected in the former Curtin Taxi portion of the building, in the Auto Supply Room on the lower ground floor 5 feet from the north wall, 3 feet 6 inches from the east wall, 3 feet 6 inches from the west interior wall and 1 foot 6 inches above the floor over an 8-hour period from 08:05 to 16:05 on 12/12/13. Also at this location, Canister #22685 was collected as a duplicate sample for obtaining precision data.

335 Ferry Blvd.
Indoor Air Sampling Location
Former Curtin Taxi Auto Supply Room

Canister #22692 was collected in Salce's receptionist office on the upper ground floor near the front entrance against the south wall 22 feet from the west wall and 4 feet above the floor over an 8-hour period from 08:18 to 16:18 on 12/12/13.

335 Ferry Blvd.
Salce Front Office Indoor Air Sampling Location

Canister #13498 was collected in the Salce's Estimating Room located in the back of the building on the upper floor above the garage area 17 feet from the north wall, 10 feet from the east wall and 4 feet above the floor over an 8-hour period from 08:17 to 16:17 on 12/12/13.

Salce Estimating Room Indoor Air Sampling Location

Sub-slab Soil Gas Samples

SS-1: To prepare the sampling probe, on 2/6/12 a 9 inch deep; 3/8 inch diameter hole was drilled through the concrete floor and sub-slab material into which a 6 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 12/12/13 a sub-slab soil gas sample was collected in garage area 1 (west end of building) below the concrete slab on-grade foundation 28 feet 6 inches from the north wall, 21 feet 9 inches from the west wall and 6 inches below the slab. A canister grab sample (Canister #4742) was collected after purging 1 liter from the probe.

SS-2: To prepare the sampling probe, on 2/6/12 a 9 inch deep; 3/8 inch diameter hole was drilled through the concrete floor and sub-slab material into which a 6 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 12/12/13 a sub-slab soil gas sample was collected in garage area 2 below the concrete slab on-grade foundation 23 feet 6 inches from the north wall, 13 feet 3 inches from the east interior wall, 8 feet 8 inches from the west interior wall and 6 inches below the slab. A canister grab sample (Canister #1565) was collected after purging 1 liter from the probe.

SS-3: To prepare the sampling probe, on 8/15/12 a 12 inch deep; 3/8 inch diameter hole was drilled through the concrete floor and sub-slab material into which a 9 inch long; ¼ inch diameter stainless steel probe and fittings were permanently installed. On 12/12/13 a sub-slab soil gas sample was collected in a garage area/office rental space formerly occupied by BrenAir below the concrete slab on-grade foundation 28 feet from the north interior wall, 17 feet 6 inches from the east wall, 53 feet 8 inches from the west wall and 9 inches below the slab. A canister grab sample (Canister #4778) was collected after purging 1 liter from the probe.

Ambient/Background Air Sample

Canister #13499 was collected over an 8-hour period from 07:56 to 15:56 on 12/12/13. The canister sampler was placed outside on the fence between the Salce's building and Schock's Auto Body, southeast of I-95, 21 meters north of the Salce building, 23 meters northwest of Shock's Auto Body and 5 feet 9 inches above the ground.

335 Ferry Blvd.
Ambient/Backgroud Air Sampling Location
Looking Southeast Towards Shock's Auto Body

Looking North Towards I-95

4.0 Canister VOC Air Sampling and Analytical Methodologies

4.1 Description

EPA Region I Standard Operating Procedure (SOP) for Canister Sampling, ECASOP-Canister Sampling SOP5, September 19, 2011, Revision 5, was used to collect the air samples. Eight hour time-weighted average (TWA) indoor air samples were collected in evacuated 6-liter canisters using mechanical flow controllers, following the procedures described in Part 2 of the Region I SOP. Detailed descriptions of the quality assurance procedures are provided in Part 3, Section 14 of the referenced SOP.

The TWA indoor air samples were collected using a 6-liter canister with a mechanical flow controller calibrated to 10 ml/min to obtain 8-hour samples. At the end of the sampling period, the final canister pressure should have been below atmospheric pressure. For this study the final canister pressures were between -7 and -10 inches of mercury vacuum. As a result, the data collected are representative of 8-hour average concentrations.

The indoor air, ambient air and soil gas canister samples were brought back to the EPA laboratory, properly logged in on 12/13/13 and analyzed on12/16/13 and 12/17/13 using a GC/MS following the EPA Region I Standard Operating Procedure, EIASOP-AIRCAN10. This analytical procedure was used to identify and quantify the VOCs listed on Table 1. Prior to analyzing the canisters, they were pressurized with nitrogen. Indoor air and soil gas concentrations can be higher than outside ambient air. Therefore, in some cases a series of dilutions were made to keep concentrations within the calibration range. As a result, a dilution factor was calculated and applied to the data. When dilutions are made to samples, the compound reporting limits tend to be higher.

4.2 Canister Cleaning and Leak Certification Procedures

4.2.1 Canister Cleaning Procedure

Prior to the sampling event, all the canisters were cleaned by placing them in ovens maintained at 150°C, evacuated to at least 10^{-2} Torr and then pressurized with humidified nitrogen to approximately 30 psig. This process was repeated three times. Detailed descriptions of these procedures are provided in the document entitled, "Canister Cleaning Standard Operating Procedures, ECASOP-Canister Cleaning SOP5, March 17, 2009, Revision 5."

4.2.2 Canister Leak Certification Procedure

At the end of the cleaning process described above, the canisters were evacuated to less than 10^{-2} Torr. A Pirani sensor was then used to measure the vacuum in each canister. The canisters were then placed on a shelf for at least 24 hours. At the conclusion of this period, the Pirani sensor was used again to measure the final canister vacuum which was compared to the initial reading to determine if the canisters show signs of leaking. Detailed descriptions of these procedures are provided in the document entitled, "Canister Leak Certification Standard Operating Procedures,

ECASOP-Canister Leak SOP4, August 9, 2007, Revision 4."

4.2.3 Canister Cleanliness Certification Procedure

After all the canisters were certified leak free, each canister was pressurized with humidified nitrogen and then analyzed for contamination using the same GC/MS used to analyze the samples. Detailed descriptions of these procedures are provided in the document entitled, "Pressurized Canisters for Clean Certification Standard Operating Procedures, ECASOP-Canister Pressurizing SOP5, EPA-REG1-OEME/CANISTER-PREP-SOP, September 19, 2011, Revision 5."

Canisters were stored under pressure until December 11, 2013, when they were re-evacuated to less than 10^{-2} Torr. Detailed descriptions of these procedures are provided in the document entitled, "Canister Evacuation Standard Operating Procedures, ECASOP-Canister Evacuation SOP4, September 19, 2011, Revision 4."

4.3 Canister Flow Controller Cleaning and Calibration Procedures

4.3.1 Flow Controller Calibration Procedure

Flow controllers to be used with the 6-liter canisters were calibrated at the EPA laboratory to 10 ml/min. to obtain 8-hour samples following the procedures provided in the EPA Region I SOP for Canister Sampling, ECASOP-Canister Sampling SOP5, September 19, 2011, Revision 5, part 2, Section 14.1. Each flow controller was connected to a "dummy" evacuated canister and an Aalborg Electronic Mass Flow Meter, Model GFMs-010020, was attached to the flow controller's inlet port. As room air was drawn into the "dummy" canister, the flow controller needle valve was adjusted until the flow rate was maintained at the desired rate.

In the field, each canister pressure was checked prior to and after the sampling event with a dedicated pressure/vacuum gauge. For this study the final canister pressures were between -7 and -10 inches of mercury vacuum. As a result, the data collected are representative of 8-hour average concentrations.

4.3.2 Flow Controller Cleaning Procedure

After the flow controllers were calibrated they were cleaned following the procedures provided in the EPA Region I SOP for Flow Controller Cleaning Standard Operating Procedures, ECASOP- Flow Controller Cleaning. SOP.Rev1, September 19, 2011. The flow controllers were placed in ovens maintained at 100°C and purged with humidified nitrogen at a minimal for one hour.

4.4 Canister Analysis Quality Control/Quality Assurance Results

4.4.1 Laboratory Blank

Humidified nitrogen was introduced into the analytical instrument inlet line prior to analyzing the canisters to serve as laboratory blanks. The laboratory blanks were analyzed to determine the background contamination present in the analytical system.

Canister data were qualified as estimated and flagged with a "B", when the observed concentration in the sample was less then five times the concentration in the laboratory blank. Blank values were not subtracted from the reported sample concentrations. The laboratory blank results are presented in the Laboratory Analytical Reports, provided in Appendix B. Two laboratory blanks were analyzed with the samples and no compounds were detected above the reporting limits. Therefore, no compounds were qualified as estimated based on the laboratory blank data.

4.4.2 Data Reproducibility/Precision Results

Canister #14898 (Sample ID: AB45923) was analyzed a second time for assessing analytical precision. The same sample aliquot was withdrawn from the canisters and analyzed in a similar manner. The results are reported in a table at the end of the Laboratory Analytical Reports provided in Appendix B. The relative percent differences (RPD) were calculated and all are less than QC limits/acceptance criterion. Therefore, the analytical precision acceptance criterion has been satisfied and the data did not need to be qualified as estimated.

Canister #22685 served as the duplicate sample and was collected in the former Curtin Taxi Auto Supply Room on 12/12/13. Table 2 shows the comparison data of compounds detected above their reporting limits in both samples with calculated RPDs. The sampling precision data were evaluated by comparing data pairs with both values greater than ten times the reporting limit and then determine if the calculated RPD was within the 25% acceptance criteria. Based on these criteria, the acceptance criteria was satisfied for all the duplicate samples.

4.4.3 Data Accuracy Results

A laboratory fortified blank (LFB) was analyzed with the canister samples to determine analytical accuracy. The LFB percent recovery was calculated for each compound and reported in a table at the end of the Laboratory Analytical Report provided in Appendix B. All LFB percent recoveries were with the QC limits, 70 – 130%.

4.4.4 Canister Surrogate Spike Results

Prior to analyzing each canister sample, surrogate compounds, 1, 2 dichloroethane d4, bromofluorobenzene and toluene d8 were added to the analytical system. The percent recovery data for the surrogate compounds are reported with each sample data sheet in Appendix B. The results show the recoveries for the three surrogate compounds were all determined to be acceptable.

4.4.5 Chain of Custody

Chain of custody documentation was completed by Peter Kahn. All canister samples were logged into the laboratory on December 13, 2013, transferring the sample custody to the laboratory personnel. A completed chain of custody form is included with the Laboratory Analytical Report provided in Appendix B.

4.4.6 Data Validation and Usability

The analytical report provided by the EPA Regional Laboratory was further validated by Peter Kahn. The data reported by the laboratory were compared to the data quality performance criteria specified in Sections 4.4.1, 4.4.2, 4.4.3 and 4.4.4 to evaluate data usability. All data collected for this project are presented in this report and qualified as needed, no data were rejected. The data presented in this report are of acceptable quality to represent the levels of volatile organic compounds present at the indoor air, ambient air, and soil gas sampling locations. These levels may vary given differing site activities, environmental conditions and the time of year. Therefore, the data only represent the conditions prevailing at the time of sampling.

5.0 Soil Gas Sampling and Analysis Methodology for VOCs

5.1 Soil Gas Sampling Procedures

5.1.1 Sub-Slab Soil Gas Sampling Procedures

The installation of sub-slab soil gas sampling probes was performed using the EPA Region I Standard Operating Procedure for Sub-Slab Soil Gas Sampling, April 12, 2011, Revision 2. At each soil gas sampling location, a "T" fitting, made of a stainless steel flexible line and an in-line valve, was connected to the sub-slab sampling probe for collecting a canister grab sample. A vacuum pump was attached to one end of the "T" fitting and the flow controller/canister was connected to the other end of the "T" fitting. The canister valve remained closed as the pump purged 1 liter from the probe. Immediately after the in-line valve on the pump end of the "T" fitting was closed, the canister valve was opened to collect a grab sample. Using a flow controller on the canister calibrated to flow rate of approximately 600 ml/min. the canister reached atmospheric pressure within approximately 20 minutes. All of the soil gas canister grab samples were brought back to the OEME Laboratory for analysis following the procedure described in Section 4.1.

6.0 Meteorological Measurement

6.1 Ambient Air Meteorological Data

In general, sampling during winter months is the best strategy to maximize the probability of encountering "worse case" conditions. A key factor in this regard is the movement of gases in and out of the building basement or slab on-grade, to and from the surrounding subsurface environment. Meteorological conditions and observations during and prior to the sampling event provide some insight in this regard. With respect to encountering worse-case conditions, a change in barometric pressure can promote a modest "barometric pumping" action, where higher pressure gases in the subsurface migrate to lower pressure overlying areas (including structures). Also, moderate rainfall in the preceding days of a sampling event, moderate to high wind speeds around a structure and hot forced air heating systems cycling on and off within the structure during the sampling event could promote movement of subsurface vapors into structures.

Meteorological data were obtained from the Igor I. Sikorsky Memorial Airport in Bridgeport, CT using the following NOAA web Site, http://cdo.ncdc.noaa.gov/qclcd. The airport is between 2 and 2.5 miles south of the area under investigation. Two tables are provided in Appendix A showing the daily weather conditions for December 11 – 12, 2013. The data shown include: hourly temperature, dew point, relative humidity, wind direction, wind speed, atmospheric pressure and precipitation amounts. Thirty one hours prior to the sampling event that began at 07:56 on December 12, there was no measured amount of precipitation recorded during the sampling event. As a result, the soil pore spaces were most likely not significantly saturated with moisture prior to or during the sampling events. Therefore, soil gases had a chance to accumulate in the soil pore spaces and had the potential to migrate into the building, if a pathway existed. Thirty one hours prior to the sampling event the barometric pressure was stable between 30.28 and 30.10 inches of mercury and between 30.32 and 30.23 inches of mercury during the sampling event. These slight changes in pressure most likely did not influence soil gases to begin moving out of the soil pore spaces and potentially into the building, if a pathway existed. Wind speeds were steady between 7 and 10 mph, which may have promote the movement of subsurface vapors into the structure. The table below shows the average 24-hour meteorological conditions for the period December 11 – 12, 2013.

Time	Temp. (F)	Dew Point Temp. (F)	Relative Humidity (%)	Wind Speed (mph)	Wind Direction	Barometric Pressure (inches Hg)
12/11/13	31	16	56	12	WSW	30.20
12/12/13	25	9	52	8	WNW	30.23

7.0 Indoor Air and Soil Gas Sampling Results and Discussions

December 12, 1013, indoor air and sub-slab soil gas sampling were performed inside the commercial building located 335 Ferry Blvd. Soil gas canister grab samples were collected from 3 sub-slab sampling locations and two indoor air samples were collected from the lower floor and two from the upper floor over an 8-hour period. In this section, the indoor air data will be compared to background outdoor ambient air data collected over an 8-hour period outside the building. The collected data will also be compared to the EPA Regional Screening Levels (RSLs) for the target compounds, TCE, 1, 1-DCE, 1, 1-DCA, benzene, chlorobenzene, chloroform, ethylbenzene and VC. All canister samples were analyzed for the VOCs listed on Table 1 using a GC/MS. The data presented in this report are of acceptable quality to represent the levels of VOCs present at the sampling locations under the specific conditions prevailing during sampling. These levels may vary given differing site activities, time of year, characteristics of the site and groundwater plume, meteorological conditions and building operations.

The indoor air and soil gas canister sampling analytical report is provided in Appendix B. The ambient/background air target and non-target compound data are summarized in Table 3. Table 4 shows a summary of the indoor air and outside air data and Table 5 shows a summary of the sub-slab soil gas canister data for all compounds (target and non-target) detected above their reporting limits.

7.1 Trichloroethylene Sampling Results and Discussions

The TCE indoor air data collected inside 335 Ferry Blvd. were compared to the commercial/industrial EPA RSL, 3.0 µg/m^3. TCE was not detected above the reporting limit (0.59 µg/m^3) or the RSL at any of the indoor air sampling locations. There was however evidence of TCE present in the soil gas below the buildings slab at concentrations between 59 µg/m^3 and 130 µg/m^3, which are above the 30 µg/m^3 EPA sub-slab soil gas RSL for commercial/industrial properties. TCE was not detected above the reporting limit in the outside ambient air, so this would not have been a contributing factor to indoor air levels. Comparing the indoor air and soil gas data shows that TCE was not migrating into the building and impacting indoor air quality.

TCE indoor air and soil gas results are shown in the table below. Note that in the table, ND = not detected.

TCE Concentrations

335 Ferry Blvd.	(µg/m^3)
Former Curtin Taxi Main Room Indoor Air	ND (0.59)
Former Curtin Taxi Auto Supply Room Indoor Air	ND (0.54)
Receptionist Office Indoor Air	ND (0.59)
Estimating Room Indoor Air	ND (0.59)
Garage Area 1 Sub-Slab Soil Gas SS-1	59
Garage Area 2 Sub-Slab Soil Gas SS-2	ND (0.48)
Former BrenAir Sub-Slab Soil Gas SS-3	130
Outside Ambient Air	ND (0.54)

EPA RSL Commercial/Industrial Air for TCE is 3.0 µg/m^3
EPA RSL Commercial/Industrial Target Sub-Slab Soil Gas for TCE is 30 µg/m^3

7.2 1, 1-Dichloroethylene Sampling Results and Discussions

The 1, 1-DCE indoor air data collected inside 335 Ferry Blvd. were compared to the commercial/industrial EPA RSL, 880 µg/m^3. 1, 1-DCE was not detected above the reporting limits (0.40 µg/m^3 - 0.44 µg/m^3) or the RSL at any of the indoor air sampling locations. There was however evidence of 1, 1-DCE present in the soil gas below the buildings slab at concentrations between 0.40 µg/m^3 and 56 µg/m^3, which are well below the 8,000 µg/m^3 EPA sub-slab soil gas RSL for commercial/industrial properties. 1, 1-DCE was not detected above the reporting limit in the outside ambient air, so this would not have been a contributing factor to indoor air levels. Comparing the indoor air and soil gas data shows that 1, 1-DCE was not migrating into the building and impacting indoor air quality.

1, 1-DCE indoor air and soil gas results are shown in the table below. Note that in the table, ND = not detected.

1, 1- DCE Concentrations

335 Ferry Blvd.	(µg/m^3)
Former Curtin Taxi Main Room Indoor Air	ND (0.44)
Former Curtin Taxi Auto Supply Room Indoor Air	ND (0.40)
Receptionist Office Indoor Air	ND (0.44)
Estimating Room Indoor Air	ND (0.44)
Garage Area 1 Sub-Slab Soil Gas SS-1	56
Garage Area 2 Sub-Slab Soil Gas SS-2	0.40
Former BrenAir Sub-Slab Soil Gas SS-3	44
Outside Ambient Air	ND (0.40)

EPA RSL Commercial/Industrial Air for 1, 1-DCE is 880 µg/m^3
EPA RSL Commercial/Industrial Target Sub-Slab Soil Gas for 1, 1-DCE is 8000 µg/m^3

7.3 1, 1-Dichloroethane Sampling Results and Discussions

The 1, 1-DCA indoor air data collected inside 335 Ferry Blvd. were compared to the commercial/industrial EPA RSL, 7.7 µg/m^3. 1, 1-DCA was not detected above the reporting limits (0.40 µg/m^3 - 0.44 µg/m^3) or the RSL at any of the indoor air sampling locations. There was however evidence of 1, 1-DCA present in the soil gas below the buildings slab at concentrations between 13 µg/m^3 and 65 µg/m^3, which are below the 77 µg/m^3 EPA sub-slab soil gas RSL for commercial/industrial properties. 1, 1-DCA was not detected above the reporting limit in the outside ambient air, so this would not have been a contributing factor to indoor air levels. Comparing the indoor air and soil gas data shows that 1, 1-DCA was not migrating into the building and impacting indoor air quality.

1, 1-DCA indoor air and soil gas results are shown in the table below. Note that in the table, ND = not detected.

1, 1- DCA Concentrations

335 Ferry Blvd.	(µg/m^3)
Former Curtin Taxi Main Room Indoor Air	ND (0.44)
Former Curtin Taxi Auto Supply Room Indoor Air	ND (0.40)
Receptionist Office Indoor Air	ND (0.44)
Estimating Room Indoor Air	ND (0.44)
Garage Area 1 Sub-Slab Soil Gas SS-1	36
Garage Area 2 Sub-Slab Soil Gas SS-2	13
Former BrenAir Sub-Slab Soil Gas SS-3	65
Outside Ambient Air	ND (0.40)

EPA RSL Commercial/Industrial Air for 1, 1-DCA is 7.7 µg/m^3
EPA RSL Commercial/Industrial Target Sub-Slab Soil Gas for 1, 1-DCA is 77 µg/m^3

7.4 Benzene Sampling Results and Discussions

The benzene indoor air data collected inside 335 Ferry Blvd. were compared to the commercial/industrial EPA RSL, 1.6 μg/m^3. Benzene was detected at all of the indoor air sampling locations between 0.51 μg/m^3 and 1.5 μg/m^3, which are below the RSL. Benzene was also detected in the ambient air outside the building at 0.57 μg/m^3, which is similar to the indoor air levels, indicating that ambient air most likely contributed to the benzene indoor air concentrations. The concentrations on the lower floor were identical and very similar on the upper floor. The upper floor is at the same grade level as Ferry Blvd., with a traffic light in front of the building and a gas station across the street. There is a reasonable amount of vehicle traffic along Ferry Blvd. and with benzene being a component of automobile emissions and gasoline this could be the reason for the detection of benzene inside and outside the building. Benzene was not detected above the reporting limit (0.29 μg/m^3) in the soil gas below the buildings slab. Comparing the indoor air, ambient air and soil gas data shows that benzene was not migrating into the building from a contamination source below the buildings slab, but most likely from ambient air sources external to the building.

Benzene indoor air and soil gas results are shown in the table below. Note that in the table, ND = not detected.

Benzene Concentrations

335 Ferry Blvd.	(μg/m^3)
Former Curtin Taxi Main Room Indoor Air	0.51
Former Curtin Taxi Auto Supply Room Indoor Air	0.51
Receptionist Office Indoor Air	1.2
Estimating Room Indoor Air	1.5
Garage Area 1 Sub-Slab Soil Gas SS-1	ND (0.29)
Garage Area 2 Sub-Slab Soil Gas SS-2	ND (0.29)
Former BrenAir Sub-Slab Soil Gas SS-3	ND (0.29)
Outside Ambient Air	0.57

EPA RSL Commercial/Industrial Air for benzene is 1.6 μg/m^3
EPA RSL Commercial/Industrial Target Sub-Slab Soil Gas for benzene is 16 μg/m^3

7.5 Chlorobenzene Sampling Results and Discussions

The chlorobenzene indoor air data collected inside 335 Ferry Blvd. were compared to the commercial/industrial EPA RSL, 220 μg/m^3. Chlorobenzene was not detected above the reporting limits (0.46 μg/m^3 - 0.51 μg/m^3) or the RSL at any of the indoor air sampling locations. Chlorobenzene was not detected above the reporting limit (0.42 μg/m^3) in the soil gas below the buildings slab. Chlorobenzene was not detected above the reporting limit in the outside ambient air, so this would not have been a contributing factor to indoor air levels. Comparing the indoor air, ambient air and soil gas data shows that chlorobenzene was not migrating into the building from a contamination

source below the buildings slab or from ambient air sources external to the building.

Chlorobenzene indoor air and soil gas results are shown in the table below. Note that in the table, ND = not detected.

Chlorobenzene Concentrations

335 Ferry Blvd.	(µg/m^3)
Former Curtin Taxi Main Room Indoor Air	ND (0.51)
Former Curtin Taxi Auto Supply Room Indoor Air	ND (0.46)
Receptionist Office Indoor Air	ND (0.51)
Estimating Room Indoor Air	ND (0.51)
Garage Area 1 Sub-Slab Soil Gas SS-1	ND (0.42)
Garage Area 2 Sub-Slab Soil Gas SS-2	ND (0.42)
Former BrenAir Sub-Slab Soil Gas SS-3	ND (0.42)
Outside Ambient Air	ND (0.46)

EPA RSL Commercial/Industrial Air for chlorobenzene is 220 µg/m^3
EPA RSL Commercial/Industrial Target Sub-Slab Soil Gas for chlorobenzene 2200 µg/m^3

7.6 Chloroform Sampling Results and Discussions

The chloroform indoor air data collected inside 335 Ferry Blvd. were compared to the commercial/industrial EPA RSL, 0.53 µg/m^3. Chloroform was not detected above the reporting limits (0.49 µg/m^3 - 0.54 µg/m^3) or the RSL at any of the indoor air sampling locations. At the former Curtin Taxi main room, receptionist office and estimating room sampling locations the reporting limit (0.54 ug/m^3) was slightly above the RSL (0.53 µg/m^3), making it difficult to perform an accurate vapor intrusion pathway risk evaluation. There was however evidence of chloroform present in the soil gas below the buildings slab at 8.4 µg/m^3 below garage area 1, 3.5 µg/m^3 below garage area 2, and 17 µg/m^3 below garage area 3. On average the soil gas concentrations were above the 5.3 µg/m^3 EPA sub-slab soil gas RSL for commercial/industrial properties. Chloroform can off gas from drinking water containing chlorine, so this maybe a contributing source to the detected soil gas concentrations. Chloroform was not detected above the reporting limit in the outside ambient air, so this would not have been a contributing factor to indoor air levels. Comparing the indoor air and soil gas data shows that chloroform most likely was not migrating into the building and impacting indoor air quality.

Chloroform indoor air and soil gas results are shown in the table below. Note that in the table, ND = not detected.

Chloroform Concentrations

335 Ferry Blvd.	(µg/m^3)
Former Curtin Taxi Main Room Indoor Air	ND (0.54)
Former Curtin Taxi Auto Supply Room Indoor Air	ND (0.49)
Receptionist Office Indoor Air	ND (0.54)
Estimating Room Indoor Air	ND (0.54)
Garage Area 1 Sub-Slab Soil Gas SS-1	8.4
Garage Area 2 Sub-Slab Soil Gas SS-2	3.5
Former BrenAir Sub-Slab Soil Gas SS-3	17
Outside Ambient Air	ND (0.49)

EPA RSL Commercial/Industrial Air for chloroform is 0.53 µg/m^3
EPA RSL Commercial/Industrial Target Sub-Slab Soil Gas for benzene is 5.3 µg/m^3

7.7 Ethylbenzene Sampling Results and Discussions

The ethylbenzene indoor air data collected inside 335 Ferry Blvd. were compared to the commercial/industrial EPA RSL, 4.9 µg/m^3. Ethylbenzene was only detected above the reporting limits in the receptionist office and estimating room sampling locations on the upper floor at 0.69 µg/m^3 and 0.87 µg/m^3, respectively. The former Curtin Taxi sampling locations located on the lower floor did not detect ethylbenzene above the reporting limits 0.43 µg/m^3 and 0.48 µg/m^3. Ethylbenzene was not detected in the ambient air outside the building above the reporting limit, 0.43 µg/m^3. Ethylbenzene was not detected above the reporting limit (0.23 µg/m^3) in the soil gas below the buildings slab. Comparing the indoor air, ambient air and soil gas data shows that ethylbenzene was not migrating into the building from a contamination source below the buildings slab, but most likely from either sources within or external to the building.

Ethylbenzene indoor air and soil gas results are shown in the table below. Note that in the table, ND = not detected.

Ethylbenzene Concentrations

335 Ferry Blvd.	(µg/m^3)
Former Curtin Taxi Main Room Indoor Air	ND (0.48)
Former Curtin Taxi Auto Supply Room Indoor Air	ND (0.43)
Receptionist Office Indoor Air	0.69
Estimating Room Indoor Air	0.87
Garage Area 1 Sub-Slab Soil Gas SS-1	ND (0.23)
Garage Area 2 Sub-Slab Soil Gas SS-2	ND (0.23)
Former BrenAir Sub-Slab Soil Gas SS-3	ND (0.23)
Outside Ambient Air	ND (0.43)

EPA RSL Commercial/Industrial Air for ethylbenzene is 4.9 µg/m^3
EPA RSL Commercial/Industrial Target Sub-Slab Soil Gas for ethylbenzene is 49 µg/m^3

7.8 Vinyl Chloride Sampling Results and Discussions

The VC indoor air data collected inside 335 Ferry Blvd. were compared to the commercial/industrial EPA RSL, 2.8 µg/m^3. VC was not detected above the reporting limits (0.26 µg/m^3 - 0.28 µg/m^3) or the RSL at any of the indoor air sampling locations. VC was not detected above the reporting limit (0.23 µg/m^3) in the soil gas below the buildings slab. VC was not detected above the reporting limit in the outside ambient air, so this would not have been a contributing factor to indoor air levels. Comparing the indoor air, ambient air and soil gas data shows that VC was not migrating into the building from a contamination source below the buildings slab or from ambient air sources external to the building.

VC indoor air and soil gas results are shown in the table below. Note that in the table, ND = not detected.

VC Concentrations

335 Ferry Blvd.	(µg/m^3)
Former Curtin Taxi Main Room Indoor Air	ND (0.28)
Former Curtin Taxi Auto Supply Room Indoor Air	ND (0.26)
Receptionist Office Indoor Air	ND (0.28)
Estimating Room Indoor Air	ND (0.28)
Garage Area 1 Sub-Slab Soil Gas SS-1	ND (0.23)
Garage Area 2 Sub-Slab Soil Gas SS-2	ND (0.23)
Former BrenAir Sub-Slab Soil Gas SS-3	ND (0.23)
Outside Ambient Air	ND (0.26)

EPA RSL Commercial/Industrial Air for VC is 2.8 µg/m^3
EPA RSL Residential Target Sub-Slab Soil Gas for VC is 28 µg/m^3

7.9 Indoor Air and Soil Gas February 2012, August 2012 and December 2013 COC Data Comparison

Table 6 shows a comparison of the indoor air and sub-slab soil gas data collected in February 2012, August 2012 and December 2013 at 335 Ferry Blvd. Below is a discussion how the data compared between the sampling events.

The building located at 335 Ferry Blvd. does not have a basement. The lower level is constructed on a slab on-grade foundation, which has three separate garage bays and one area used as office space occupied by Curtin Taxi during the February and August 2012 sampling events. The occupants (Curtin Taxi) vacated the space after Hurricane Sandy caused the lower part of the building to be flooded in October 2012. As a result, this space has not been occupied since that time. During the December 2013 survey the area was vacant; no furniture, no carpet and no products were present. A level above this, which is at ground level, is intended as office and retail space.

During the August 2012 sampling round there was evidence that TCE was present in the soil gas below the buildings slab at concentrations between 53 $\mu g/m^3$ and 91 $\mu g/m^3$, which were much lower than the concentration detected inside Curtin Taxi. After taking several indoor air grab samples in various rooms/closets within Curtin Taxi, high TCE concentrations were identified coming from the auto supply room. An inventory of products stored in the auto supply room indentified the source of the TCE indoor air concentrations to be from a 32 ounce container of "Tru-Flate Universal Cement, Type C" with a label indicating it contained TCE. The concentration detected in the Estimating Room was much less, but still above the RSL. Considering the discovery of a product containing TCE was being used inside the building strongly suggested the source of the TCE indoor air concentrations within the building was from this product and not from sources beneath or adjacent to the building. It was also discovered that higher concentrations were present in the Curtin Taxi Auto Supply Room compared to other areas of the building for the compounds, dichlorodifluoromethane, hexane, methyl ethyl ketone, and toluene. In general, considering the indoor air, sub-slab soil gas and ambient/background air data, the compounds detected inside the building was determined to be most likely associated with sources inside or outside the building and not from contaminated soils or groundwater beneath or adjacent to the building.

Comparing the December 2013 TCE indoor air levels to those detected in August 2012 they decreased from 400 $\mu g/m^3$ to ND (0.54 $\mu g/m^3$) in the Curtin Taxi space and from 4.3 $\mu g/m^3$ to ND (0.54 $\mu g/m^3$) in the upper floor area. The data shows after the stored product containing TCE was removed from the building the TCE indoor air levels decreased significantly and are now below the RSL. The TCE sub-slab soil gas levels remained reasonably constant between August 2012 and December 2013 underneath garage areas 1 and 2 and only a slight increase underneath garage 3.

Evaluating the rest of the COCs indoor air data for the three sampling events shows, in general, their concentrations were either similar or lower in December 2013 compared to February and August 2012. The sub-slab soil gas data for these compounds were difficult to compare for all three sampling events because canister samples were only collected at selected locations during February and August 2012. However, samples collected underneath garage area 1 and 3 during February 2012 and December 2013

show concentrations were either similar or higher in December 2013 compared to February 2012.

7.10 Non Target Compounds Sampling Results and Discussions

In addition to the target compounds detected in the indoor air and in the soil gas, a number of non-target compounds were also detected during the December 2013 round of sampling. The indoor air concentrations are compared to the ambient/background air concentrations to help determine if a source of these compounds exists inside the building. In addition, the soil gas data are also compared to the indoor air data to further help assess the source of these compounds.

Table 4 shows a summary of the indoor air and ambient/outside air data and Table 5 shows a summary of the sub-slab soil gas canister data for all compounds (target and non-target) detected above their reporting limits. A description of the product use for these compounds is presented in Appendix C. There were several compounds detected in the sub-slab soil gas sample at higher concentrations than in the indoor air, namely: 1, 1, 1 -TCA, PCE, cis-1, 2-DCE, and trichlorofluoromethane. The indoor air concentrations detected inside the building for these compounds were well below the RSLs. The other non-target compounds detected above their reporting limits inside the building were also below the RSLs and generally similar to ambient air concentrations.

TABLES

Table 1 – EPA Method TO15 Target VOC List
Table 2 – Duplicate Air Sampling Results
Table 3 – Ambient/Background Air Data Summary
Table 4 – 335 Ferry Blvd. Indoor Air and Ambient Air Sampling Results Summary
Table 5 – 335 Ferry Blvd. Soil Gas Sampling Results
Table 6 – 335 Ferry Blvd. Indoor Air and Soil Gas February, August 2012 and December 2013 COC Data Comparison

EPA METHOD TO15 TARGET VOC LIST

EPA Region I TO-15 VOC Reported Compounds	CAS No.	EPA RSL Industrial Air	Toxicity Basis
1, 1, 1-Trichloroethane	71-55-6	22000	nc
1, 1, 2, 2-Tetrachloroethane	79-34-5	0.21	c
1, 1, 2-Trichloroethane	79-00-5	0.77	c
1, 1-Dichloroethane	75-34-3	7.7	c
1, 1-Dichloroethylene	75-35-4	880	nc
1, 2, 4-Trichlorobenzene	120-82-1	8.8	nc
1, 2, 4-Trimethylbenzene	95-63-6	31	nc
1, 2-Dibromoethane	106-93-4	0.020	c
1, 2-Dichlorobenzene	95-50-1	880	nc
1, 2-Dichloroethane	107-06-2	0.47	c
1, 2-Dichloropropane	78-87-5	1.2	c
1, 3, 5-Trimethylbenzene	108-67-8	NA	nc
1, 3-Butadiene	106-99-0	0.41	c
1, 3-Dichlorobenzene (m-Dichlorobenzene)	541-73-1	NA	NA
1, 4-Dichlorobenzene (p-Dichlorobenzene)	106-46-7	1.1	c
2-Hexanone	591-78-6	130	nc
4-Ethyl Toluene	622-96-8	NA	NA
Acrylonitrile	107-13-1	0.18	c
Allyl Chloride	107-05-1	2.0	c
Benzene	71-43-2	1.6	c
Benzylchloride	100-44-7	0.25	c
Bromodichloromethane	75-27-4	0.33	c
Bromoform	75-25-2	11	c
Carbon Tetrachloride	56-23-5	2.0	c
Chlorobenzene	108-90-7	220	nc
Chloroethane (Ethyl chloride)	75-00-3	44000	nc
Chloroform	67-66-3	0.53	c
Cyclohexane	110-82-7	26000	nc
Dibromochloromethane	124-48-1	0.45	c
Dichlorodifluoromethane (F12)	1320-37-2	440	nc
Dichlorotetrafluoroethane	1320-37-2	NA	NA
Ethylbenzene	100-41-4	4.9	c
Heptane	142-82-5	NA	NA
Hexachloro-1, 3-butadiene (Hexachlorobutadiene)	87-68-3	0.56	c
Hexane (n-Hexane)	110-54-3	3100	nc
Methyl Ethyl Ketone (2-butanone)	78-93-3	22000	nc
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1	13000	nc
Methyl-t-butyl ether	1634-04-4	47	c
Methylbromide (Bromomethane)	74-83-9	22	nc
Methylchloride (Chloromethane)	74-87-3	390	nc
Methylene Chloride	75-09-2	1200	c
Styrene	100-42-5	4400	nc
Tetrachloroethene	127-18-4	47	c
Tetrahydrofuran	109-99-9	8800	nc
Toluene	108-88-3	22000	nc
Trichloroethene	79-01-6	3.0	c
Trichlorofluoromethane	75-69-4	3100	nc
Trichlorotrifluoroethane	76-13-1	NA	NA
Vinyl Bromide	593-60-2	0.38	c
Vinyl chloride	75-01-4	2.8	c
cis-1, 2-Dichloroethene	156-59-2	NA	NA
cis-1,3-Dichloropropene	10061-01-5	NA	NA
1, 3-Dichloropropene	542-75-6	3.1	c
m, p-Xylene (Xylene, mixture)	1330-20-7	440	nc
m-Xylene	108-38-3	440	nc
p-Xylene	106-42-3	440	nc
o-Xylene	95-47-6	440	nc
trans-1, 2-Dichloroethene	156-60-5	260	nc
trans-1, 3-Dichloropropene	10061-02-6	NA	NA

NA = Not Available
nc = non-cancer health effect (for Hazard Quotient = 1)
c = cancer health effect (for 1×10^{-6} incremental lifetime cancer risk)
EPA RSL = EPA Regional Screening Level (May, 2012)
http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm

TABLE 2
DUPLICATE SAMPLING RESULTS
335 FERRY BLVD.
FORMER CURTIN TAXI AUTO SUPPLY ROOM
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR CANISTER #14898 12-Dec-13 8-HOUR AVG.		INDOOR AIR DUPLICTAE CANISTER #22685 12-Dec-13 8-HOUR AVG.		RPD
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(%)
Trichloroethene	**ND (0.12)**	**ND (0.64)**	**ND (0.10)**	**ND (0.54)**	**NA**
1,1-Dichloroethylene	**ND (0.12)**	**ND (0.48)**	**ND (0.10)**	**ND (0.40)**	**NA**
1,1-Dichloroethane	**ND (0.12)**	**ND (0.49)**	**ND (0.10)**	**ND (0.40)**	**NA**
Benzene	**0.16**	**0.51**	**0.16**	**0.51**	0
Chorobenzene	**ND (0.12)**	**ND (0.56)**	**ND (0.10)**	**ND (0.46)**	**NA**
Chloroform	**ND (0.12)**	**ND (0.59)**	**ND (0.10)**	**ND (0.49)**	**NA**
Ethylbenzene	**ND (0.12)**	**ND (0.52)**	**ND (0.10)**	**ND (0.43)**	**NA**
Vinyl Chloride	**ND (0.12)**	**ND (0.31)**	**ND (0.10)**	**ND (0.26)**	**NA**
1,1,1-Trichloroethane	0.11	0.60	0.08 L	0.46 L	27
Dichlorodifluoromethane	0.47	2.3	0.44	2.3	7
Hexane	0.71	2.5	0.78	2.7	9
Methyl Ethyl Ketone	0.13	0.38	0.14	0.41	7
Methylchloride	0.49	1.0	0.45	0.93	9
Methylene Chloride	0.13	0.45	0.12	0.42	8
Toluene	0.14	0.53	0.13	0.49	7
Trichlorofluoromethane	0.23	1.3	0.23	1.3	0

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
NA = not applicable, concentrations for these compounds were either less than 10 times the reporting limit or not detected above the reporting limits to calculate an RPD
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 3
AMBIENT/BACKGROUND AIR DATA SUMMARY
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	OUTSIDE AMBIENT AIR 335 FERRY BLVD. CANISTER #13499 12-Dec-13 8-HOUR AVG.	
	(ppb/v)	(µg/m^3)
Trichloroethene	**ND (0.10)**	**ND (0.54)**
1,1-Dichloroethylene	**ND (0.10)**	**ND (0.40)**
1,1-Dichloroethane	**ND (0.10)**	**ND (0.40)**
Benzene	**0.18**	**0.57**
Chorobenzene	**ND (0.10)**	**ND (0.46)**
Chloroform	**ND (0.10)**	**ND (0.49)**
Ethylbenzene	**ND (0.10)**	**ND (0.43)**
Vinyl Chloride	**ND (0.10)**	**ND (0.26)**
1,1,1-Trichloroethane	ND (0.10)	ND (0.55)
Dichlorodifluoromethane	0.42	2.1
Hexane	0.85	3.0
Methyl Ethyl Ketone	0.10	0.30
Methylchloride	0.52	1.1
Methylene Chloride	0.13	0.45
Toluene	0.13	0.49
Trichlorofluoromethane	0.22	1.2

NOTES:
ND = Not detected above reporting limits; reporting limit in parentheses
Compounds in bold type are target compounds for project.

TABLE 4
INDOOR AIR AND AMBIENT AIR SAMPLING RESULTS SUMMARY
335 FERRY BLVD.
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR FORMER CURTIN TAXI MAIN ROOM CANISTER #15056 12-Dec-13 8-HOUR AVG.		INDOOR AIR FORMER CURTIN TAXI AUTO SUPPLY ROOM CANISTER #14898 12-Dec-13 8-HOUR AVG.		INDOOR AIR FORMER CURTIN TAXI AUTO SUPPLY ROOM CANISTER #22685 12-Dec-13 8-HOUR AVG. DUPLICATE		INDOOR AIR RECEPTIONIST OFFICE CANISTER #22692 12-Dec-13 8-HOUR AVG.		INDOOR AIR ESTIMATING ROOM CANISTER #13498 12-Dec-13 8-HOUR AVG.		AMBIENT AIR OUTSIDE CANISTER #13499 12-Dec-13 8-HOUR AVG.	
	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)	(ppb/v)	(µg/m³)
Trichloroethene	ND (0.11)	ND (0.59)	ND (0.12)	ND(0.64)	ND (0.10)	ND (0.54)	ND (0.11)	ND (0.59)	ND (0.11)	ND (0.59)	ND (0.10)	ND (0.54)
1,1-Dichloroethylene	ND (0.11)	ND (0.44)	ND (0.12)	ND (0.48)	ND (0.10)	ND (0.40)	ND (0.11)	ND (0.44)	ND (0.11)	ND (0.44)	ND (0.10)	ND (0.40)
1,1-Dichloroethane	ND (0.11)	ND (0.44)	ND (0.12)	ND (0.49)	ND (0.10)	ND (0.40)	ND (0.11)	ND (0.44)	ND (0.11)	ND (0.44)	ND (0.10)	ND (0.40)
Benzene	0.16	0.51	0.16	0.51	0.16	0.51	0.37	1.2	0.47	1.5	0.18	0.57
Chorobenzene	ND (0.11)	ND (0.51)	ND (0.12)	ND (0.56)	ND (0.10)	ND (0.46)	ND (0.11)	ND (0.51)	ND (0.11)	ND (0.51)	ND (0.10)	ND (0.46)
Chloroform	ND (0.11)	ND (0.54)	ND (0.12)	ND (0.59)	ND (0.10)	ND (0.49)	ND (0.11)	ND (0.54)	ND (0.11)	ND (0.54)	ND (0.10)	ND (0.49)
Ethylbenzene	ND (0.11)	ND (0.48)	ND (0.12)	ND (0.52)	ND (0.10)	ND (0.43)	0.16	0.69	0.20	0.87	ND (0.10)	ND (0.43)
Vinyl Chloride	ND (0.11)	ND (0.28)	ND (0.12)	ND (0.31)	ND (0.10)	ND (0.26)	ND (0.11)	ND (0.28)	ND (0.11)	ND (0.28)	ND (0.10)	ND (0.26)
1,1,1-Trichloroethane	ND (0.11)	ND (0.60)	0.11	0.60	0.08 L	0.46 L	ND (0.11)	ND (0.60)	ND (0.11)	ND (0.60)	ND (0.10)	ND (0.55)
1,2,4 Trimethylbenzene	ND (0.11)	ND (0.54)	ND (0.12)	ND (0.59)	ND (0.10)	ND (0.49)	ND (0.11)	ND (0.54)	0.16	0.79	ND (0.10)	ND (0.49)
4-Ethyltoulene	ND (0.11)	ND (0.54)	ND (0.12)	ND (0.59)	ND (0.10)	ND (0.49)	ND (0.11)	ND (0.54)	0.12	0.59	ND (0.10)	ND (0.49)
Cyclohexane	ND (0.11)	ND (0.38)	ND (0.12)	ND (0.41)	ND (0.10)	ND (0.34)	0.16	0.55	0.23	0.79	ND (0.10)	ND (0.34)
Dichlorodifluoromethane	0.48	2.4	0.47	2.3	0.44	2.3	0.49	2.4	0.52	2.6	0.42	2.1
Hexane	0.82	2.9	0.71	2.5	0.78	2.7	1.6	5.5	2.0	7.1	0.85	3.0
Methyl Ethyl Ketone	0.13	0.38	0.13	0.38	0.14	0.41	0.24	0.71	0.27	0.80	0.10	0.30
Methylchloride	0.57	1.2	0.49	1.0	0.45	0.93	0.50	1.0	0.59	1.2	0.52	1.1
Methylene Chloride	0.13	0.45	0.13	0.45	0.12	0.42	0.34	1.2	0.36	1.3	0.13	0.45
Tetrachloroethene	ND (0.11)	ND (0.75)	ND (0.12)	ND (0.81)	ND (0.10)	ND (0.68)	ND (0.11)	ND (0.75)	ND (0.11)	ND (0.75)	ND (0.10)	ND (0.68)
Toluene	0.15	0.56	0.14	0.53	0.13	0.49	1.6	5.9	1.9	7.3	0.13	0.49
Trichlorofluoromethane	0.24	1.3	0.23	1.3	0.23	1.3	0.46	2.6	0.56	3.1	0.22	1.2
c-1,2-Dichloroethene	ND (0.11)	ND (0.44)	ND (0.12)	ND (0.48)	ND (0.10)	ND (0.40)	ND (0.11)	ND (0.44)	ND (0.11)	ND (0.44)	ND (0.10)	ND (0.40)
t-1,2-Dichloroethene	ND (0.11)	ND (0.44)	ND (0.12)	ND (0.48)	ND (0.10)	ND (0.40)	ND (0.11)	ND (0.44)	ND (0.11)	ND (0.44)	ND (0.10)	ND (0.40)
m/p-Xylenes	ND (0.20)	ND (0.87)	ND (0.20)	ND (0.87)	ND (0.20)	ND (0.87)	0.65	2.8	0.82	3.6	ND (0.20)	ND (0.87)
o-Xylenes	ND (0.11)	ND (0.48)	ND (0.12)	ND (0.52)	ND (0.10)	ND (0.43)	0.19	0.82	0.23	1.0	ND (0.10)	ND (0.43)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
Compounds in bold type are target compounds for project.

TABLE 5
SOIL GAS SAMPLING RESULTS SUMMARY
335 FERRY BLVD.
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	SUB-SLAB SOIL GAS SS-1 GARAGE AREA 1 CANISTER #4742 12-Dec-13 GRAB SAMPLE		SUB-SLAB SOIL GAS SS-2 GARAGE AREA 2 CANISTER #1565 12-Dec-13 GRAB SAMPLE		SUB-SLAB SOIL GAS SS-3 GARAGE AREA 3 CANISTER #4778 12-Dec-13 GRAB SAMPLE	
	(ppb/v)	(µg/m^3)	(ppb/v)	(µg/m^3)	(ppb/v)	(µg/m^3)
Trichloroethene	**11**	**59**	**ND (0.09)**	**ND (0.48)**	**25**	**130**
1,1-Dichloroethylene	**14**	**56**	**0.10**	**0.40**	**11**	**44**
1,1-Dichloroethane	**9.0**	**36**	**3.2**	**13**	**16**	**65**
Benzene	**ND (0.09)**	**ND (0.29)**	**ND (0.09)**	**ND (0.29)**	**ND (0.09)**	**ND (0.29)**
Chorobenzene	**ND (0.09)**	**ND (0.42)**	**ND (0.09)**	**ND (0.42)**	**ND (0.09)**	**ND (0.42)**
Chloroform	**1.7**	**8.4**	**0.72**	**3.5**	**3.5**	**17**
Ethylbenzene	**ND (0.09)**	**ND (0.39)**	**ND (0.09)**	**ND (0.39)**	**ND (0.09)**	**ND (0.39)**
Vinyl Chloride	**ND (0.09)**	**ND (0.23)**	**ND (0.09)**	**ND (0.23)**	**ND (0.09)**	**ND (0.23)**
1,1,1-Trichloroethane	430	2300	480	2600	150	820
1,2,4-Trimethylbenzene	ND (0.09)	ND (0.44)	ND (0.09)	ND (0.44)	ND (0.09)	ND (0.44)
4-Ethyltoulene	ND (0.09)	ND (0.44)	ND (0.09)	ND (0.44)	ND (0.09)	ND (0.44)
Cyclohexane	ND (0.09)	ND (0.31)	ND (0.09)	ND (0.31)	ND (0.09)	ND (0.31)
Dichlorodifluoromethane	ND (0.09)	ND (0.44)	ND (0.09)	ND (0.44)	ND (0.09)	ND (0.44)
Hexane	ND (0.09)	ND (0.32)	1.2	4.3	ND (0.09)	ND (0.32)
Methyl Ethyl Ketone	0.16	0.47	0.13	0.38	ND (0.09)	ND (0.26)
Methylchloride	ND (0.09)	ND (0.19)	ND (0.09)	ND (0.19)	ND (0.09)	ND (0.19)
Methylene Chloride	ND (0.09)	ND (0.31)	ND (0.09)	ND (0.31)	ND (0.09)	ND (0.31)
Tetrachloroethene	0.87	5.9	0.20	1.4	0.61	4.1
Toluene	ND (0.09)	ND (0.34)	ND (0.09)	ND (0.34)	ND (0.09)	ND (0.34)
Trichlorofluoromethane	0.80	4.5	3.0	17	4.6	26
c-1,2-Dichloroethene	1.9	7.7	ND (0.09)	ND (0.36)	11	44
t-1,2-Dichloroethene	ND (0.09)	ND (0.36)	ND (0.09)	ND (0.36)	0.13	0.52
m/p-Xylenes	ND (0.20)	ND (0.87)	ND (0.20)	ND (0.87)	ND (0.20)	ND (0.87)
o-Xylenes	ND (0.09)	ND (0.39)	ND (0.09)	ND (0.39)	ND (0.09)	ND (0.39)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
Compounds in bold type are target compounds for project.

TABLE 6
INDOOR AIR and SOIL GAS FEBRUARY, AUGUST 2012 and DECEMBER 2013 COC DATA COMPARISON
335 FERRY BLVD.
RAYMARK SITE, OU-2
STRATFORD, CT

COMPOUND	INDOOR AIR 8-HOUR AVERAGE FORMER CURTIN TAXI				INDOOR AIR 8-HOUR AVERAGE RECEPTIONIST OFFICE			INDOOR AIR 8-HOUR AVERAGE ESTIMATING ROOM		
	MAIN ROOM			SUPPLY ROOM						
	14-Feb-12 (µg/m³)	15-Aug-12 (µg/m³)	12-Dec-13 (µg/m³)	12-Dec-13 (µg/m³)	14-Feb-12 (µg/m³)	15-Aug-12 (µg/m³)	12-Dec-13 (µg/m³)	14-Feb-12 (µg/m³)	15-Aug-12 (µg/m³)	12-Dec-13 (µg/m³)
Trichloroethene	11	400	ND (0.59)	ND (0.54)	0.23 L	1.6	ND (0.59)	ND (0.64)	4.3	ND (0.59)
1,1,-Dichloroethylene	ND (0.44)	ND (0.71)	ND (0.44)	ND (0.40)	ND (0.48)	ND (0.64)	ND (0.44)	ND (0.48)	ND (0.40)	ND (0.44)
1,1-Dichloroethane	ND (0.44)	ND (0.73)	ND (0.44)	ND (0.40)	ND (0.49)	ND (0.65)	ND (0.44)	ND (0.49)	ND (0.40)	ND (0.44)
Benzene	1.8	1.4	0.51	0.51	2.0	ND (0.51)	1.2	1.7	0.48	1.5
Chorobenzene	ND (0.51)	ND (0.84)	ND (0.51)	ND (0.46)	ND (0.56)	ND (0.75)	ND (0.51)	ND (0.56)	ND (0.46)	ND (0.51)
Chloroform	0.44 L	1.6	ND (0.54)	ND (0.49)	ND (0.59)	ND (0.78)	ND (0.54)	ND (0.59)	ND (0.49)	ND (0.54)
Ethylbenzene	1.1	4.2	ND (0.48)	ND (0.43)	0.95	ND (0.70)	0.69	0.87	0.52	0.87
Vinyl Chloride	ND (0.28)	ND (0.86)	ND (0.28)	ND (0.26)	0.12 L	ND (0.41)	ND (0.28)	0.11 L	1.6	ND (0.28)

COMPOUND	SUB-SLAB SOIL GAS GRAB SAMPLE SS-1 GARAGE AREA 1			SUB-SLAB SOIL GAS GRAB SAMPLE SS-2 GARAGE AREA 2			SUB-SLAB SOIL GAS GRAB SAMPLE SS-3 FORMER BREN AIR	
	14-Feb-12 (µg/m³)	15-Aug-12 (µg/m³)	12-Dec-13 (µg/m³)	14-Feb-12 (µg/m³)	15-Aug-12 (µg/m³)	12-Dec-13 (µg/m³)	15-Aug-12 (ug/m³)	12-Dec-13 (ug/m³)
Trichloroethene	22	53	59	1.6	ND (0.75)	ND (0.48)	91 L	130
1,1,-Dichloroethylene	ND (5.9)	NA	56	ND (40)	NA	0.40	ND (0.40)	44
1,1-Dichloroethane	5.6 L	NA	36	NA	NA	13	1.3	65
Benzene	ND (4.8)	NA	ND (0.29)	NA	NA	ND (0.29)	0.48	ND (0.29)
Chorobenzene	ND (7.0)	NA	ND (0.42)	NA	NA	ND (0.42)	ND (0.46)	ND (0.42)
Chloroform	ND (7.3)	NA	8.4	NA	NA	3.5	3.9	17
Ethylbenzene	ND (6.5)	NA	ND (0.39)	NA	NA	ND (0.39)	ND (0.43)	ND (0.39)
Vinyl Chloride	ND (3.8)	NA	ND (0.23)	NA	NA	ND (0.23)	ND (0.26)	ND (0.23)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
L = Estimated value, is below the calibration range
NA = Not applicable, sample analyzed using Mobile Lab GC

APPENDIX A

METEOROLOGICAL DATA

IGOR I. SIKORSKY MEMORIAL AIRPORT
BRIDGEPORT, CT
Pre-Sampling Period December 11, 2013 Meteorological I

Date	Time (LST)	Dry Bulb Temp (F)	Wet Bulb Temp (F)	Dew Point Temp (F)	Relative Humidity (%)	Wind Speed (MPH)	Wind Direction (degrees)	Wind Gusts (MPH)	Atmospheric Pressure (in. hg)	Precipitation Total (in)
12/11/2013	0:52	30	26	18	61	11	250	21	30.10	
	1:52	29	25	17	61	13	250	25	30.11	
	2:52	29	25	16	58	11	250	21	30.15	
	3:52	28	24	16	61	15	250	24	30.17	
	4:52	28	24	15	58	15	260	23	30.19	
	5:52	28	24	15	58	16	260	23	30.21	
	6:52	27	23	15	61	14	250	22	30.24	
	7:52	27	23	15	61	17	260	22	30.26	
	8:52	29	25	15	56	14	260	24	30.26	
	9:52	30	25	15	54	10	250	22	30.27	
	10:52	32	27	16	52	16	260	26	30.26	
	11:52	33	28	17	52	14	270	22	30.23	
	12:52	34	28	17	50	13	260	22	30.21	
	13:52	34	29	18	52	13	230	18	30.18	
	14:52	34	29	18	52	10	240		30.19	
	15:52	33	28	17	52	11	260	16	30.19	
	16:52	32	27	16	52	7	260		30.18	
	17:52	33	28	17	52	10	250	17	30.19	
	18:52	32	27	16	52	11	260	20	30.19	
	19:52	32	27	17	54	11	260	18	30.19	
	20:52	32	27	18	56	11	260	22	30.19	
	21:52	31	27	18	59	13	250	21	30.18	
	22:52	29	25	17	61	8	270		30.18	
	23:52	29	25	15	56	10	280	20	30.19	
Average		**31**	**26**	**16**	**56**	**12**	**256**	**21**	**30.20**	
Total										**0.00**

IGOR I. SIKORSKY MEMORIAL AIRPORT
BRIDGEPORT, CT
December 12, 2013 Meteorological Data

Date	Time (LST)	Dry Bulb Temp (F)	Wet Bulb Temp (F)	Dew Point Temp (F)	Relative Humidity (%)	Wind Speed (MPH)	Wind Direction (degrees)	Wind Gusts (MPH)	Atmospheric Pressure (in. hg)	Precipitation Total (in)
12/12/2013	0:52	28	24	15	58	8	280		30.19	
	1:52	26	23	15	63	6	280		30.20	
	2:52	25	22	14	63	5	300		30.22	
	3:52	25	22	14	63	10	310		30.22	
	4:52	24	21	13	63	9	310		30.22	
	5:52	24	20	9	53	10	300		30.24	
	6:52	23	19	8	52	8	310		30.28	
	7:52	22	18	8	55	7	320		30.30	
	8:52	23	20	11	60	8	350		30.32	
	9:52	25	21	10	53	9	340		30.32	
	10:52	26	22	10	51	7	320	16	30.31	
	11:52	26	21	9	48	10	320		30.27	
	12:52	28	22	6	39	9	340		30.24	
	13:52	29	23	6	37	9	320		30.23	
	14:52									
	15:52									
	16:52	24	19	4	42	8	290		30.23	
	17:52	23	19	6	48	3	280		30.23	
	18:52	22	18	6	50	0	Calm		30.22	
	19:52	23	19	8	52	5	270		30.21	
	20:52	24	20	8	50	14	270	25	30.18	
	21:52	24	20	7	48	14	260	23	30.16	
	22:52	24	20	7	48	14	260	22	30.15	
	23:52	23	19	6	48	13	270	22	30.12	
Average		**25**	**21**	**9**	**52**	**8**	**300**	**22**	**30.23**	
Total										**0.00**

APPENDIX B

LABORATORY ANALYTICAL REPORT

United States Environmental Protection Agency
Office of Environmental Measurement & Evaluation
11 Technology Drive
North Chelmsford, MA 01863-2431

Laboratory Report

December 18, 2013

Ron Jennings - Mail Code OSRR07-1
US EPA New England, Region 1

Project Number: 13120020
Project: Raymark - Stratford, CT
Analysis: Air Toxics by GC/MS
EPA Chemist: Dan Curran

Analytical Procedure:

All samples were received and logged in by the laboratory according to the US EPA New England Laboratory SOP for Sample Log-in.

Sample preparation and analysis was done following the EPA Region I SOP, EIASOP-AIRCAN11.

Samples were analyzed by GC/MS using an ion trap mass spectrometer. Samples were introduced to the GC via an Entech preconcentrator using cryofocusing. Analysis SOP is based on Compendium Method TO-15, update January 1999.

Conversion of ppbv to ug/m3 = ppbv*(mw/24.45) 24.45 is based on T=25c and P= 760 mm Hg

Date Samples Received by the Laboratory: 12/13/2013

Data were reviewed in accordance with the internal verification procedures described in the EPA New England Quality Manual for NERL.

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

If you have any questions please call me at 617-918-8340.

Sincerely,

Digitally signed by Dan Boudreau
DN: cn=Dan Boudreau, o=EPA,
ou=EIA,
email=boudreau.dan@epa.gov, c=US
Date: 2013.12.18 15:22:42 -05'00'

13120020$AIRTX

Qualifiers:

RL	Reporting limit
ND	Not Detected above reporting limit
NA	Not Applicable
NC	Not calculated since analyte concentration is ND
J1	Estimated value due to MS recovery outside acceptance criteria
J2	Estimated value due to LFB result outside acceptance criteria
J3	Estimated value due to RPD result outside acceptance criteria
J4	Estimated value due to LCS result outside acceptance criteria
B	Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample extract is less than 10 times the concentration in the blank.
R	No recovery was calculated since the analyte concentration is greater than four times the spike level.

13120020$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Raymark - Stratford, CT

Air Toxics by GC/MS

Client Sample ID:	13499	Lab Sample ID:	AB45921
Date of Collection:	12/12/2013	Matrix:	Air
Date of Preparation:	12/16/2013	Amount Prepared:	500 mL
Date of Analysis:	12/16/2013	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	1.98
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
71-55-6	1,1,1-Trichloroethane	ND	ND	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	0.10	
79-00-5	1,1,2-Trichloroethane	ND	ND	0.10	
75-34-3	1,1-Dichloroethane	ND	ND	0.10	
75-35-4	1,1-Dichloroethylene	ND	ND	0.10	
120-82-1	1,2,4-Trichlorobenzene	ND	ND	0.10	
95-63-6	1,2,4-Trimethylbenzene	ND	ND	0.10	
106-93-4	1,2-Dibromoethane	ND	ND	0.10	
95-50-1	1,2-Dichlorobenzene	ND	ND	0.10	
107-06-2	1,2-Dichloroethane	ND	ND	0.10	
78-87-5	1,2-Dichloropropane	ND	ND	0.10	
108-67-8	1,3,5-Trimethylbenzene	ND	ND	0.10	
106-99-0	1,3-Butadiene	ND	ND	0.20	
541-73-1	1,3-Dichlorobenzene	ND	ND	0.10	
106-46-7	1,4-Dichlorobenzene	ND	ND	0.10	
591-78-6	2-Hexanone	ND	ND	0.10	
622-96-8	4-Ethyltoluene	ND	ND	0.10	
107-13-1	Acrylonitrile	ND	ND	0.10	
107-05-1	Allyl Chloride	ND	ND	0.10	
71-43-2	Benzene	**0.18**	**0.57**	0.10	
100-44-7	Benzylchloride	ND	ND	0.10	
75-27-4	Bromodichloromethane	ND	ND	0.10	
75-25-2	Bromoform	ND	ND	0.10	
56-23-5	Carbon Tetrachloride	ND	ND	0.10	
108-90-7	Chlorobenzene	ND	ND	0.10	
75-00-3	Chloroethane	ND	ND	0.10	
67-66-3	Chloroform	ND	ND	0.10	
110-82-7	Cyclohexane	ND	ND	0.10	
124-48-1	Dibromochloromethane	ND	ND	0.10	
75-71-8	Dichlorodifluoromethane	**0.42**	**2.1**	0.10	
1320-37-2	Dichlorotetrafluoroethane	ND	ND	0.10	
100-41-4	Ethylbenzene	ND	ND	0.10	
142-82-5	Heptane	ND	ND	0.10	
87-68-3	Hexachloro-1,3-butadiene	ND	ND	0.10	
110-54-3	Hexane	**0.85**	**3.0**	0.10	
78-93-3	Methyl Ethyl Ketone	**0.10**	**0.30**	0.10	
108-10-1	Methyl Isobutyl Ketone	ND	ND	0.10	
1634-04-4	Methyl-t-Butyl Ether	ND	ND	0.10	
74-83-9	Methylbromide	ND	ND	0.10	
74-87-3	Methylchloride	**0.52**	**1.1**	0.10	

13120020$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Raymark - Stratford, CT

Air Toxics by GC/MS

Client Sample ID:	13499	Lab Sample ID:	AB45921
Date of Collection:	12/12/2013	Matrix:	Air
Date of Preparation:	12/16/2013	Amount Prepared:	500 mL
Date of Analysis:	12/16/2013	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	1.98
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
75-09-2	Methylene Chloride	**0.13**	**0.45**	0.10	
100-42-5	Styrene	ND	ND	0.10	
127-18-4	Tetrachloroethylene	ND	ND	0.10	
109-99-9	Tetrahydrofuran	ND	ND	0.10	
108-88-3	Toluene	**0.13**	**0.49**	0.10	
79-01-6	Trichloroethylene	ND	ND	0.10	
75-69-4	Trichlorofluoromethane	**0.22**	**1.2**	0.10	
76-13-1	Trichlorotrifluoroethane	ND	ND	0.10	
593-60-2	Vinyl Bromide	ND	ND	0.10	
75-01-4	Vinylchloride	ND	ND	0.10	
156-59-2	c-1,2-Dichloroethylene	ND	ND	0.10	
10061-01-5	c-1,3-Dichloropropylene	ND	ND	0.10	
1330-20-7	m/p-Xylenes	ND	ND	0.20	
95-47-6	o-Xylene	ND	ND	0.10	
156-60-5	t-1,2-Dichloroethylene	ND	ND	0.10	
10061-02-6	t-1,3-Dichloropropylene	ND	ND	0.10	

Surrogate Compounds	Recoveries (%)	QC Ranges
1,2-Dichloroethane,d4	121	82 - 135
Bromofluorobenzene	91	76 - 115
Toluene,d8	103	64 - 125

Comments:

13120020$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Raymark - Stratford, CT

Air Toxics by GC/MS

Client Sample ID:	15056	Lab Sample ID:	AB45922
Date of Collection:	12/12/2013	Matrix:	Air
Date of Preparation:	12/16/2013	Amount Prepared:	500 mL
Date of Analysis:	12/16/2013	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	2.25
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
71-55-6	1,1,1-Trichloroethane	ND	ND	0.11	
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	0.11	
79-00-5	1,1,2-Trichloroethane	ND	ND	0.11	
75-34-3	1,1-Dichloroethane	ND	ND	0.11	
75-35-4	1,1-Dichloroethylene	ND	ND	0.11	
120-82-1	1,2,4-Trichlorobenzene	ND	ND	0.11	
95-63-6	1,2,4-Trimethylbenzene	ND	ND	0.11	
106-93-4	1,2-Dibromoethane	ND	ND	0.11	
95-50-1	1,2-Dichlorobenzene	ND	ND	0.11	
107-06-2	1,2-Dichloroethane	ND	ND	0.11	
78-87-5	1,2-Dichloropropane	ND	ND	0.11	
108-67-8	1,3,5-Trimethylbenzene	ND	ND	0.11	
106-99-0	1,3-Butadiene	ND	ND	0.23	
541-73-1	1,3-Dichlorobenzene	ND	ND	0.11	
106-46-7	1,4-Dichlorobenzene	ND	ND	0.11	
591-78-6	2-Hexanone	ND	ND	0.11	
622-96-8	4-Ethyltoluene	ND	ND	0.11	
107-13-1	Acrylonitrile	ND	ND	0.11	
107-05-1	Allyl Chloride	ND	ND	0.11	
71-43-2	Benzene	**0.16**	**0.51**	0.11	
100-44-7	Benzylchloride	ND	ND	0.11	
75-27-4	Bromodichloromethane	ND	ND	0.11	
75-25-2	Bromoform	ND	ND	0.11	
56-23-5	Carbon Tetrachloride	ND	ND	0.11	
108-90-7	Chlorobenzene	ND	ND	0.11	
75-00-3	Chloroethane	ND	ND	0.11	
67-66-3	Chloroform	ND	ND	0.11	
110-82-7	Cyclohexane	ND	ND	0.11	
124-48-1	Dibromochloromethane	ND	ND	0.11	
75-71-8	Dichlorodifluoromethane	**0.48**	**2.4**	0.11	
1320-37-2	Dichlorotetrafluoroethane	ND	ND	0.11	
100-41-4	Ethylbenzene	ND	ND	0.11	
142-82-5	Heptane	ND	ND	0.11	
87-68-3	Hexachloro-1,3-butadiene	ND	ND	0.11	
110-54-3	Hexane	**0.82**	**2.9**	0.11	
78-93-3	Methyl Ethyl Ketone	**0.13**	**0.38**	0.11	
108-10-1	Methyl Isobutyl Ketone	ND	ND	0.11	
1634-04-4	Methyl-t-Butyl Ether	ND	ND	0.11	
74-83-9	Methylbromide	ND	ND	0.11	
74-87-3	Methylchloride	**0.57**	**1.2**	0.11	

13120020$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Raymark - Stratford, CT

Air Toxics by GC/MS

Client Sample ID:	15056	Lab Sample ID:	AB45922
Date of Collection:	12/12/2013	Matrix:	Air
Date of Preparation:	12/16/2013	Amount Prepared:	500 mL
Date of Analysis:	12/16/2013	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	2.25
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
75-09-2	Methylene Chloride	**0.13**	**0.45**	0.11	
100-42-5	Styrene	ND	ND	0.11	
127-18-4	Tetrachloroethylene	ND	ND	0.11	
109-99-9	Tetrahydrofuran	ND	ND	0.11	
108-88-3	Toluene	**0.15**	**0.56**	0.11	
79-01-6	Trichloroethylene	ND	ND	0.11	
75-69-4	Trichlorofluoromethane	**0.24**	**1.3**	0.11	
76-13-1	Trichlorotrifluoroethane	ND	ND	0.11	
593-60-2	Vinyl Bromide	ND	ND	0.11	
75-01-4	Vinylchloride	ND	ND	0.11	
156-59-2	c-1,2-Dichloroethylene	ND	ND	0.11	
10061-01-5	c-1,3-Dichloropropylene	ND	ND	0.11	
1330-20-7	m/p-Xylenes	ND	ND	0.20	
95-47-6	o-Xylene	ND	ND	0.11	
156-60-5	t-1,2-Dichloroethylene	ND	ND	0.11	
10061-02-6	t-1,3-Dichloropropylene	ND	ND	0.11	

Surrogate Compounds	Recoveries (%)	QC Ranges
1,2-Dichloroethane,d4	119	82 - 135
Bromofluorobenzene	87	76 - 115
Toluene,d8	108	64 - 125

Comments:

13120020$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Raymark - Stratford, CT

Air Toxics by GC/MS

Client Sample ID:	14898	Lab Sample ID:	AB45923
Date of Collection:	12/12/2013	Matrix:	Air
Date of Preparation:	12/16/2013	Amount Prepared:	500 mL
Date of Analysis:	12/16/2013	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	2.38
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
71-55-6	1,1,1-Trichloroethane	**0.11**	**0.60**	0.12	
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	0.12	
79-00-5	1,1,2-Trichloroethane	ND	ND	0.12	
75-34-3	1,1-Dichloroethane	ND	ND	0.12	
75-35-4	1,1-Dichloroethylene	ND	ND	0.12	
120-82-1	1,2,4-Trichlorobenzene	ND	ND	0.12	
95-63-6	1,2,4-Trimethylbenzene	ND	ND	0.12	
106-93-4	1,2-Dibromoethane	ND	ND	0.12	
95-50-1	1,2-Dichlorobenzene	ND	ND	0.12	
107-06-2	1,2-Dichloroethane	ND	ND	0.12	
78-87-5	1,2-Dichloropropane	ND	ND	0.12	
108-67-8	1,3,5-Trimethylbenzene	ND	ND	0.12	
106-99-0	1,3-Butadiene	ND	ND	0.24	
541-73-1	1,3-Dichlorobenzene	ND	ND	0.12	
106-46-7	1,4-Dichlorobenzene	ND	ND	0.12	
591-78-6	2-Hexanone	ND	ND	0.12	
622-96-8	4-Ethyltoluene	ND	ND	0.12	
107-13-1	Acrylonitrile	ND	ND	0.12	
107-05-1	Allyl Chloride	ND	ND	0.12	
71-43-2	Benzene	**0.16**	**0.51**	0.12	
100-44-7	Benzylchloride	ND	ND	0.12	
75-27-4	Bromodichloromethane	ND	ND	0.12	
75-25-2	Bromoform	ND	ND	0.12	
56-23-5	Carbon Tetrachloride	ND	ND	0.12	
108-90-7	Chlorobenzene	ND	ND	0.12	
75-00-3	Chloroethane	ND	ND	0.12	
67-66-3	Chloroform	ND	ND	0.12	
110-82-7	Cyclohexane	ND	ND	0.12	
124-48-1	Dibromochloromethane	ND	ND	0.12	
75-71-8	Dichlorodifluoromethane	**0.47**	**2.3**	0.12	
1320-37-2	Dichlorotetrafluoroethane	ND	ND	0.12	
100-41-4	Ethylbenzene	ND	ND	0.12	
142-82-5	Heptane	ND	ND	0.12	
87-68-3	Hexachloro-1,3-butadiene	ND	ND	0.12	
110-54-3	Hexane	**0.71**	**2.5**	0.12	
78-93-3	Methyl Ethyl Ketone	**0.13**	**0.38**	0.12	
108-10-1	Methyl Isobutyl Ketone	ND	ND	0.12	
1634-04-4	Methyl-t-Butyl Ether	ND	ND	0.12	
74-83-9	Methylbromide	ND	ND	0.12	
74-87-3	Methylchloride	**0.49**	**1.0**	0.12	

13120020$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Raymark - Stratford, CT

Air Toxics by GC/MS

Client Sample ID:	14898	Lab Sample ID:	AB45923
Date of Collection:	12/12/2013	Matrix:	Air
Date of Preparation:	12/16/2013	Amount Prepared:	500 mL
Date of Analysis:	12/16/2013	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	2.38
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
75-09-2	Methylene Chloride	**0.13**	**0.45**	0.12	
100-42-5	Styrene	ND	ND	0.12	
127-18-4	Tetrachloroethylene	ND	ND	0.12	
109-99-9	Tetrahydrofuran	ND	ND	0.12	
108-88-3	Toluene	**0.14**	**0.53**	0.12	
79-01-6	Trichloroethylene	ND	ND	0.12	
75-69-4	Trichlorofluoromethane	**0.23**	**1.3**	0.12	
76-13-1	Trichlorotrifluoroethane	ND	ND	0.12	
593-60-2	Vinyl Bromide	ND	ND	0.12	
75-01-4	Vinylchloride	ND	ND	0.12	
156-59-2	c-1,2-Dichloroethylene	ND	ND	0.12	
10061-01-5	c-1,3-Dichloropropylene	ND	ND	0.12	
1330-20-7	m/p-Xylenes	ND	ND	0.20	
95-47-6	o-Xylene	ND	ND	0.12	
156-60-5	t-1,2-Dichloroethylene	ND	ND	0.12	
10061-02-6	t-1,3-Dichloropropylene	ND	ND	0.12	

Surrogate Compounds	Recoveries (%)	QC Ranges
1,2-Dichloroethane,d4	123	82 - 135
Bromofluorobenzene	93	76 - 115
Toluene,d8	105	64 - 125

Comments:

13120020$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Raymark - Stratford, CT

Laboratory Blank

Client Sample ID:	N/A	Lab Sample ID:	N/A
Date of Collection:	N/A	Matrix:	Air
Date of Preparation:	12/16/2013	Amount Prepared:	500 mL
Date of Analysis:	12/16/2013	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	1
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
71-55-6	1,1,1-Trichloroethane	ND	ND	0.05	
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	0.05	
79-00-5	1,1,2-Trichloroethane	ND	ND	0.05	
75-34-3	1,1-Dichloroethane	ND	ND	0.05	
75-35-4	1,1-Dichloroethylene	ND	ND	0.05	
120-82-1	1,2,4-Trichlorobenzene	ND	ND	0.05	
95-63-6	1,2,4-Trimethylbenzene	ND	ND	0.05	
106-93-4	1,2-Dibromoethane	ND	ND	0.05	
95-50-1	1,2-Dichlorobenzene	ND	ND	0.05	
107-06-2	1,2-Dichloroethane	ND	ND	0.05	
78-87-5	1,2-Dichloropropane	ND	ND	0.05	
108-67-8	1,3,5-Trimethylbenzene	ND	ND	0.05	
106-99-0	1,3-Butadiene	ND	ND	0.10	
541-73-1	1,3-Dichlorobenzene	ND	ND	0.05	
106-46-7	1,4-Dichlorobenzene	ND	ND	0.05	
591-78-6	2-Hexanone	ND	ND	0.05	
622-96-8	4-Ethyltoluene	ND	ND	0.05	
107-13-1	Acrylonitrile	ND	ND	0.05	
107-05-1	Allyl Chloride	ND	ND	0.05	
71-43-2	Benzene	ND	ND	0.05	
100-44-7	Benzylchloride	ND	ND	0.05	
75-27-4	Bromodichloromethane	ND	ND	0.05	
75-25-2	Bromoform	ND	ND	0.05	
56-23-5	Carbon Tetrachloride	ND	ND	0.05	
108-90-7	Chlorobenzene	ND	ND	0.05	
75-00-3	Chloroethane	ND	ND	0.05	
67-66-3	Chloroform	ND	ND	0.05	
110-82-7	Cyclohexane	ND	ND	0.05	
124-48-1	Dibromochloromethane	ND	ND	0.05	
75-71-8	Dichlorodifluoromethane	ND	ND	0.05	
1320-37-2	Dichlorotetrafluoroethane	ND	ND	0.05	
100-41-4	Ethylbenzene	ND	ND	0.05	
142-82-5	Heptane	ND	ND	0.05	
87-68-3	Hexachloro-1,3-butadiene	ND	ND	0.05	
110-54-3	Hexane	ND	ND	0.05	
78-93-3	Methyl Ethyl Ketone	ND	ND	0.05	
108-10-1	Methyl Isobutyl Ketone	ND	ND	0.05	
1634-04-4	Methyl-t-Butyl Ether	ND	ND	0.05	
74-83-9	Methylbromide	ND	ND	0.05	
74-87-3	Methylchloride	ND	ND	0.05	

13120020$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Raymark - Stratford, CT

Laboratory Blank

Client Sample ID:	N/A	Lab Sample ID:	N/A
Date of Collection:	N/A	Matrix:	Air
Date of Preparation:	12/16/2013	Amount Prepared:	500 mL
Date of Analysis:	12/16/2013	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	1
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
75-09-2	Methylene Chloride	ND	ND	0.05	
100-42-5	Styrene	ND	ND	0.05	
127-18-4	Tetrachloroethylene	ND	ND	0.05	
109-99-9	Tetrahydrofuran	ND	ND	0.05	
108-88-3	Toluene	ND	ND	0.05	
79-01-6	Trichloroethylene	ND	ND	0.05	
75-69-4	Trichlorofluoromethane	ND	ND	0.05	
76-13-1	Trichlorotrifluoroethane	ND	ND	0.05	
593-60-2	Vinyl Bromide	ND	ND	0.05	
75-01-4	Vinylchloride	ND	ND	0.05	
156-59-2	c-1,2-Dichloroethylene	ND	ND	0.05	
10061-01-5	c-1,3-Dichloropropylene	ND	ND	0.05	
1330-20-7	m/p-Xylenes	ND	ND	0.10	
95-47-6	o-Xylene	ND	ND	0.05	
156-60-5	t-1,2-Dichloroethylene	ND	ND	0.05	
10061-02-6	t-1,3-Dichloropropylene	ND	ND	0.05	

Surrogate Compounds	Recoveries (%)	QC Ranges
1,2-Dichloroethane,d4	123	82 - 135
Bromofluorobenzene	86	76 - 115
Toluene,d8	114	64 - 125

Comments:

13120020$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Raymark - Stratford, CT

Air Toxics by GC/MS

Client Sample ID:	22685	Lab Sample ID:	AB45924
Date of Collection:	12/12/2013	Matrix:	Air
Date of Preparation:	12/16/2013	Amount Prepared:	500 mL
Date of Analysis:	12/16/2013	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	2.09
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
71-55-6	1,1,1-Trichloroethane	**0.084**	**0.46**	0.10	L
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	0.10	
79-00-5	1,1,2-Trichloroethane	ND	ND	0.10	
75-34-3	1,1-Dichloroethane	ND	ND	0.10	
75-35-4	1,1-Dichloroethylene	ND	ND	0.10	
120-82-1	1,2,4-Trichlorobenzene	ND	ND	0.10	
95-63-6	1,2,4-Trimethylbenzene	ND	ND	0.10	
106-93-4	1,2-Dibromoethane	ND	ND	0.10	
95-50-1	1,2-Dichlorobenzene	ND	ND	0.10	
107-06-2	1,2-Dichloroethane	ND	ND	0.10	
78-87-5	1,2-Dichloropropane	ND	ND	0.10	
108-67-8	1,3,5-Trimethylbenzene	ND	ND	0.10	
106-99-0	1,3-Butadiene	ND	ND	0.21	
541-73-1	1,3-Dichlorobenzene	ND	ND	0.10	
106-46-7	1,4-Dichlorobenzene	ND	ND	0.10	
591-78-6	2-Hexanone	ND	ND	0.10	
622-96-8	4-Ethyltoluene	ND	ND	0.10	
107-13-1	Acrylonitrile	ND	ND	0.10	
107-05-1	Allyl Chloride	ND	ND	0.10	
71-43-2	Benzene	**0.16**	**0.51**	0.10	
100-44-7	Benzylchloride	ND	ND	0.10	
75-27-4	Bromodichloromethane	ND	ND	0.10	
75-25-2	Bromoform	ND	ND	0.10	
56-23-5	Carbon Tetrachloride	ND	ND	0.10	
108-90-7	Chlorobenzene	ND	ND	0.10	
75-00-3	Chloroethane	ND	ND	0.10	
67-66-3	Chloroform	ND	ND	0.10	
110-82-7	Cyclohexane	ND	ND	0.10	
124-48-1	Dibromochloromethane	ND	ND	0.10	
75-71-8	Dichlorodifluoromethane	**0.44**	**2.3**	0.10	
1320-37-2	Dichlorotetrafluoroethane	ND	ND	0.10	
100-41-4	Ethylbenzene	ND	ND	0.10	
142-82-5	Heptane	ND	ND	0.10	
87-68-3	Hexachloro-1,3-butadiene	ND	ND	0.10	
110-54-3	Hexane	**0.78**	**2.7**	0.10	
78-93-3	Methyl Ethyl Ketone	**0.14**	**0.41**	0.10	
108-10-1	Methyl Isobutyl Ketone	ND	ND	0.10	
1634-04-4	Methyl-t-Butyl Ether	ND	ND	0.10	
74-83-9	Methylbromide	ND	ND	0.10	
74-87-3	Methylchloride	**0.45**	**0.93**	0.10	

13120020$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Raymark - Stratford, CT

Air Toxics by GC/MS

Client Sample ID:	22685	Lab Sample ID:	AB45924
Date of Collection:	12/12/2013	Matrix:	Air
Date of Preparation:	12/16/2013	Amount Prepared:	500 mL
Date of Analysis:	12/16/2013	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	2.09
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
75-09-2	Methylene Chloride	**0.12**	**0.42**	0.10	
100-42-5	Styrene	ND	ND	0.10	
127-18-4	Tetrachloroethylene	ND	ND	0.10	
109-99-9	Tetrahydrofuran	ND	ND	0.10	
108-88-3	Toluene	**0.13**	**0.49**	0.10	
79-01-6	Trichloroethylene	ND	ND	0.10	
75-69-4	Trichlorofluoromethane	**0.23**	**1.3**	0.10	
76-13-1	Trichlorotrifluoroethane	ND	ND	0.10	
593-60-2	Vinyl Bromide	ND	ND	0.10	
75-01-4	Vinylchloride	ND	ND	0.10	
156-59-2	c-1,2-Dichloroethylene	ND	ND	0.10	
10061-01-5	c-1,3-Dichloropropylene	ND	ND	0.10	
1330-20-7	m/p-Xylenes	ND	ND	0.20	
95-47-6	o-Xylene	ND	ND	0.10	
156-60-5	t-1,2-Dichloroethylene	ND	ND	0.10	
10061-02-6	t-1,3-Dichloropropylene	ND	ND	0.10	

Surrogate Compounds	Recoveries (%)	QC Ranges
1,2-Dichloroethane,d4	117	82 - 135
Bromofluorobenzene	89	76 - 115
Toluene,d8	107	64 - 125

Comments:

13120020$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Raymark - Stratford, CT

Air Toxics by GC/MS

Client Sample ID:	13498	Lab Sample ID:	AB45925
Date of Collection:	12/12/2013	Matrix:	Air
Date of Preparation:	12/16/2013	Amount Prepared:	500 mL
Date of Analysis:	12/16/2013	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	2.19
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
71-55-6	1,1,1-Trichloroethane	ND	ND	0.11	
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	0.11	
79-00-5	1,1,2-Trichloroethane	ND	ND	0.11	
75-34-3	1,1-Dichloroethane	ND	ND	0.11	
75-35-4	1,1-Dichloroethylene	ND	ND	0.11	
120-82-1	1,2,4-Trichlorobenzene	ND	ND	0.11	
95-63-6	1,2,4-Trimethylbenzene	**0.16**	**0.79**	0.11	
106-93-4	1,2-Dibromoethane	ND	ND	0.11	
95-50-1	1,2-Dichlorobenzene	ND	ND	0.11	
107-06-2	1,2-Dichloroethane	ND	ND	0.11	
78-87-5	1,2-Dichloropropane	ND	ND	0.11	
108-67-8	1,3,5-Trimethylbenzene	ND	ND	0.11	
106-99-0	1,3-Butadiene	ND	ND	0.22	
541-73-1	1,3-Dichlorobenzene	ND	ND	0.11	
106-46-7	1,4-Dichlorobenzene	ND	ND	0.11	
591-78-6	2-Hexanone	ND	ND	0.11	
622-96-8	4-Ethyltoluene	**0.12**	**0.59**	0.11	
107-13-1	Acrylonitrile	ND	ND	0.11	
107-05-1	Allyl Chloride	ND	ND	0.11	
71-43-2	Benzene	**0.47**	**1.5**	0.11	
100-44-7	Benzylchloride	ND	ND	0.11	
75-27-4	Bromodichloromethane	ND	ND	0.11	
75-25-2	Bromoform	ND	ND	0.11	
56-23-5	Carbon Tetrachloride	ND	ND	0.11	
108-90-7	Chlorobenzene	ND	ND	0.11	
75-00-3	Chloroethane	ND	ND	0.11	
67-66-3	Chloroform	ND	ND	0.11	
110-82-7	Cyclohexane	**0.23**	**0.79**	0.11	
124-48-1	Dibromochloromethane	ND	ND	0.11	
75-71-8	Dichlorodifluoromethane	**0.52**	**2.6**	0.11	
1320-37-2	Dichlorotetrafluoroethane	ND	ND	0.11	
100-41-4	Ethylbenzene	**0.20**	**0.87**	0.11	
142-82-5	Heptane	ND	ND	0.11	
87-68-3	Hexachloro-1,3-butadiene	ND	ND	0.11	
110-54-3	Hexane	**2.0**	**7.1**	0.11	
78-93-3	Methyl Ethyl Ketone	**0.27**	**0.80**	0.11	
108-10-1	Methyl Isobutyl Ketone	ND	ND	0.11	
1634-04-4	Methyl-t-Butyl Ether	ND	ND	0.11	
74-83-9	Methylbromide	ND	ND	0.11	
74-87-3	Methylchloride	**0.59**	**1.2**	0.11	

13120020$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Raymark - Stratford, CT

Air Toxics by GC/MS

Client Sample ID:	13498	Lab Sample ID:	AB45925
Date of Collection:	12/12/2013	Matrix:	Air
Date of Preparation:	12/16/2013	Amount Prepared:	500 mL
Date of Analysis:	12/16/2013	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	2.19
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
75-09-2	Methylene Chloride	**0.36**	**1.3**	0.11	
100-42-5	Styrene	ND	ND	0.11	
127-18-4	Tetrachloroethylene	ND	ND	0.11	
109-99-9	Tetrahydrofuran	ND	ND	0.11	
108-88-3	Toluene	**1.9**	**7.3**	0.11	
79-01-6	Trichloroethylene	ND	ND	0.11	
75-69-4	Trichlorofluoromethane	**0.56**	**3.1**	0.11	
76-13-1	Trichlorotrifluoroethane	ND	ND	0.11	
593-60-2	Vinyl Bromide	ND	ND	0.11	
75-01-4	Vinylchloride	ND	ND	0.11	
156-59-2	c-1,2-Dichloroethylene	ND	ND	0.11	
10061-01-5	c-1,3-Dichloropropylene	ND	ND	0.11	
1330-20-7	m/p-Xylenes	**0.82**	**3.6**	0.20	
95-47-6	o-Xylene	**0.23**	**1.0**	0.11	
156-60-5	t-1,2-Dichloroethylene	ND	ND	0.11	
10061-02-6	t-1,3-Dichloropropylene	ND	ND	0.11	

Surrogate Compounds	Recoveries (%)	QC Ranges
1,2-Dichloroethane,d4	121	82 - 135
Bromofluorobenzene	90	76 - 115
Toluene,d8	106	64 - 125

Comments:

13120020$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Raymark - Stratford, CT

Air Toxics by GC/MS

Client Sample ID:	22692	Lab Sample ID:	AB45926
Date of Collection:	12/12/2013	Matrix:	Air
Date of Preparation:	12/16/2013	Amount Prepared:	500 mL
Date of Analysis:	12/16/2013	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	2.12
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
71-55-6	1,1,1-Trichloroethane	ND	ND	0.11	
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	0.11	
79-00-5	1,1,2-Trichloroethane	ND	ND	0.11	
75-34-3	1,1-Dichloroethane	ND	ND	0.11	
75-35-4	1,1-Dichloroethylene	ND	ND	0.11	
120-82-1	1,2,4-Trichlorobenzene	ND	ND	0.11	
95-63-6	1,2,4-Trimethylbenzene	ND	ND	0.11	
106-93-4	1,2-Dibromoethane	ND	ND	0.11	
95-50-1	1,2-Dichlorobenzene	ND	ND	0.11	
107-06-2	1,2-Dichloroethane	ND	ND	0.11	
78-87-5	1,2-Dichloropropane	ND	ND	0.11	
108-67-8	1,3,5-Trimethylbenzene	ND	ND	0.11	
106-99-0	1,3-Butadiene	ND	ND	0.21	
541-73-1	1,3-Dichlorobenzene	ND	ND	0.11	
106-46-7	1,4-Dichlorobenzene	ND	ND	0.11	
591-78-6	2-Hexanone	ND	ND	0.11	
622-96-8	4-Ethyltoluene	ND	ND	0.11	
107-13-1	Acrylonitrile	ND	ND	0.11	
107-05-1	Allyl Chloride	ND	ND	0.11	
71-43-2	Benzene	**0.37**	**1.2**	0.11	
100-44-7	Benzylchloride	ND	ND	0.11	
75-27-4	Bromodichloromethane	ND	ND	0.11	
75-25-2	Bromoform	ND	ND	0.11	
56-23-5	Carbon Tetrachloride	ND	ND	0.11	
108-90-7	Chlorobenzene	ND	ND	0.11	
75-00-3	Chloroethane	ND	ND	0.11	
67-66-3	Chloroform	ND	ND	0.11	
110-82-7	Cyclohexane	**0.16**	**0.55**	0.11	
124-48-1	Dibromochloromethane	ND	ND	0.11	
75-71-8	Dichlorodifluoromethane	**0.49**	**2.4**	0.11	
1320-37-2	Dichlorotetrafluoroethane	ND	ND	0.11	
100-41-4	Ethylbenzene	**0.16**	**0.69**	0.11	
142-82-5	Heptane	ND	ND	0.11	
87-68-3	Hexachloro-1,3-butadiene	ND	ND	0.11	
110-54-3	Hexane	**1.6**	**5.5**	0.11	
78-93-3	Methyl Ethyl Ketone	**0.24**	**0.71**	0.11	
108-10-1	Methyl Isobutyl Ketone	ND	ND	0.11	
1634-04-4	Methyl-t-Butyl Ether	ND	ND	0.11	
74-83-9	Methylbromide	ND	ND	0.11	
74-87-3	Methylchloride	**0.50**	**1.0**	0.11	

13120020$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Raymark - Stratford, CT

Air Toxics by GC/MS

Client Sample ID:	22692	Lab Sample ID:	AB45926
Date of Collection:	12/12/2013	Matrix:	Air
Date of Preparation:	12/16/2013	Amount Prepared:	500 mL
Date of Analysis:	12/16/2013	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	2.12
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
75-09-2	Methylene Chloride	**0.34**	**1.2**	0.11	
100-42-5	Styrene	ND	ND	0.11	
127-18-4	Tetrachloroethylene	ND	ND	0.11	
109-99-9	Tetrahydrofuran	ND	ND	0.11	
108-88-3	Toluene	**1.6**	**5.9**	0.11	
79-01-6	Trichloroethylene	ND	ND	0.11	
75-69-4	Trichlorofluoromethane	**0.46**	**2.6**	0.11	
76-13-1	Trichlorotrifluoroethane	ND	ND	0.11	
593-60-2	Vinyl Bromide	ND	ND	0.11	
75-01-4	Vinylchloride	ND	ND	0.11	
156-59-2	c-1,2-Dichloroethylene	ND	ND	0.11	
10061-01-5	c-1,3-Dichloropropylene	ND	ND	0.11	
1330-20-7	m/p-Xylenes	**0.65**	**2.8**	0.20	
95-47-6	o-Xylene	**0.19**	**0.82**	0.11	
156-60-5	t-1,2-Dichloroethylene	ND	ND	0.11	
10061-02-6	t-1,3-Dichloropropylene	ND	ND	0.11	

Surrogate Compounds	Recoveries (%)	QC Ranges
1,2-Dichloroethane,d4	120	82 - 135
Bromofluorobenzene	95	76 - 115
Toluene,d8	105	64 - 125

Comments:

13120020$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Raymark - Stratford, CT

Air Toxics by GC/MS

Client Sample ID:	4742	Lab Sample ID:	AB45927
Date of Collection:	12/12/2013	Matrix:	Air
Date of Preparation:	12/16/2013	Amount Prepared:	500 mL
Date of Analysis:	12/16/2013	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	1.84
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
71-55-6	1,1,1-Trichloroethane	**430**	**2300**	46	
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	0.09	
79-00-5	1,1,2-Trichloroethane	ND	ND	0.09	
75-34-3	1,1-Dichloroethane	**9.0**	**36**	0.92	
75-35-4	1,1-Dichloroethylene	**14**	**56**	0.92	
120-82-1	1,2,4-Trichlorobenzene	ND	ND	0.09	
95-63-6	1,2,4-Trimethylbenzene	ND	ND	0.09	
106-93-4	1,2-Dibromoethane	ND	ND	0.09	
95-50-1	1,2-Dichlorobenzene	ND	ND	0.09	
107-06-2	1,2-Dichloroethane	ND	ND	0.09	
78-87-5	1,2-Dichloropropane	ND	ND	0.09	
108-67-8	1,3,5-Trimethylbenzene	ND	ND	0.09	
106-99-0	1,3-Butadiene	ND	ND	0.18	
541-73-1	1,3-Dichlorobenzene	ND	ND	0.09	
106-46-7	1,4-Dichlorobenzene	ND	ND	0.09	
591-78-6	2-Hexanone	ND	ND	0.09	
622-96-8	4-Ethyltoluene	ND	ND	0.09	
107-13-1	Acrylonitrile	ND	ND	0.09	
107-05-1	Allyl Chloride	ND	ND	0.09	
71-43-2	Benzene	ND	ND	0.09	
100-44-7	Benzylchloride	ND	ND	0.09	
75-27-4	Bromodichloromethane	ND	ND	0.09	
75-25-2	Bromoform	ND	ND	0.09	
56-23-5	Carbon Tetrachloride	ND	ND	0.09	
108-90-7	Chlorobenzene	ND	ND	0.09	
75-00-3	Chloroethane	ND	ND	0.09	
67-66-3	Chloroform	**1.7**	**8.4**	0.09	
110-82-7	Cyclohexane	ND	ND	0.09	
124-48-1	Dibromochloromethane	ND	ND	0.09	
75-71-8	Dichlorodifluoromethane	ND	ND	0.09	
1320-37-2	Dichlorotetrafluoroethane	ND	ND	0.09	
100-41-4	Ethylbenzene	ND	ND	0.09	
142-82-5	Heptane	ND	ND	0.09	
87-68-3	Hexachloro-1,3-butadiene	ND	ND	0.09	
110-54-3	Hexane	ND	ND	0.09	
78-93-3	Methyl Ethyl Ketone	**0.16**	**0.47**	0.09	
108-10-1	Methyl Isobutyl Ketone	ND	ND	0.09	
1634-04-4	Methyl-t-Butyl Ether	ND	ND	0.09	
74-83-9	Methylbromide	ND	ND	0.09	
74-87-3	Methylchloride	ND	ND	0.09	

13120020$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Raymark - Stratford, CT

Air Toxics by GC/MS

Client Sample ID:	4742	Lab Sample ID:	AB45927
Date of Collection:	12/12/2013	Matrix:	Air
Date of Preparation:	12/16/2013	Amount Prepared:	500 mL
Date of Analysis:	12/16/2013	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	1.84
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
75-09-2	Methylene Chloride	ND	ND	0.09	
100-42-5	Styrene	ND	ND	0.09	
127-18-4	Tetrachloroethylene	**0.87**	**5.9**	0.09	
109-99-9	Tetrahydrofuran	ND	ND	0.09	
108-88-3	Toluene	ND	ND	0.09	
79-01-6	Trichloroethylene	**11**	**59**	0.92	
75-69-4	Trichlorofluoromethane	**0.80**	**4.5**	0.09	
76-13-1	Trichlorotrifluoroethane	ND	ND	0.09	
593-60-2	Vinyl Bromide	ND	ND	0.09	
75-01-4	Vinylchloride	ND	ND	0.09	
156-59-2	c-1,2-Dichloroethylene	**1.9**	**7.7**	0.09	
10061-01-5	c-1,3-Dichloropropylene	ND	ND	0.09	
1330-20-7	m/p-Xylenes	ND	ND	0.20	
95-47-6	o-Xylene	ND	ND	0.09	
156-60-5	t-1,2-Dichloroethylene	ND	ND	0.09	
10061-02-6	t-1,3-Dichloropropylene	ND	ND	0.09	

Surrogate Compounds	Recoveries (%)	QC Ranges
1,2-Dichloroethane,d4	120	82 - 135
Bromofluorobenzene	93	76 - 115
Toluene,d8	114	64 - 125

Comments: 1,1-Dichloroethylene, Trichloroethylene and 1,1-Dichloroethane results are from a 18.4 fold dilution analyzed 12/16/13. 1,1,1-Trichloroethane result is from a 920 fold dilution analyzed 12/17/13

13120020$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Raymark - Stratford, CT

Air Toxics by GC/MS

Client Sample ID:	1565	Lab Sample ID:	AB45928
Date of Collection:	12/12/2013	Matrix:	Air
Date of Preparation:	12/17/2013	Amount Prepared:	500 mL
Date of Analysis:	12/17/2013	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	1.85
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
71-55-6	1,1,1-Trichloroethane	**480**	**2600**	46	
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	0.09	
79-00-5	1,1,2-Trichloroethane	ND	ND	0.09	
75-34-3	1,1-Dichloroethane	**3.2**	**13**	0.09	
75-35-4	1,1-Dichloroethylene	**0.10**	**0.40**	0.09	
120-82-1	1,2,4-Trichlorobenzene	ND	ND	0.09	
95-63-6	1,2,4-Trimethylbenzene	ND	ND	0.09	
106-93-4	1,2-Dibromoethane	ND	ND	0.09	
95-50-1	1,2-Dichlorobenzene	ND	ND	0.09	
107-06-2	1,2-Dichloroethane	ND	ND	0.09	
78-87-5	1,2-Dichloropropane	ND	ND	0.09	
108-67-8	1,3,5-Trimethylbenzene	ND	ND	0.09	
106-99-0	1,3-Butadiene	ND	ND	0.19	
541-73-1	1,3-Dichlorobenzene	ND	ND	0.09	
106-46-7	1,4-Dichlorobenzene	ND	ND	0.09	
591-78-6	2-Hexanone	ND	ND	0.09	
622-96-8	4-Ethyltoluene	ND	ND	0.09	
107-13-1	Acrylonitrile	ND	ND	0.09	
107-05-1	Allyl Chloride	ND	ND	0.09	
71-43-2	Benzene	ND	ND	0.09	
100-44-7	Benzylchloride	ND	ND	0.09	
75-27-4	Bromodichloromethane	ND	ND	0.09	
75-25-2	Bromoform	ND	ND	0.09	
56-23-5	Carbon Tetrachloride	ND	ND	0.09	
108-90-7	Chlorobenzene	ND	ND	0.09	
75-00-3	Chloroethane	ND	ND	0.09	
67-66-3	Chloroform	**0.72**	**3.5**	0.09	
110-82-7	Cyclohexane	ND	ND	0.09	
124-48-1	Dibromochloromethane	ND	ND	0.09	
75-71-8	Dichlorodifluoromethane	ND	ND	0.09	
1320-37-2	Dichlorotetrafluoroethane	ND	ND	0.09	
100-41-4	Ethylbenzene	ND	ND	0.09	
142-82-5	Heptane	ND	ND	0.09	
87-68-3	Hexachloro-1,3-butadiene	ND	ND	0.09	
110-54-3	Hexane	**1.2**	**4.3**	0.09	
78-93-3	Methyl Ethyl Ketone	**0.13**	**0.38**	0.09	
108-10-1	Methyl Isobutyl Ketone	ND	ND	0.09	
1634-04-4	Methyl-t-Butyl Ether	ND	ND	0.09	
74-83-9	Methylbromide	ND	ND	0.09	
74-87-3	Methylchloride	ND	ND	0.09	

13120020$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Raymark - Stratford, CT

Air Toxics by GC/MS

Client Sample ID:	1565	Lab Sample ID:	AB45928
Date of Collection:	12/12/2013	Matrix:	Air
Date of Preparation:	12/17/2013	Amount Prepared:	500 mL
Date of Analysis:	12/17/2013	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	1.85
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
75-09-2	Methylene Chloride	ND	ND	0.09	
100-42-5	Styrene	ND	ND	0.09	
127-18-4	Tetrachloroethylene	**0.20**	**1.4**	0.09	
109-99-9	Tetrahydrofuran	ND	ND	0.09	
108-88-3	Toluene	ND	ND	0.09	
79-01-6	Trichloroethylene	ND	ND	0.09	
75-69-4	Trichlorofluoromethane	**3.0**	**17**	0.09	
76-13-1	Trichlorotrifluoroethane	ND	ND	0.09	
593-60-2	Vinyl Bromide	ND	ND	0.09	
75-01-4	Vinylchloride	ND	ND	0.09	
156-59-2	c-1,2-Dichloroethylene	ND	ND	0.09	
10061-01-5	c-1,3-Dichloropropylene	ND	ND	0.09	
1330-20-7	m/p-Xylenes	ND	ND	0.20	
95-47-6	o-Xylene	ND	ND	0.09	
156-60-5	t-1,2-Dichloroethylene	ND	ND	0.09	
10061-02-6	t-1,3-Dichloropropylene	ND	ND	0.09	

Surrogate Compounds	Recoveries (%)	QC Ranges
1,2-Dichloroethane,d4	122	82 - 135
Bromofluorobenzene	93	76 - 115
Toluene,d8	107	64 - 125

Comments: 1,1,1-Trichloroethane result is from a 925 fold dilution analyzed 12/17/13

13120020$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Raymark - Stratford, CT

Air Toxics by GC/MS

Client Sample ID:	4778	Lab Sample ID:	AB45929
Date of Collection:	12/12/2013	Matrix:	Air
Date of Preparation:	12/17/2013	Amount Prepared:	500 mL
Date of Analysis:	12/17/2013	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	1.88
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
71-55-6	1,1,1-Trichloroethane	**150**	**820**	47	
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	0.09	
79-00-5	1,1,2-Trichloroethane	ND	ND	0.09	
75-34-3	1,1-Dichloroethane	**16**	**65**	0.94	
75-35-4	1,1-Dichloroethylene	**11**	**44**	0.94	
120-82-1	1,2,4-Trichlorobenzene	ND	ND	0.09	
95-63-6	1,2,4-Trimethylbenzene	ND	ND	0.09	
106-93-4	1,2-Dibromoethane	ND	ND	0.09	
95-50-1	1,2-Dichlorobenzene	ND	ND	0.09	
107-06-2	1,2-Dichloroethane	ND	ND	0.09	
78-87-5	1,2-Dichloropropane	ND	ND	0.09	
108-67-8	1,3,5-Trimethylbenzene	ND	ND	0.09	
106-99-0	1,3-Butadiene	ND	ND	0.19	
541-73-1	1,3-Dichlorobenzene	ND	ND	0.09	
106-46-7	1,4-Dichlorobenzene	ND	ND	0.09	
591-78-6	2-Hexanone	ND	ND	0.09	
622-96-8	4-Ethyltoluene	ND	ND	0.09	
107-13-1	Acrylonitrile	ND	ND	0.09	
107-05-1	Allyl Chloride	ND	ND	0.09	
71-43-2	Benzene	ND	ND	0.09	
100-44-7	Benzylchloride	ND	ND	0.09	
75-27-4	Bromodichloromethane	ND	ND	0.09	
75-25-2	Bromoform	ND	ND	0.09	
56-23-5	Carbon Tetrachloride	ND	ND	0.09	
108-90-7	Chlorobenzene	ND	ND	0.09	
75-00-3	Chloroethane	ND	ND	0.09	
67-66-3	Chloroform	**3.5**	**17**	0.09	
110-82-7	Cyclohexane	ND	ND	0.09	
124-48-1	Dibromochloromethane	ND	ND	0.09	
75-71-8	Dichlorodifluoromethane	ND	ND	0.09	
1320-37-2	Dichlorotetrafluoroethane	ND	ND	0.09	
100-41-4	Ethylbenzene	ND	ND	0.09	
142-82-5	Heptane	ND	ND	0.09	
87-68-3	Hexachloro-1,3-butadiene	ND	ND	0.09	
110-54-3	Hexane	ND	ND	0.09	
78-93-3	Methyl Ethyl Ketone	ND	ND	0.09	
108-10-1	Methyl Isobutyl Ketone	ND	ND	0.09	
1634-04-4	Methyl-t-Butyl Ether	ND	ND	0.09	
74-83-9	Methylbromide	ND	ND	0.09	
74-87-3	Methylchloride	ND	ND	0.09	

13120020$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Raymark - Stratford, CT

Air Toxics by GC/MS

Client Sample ID:	4778	Lab Sample ID:	AB45929
Date of Collection:	12/12/2013	Matrix:	Air
Date of Preparation:	12/17/2013	Amount Prepared:	500 mL
Date of Analysis:	12/17/2013	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	1.88
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
75-09-2	Methylene Chloride	ND	ND	0.09	
100-42-5	Styrene	ND	ND	0.09	
127-18-4	Tetrachloroethylene	**0.61**	**4.1**	0.09	
109-99-9	Tetrahydrofuran	ND	ND	0.09	
108-88-3	Toluene	ND	ND	0.09	
79-01-6	Trichloroethylene	**25**	**130**	0.94	
75-69-4	Trichlorofluoromethane	**4.6**	**26**	0.09	
76-13-1	Trichlorotrifluoroethane	ND	ND	0.09	
593-60-2	Vinyl Bromide	ND	ND	0.09	
75-01-4	Vinylchloride	ND	ND	0.09	
156-59-2	c-1,2-Dichloroethylene	**11**	**44**	0.94	
10061-01-5	c-1,3-Dichloropropylene	ND	ND	0.09	
1330-20-7	m/p-Xylenes	ND	ND	0.20	
95-47-6	o-Xylene	ND	ND	0.09	
156-60-5	t-1,2-Dichloroethylene	**0.13**	**0.52**	0.09	
10061-02-6	t-1,3-Dichloropropylene	ND	ND	0.09	

Surrogate Compounds	Recoveries (%)	QC Ranges
1,2-Dichloroethane,d4	123	82 - 135
Bromofluorobenzene	93	76 - 115
Toluene,d8	114	64 - 125

Comments: 1,1-Dichloroethylene, Trichloroethylene c-1,2-Dichloroethylene and 1,1-Dichloroethane results are from a 18.4 fold dilution analyzed 12/16/13.
1,1,1-Trichloroethane result is from a 940 fold dilution analyzed 12/17/13

13120020$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Raymark - Stratford, CT

Laboratory Blank

Client Sample ID:	N/A	Lab Sample ID:	N/A
Date of Collection:	N/A	Matrix:	Air
Date of Preparation:	12/17/2013	Amount Prepared:	500 mL
Date of Analysis:	12/17/2013	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	1
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
71-55-6	1,1,1-Trichloroethane	ND	ND	0.05	
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	0.05	
79-00-5	1,1,2-Trichloroethane	ND	ND	0.05	
75-34-3	1,1-Dichloroethane	ND	ND	0.05	
75-35-4	1,1-Dichloroethylene	ND	ND	0.05	
120-82-1	1,2,4-Trichlorobenzene	ND	ND	0.05	
95-63-6	1,2,4-Trimethylbenzene	ND	ND	0.05	
106-93-4	1,2-Dibromoethane	ND	ND	0.05	
95-50-1	1,2-Dichlorobenzene	ND	ND	0.05	
107-06-2	1,2-Dichloroethane	ND	ND	0.05	
78-87-5	1,2-Dichloropropane	ND	ND	0.05	
108-67-8	1,3,5-Trimethylbenzene	ND	ND	0.05	
106-99-0	1,3-Butadiene	ND	ND	0.10	
541-73-1	1,3-Dichlorobenzene	ND	ND	0.05	
106-46-7	1,4-Dichlorobenzene	ND	ND	0.05	
591-78-6	2-Hexanone	ND	ND	0.05	
622-96-8	4-Ethyltoluene	ND	ND	0.05	
107-13-1	Acrylonitrile	ND	ND	0.05	
107-05-1	Allyl Chloride	ND	ND	0.05	
71-43-2	Benzene	ND	ND	0.05	
100-44-7	Benzylchloride	ND	ND	0.05	
75-27-4	Bromodichloromethane	ND	ND	0.05	
75-25-2	Bromoform	ND	ND	0.05	
56-23-5	Carbon Tetrachloride	ND	ND	0.05	
108-90-7	Chlorobenzene	ND	ND	0.05	
75-00-3	Chloroethane	ND	ND	0.05	
67-66-3	Chloroform	ND	ND	0.05	
110-82-7	Cyclohexane	ND	ND	0.05	
124-48-1	Dibromochloromethane	ND	ND	0.05	
75-71-8	Dichlorodifluoromethane	ND	ND	0.05	
1320-37-2	Dichlorotetrafluoroethane	ND	ND	0.05	
100-41-4	Ethylbenzene	ND	ND	0.05	
142-82-5	Heptane	ND	ND	0.05	
87-68-3	Hexachloro-1,3-butadiene	ND	ND	0.05	
110-54-3	Hexane	ND	ND	0.05	
78-93-3	Methyl Ethyl Ketone	ND	ND	0.05	
108-10-1	Methyl Isobutyl Ketone	ND	ND	0.05	
1634-04-4	Methyl-t-Butyl Ether	ND	ND	0.05	
74-83-9	Methylbromide	ND	ND	0.05	
74-87-3	Methylchloride	ND	ND	0.05	

13120020$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Raymark - Stratford, CT

Laboratory Blank

Client Sample ID:	N/A	Lab Sample ID:	N/A
Date of Collection:	N/A	Matrix:	Air
Date of Preparation:	12/17/2013	Amount Prepared:	500 mL
Date of Analysis:	12/17/2013	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	1
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
75-09-2	Methylene Chloride	ND	ND	0.05	
100-42-5	Styrene	ND	ND	0.05	
127-18-4	Tetrachloroethylene	ND	ND	0.05	
109-99-9	Tetrahydrofuran	ND	ND	0.05	
108-88-3	Toluene	ND	ND	0.05	
79-01-6	Trichloroethylene	ND	ND	0.05	
75-69-4	Trichlorofluoromethane	ND	ND	0.05	
76-13-1	Trichlorotrifluoroethane	ND	ND	0.05	
593-60-2	Vinyl Bromide	ND	ND	0.05	
75-01-4	Vinylchloride	ND	ND	0.05	
156-59-2	c-1,2-Dichloroethylene	ND	ND	0.05	
10061-01-5	c-1,3-Dichloropropylene	ND	ND	0.05	
1330-20-7	m/p-Xylenes	ND	ND	0.10	
95-47-6	o-Xylene	ND	ND	0.05	
156-60-5	t-1,2-Dichloroethylene	ND	ND	0.05	
10061-02-6	t-1,3-Dichloropropylene	ND	ND	0.05	

Surrogate Compounds	Recoveries (%)	QC Ranges
1,2-Dichloroethane,d4	126	82 - 135
Bromofluorobenzene	90	76 - 115
Toluene,d8	110	64 - 125

Comments:

13120020$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Raymark - Stratford, CT

Laboratory Duplicate Results

Sample ID: AB45923

PARAMETER	SAMPLE RESULT ppbv	SAMPLE DUPLICATE RESULT ppbv	PRECISION RPD %	QC LIMITS
1,1,1-Trichloroethane	0.110	0.100	9.52	50
1,1,2,2-Tetrachloroethane	ND	ND	ND	50
1,1,2-Trichloroethane	ND	ND	ND	50
1,1-Dichloroethane	ND	ND	ND	50
1,1-Dichloroethylene	ND	ND	ND	50
1,2,4-Trichlorobenzene	ND	ND	ND	50
1,2,4-Trimethylbenzene	ND	ND	ND	50
1,2-Dibromoethane	ND	ND	ND	50
1,2-Dichlorobenzene	ND	ND	ND	50
1,2-Dichloroethane	ND	ND	ND	50
1,2-Dichloropropane	ND	ND	ND	50
1,3,5-Trimethylbenzene	ND	ND	ND	50
1,3-Butadiene	ND	ND	ND	50
1,3-Dichlorobenzene	ND	ND	ND	50
1,4-Dichlorobenzene	ND	ND	ND	50
2-Hexanone	ND	ND	ND	50
4-Ethyltoluene	ND	ND	ND	50
Acrylonitrile	ND	ND	ND	50
Allyl Chloride	ND	ND	ND	50
Benzene	0.160	0.150	6.45	50
Benzylchloride	ND	ND	ND	50
Bromodichloromethane	ND	ND	ND	50
Bromoform	ND	ND	ND	50
Carbon Tetrachloride	ND	ND	ND	50
Chlorobenzene	ND	ND	ND	50
Chloroethane	ND	ND	ND	50
Chloroform	ND	ND	ND	50
Cyclohexane	ND	ND	ND	50
Dibromochloromethane	ND	ND	ND	50
Dichlorodifluoromethane	0.470	0.460	2.15	50
Dichlorotetrafluoroethane	ND	ND	ND	50
Ethylbenzene	ND	ND	ND	50
Heptane	ND	ND	ND	50
Hexachloro-1,3-butadiene	ND	ND	ND	50
Hexane	0.710	0.680	4.32	50
Methyl Ethyl Ketone	0.130	0.110	16.7	50
Methyl Isobutyl Ketone	ND	ND	ND	50
Methyl-t-Butyl Ether	ND	ND	ND	50
Methylbromide	ND	ND	ND	50
Methylchloride	0.490	0.490	0.00	50
Methylene Chloride	0.130	0.120	8.00	50
Styrene	ND	ND	ND	50
Tetrachloroethylene	ND	ND	ND	50
Tetrahydrofuran	ND	ND	ND	50
Toluene	0.140	0.130	7.41	50

13120020$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Raymark - Stratford, CT

Laboratory Duplicate Results

Sample ID: AB45923

PARAMETER	SAMPLE RESULT ppbv	SAMPLE DUPLICATE RESULT ppbv	PRECISION RPD %	QC LIMITS
Trichloroethylene	ND	ND	ND	50
Trichlorofluoromethane	0.230	0.220	4.44	50
Trichlorotrifluoroethane	ND	ND	ND	50
Vinyl Bromide	ND	ND	ND	50
Vinylchloride	ND	ND	ND	50
c-1,2-Dichloroethylene	ND	ND	ND	50
c-1,3-Dichloropropylene	ND	ND	ND	50
m/p-Xylenes	ND	ND	ND	50
o-Xylene	ND	ND	ND	50
t-1,2-Dichloroethylene	ND	ND	ND	50
t-1,3-Dichloropropylene	ND	ND	ND	50

Comments:

13120020$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Raymark - Stratford, CT

Laboratory Fortified Blank (LFB) Results

PARAMETER	LFB AMOUNT SPIKED ppb/V	LFB RESULT ppb/V	LFB RECOVERY %	QC LIMITS %
1,1,1-Trichloroethane	2.24	2.15	96	70 - 130
1,1,2,2-Tetrachloroethane	2.26	2.11	93	70 - 130
1,1,2-Trichloroethane	2.33	2.06	88	70 - 130
1,1-Dichloroethane	2.18	2.15	99	70 - 130
1,1-Dichloroethylene	2.15	2.31	107	70 - 130
1,2,4-Trichlorobenzene	2.11	1.75	83	70 - 130
1,2,4-Trimethylbenzene	2.26	2.01	89	70 - 130
1,2-Dibromoethane	2.30	2.37	103	70 - 130
1,2-Dichlorobenzene	2.20	1.92	87	70 - 130
1,2-Dichloroethane	2.15	2.15	100	70 - 130
1,2-Dichloropropane	2.26	2.24	99	70 - 130
1,3,5-Trimethylbenzene	2.26	2.18	97	70 - 130
1,3-Butadiene	4.44	4.74	107	70 - 130
1,3-Dichlorobenzene	2.24	1.95	87	70 - 130
1,4-Dichlorobenzene	2.24	1.90	85	70 - 130
2-Hexanone	2.11	1.56	74	70 - 130
4-Ethyltoluene	2.19	1.76	80	70 - 130
Acrylonitrile	2.09	1.94	93	70 - 130
Allyl Chloride	1.91	1.94	102	70 - 130
Benzene	2.22	2.13	96	70 - 130
Benzylchloride	2.13	1.71	80	70 - 130
Bromodichloromethane	2.15	1.89	88	70 - 130
Bromoform	2.15	1.88	87	70 - 130
Carbon Tetrachloride	2.30	2.23	97	70 - 130
Chlorobenzene	2.26	1.96	87	70 - 130
Chloroethane	2.26	2.23	99	70 - 130
Chloroform	2.30	2.41	105	70 - 130
Cyclohexane	2.13	2.00	94	70 - 130
Dibromochloromethane	2.15	1.98	92	70 - 130
Dichlorodifluoromethane	2.35	2.62	111	70 - 130
Dichlorotetrafluoroethane	2.28	2.26	99	70 - 130
Ethylbenzene	2.26	2.00	89	70 - 130
Heptane	2.15	2.14	100	70 - 130
Hexachloro-1,3-butadiene	2.13	1.92	90	70 - 130
Hexane	2.05	2.04	100	70 - 130
Methyl Ethyl Ketone	2.11	1.76	83	70 - 130
Methyl Isobutyl Ketone	2.13	1.77	83	70 - 130
Methyl-t-Butyl Ether	2.13	2.05	96	70 - 130
Methylbromide	2.24	2.88	129	70 - 130
Methylchloride	2.33	2.36	101	70 - 130
Methylene Chloride	2.18	2.18	100	70 - 130
Styrene	2.24	2.12	95	70 - 130
Tetrachloroethylene	2.20	2.05	93	70 - 130
Tetrahydrofuran	2.11	1.75	83	70 - 130
Toluene	2.26	2.13	94	70 - 130
Trichloroethylene	2.28	2.22	97	70 - 130
Trichlorofluoromethane	2.35	2.47	105	70 - 130
Trichlorotrifluoroethane	2.18	2.35	108	70 - 130
Vinyl Bromide	2.09	2.08	100	70 - 130
Vinylchloride	2.28	2.48	109	70 - 130
c-1,2-Dichloroethylene	2.26	2.27	100	70 - 130
c-1,3-Dichloropropylene	2.35	2.32	99	70 - 130

13120020$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Raymark - Stratford, CT

Laboratory Fortified Blank (LFB) Results

PARAMETER	LFB AMOUNT SPIKED ppb/V	LFB RESULT ppb/V	LFB RECOVERY %	QC LIMITS %
m/p-Xylenes	4.52	4.38	97	70 - 130
o-Xylene	2.28	1.97	86	70 - 130
t-1,2-Dichloroethylene	1.89	1.97	104	70 - 130
t-1,3-Dichloropropylene	2.11	1.97	93	70 - 130

Comments:

13120020$AIRTX

Revision 0
Date 12/24/13

ENVIRONMENTAL PROTECTION AGENCY
REGION 1

CHAIN OF CUSTODY RECORD

PROJ. NO.: 3120020
PROJECT NAME: Raymark 335 Ferry Blvd.
SAMPLERS: (Signature) [signature]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Canister Number	REMARKS: AirTox GC/MS Analysis
—	12/12/13	—	—	—	Ambient Air	1	13499	8-hour Ambient Air
					Former Curtin Taxi	1	15056	8-hour Indoor Air
					Former Curtin Taxi Auto Supply Room	1	14898	8-hour Indoor Air
					Former Curtin Taxi Auto Supply Room	1	22685	8-hour Indoor Air Duplicate
					Sales Estimating Room		13498	8-hour Indoor Air —
					Sales Receptionist Office		22692	8-hour Indoor Air —
					SS-1 Garage Area 1		4742	Grab soil gas
					SS-2 Garage Area 2		1565	Grab soil gas
					SS-3 Former Brem Air Garage		4778	Grab Soil gas (6)

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	12/13/13 8:18				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature) [signature]	Date / Time: 12/13/13 8:18	Remarks	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

13120020SAirtx

APPENDIX C

COMPOUND PRODUCT USE DESCRIPTION

COMPOUND	PRODUCT USE
1, 1,1-trichloroethane	no 1,1,1-trichloroethane is supposed to be manufactured for domestic use in the US after January 1, 2002; it had many industrial and household uses, including use as a solvent to dissolve other substances, such as glues and paints, to remove oil or grease from manufactured metal parts and as an ingredient of household products such as spot cleaners, glues, and aerosol sprays
1,1,2,2-tetrachloroethane	in the past was used in large amounts to produce other chemicals, as an industrial solvent to clean and degrease metals and as an ingredient in paints and pesticides; commercial production for these uses has stopped in the US, presently used only as a chemical intermediate in the production of other chemicals
1,1,2-trichloroethane	used as a solvent and as an intermediate in the production of the chemical 1,1-dichloroethane; is sometimes present as an impurity in other chemicals and it may be formed when another chemical breaks down in the environment under conditions where there is no air
1,1-dichloroethane	in the past was used as a surgical anesthetic, but it is no longer used this way; today it is used primarily to make other chemicals, to dissolve substances such as paint, varnish, and finish removers, and to remove grease
1,1-dichloroethylene	used to make certain plastics, such as flexible films like food wrap and in packaging materials; used to make flame retardant coatings for fiber and carpet backings and in piping, coating for steel pipes and in adhesive applications
1,2,4-trichlorobenzene	used as a solvent to make dyes, pesticides and other chemicals, added to dielectric fluids, transformer oils, cleaners, and lubricants; a gasoline additive; occurs naturally in coal tar and petroleum
1, 2, 4-trimethylbenzene	used as an industrial solvent, paint thinner and in the manufacture of dyes, perfumes, resins, chemical intermediates and pharmaceuticals; enters the environment primarily from gasoline evaporation and as an emission from gasoline-powered vehicles, municipal waste-treatment plants, and coal-fired power stations; emitted from many building materials including: vinyl & rubber molding, particle board, linoleum tile, tar paper, telephone cable, latex paint, foam & duct insulation, urethane sealant, adhesives, latex caulk, and carpet occurs
1,2-dibromoethane	manufactured chemical and also occurs naturally in small amounts in the ocean where it is formed, probably by algae and kelp; used as a pesticide in soil and on citrus, vegetable and grain crops, most of these uses have been stopped by the EPA since 1984; was used as an additive in leaded gasoline, however since leaded gasoline is now banned, it is no longer used for this purpose; uses today include treatment of logs for termites and beetles, control of moths in beehives, as a solvent, as a preparation for dyes and waxes and in waterproofing preparations
1,2-dichlorobenzene	used as a fumigant, solvent, chemical intermediate and to make insecticides
1,2-dichloroethane	manufactured chemical that is not found naturally in the environment; most common use is in the production of vinyl chloride which is used to make a variety of plastic and vinyl products including PVC pipes, furniture and automobile upholstery, wall coverings, house wares and automobile parts; used as a solvent, fumigant, degreaser, paint thinner; added to leaded gasoline to remove lead

COMPOUND	PRODUCT USE
1,2-dichloropropane	does not occur naturally in the environment; production in the US has declined over the past 20 years; was used in the past as a soil fumigant, chemical intermediate and industrial solvent and was found in paint strippers, varnishes and furniture finish removers; most of these uses were discontinued; today used as a chemical intermediate to make perchloroethylene and several other related chlorinated chemical
1, 3, 5-trimethylbenzene	used as an industrial solvent, paint thinner and in the manufacture of dyes, perfumes, resins, chemical intermediates and pharmaceuticals; enters the environment primarily from gasoline evaporation and as an emission from gasoline-powered vehicles, municipal waste-treatment plants, and coal-fired power stations; emitted from many building materials including: vinyl & rubber molding, particle board, linoleum tile, tar paper, telephone cable, latex paint, foam & duct insulation, urethane sealant, adhesives, latex caulk and carpet
1, 3-butadiene	made from the processing of petroleum; about 75% manufactured is used to make synthetic rubber, which is widely used for tires on cars and trucks; used to make plastics including acrylics; small amounts are found in gasoline, automobile exhaust, cigarette smoke and wood fires
1,3-dichlorobenzene	used to make herbicides, insecticides, medicine and dyes
1,4-dichlorobenzene	used as a fumigant to control mildew and mold; used to make insecticides
2-hexanone	used in the past in paint and paint thinner, to make other chemical substances and to dissolve oils and waxes; no longer made or used in the US because it has harmful health effects; formed as a waste product resulting from industrial activities such as making wood pulp and producing gas from coal and in oil shale operations
4-ethyltoluene	man-made chemical used principally as an additive to petroleum; used as a solvent in a variety of industrial, agricultural and domestic products; major release route to the atmosphere is from evaporation of petroleum during production, transport and refueling and from car exhausts; released when used as a solvent
acrylonitrile	used to make other chemicals such as plastics, synthetic rubber and acrylic fibers; a mixture of acrylonitrile and carbon tetrachloride was used as a pesticide in the past; all uses in pesticide have stopped
ally chloride	used to make epichlorohydrin and glycerin; used in the synthesis of allyl compounds such as allyl alcohol, allyl amines, allyl esters and polyesters; derivatives are found in varnish, plastics, adhesives, perfumes, insecticides and pharmaceuticals
benzene	widely used in the US; some industries use it to make other chemicals which are used to make plastics, resins, nylon and synthetic fibers; used to make some types of rubbers, lubricants, dyes, detergents, drugs and pesticides; natural sources include volcanoes and forest fires; a natural part of crude oil and gasoline; found in industrial emissions, waste and storage operations, motor vehicle exhaust, evaporation from gasoline service stations and tobacco smoke
benzylchloride	used as a chemical intermediate in the manufacture of certain dyes, lubricants, gasoline and pharmaceutical products and as a photographic developer; emissions from floor tile plasticized by butyl benzyl phthalate have been reported; has been detected in emissions from the burning of polyvinyl chloride, neoprene and rigid urethane foam compounds

COMPOUND	PRODUCT USE
bromodichloromethane	small amounts are formed naturally by algae in the oceans; only small quantities are produced in the US; small quantities that are produced are used in laboratories or to make other chemicals; most is formed as a by-product when chlorine is added to drinking water to kill bacteria
bromoform	small amounts are formed naturally by plants in the ocean; formed as byproducts when chlorine is added to drinking water to kill bacteria; were used in the past as solvents and flame retardants, or to make other chemicals; small quantities are produced in the US and used mainly as laboratory reagents
carbon tetrachloride	manufactured chemical that does not occur naturally; was used in the production of refrigeration fluid and propellants for aerosol cans, as a pesticide, as a cleaning fluid and degreasing agent, in fire extinguishers and in spot removers; these uses are now banned and it is only used in some industrial applications
chlorobenzene	does not occur naturally in the environment; production in the US has declined by more than 60% from its peak in 1960; was used in the past to make other chemicals, such as phenol and DDT; now chlorobenzene is used as a solvent for some pesticide formulations, to degrease automobile parts, and as a chemical intermediate to make several other chemicals
chloroethane	In the past was used in leaded gasoline; used in the production of cellulose, dyes, medicinal drugs, and other commercial products and as a solvent and refrigerant; used to numb the skin before medical procedures such as ear piercing and skin biopsies and as a treatment in sports injuries
chloroform	used to make other chemicals and can also be formed in small amounts when chlorine is added to water
cyclohexane	occurs naturally in petroleum crude oil, in volcanic gases, and in cigarette smoke; used to make nylon, benzene, cyclohexanone, nitrocyclohexane, adhesives and perfumes; added to lacquers and resins, paint and varnish removers and fungicides; used as a fuel for camp stoves
dibromochloromethane	small amounts are formed naturally by plants in the ocean; formed as byproducts when chlorine is added to drinking water to kill bacteria; were used in the past as solvents and flame retardants or to make other chemicals; small quantities are produced in the US and used mainly as laboratory reagents
dichlorodifluoromethane	used as a refrigerant in air conditioning systems, as a blowing or foaming agent for aerosols, in fire extinguishers; banned in the US along with many other countries in 1994
dichlorotetrafluoromethane	used as a refrigerant in air conditioning systems, as a blowing or foaming agent for aerosols, in fire extinguishers
dichlorotetrafluoroethane	primary use has been as a refrigerant; found in consumer products, such as hair mousse and hairspray aerosol
ethylbenzene	found in natural products such as coal tar and petroleum; found in manufactured products such as inks, insecticides and paints; used primarily to make styrene; used as a solvent and in fuels; releases into the air occur from burning oil, gas and coal

COMPOUND	PRODUCT USE
heptane	produced and used as a solvent in organic synthesis and as a standard for octane-rating determinations; found in gasoline and petroleum-based products
hexachloro-1,3-butadiene	not found naturally in the environment, formed when other chemicals are made; mainly used to make rubber compounds; used as a solvent and to make lubricants, used in gyroscopes, as a heat transfer liquid and as a hydraulic fluid
hexane	made from crude oil; pure *n*-Hexane is used in laboratories; mixed with similar chemicals called solvents and used to extract vegetable oils from crops such as soybeans; these solvents are also used as cleaning agents in the printing, textile, furniture, and shoemaking industries; used in certain kinds of special glues used in the roofing, shoe and leather industries; contained in several consumer products, such as gasoline, quick-drying glues and rubber cement, used in various hobbies
methyl ethyl ketone	manufactured chemical but it is also present in the environment from natural sources; produced in large quantities, nearly half of its use is in paints and other coatings; used in glues and as a cleaning agent; made by some trees and found in some fruits and vegetables in small amounts; also released to the air from car and truck exhausts
methyl isobutyl ketone	occurs naturally in certain foods and beverages; added to protective surface coatings, adhesives, printing ink, and special lubricating oils; used to make pesticides and to separate and purify several other organic; used to make textiles and leather; exposure can occur when people use certain paints, varnishes, or glues
methyl-t-butyl ether	was used since the 1980s as an additive for unleaded gasoline to achieve more efficient burning, today it is not being used and has been replaced by ethanol
methylbromide	manufactured chemical; also occurs naturally in small amounts in the ocean where it is formed, probably by algae and kelp; used to kill a variety of pests including rats, insects and fungi; used to make other chemicals or as a solvent to get oil out of nuts, seeds, and wool
methylchloride	used as a methylating agent, laboratory reagent, refrigerant, aerosol propellant, pesticide, fumigant, fire-extinguishing agent, anesthetic, degreaser, blowing agent for plastic foam and chemical intermediate; present at very low concentrations throughout the atmosphere
methylene chloride	does not occur naturally in the environment; used as an industrial solvent and as a paint stripper; found in some aerosol and pesticide products; used in the manufacture of photographic film
styrene	found in insulation, fiberglass, plastic pipes, automobile parts, shoes, drinking cups and other food containers, carpet backing, tobacco smoke, automobile exhaust and off gases from photocopy machines; used to make plastics and rubber; occurs naturally in a variety of foods such as fruits, vegetables, nuts, beverages and meats
tetrachloroethene	used in dry cleaning and metal degreasing; used to make other chemicals and is used in some consumer products
tetrahydrofuran	used as a solvent for PVC, natural and synthetic resins; used as a monomer and chemical intermediate; used in varnishes
toluene	occurs naturally in crude oil and in the tolu tree; produced in the process of making gasoline and other fuels from crude oil and making coke from coal; used in making paints, paint thinners, fingernail polish, lacquers, adhesives and rubber and in some printing and leather tanning processes; found in automobile exhaust and tobacco smoke

COMPOUND	PRODUCT USE
trichloroethene	used mainly as a solvent to remove grease from metal parts, is an ingredient in adhesives, paint removers, typewriter correction fluids and spot removers
trichlorofluoromethane	was used in consumer products including hair sprays, deodorants and cosmetics, in products to control home and garden insects and pests, in cleaners, spray paints and floor and furniture polish; in industry it was used as a refrigerant, to make foam and as an active part of liquid-type fire extinguishers; it is no longer made in the US
trichlorotrifluoroethane	does not occur naturally; EPA restricted production and after 1995 was significantly lower; used to clean metal surfaces, as a coolant in commercial and industrial air conditioners, as an ingredient in aerosols sprays, by foam makers as a blowing agent, to make high temperature lubricants and fluorocarbon resins and as a dry cleaning solvent
vinyl bromide	used primarily in the production of polymers and copolymers; used in polymers as a flame retardant and in the production of monoacrylic fibers for carpet-backing material; combined with acrylonitrile as a co-monomer, used to produce fabrics and fabric blends used in sleepwear (mostly children's) and home furnishings; when copolymerized with vinyl acetate and maleic anhydride, used to produce granular products; copolymers of vinyl chloride and vinyl bromide are used to prepare films, for impregnating or laminating fibers, and as rubber substitutes; used in leather and fabricated metal products
vinyl chloride	manufactured substance that does not occur naturally; formed when other substances such as trichloroethane, trichloroethylene, and tetrachloroethylene are broken down; used to make PVC, which is used to make a variety of plastic products, including pipes, wire and cable coatings and packaging materials.
cis-1,2-dichloroethene	used to produce solvents and in chemical mixtures
cis-1,3-dichloropropene	used mainly in farming as a pesticide
m/p/o-xylenes	occurs naturally in petroleum and coal tar; chemical industries produce xylene from petroleum; used as a solvent and in the printing, rubber, and leather industries; used as a cleaning agent, a thinner for paint and in paints and varnishes; found in small amounts in airplane fuel and gasoline and cigarette smoke
trans-1,2-dichloroethene	used to produce solvents and in chemical mixtures
trans-1,3-dichloropropene	used mainly in farming as a pesticide

Information Sources: http://www.atsdr.cdc.gov
http://www.epa.gov/chemicalfact/
http://www.epa.gov/ttn/atw/
http://web.doh.state.nj.us

APPENDIX C

APPENDIX C

DNAPL Recovery Well Geophysical Survey

C-1 Geophysical Survey Report

C-2 Downhole Videos of Recovery Wells RW-1, RW-2, RW-3, RW-6 – provided in separate files

GEOPHYSICAL SURVEY SERVICES
RAYMARK INDUSTRIES, INC.
FACILITY SITE
STRATFORD, CONNECTICUT

Prepared for:

Nobis Engineering, Inc.
18 Chenell Drive
Concord, New Hampshire 03301

Prepared by:

Hager GeoScience, Inc.
596 Main Street
Woburn, Massachusetts 01801

File 2012013
March 2012

Copyright © 2012, Hager GeoScience, Inc. All rights reserved.

Hager GeoScience, Inc.

1.0 INTRODUCTION

In February of 2012, Hager GeoScience, Inc. (HGI) was contracted by Nobis Engineering, Inc. (Nobis) to perform borehole casing inspections of five overburden recovery wells, having a total length of approximately 400 feet. The objective of the survey was to assess the integrity of the stainless steel well casing and screened intervals using a combination of borehole tools. Logging was completed over two days, on February 15th and 17th, using down-hole video and acoustic televiewer (ATV). A three-arm caliper log was also run to physically measure casing size, and optical televiewer (OTV) data were collected in one well. The order in which the five wells were logged was determined by the relative contamination level, moving from lowest to highest. Video and caliper logging were performed in each well on the first day and ATV logging on the second day of data collection. Logging probes were decontaminated before moving from one well to the next. Water used for cleaning was collected in a portable basin that was emptied into a wastewater drum at the end of each day.

DVD copies of the video logs were provided to Nobis within one day after recording.

2.0 DATA ACQUISITION

The borehole data were acquired in recovery wells RW-1, RW-2, RW-3, RW-5, and RW-6 using HGI's Mount Sopris Instruments logging system. The following components were used for this investigation:

- 5MXA-1000 Matrix logger
- MSI 4WNA-1000 winch
- Aries Industries WC1750 dual view inspection camera
- MSI 2CAA-1000 three-arm caliper probe
- ALT Mark-V OBI optical televiewer (OTV) (Well RW-1 only)
- Advanced Logic Technologies (ALT) ABI MK IV acoustic televiewer (ATV)

The winch, controller, generator, and computer were housed in HGI's logging truck. In addition to monitoring data quality, an HGI geologist recorded hardware and software acquisition settings and data anomalies on pre-developed forms. Raw data from the logging runs were stored digitally on the computer for onsite review, post-processing, interpretation, and plotting.

The following logs were run in all wells in the order listed:

1. Dual view borehole camera
2 Caliper probe
3. Acoustic televiewer probe

Due to the clarity of the borehole fluid in RW-1, the OBI probe was used to determine if it could provide better image quality than the borehole camera. The OBI probe was not used in the

Copyright © 2012, Hager GeoScience, Inc. All rights reserved.

remaining wells mainly due to poor visibility observed on the video logs, but also because interference from the metal casing produced inaccurate image orientation.

ATV data were recorded in all wells in order to use acoustic signals to measure the casing thickness, thereby assessing the casing integrity. The ATV also provided well tilt.

3.0 LOG DESCRIPTIONS

The individual log suites are described below.

3.1 Dual View Borehole Camera

The Aries WC1750 slim-line dual view water-well color inspection camera has a maximum outside diameter of only 1.750 inches. Its small design permits the inspection of small boreholes, monitoring wells, and in some cases, getting between the casing and pump. The camera includes the following operator-controlled features: adjustable focus, electronic shutter (iris), low/med/high lighting controls, slow/med/fast rotation, rotation direction (clockwise/counterclockwise), front view and side view selection. It can withstand a depth of 5,000 feet. The ring light allows for unobstructed viewing in tight spaces. The camera uses LED lighting technology, and its housing is pressurized with dry nitrogen gas to help displace moisture and minimize corrosion.

The borehole wall was scanned in reconnaissance mode using the down-hole and side camera views. Specific features on the borehole wall were recorded using the rotating side camera. The water in RW-1 was clear, with varying degrees of turbidity in the other wells

3.2 Caliper Probe

Caliper logs record borehole diameter using a simple three-arm measuring system. If possible, the hearty caliper tool is run first in order to probe and assess the suitability of the borehole for running more sensitive and expensive tools. Changes in borehole diameter are related to well construction, such as casing or drill-bit size, and to fracturing or breakout along the borehole wall. Because borehole diameter commonly affects log response, the caliper log is useful in the analysis of other geophysical logs. Caliper data are also combined with ATV data to produce 3D "virtual cores."

The primary purpose of the caliper logs was to provide calibration data for determining the seismic velocity of the borehole fluid. The fluid velocity was then used to calculate the inner casing radius from the two-way travel time of the acoustic signal. The vertical sampling interval for caliper logging in all the wells was 0.04 foot at a logging rate of approximately 15 feet per minute. The caliper probe calibration was checked on-site before each run and re-calibration performed as necessary.

Copyright © 2012, Hager GeoScience, Inc. All rights reserved.

3.3 Optical Televiewer (OTV) Probe

The optical televiewer provides high-resolution optical borehole imagery with true-color reflectance for wells and boreholes to obtain a complete feature analysis that includes fracture orientation. Unlike the acoustic televiewer, the optical televiewer can be run in both air- and water-filled holes; however, muck or other skim coats on the borehole surface and murky borehole fluids can impede or severely degrade the optical televiewer data. Section 6 describes the limitations of the ATV and OTV methods.

The sample interval for the OTV logging in RW-1 was 0.01 foot using a scan density of 180 points/revolution. The logging rate was 7 to 8 feet per minute. As noted in the previous section, the OBI probe was not used in the remaining wells due to poor visibility and inaccurate image orientation data caused by metal interference.

3.4. ABI Acoustic Televiewer (ATV) Probe

Using high-frequency acoustic energy, the acoustic televiewer probe measures the acoustic impedance at the borehole wall or casing and the two-way travel time of the transmitted acoustic signals reflected from the borehole wall or casing. The ABI is a multi-echo system capable of digitally recording a full acoustic wave train. The ability to record multiple acoustic pulses enables the ABI to evaluate the inner and outer surfaces of steel casing. The significant differences in travel time and reflection amplitudes from background values are seen as anomalous features. The ATV log also provides 3D caliper/borehole geometry using 2-way travel time data and is immune to turbidity and other borehole fluid characteristics.

A high-resolution vertical sample interval of 0.01 foot was used for ATV logging, with a horizontal sample rate of 72 measurements per revolution. The overall logging rate was 2.5 to 6 feet per minute. The acquisition parameters were optimized for recording the full waveform of reflected acoustic signals. High-amplitude reflected pulses were used to delineate the inner and outer casing surfaces. The travel time of the pulses was used to calculate the inner and outer radius of the casing and, therefore, the casing thickness.

As noted above, the ATV probe only functions in water.

4.0 DATA PROCESSING

Borehole logging data were processed as graphical logs using WellCAD for Windows© software. Processed caliper, ATV, and OTV logs were combined to produce composite formats to allow for more efficient graphical log analysis. Log scales were set to optimize the detection of readings that depart from baseline and background values and can be adjusted using the WellCAD reader. ***Geophysical log depths are referenced to ground surface***. Copies of the geophysical logs are included in Appendix A.

Copyright © 2012, Hager GeoScience, Inc. All rights reserved.

The video log was recorded directly to DVD and was not processed. The video quality is directly related to the borehole water quality. The water quality of RW-1 was very good, except for some turbidity in the upper 20 feet of the well. Varying degrees of turbidity were observed in the remaining wells. ***Video log depths are referenced to ground surface***. DVD videos are included in a pocket at the end of this report.

The image logs are presented as 2D and 3D images of the borehole wall. The ATV 2D log shows the reflection amplitude of transmitted signals, the calculated fluid velocity, and measured casing thickness. The OTV 2D logs present the digital optical image of the casing for RW-1 only. The ATV image data are also shown in 3D virtual borehole image format. The 3D virtual borehole log was constructed using ATV centralized travel-time data to define the core shape or diameter. The acoustic travel time provides a more accurate 3D physical representation of the borehole geometry than the caliper log. The 3D virtual core log can be viewed and rotated, and is useful for analyzing the physical characteristics of the casing.

Magnetometers used in the ATV and OTV acoustic and optical televiewer deviation data are affected by metal casing and screens. As a result, the bearing component of the well deviation is inaccurate. However, the probes' accelerometers are not affected by metal and, therefore, an accurate tilt of the wells was obtained.

Digital log files are included on a DVD in a pocket at the end of this report. The DVD also includes the WellCAD Reader software that allows the user to view and analyze the digital log files. The reader functions in a Windows operating environment and is designed to facilitate log analysis by allowing scrolling of logs at desired log scales, using cursor operations to directly read log values, view and rotate 3D logs, view digital log data in table format, and print logs.

5.0 DATA ANALYSIS

The log data from recovery wells RW-1, RW-2, RW-3, RW-5 and RW-6 are summarized below. The composite logs have been annotated to highlight the significant observations. The composite log joins the ATV images and caliper data into a visual representation of the well condition based on travel times, reflection amplitude, and changes in casing diameter. Interpretations are based on the amplitude and casing-radius and video logs.

Well centralizers, located on the outside of the casing and screen, are common in all the wells and have been annotated on the ATV log. Possible defects in the well casing have also been annotated.

In addition to field notes, the results of detailed reviews of the video logs for each well are provided in Appendix B. The total depth of the video inspection may be different from that shown in the geophysical logs due to sediment buildup on the bottom of the wells. The ATV and

Copyright © 2012, Hager GeoScience, Inc. All rights reserved.

caliper probes are capable of penetrating this material.

Well summaries are provided below. However, a detailed log analysis is recommended as an integral part of well inspections. Table 1 presents well construction details modified using geophysical and video log data. Table 2 summarizes casing conditions of the five recovery wells interpreted from the geophysical and video logs.

Table 1 Current Well Construction Details

Well:	Ground Elevation (ft)	Top of Screen Elevation (ft)	Bottom of Screen Elevation (ft)	Bottom of Well Elevation (ft)
RW-1	26.25	-12.5	-37.28	-41.8
RW-2	26.25	11.25	-29	-31
RW-3	25.50	13.9	-35	-38.25
RW-5	24.25	-2.75	-86.5	-88.75
RW-6	25.25	8.45	-30.35	-34.25

5.1 RW-1

The condition of casing and screens in RW-1 is very good. This well is the least contaminated of the five wells and is also in the best condition. RW-1 has the cleanest casing and well screen, with most of the slotted interval still open. With the exception of a possible casing defect at 37 feet, the ATV does not show any areas of thinning or large-scale casing or screen deterioration. Very little foreign material is coming through the slots, and coarse-grained material can be seen behind the screen. All of the joints within the well are in good condition with only some minor buildup of sediment on the protruding edges. The most notable feature of RW-1 is visible in the video inspection, which shows a change in fluid density as the camera enters the sump at the bottom of the well. An accumulation of sediment is observed in the sump, mixed with a dense liquid that is not put into suspension by the camera light bar. Some casing pitting is noticeable in the sump.

5.2 RW-2

The solid casing in RW-2 extends only 15 feet into the well and is above the water level. The casing is in very good condition, but the screened interval is less so. The screen is in good condition to a depth of approximately 22 feet below ground surface (elev. 4.35’). Below 22 feet, flocking fills and coats the screen. The buildup varies in density, but at times completely covers the screen. However, it does not adhere to the joints, which appear to be in good condition except for some dark staining that may be due to a chemical reaction between the steel and contaminants in the water.

Copyright © 2012, Hager GeoScience, Inc. All rights reserved.

The flocking disturbed by the video camera was readily detached from the screen and can be seen settling to the bottom of the hole. The accumulated sediment in the sump prevented its visual inspection by the camera. Based on depths measured by the caliper probe, the bottom of the sump is 57 feet below ground surface (elev. -31). ATV data show potential casing deterioration in the sump along with an increase in fluid velocity at the sump.

5.3 RW-3

Data provided by Nobis indicate that RW-3 contains the highest level of DNAPL and other chemicals. The solid casing in RW-3 extends 11.6 feet into the well and ends above the water level. It is in very good condition. The screen above the water table is also in good condition, with open slots, but is coated with dark material. The water in the upper portion on the well is very cloudy but improves in clarity with depth, most notably at 50 feet below ground surface (elev. -24.5').

Below the water level, the screened interval is almost totally plugged with a layer of cemented material. The thickness of this material appears to increase with depth to approximately 38 feet (el. -12.5). At approximately 49 feet, the cemented material appears calcareous.

Similar to RW-2, the joints in RW-3 are free of flocking, but show black staining. The joints appear to be in good condition.

ATV data show a variable and increased thickness of the screened intervals. This is probably the response to the combined thickness of the cemented material and the original screen (and well packing). The screen thickness variations measured by the ATV appear to increase with depth and correlate with changes in thickness and composition of the surface buildup observed in the video log.

The video log identified a few areas where DNAPL may be entering the well through the screen (45.1, 56, and 58.5 feet below ground surface) and is probably the source of the dark staining on the exposed metal surfaces and of flocking covering the screen.

Water clarity increases at about 50 feet below ground surface (elev. -24'). Fine suspended particles are replaced by larger pieces of flocking. This material remains generally in suspension and does not accumulate in the bottom of the well. The screened interval ends at the sump, approximately 61 feet below ground surface (elev. -35.5').

The solid casing at the bottom of the well shows dark staining, and possible pitting is observable in the sump. The ATV data suggest deterioration of the exterior surface of the solid steel casing.

5.4 RW-5

The solid casing at the top of RW-5 is in good condition, and casing exposed to the air is free of staining or pitting. Below the water level, the casing has a tan-colored coating that increases in

Copyright © 2012, Hager GeoScience, Inc. All rights reserved.

thickness down to the top of the screen. The screened interval appears to be in good condition from 27 to 48 feet below ground surface (elev. -2.75 and -23.75), where slot openings are still visible. Below 47 feet, the screen and joints are covered with flocking and are no longer visible. As for RW-3, variable and increased thickness measured by the ATV probe along isolated sections of the screened interval is probably caused by the combined thickness of the surface buildup and original screen (and well packing).

Water turbidity is high near the top of the water column, but quickly decreases below 47 feet. The change in water clarity is also reflected by changes in the fluid velocity logs.

The video log ends at the sump due to the accumulated flocking. Well records indicate that the sump consists of a 5-foot section of solid casing starting just below the screen at approximately 110.5 feet below ground surface (elev. -86.25'). Approximately 2.5 feet of the sump were imaged by the caliper and ATV probes. The video camera reached only 108.5 feet. Variable thickness of the solid casing interval measured by the ATV probe may indicate possible casing deterioration and a thick accumulation of muck on the casing wall.

5.5 RW-6

The solid casing extends 16.8 feet into the well and is completely above the water level. The top of the screened interval is heavily damaged below the first joint with the solid casing (see borehole video log). The screen is bent inward into the well, reducing the diameter by about 2 inches, but still appears to be attached to the joint. The screen is clean of debris or flocking above the water level (elev. 5.95'), but becomes completely blocked by fine-grained material within 2 feet below it.

Unlike in the other wells, the flocking in RW-6 appears in two different forms: a tan-colored less dense flocking and a dark fine-grained denser flocking that may contain tan material at its core. The color of the darker material is similar to that of the chemical staining covering the joints and exposed steel casing in the other wells.

Similar to the ATV data for RW-3 and RW-5, increased variable thickness measured by the ATV probe along isolated sections of the screened interval is probably the response to the combined thickness of the surface buildup and original screen (and well packing).

The joint at 36 feet below ground surface (elev. -10.75) is clear of any light flocking, but shows dark staining. The video shows possible DNAPL penetrating the flocking at 55.8', directly above the sump. The dark staining may indicate that less DNAPL is making its way through the screen than elsewhere in the well.

The video shows a noticeable change in water density and clarity at approximately 50 feet below ground surface (elev. -24.75'). A second change occurs at 54.4 feet, accompanied by a change in color of the video log. Below 50 feet, the flocking is less thick and the staining less prevalent on the screen's vertical bars. The sump casing shows black staining below 55.5 feet (elev. -30.25'),

Copyright © 2012, Hager GeoScience, Inc. All rights reserved.

but the video log shows that most of the casing appears to be in good condition. The ATV data shows an increase in the casing thickness along the bottom 6 inches, suggesting deterioration on the outer surface. The sump has a hard bottom and is partially filled with a dense liquid that did not disperse when disturbed by the video camera.

6.0 LIMITATIONS OF IMAGE LOG (ATV AND OTV) MEASUREMENTS

The image log must be properly centered in the borehole to provide clear images. A non-centered image log tool in the borehole will produce asymmetrical patterns of acoustic signal reflection amplitude and two-way travel time (ATV) and optical image focal length (OTV), thereby making it difficult to establish a uniform background value of reflection amplitude, travel-time, and image quality against which the anomalous features can be discerned. Borehole tilt and small borehole diameters also degrade image quality.

Image log features or discontinuities may represent open or filled fractures, foliation, and mineralized or weathered zones. Interpreting the type of feature present from the image log requires using other logs or core data, if available. Measurements of open fractures or features in ATV logs may not represent the true aperture or thickness dimension of the fracture or feature. A portion of the acoustic energy hitting the fracture surface is diffracted. The recorded arrivals of these diffractions will appear on the log above and below the normal position of the fracture edges as lower-amplitude arrivals with longer travel times. Subtle changes in amplitude within each discontinuity can be used to approximate the true aperture; however, the measurement is approximate and should be designated as “apparent aperture.”

Copyright © 2012, Hager GeoScience, Inc. All rights reserved.

TABLE 2 Well Condition

	Casing Condition Rating	Screen Condition Rating	Joint Condition Rating	Screen Slots Rating	Flocking Buildup	Screen Damage	Chemical Staining	DNAPL Observed
RW-1	Excellent	Excellent	Excellent	Excellent	Minor	Not Observed	No	Possibly
RW-2	Excellent	Good	Good	Poor	Heavy	Not Observed	Yes	No
RW-3	Excellent	Poor	Good	Poor	Heavy	Not Observed	Yes	Yes
RW-5	Good	Poor	Good	Poor	Heavy	Not Observed	No	No
RW-6	Excellent	Poor	Good	Poor	Heavy	Bent at casing	Yes	Yes

Copyright © 2012, Hager GeoScience, Inc. All rights reserved.

APPENDIX D

APPENDIX D

2014 ADJUSTED VAPOR INTRUSION SCREENING AND COMPARISON LEVEL CALCULATIONS

D-1 2014 Adjusted Residential Vapor Intrusion Screening Levels – Cancer Risk = $1x10^{-6}$ and HQ = 0.1

D-2 2014 Adjusted Industrial/Commercial Vapor Intrusion Screening Levels – Cancer Risk = $1x10^{-6}$ and HQ = 0.1

D-3 2014 Adjusted Residential Vapor Intrusion Comparison Levels – Cancer Risk = $1x10^{-6}$ and HQ = 1.0

D-4 2014 Adjusted Industrial/Commercial Vapor Intrusion Comparison Levels – Cancer Risk = $1x10^{-6}$ and HQ = 1.0

OSWER VAPOR INTRUSION ASSESSMENT
Vapor Intrusion Screening Level (VISL) Calculator Version 3.3.1, May 2014 RSLs*

Parameter	Symbol	Value	Instructions
Exposure Scenario	Scenario	Residential	Select residential or commercial scenario from pull down list
Target Risk for Carcinogens	TCR	1.00E-06	Enter target risk for carcinogens
Target Hazard Quotient for Non-Carcinogens	THQ	0.1	Enter target hazard quotient for non-carcinogens
Average Groundwater Temperature (^{0}C)	Tgw	25	Enter average of the stabilized groundwater temperature to correct Henry's Law Constant for gro

	CAS	Chemical Name	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Soil Source?	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Groundwater Source?	Target Indoor Air Conc. @ TCR = 1E-06 or THQ = 0.1	Toxicity Basis	Target Sub-Slab and Exterior Soil Gas Conc. @ TCR = 1E-06 or THQ = 0.1	Target Ground Water Conc. @ TCR = 1E-06 or THQ = 0.1	Inhalation Unit Risk	IUR Source*	Reference Concentration	RFC Source*	Mutagenic Indicator
			Cvp > Cia,target?	Chc > Cia,target?	MIN(Cia,c;Cia,nc)		Csg	Cgw	IUR		RfC		i
			Yes/No	Yes/No	(ug/m^3)	C/NC	(ug/m^3)	(ug/L)	(ug/m^3)$^{-1}$		(mg/m^3)		
	75-07-0	Acetaldehyde	Yes	Yes	9.4E-01	NC	9.4E+00	3.4E+02	2.20E-06	I	9.00E-03	I	
x	67-64-1	Acetone	Yes	Yes	3.2E+03	NC	3.2E+04	2.3E+06			3.10E+01	A	
	75-86-5	Acetone Cyanohydrin	Yes	Yes	2.1E-01	NC	2.1E+00	3.9E+02			2.00E-03	X	
	75-05-8	Acetonitrile	Yes	Yes	6.3E+00	NC	6.3E+01	4.4E+03			6.00E-02	I	
	107-02-8	Acrolein	Yes	Yes	2.1E-03	NC	2.1E-02	4.2E-01			2.00E-05	I	
x	107-13-1	Acrylonitrile	Yes	Yes	4.1E-02	C	4.1E-01	7.3E+00	6.80E-05	I	2.00E-03	I	
x	107-05-1	Allyl Chloride	Yes	Yes	1.0E-01	NC	1.0E+00	2.3E-01	6.00E-06	CA	1.00E-03	I	
	75-85-4	Amyl Alcohol, tert-	Yes	Yes	3.1E-01	NC	3.1E+00	5.5E+02			3.00E-03	X	
	11104-28-2	Aroclor 1221	Yes	Yes	4.9E-03	C	4.9E-02	1.6E-01	5.70E-04	S			
	11141-16-5	Aroclor 1232	Yes	Yes	4.9E-03	C	4.9E-02	1.6E-01	5.70E-04	S			
	103-33-3	Azobenzene	Yes	Yes	9.1E-02	C	9.1E-01	1.6E+02	3.10E-05	I			
x	71-43-2	Benzene	Yes	Yes	3.6E-01	C	3.6E+00	1.6E+00	7.80E-06	I	3.00E-02	I	
x	100-44-7	Benzyl Chloride	Yes	Yes	5.7E-02	C	5.7E-01	3.4E+00	4.90E-05	CA	1.00E-03	P	
	92-52-4	Biphenyl, 1,1'-	Yes	Yes	4.2E-02	NC	4.2E-01	3.3E+00			4.00E-04	X	
	108-60-1	Bis(2-chloro-1-methylethyl) ether	Yes	Yes	2.8E-01	C	2.8E+00	9.3E+01	1.00E-05	H			
	111-44-4	Bis(2-chloroethyl)ether	Yes	Yes	8.5E-03	C	8.5E-02	1.2E+01	3.30E-04	I			
	542-88-1	Bis(chloromethyl)ether	Yes	Yes	4.5E-05	C	4.5E-04	2.5E-04	6.20E-02	I			
	107-04-0	Bromo-2-chloroethane, 1-	Yes	Yes	4.7E-03	C	4.7E-02	1.3E-01	6.00E-04	X			
x	108-86-1	Bromobenzene	Yes	Yes	6.3E+00	NC	6.3E+01	6.2E+01			6.00E-02	I	
x	74-97-5	Bromochloromethane	Yes	Yes	4.2E+00	NC	4.2E+01	7.0E+01			4.00E-02	X	
x	75-27-4	Bromodichloromethane	Yes	Yes	7.6E-02	C	7.6E-01	8.8E-01	3.70E-05	CA			
x	74-83-9	Bromomethane	Yes	Yes	5.2E-01	NC	5.2E+00	1.7E+00			5.00E-03	I	
x	106-99-0	Butadiene, 1,3-	Yes	Yes	9.4E-02	C	9.4E-01	3.1E-02	3.00E-05	I	2.00E-03	I	
x	75-15-0	Carbon Disulfide	Yes	Yes	7.3E+01	NC	7.3E+02	1.2E+02			7.00E-01	I	
x	56-23-5	Carbon Tetrachloride	Yes	Yes	4.7E-01	C	4.7E+00	4.1E-01	6.00E-06	I	1.00E-01	I	
	75-68-3	Chloro-1,1-difluoroethane, 1-	Yes	Yes	5.2E+03	NC	5.2E+04	2.2E+03			5.00E+01	I	
	126-99-8	Chloro-1,3-butadiene, 2-	Yes	Yes	9.4E-03	C	9.4E-02	4.1E-03	3.00E-04	I	2.00E-02	I	
x	108-90-7	Chlorobenzene	Yes	Yes	5.2E+00	NC	5.2E+01	4.1E+01			5.00E-02	P	
	98-56-6	Chlorobenzotrifluoride, 4-	Yes	Yes	3.1E+01	NC	3.1E+02	2.2E+01			3.00E-01	P	
	75-45-6	Chlorodifluoromethane	Yes	Yes	5.2E+03	NC	5.2E+04	3.1E+03			5.00E+01	I	
x	67-66-3	Chloroform	Yes	Yes	1.2E-01	C	1.2E+00	8.1E-01	2.30E-05	I	9.80E-02	A	
x	74-87-3	Chloromethane	Yes	Yes	9.4E+00	NC	9.4E+01	2.6E+01			9.00E-02	I	
	107-30-2	Chloromethyl Methyl Ether	Yes	Yes	4.1E-03	C	4.1E-02	3.3E-01	6.90E-04	CA			
	76-06-2	Chloropicrin	Yes	Yes	4.2E-02	NC	4.2E-01	5.0E-01			4.00E-04	CA	
x	98-82-8	Cumene	Yes	Yes	4.2E+01	NC	4.2E+02	8.9E+01			4.00E-01	I	
	57-12-5	Cyanide (CN-)	Yes	Yes	8.3E-02	NC	8.3E-01	1.5E+01			8.00E-04	S	
x	110-82-7	Cyclohexane	Yes	Yes	6.3E+02	NC	6.3E+03	1.0E+02			6.00E+00	I	
	110-83-8	Cyclohexene	Yes	Yes	1.0E+02	NC	1.0E+03	5.6E+01			1.00E+00	X	
x	96-12-8	Dibromo-3-chloropropane, 1,2-	Yes	Yes	1.7E-04	C	1.7E-03	2.8E-02	6.00E-03	P	2.00E-04	I	Mut
x	124-48-1	Dibromochloromethane	Yes	Yes	1.0E-01	C	1.0E+00	3.2E+00	2.70E-05	CA			
x	106-93-4	Dibromoethane, 1,2-	Yes	Yes	4.7E-03	C	4.7E-02	1.8E-01	6.00E-04	I	9.00E-03	I	
x	74-95-3	Dibromomethane (Methylene Bromide)	Yes	Yes	4.2E-01	NC	4.2E+00	1.2E+01			4.00E-03	X	
	764-41-0	Dichloro-2-butene, 1,4-	Yes	Yes	6.7E-04	C	6.7E-03	2.5E-02	4.20E-03	P			
	1476-11-5	Dichloro-2-butene, cis-1,4-	Yes	Yes	6.7E-04	C	6.7E-03	2.5E-02	4.20E-03	P			
	110-57-6	Dichloro-2-butene, trans-1,4-	Yes	Yes	6.7E-04	C	6.7E-03	2.5E-02	4.20E-03	P			
x	95-50-1	Dichlorobenzene, 1,2-	Yes	Yes	2.1E+01	NC	2.1E+02	2.7E+02			2.00E-01	H	
x	106-46-7	Dichlorobenzene, 1,4-	Yes	Yes	2.6E-01	C	2.6E+00	2.6E+00	1.10E-05	CA	8.00E-01	I	
x	75-71-8	Dichlorodifluoromethane	Yes	Yes	1.0E+01	NC	1.0E+02	7.4E-01			1.00E-01	X	
x	75-34-3	Dichloroethane, 1,1-	Yes	Yes	1.8E+00	C	1.8E+01	7.6E+00	1.60E-06	CA			
x	107-06-2	Dichloroethane, 1,2-	Yes	Yes	1.1E-01	C	1.1E+00	2.2E+00	2.60E-05	I	7.00E-03	P	
x	75-35-4	Dichloroethylene, 1,1-	Yes	Yes	2.1E+01	NC	2.1E+02	2.0E+01			2.00E-01	I	
x	78-87-5	Dichloropropane, 1,2-	Yes	Yes	2.8E-01	C	2.8E+00	2.4E+00	1.00E-05	CA	4.00E-03	I	
x	542-75-6	Dichloropropene, 1,3-	Yes	Yes	7.0E-01	C	7.0E+00	4.8E+00	4.00E-06	I	2.00E-02	I	
	77-73-6	Dicyclopentadiene	Yes	Yes	3.1E-02	NC	3.1E-01	1.2E-02			3.00E-04	X	
	75-37-6	Difluoroethane, 1,1-	Yes	Yes	4.2E+03	NC	4.2E+04	5.0E+03			4.00E+01	I	
	94-58-6	Dihydrosafrole	Yes	Yes	2.2E-01	C	2.2E+00	3.2E-02	1.30E-05	CA			

OSWER VAPOR INTRUSION ASSESSMENT
Vapor Intrusion Screening Level (VISL) Calculator Version 3.3.1, May 2014 RSLs*

Parameter	Symbol	Value	Instructions
Exposure Scenario	Scenario	Residential	Select residential or commercial scenario from pull down list
Target Risk for Carcinogens	TCR	1.00E-06	Enter target risk for carcinogens
Target Hazard Quotient for Non-Carcinogens	THQ	0.1	Enter target hazard quotient for non-carcinogens
Average Groundwater Temperature (^{0}C)	Tgw	25	Enter average of the stabilized groundwater temperature to correct Henry's Law Constant for gro

	CAS	Chemical Name	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Soil Source?	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Groundwater Source?	Target Indoor Air Conc. @ TCR = 1E-06 or THQ = 0.1	Toxicity Basis	Target Sub-Slab and Exterior Soil Gas Conc. @ TCR = 1E-06 or THQ = 0.1	Target Ground Water Conc. @ TCR = 1E-06 or THQ = 0.1	Inhalation Unit Risk	IUR Source*	Reference Concentration	RFC Source*	Mutagenic Indicator
			Cvp > Cia,target?	Chc > Cia,target?	MIN(Cia,c;Cia,nc)		Csg	Cgw	IUR		RfC		i
			Yes/No	Yes/No	(ug/m^3)	C/NC	(ug/m^3)	(ug/L)	(ug/m^3)$^{-1}$		(mg/m^3)		
	108-20-3	Diisopropyl Ether	Yes	Yes	7.3E+01	NC	7.3E+02	7.0E+02			7.00E-01	P	
	513-37-1	Dimethylvinylchloride	Yes	Yes	2.2E-01	C	2.2E+00	6.5E-02	1.30E-05	CA			
	106-89-8	Epichlorohydrin	Yes	Yes	1.0E-01	NC	1.0E+00	8.4E+01	1.20E-06	I	1.00E-03	I	
	106-88-7	Epoxybutane, 1,2-	Yes	Yes	2.1E+00	NC	2.1E+01	2.8E+02			2.00E-02	I	
	141-78-6	Ethyl Acetate	Yes	Yes	7.3E+00	NC	7.3E+01	1.3E+03			7.00E-02	P	
x	75-00-3	Ethyl Chloride (Chloroethane)	Yes	Yes	1.0E+03	NC	1.0E+04	2.3E+03			1.00E+01	I	
	97-63-2	Ethyl Methacrylate	Yes	Yes	3.1E+01	NC	3.1E+02	1.3E+03			3.00E-01	P	
x	100-41-4	Ethylbenzene	Yes	Yes	1.1E+00	C	1.1E+01	3.5E+00	2.50E-06	CA	1.00E+00	I	
	75-21-8	Ethylene Oxide	Yes	Yes	3.2E-02	C	3.2E-01	5.3E+00	8.80E-05	CA	3.00E-02	CA	
	151-56-4	Ethyleneimine	Yes	Yes	1.5E-04	C	1.5E-03	3.0E-01	1.90E-02	CA			
	822-06-0	Hexamethylene Diisocyanate, 1,6-	Yes	Yes	1.0E-03	NC	1.0E-02	5.3E-01			1.00E-05	I	
x	110-54-3	Hexane, N-	Yes	Yes	7.3E+01	NC	7.3E+02	9.9E-01			7.00E-01	I	
x	591-78-6	Hexanone, 2-	Yes	Yes	3.1E+00	NC	3.1E+01	8.2E+02			3.00E-02	I	
	74-90-8	Hydrogen Cyanide	Yes	Yes	8.3E-02	NC	8.3E-01	1.5E+01			8.00E-04	I	
	7439-97-6	Mercury (elemental)	Yes	Yes	3.1E-02	NC	3.1E-01	6.7E-02			3.00E-04	I	
	126-98-7	Methacrylonitrile	Yes	Yes	3.1E+00	NC	3.1E+01	3.1E+02			3.00E-02	P	
	96-33-3	Methyl Acrylate	Yes	Yes	2.1E+00	NC	2.1E+01	2.6E+02			2.00E-02	P	
x	78-93-3	Methyl Ethyl Ketone (2-Butanone)	Yes	Yes	5.2E+02	NC	5.2E+03	2.2E+05			5.00E+00	I	
x	108-10-1	Methyl Isobutyl Ketone (4-methyl-2-pentanone)	Yes	Yes	3.1E+02	NC	3.1E+03	5.5E+04			3.00E+00	I	
	624-83-9	Methyl Isocyanate	Yes	Yes	1.0E-01	NC	1.0E+00	2.8E+00			1.00E-03	CA	
	80-62-6	Methyl Methacrylate	Yes	Yes	7.3E+01	NC	7.3E+02	5.6E+03			7.00E-01	I	
	25013-15-4	Methyl Styrene (Mixed Isomers)	Yes	Yes	4.2E+00	NC	4.2E+01	3.4E+01			4.00E-02	H	
x	1634-04-4	Methyl tert-Butyl Ether (MTBE)	Yes	Yes	1.1E+01	C	1.1E+02	4.5E+02	2.60E-07	CA	3.00E+00	I	
x	75-09-2	Methylene Chloride	Yes	Yes	6.3E+01	NC	6.3E+02	4.7E+02	1.00E-08	I	6.00E-01	I	Mut
x	91-20-3	Naphthalene	Yes	Yes	8.3E-02	C	8.3E-01	4.6E+00	3.40E-05	CA	3.00E-03	I	
	98-95-3	Nitrobenzene	Yes	Yes	7.0E-02	C	7.0E-01	7.2E+01	4.00E-05	I	9.00E-03	I	
	75-52-5	Nitromethane	Yes	Yes	3.2E-01	C	3.2E+00	2.7E+02	8.80E-06	P	5.00E-03	P	
	79-46-9	Nitropropane, 2-	Yes	Yes	1.0E-03	C	1.0E-02	2.1E-01	2.70E-03	H	2.00E-02	I	
	924-16-3	Nitroso-di-N-butylamine, N-	Yes	Yes	1.8E-03	C	1.8E-02	3.3E+00	1.60E-03	I			
	111-84-2	Nonane, n-	Yes	Yes	2.1E+00	NC	2.1E+01	1.5E-02			2.00E-02	P	
	109-66-0	Pentane, n-	Yes	Yes	1.0E+02	NC	1.0E+03	2.0E+00			1.00E+00	P	
	75-44-5	Phosgene	Yes	Yes	3.1E-02	NC	3.1E-01	4.6E-02			3.00E-04	I	
	123-38-6	Propionaldehyde	Yes	Yes	8.3E-01	NC	8.3E+00	2.8E+02			8.00E-03	I	
x	103-65-1	Propyl benzene	Yes	Yes	1.0E+02	NC	1.0E+03	2.4E+02			1.00E+00	X	
	115-07-1	Propylene	Yes	Yes	3.1E+02	NC	3.1E+03	3.9E+01			3.00E+00	CA	
	75-56-9	Propylene Oxide	Yes	Yes	7.6E-01	C	7.6E+00	2.7E+02	3.70E-06	I	3.00E-02	I	
x	100-42-5	Styrene	Yes	Yes	1.0E+02	NC	1.0E+03	9.3E+02			1.00E+00	I	
x	630-20-6	Tetrachloroethane, 1,1,1,2-	Yes	Yes	3.8E-01	C	3.8E+00	3.7E+00	7.40E-06	I			
x	79-34-5	Tetrachloroethane, 1,1,2,2-	Yes	Yes	4.8E-02	C	4.8E-01	3.2E+00	5.80E-05	CA			
x	127-18-4	Tetrachloroethylene	Yes	Yes	4.2E+00	NC	4.2E+01	5.8E+00	2.60E-07	I	4.00E-02	I	
	811-97-2	Tetrafluoroethane, 1,1,1,2-	Yes	Yes	8.3E+03	NC	8.3E+04	4.1E+03			8.00E+01	I	
x	109-99-9	Tetrahydrofuran	Yes	Yes	2.1E+02	NC	2.1E+03	7.2E+04			2.00E+00	I	
x	108-88-3	Toluene	Yes	Yes	5.2E+02	NC	5.2E+03	1.9E+03			5.00E+00	I	
x	76-13-1	Trichloro-1,2,2-trifluoroethane, 1,1,2-	Yes	Yes	3.1E+03	NC	3.1E+04	1.5E+02			3.00E+01	H	
x	120-82-1	Trichlorobenzene, 1,2,4-	Yes	Yes	2.1E-01	NC	2.1E+00	3.6E+00			2.00E-03	P	
x	71-55-6	Trichloroethane, 1,1,1-	Yes	Yes	5.2E+02	NC	5.2E+03	7.4E+02			5.00E+00	I	
x	79-00-5	Trichloroethane, 1,1,2-	Yes	Yes	2.1E-02	NC	2.1E-01	6.2E-01	1.60E-05	I	2.00E-04	X	
x	79-01-6	Trichloroethylene	Yes	Yes	2.1E-01	NC	2.1E+00	5.2E-01	see note	I	2.00E-03	I	TCE
x	75-69-4	Trichlorofluoromethane	Yes	Yes	7.3E+01	NC	7.3E+02	1.8E+01			7.00E-01	H	
x	96-18-4	Trichloropropane, 1,2,3-	Yes	Yes	3.1E-02	NC	3.1E-01	2.2E+00			3.00E-04	I	Mut
	96-19-5	Trichloropropene, 1,2,3-	Yes	Yes	3.1E-02	NC	3.1E-01	4.3E-02			3.00E-04	P	
	121-44-8	Triethylamine	Yes	Yes	7.3E-01	NC	7.3E+00	1.2E+02			7.00E-03	I	
	526-73-8	Trimethylbenzene, 1,2,3-	Yes	Yes	5.2E-01	NC	5.2E+00	2.9E+00			5.00E-03	P	
x	95-63-6	Trimethylbenzene, 1,2,4-	Yes	Yes	7.3E-01	NC	7.3E+00	2.9E+00			7.00E-03	P	
x	108-05-4	Vinyl Acetate	Yes	Yes	2.1E+01	NC	2.1E+02	1.0E+03			2.00E-01	I	
x	593-60-2	Vinyl Bromide	Yes	Yes	8.8E-02	C	8.8E-01	1.7E-01	3.20E-05	H	3.00E-03	I	

OSWER VAPOR INTRUSION ASSESSMENT
Vapor Intrusion Screening Level (VISL) Calculator Version 3.3.1, May 2014 RSLs*

Parameter	Symbol	Value	Instructions
Exposure Scenario	Scenario	Residential	Select residential or commercial scenario from pull down list
Target Risk for Carcinogens	TCR	1.00E-06	Enter target risk for carcinogens
Target Hazard Quotient for Non-Carcinogens	THQ	0.1	Enter target hazard quotient for non-carcinogens
Average Groundwater Temperature (^{0}C)	Tgw	25	Enter average of the stabilized groundwater temperature to correct Henry's Law Constant for gro

	CAS	Chemical Name	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Soil Source?	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Groundwater Source?	Target Indoor Air Conc. @ TCR = 1E-06 or THQ = 0.1	Toxicity Basis	Target Sub-Slab and Exterior Soil Gas Conc. @ TCR = 1E-06 or THQ = 0.1	Target Ground Water Conc. @ TCR = 1E-06 or THQ = 0.1	Inhalation Unit Risk	IUR Source*	Reference Concentration	RFC Source*	Mutagenic Indicator
			Cvp > Cia,target?	Chc > Cia,target?	MIN(Cia,c;Cia,nc)		Csg	Cgw	IUR		RfC		i
			Yes/No	Yes/No	(ug/m^3)	C/NC	(ug/m^3)	(ug/L)	(ug/m^3)$^{-1}$		(mg/m^3)		
x	75-01-4	Vinyl Chloride	Yes	Yes	1.7E-01	C	1.7E+00	1.5E-01	4.40E-06	I	1.00E-01	I	VC
x	108-38-3	Xylene, m-	Yes	Yes	1.0E+01	NC	1.0E+02	3.6E+01			1.00E-01	S	
x	95-47-6	Xylene, o-	Yes	Yes	1.0E+01	NC	1.0E+02	4.9E+01			1.00E-01	S	
x	106-42-3	Xylene, P-	Yes	Yes	1.0E+01	NC	1.0E+02	3.7E+01			1.00E-01	S	
x	1330-20-7	Xylenes	Yes	Yes	1.0E+01	NC	1.0E+02	4.9E+01			1.00E-01	I	

Notes:

(1) **Inhalation Pathway Exposure Parameters (RME):**

Exposure Scenario	Units	Residential Symbol	Residential Value	Commercial Symbol	Commercial Value	Selected Symbol	Selected Value
Averaging time for carcinogens	(yrs)	ATc_R	70	ATc_C	70	ATc	70
Averaging time for non-carcinogens	(yrs)	ATnc_R	26	ATnc_C	25	ATnc	26
Exposure duration	(yrs)	ED_R	26	ED_C	25	ED	26
Exposure frequency	(days/yr)	EF_R	350	EF_C	250	EF	350
Exposure time	(hr/day)	ET_R	24	ET_C	8	ET	24

(2) **Generic Attenuation Factors:**

Source Medium of Vapors		Residential Symbol	Residential Value	Commercial Symbol	Commercial Value	Selected Symbol	Selected Value
Groundwater	(-)	AFgw_R	0.001	AFgw_C	0.001	AFgw	0.001
Sub-Slab and Exterior Soil Gas	(-)	AFss_R	0.1	AFss_C	0.1	AFss	0.1

(3) **Formulas**
Cia, target = MIN(Cia,c; Cia,nc)
Cia,c (ug/m3) = TCR x ATc x (365 days/yr) x (24 hrs/day) / (ED x EF x ET x IUR)
Cia,nc (ug/m3) = THQ x ATnc x (365 days/yr) x (24 hrs/day) x RfC x (1000 ug/mg) / (ED x EF x ET)

(4) **Special Case Chemicals**
Trichloroethylene

	Residential Symbol	Residential Value	Commercial Symbol	Commercial Value	Selected Symbol	Selected Value
	mIURTCE_R	1.00E-06	mIURTCE_C	0.00E+00	mIURTCE	1.00E-06
	IURTCE_R	3.10E-06	IURTCE_C	4.10E-06	IURTCE	3.10E-06

Mutagenic Chemicals — The exposure durations and age-dependent adjustment factors for mutagenic-mode-of-action are listed in the table below:

Note: This section applies to trichloroethylene and other mutagenic chemicals, but not to vinyl chloride.

Age Cohort	Exposure Duration (years)	Age-dependent adjustment factor
0 - 2 years	2	10
2 - 6 years	4	3
6 - 16 years	10	3
16 - 26 years	10	1

Mutagenic-mode-of-action (MMOA) adjustment factor 72 This factor is used in the equations for mutagenic chemicals.

Vinyl Chloride — See the Navigation Guide equation for Cia,c for vinyl chloride.

Notation:
NVT = Not sufficiently volatile and/or toxic to pose inhalation risk in selected exposure scenario for the indicated medium
C = Carcinogenic
NC = Non-carcinogenic
I = IRIS: EPA Integrated Risk Information System (IRIS). Available online at: http://www.epa.gov/iris/subst/index.html
P = PPRTV. EPA Provisional Peer Reviewed Toxicity Values (PPRTVs). Available online at: http://hhpprtv.ornl.gov/pprtv.shtml
A = Agency for Toxic Substances and Disease Registry (ATSDR) Minimum Risk Levels (MRLs). Available online at: http://www.atsdr.cdc.gov/mrls/index.html
CA = California Environmental Protection Agency/Office of Environmental Health Hazard Assessment assessments. Available online at:

OSWER VAPOR INTRUSION ASSESSMENT
Vapor Intrusion Screening Level (VISL) Calculator Version 3.3.1, May 2014 RSLs*

Parameter	Symbol	Value	Instructions
Exposure Scenario	Scenario	Residential	Select residential or commercial scenario from pull down list
Target Risk for Carcinogens	TCR	1.00E-06	Enter target risk for carcinogens
Target Hazard Quotient for Non-Carcinogens	THQ	0.1	Enter target hazard quotient for non-carcinogens
Average Groundwater Temperature (^{0}C)	Tgw	25	Enter average of the stabilized groundwater temperature to correct Henry's Law Constant for gro

CAS	Chemical Name	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Soil Source?	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Groundwater Source?	Target Indoor Air Conc. @ TCR = 1E-06 or THQ = 0.1	Toxicity Basis	Target Sub-Slab and Exterior Soil Gas Conc. @ TCR = 1E-06 or THQ = 0.1	Target Ground Water Conc. @ TCR = 1E-06 or THQ = 0.1	Inhalation Unit Risk	IUR Source*	Reference Concentration	RFC Source*	Mutagenic Indicator
		Cvp > Cia,target?	Chc > Cia,target?	MIN(Cia,c;Cia,nc)		Csg	Cgw	IUR		RfC		i
		Yes/No	Yes/No	(ug/m^3)	C/NC	(ug/m^3)	(ug/L)	(ug/m^3)$^{-1}$		(mg/m^3)		

H = HEAST. EPA Superfund Health Effects Assessment Summary Tables (HEAST) database. Available online at: http://epa-heast.ornl.gov/heast.shtml
S = See RSL User Guide, Section 5
X = PPRTV Appendix
E = The Engineering ToolBox. Available online at http://www.engineeringtoolbox.com/explosive-concentration-limits-d_423.html
N = Centers for Disease Control and Prevention (CDC) National Institute for Occupational Safety and Health (NIOSH). Pocket Guide to Chemical Hazards. Available online at:
M = Chemical-specific MSDS
Mut = Chemical acts according to the mutagenic-mode-of-action, special exposure parameters apply (see footnote (4) above).
VC = Special exposure equation for vinyl chloride applies (see Navigation Guide for equation).
TCE = Special mutagenic and non-mutagenic IURs for trichloroethylene apply (see footnote (4) above).
Yellow highlighting indicates site-specific parameters that may be edited by the user.
Blue highlighting indicates exposure factors that are based on Risk Assessment Guidance for Superfund (RAGS) or EPA vapor intrusion guidance, which generally should not be changed.
*The EPA Regional Screening Levels (RSLs) were updated in November 2014; however, none of the RSL changes impacted the VISLs, so the May 2014 VISL calculator was not updated and is consistent with the November 2014 RSLs.

OSWER VAPOR INTRUSION ASSESSMENT
Vapor Intrusion Screening Level (VISL) Calculator Version 3.3.1, May 2014 RSLs*

Parameter	Symbol	Value	Instructions
Exposure Scenario	Scenario	Commercial	Select residential or commercial scenario from pull down list
Target Risk for Carcinogens	TCR	1.00E-06	Enter target risk for carcinogens
Target Hazard Quotient for Non-Carcinogens	THQ	0.1	Enter target hazard quotient for non-carcinogens
Average Groundwater Temperature (^oC)	Tgw	25	Enter average of the stabilized groundwater temperature to correct Henry's Law Constant for gro

	CAS	Chemical Name	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Soil Source?	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Groundwater Source?	Target Indoor Air Conc. @ TCR = 1E-06 or THQ = 0.1	Toxicity Basis	Target Sub-Slab and Exterior Soil Gas Conc. @ TCR = 1E-06 or THQ = 0.1	Target Ground Water Conc. @ TCR = 1E-06 or THQ = 0.1	Inhalation Unit Risk	IUR Source*	Reference Concentration	RFC Source*	Mutagenic Indicator
			Cvp > Cia,target?	Chc > Cia,target?	MIN(Cia,c;Cia,nc)		Csg	Cgw	IUR		RfC		i
			Yes/No	Yes/No	(ug/m^3)	C/NC	(ug/m^3)	(ug/L)	(ug/m^3)$^{-1}$		(mg/m^3)		
x	67-64-1	Acetone	Yes	Yes	1.4E+04	NC	1.4E+05	9.5E+06			3.10E+01	A	
x	107-13-1	Acrylonitrile	Yes	Yes	1.8E-01	C	1.8E+00	3.2E+01	6.80E-05	I	2.00E-03	I	
x	107-05-1	Allyl Chloride	Yes	Yes	4.4E-01	NC	4.4E+00	9.7E-01	6.00E-06	CA	1.00E-03	I	
x	71-43-2	Benzene	Yes	Yes	1.6E+00	C	1.6E+01	6.9E+00	7.80E-06	I	3.00E-02	I	
x	100-44-7	Benzyl Chloride	Yes	Yes	2.5E-01	C	2.5E+00	1.5E+01	4.90E-05	CA	1.00E-03	P	
x	108-86-1	Bromobenzene	Yes	Yes	2.6E+01	NC	2.6E+02	2.6E+02			6.00E-02	I	
x	74-97-5	Bromochloromethane	Yes	Yes	1.8E+01	NC	1.8E+02	2.9E+02			4.00E-02	X	
x	75-27-4	Bromodichloromethane	Yes	Yes	3.3E-01	C	3.3E+00	3.8E+00	3.70E-05	CA			
x	74-83-9	Bromomethane	Yes	Yes	2.2E+00	NC	2.2E+01	7.3E+00			5.00E-03	I	
x	106-99-0	Butadiene, 1,3-	Yes	Yes	4.1E-01	C	4.1E+00	1.4E-01	3.00E-05	I	2.00E-03	I	
x	75-15-0	Carbon Disulfide	Yes	Yes	3.1E+02	NC	3.1E+03	5.2E+02			7.00E-01	I	
x	56-23-5	Carbon Tetrachloride	Yes	Yes	2.0E+00	C	2.0E+01	1.8E+00	6.00E-06	I	1.00E-01	I	
x	108-90-7	Chlorobenzene	Yes	Yes	2.2E+01	NC	2.2E+02	1.7E+02			5.00E-02	P	
x	67-66-3	Chloroform	Yes	Yes	5.3E-01	C	5.3E+00	3.6E+00	2.30E-05	I	9.80E-02	A	
x	74-87-3	Chloromethane	Yes	Yes	3.9E+01	NC	3.9E+02	1.1E+02			9.00E-02	I	
x	98-82-8	Cumene	Yes	Yes	1.8E+02	NC	1.8E+03	3.7E+02			4.00E-01	I	
x	110-82-7	Cyclohexane	Yes	Yes	2.6E+03	NC	2.6E+04	4.3E+02			6.00E+00	I	
x	96-12-8	Dibromo-3-chloropropane, 1,2-	Yes	Yes	2.0E-03	C	2.0E-02	3.4E-01	6.00E-03	P	2.00E-04	I	Mut
x	124-48-1	Dibromochloromethane	Yes	Yes	4.5E-01	C	4.5E+00	1.4E+01	2.70E-05	CA			
x	106-93-4	Dibromoethane, 1,2-	Yes	Yes	2.0E-02	C	2.0E-01	7.7E-01	6.00E-04	I	9.00E-03	I	
x	74-95-3	Dibromomethane (Methylene Bromide)	Yes	Yes	1.8E+00	NC	1.8E+01	5.2E+01			4.00E-03	X	
x	95-50-1	Dichlorobenzene, 1,2-	Yes	Yes	8.8E+01	NC	8.8E+02	1.1E+03			2.00E-01	H	
x	106-46-7	Dichlorobenzene, 1,4-	Yes	Yes	1.1E+00	C	1.1E+01	1.1E+01	1.10E-05	CA	8.00E-01	I	
x	75-71-8	Dichlorodifluoromethane	Yes	Yes	4.4E+01	NC	4.4E+02	3.1E+00			1.00E-01	X	
x	75-34-3	Dichloroethane, 1,1-	Yes	Yes	7.7E+00	C	7.7E+01	3.3E+01	1.60E-06	CA			
x	107-06-2	Dichloroethane, 1,2-	Yes	Yes	4.7E-01	C	4.7E+00	9.8E+00	2.60E-05	I	7.00E-03	P	
x	75-35-4	Dichloroethylene, 1,1-	Yes	Yes	8.8E+01	NC	8.8E+02	8.2E+01			2.00E-01	I	
x	78-87-5	Dichloropropane, 1,2-	Yes	Yes	1.2E+00	C	1.2E+01	1.1E+01	1.00E-05	CA	4.00E-03	I	
x	542-75-6	Dichloropropene, 1,3-	Yes	Yes	3.1E+00	C	3.1E+01	2.1E+01	4.00E-06	I	2.00E-02	I	
x	75-00-3	Ethyl Chloride (Chloroethane)	Yes	Yes	4.4E+03	NC	4.4E+04	9.7E+03			1.00E+01	I	
x	100-41-4	Ethylbenzene	Yes	Yes	4.9E+00	C	4.9E+01	1.5E+01	2.50E-06	CA	1.00E+00	I	
x	110-54-3	Hexane, N-	Yes	Yes	3.1E+02	NC	3.1E+03	4.2E+00			7.00E-01	I	
x	591-78-6	Hexanone, 2-	Yes	Yes	1.3E+01	NC	1.3E+02	3.4E+03			3.00E-02	I	
x	78-93-3	Methyl Ethyl Ketone (2-Butanone)	Yes	Yes	2.2E+03	NC	2.2E+04	9.4E+05			5.00E+00	I	
x	108-10-1	Methyl Isobutyl Ketone (4-methyl-2-pentanone)	Yes	Yes	1.3E+03	NC	1.3E+04	2.3E+05			3.00E+00	I	
x	1634-04-4	Methyl tert-Butyl Ether (MTBE)	Yes	Yes	4.7E+01	C	4.7E+02	2.0E+03	2.60E-07	CA	3.00E+00	I	
x	75-09-2	Methylene Chloride	Yes	Yes	2.6E+02	NC	2.6E+03	2.0E+03	1.00E-08	I	6.00E-01	I	Mut
x	91-20-3	Naphthalene	Yes	Yes	3.6E-01	C	3.6E+00	2.0E+01	3.40E-05	CA	3.00E-03	I	
x	103-65-1	Propyl benzene	Yes	Yes	4.4E+02	NC	4.4E+03	1.0E+03			1.00E+00	X	
x	100-42-5	Styrene	Yes	Yes	4.4E+02	NC	4.4E+03	3.9E+03			1.00E+00	I	
x	630-20-6	Tetrachloroethane, 1,1,1,2-	Yes	Yes	1.7E+00	C	1.7E+01	1.6E+01	7.40E-06	I			
x	79-34-5	Tetrachloroethane, 1,1,2,2-	Yes	Yes	2.1E-01	C	2.1E+00	1.4E+01	5.80E-05	CA			
x	127-18-4	Tetrachloroethylene	Yes	Yes	1.8E+01	NC	1.8E+02	2.4E+01	2.60E-07	I	4.00E-02	I	
x	109-99-9	Tetrahydrofuran	Yes	Yes	8.8E+02	NC	8.8E+03	3.0E+05			2.00E+00	I	
x	108-88-3	Toluene	Yes	Yes	2.2E+03	NC	2.2E+04	8.1E+03			5.00E+00	I	
x	76-13-1	Trichloro-1,2,2-trifluoroethane, 1,1,2-	Yes	Yes	1.3E+04	NC	1.3E+05	6.1E+02			3.00E+01	H	
x	120-82-1	Trichlorobenzene, 1,2,4-	Yes	Yes	8.8E-01	NC	8.8E+00	1.5E+01			2.00E-03	P	
x	71-55-6	Trichloroethane, 1,1,1-	Yes	Yes	2.2E+03	NC	2.2E+04	3.1E+03			5.00E+00	I	
x	79-00-5	Trichloroethane, 1,1,2-	Yes	Yes	8.8E-02	NC	8.8E-01	2.6E+00	1.60E-05	I	2.00E-04	X	
x	79-01-6	Trichloroethylene	Yes	Yes	8.8E-01	NC	8.8E+00	2.2E+00	see note	I	2.00E-03	I	TCE
x	75-69-4	Trichlorofluoromethane	Yes	Yes	3.1E+02	NC	3.1E+03	7.7E+01			7.00E-01	H	
x	96-18-4	Trichloropropane, 1,2,3-	Yes	Yes	1.3E-01	NC	1.3E+00	9.4E+00			3.00E-04	I	Mut
x	95-63-6	Trimethylbenzene, 1,2,4-	Yes	Yes	3.1E+00	NC	3.1E+01	1.2E+01			7.00E-03	P	

OSWER VAPOR INTRUSION ASSESSMENT
Vapor Intrusion Screening Level (VISL) Calculator Version 3.3.1, May 2014 RSLs*

Parameter	Symbol	Value	Instructions
Exposure Scenario	Scenario	Commercial	Select residential or commercial scenario from pull down list
Target Risk for Carcinogens	TCR	1.00E-06	Enter target risk for carcinogens
Target Hazard Quotient for Non-Carcinogens	THQ	0.1	Enter target hazard quotient for non-carcinogens
Average Groundwater Temperature (^oC)	Tgw	25	Enter average of the stabilized groundwater temperature to correct Henry's Law Constant for gro

	CAS	Chemical Name	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Soil Source?	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Groundwater Source?	Target Indoor Air Conc. @ TCR = 1E-06 or THQ = 0.1	Toxicity Basis	Target Sub-Slab and Exterior Soil Gas Conc. @ TCR = 1E-06 or THQ = 0.1	Target Ground Water Conc. @ TCR = 1E-06 or THQ = 0.1	Inhalation Unit Risk	IUR Source*	Reference Concentration	RFC Source*	Mutagenic Indicator
			Cvp > Cia,target?	Chc > Cia,target?	MIN(Cia,c;Cia,nc)		Csg	Cgw	IUR		RfC		i
			Yes/No	Yes/No	(ug/m^3)	C/NC	(ug/m^3)	(ug/L)	(ug/m^3)$^{-1}$		(mg/m^3)		
x	108-05-4	Vinyl Acetate	Yes	Yes	8.8E+01	NC	8.8E+02	4.2E+03			2.00E-01	I	
x	593-60-2	Vinyl Bromide	Yes	Yes	3.8E-01	C	3.8E+00	7.6E-01	3.20E-05	H	3.00E-03	I	
x	75-01-4	Vinyl Chloride	Yes	Yes	2.8E+00	C	2.8E+01	2.5E+00	4.40E-06	I	1.00E-01	I	VC
x	108-38-3	Xylene, m-	Yes	Yes	4.4E+01	NC	4.4E+02	1.5E+02			1.00E-01	S	
x	95-47-6	Xylene, o-	Yes	Yes	4.4E+01	NC	4.4E+02	2.1E+02			1.00E-01	S	
x	106-42-3	Xylene, P-	Yes	Yes	4.4E+01	NC	4.4E+02	1.6E+02			1.00E-01	S	
x	1330-20-7	Xylenes	Yes	Yes	4.4E+01	NC	4.4E+02	2.1E+02			1.00E-01	I	

Notes:

(1) **Inhalation Pathway Exposure Parameters (RME):**

Exposure Scenario	Units	Residential Symbol	Residential Value	Commercial Symbol	Commercial Value	Selected Symbol	Selected Value
Averaging time for carcinogens	(yrs)	ATc_R	70	ATc_C	70	ATc	70
Averaging time for non-carcinogens	(yrs)	ATnc_R	26	ATnc_C	25	ATnc	25
Exposure duration	(yrs)	ED_R	26	ED_C	25	ED	25
Exposure frequency	(days/yr)	EF_R	350	EF_C	250	EF	250
Exposure time	(hr/day)	ET_R	24	ET_C	8	ET	8

(2) **Generic Attenuation Factors:**

Source Medium of Vapors		Residential Symbol	Residential Value	Commercial Symbol	Commercial Value	Selected Symbol	Selected Value
Groundwater	(-)	AFgw_R	0.001	AFgw_C	0.001	AFgw	0.001
Sub-Slab and Exterior Soil Gas	(-)	AFss_R	0.1	AFss_C	0.1	AFss	0.1

(3) **Formulas**
Cia, target = MIN(Cia,c; Cia,nc)
Cia,c (ug/m3) = TCR x ATc x (365 days/yr) x (24 hrs/day) / (ED x EF x ET x IUR)
Cia,nc (ug/m3) = THQ x ATnc x (365 days/yr) x (24 hrs/day) x RfC x (1000 ug/mg) / (ED x EF x ET)

(4) **Special Case Chemicals**

Trichloroethylene	Residential Symbol	Residential Value	Commercial Symbol	Commercial Value	Selected Symbol	Selected Value
	mIURTCE_R	1.00E-06	mIURTCE_C	0.00E+00	mIURTCE	0.00E+00
	IURTCE_R	3.10E-06	IURTCE_C	4.10E-06	IURTCE	4.10E-06

Mutagenic Chemicals — The exposure durations and age-dependent adjustment factors for mutagenic-mode-of-action are listed in the table below:

Note: This section applies to trichloroethylene and other mutagenic chemicals, but not to vinyl chloride.

Age Cohort	Exposure Duration (years)	Age-dependent adjustment factor
0 - 2 years	2	10
2 - 6 years	4	3
6 - 16 years	10	3
16 - 26 years	10	1

Mutagenic-mode-of-action (MMOA) adjustment factor 25 — This factor is used in the equations for mutagenic chemicals.

Vinyl Chloride — See the Navigation Guide equation for Cia,c for vinyl chloride.

Notation:
NVT = Not sufficiently volatile and/or toxic to pose inhalation risk in selected exposure scenario for the indicated medium
C = Carcinogenic

OSWER VAPOR INTRUSION ASSESSMENT
Vapor Intrusion Screening Level (VISL) Calculator Version 3.3.1, May 2014 RSLs*

Parameter	Symbol	Value	Instructions
Exposure Scenario	Scenario	Commercial	Select residential or commercial scenario from pull down list
Target Risk for Carcinogens	TCR	1.00E-06	Enter target risk for carcinogens
Target Hazard Quotient for Non-Carcinogens	THQ	0.1	Enter target hazard quotient for non-carcinogens
Average Groundwater Temperature (^oC)	Tgw	25	Enter average of the stabilized groundwater temperature to correct Henry's Law Constant for gro

CAS	Chemical Name	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Soil Source?	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Groundwater Source?	Target Indoor Air Conc. @ TCR = 1E-06 or THQ = 0.1	Toxicity Basis	Target Sub-Slab and Exterior Soil Gas Conc. @ TCR = 1E-06 or THQ = 0.1	Target Ground Water Conc. @ TCR = 1E-06 or THQ = 0.1	Inhalation Unit Risk	IUR Source*	Reference Concentration	RFC Source*	Mutagenic Indicator
		Cvp > Cia,target?	Chc > Cia,target?	MIN(Cia,c;Cia,nc)		Csg	Cgw	IUR		RfC		i
		Yes/No	Yes/No	(ug/m^3)	C/NC	(ug/m^3)	(ug/L)	(ug/m^3)$^{-1}$		(mg/m^3)		

NC = Non-carcinogenic
I = IRIS: EPA Integrated Risk Information System (IRIS). Available online at: http://www.epa.gov/iris/subst/index.html
P = PPRTV. EPA Provisional Peer Reviewed Toxicity Values (PPRTVs). Available online at: http://hhpprtv.ornl.gov/pprtv.shtml
A = Agency for Toxic Substances and Disease Registry (ATSDR) Minimum Risk Levels (MRLs). Available online at: http://www.atsdr.cdc.gov/mrls/index.html
CA = California Environmental Protection Agency/Office of Environmental Health Hazard Assessment assessments. Available online at:
H = HEAST. EPA Superfund Health Effects Assessment Summary Tables (HEAST) database. Available online at: http://epa-heast.ornl.gov/heast.shtml
S = See RSL User Guide, Section 5
X = PPRTV Appendix
E = The Engineering ToolBox. Available online at http://www.engineeringtoolbox.com/explosive-concentration-limits-d_423.html
N = Centers for Disease Control and Prevention (CDC) National Institute for Occupational Safety and Health (NIOSH). Pocket Guide to Chemical Hazards. Available online at:
M = Chemical-specific MSDS
Mut = Chemical acts according to the mutagenic-mode-of-action, special exposure parameters apply (see footnote (4) above).
VC = Special exposure equation for vinyl chloride applies (see Navigation Guide for equation).
TCE = Special mutagenic and non-mutagenic IURs for trichloroethylene apply (see footnote (4) above).
Yellow highlighting indicates site-specific parameters that may be edited by the user.
Blue highlighting indicates exposure factors that are based on Risk Assessment Guidance for Superfund (RAGS) or EPA vapor intrusion guidance, which generally should not be changed.
*The EPA Regional screening Levels (RSLs) were updated in November 2014; however, none of the RSL changes impacted the VISLs, so the May 2014 VISL calculator was not updated and is consistent with the November 2014 RSLs.

OSWER VAPOR INTRUSION ASSESSMENT
Vapor Intrusion Screening Level (VISL) Calculator Version 3.3.1, May 2014 RSLs*

Parameter	Symbol	Value	Instructions
Exposure Scenario	Scenario	Residential	Select residential or commercial scenario from pull down list
Target Risk for Carcinogens	TCR	1.00E-06	Enter target risk for carcinogens
Target Hazard Quotient for Non-Carcinogens	THQ	1	Enter target hazard quotient for non-carcinogens
Average Groundwater Temperature (^oC)	Tgw	25	Enter average of the stabilized groundwater temperature to correct Henry's Law Constant for gro

	CAS	Chemical Name	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Soil Source?	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Groundwater Source?	Target Indoor Air Conc. @ TCR = 1E-06 or THQ = 1	Toxicity Basis	Target Sub-Slab and Exterior Soil Gas Conc. @ TCR = 1E-06 or THQ = 1	Target Ground Water Conc. @ TCR = 1E-06 or THQ = 1	Inhalation Unit Risk	IUR Source*	Reference Concentration	RFC Source*	Mutagenic Indicator
			Cvp > Cia,target?	Chc > Cia,target?	MIN(Cia,c;Cia,nc)		Csg	Cgw	IUR		RfC		i
			Yes/No	Yes/No	(ug/m^3)	C/NC	(ug/m^3)	(ug/L)	(ug/m^3)$^{-1}$		(mg/m^3)		
x	67-64-1	Acetone	Yes	Yes	3.2E+04	NC	3.2E+05	2.3E+07			3.10E+01	A	
x	107-13-1	Acrylonitrile	Yes	Yes	4.1E-02	C	4.1E-01	7.3E+00	6.80E-05	I	2.00E-03	I	
x	107-05-1	Allyl Chloride	Yes	Yes	4.7E-01	C	4.7E+00	1.0E+00	6.00E-06	CA	1.00E-03	I	
x	71-43-2	Benzene	Yes	Yes	3.6E-01	C	3.6E+00	1.6E+00	7.80E-06	I	3.00E-02	I	
x	100-44-7	Benzyl Chloride	Yes	Yes	5.7E-02	C	5.7E-01	3.4E+00	4.90E-05	CA	1.00E-03	P	
x	108-86-1	Bromobenzene	Yes	Yes	6.3E+01	NC	6.3E+02	6.2E+02			6.00E-02	I	
x	74-97-5	Bromochloromethane	Yes	Yes	4.2E+01	NC	4.2E+02	7.0E+02			4.00E-02	X	
x	75-27-4	Bromodichloromethane	Yes	Yes	7.6E-02	C	7.6E-01	8.8E-01	3.70E-05	CA			
x	74-83-9	Bromomethane	Yes	Yes	5.2E+00	NC	5.2E+01	1.7E+01			5.00E-03	I	
x	106-99-0	Butadiene, 1,3-	Yes	Yes	9.4E-02	C	9.4E-01	3.1E-02	3.00E-05	I	2.00E-03	I	
x	75-15-0	Carbon Disulfide	Yes	Yes	7.3E+02	NC	7.3E+03	1.2E+03			7.00E-01	I	
x	56-23-5	Carbon Tetrachloride	Yes	Yes	4.7E-01	C	4.7E+00	4.1E-01	6.00E-06	I	1.00E-01	I	
x	108-90-7	Chlorobenzene	Yes	Yes	5.2E+01	NC	5.2E+02	4.1E+02			5.00E-02	P	
x	67-66-3	Chloroform	Yes	Yes	1.2E-01	C	1.2E+00	8.1E-01	2.30E-05	I	9.80E-02	A	
x	74-87-3	Chloromethane	Yes	Yes	9.4E+01	NC	9.4E+02	2.6E+02			9.00E-02	I	
x	98-82-8	Cumene	Yes	Yes	4.2E+02	NC	4.2E+03	8.9E+02			4.00E-01	I	
x	110-82-7	Cyclohexane	Yes	Yes	6.3E+03	NC	6.3E+04	1.0E+03			6.00E+00	I	
x	96-12-8	Dibromo-3-chloropropane, 1,2-	Yes	Yes	1.7E-04	C	1.7E-03	2.8E-02	6.00E-03	P	2.00E-04	I	Mut
x	124-48-1	Dibromochloromethane	Yes	Yes	1.0E-01	C	1.0E+00	3.2E+00	2.70E-05	CA			
x	106-93-4	Dibromoethane, 1,2-	Yes	Yes	4.7E-03	C	4.7E-02	1.8E-01	6.00E-04	I	9.00E-03	I	
x	74-95-3	Dibromomethane (Methylene Bromide)	Yes	Yes	4.2E+00	NC	4.2E+01	1.2E+02			4.00E-03	X	
x	95-50-1	Dichlorobenzene, 1,2-	Yes	Yes	2.1E+02	NC	2.1E+03	2.7E+03			2.00E-01	H	
x	106-46-7	Dichlorobenzene, 1,4-	Yes	Yes	2.6E-01	C	2.6E+00	2.6E+00	1.10E-05	CA	8.00E-01	I	
x	75-71-8	Dichlorodifluoromethane	Yes	Yes	1.0E+02	NC	1.0E+03	7.4E+00			1.00E-01	X	
x	75-34-3	Dichloroethane, 1,1-	Yes	Yes	1.8E+00	C	1.8E+01	7.6E+00	1.60E-06	CA			
x	107-06-2	Dichloroethane, 1,2-	Yes	Yes	1.1E-01	C	1.1E+00	2.2E+00	2.60E-05	I	7.00E-03	P	
x	75-35-4	Dichloroethylene, 1,1-	Yes	Yes	2.1E+02	NC	2.1E+03	2.0E+02			2.00E-01	I	
x	78-87-5	Dichloropropane, 1,2-	Yes	Yes	2.8E-01	C	2.8E+00	2.4E+00	1.00E-05	CA	4.00E-03	I	
x	542-75-6	Dichloropropene, 1,3-	Yes	Yes	7.0E-01	C	7.0E+00	4.8E+00	4.00E-06	I	2.00E-02	I	
x	75-00-3	Ethyl Chloride (Chloroethane)	Yes	Yes	1.0E+04	NC	1.0E+05	2.3E+04			1.00E+01	I	
x	100-41-4	Ethylbenzene	Yes	Yes	1.1E+00	C	1.1E+01	3.5E+00	2.50E-06	CA	1.00E+00	I	
x	110-54-3	Hexane, N-	Yes	Yes	7.3E+02	NC	7.3E+03	9.9E+00			7.00E-01	I	
x	591-78-6	Hexanone, 2-	Yes	Yes	3.1E+01	NC	3.1E+02	8.2E+03			3.00E-02	I	
x	78-93-3	Methyl Ethyl Ketone (2-Butanone)	Yes	Yes	5.2E+03	NC	5.2E+04	2.2E+06			5.00E+00	I	
x	108-10-1	Methyl Isobutyl Ketone (4-methyl-2-pentanone)	Yes	Yes	3.1E+03	NC	3.1E+04	5.5E+05			3.00E+00	I	
x	1634-04-4	Methyl tert-Butyl Ether (MTBE)	Yes	Yes	1.1E+01	C	1.1E+02	4.5E+02	2.60E-07	CA	3.00E+00	I	
x	75-09-2	Methylene Chloride	Yes	Yes	1.0E+02	C	1.0E+03	7.6E+02	1.00E-08	I	6.00E-01	I	Mut
x	91-20-3	Naphthalene	Yes	Yes	8.3E-02	C	8.3E-01	4.6E+00	3.40E-05	CA	3.00E-03	I	
x	103-65-1	Propyl benzene	Yes	Yes	1.0E+03	NC	1.0E+04	2.4E+03			1.00E+00	X	
x	100-42-5	Styrene	Yes	Yes	1.0E+03	NC	1.0E+04	9.3E+03			1.00E+00	I	
x	630-20-6	Tetrachloroethane, 1,1,1,2-	Yes	Yes	3.8E-01	C	3.8E+00	3.7E+00	7.40E-06	I			
x	79-34-5	Tetrachloroethane, 1,1,2,2-	Yes	Yes	4.8E-02	C	4.8E-01	3.2E+00	5.80E-05	CA			
x	127-18-4	Tetrachloroethylene	Yes	Yes	1.1E+01	C	1.1E+02	1.5E+01	2.60E-07	I	4.00E-02	I	
x	109-99-9	Tetrahydrofuran	Yes	Yes	2.1E+03	NC	2.1E+04	7.2E+05			2.00E+00	I	
x	108-88-3	Toluene	Yes	Yes	5.2E+03	NC	5.2E+04	1.9E+04			5.00E+00	I	
x	76-13-1	Trichloro-1,2,2-trifluoroethane, 1,1,2-	Yes	Yes	3.1E+04	NC	3.1E+05	1.5E+03			3.00E+01	H	
x	120-82-1	Trichlorobenzene, 1,2,4-	Yes	Yes	2.1E+00	NC	2.1E+01	3.6E+01			2.00E-03	P	
x	71-55-6	Trichloroethane, 1,1,1-	Yes	Yes	5.2E+03	NC	5.2E+04	7.4E+03			5.00E+00	I	
x	79-00-5	Trichloroethane, 1,1,2-	Yes	Yes	1.8E-01	C	1.8E+00	5.2E+00	1.60E-05	I	2.00E-04	X	
x	79-01-6	Trichloroethylene	Yes	Yes	4.8E-01	C	4.8E+00	1.2E+00	see note	I	2.00E-03	I	TCE
x	75-69-4	Trichlorofluoromethane	Yes	Yes	7.3E+02	NC	7.3E+03	1.8E+02			7.00E-01	H	
x	96-18-4	Trichloropropane, 1,2,3-	Yes	Yes	3.1E-01	NC	3.1E+00	2.2E+01			3.00E-04	I	Mut
x	95-63-6	Trimethylbenzene, 1,2,4-	Yes	Yes	7.3E+00	NC	7.3E+01	2.9E+01			7.00E-03	P	

OSWER VAPOR INTRUSION ASSESSMENT
Vapor Intrusion Screening Level (VISL) Calculator Version 3.3.1, May 2014 RSLs*

Parameter	Symbol	Value	Instructions
Exposure Scenario	Scenario	Residential	Select residential or commercial scenario from pull down list
Target Risk for Carcinogens	TCR	1.00E-06	Enter target risk for carcinogens
Target Hazard Quotient for Non-Carcinogens	THQ	1	Enter target hazard quotient for non-carcinogens
Average Groundwater Temperature (^{o}C)	Tgw	25	Enter average of the stabilized groundwater temperature to correct Henry's Law Constant for gro

	CAS	Chemical Name	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Soil Source?	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Groundwater Source?	Target Indoor Air Conc. @ TCR = 1E-06 or THQ = 1	Toxicity Basis	Target Sub-Slab and Exterior Soil Gas Conc. @ TCR = 1E-06 or THQ = 1	Target Ground Water Conc. @ TCR = 1E-06 or THQ = 1	Inhalation Unit Risk	IUR Source*	Reference Concentration	RFC Source*	Mutagenic Indicator
			Cvp > Cia,target?	Chc > Cia,target?	MIN(Cia,c;Cia,nc)		Csg	Cgw	IUR		RfC		i
			Yes/No	Yes/No	(ug/m^3)	C/NC	(ug/m^3)	(ug/L)	(ug/m^3)$^{-1}$		(mg/m^3)		
x	108-05-4	Vinyl Acetate	Yes	Yes	2.1E+02	NC	2.1E+03	1.0E+04			2.00E-01	I	
x	593-60-2	Vinyl Bromide	Yes	Yes	8.8E-02	C	8.8E-01	1.7E-01	3.20E-05	H	3.00E-03	I	
x	75-01-4	Vinyl Chloride	Yes	Yes	1.7E-01	C	1.7E+00	1.5E-01	4.40E-06	I	1.00E-01	I	VC
x	108-38-3	Xylene, m-	Yes	Yes	1.0E+02	NC	1.0E+03	3.6E+02			1.00E-01	S	
x	95-47-6	Xylene, o-	Yes	Yes	1.0E+02	NC	1.0E+03	4.9E+02			1.00E-01	S	
x	106-42-3	Xylene, P-	Yes	Yes	1.0E+02	NC	1.0E+03	3.7E+02			1.00E-01	S	
x	1330-20-7	Xylenes	Yes	Yes	1.0E+02	NC	1.0E+03	4.9E+02			1.00E-01	I	

Notes:

(1) **Inhalation Pathway Exposure Parameters (RME):**

Exposure Scenario	Units	Residential Symbol	Residential Value	Commercial Symbol	Commercial Value	Selected Symbol	Selected Value
Averaging time for carcinogens	(yrs)	ATc_R	70	ATc_C	70	ATc	70
Averaging time for non-carcinogens	(yrs)	ATnc_R	26	ATnc_C	25	ATnc	26
Exposure duration	(yrs)	ED_R	26	ED_C	25	ED	26
Exposure frequency	(days/yr)	EF_R	350	EF_C	250	EF	350
Exposure time	(hr/day)	ET_R	24	ET_C	8	ET	24

(2) **Generic Attenuation Factors:**

Source Medium of Vapors		Residential Symbol	Residential Value	Commercial Symbol	Commercial Value	Selected Symbol	Selected Value
Groundwater	(-)	AFgw_R	0.001	AFgw_C	0.001	AFgw	0.001
Sub-Slab and Exterior Soil Gas	(-)	AFss_R	0.1	AFss_C	0.1	AFss	0.1

(3) **Formulas**
Cia, target = MIN(Cia,c; Cia,nc)
Cia,c (ug/m3) = TCR x ATc x (365 days/yr) x (24 hrs/day) / (ED x EF x ET x IUR)
Cia,nc (ug/m3) = THQ x ATnc x (365 days/yr) x (24 hrs/day) x RfC x (1000 ug/mg) / (ED x EF x ET)

(4) **Special Case Chemicals**

Trichloroethylene	Residential Symbol	Residential Value	Commercial Symbol	Commercial Value	Selected Symbol	Selected Value
	mIURTCE_R	1.00E-06	mIURTCE_C	0.00E+00	mIURTCE	1.00E-06
	IURTCE_R	3.10E-06	IURTCE_C	4.10E-06	IURTCE	3.10E-06

Mutagenic Chemicals — The exposure durations and age-dependent adjustment factors for mutagenic-mode-of-action are listed in the table below:

Note: This section applies to trichloroethylene and other mutagenic chemicals, but not to vinyl chloride.

Age Cohort	Exposure Duration (years)	Age-dependent adjustment factor
0 - 2 years	2	10
2 - 6 years	4	3
6 - 16 years	10	3
16 - 26 years	10	1

Mutagenic-mode-of-action (MMOA) adjustment factor 72 — This factor is used in the equations for mutagenic chemicals.

Vinyl Chloride — See the Navigation Guide equation for Cia,c for vinyl chloride.

Notation:
NVT = Not sufficiently volatile and/or toxic to pose inhalation risk in selected exposure scenario for the indicated medium
C = Carcinogenic

OSWER VAPOR INTRUSION ASSESSMENT
Vapor Intrusion Screening Level (VISL) Calculator Version 3.3.1, May 2014 RSLs*

Parameter	Symbol	Value	Instructions
Exposure Scenario	Scenario	Residential	Select residential or commercial scenario from pull down list
Target Risk for Carcinogens	TCR	1.00E-06	Enter target risk for carcinogens
Target Hazard Quotient for Non-Carcinogens	THQ	1	Enter target hazard quotient for non-carcinogens
Average Groundwater Temperature (^{o}C)	Tgw	25	Enter average of the stabilized groundwater temperature to correct Henry's Law Constant for gro

CAS	Chemical Name	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Soil Source?	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Groundwater Source?	Target Indoor Air Conc. @ TCR = 1E-06 or THQ = 1	Toxicity Basis	Target Sub-Slab and Exterior Soil Gas Conc. @ TCR = 1E-06 or THQ = 1	Target Ground Water Conc. @ TCR = 1E-06 or THQ = 1	Inhalation Unit Risk	IUR Source*	Reference Concentration	RFC Source*	Mutagenic Indicator
		Cvp > Cia,target?	Chc > Cia,target?	MIN(Cia,c;Cia,nc)		Csg	Cgw	IUR		RfC		i
		Yes/No	Yes/No	(ug/m^3)	C/NC	(ug/m^3)	(ug/L)	(ug/m^3)$^{-1}$		(mg/m^3)		

NC = Non-carcinogenic
I = IRIS: EPA Integrated Risk Information System (IRIS). Available online at: http://www.epa.gov/iris/subst/index.html
P = PPRTV. EPA Provisional Peer Reviewed Toxicity Values (PPRTVs). Available online at: http://hhpprtv.ornl.gov/pprtv.shtml
A = Agency for Toxic Substances and Disease Registry (ATSDR) Minimum Risk Levels (MRLs). Available online at: http://www.atsdr.cdc.gov/mrls/index.html
CA = California Environmental Protection Agency/Office of Environmental Health Hazard Assessment assessments. Available online at:
H = HEAST. EPA Superfund Health Effects Assessment Summary Tables (HEAST) database. Available online at: http://epa-heast.ornl.gov/heast.shtml
S = See RSL User Guide, Section 5
X = PPRTV Appendix
E = The Engineering ToolBox. Available online at http://www.engineeringtoolbox.com/explosive-concentration-limits-d_423.html
N = Centers for Disease Control and Prevention (CDC) National Institute for Occupational Safety and Health (NIOSH). Pocket Guide to Chemical Hazards. Available online at:
M = Chemical-specific MSDS
Mut = Chemical acts according to the mutagenic-mode-of-action, special exposure parameters apply (see footnote (4) above).
VC = Special exposure equation for vinyl chloride applies (see Navigation Guide for equation).
TCE = Special mutagenic and non-mutagenic IURs for trichloroethylene apply (see footnote (4) above).
Yellow highlighting indicates site-specific parameters that may be edited by the user.
Blue highlighting indicates exposure factors that are based on Risk Assessment Guidance for Superfund (RAGS) or EPA vapor intrusion guidance, which generally should not be changed.
*The EPA Regional screening Levels (RSLs) were updated in November 2014; however, none of the RSL changes impacted the VISLs, so the May 2014 VISL calculator was not updated and is consistent with the November 2014 RSLs.

OSWER VAPOR INTRUSION ASSESSMENT
Vapor Intrusion Screening Level (VISL) Calculator Version 3.3.1, May 2014 RSLs*

Parameter	Symbol	Value	Instructions
Exposure Scenario	Scenario	Commercial	Select residential or commercial scenario from pull down list
Target Risk for Carcinogens	TCR	1.00E-06	Enter target risk for carcinogens
Target Hazard Quotient for Non-Carcinogens	THQ	1	Enter target hazard quotient for non-carcinogens
Average Groundwater Temperature (^oC)	Tgw	25	Enter average of the stabilized groundwater temperature to correct Henry's Law Constant for gro

	CAS	Chemical Name	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Soil Source?	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Groundwater Source?	Target Indoor Air Conc. @ TCR = 1E-06 or THQ = 1	Toxicity Basis	Target Sub-Slab and Exterior Soil Gas Conc. @ TCR = 1E-06 or THQ = 1	Target Ground Water Conc. @ TCR = 1E-06 or THQ = 1	Inhalation Unit Risk	IUR Source*	Reference Concentration	RFC Source*	Mutagenic Indicator
			Cvp > Cia,target?	Chc > Cia,target?	MIN(Cia,c;Cia,nc)		Csg	Cgw	IUR		RfC		i
			Yes/No	Yes/No	(ug/m^3)	C/NC	(ug/m^3)	(ug/L)	(ug/m^3)$^{-1}$		(mg/m^3)		
x	67-64-1	Acetone	Yes	Yes	1.4E+05	NC	1.4E+06	9.5E+07			3.10E+01	A	
x	107-13-1	Acrylonitrile	Yes	Yes	1.8E-01	C	1.8E+00	3.2E+01	6.80E-05	I	2.00E-03	I	
x	107-05-1	Allyl Chloride	Yes	Yes	2.0E+00	C	2.0E+01	4.5E+00	6.00E-06	CA	1.00E-03	I	
x	71-43-2	Benzene	Yes	Yes	1.6E+00	C	1.6E+01	6.9E+00	7.80E-06	I	3.00E-02	I	
x	100-44-7	Benzyl Chloride	Yes	Yes	2.5E-01	C	2.5E+00	1.5E+01	4.90E-05	CA	1.00E-03	P	
x	108-86-1	Bromobenzene	Yes	Yes	2.6E+02	NC	2.6E+03	2.6E+03			6.00E-02	I	
x	74-97-5	Bromochloromethane	Yes	Yes	1.8E+02	NC	1.8E+03	2.9E+03			4.00E-02	X	
x	75-27-4	Bromodichloromethane	Yes	Yes	3.3E-01	C	3.3E+00	3.8E+00	3.70E-05	CA			
x	74-83-9	Bromomethane	Yes	Yes	2.2E+01	NC	2.2E+02	7.3E+01			5.00E-03	I	
x	106-99-0	Butadiene, 1,3-	Yes	Yes	4.1E-01	C	4.1E+00	1.4E-01	3.00E-05	I	2.00E-03	I	
x	75-15-0	Carbon Disulfide	Yes	Yes	3.1E+03	NC	3.1E+04	5.2E+03			7.00E-01	I	
x	56-23-5	Carbon Tetrachloride	Yes	Yes	2.0E+00	C	2.0E+01	1.8E+00	6.00E-06	I	1.00E-01	I	
x	108-90-7	Chlorobenzene	Yes	Yes	2.2E+02	NC	2.2E+03	1.7E+03			5.00E-02	P	
x	67-66-3	Chloroform	Yes	Yes	5.3E-01	C	5.3E+00	3.6E+00	2.30E-05	I	9.80E-02	A	
x	74-87-3	Chloromethane	Yes	Yes	3.9E+02	NC	3.9E+03	1.1E+03			9.00E-02	I	
x	98-82-8	Cumene	Yes	Yes	1.8E+03	NC	1.8E+04	3.7E+03			4.00E-01	I	
x	110-82-7	Cyclohexane	Yes	Yes	2.6E+04	NC	2.6E+05	4.3E+03			6.00E+00	I	
x	96-12-8	Dibromo-3-chloropropane, 1,2-	Yes	Yes	2.0E-03	C	2.0E-02	3.4E-01	6.00E-03	P	2.00E-04	I	Mut
x	124-48-1	Dibromochloromethane	Yes	Yes	4.5E-01	C	4.5E+00	1.4E+01	2.70E-05	CA			
x	106-93-4	Dibromoethane, 1,2-	Yes	Yes	2.0E-02	C	2.0E-01	7.7E-01	6.00E-04	I	9.00E-03	I	
x	74-95-3	Dibromomethane (Methylene Bromide)	Yes	Yes	1.8E+01	NC	1.8E+02	5.2E+02			4.00E-03	X	
x	95-50-1	Dichlorobenzene, 1,2-	Yes	Yes	8.8E+02	NC	8.8E+03	1.1E+04			2.00E-01	H	
x	106-46-7	Dichlorobenzene, 1,4-	Yes	Yes	1.1E+00	C	1.1E+01	1.1E+01	1.10E-05	CA	8.00E-01	I	
x	75-71-8	Dichlorodifluoromethane	Yes	Yes	4.4E+02	NC	4.4E+03	3.1E+01			1.00E-01	X	
x	75-34-3	Dichloroethane, 1,1-	Yes	Yes	7.7E+00	C	7.7E+01	3.3E+01	1.60E-06	CA			
x	107-06-2	Dichloroethane, 1,2-	Yes	Yes	4.7E-01	C	4.7E+00	9.8E+00	2.60E-05	I	7.00E-03	P	
x	75-35-4	Dichloroethylene, 1,1-	Yes	Yes	8.8E+02	NC	8.8E+03	8.2E+02			2.00E-01	I	
x	78-87-5	Dichloropropane, 1,2-	Yes	Yes	1.2E+00	C	1.2E+01	1.1E+01	1.00E-05	CA	4.00E-03	I	
x	542-75-6	Dichloropropene, 1,3-	Yes	Yes	3.1E+00	C	3.1E+01	2.1E+01	4.00E-06	I	2.00E-02	I	
x	75-00-3	Ethyl Chloride (Chloroethane)	Yes	Yes	4.4E+04	NC	4.4E+05	9.7E+04			1.00E+01	I	
x	100-41-4	Ethylbenzene	Yes	Yes	4.9E+00	C	4.9E+01	1.5E+01	2.50E-06	CA	1.00E+00	I	
x	110-54-3	Hexane, N-	Yes	Yes	3.1E+03	NC	3.1E+04	4.2E+01			7.00E-01	I	
x	591-78-6	Hexanone, 2-	Yes	Yes	1.3E+02	NC	1.3E+03	3.4E+04			3.00E-02	I	
x	78-93-3	Methyl Ethyl Ketone (2-Butanone)	Yes	Yes	2.2E+04	NC	2.2E+05	9.4E+06			5.00E+00	I	
x	108-10-1	Methyl Isobutyl Ketone (4-methyl-2-pentanone)	Yes	Yes	1.3E+04	NC	1.3E+05	2.3E+06			3.00E+00	I	
x	1634-04-4	Methyl tert-Butyl Ether (MTBE)	Yes	Yes	4.7E+01	C	4.7E+02	2.0E+03	2.60E-07	CA	3.00E+00	I	
x	75-09-2	Methylene Chloride	Yes	Yes	1.2E+03	C	1.2E+04	9.2E+03	1.00E-08	I	6.00E-01	I	Mut
x	91-20-3	Naphthalene	Yes	Yes	3.6E-01	C	3.6E+00	2.0E+01	3.40E-05	CA	3.00E-03	I	
x	103-65-1	Propyl benzene	Yes	Yes	4.4E+03	NC	4.4E+04	1.0E+04			1.00E+00	X	
x	100-42-5	Styrene	Yes	Yes	4.4E+03	NC	4.4E+04	3.9E+04			1.00E+00	I	
x	630-20-6	Tetrachloroethane, 1,1,1,2-	Yes	Yes	1.7E+00	C	1.7E+01	1.6E+01	7.40E-06	I			
x	79-34-5	Tetrachloroethane, 1,1,2,2-	Yes	Yes	2.1E-01	C	2.1E+00	1.4E+01	5.80E-05	CA			
x	127-18-4	Tetrachloroethylene	Yes	Yes	4.7E+01	C	4.7E+02	6.5E+01	2.60E-07	I	4.00E-02	I	
x	109-99-9	Tetrahydrofuran	Yes	Yes	8.8E+03	NC	8.8E+04	3.0E+06			2.00E+00	I	
x	108-88-3	Toluene	Yes	Yes	2.2E+04	NC	2.2E+05	8.1E+04			5.00E+00	I	
x	76-13-1	Trichloro-1,2,2-trifluoroethane, 1,1,2-	Yes	Yes	1.3E+05	NC	1.3E+06	6.1E+03			3.00E+01	H	
x	120-82-1	Trichlorobenzene, 1,2,4-	Yes	Yes	8.8E+00	NC	8.8E+01	1.5E+02			2.00E-03	P	
x	71-55-6	Trichloroethane, 1,1,1-	Yes	Yes	2.2E+04	NC	2.2E+05	3.1E+04			5.00E+00	I	
x	79-00-5	Trichloroethane, 1,1,2-	Yes	Yes	7.7E-01	C	7.7E+00	2.3E+01	1.60E-05	I	2.00E-04	X	
x	79-01-6	Trichloroethylene	Yes	Yes	3.0E+00	C	3.0E+01	7.4E+00	see note	I	2.00E-03	I	TCE
x	75-69-4	Trichlorofluoromethane	Yes	Yes	3.1E+03	NC	3.1E+04	7.7E+02			7.00E-01	H	
x	96-18-4	Trichloropropane, 1,2,3-	Yes	Yes	1.3E+00	NC	1.3E+01	9.4E+01			3.00E-04	I	Mut
x	95-63-6	Trimethylbenzene, 1,2,4-	Yes	Yes	3.1E+01	NC	3.1E+02	1.2E+02			7.00E-03	P	

OSWER VAPOR INTRUSION ASSESSMENT
Vapor Intrusion Screening Level (VISL) Calculator Version 3.3.1, May 2014 RSLs*

Parameter	Symbol	Value	Instructions
Exposure Scenario	Scenario	Commercial	Select residential or commercial scenario from pull down list
Target Risk for Carcinogens	TCR	1.00E-06	Enter target risk for carcinogens
Target Hazard Quotient for Non-Carcinogens	THQ	1	Enter target hazard quotient for non-carcinogens
Average Groundwater Temperature (^{o}C)	Tgw	25	Enter average of the stabilized groundwater temperature to correct Henry's Law Constant for gro

	CAS	Chemical Name	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Soil Source?	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Groundwater Source?	Target Indoor Air Conc. @ TCR = 1E-06 or THQ = 1	Toxicity Basis	Target Sub-Slab and Exterior Soil Gas Conc. @ TCR = 1E-06 or THQ = 1	Target Ground Water Conc. @ TCR = 1E-06 or THQ = 1	Inhalation Unit Risk	IUR Source*	Reference Concentration	RFC Source*	Mutagenic Indicator
			Cvp > Cia,target?	Chc > Cia,target?	MIN(Cia,c;Cia,nc)		Csg	Cgw	IUR		RfC		i
			Yes/No	Yes/No	(ug/m^3)	C/NC	(ug/m^3)	(ug/L)	(ug/m^3)$^{-1}$		(mg/m^3)		
x	108-05-4	Vinyl Acetate	Yes	Yes	8.8E+02	NC	8.8E+03	4.2E+04			2.00E-01	I	
x	593-60-2	Vinyl Bromide	Yes	Yes	3.8E-01	C	3.8E+00	7.6E-01	3.20E-05	H	3.00E-03	I	
x	75-01-4	Vinyl Chloride	Yes	Yes	2.8E+00	C	2.8E+01	2.5E+00	4.40E-06	I	1.00E-01	I	VC
x	108-38-3	Xylene, m-	Yes	Yes	4.4E+02	NC	4.4E+03	1.5E+03			1.00E-01	S	
x	95-47-6	Xylene, o-	Yes	Yes	4.4E+02	NC	4.4E+03	2.1E+03			1.00E-01	S	
x	106-42-3	Xylene, P-	Yes	Yes	4.4E+02	NC	4.4E+03	1.6E+03			1.00E-01	S	
x	1330-20-7	Xylenes	Yes	Yes	4.4E+02	NC	4.4E+03	2.1E+03			1.00E-01	I	

Notes:

(1) **Inhalation Pathway Exposure Parameters (RME):**

Exposure Scenario	Units	Residential Symbol	Residential Value	Commercial Symbol	Commercial Value	Selected Symbol	Selected Value
Averaging time for carcinogens	(yrs)	ATc_R	70	ATc_C	70	ATc	70
Averaging time for non-carcinogens	(yrs)	ATnc_R	26	ATnc_C	25	ATnc	25
Exposure duration	(yrs)	ED_R	26	ED_C	25	ED	25
Exposure frequency	(days/yr)	EF_R	350	EF_C	250	EF	250
Exposure time	(hr/day)	ET_R	24	ET_C	8	ET	8

(2) **Generic Attenuation Factors:**

Source Medium of Vapors		Residential Symbol	Residential Value	Commercial Symbol	Commercial Value	Selected Symbol	Selected Value
Groundwater	(-)	AFgw_R	0.001	AFgw_C	0.001	AFgw	0.001
Sub-Slab and Exterior Soil Gas	(-)	AFss_R	0.1	AFss_C	0.1	AFss	0.1

(3) **Formulas**
Cia, target = MIN(Cia,c; Cia,nc)
Cia,c (ug/m3) = TCR x ATc x (365 days/yr) x (24 hrs/day) / (ED x EF x ET x IUR)
Cia,nc (ug/m3) = THQ x ATnc x (365 days/yr) x (24 hrs/day) x RfC x (1000 ug/mg) / (ED x EF x ET)

(4) **Special Case Chemicals**

Trichloroethylene	Residential Symbol	Residential Value	Commercial Symbol	Commercial Value	Selected Symbol	Selected Value
	mIURTCE_R	1.00E-06	mIURTCE_C	0.00E+00	mIURTCE	0.00E+00
	IURTCE_R	3.10E-06	IURTCE_C	4.10E-06	IURTCE	4.10E-06

Mutagenic Chemicals — The exposure durations and age-dependent adjustment factors for mutagenic-mode-of-action are listed in the table below:

Note: This section applies to trichloroethylene and other mutagenic chemicals, but not to vinyl chloride.

Age Cohort	Exposure Duration (years)	Age-dependent adjustment factor
0 - 2 years	2	10
2 - 6 years	4	3
6 - 16 years	10	3
16 - 26 years	10	1

Mutagenic-mode-of-action (MMOA) adjustment factor 25 — This factor is used in the equations for mutagenic chemicals.

Vinyl Chloride — See the Navigation Guide equation for Cia,c for vinyl chloride.

Notation:
NVT = Not sufficiently volatile and/or toxic to pose inhalation risk in selected exposure scenario for the indicated medium
C = Carcinogenic

OSWER VAPOR INTRUSION ASSESSMENT
Vapor Intrusion Screening Level (VISL) Calculator Version 3.3.1, May 2014 RSLs*

Parameter	Symbol	Value	Instructions
Exposure Scenario	Scenario	Commercial	Select residential or commercial scenario from pull down list
Target Risk for Carcinogens	TCR	1.00E-06	Enter target risk for carcinogens
Target Hazard Quotient for Non-Carcinogens	THQ	1	Enter target hazard quotient for non-carcinogens
Average Groundwater Temperature (^{o}C)	Tgw	25	Enter average of the stabilized groundwater temperature to correct Henry's Law Constant for gro

CAS	Chemical Name	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Soil Source?	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Groundwater Source?	Target Indoor Air Conc. @ TCR = 1E-06 or THQ = 1	Toxicity Basis	Target Sub-Slab and Exterior Soil Gas Conc. @ TCR = 1E-06 or THQ = 1	Target Ground Water Conc. @ TCR = 1E-06 or THQ = 1	Inhalation Unit Risk	IUR Source*	Reference Concentration	RFC Source*	Mutagenic Indicator
		Cvp > Cia,target?	Chc > Cia,target?	MIN(Cia,c;Cia,nc)		Csg	Cgw	IUR		RfC		i
		Yes/No	Yes/No	(ug/m^3)	C/NC	(ug/m^3)	(ug/L)	(ug/m^3)$^{-1}$		(mg/m^3)		

NC = Non-carcinogenic
I = IRIS: EPA Integrated Risk Information System (IRIS). Available online at: http://www.epa.gov/iris/subst/index.html
P = PPRTV. EPA Provisional Peer Reviewed Toxicity Values (PPRTVs). Available online at: http://hhpprtv.ornl.gov/pprtv.shtml
A = Agency for Toxic Substances and Disease Registry (ATSDR) Minimum Risk Levels (MRLs). Available online at: http://www.atsdr.cdc.gov/mrls/index.html
CA = California Environmental Protection Agency/Office of Environmental Health Hazard Assessment assessments. Available online at:
H = HEAST. EPA Superfund Health Effects Assessment Summary Tables (HEAST) database. Available online at: http://epa-heast.ornl.gov/heast.shtml
S = See RSL User Guide, Section 5
X = PPRTV Appendix
E = The Engineering ToolBox. Available online at http://www.engineeringtoolbox.com/explosive-concentration-limits-d_423.html
N = Centers for Disease Control and Prevention (CDC) National Institute for Occupational Safety and Health (NIOSH). Pocket Guide to Chemical Hazards. Available online at:
M = Chemical-specific MSDS
Mut = Chemical acts according to the mutagenic-mode-of-action, special exposure parameters apply (see footnote (4) above).
VC = Special exposure equation for vinyl chloride applies (see Navigation Guide for equation).
TCE = Special mutagenic and non-mutagenic IURs for trichloroethylene apply (see footnote (4) above).
Yellow highlighting indicates site-specific parameters that may be edited by the user.
Blue highlighting indicates exposure factors that are based on Risk Assessment Guidance for Superfund (RAGS) or EPA vapor intrusion guidance, which generally should not be changed.
*The EPA Regional screening Levels (RSLs) were updated in November 2014; however, none of the RSL changes impacted the VISLs, so the May 2014 VISL calculator was not updated and is consistent with the November 2014 RSLs.

APPENDIX E

Table E-1A
Occurrence and Distribution of Contaminants of Potential Concern in Indoor Air in Residential Properties
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Medium: Indoor Air
Exposure Medium: Indoor Air at Residential Buildings

Exposure Point	CAS Number	Contaminant	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Screening Toxicity Value (N/C) (2)	
Indoor Air at Residential Properties	76131	1,1,2-Trichloro-1,2,2-trifluoroethane	0.39	0.46	ug/m^3	FERRYCT-UNIT62-BASEMENT	7/14	0.36 - 0.42	0.46	3100	n
	120821	1,2,4-Trichlorobenzene	0.38	0.38	ug/m^3	FERRYCT-UNIT50-1STFL-081312	1/14	0.35 - 0.41	0.38	0.21	n
	95636	1,2,4-Trimethylbenzene	0.2	2.9	ug/m^3	FERRYCT-UNIT72-BSMT-081312	8/14	0.235 - 0.25	2.9	0.73	n
	107062	1,2-Dichloroethane	0.4	4.5	ug/m^3	FERRYCT-UNIT72-BSMT-081312	8/14	0.19 - 0.225	4.5	0.11	c
	108678	1,3,5-Trimethylbenzene	0.28	0.69	ug/m^3	FERRYCT-UNIT72-BSMT-081312	4/14	0.235 - 0.27	0.69	NBA	
	106990	1,3-Butadine	0.09	0.92	ug/m^3	FERRYCT-UNIT62-1STFL	5/14	0.2 - 0.245	0.92	0.094	c
	106467	1,4-Dichlorobenzene	0.9	0.96	ug/m^3	FERRYCT-UNIT50-BSMT-081312	4/14	0.285 - 0.33	0.96	0.26	c
	78933	2-Butanone	0.6	10	ug/m^3	FERRYCT-UNIT72-BSMT-081312	12/14	0.14 - 0.145	10	520	n
	622968	4-Ethyltoluene	0.34	1.8	ug/m^3	FERRYCT-UNIT72-BSMT-081312	9/14	0.235 - 0.25	1.8	NBA	
	107131	Acrylonitrile	0.46	0.46	ug/m^3	FERRYCT-UNIT62-1STFL	2/14	0.1 - 0.12	0.46	0.041	c
	71432	Benzene	0.45	1.68	ug/m^3	FERRYCT-UNIT62-1STFL	14/14	0 - 0	1.68	0.36	c
	75274	Bromodichloromethane	0.39	1.4	ug/m^3	FERRYCT-UNIT72-1STFL-081312	7/14	0.33 - 0.37	1.4	0.076	c
	56235	Carbon Tetrachloride	0.36	0.52	ug/m^3	FERRYCT-UNIT72-1STFL-081312	9/14	0.31 - 0.345	0.52	0.47	c
	67663	Chloroform	0.5	7.1	ug/m^3	FERRYCT-UNIT72-1STFL-081312	14/14	0 - 0	7.1	0.12	c
	74873	Chloromethane	0.54	1.4	ug/m^3	FERRYCT-UNIT62-1STFL	14/14	0 - 0	1.4	9.4	n
	110827	Cyclohexane	0.1	0.58	ug/m^3	FERRYCT-UNIT72-BSMT-081312	12/14	0.15 - 0.19	0.58	630	n
	75718	Dichlorodifluoromethane	1.3	2.8	ug/m^3	FERRYCT-UNIT72-BSMT-081312	14/14	0 - 0	2.8	10	n
	100414	Ethylbenzene	0.3	8.4	ug/m^3	FERRYCT-UNIT72-BSMT-081312	14/14	0 - 0	8.4	1.1	c
	110543	Hexane	0.7	2.5	ug/m^3	FERRYCT-UNIT72-BSMT-081312	14/14	0 - 0	2.5	73	n
	179601231	m,p-Xylene	0.8	8.1	ug/m^3	FERRYCT-UNIT72-BSMT-081312	14/14	0 - 0	8.1	10	n
	75092	Methylene Chloride	0.8	9.4	ug/m^3	FERRYCT-UNIT72-BSMT-081312	10/14	0.165 - 0.19	9.4	63	n
	95476	o-Xylene	0.3	3.2	ug/m^3	FERRYCT-UNIT72-1STFL-081312	14/14	0 - 0	3.2	10	n
	100425	Styrene	0.28	2.6	ug/m^3	FERRYCT-UNIT72-BSMT-081312	14/14	0 - 0	2.6	100	n
	127184	Tetrachloroethene	0.5	1.6	ug/m^3	FERRYCT-UNIT82-1STFL	8/14	0.32 - 0.375	1.6	4.2	n
	109999	Tetrahydrofuran	0.86	2.38	ug/m^3	FERRYCT-UNIT62-BASEMENT	3/14	0.14 - 0.16	2.38	210	n
	108883	Toluene	2.6	18	ug/m^3	FERRYCT-UNIT72-BSMT-081312	14/14	0 - 0	18	520	n
	79016	Trichloroethene	0.27	0.43	ug/m^3	FERRYCT-UNIT72-1STFL-081312	3/14	0.25 - 0.295	0.43	0.21	n
	75694	Trichlorofluoromethane	0.54	2.2	ug/m^3	FERRYCT-UNIT72-1STFL-081312	14/14	0 - 0	2.2	73	n

Notes/sources:
(1) Maximum detected concentration used for screening.
(2) Risk-based residential indoor air concentrations obtained from the Regional Screening Level (RSL) Table (January, 2015).

C = cancer based screening value set at a target risk of 1E-06.
NBA = No benchmark available.
NC = noncancer based screening value set at a target hazard quotient of 0.1.
µg/m^3 = Micrograms per cubic meter.

Table E-1B
Occurrence and Distribution of Contaminants of Potential Concern in Indoor Air in Commercial Properties
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Medium: Indoor Air
Exposure Medium: Indoor Air at Commercial Buildings

Exposure Point	CAS Number	Contaminant	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Screening Toxicity Value (N/C) (2)	
Indoor Air at Commercial Properties	71556	1,1,1-Trichloroethane	0.28	4.19	ug/m^3	411BARNUM-POSTOFFICE	23/57	0.23 - 1.145	4.19	2200	n
	76131	1,1,2-Trichloro-1,2,2-trifluoroethane	0.38	2.94	ug/m^3	411BARNUM-TMOBILE	22/57	0.325 - 1.61	2.94	13000	n
	75343	1,1-Dichloroethane	0.22	5.8	ug/m^3	100VETERANS-BASEMENT	5/57	0.17 - 0.85	5.8	7.7	c
	75354	1,1-Dichloroethene	0.7	2.6	ug/m^3	100VETERANS-BASEMENT	2/57	0.17 - 0.835	2.6	88	n
	120821	1,2,4-Trichlorobenzene	0.39	0.61	ug/m^3	100VETERANS-1STFL-081412	5/57	0.315 - 1.56	0.61	0.88	n
	95636	1,2,4-Trimethylbenzene	0.2	18	ug/m^3	500FERRY-BASEMENT-DUP-081312	35/57	0.23 - 1.035	18	3.1	n
	107062	1,2-Dichloroethane	0.36	90	ug/m^3	411BARNUM-PAYLESS	16/57	0.17 - 0.85	90	0.47	c
	78875	1,2-Dichloropropane	1.2	35.5	ug/m^3	411BARNUM-PAYLESS	9/57	0.195 - 0.97	35.5	1.2	c
	108678	1,3,5-Trimethylbenzene	0.2	5	ug/m^3	500FERRY-BASEMENT-081312	25/57	0.22 - 1.035	5	NBA	
	106990	1,3-Butadine	0.1	1.2	ug/m^3	100VETERANS-FIRST FLOOR	16/57	0.19 - 0.93	1.2	0.41	c
	106467	1,4-Dichlorobenzene	0.27	1.8	ug/m^3	100VETERANS-1STFL-081412	5/57	0.255 - 1.265	1.8	1.1	c
	78933	2-Butanone	0.29	164	ug/m^3	411BARNUM-PAYLESS	49/57	0.125 - 0.195	164	2200	n
	622968	4-Ethyltoluene	0.25	19	ug/m^3	500FERRY-BASEMENT-081312	43/57	0.23 - 1.035	19	NBA	
	108101	4-Methyl-2-Pentanone	0.2	0.61	ug/m^3	300FERRY-SNOWBOARD-081512	4/57	0.175 - 0.86	0.61	1300	n
	107131	Acrylonitrile	0.31	0.77	ug/m^3	411BARNUM-PAYLESS	3/57	0.09 - 0.455	0.77	0.18	c
	71432	Benzene	0.26	23.9	ug/m^3	411BARNUM-PAYLESS	54/57	0.16 - 0.27	23.9	1.6	c
	56235	Carbon Tetrachloride	0.32	0.82	ug/m^3	444FERRY-1STFL-081412	30/57	0.265 - 1.32	0.82	2	c
	67663	Chloroform	0.3	3.4	ug/m^3	100VETERANS-1STFL-081412	20/57	0.21 - 1.025	3.4	0.53	c
	74873	Chloromethane	0.46	1.5	ug/m^3	100VETERANS-1STFL-081412	57/57	0 - 0	1.5	39	n
	156592	cis-1,2-Dichloroethene	1.1	14	ug/m^3	100VETERANS-BASEMENT	5/57	0.17 - 0.835	14	NBA	
	110827	Cyclohexane	0.26	23.8	ug/m^3	411BARNUM-PAYLESS	38/57	0.16 - 0.725	23.8	2600	n
	75718	Dichlorodifluoromethane	1.6	19	ug/m^3	411BARNUM-SLEEPYS-081612	57/57	0 - 0	19	44	n
	1320372	Dichlorotetrafluoroethane	14	14	ug/m^3	100VETERANS-1STFL-081412	1/57	0.295 - 1.47	14	NBA	
	100414	Ethylbenzene	0.29	50	ug/m^3	411BARNUM-PAYLESS	42/57	0.205 - 0.91	50	4.9	c
	87683	Hexachlorobutadiene	0.4	0.56	ug/m^3	500FERRY-1STFL-081312	2/57	0.455 - 2.24	0.56	0.56	c
	110543	Hexane	0.74	74	ug/m^3	500FERRY-BASEMENT-DUP-081312	54/57	0.165 - 0.74	74	310	n
	179601231	m,p-Xylene	0.28	71.9	ug/m^3	411BARNUM-PAYLESS	53/57	0.435 - 0.87	71.9	44	n
	75092	Methylene Chloride	0.35	13	ug/m^3	300FERRY-SNOWBOARD-081512	39/57	0.15 - 0.73	13	260	n
	142825	n-Heptane	6.75	58	ug/m^3	411BARNUM-PAYLESS	8/57	0.175 - 0.86	58	NBA	
	95476	o-Xylene	0.18	35.2	ug/m^3	411BARNUM-PAYLESS	48/57	0.215 - 0.91	35.2	44	n
	100425	Styrene	0.2	22.9	ug/m^3	411BARNUM-PAYLESS	36/57	0.18 - 0.895	22.9	440	n
	127184	Tetrachloroethene	0.3	1.2	ug/m^3	326FERRY-DININGROOM	10/57	0.29 - 1.425	1.2	18	n
	109999	Tetrahydrofuran	0.69	18	ug/m^3	300FERRY-MAINFLOOR-081512	4/57	0.125 - 0.62	18	880	n
	108883	Toluene	0.49	2930	ug/m^3	411BARNUM-PAYLESS	57/57	0 - 0	2930	2200	n
	156605	trans-1,2-Dichloroethene	0.44	0.44	ug/m^3	300FERRY-SNOWBOARD-081512	1/57	0.17 - 0.835	0.44	NBA	
	79016	Trichloroethene	0.2	13.1	ug/m^3	411BARNUM-SLEEPYS	19/57	0.23 - 0.64	13.1	0.88	n
	75694	Trichlorofluoromethane	0.67	78	ug/m^3	411BARNUM-SLEEPYS-081612	52/57	0.24 - 0.56	78	310	n
	75014	Vinyl Chloride	1	2.1	ug/m^3	300FERRY-SNOWBOARD-081512	2/57	0.11 - 0.535	2.1	2.8	c

Notes/sources:

(1) Maximum detected concentration used for screening.

(2) Risk-based industrial indoor air concentrations obtained from the Regional Screening Level (RSL) Table (January, 2015).

C = cancer based screening value set at a target risk of 1E-06.

NBA = No benchmark available.

NC = noncancer based screening value set at a target hazard quotient of 0.1.

µg/m^3 = Micrograms per cubic meter.

Table E-2A
Exposure Point Concentration Summary - Residential Properties
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Medium: Indoor Air
Exposure Medium: Indoor Air at Residential Properties

Exposure Point	Contaminant of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Concentration	Exposure Point Concentration		
						Value	Units	Statistic
Indoor Air at Ferry Ct - Unit 50	1,2,4-Trichlorobenzene	ug/m^3	0.37	NC	0.38	0.38	ug/m^3	Maximum Detected Concentration
	1,2,4-Trimethylbenzene	ug/m^3	1.3	NC	1.3	1.3	ug/m^3	Maximum Detected Concentration
	1,3,5-Trimethylbenzene	ug/m^3	0.31	NC	0.34	0.34	ug/m^3	Maximum Detected Concentration
	1,4-Dichlorobenzene	ug/m^3	0.93	NC	0.96	0.96	ug/m^3	Maximum Detected Concentration
	2-Butanone	ug/m^3	3.7	NC	3.7	3.7	ug/m^3	Maximum Detected Concentration
	4-Ethyltoluene	ug/m^3	0.88	NC	0.93	0.93	ug/m^3	Maximum Detected Concentration
	Benzene	ug/m^3	0.93	NC	0.93	0.93	ug/m^3	Maximum Detected Concentration
	Bromodichloromethane	ug/m^3	0.47	NC	0.48	0.48	ug/m^3	Maximum Detected Concentration
	Carbon Tetrachloride	ug/m^3	0.353	NC	0.36	0.36	ug/m^3	Maximum Detected Concentration
	Chloroform	ug/m^3	2.5	NC	2.5	2.5	ug/m^3	Maximum Detected Concentration
	Chloromethane	ug/m^3	0.88	NC	0.97	0.97	ug/m^3	Maximum Detected Concentration
	Cyclohexane	ug/m^3	0.29	NC	0.31	0.31	ug/m^3	Maximum Detected Concentration
	Dichlorodifluoromethane	ug/m^3	2.0	NC	2	2	ug/m^3	Maximum Detected Concentration
	Ethylbenzene	ug/m^3	2	NC	2	2	ug/m^3	Maximum Detected Concentration
	Hexane	ug/m^3	1.6	NC	1.6	1.6	ug/m^3	Maximum Detected Concentration
	m,p-Xylene	ug/m^3	5.5	NC	6	6	ug/m^3	Maximum Detected Concentration
	o-Xylene	ug/m^3	2.2	NC	2.3	2.3	ug/m^3	Maximum Detected Concentration
	Styrene	ug/m^3	1.4	NC	1.4	1.4	ug/m^3	Maximum Detected Concentration
	Tetrachloroethene	ug/m^3	0.82	NC	0.88	0.88	ug/m^3	Maximum Detected Concentration
	Toluene	ug/m^3	8.8	NC	9.2	9.2	ug/m^3	Maximum Detected Concentration
	Trichlorofluoromethane	ug/m^3	1.7	NC	1.9	1.9	ug/m^3	Maximum Detected Concentration
Indoor Air at Ferry Ct - Unit 62	1,1,2-Trichloro-1,2,2-trifluoroethane	ug/m^3	0.42	NC	0.46	0.46	ug/m^3	Maximum Detected Concentration
	1,2,4-Trimethylbenzene	ug/m^3	0.3	NC	0.41	0.41	ug/m^3	Maximum Detected Concentration
	1,3-Butadine	ug/m^3	0.53	NC	0.92	0.92	ug/m^3	Maximum Detected Concentration
	2-Butanone	ug/m^3	2.6	NC	3.3	3.3	ug/m^3	Maximum Detected Concentration
	4-Ethyltoluene	ug/m^3	0.37	NC	0.49	0.49	ug/m^3	Maximum Detected Concentration
	Acrylonitrile	ug/m^3	0.29	NC	0.46	0.46	ug/m^3	Maximum Detected Concentration
	Benzene	ug/m^3	1.1	NC	1.68	1.68	ug/m^3	Maximum Detected Concentration
	Carbon Tetrachloride	ug/m^3	0.39	NC	0.51	0.51	ug/m^3	Maximum Detected Concentration
	Chloroform	ug/m^3	1.1	NC	1.48	1.48	ug/m^3	Maximum Detected Concentration
	Chloromethane	ug/m^3	1	NC	1.4	1.4	ug/m^3	Maximum Detected Concentration
	Cyclohexane	ug/m^3	0.22	NC	0.27	0.27	ug/m^3	Maximum Detected Concentration
	Dichlorodifluoromethane	ug/m^3	1.9	NC	2.2	2.2	ug/m^3	Maximum Detected Concentration
	Ethylbenzene	ug/m^3	0.93	NC	1.2	1.2	ug/m^3	Maximum Detected Concentration
	Hexane	ug/m^3	1.1	NC	1.2	1.2	ug/m^3	Maximum Detected Concentration
	m,p-Xylene	ug/m^3	3.08	NC	3.99	3.99	ug/m^3	Maximum Detected Concentration
	Methylene Chloride	ug/m^3	1.38	NC	2.84	2.84	ug/m^3	Maximum Detected Concentration
	o-Xylene	ug/m^3	0.74	NC	0.92	0.92	ug/m^3	Maximum Detected Concentration
	Styrene	ug/m^3	0.40	NC	0.52	0.52	ug/m^3	Maximum Detected Concentration
	Tetrachloroethene	ug/m^3	0.74	NC	0.89	0.89	ug/m^3	Maximum Detected Concentration
	Tetrahydrofuran	ug/m^3	1.3	NC	2.38	2.38	ug/m^3	Maximum Detected Concentration
	Toluene	ug/m^3	4.0	NC	4.45	4.45	ug/m^3	Maximum Detected Concentration
	Trichloroethene	ug/m^3	0.28	NC	0.27	0.27	ug/m^3	Maximum Detected Concentration
	Trichlorofluoromethane	ug/m^3	1.0	NC	1.1	1.1	ug/m^3	Maximum Detected Concentration

Table E-2A
Exposure Point Concentration Summary - Residential Properties
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Medium: Indoor Air
Exposure Medium: Indoor Air at Residential Properties

Exposure Point	Contaminant of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Concentration	Exposure Point Concentration		
						Value	Units	Statistic
Indoor Air at Ferry Ct - Unit 72	1,1,2-Trichloro-1,2,2-trifluoroethane	ug/m^3	0.40	NC	0.44	0.44	ug/m^3	Maximum Detected Concentration
	1,2,4-Trimethylbenzene	ug/m^3	1.5	NC	2.9	2.9	ug/m^3	Maximum Detected Concentration
	1,2-Dichloroethane	ug/m^3	2.3	NC	4.5	4.5	ug/m^3	Maximum Detected Concentration
	1,3,5-Trimethylbenzene	ug/m^3	0.45	NC	0.69	0.69	ug/m^3	Maximum Detected Concentration
	1,3-Butadine	ug/m^3	0.16	NC	0.1	0.1	ug/m^3	Maximum Detected Concentration
	1,4-Dichlorobenzene	ug/m^3	0.61	NC	0.96	0.96	ug/m^3	Maximum Detected Concentration
	2-Butanone	ug/m^3	5.0	NC	10	10	ug/m^3	Maximum Detected Concentration
	4-Ethyltoluene	ug/m^3	0.97	NC	1.8	1.8	ug/m^3	Maximum Detected Concentration
	Benzene	ug/m^3	1.1	NC	1.2	1.2	ug/m^3	Maximum Detected Concentration
	Bromodichloromethane	ug/m^3	0.92	NC	1.4	1.4	ug/m^3	Maximum Detected Concentration
	Carbon Tetrachloride	ug/m^3	0.45	NC	0.52	0.52	ug/m^3	Maximum Detected Concentration
	Chloroform	ug/m^3	4.6	NC	7.1	7.1	ug/m^3	Maximum Detected Concentration
	Chloromethane	ug/m^3	0.96	NC	1.1	1.1	ug/m^3	Maximum Detected Concentration
	Cyclohexane	ug/m^3	0.45	NC	0.58	0.58	ug/m^3	Maximum Detected Concentration
	Dichlorodifluoromethane	ug/m^3	2.2	NC	2.8	2.8	ug/m^3	Maximum Detected Concentration
	Ethylbenzene	ug/m^3	4.4	NC	8.4	8.4	ug/m^3	Maximum Detected Concentration
	Hexane	ug/m^3	1.7	NC	2.5	2.5	ug/m^3	Maximum Detected Concentration
	m,p-Xylene	ug/m^3	4.5	NC	8.1	8.1	ug/m^3	Maximum Detected Concentration
	Methylene Chloride	ug/m^3	4.9	NC	9.4	9.4	ug/m^3	Maximum Detected Concentration
	o-Xylene	ug/m^3	1.8	NC	3.2	3.2	ug/m^3	Maximum Detected Concentration
	Styrene	ug/m^3	1.4	NC	2.6	2.6	ug/m^3	Maximum Detected Concentration
	Tetrahydrofuran	ug/m^3	0.32	NC	0.86	0.86	ug/m^3	Maximum Detected Concentration
	Toluene	ug/m^3	12.4	NC	18	18	ug/m^3	Maximum Detected Concentration
	Trichloroethene	ug/m^3	0.35	NC	0.43	0.43	ug/m^3	Maximum Detected Concentration
	Trichlorofluoromethane	ug/m^3	1.8	NC	2.2	2.2	ug/m^3	Maximum Detected Concentration
Indoor Air at Ferry Ct - Unit 82	1,1,2-Trichloro-1,2,2-trifluoroethane	ug/m^3	0.40	NC	0.4	0.4	ug/m^3	Maximum Detected Concentration
	1,2,4-Trimethylbenzene	ug/m^3	0.38	NC	0.83	0.83	ug/m^3	Maximum Detected Concentration
	1,2-Dichloroethane	ug/m^3	0.88	NC	1.8	1.8	ug/m^3	Maximum Detected Concentration
	1,3-Butadine	ug/m^3	0.19	NC	0.1	0.1	ug/m^3	Maximum Detected Concentration
	2-Butanone	ug/m^3	1.3	NC	2.4	2.4	ug/m^3	Maximum Detected Concentration
	4-Ethyltoluene	ug/m^3	0.35	NC	0.54	0.54	ug/m^3	Maximum Detected Concentration
	Benzene	ug/m^3	0.7	NC	1	1	ug/m^3	Maximum Detected Concentration
	Bromodichloromethane	ug/m^3	0.36	NC	0.39	0.39	ug/m^3	Maximum Detected Concentration
	Carbon Tetrachloride	ug/m^3	0.36	NC	0.4	0.4	ug/m^3	Maximum Detected Concentration
	Chloroform	ug/m^3	1.06	NC	1.7	1.7	ug/m^3	Maximum Detected Concentration
	Chloromethane	ug/m^3	0.6	NC	0.66	0.66	ug/m^3	Maximum Detected Concentration
	Cyclohexane	ug/m^3	0.17	NC	0.25	0.25	ug/m^3	Maximum Detected Concentration
	Dichlorodifluoromethane	ug/m^3	1.6	NC	1.8	1.8	ug/m^3	Maximum Detected Concentration
	Ethylbenzene	ug/m^3	0.59	NC	1.3	1.3	ug/m^3	Maximum Detected Concentration
	Hexane	ug/m^3	0.91	NC	1.2	1.2	ug/m^3	Maximum Detected Concentration
	m,p-Xylene	ug/m^3	1.2	NC	2	2	ug/m^3	Maximum Detected Concentration
	Methylene Chloride	ug/m^3	1.5	NC	3.1	3.1	ug/m^3	Maximum Detected Concentration
	o-Xylene	ug/m^3	0.47	NC	0.95	0.95	ug/m^3	Maximum Detected Concentration
	Styrene	ug/m^3	0.68	NC	1.1	1.1	ug/m^3	Maximum Detected Concentration
	Tetrachloroethene	ug/m^3	0.70	NC	1.6	1.6	ug/m^3	Maximum Detected Concentration
	Toluene	ug/m^3	3.5	NC	4.6	4.6	ug/m^3	Maximum Detected Concentration
	Trichlorofluoromethane	ug/m^3	0.74	NC	0.9	0.9	ug/m^3	Maximum Detected Concentration

Table E-2A
Exposure Point Concentration Summary - Residential Properties
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Medium: Indoor Air
Exposure Medium: Indoor Air at Residential Properties

Exposure Point	Contaminant of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Concentration	Exposure Point Concentration		
						Value	Units	Statistic
Indoor Air at 500 Ferry	1,1,2-Trichloro-1,2,2-trifluoroethane	ug/m^3	0.40	NC	0.5	0.5	ug/m^3	Maximum Detected Concentration
	1,2,4-Trichlorobenzene	ug/m^3	0.39	NC	0.45	0.45	ug/m^3	Maximum Detected Concentration
	1,2,4-Trimethylbenzene	ug/m^3	7.4	NC	18	18	ug/m^3	Maximum Detected Concentration
	1,3,5-Trimethylbenzene	ug/m^3	2.2	NC	5	5	ug/m^3	Maximum Detected Concentration
	1,3-Butadine	ug/m^3	0.19	NC	0.1	0.1	ug/m^3	Maximum Detected Concentration
	2-Butanone	ug/m^3	0.17	NC	0.29	0.29	ug/m^3	Maximum Detected Concentration
	4-Ethyltoluene	ug/m^3	7.8	NC	19	19	ug/m^3	Maximum Detected Concentration
	Benzene	ug/m^3	8.3	NC	19	19	ug/m^3	Maximum Detected Concentration
	Carbon Tetrachloride	ug/m^3	0.36	NC	0.46	0.46	ug/m^3	Maximum Detected Concentration
	Chloroform	ug/m^3	0.41	NC	0.78	0.78	ug/m^3	Maximum Detected Concentration
	Chloromethane	ug/m^3	0.71	NC	0.91	0.91	ug/m^3	Maximum Detected Concentration
	Cyclohexane	ug/m^3	4.4	NC	9.6	9.6	ug/m^3	Maximum Detected Concentration
	Dichlorodifluoromethane	ug/m^3	2.1	NC	2.5	2.5	ug/m^3	Maximum Detected Concentration
	Ethylbenzene	ug/m^3	8.72	NC	20	20	ug/m^3	Maximum Detected Concentration
	Hexachlorobutadiene	ug/m^3	0.52	NC	0.56	0.56	ug/m^3	Maximum Detected Concentration
	Hexane	ug/m^3	27.9	NC	74	74	ug/m^3	Maximum Detected Concentration
	m,p-Xylene	ug/m^3	25.5	NC	58	58	ug/m^3	Maximum Detected Concentration
	Methylene Chloride	ug/m^3	1.1	NC	2.25	2.25	ug/m^3	Maximum Detected Concentration
	n-Heptane	ug/m^3	11.6	NC	37	37	ug/m^3	Maximum Detected Concentration
	o-Xylene	ug/m^3	8.8	NC	20	20	ug/m^3	Maximum Detected Concentration
	Toluene	ug/m^3	63.7	NC	140	140	ug/m^3	Maximum Detected Concentration
	Trichloroethene	ug/m^3	0.25	NC	0.27	0.27	ug/m^3	Maximum Detected Concentration
	Trichlorofluoromethane	ug/m^3	0.64	NC	1.08	1.08	ug/m^3	Maximum Detected Concentration

NC = Not calculated.
µg/m^3 = Micrograms per cubic meter.

Table E-2B
Exposure Point Concentration Summary - Commercial Properties
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Medium: Indoor Air
Exposure Medium: Indoor Air at Commercial Properties

Exposure Point	Contaminant of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Concentration	Exposure Point Concentration		
						Value	Units	Statistic
Indoor Air at 100 Veterans	1,1,1-Trichloroethane	ug/m^3	0.93	NC	2.4	2.4	ug/m^3	Maximum Detected Concentration
	1,1,2-Trichloro-1,2,2-trifluoroethane	ug/m^3	0.43	NC	0.5	0.5	ug/m^3	Maximum Detected Concentration
	1,1-Dichloroethane	ug/m^3	2.2	NC	5.8	5.8	ug/m^3	Maximum Detected Concentration
	1,1-Dichloroethene	ug/m^3	0.93	NC	2.6	2.6	ug/m^3	Maximum Detected Concentration
	1,2,4-Trichlorobenzene	ug/m^3	0.47	NC	0.61	0.61	ug/m^3	Maximum Detected Concentration
	1,2,4-Trimethylbenzene	ug/m^3	0.77	NC	1.5	1.5	ug/m^3	Maximum Detected Concentration
	1,2-Dichloroethane	ug/m^3	1.7	NC	5.4	5.4	ug/m^3	Maximum Detected Concentration
	1,3,5-Trimethylbenzene	ug/m^3	0.36	NC	0.64	0.64	ug/m^3	Maximum Detected Concentration
	1,3-Butadine	ug/m^3	0.49	NC	1.2	1.2	ug/m^3	Maximum Detected Concentration
	1,4-Dichlorobenzene	ug/m^3	0.91	NC	1.8	1.8	ug/m^3	Maximum Detected Concentration
	2-Butanone	ug/m^3	2.1	NC	3.5	3.5	ug/m^3	Maximum Detected Concentration
	4-Ethyltoluene	ug/m^3	0.85	NC	1.6	1.6	ug/m^3	Maximum Detected Concentration
	Acrylonitrile	ug/m^3	0.20	NC	0.4	0.4	ug/m^3	Maximum Detected Concentration
	Benzene	ug/m^3	2.15	NC	3.3	3.3	ug/m^3	Maximum Detected Concentration
	Carbon Tetrachloride	ug/m^3	0.44	NC	0.5	0.5	ug/m^3	Maximum Detected Concentration
	Chloroform	ug/m^3	1.85	NC	3.4	3.4	ug/m^3	Maximum Detected Concentration
	Chloromethane	ug/m^3	1.2	NC	1.5	1.5	ug/m^3	Maximum Detected Concentration
	cis-1,2-Dichloroethene	ug/m^3	5.6	NC	14	14	ug/m^3	Maximum Detected Concentration
	Cyclohexane	ug/m^3	0.55	NC	0.76	0.76	ug/m^3	Maximum Detected Concentration
	Dichlorodifluoromethane	ug/m^3	3.9	NC	6.4	6.4	ug/m^3	Maximum Detected Concentration
	Dichlorotetrafluoroethane	ug/m^3	3.8	NC	14	14	ug/m^3	Maximum Detected Concentration
	Ethylbenzene	ug/m^3	1.4	NC	2.6	2.6	ug/m^3	Maximum Detected Concentration
	Hexane	ug/m^3	8.7	NC	13	13	ug/m^3	Maximum Detected Concentration
	m,p-Xylene	ug/m^3	4.2	NC	7.4	7.4	ug/m^3	Maximum Detected Concentration
	Methylene Chloride	ug/m^3	1.2	NC	2.5	2.5	ug/m^3	Maximum Detected Concentration
	o-Xylene	ug/m^3	1.3	NC	2.2	2.2	ug/m^3	Maximum Detected Concentration
	Styrene	ug/m^3	3.5	NC	9	9	ug/m^3	Maximum Detected Concentration
	Tetrachloroethene	ug/m^3	0.35	NC	0.3	0.3	ug/m^3	Maximum Detected Concentration
	Toluene	ug/m^3	9.5	NC	15	15	ug/m^3	Maximum Detected Concentration
	Trichloroethene	ug/m^3	2.2	NC	5.4	5.4	ug/m^3	Maximum Detected Concentration
	Trichlorofluoromethane	ug/m^3	2.0	NC	2.5	2.5	ug/m^3	Maximum Detected Concentration

Table E-2B
Exposure Point Concentration Summary - Commercial Properties
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Medium: Indoor Air
Exposure Medium: Indoor Air at Commercial Properties

Exposure Point	Contaminant of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Concentration	Exposure Point Concentration		
						Value	Units	Statistic
Indoor Air at 300 Ferry	1,1,1-Trichloroethane	ug/m^3	0.78	NC	0.98	0.98	ug/m^3	Maximum Detected Concentration
	1,1,2-Trichloro-1,2,2-trifluoroethane	ug/m^3	0.53	NC	0.5	0.5	ug/m^3	Maximum Detected Concentration
	1,2,4-Trichlorobenzene	ug/m^3	0.54	NC	0.46	0.46	ug/m^3	Maximum Detected Concentration
	1,2,4-Trimethylbenzene	ug/m^3	6.1	NC	14	14	ug/m^3	Maximum Detected Concentration
	1,2-Dichloroethane	ug/m^3	0.34	NC	0.45	0.45	ug/m^3	Maximum Detected Concentration
	1,3,5-Trimethylbenzene	ug/m^3	1.8	NC	3.8	3.8	ug/m^3	Maximum Detected Concentration
	1,3-Butadine	ug/m^3	0.27	NC	0.2	0.2	ug/m^3	Maximum Detected Concentration
	2-Butanone	ug/m^3	5.35	NC	11	11	ug/m^3	Maximum Detected Concentration
	4-Ethyltoluene	ug/m^3	5.45	NC	12	12	ug/m^3	Maximum Detected Concentration
	4-Methyl-2-Pentanone	ug/m^3	0.38	NC	0.61	0.61	ug/m^3	Maximum Detected Concentration
	Benzene	ug/m^3	4.5	NC	7.3	7.3	ug/m^3	Maximum Detected Concentration
	Carbon Tetrachloride	ug/m^3	0.50	NC	0.5	0.5	ug/m^3	Maximum Detected Concentration
	Chloroform	ug/m^3	0.44	NC	0.68	0.68	ug/m^3	Maximum Detected Concentration
	Chloromethane	ug/m^3	0.94	NC	1.2	1.2	ug/m^3	Maximum Detected Concentration
	cis-1,2-Dichloroethene	ug/m^3	0.70	NC	1.9	1.9	ug/m^3	Maximum Detected Concentration
	Cyclohexane	ug/m^3	2.7	NC	5.2	5.2	ug/m^3	Maximum Detected Concentration
	Dichlorodifluoromethane	ug/m^3	4.0	NC	5.9	5.9	ug/m^3	Maximum Detected Concentration
	Ethylbenzene	ug/m^3	6.9	NC	14	14	ug/m^3	Maximum Detected Concentration
	Hexachlorobutadiene	ug/m^3	0.66	NC	0.4	0.4	ug/m^3	Maximum Detected Concentration
	Hexane	ug/m^3	13.7	NC	24	24	ug/m^3	Maximum Detected Concentration
	m,p-Xylene	ug/m^3	20.1	NC	39	39	ug/m^3	Maximum Detected Concentration
	Methylene Chloride	ug/m^3	5.1	NC	13	13	ug/m^3	Maximum Detected Concentration
	o-Xylene	ug/m^3	7.4	NC	15	15	ug/m^3	Maximum Detected Concentration
	Styrene	ug/m^3	1.5	NC	2.7	2.7	ug/m^3	Maximum Detected Concentration
	Tetrachloroethene	ug/m^3	0.51	NC	0.6	0.6	ug/m^3	Maximum Detected Concentration
	Tetrahydrofuran	ug/m^3	4.6	NC	18	18	ug/m^3	Maximum Detected Concentration
	Toluene	ug/m^3	50.5	NC	98	98	ug/m^3	Maximum Detected Concentration
	trans-1,2-Dichloroethene	ug/m^3	0.33	NC	0.44	0.44	ug/m^3	Maximum Detected Concentration
	Trichloroethene	ug/m^3	1.7	NC	5.4	5.4	ug/m^3	Maximum Detected Concentration
	Trichlorofluoromethane	ug/m^3	0.89	NC	1.1	1.1	ug/m^3	Maximum Detected Concentration
	Vinyl Chloride	ug/m^3	0.66	NC	2.1	2.1	ug/m^3	Maximum Detected Concentration

Table E-2B
Exposure Point Concentration Summary - Commercial Properties
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Medium: Indoor Air
Exposure Medium: Indoor Air at Commercial Properties

Exposure Point	Contaminant of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Concentration	Exposure Point Concentration		
						Value	Units	Statistic
Indoor Air at 326 Ferry	1,1,1-Trichloroethane	ug/m^3	0.36	NC	0.5	0.5	ug/m^3	Maximum Detected Concentration
	1,1,2-Trichloro-1,2,2-trifluoroethane	ug/m^3	0.50	NC	0.6	0.6	ug/m^3	Maximum Detected Concentration
	1,2,4-Trichlorobenzene	ug/m^3	0.42	NC	0.4	0.4	ug/m^3	Maximum Detected Concentration
	1,2,4-Trimethylbenzene	ug/m^3	0.84	NC	1.4	1.4	ug/m^3	Maximum Detected Concentration
	1,3,5-Trimethylbenzene	ug/m^3	0.32	NC	0.54	0.54	ug/m^3	Maximum Detected Concentration
	1,3-Butadine	ug/m^3	0.29	NC	0.4	0.4	ug/m^3	Maximum Detected Concentration
	2-Butanone	ug/m^3	1.4	NC	1.7	1.7	ug/m^3	Maximum Detected Concentration
	4-Ethyltoluene	ug/m^3	0.83	NC	1.4	1.4	ug/m^3	Maximum Detected Concentration
	4-Methyl-2-Pentanone	ug/m^3	0.23	NC	0.2	0.2	ug/m^3	Maximum Detected Concentration
	Benzene	ug/m^3	1.6	NC	2.2	2.2	ug/m^3	Maximum Detected Concentration
	Carbon Tetrachloride	ug/m^3	0.41	NC	0.5	0.5	ug/m^3	Maximum Detected Concentration
	Chloroform	ug/m^3	1.0	NC	2	2	ug/m^3	Maximum Detected Concentration
	Chloromethane	ug/m^3	0.86	NC	0.97	0.97	ug/m^3	Maximum Detected Concentration
	Cyclohexane	ug/m^3	0.63	NC	1.3	1.3	ug/m^3	Maximum Detected Concentration
	Dichlorodifluoromethane	ug/m^3	2.3	NC	3.2	3.2	ug/m^3	Maximum Detected Concentration
	Ethylbenzene	ug/m^3	0.74	NC	1.1	1.1	ug/m^3	Maximum Detected Concentration
	Hexane	ug/m^3	10.3	NC	20	20	ug/m^3	Maximum Detected Concentration
	m,p-Xylene	ug/m^3	2.3	NC	3.4	3.4	ug/m^3	Maximum Detected Concentration
	Methylene Chloride	ug/m^3	2.6	NC	5.1	5.1	ug/m^3	Maximum Detected Concentration
	o-Xylene	ug/m^3	0.95	NC	1.3	1.3	ug/m^3	Maximum Detected Concentration
	Styrene	ug/m^3	0.96	NC	2.7	2.7	ug/m^3	Maximum Detected Concentration
	Tetrachloroethene	ug/m^3	0.77	NC	1.2	1.2	ug/m^3	Maximum Detected Concentration
	Toluene	ug/m^3	4.3	NC	5.6	5.6	ug/m^3	Maximum Detected Concentration
	Trichloroethene	ug/m^3	0.28	NC	0.2	0.2	ug/m^3	Maximum Detected Concentration
	Trichlorofluoromethane	ug/m^3	0.92	NC	1.1	1.1	ug/m^3	Maximum Detected Concentration
Indoor Air at 335 Ferry	1,1,1-Trichloroethane	ug/m^3	3.82	NC	0.60	0.60	ug/m^3	Maximum Detected Concentration
	1,2,4-Trimethylbenzene	ug/m^3	5.10	NC	0.79	0.79	ug/m^3	Maximum Detected Concentration
	2-Butanone	ug/m^3	0.58	NC	0.80	0.8	ug/m^3	Maximum Detected Concentration
	4-Ethyltoluene	ug/m^3	4.47	NC	0.59	0.59	ug/m^3	Maximum Detected Concentration
	Benzene	ug/m^3	0.93	NC	1.5	1.5	ug/m^3	Maximum Detected Concentration
	Chloromethane	ug/m^3	1.1	NC	1.2	1.2	ug/m^3	Maximum Detected Concentration
	Cyclohexane	ug/m^3	0.53	NC	0.79	0.79	ug/m^3	Maximum Detected Concentration
	Dichlorodifluoromethane	ug/m^3	2.4	NC	2.6	2.6	ug/m^3	Maximum Detected Concentration
	Ethylbenzene	ug/m^3	5.92	NC	0.87	0.87	ug/m^3	Maximum Detected Concentration
	Hexane	ug/m^3	4.6	NC	7.0	7.0	ug/m^3	Maximum Detected Concentration
	m,p-Xylene	ug/m^3	2.0	NC	3.6	3.6	ug/m3	Maximum Detected Concentration
	Methylene Chloride	ug/m^3	0.83	NC	1.2	1.2	ug/m^3	Maximum Detected Concentration
	o-Xylene	ug/m^3	0.71	NC	1.0	1.0	ug/m^3	Maximum Detected Concentration
	Toluene	ug/m^3	3.6	NC	7.2	7.2	ug/m^3	Maximum Detected Concentration
	Trichlorofluoromethane	ug/m^3	2.1	NC	3.1	3.1	ug/m^3	Maximum Detected Concentration

Table E-2B
Exposure Point Concentration Summary - Commercial Properties
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Medium: Indoor Air
Exposure Medium: Indoor Air at Commercial Properties

Exposure Point	Contaminant of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Concentration	Exposure Point Concentration		
						Value	Units	Statistic
Indoor Air at 444 Ferry	1,1,1-Trichloroethane	ug/m^3	0.87	NC	1.5	1.5	ug/m^3	Maximum Detected Concentration
	1,1,2-Trichloro-1,2,2-trifluoroethane	ug/m^3	0.40	NC	0.4	0.4	ug/m^3	Maximum Detected Concentration
	1,2,4-Trimethylbenzene	ug/m^3	3.3	NC	5.2	5.2	ug/m^3	Maximum Detected Concentration
	1,3,5-Trimethylbenzene	ug/m^3	2.1	NC	3.7	3.7	ug/m^3	Maximum Detected Concentration
	1,3-Butadine	ug/m^3	0.22	NC	0.2	0.2	ug/m^3	Maximum Detected Concentration
	2-Butanone	ug/m^3	4.0	NC	4.5	4.5	ug/m^3	Maximum Detected Concentration
	4-Ethyltoluene	ug/m^3	5.8	NC	10	10	ug/m^3	Maximum Detected Concentration
	4-Methyl-2-Pentanone	ug/m^3	0.23	NC	0.2	0.2	ug/m^3	Maximum Detected Concentration
	Benzene	ug/m^3	1.4	NC	1.4	1.4	ug/m^3	Maximum Detected Concentration
	Carbon Tetrachloride	ug/m^3	0.51	NC	0.82	0.82	ug/m^3	Maximum Detected Concentration
	Chloroform	ug/m^3	0.51	NC	0.88	0.88	ug/m^3	Maximum Detected Concentration
	Chloromethane	ug/m^3	0.69	NC	0.81	0.81	ug/m^3	Maximum Detected Concentration
	Cyclohexane	ug/m^3	0.80	NC	1.2	1.2	ug/m^3	Maximum Detected Concentration
	Dichlorodifluoromethane	ug/m^3	2.1	NC	2.4	2.4	ug/m^3	Maximum Detected Concentration
	Ethylbenzene	ug/m^3	1.0	NC	1.3	1.3	ug/m^3	Maximum Detected Concentration
	Hexane	ug/m^3	11.6	NC	22	22	ug/m^3	Maximum Detected Concentration
	m,p-Xylene	ug/m^3	2.8	NC	3.2	3.2	ug/m^3	Maximum Detected Concentration
	Methylene Chloride	ug/m^3	5.6	NC	12	12	ug/m^3	Maximum Detected Concentration
	o-Xylene	ug/m^3	1.7	NC	2.4	2.4	ug/m^3	Maximum Detected Concentration
	Styrene	ug/m^3	0.31	NC	0.51	0.51	ug/m^3	Maximum Detected Concentration
	Tetrachloroethene	ug/m^3	0.41	NC	0.5	0.5	ug/m^3	Maximum Detected Concentration
	Toluene	ug/m^3	8.1	NC	11	11	ug/m^3	Maximum Detected Concentration
	Trichlorofluoromethane	ug/m^3	1.1	NC	1.2	1.2	ug/m^3	Maximum Detected Concentration
Indoor Air at 500 Ferry	1,1,2-Trichloro-1,2,2-trifluoroethane	ug/m^3	0.40	NC	0.5	0.5	ug/m^3	Maximum Detected Concentration
	1,2,4-Trichlorobenzene	ug/m^3	0.39	NC	0.45	0.45	ug/m^3	Maximum Detected Concentration
	1,2,4-Trimethylbenzene	ug/m^3	7.4	NC	18	18	ug/m^3	Maximum Detected Concentration
	1,3,5-Trimethylbenzene	ug/m^3	2.2	NC	5	5	ug/m^3	Maximum Detected Concentration
	1,3-Butadine	ug/m^3	0.19	NC	0.1	0.1	ug/m^3	Maximum Detected Concentration
	2-Butanone	ug/m^3	0.17	NC	0.29	0.29	ug/m^3	Maximum Detected Concentration
	4-Ethyltoluene	ug/m^3	7.8	NC	19	19	ug/m^3	Maximum Detected Concentration
	Benzene	ug/m^3	8.3	NC	19	19	ug/m^3	Maximum Detected Concentration
	Carbon Tetrachloride	ug/m^3	0.36	NC	0.46	0.46	ug/m^3	Maximum Detected Concentration
	Chloroform	ug/m^3	0.41	NC	0.78	0.78	ug/m^3	Maximum Detected Concentration
	Chloromethane	ug/m^3	0.71	NC	0.91	0.91	ug/m^3	Maximum Detected Concentration
	Cyclohexane	ug/m^3	4.4	NC	9.6	9.6	ug/m^3	Maximum Detected Concentration
	Dichlorodifluoromethane	ug/m^3	2.1	NC	2.5	2.5	ug/m^3	Maximum Detected Concentration
	Ethylbenzene	ug/m^3	8.72	NC	20	20	ug/m^3	Maximum Detected Concentration
	Hexachlorobutadiene	ug/m^3	0.52	NC	0.56	0.56	ug/m^3	Maximum Detected Concentration
	Hexane	ug/m^3	27.9	NC	74	74	ug/m^3	Maximum Detected Concentration
	m,p-Xylene	ug/m^3	25.5	NC	58	58	ug/m^3	Maximum Detected Concentration
	Methylene Chloride	ug/m^3	1.1	NC	2.25	2.25	ug/m^3	Maximum Detected Concentration
	n-Heptane	ug/m^3	11.6	NC	37	37	ug/m^3	Maximum Detected Concentration
	o-Xylene	ug/m^3	8.8	NC	20	20	ug/m^3	Maximum Detected Concentration
	Toluene	ug/m^3	63.7	NC	140	140	ug/m^3	Maximum Detected Concentration
	Trichloroethene	ug/m^3	0.25	NC	0.27	0.27	ug/m^3	Maximum Detected Concentration
	Trichlorofluoromethane	ug/m^3	0.64	NC	1.08	1.08	ug/m^3	Maximum Detected Concentration

Table E-2B
Exposure Point Concentration Summary - Commercial Properties
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Medium: Indoor Air
Exposure Medium: Indoor Air at Commercial Properties

Exposure Point	Contaminant of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Concentration	Exposure Point Concentration		
						Value	Units	Statistic
Indoor Air at 608 Ferry	1,1,1-Trichloroethane	ug/m^3	1.0	NC	2.6	2.6	ug/m^3	Maximum Detected Concentration
	1,1,2-Trichloro-1,2,2-trifluoroethane	ug/m^3	0.47	NC	0.43	0.43	ug/m^3	Maximum Detected Concentration
	1,1-Dichloroethane	ug/m^3	0.24	NC	0.22	0.22	ug/m^3	Maximum Detected Concentration
	2-Butanone	ug/m^3	0.57	NC	1	1	ug/m^3	Maximum Detected Concentration
	4-Ethyltoluene	ug/m^3	0.29	NC	0.26	0.26	ug/m^3	Maximum Detected Concentration
	Benzene	ug/m^3	0.41	NC	0.61	0.61	ug/m^3	Maximum Detected Concentration
	Carbon Tetrachloride	ug/m^3	0.41	NC	0.4	0.4	ug/m^3	Maximum Detected Concentration
	Chloromethane	ug/m^3	0.61	NC	0.81	0.81	ug/m^3	Maximum Detected Concentration
	Dichlorodifluoromethane	ug/m^3	2.7	NC	2.95	2.95	ug/m^3	Maximum Detected Concentration
	Hexane	ug/m^3	5.9	NC	8.2	8.2	ug/m^3	Maximum Detected Concentration
	m,p-Xylene	ug/m^3	0.50	NC	0.48	0.48	ug/m^3	Maximum Detected Concentration
	Methylene Chloride	ug/m^3	2.4	NC	5	5	ug/m^3	Maximum Detected Concentration
	o-Xylene	ug/m^3	0.25	NC	0.18	0.18	ug/m^3	Maximum Detected Concentration
	Tetrahydrofuran	ug/m^3	0.32	NC	0.72	0.72	ug/m^3	Maximum Detected Concentration
	Toluene	ug/m^3	0.81	NC	0.95	0.95	ug/m^3	Maximum Detected Concentration
	Trichloroethene	ug/m^3	0.57	NC	1.3	1.3	ug/m^3	Maximum Detected Concentration
	Trichlorofluoromethane	ug/m^3	1.0	NC	1.1	1.1	ug/m^3	Maximum Detected Concentration
Indoor Air at 411 Barnum Fashionbug	1,1,1-Trichloroethane	ug/m^3	0.42	NC	0.61	0.61	ug/m^3	Maximum Detected Concentration
	1,2,4-Trimethylbenzene	ug/m^3	1.2	NC	1.7	1.7	ug/m^3	Maximum Detected Concentration
	1,2-Dichloroethane	ug/m^3	2.3	NC	4.42	4.42	ug/m^3	Maximum Detected Concentration
	1,3,5-Trimethylbenzene	ug/m^3	0.65	NC	1	1	ug/m^3	Maximum Detected Concentration
	2-Butanone	ug/m^3	3.9	NC	5.72	5.72	ug/m^3	Maximum Detected Concentration
	4-Ethyltoluene	ug/m^3	1.1	NC	1.5	1.5	ug/m^3	Maximum Detected Concentration
	Benzene	ug/m^3	1.9	NC	3.1	3.1	ug/m^3	Maximum Detected Concentration
	Carbon Tetrachloride	ug/m^3	0.39	NC	0.39	0.39	ug/m^3	Maximum Detected Concentration
	Chloromethane	ug/m^3	0.77	NC	0.81	0.81	ug/m^3	Maximum Detected Concentration
	Cyclohexane	ug/m^3	1.5	NC	2.2	2.2	ug/m^3	Maximum Detected Concentration
	Dichlorodifluoromethane	ug/m^3	5.0	NC	5.9	5.9	ug/m^3	Maximum Detected Concentration
	Ethylbenzene	ug/m^3	1.5	NC	2.24	2.24	ug/m^3	Maximum Detected Concentration
	Hexane	ug/m^3	1.5	NC	2.03	2.03	ug/m^3	Maximum Detected Concentration
	m,p-Xylene	ug/m^3	2.5	NC	3.86	3.86	ug/m^3	Maximum Detected Concentration
	Methylene Chloride	ug/m^3	0.95	NC	1.75	1.75	ug/m^3	Maximum Detected Concentration
	o-Xylene	ug/m^3	1.1	NC	1.62	1.62	ug/m^3	Maximum Detected Concentration
	Styrene	ug/m^3	0.54	NC	0.56	0.56	ug/m^3	Maximum Detected Concentration
	Toluene	ug/m^3	67	NC	114	114	ug/m^3	Maximum Detected Concentration
	Trichloroethene	ug/m^3	0.98	NC	1.25	1.25	ug/m^3	Maximum Detected Concentration
	Trichlorofluoromethane	ug/m^3	15.5	NC	19	19	ug/m^3	Maximum Detected Concentration

Table E-2B
Exposure Point Concentration Summary - Commercial Properties
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Medium: Indoor Air
Exposure Medium: Indoor Air at Commercial Properties

Exposure Point	Contaminant of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Concentration	Exposure Point Concentration		
						Value	Units	Statistic
Indoor Air at 411 Barnum Gameshop	1,2,4-Trimethylbenzene	ug/m^3	0.42	NC	0.44	0.44	ug/m^3	Maximum Detected Concentration
	1,2-Dichloroethane	ug/m^3	0.31	NC	0.41	0.41	ug/m^3	Maximum Detected Concentration
	1,3-Butadine	ug/m^3	0.24	NC	0.25	0.25	ug/m^3	Maximum Detected Concentration
	2-Butanone	ug/m^3	6.8	NC	11	11	ug/m^3	Maximum Detected Concentration
	4-Ethyltoluene	ug/m^3	0.5	NC	0.55	0.55	ug/m^3	Maximum Detected Concentration
	Benzene	ug/m^3	1.2	NC	1.9	1.9	ug/m^3	Maximum Detected Concentration
	Carbon Tetrachloride	ug/m^3	0.45	NC	0.38	0.38	ug/m^3	Maximum Detected Concentration
	Chloromethane	ug/m^3	0.83	NC	0.83	0.83	ug/m^3	Maximum Detected Concentration
	Cyclohexane	ug/m^3	0.50	NC	0.73	0.73	ug/m^3	Maximum Detected Concentration
	Dichlorodifluoromethane	ug/m^3	3.1	NC	3.6	3.6	ug/m^3	Maximum Detected Concentration
	Ethylbenzene	ug/m^3	0.68	NC	0.97	0.97	ug/m^3	Maximum Detected Concentration
	Hexane	ug/m^3	1.9	NC	2.85	2.85	ug/m^3	Maximum Detected Concentration
	m,p-Xylene	ug/m^3	1.8	NC	2.76	2.76	ug/m^3	Maximum Detected Concentration
	Methylene Chloride	ug/m^3	1.4	NC	2.6	2.6	ug/m^3	Maximum Detected Concentration
	o-Xylene	ug/m^3	0.72	NC	1.1	1.1	ug/m^3	Maximum Detected Concentration
	Styrene	ug/m^3	0.56	NC	0.6	0.6	ug/m^3	Maximum Detected Concentration
	Toluene	ug/m^3	8.1	NC	11.2	11.2	ug/m^3	Maximum Detected Concentration
	Trichlorofluoromethane	ug/m^3	2.7	NC	3.3	3.3	ug/m^3	Maximum Detected Concentration
Indoor Air at 411 Barnum Marshalls	1,1,1-Trichloroethane	ug/m^3	1.1	NC	3.64	3.64	ug/m^3	Maximum Detected Concentration
	1,1,2-Trichloro-1,2,2-trifluoroethane	ug/m^3	0.44	NC	0.47	0.47	ug/m^3	Maximum Detected Concentration
	1,2,4-Trimethylbenzene	ug/m^3	0.85	NC	1.3	1.3	ug/m^3	Maximum Detected Concentration
	1,2-Dichloroethane	ug/m^3	5.2	NC	6.13	6.13	ug/m^3	Maximum Detected Concentration
	1,2-Dichloropropane	ug/m^3	1.7	NC	2.33	2.33	ug/m^3	Maximum Detected Concentration
	1,3-Butadine	ug/m^3	0.22	NC	0.13	0.13	ug/m^3	Maximum Detected Concentration
	2-Butanone	ug/m^3	4.3	NC	5.04	5.04	ug/m^3	Maximum Detected Concentration
	4-Ethyltoluene	ug/m^3	0.86	NC	1.2	1.2	ug/m^3	Maximum Detected Concentration
	4-Methyl-2-Pentanone	ug/m^3	0.22	NC	0.21	0.21	ug/m^3	Maximum Detected Concentration
	Benzene	ug/m^3	1.8	NC	2.78	2.78	ug/m^3	Maximum Detected Concentration
	Carbon Tetrachloride	ug/m^3	0.37	NC	0.41	0.41	ug/m^3	Maximum Detected Concentration
	Chloromethane	ug/m^3	0.83	NC	1.06	1.06	ug/m^3	Maximum Detected Concentration
	Cyclohexane	ug/m^3	0.81	NC	1.29	1.29	ug/m^3	Maximum Detected Concentration
	Dichlorodifluoromethane	ug/m^3	3.3	NC	4.9	4.9	ug/m^3	Maximum Detected Concentration
	Ethylbenzene	ug/m^3	2.4	NC	2.9	2.9	ug/m^3	Maximum Detected Concentration
	Hexane	ug/m^3	1.2	NC	1.92	1.92	ug/m^3	Maximum Detected Concentration
	m,p-Xylene	ug/m^3	4.6	NC	5.83	5.83	ug/m^3	Maximum Detected Concentration
	Methylene Chloride	ug/m^3	1.7	NC	2.6	2.6	ug/m^3	Maximum Detected Concentration
	o-Xylene	ug/m^3	1.8	NC	2.02	2.02	ug/m^3	Maximum Detected Concentration
	Styrene	ug/m^3	1.7	NC	2.3	2.3	ug/m^3	Maximum Detected Concentration
	Tetrachloroethene	ug/m^3	0.42	NC	0.53	0.53	ug/m^3	Maximum Detected Concentration
	Tetrahydrofuran	ug/m^3	0.75	NC	2.5	2.5	ug/m^3	Maximum Detected Concentration
	Toluene	ug/m^3	122	NC	209	209	ug/m^3	Maximum Detected Concentration
	Trichloroethene	ug/m^3	0.33	NC	0.43	0.43	ug/m^3	Maximum Detected Concentration
	Trichlorofluoromethane	ug/m^3	6.8	NC	13	13	ug/m^3	Maximum Detected Concentration

Table E-2B
Exposure Point Concentration Summary - Commercial Properties
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Medium: Indoor Air
Exposure Medium: Indoor Air at Commercial Properties

Exposure Point	Contaminant of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Concentration	Exposure Point Concentration		
						Value	Units	Statistic
Indoor Air at 411 Barnum McDonalds	1,1,1-Trichloroethane	ug/m^3	1.5	NC	2.7	2.7	ug/m^3	Maximum Detected Concentration
	1,1,2-Trichloro-1,2,2-trifluoroethane	ug/m^3	0.48	NC	0.5	0.5	ug/m^3	Maximum Detected Concentration
	1,2,4-Trimethylbenzene	ug/m^3	0.26	NC	0.27	0.27	ug/m^3	Maximum Detected Concentration
	1,3-Butadine	ug/m^3	0.18	NC	0.1	0.1	ug/m^3	Maximum Detected Concentration
	2-Butanone	ug/m^3	0.7	NC	1	1	ug/m^3	Maximum Detected Concentration
	4-Ethyltoluene	ug/m^3	0.28	NC	0.31	0.31	ug/m^3	Maximum Detected Concentration
	Benzene	ug/m^3	0.66	NC	1	1	ug/m^3	Maximum Detected Concentration
	Carbon Tetrachloride	ug/m^3	0.44	NC	0.5	0.5	ug/m^3	Maximum Detected Concentration
	Chloroform	ug/m^3	1.4	NC	1.4	1.4	ug/m^3	Maximum Detected Concentration
	Chloromethane	ug/m^3	0.7	NC	0.8	0.8	ug/m^3	Maximum Detected Concentration
	Dichlorodifluoromethane	ug/m^3	2	NC	2.2	2.2	ug/m^3	Maximum Detected Concentration
	Ethylbenzene	ug/m^3	0.28	NC	0.3	0.3	ug/m^3	Maximum Detected Concentration
	Hexane	ug/m^3	3.9	NC	4.3	4.3	ug/m^3	Maximum Detected Concentration
	m,p-Xylene	ug/m^3	0.59	NC	0.7	0.7	ug/m^3	Maximum Detected Concentration
	Methylene Chloride	ug/m^3	0.76	NC	1.3	1.3	ug/m^3	Maximum Detected Concentration
	o-Xylene	ug/m^3	0.28	NC	0.3	0.3	ug/m^3	Maximum Detected Concentration
	Tetrachloroethene	ug/m^3	0.35	NC	0.3	0.3	ug/m^3	Maximum Detected Concentration
	Toluene	ug/m^3	1.4	NC	1.9	1.9	ug/m^3	Maximum Detected Concentration
	Trichloroethene	ug/m^3	0.7	NC	1.1	1.1	ug/m^3	Maximum Detected Concentration
	Trichlorofluoromethane	ug/m^3	0.89	NC	1.1	1.1	ug/m^3	Maximum Detected Concentration
	Vinyl Chloride	ug/m^3	0.58	NC	1	1	ug/m^3	Maximum Detected Concentration
Indoor Air at 411 Barnum Movie Theatre	1,1,1-Trichloroethane	ug/m^3	0.59	NC	1.98	1.98	ug/m^3	Maximum Detected Concentration
	1,1,2-Trichloro-1,2,2-trifluoroethane	ug/m^3	0.45	NC	0.49	0.49	ug/m^3	Maximum Detected Concentration
	1,3-Butadine	ug/m^3	0.23	NC	0.1	0.1	ug/m^3	Maximum Detected Concentration
	1,4-Dichlorobenzene	ug/m^3	0.43	NC	0.84	0.84	ug/m^3	Maximum Detected Concentration
	2-Butanone	ug/m^3	0.70	NC	1	1	ug/m^3	Maximum Detected Concentration
	4-Ethyltoluene	ug/m^3	0.28	NC	0.27	0.27	ug/m^3	Maximum Detected Concentration
	Benzene	ug/m^3	0.60	NC	1	1	ug/m^3	Maximum Detected Concentration
	Carbon Tetrachloride	ug/m^3	0.38	NC	0.43	0.43	ug/m^3	Maximum Detected Concentration
	Chloromethane	ug/m^3	0.71	NC	0.79	0.79	ug/m^3	Maximum Detected Concentration
	Dichlorodifluoromethane	ug/m^3	3.1	NC	3.9	3.9	ug/m^3	Maximum Detected Concentration
	Hexane	ug/m^3	1.9	NC	3.5	3.5	ug/m^3	Maximum Detected Concentration
	m,p-Xylene	ug/m^3	0.66	NC	0.92	0.92	ug/m^3	Maximum Detected Concentration
	Methylene Chloride	ug/m^3	0.59	NC	0.98	0.98	ug/m^3	Maximum Detected Concentration
	o-Xylene	ug/m^3	0.26	NC	0.33	0.33	ug/m^3	Maximum Detected Concentration
	Styrene	ug/m^3	0.41	NC	0.89	0.89	ug/m^3	Maximum Detected Concentration
	Tetrachloroethene	ug/m^3	0.41	NC	0.49	0.49	ug/m^3	Maximum Detected Concentration
	Toluene	ug/m^3	2.4	NC	3.35	3.35	ug/m^3	Maximum Detected Concentration
	Trichlorofluoromethane	ug/m^3	1.6	NC	2.9	2.9	ug/m^3	Maximum Detected Concentration

Table E-2B
Exposure Point Concentration Summary - Commercial Properties
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Medium: Indoor Air
Exposure Medium: Indoor Air at Commercial Properties

Exposure Point	Contaminant of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Concentration	Exposure Point Concentration		
						Value	Units	Statistic
Indoor Air at 411 Barnum Payless	1,2,4-Trimethylbenzene	ug/m^3	8.6	NC	12.1	12.1	ug/m^3	Maximum Detected Concentration
	1,2-Dichloroethane	ug/m^3	40.3	NC	90	90	ug/m^3	Maximum Detected Concentration
	1,2-Dichloropropane	ug/m^3	22.2	NC	35.5	35.5	ug/m^3	Maximum Detected Concentration
	1,3,5-Trimethylbenzene	ug/m^3	3.2	NC	4.87	4.87	ug/m^3	Maximum Detected Concentration
	2-Butanone	ug/m^3	110	NC	164	164	ug/m^3	Maximum Detected Concentration
	4-Ethyltoluene	ug/m^3	8.2	NC	10.7	10.7	ug/m^3	Maximum Detected Concentration
	Acrylonitrile	ug/m^3	0.33	NC	0.77	0.77	ug/m^3	Maximum Detected Concentration
	Benzene	ug/m^3	14.8	NC	23.9	23.9	ug/m^3	Maximum Detected Concentration
	Chloroform	ug/m^3	0.82	NC	1.13	1.13	ug/m^3	Maximum Detected Concentration
	Chloromethane	ug/m^3	1.1	NC	1.2	1.2	ug/m^3	Maximum Detected Concentration
	Cyclohexane	ug/m^3	11.5	NC	23.8	23.8	ug/m^3	Maximum Detected Concentration
	Dichlorodifluoromethane	ug/m^3	12.2	NC	14	14	ug/m^3	Maximum Detected Concentration
	Ethylbenzene	ug/m^3	37.3	NC	50	50	ug/m^3	Maximum Detected Concentration
	Hexane	ug/m^3	2.6	NC	4.56	4.56	ug/m^3	Maximum Detected Concentration
	m,p-Xylene	ug/m^3	49.6	NC	71.9	71.9	ug/m^3	Maximum Detected Concentration
	Methylene Chloride	ug/m^3	6.8	NC	12	12	ug/m^3	Maximum Detected Concentration
	n-Heptane	ug/m^3	34.3	NC	58	58	ug/m^3	Maximum Detected Concentration
	o-Xylene	ug/m^3	24.1	NC	35.2	35.2	ug/m^3	Maximum Detected Concentration
	Styrene	ug/m^3	17.6	NC	22.9	22.9	ug/m^3	Maximum Detected Concentration
	Toluene	ug/m^3	1823	NC	2930	2930	ug/m^3	Maximum Detected Concentration
	Trichloroethene	ug/m^3	2.9	NC	5.76	5.76	ug/m^3	Maximum Detected Concentration
	Trichlorofluoromethane	ug/m^3	39.1	NC	51	51	ug/m^3	Maximum Detected Concentration
Indoor Air at 411 Barnum Post Office	1,1,1-Trichloroethane	ug/m^3	2.8	NC	4.19	4.19	ug/m^3	Maximum Detected Concentration
	1,1,2-Trichloro-1,2,2-trifluoroethane	ug/m^3	0.41	NC	0.4	0.4	ug/m^3	Maximum Detected Concentration
	1,2,4-Trimethylbenzene	ug/m^3	0.99	NC	1.7	1.7	ug/m^3	Maximum Detected Concentration
	1,2-Dichloroethane	ug/m^3	0.29	NC	0.36	0.36	ug/m^3	Maximum Detected Concentration
	1,3,5-Trimethylbenzene	ug/m^3	0.59	NC	0.98	0.98	ug/m^3	Maximum Detected Concentration
	1,3-Butadine	ug/m^3	0.19	NC	0.13	0.13	ug/m^3	Maximum Detected Concentration
	1,4-Dichlorobenzene	ug/m^3	0.30	NC	0.27	0.27	ug/m^3	Maximum Detected Concentration
	2-Butanone	ug/m^3	3.8	NC	6.2	6.2	ug/m^3	Maximum Detected Concentration
	4-Ethyltoluene	ug/m^3	0.91	NC	1.4	1.4	ug/m^3	Maximum Detected Concentration
	Benzene	ug/m^3	0.95	NC	1.29	1.29	ug/m^3	Maximum Detected Concentration
	Carbon Tetrachloride	ug/m^3	0.35	NC	0.38	0.38	ug/m^3	Maximum Detected Concentration
	Chloroform	ug/m^3	0.70	NC	1.13	1.13	ug/m^3	Maximum Detected Concentration
	Chloromethane	ug/m^3	0.70	NC	0.76	0.76	ug/m^3	Maximum Detected Concentration
	Cyclohexane	ug/m^3	0.55	NC	0.9	0.9	ug/m^3	Maximum Detected Concentration
	Dichlorodifluoromethane	ug/m^3	2.9	NC	3.1	3.1	ug/m^3	Maximum Detected Concentration
	Ethylbenzene	ug/m^3	0.40	NC	0.56	0.56	ug/m^3	Maximum Detected Concentration
	Hexane	ug/m^3	4.7	NC	5.8	5.8	ug/m^3	Maximum Detected Concentration
	m,p-Xylene	ug/m^3	1.7	NC	2.06	2.06	ug/m^3	Maximum Detected Concentration
	Methylene Chloride	ug/m^3	0.45	NC	0.7	0.7	ug/m^3	Maximum Detected Concentration
	o-Xylene	ug/m^3	0.63	NC	0.7	0.7	ug/m^3	Maximum Detected Concentration
	Styrene	ug/m^3	0.36	NC	0.4	0.4	ug/m^3	Maximum Detected Concentration
	Toluene	ug/m^3	13.9	NC	15	15	ug/m^3	Maximum Detected Concentration
	Trichloroethene	ug/m^3	0.80	NC	1.3	1.3	ug/m^3	Maximum Detected Concentration
	Trichlorofluoromethane	ug/m^3	6.3	NC	6.7	6.7	ug/m^3	Maximum Detected Concentration

Table E-2B
Exposure Point Concentration Summary - Commercial Properties
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Medium: Indoor Air
Exposure Medium: Indoor Air at Commercial Properties

Exposure Point	Contaminant of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Concentration	Exposure Point Concentration		
						Value	Units	Statistic
Indoor Air at 411 Barnum Sally's Beauty	1,2,4-Trimethylbenzene	ug/m^3	0.73	NC	1.14	1.14	ug/m^3	Maximum Detected Concentration
	1,3,5-Trimethylbenzene	ug/m^3	0.35	NC	0.4	0.4	ug/m^3	Maximum Detected Concentration
	2-Butanone	ug/m^3	65.3	NC	77	77	ug/m^3	Maximum Detected Concentration
	4-Ethyltoluene	ug/m^3	1.0	NC	1.04	1.04	ug/m^3	Maximum Detected Concentration
	Acrylonitrile	ug/m^3	0.23	NC	0.31	0.31	ug/m^3	Maximum Detected Concentration
	Benzene	ug/m^3	1.4	NC	1.94	1.94	ug/m^3	Maximum Detected Concentration
	Chloromethane	ug/m^3	1.1	NC	1.1	1.1	ug/m^3	Maximum Detected Concentration
	Cyclohexane	ug/m^3	0.92	NC	1	1	ug/m^3	Maximum Detected Concentration
	Dichlorodifluoromethane	ug/m^3	3.1	NC	3.9	3.9	ug/m^3	Maximum Detected Concentration
	Ethylbenzene	ug/m^3	1.3	NC	1.36	1.36	ug/m^3	Maximum Detected Concentration
	Hexane	ug/m^3	1.5	NC	2.71	2.71	ug/m^3	Maximum Detected Concentration
	m,p-Xylene	ug/m^3	2.8	NC	3.07	3.07	ug/m^3	Maximum Detected Concentration
	Methylene Chloride	ug/m^3	2.0	NC	3.79	3.79	ug/m^3	Maximum Detected Concentration
	n-Heptane	ug/m^3	16.9	NC	27	27	ug/m^3	Maximum Detected Concentration
	o-Xylene	ug/m^3	1.3	NC	1.32	1.32	ug/m^3	Maximum Detected Concentration
	Styrene	ug/m^3	0.88	NC	0.89	0.89	ug/m^3	Maximum Detected Concentration
	Tetrahydrofuran	ug/m^3	3.1	NC	6	6	ug/m^3	Maximum Detected Concentration
	Toluene	ug/m^3	17.3	NC	20	20	ug/m^3	Maximum Detected Concentration
	Trichlorofluoromethane	ug/m^3	3.7	NC	4.9	4.9	ug/m^3	Maximum Detected Concentration
Indoor Air at 411 Barnum Sleepy's	1,1,1-Trichloroethane	ug/m^3	0.63	NC	0.61	0.61	ug/m^3	Maximum Detected Concentration
	1,2,4-Trimethylbenzene	ug/m^3	2.1	NC	3.1	3.1	ug/m^3	Maximum Detected Concentration
	1,2-Dichloroethane	ug/m^3	5.3	NC	7.4	7.4	ug/m^3	Maximum Detected Concentration
	1,2-Dichloropropane	ug/m^3	4.9	NC	6.21	6.21	ug/m^3	Maximum Detected Concentration
	1,3,5-Trimethylbenzene	ug/m^3	1.0	NC	1.8	1.8	ug/m^3	Maximum Detected Concentration
	2-Butanone	ug/m^3	12.1	NC	13.2	13.2	ug/m^3	Maximum Detected Concentration
	4-Ethyltoluene	ug/m^3	2.1	NC	3.2	3.2	ug/m^3	Maximum Detected Concentration
	Benzene	ug/m^3	2.9	NC	3.23	3.23	ug/m^3	Maximum Detected Concentration
	Chloromethane	ug/m^3	0.74	NC	0.83	0.83	ug/m^3	Maximum Detected Concentration
	Cyclohexane	ug/m^3	1.7	NC	2.19	2.19	ug/m^3	Maximum Detected Concentration
	Dichlorodifluoromethane	ug/m^3	11.7	NC	19	19	ug/m^3	Maximum Detected Concentration
	Ethylbenzene	ug/m^3	5.1	NC	6.1	6.1	ug/m^3	Maximum Detected Concentration
	Hexane	ug/m^3	1.5	NC	2.03	2.03	ug/m^3	Maximum Detected Concentration
	m,p-Xylene	ug/m^3	7.9	NC	8.9	8.9	ug/m^3	Maximum Detected Concentration
	Methylene Chloride	ug/m^3	4.0	NC	6.1	6.1	ug/m^3	Maximum Detected Concentration
	n-Heptane	ug/m^3	6.1	NC	11.8	11.8	ug/m^3	Maximum Detected Concentration
	o-Xylene	ug/m^3	3.4	NC	4	4	ug/m^3	Maximum Detected Concentration
	Styrene	ug/m^3	1.7	NC	2.1	2.1	ug/m^3	Maximum Detected Concentration
	Toluene	ug/m^3	295	NC	320	320	ug/m^3	Maximum Detected Concentration
	Trichloroethene	ug/m^3	12.1	NC	13.1	13.1	ug/m^3	Maximum Detected Concentration
	Trichlorofluoromethane	ug/m^3	45.8	NC	78	78	ug/m^3	Maximum Detected Concentration

Table E-2B
Exposure Point Concentration Summary - Commercial Properties
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Medium: Indoor Air
Exposure Medium: Indoor Air at Commercial Properties

Exposure Point	Contaminant of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Concentration	Exposure Point Concentration		
						Value	Units	Statistic
Indoor Air at 411 Barnum T-Mobile	1,1,2-Trichloro-1,2,2-trifluoroethane	ug/m^3	2.3	NC	2.94	2.94	ug/m^3	Maximum Detected Concentration
	1,2-Dichloroethane	ug/m^3	0.63	NC	0.41	0.41	ug/m^3	Maximum Detected Concentration
	2-Butanone	ug/m^3	2.6	NC	3.7	3.7	ug/m^3	Maximum Detected Concentration
	Benzene	ug/m^3	1.1	NC	1.55	1.55	ug/m^3	Maximum Detected Concentration
	Chloromethane	ug/m^3	0.88	NC	0.93	0.93	ug/m^3	Maximum Detected Concentration
	Dichlorodifluoromethane	ug/m^3	2.8	NC	3.4	3.4	ug/m^3	Maximum Detected Concentration
	Ethylbenzene	ug/m^3	0.79	NC	0.66	0.66	ug/m^3	Maximum Detected Concentration
	Hexane	ug/m^3	1.2	NC	1.74	1.74	ug/m^3	Maximum Detected Concentration
	m,p-Xylene	ug/m^3	1.4	NC	1.75	1.75	ug/m^3	Maximum Detected Concentration
	Methylene Chloride	ug/m^3	1.4	NC	1.97	1.97	ug/m^3	Maximum Detected Concentration
	o-Xylene	ug/m^3	0.76	NC	0.61	0.61	ug/m^3	Maximum Detected Concentration
	Styrene	ug/m^3	0.94	NC	0.99	0.99	ug/m^3	Maximum Detected Concentration
	Toluene	ug/m^3	9.1	NC	11	11	ug/m^3	Maximum Detected Concentration
	Trichloroethene	ug/m^3	1.5	NC	2.7	2.7	ug/m^3	Maximum Detected Concentration
	Trichlorofluoromethane	ug/m^3	2.3	NC	4.3	4.3	ug/m^3	Maximum Detected Concentration

NC = Not calculated.
µg/m^3 = Micrograms per cubic meter.

Table E-3A
Values Used for Daily Intake Calculations - Inhalation of Indoor Air - Residents
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Medium: Air
Exposure Medium: Indoor Air

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	Intake Equation/ Model Name
Inhalation	Resident	Child/	Indoor Air	CA	Concentration in Air	µg/m^3	Building- and COPC-specific	See Table E-2A	Average Daily Concentration (µg/m^3) =
		Adult		ET	Exposure Time	hrs/day	24	Residential exposure	CA x ET x EF x ED x CF x 1/AT
				EF	Exposure Frequency	days/year	350	EPA, 2014	
				ED	Exposure Duration	years	26	EPA, 2014	
				CF	Conversion Factor	day/hour	0.042	-----	
				AT-C	Averaging Time (Cancer)	days	25,550	EPA, 1989	
				AT-NC	Averaging Time (Non-Cancer)	days	9,490	ED x 365 days/year	

Table E-3B
Values Used for Daily Intake Calculations - Inhalation of Indoor Air - Worker
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Medium: Air
Exposure Medium: Indoor Air

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	Intake Equation/ Model Name
Inhalation	Worker	Adult	Indoor Air	CA	Concentration in Air	µg/m^3	Building- and COPC-specific	See Table E-2B	Average Daily Concentration (µg/m^3) =
				ET	Exposure Time	hrs/day	8	Length of standard work day	CA x ET x EF x ED x CF x 1/AT
				EF	Exposure Frequency	days/year	250	EPA, 2014	
				ED	Exposure Duration	years	25	EPA, 2014	
				CF	Conversion Factor	day/hour	0.042	-----	
				AT-C	Averaging Time (Cancer)	days	25,550	EPA, 1989	
				AT-NC	Averaging Time (Non-Cancer)	days	9,125	ED x 365 days/year	

Table E-4
Non-Cancer Toxicity Data -- Inhalation
Raymark - OU2 - Groundwater
Stratford, Connecticut

Contaminant of Potential Concern	Chronic/ Subchronic	Inhalation RfC		Primary Target Organ(s)	Combined Uncertainty/Modifying Factors	RfC: Target Organ(s)	
		Value	Units			Source(s)	Dates (1)
1,1,1-Trichloroethane	Chronic	5.00E+00	mg/m^3	Liver	100	IRIS	1/7/2015
1,1,2-Trichloro-1,2,2-trifluoroethane	Chronic	3.00E+01	mg/m^3	Whole body	100	HEAST	1997
1,2,4-Trichlorobenzene	Chronic	2.00E-03	mg/m^3	No information	No information	PPRTV	2015 RSL Table
1,2,4-Trimethylbenzene	Chronic	7.00E-03	mg/m^3	No information	No information	PPRTV	2015 RSL Table
1,3,5-Trimethylbenzene	---	NA	---	---	---	---	---
1,1-Dichloroethane	---	NA	---	---	---	---	---
1,1-Dichloroethene	Chronic	2.00E-01	mg/m^3	Liver	30	IRIS	1/7/2015
1,2-Dichloroethane	Chronic	7.00E-03	mg/m^3	No information	No information	PPRTV	2015 RSL Table
1,2-Dichloropropane	Chronic	4.00E-03	mg/m^3	Respiratory	300	IRIS	1/7/2015
1,3-Butadiene	Chronic	2.00E-03	mg/m^3	Reproductive (female)	1000	IRIS	1/7/2015
1,4-Dichlorobenzene	Chronic	8.00E-01	mg/m^3	Liver	100	IRIS	1/7/2015
2-Butanone	Chronic	5.00E+00	mg/m^3	Developmental	300	IRIS	1/7/2015
4-Ethyltoluene	---	NA	---	---	---	---	---
4-Methyl-2-Pentanone	Chronic	3.00E+00	mg/m^3	Developmental	300	IRIS	1/7/2015
Acrylonitrile	Chronic	2.00E-03	mg/m^3	Respiratory	1000	IRIS	1/7/2015
Benzene	Chronic	3.00E-02	mg/m^3	Blood	300	IRIS	1/7/2015
Bromodichloromethane	---	NA	---	---	---	---	---
Carbon Tetrachloride	Chronic	1.00E-01	mg/m^3	Liver	100	IRIS	1/7/2015
Chloroform	Chronic	9.80E-02	mg/m^3	Liver	100	ATSDR	2015 RSL Table
Chloromethane	Chronic	9.00E-02	mg/m^3	Nervous system	1,000	IRIS	1/7/2015
cis-1,2-Dichloroethene	---	NA	---	---	---	---	---
Cyclohexane	Chronic	6.00E+00	mg/m^3	Whole body	300	IRIS	1/7/2015
Dichlorodifluoromethane	Chronic	1.00E-01	mg/m^3	No information	No information	PPRTV	2015 RSL Table
Dichlorotetrafluoroethane	---	NA	---	---	---	---	---
Ethylbenzene	Chronic	1.00E+00	mg/m^3	Developmental	300	IRIS	1/7/2015
Hexachlorobutadiene	---	NA	---	---	---	---	---
Hexane	Chronic	7.00E-01	mg/m^3	Nervous system	300	IRIS	1/7/2015
m,p-Xylene	Chronic	1.00E-01	mg/m^3	Nervous system	300	IRIS	1/7/2015
Methylene Chloride	Chronic	6.00E-01	mg/m^3	Liver	30	IRIS	1/7/2015
n-Heptane	---	NA	---	---	---	---	---
o-Xylene	Chronic	1.00E-01	mg/m^3	Nervous system	300	IRIS	1/7/2015
Styrene	Chronic	1.00E+00	mg/m^3	Nervous system	30	IRIS	1/7/2015
Tetrachloroethene	Chronic	4.00E-02	mg/m^3	Nervous system	1,000	IRIS	1/7/2015
Tetrahydrofuran	Chronic	2.00E+00	mg/m^3	Liver and CNS	100	IRIS	1/7/2015
Toluene	Chronic	5.00E+00	mg/m^3	Nervous system	10	IRIS	1/7/2015
trans-1,2-Dichloroethene	---	NA	---	---	---	---	---
Trichloroethene	Chronic	2.00E-03	mg/m^3	Immune system	100	IRIS	1/7/2015
Trichlorofluoromethane	Chronic	7.00E-01	mg/m^3	Whole body	HEAST	HEAST	1997
Vinyl Chloride	Chronic	1.00E-01	mg/m^3	Liver	30	IRIS	1/7/2015

(1) Represents date source was searched.

Definitions: ATSDR = Agency for Toxic Substances and Disease Registry
IRIS = Integrated Risk Information System
NA = Not available
PPRTV = Provisional Peer-Reviewed Toxicity Value
RSL = Regional Screening Level

Table E-5
Cancer Toxicity Data -- Inhalation
Raymark - OU2 - Groundwater
Stratford, Connecticut

Contaminant of Potential Concern	Unit Risk		Weight of Evidence/ Cancer Guideline Description	Unit Risk: Inhalation CSF	
	Value	Units		Source(s)	Dates (1)
1,1,1-Trichloroethane	NA	---	Inadequate data	IRIS	1/7/2015
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	---	Not assessed	IRIS	1/7/2015
1,2,4-Trichlorobenzene	NA	---	D	IRIS	1/7/2015
1,2,4-Trimethylbenzene	NA	---	No informartion	---	---
1,3,5-Trimethylbenzene	NA	---	No informartion	---	---
1,1-Dichloroethane	1.60E-06	$(\mu g/m^3)^{-1}$	C (EPA classification)	CalEPA	2015 RSL Table
1,1-Dichloroethene	NA	---	C	IRIS	1/7/2015
1,2-Dichloroethane	2.60E-05	$(\mu g/m^3)^{-1}$	B2	IRIS	1/7/2015
1,2-Dichloropropane	1.00E-05	$(\mu g/m^3)^{-1}$	Not assessed	CalEPA	2015 RSL Table
1,3-Butadiene	3.00E-05	$(\mu g/m^3)^{-1}$	Carcinogenic to humans	IRIS	1/7/2015
1,4-Dichlorobenzene	1.10E-05	$(\mu g/m^3)^{-1}$	Not assessed	CalEPA	2015 RSL Table
2-Butanone	NA	---	Inadequate data	IRIS	1/7/2015
4-Ethyltoluene	NA	---	No informartion	---	---
4-Methyl-2-Pentanone	NA	---	Inadequate data	IRIS	1/7/2015
Acrylonitrile	6.80E-05	$(\mu g/m^3)^{-1}$	B1	IRIS	1/7/2015
Benzene	7.80E-06	$(\mu g/m^3)^{-1}$	A	IRIS	1/7/2015
Bromodichloromethane	3.70E-05	$(\mu g/m^3)^{-1}$	B2	CalEPA	2015 RSL Table
Carbon Tetrachloride	6.00E-06	$(\mu g/m^3)^{-1}$	Likely to be carcinogenic	IRIS	1/7/2015
Chloroform	2.30E-05	$(\mu g/m^3)^{-1}$	B2	IRIS	1/7/2015
Chloromethane	NA	---	D	IRIS	1/7/2015
cis-1,2-Dichloroethene	NA	---	Inadequate data	IRIS	1/7/2015
Cyclohexane	NA	---	Inadequate data	IRIS	1/7/2015
Dichlorodifluoromethane	NA	---	Not assessed	IRIS	1/7/2015
Dichlorotetrafluoroethane	NA	---	No informartion	---	---
Ethylbenzene	2.50E-06	$(\mu g/m^3)^{-1}$	D (EPA Classification)	CalEPA	2015 RSL Table
Hexachlorobutadiene	2.20E-05	$(\mu g/m^3)^{-1}$	C	IRIS	1/7/2015
Hexane	NA	---	Inadequate data	IRIS	1/7/2015
m,p-Xylene	NA	---	D	IRIS	1/7/2015
Methylene Chloride *	1.00E-08	$(\mu g/m^3)^{-1}$	Likely to be carcinogenic	IRIS	1/7/2015
n-Heptane	NA	---	D	IRIS	1/7/2015
o-Xylene	NA	---	D	IRIS	1/7/2015
Styrene	NA	---	Not assessed	IRIS	1/7/2015
Tetrachloroethene	2.60E-07	$(\mu g/m^3)^{-1}$	Likely to be carcinogenic	IRIS	1/7/2015
Tetrahydrofuran	NA	---	Suggestive evidence	IRIS	1/7/2015
Toluene	NA	---	Inadequate data	IRIS	1/7/2015
trans-1,2-Dichloroethene	NA	---	Inadequate data	IRIS	1/7/2015
Trichloroethene *	4.10E-06	$(\mu g/m^3)^{-1}$	A	IRIS	1/7/2015
Trichlorofluoromethane	NA	---	Not assessed	IRIS	1/7/2015
Vinyl Chloride *	4.40E-06	$(\mu g/m^3)^{-1}$	A	IRIS	1/7/2015

(1) Represents date source was searched.
* Carcinogenic via a mutagenic mode of action.

Definitions: A = Human carcinogen.
B2 = Probable human carcinogen - indicates sufficient evidence in animals and inadequate or no evidence in humans.
C = Possible human carcinogen.
CalEPA = California Environmental Protection Agency
D = Not classifiable as a human carcinogen.
IRIS = Integrated Risk Information System
NA = Not available.
RSL = Regional Screening Level (EPA, 2015)

Table E-6A
Calculation of Cancer Risks from Methylene Chloride - Mutagenic Mode of Action - Current/Future Residential Exposure
Raymark - OU2 - Groundwater
Stratford, Connecticut

Inhalation

Where:

$$Risk = EPC \times \sum_{i} \frac{ET \times EF \times ED \times CF}{AT} \times URF \times ADAF$$

Exposure Parameters (by age interval, i)					
Parameter	**Units**	**0-<2**	**2-<6**	**6-<16**	**16-<26**
EPC	$\mu g/m^3$	See Below			
ET	hours/day	24	24	24	24
EF	days/year	350	350	350	350
ED	years	2	4	10	10
CF	day/hour	0.042	0.042	0.042	0.042
AT	days	25550	25550	25550	25550
URF	$(\mu g/m^3)^{-1}$	1.00E-08	1.00E-08	1.00E-08	1.00E-08
ADAF	unitless	10	3	3	1

	Inhalation Risks					
Methylene Chloride	**EPC**	**0-<2**	**2-<6**	**6-<16**	**16-<26**	**Total**
Ferry Ct - Unit 62	2.84	7.8E-09	4.7E-09	1.2E-08	3.9E-09	2.8E-08
Ferry Ct - Unit 72	9.4	2.6E-08	1.6E-08	3.9E-08	1.3E-08	9.3E-08
Ferry Ct - Unit 82	3.1	8.6E-09	5.1E-09	1.3E-08	4.3E-09	3.1E-08
500 Ferry	2.25	6.2E-09	3.7E-09	9.3E-09	3.1E-09	2.2E-08

Table E-6B
Calculation of Cancer Risks from Trichloroethylene - Mutagenic Mode of Action - Current/Future
Residential Exposure to Indoor Air
Raymark - OU2 - Groundwater
Stratford, Connecticut

Indoor Air Inhalation Risk

Where:

$$\text{Risk} = \text{CA} \times \sum_{i} \left(\left(\frac{\text{ET} \times \text{EF} \times \text{ED} \times \text{CF}}{\text{AT}} \right) \times \text{IUR}_{\text{kidney}} \times \text{ADAF} \right) + \left(\left(\frac{\text{ET} \times \text{EF} \times \text{ED} \times \text{CF}}{\text{AT}} \right) \times \text{IUR}_{\text{Liver + NHL}} \right)$$

Exposure Parameters (by age interval, i)					
Parameter	**Units**	**0-<2**	**2-<6**	**6-<16**	**16-<26**
CA	µg/m^3	See Below			
ET	hrs/day	24	24	24	24
CF	day/hour	0.042	0.042	0.042	0.042
EF	days/year	350	350	350	350
ED	years	2	4	10	10
AT	days	25550	25550	25550	25550
IUR_{kidney}	(µg/m^3)$^{-1}$	1.0E-06			
ADAF	unitless	10	3	3	1
$IUR_{liver+NHL}$	(µg/m^3)$^{-1}$	3.1E-06			

	CA	Indoor Air Inhalation Risks				
COPC	**(µg/m^3)**	**0-<2**	**2-<6**	**6-<16**	**16-<26**	**Total**
Ferry Ct - Unit 62						
Trichloroethylene	0.27	9.8E-08	9.1E-08	2.3E-07	1.5E-07	5.7E-07
Ferry Ct - Unit 72						
Trichloroethylene	0.43	1.6E-07	1.4E-07	3.6E-07	2.4E-07	9.1E-07
500 Ferry						
Trichloroethylene	0.27	9.8E-08	9.1E-08	2.3E-07	1.5E-07	5.7E-07

Table E-7A
Calculation of COPC Cancer Risks and Noncancer Hazards - Indoor Air Exposure - Residents
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Average Daily Concentration		Inhalation Unit Risk		Cancer Risk	Average Daily Concentration		RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Air	Indoor Air	Ferry Ct - Unit 50	Inhalation	1,2,4-Trichlorobenzene	0.38	µg/m³	1.4E-01	µg/m³	NA	---	NA	3.7E-01	µg/m³	2.0E-03	mg/m³	0.18
				1,2,4-Trimethylbenzene	1.3	µg/m³	4.7E-01	µg/m³	NA	---	NA	1.3E+00	µg/m³	7.0E-03	mg/m³	0.18
				1,3,5-Trimethylbenzene	0.34	µg/m³	1.2E-01	µg/m³	NA	---	NA	3.3E-01	µg/m³	NA	---	---
				1,4-Dichlorobenzene	0.96	µg/m³	3.4E-01	µg/m³	1.1E-05	$(\mu g/m^3)^{-1}$	3.8E-06	9.3E-01	µg/m³	8.0E-01	mg/m³	0.0012
				2-Butanone	3.7	µg/m³	1.3E+00	µg/m³	NA	---	NA	3.6E+00	µg/m³	5.0E+00	mg/m³	0.00072
				4-Ethyltoluene	0.93	µg/m³	3.3E-01	µg/m³	NA	---	NA	9.0E-01	µg/m³	NA	---	---
				Benzene	0.93	µg/m³	3.3E-01	µg/m³	7.8E-06	$(\mu g/m^3)^{-1}$	2.6E-06	9.0E-01	µg/m³	3.0E-02	mg/m³	0.030
				Bromodichloromethane	0.48	µg/m³	1.7E-01	µg/m³	3.7E-05	$(\mu g/m^3)^{-1}$	6.4E-06	4.6E-01	µg/m³	NA	---	---
				Carbon Tetrachloride	0.36	µg/m³	1.3E-01	µg/m³	6.0E-06	$(\mu g/m^3)^{-1}$	7.8E-07	3.5E-01	µg/m³	1.0E-01	mg/m³	0.0035
				Chloroform	2.5	µg/m³	9.0E-01	µg/m³	2.3E-05	$(\mu g/m^3)^{-1}$	2.1E-05	2.4E+00	µg/m³	9.8E-02	mg/m³	0.025
				Chloromethane	0.97	µg/m³	3.5E-01	µg/m³	NA	---	NA	9.4E-01	µg/m³	9.0E-02	mg/m³	0.010
				Cyclohexane	0.31	µg/m³	1.1E-01	µg/m³	NA	---	NA	3.0E-01	µg/m³	6.0E+00	mg/m³	0.000050
				Dichlorodifluoromethane	2	µg/m³	7.2E-01	µg/m³	NA	---	NA	1.9E+00	µg/m³	1.0E-01	mg/m³	0.019
				Ethylbenzene	2	µg/m³	7.2E-01	µg/m³	2.5E-06	$(\mu g/m^3)^{-1}$	1.8E-06	1.9E+00	µg/m³	1.0E+00	mg/m³	0.0019
				Hexane	1.6	µg/m³	5.7E-01	µg/m³	NA	---	NA	1.5E+00	µg/m³	7.0E-01	mg/m³	0.0022
				m,p-Xylene	6	µg/m³	2.2E+00	µg/m³	NA	---	NA	5.8E+00	µg/m³	1.0E-01	mg/m³	0.058
				o-Xylene	2.3	µg/m³	8.3E-01	µg/m³	NA	---	NA	2.2E+00	µg/m³	1.0E-01	mg/m³	0.022
				Styrene	1.4	µg/m³	5.0E-01	µg/m³	NA	---	NA	1.4E+00	µg/m³	1.0E+00	mg/m³	0.0014
				Tetrachloroethene	0.88	µg/m³	3.2E-01	µg/m³	2.6E-07	$(\mu g/m^3)^{-1}$	8.2E-08	8.5E-01	µg/m³	4.0E-02	mg/m³	0.021
				Toluene	9.2	µg/m³	3.3E+00	µg/m³	NA	---	NA	8.9E+00	µg/m³	5.0E+00	mg/m³	0.0018
				Trichlorofluoromethane	1.9	µg/m³	6.8E-01	µg/m³	NA	---	NA	1.8E+00	µg/m³	7.0E-01	mg/m³	0.0026
Total - Ferry Ct - Unit 50										Total Cancer Risk	3.6E-05				Total Hazard Index	0.56
										Groundwater COC Cancer Risk	2.5E-05				Groundwater COC Hazard Index	0.057

Table E-7A
Calculation of COPC Cancer Risks and Noncancer Hazards - Indoor Air Exposure - Residents
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Average Daily Concentration		Inhalation Unit Risk		Cancer Risk	Average Daily Concentration		RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Air	Indoor Air	Ferry Ct - Unit 62	Inhalation	1,1,2-Trichloro-1,2,2-trifluoroethane	0.46	µg/m^3	1.7E-01	µg/m^3	NA	---	NA	4.4E-01	µg/m^3	3.0E+01	mg/m^3	0.000015
				1,2,4-Trimethylbenzene	0.41	µg/m^3	1.5E-01	µg/m^3	NA	---	NA	4.0E-01	µg/m^3	7.0E-03	mg/m^3	0.057
				1,3-Butadine	0.92	µg/m^3	3.3E-01	µg/m^3	3.0E-05	(µg/m^3)$^{-1}$	9.9E-06	8.9E-01	µg/m^3	2.0E-03	mg/m^3	0.44
				2-Butanone	3.3	µg/m^3	1.2E+00	µg/m^3	NA	---	NA	3.2E+00	µg/m^3	5.0E+00	mg/m^3	0.00064
				4-Ethyltoluene	0.49	µg/m^3	1.8E-01	µg/m^3	NA	---	NA	4.7E-01	µg/m^3	NA	---	---
				Acrylonitrile	0.46	µg/m^3	1.7E-01	µg/m^3	6.8E-05	(µg/m^3)$^{-1}$	1.1E-05	4.4E-01	µg/m^3	2.0E-03	mg/m^3	0.22
				Benzene	1.7	µg/m^3	6.0E-01	µg/m^3	7.8E-06	(µg/m^3)$^{-1}$	4.7E-06	1.6E+00	µg/m^3	3.0E-02	mg/m^3	0.054
				Carbon Tetrachloride	0.51	µg/m^3	1.8E-01	µg/m^3	6.0E-06	(µg/m^3)$^{-1}$	1.1E-06	4.9E-01	µg/m^3	1.0E-01	mg/m^3	0.0049
				Chloroform	1.5	µg/m^3	5.3E-01	µg/m^3	2.3E-05	(µg/m^3)$^{-1}$	1.2E-05	1.4E+00	µg/m^3	9.8E-02	mg/m^3	0.015
				Chloromethane	1.4	µg/m^3	5.0E-01	µg/m^3	NA	---	NA	1.4E+00	µg/m^3	9.0E-02	mg/m^3	0.015
				Cyclohexane	0.27	µg/m^3	9.7E-02	µg/m^3	NA	---	NA	2.6E-01	µg/m^3	6.0E+00	mg/m^3	0.000043
				Dichlorodifluoromethane	2.2	µg/m^3	7.9E-01	µg/m^3	NA	---	NA	2.1E+00	µg/m^3	1.0E-01	mg/m^3	0.021
				Ethylbenzene	1.2	µg/m^3	4.3E-01	µg/m^3	2.5E-06	(µg/m^3)$^{-1}$	1.1E-06	1.2E+00	µg/m^3	1.0E+00	mg/m^3	0.0012
				Hexane	1.2	µg/m^3	4.3E-01	µg/m^3	NA	---	NA	1.2E+00	µg/m^3	7.0E-01	mg/m^3	0.0017
				m,p-Xylene	4.0	µg/m^3	1.4E+00	µg/m^3	NA	---	NA	3.9E+00	µg/m^3	1.0E-01	mg/m^3	0.039
				Methylene Chloride	2.8	µg/m^3	See Mutagenic Mode of Action calculations table.				2.8E-08	2.7E+00	µg/m^3	6.0E-01	mg/m^3	0.0046
				o-Xylene	0.92	µg/m^3	3.3E-01	µg/m^3	NA	---	NA	8.9E-01	µg/m^3	1.0E-01	mg/m^3	0.0089
				Styrene	0.52	µg/m^3	1.9E-01	µg/m^3	NA	---	NA	5.0E-01	µg/m^3	1.0E+00	mg/m^3	0.00050
				Tetrachloroethene	0.89	µg/m^3	3.2E-01	µg/m^3	2.6E-07	(µg/m^3)$^{-1}$	8.3E-08	8.6E-01	µg/m^3	4.0E-02	mg/m^3	0.022
				Tetrahydrofuran	2.4	µg/m^3	8.5E-01	µg/m^3	NA	---	NA	2.3E+00	µg/m^3	2.0E+00	mg/m^3	0.0012
				Toluene	4.5	µg/m^3	1.6E+00	µg/m^3	NA	---	NA	4.3E+00	µg/m^3	5.0E+00	mg/m^3	0.00086
				Trichloroethene	0.27	µg/m^3	See Mutagenic Mode of Action calculations table.				5.7E-07	2.6E-01	µg/m^3	2.0E-03	mg/m^3	0.13
				Trichlorofluoromethane	1.1	µg/m^3	3.9E-01	µg/m^3	NA	---	NA	1.1E+00	µg/m^3	7.0E-01	mg/m^3	0.0015
Total - Ferry Ct - Unit 62							Total Cancer Risk				4.1E-05	Total Hazard Index				1.0
							Groundwater COC Cancer Risk				1.9E-05	Groundwater COC Hazard Index				0.20

Table E-7A
Calculation of COPC Cancer Risks and Noncancer Hazards - Indoor Air Exposure - Residents
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Average Daily Concentration		Inhalation Unit Risk		Cancer Risk	Average Daily Concentration		RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Air	Indoor Air	Ferry Ct - Unit 72	Inhalation	1,1,2-Trichloro-1,2,2-trifluoroethane	0.44	µg/m^3	1.6E-01	µg/m^3	NA	---	NA	4.3E-01	µg/m^3	3.0E+01	mg/m^3	0.000014
				1,2,4-Trimethylbenzene	2.9	µg/m^3	1.0E+00	µg/m^3	NA	---	NA	2.8E+00	µg/m^3	7.0E-03	mg/m^3	0.40
				1,2-Dichloroethane	4.5	µg/m^3	1.6E+00	µg/m^3	2.6E-05	(µg/m^3)$^{-1}$	4.2E-05	4.3E+00	µg/m^3	7.0E-03	mg/m^3	0.62
				1,3,5-Trimethylbenzene	0.69	µg/m^3	2.5E-01	µg/m^3	NA	---	NA	6.7E-01	µg/m^3	NA	---	---
				1,3-Butadine	0.1	µg/m^3	3.6E-02	µg/m^3	3.0E-05	(µg/m^3)$^{-1}$	1.1E-06	9.7E-02	µg/m^3	2.0E-03	mg/m^3	0.048
				1,4-Dichlorobenzene	0.96	µg/m^3	3.4E-01	µg/m^3	1.1E-05	(µg/m^3)$^{-1}$	3.8E-06	9.3E-01	µg/m^3	8.0E-01	mg/m^3	0.0012
				2-Butanone	10	µg/m^3	3.6E+00	µg/m^3	NA	---	NA	9.7E+00	µg/m^3	5.0E+00	mg/m^3	0.0019
				4-Ethyltoluene	1.8	µg/m^3	6.5E-01	µg/m^3	NA	---	NA	1.7E+00	µg/m^3	NA	---	---
				Benzene	1.2	µg/m^3	4.3E-01	µg/m^3	7.8E-06	(µg/m^3)$^{-1}$	3.4E-06	1.2E+00	µg/m^3	3.0E-02	mg/m^3	0.039
				Bromodichloromethane	1.4	µg/m^3	5.0E-01	µg/m^3	3.7E-05	(µg/m^3)$^{-1}$	1.9E-05	1.4E+00	µg/m^3	NA	---	---
				Carbon Tetrachloride	0.52	µg/m^3	1.9E-01	µg/m^3	6.0E-06	(µg/m^3)$^{-1}$	1.1E-06	5.0E-01	µg/m^3	1.0E-01	mg/m^3	0.0050
				Chloroform	7.1	µg/m^3	2.5E+00	µg/m^3	2.3E-05	(µg/m^3)$^{-1}$	5.9E-05	6.9E+00	µg/m^3	9.8E-02	mg/m^3	0.070
				Chloromethane	1.1	µg/m^3	3.9E-01	µg/m^3	NA	---	NA	1.1E+00	µg/m^3	9.0E-02	mg/m^3	0.012
				Cyclohexane	0.58	µg/m^3	2.1E-01	µg/m^3	NA	---	NA	5.6E-01	µg/m^3	6.0E+00	mg/m^3	0.000093
				Dichlorodifluoromethane	2.8	µg/m^3	1.0E+00	µg/m^3	NA	---	NA	2.7E+00	µg/m^3	1.0E-01	mg/m^3	0.027
				Ethylbenzene	8.4	µg/m^3	3.0E+00	µg/m^3	2.5E-06	(µg/m^3)$^{-1}$	7.5E-06	8.1E+00	µg/m^3	1.0E+00	mg/m^3	0.0081
				Hexane	2.5	µg/m^3	9.0E-01	µg/m^3	NA	---	NA	2.4E+00	µg/m^3	7.0E-01	mg/m^3	0.0035
				m,p-Xylene	8.1	µg/m^3	2.9E+00	µg/m^3	NA	---	NA	7.8E+00	µg/m^3	1.0E-01	mg/m^3	0.078
				Methylene Chloride	9.4	µg/m^3	See Mutagenic Mode of Action calculations table.				9.3E-08	9.1E+00	µg/m^3	6.0E-01	mg/m^3	0.015
				o-Xylene	3.2	µg/m^3	1.1E+00	µg/m^3	NA	---	NA	3.1E+00	µg/m^3	1.0E-01	mg/m^3	0.031
				Styrene	2.6	µg/m^3	9.3E-01	µg/m^3	NA	---	NA	2.5E+00	µg/m^3	1.0E+00	mg/m^3	0.0025
				Tetrahydrofuran	0.86	µg/m^3	3.1E-01	µg/m^3	NA	---	NA	8.3E-01	µg/m^3	2.0E+00	mg/m^3	0.00042
				Toluene	18	µg/m^3	6.5E+00	µg/m^3	NA	---	NA	1.7E+01	µg/m^3	5.0E+00	mg/m^3	0.0035
				Trichloroethene	0.43	µg/m^3	See Mutagenic Mode of Action calculations table.				9.1E-07	4.2E-01	µg/m^3	2.0E-03	mg/m^3	0.21
				Trichlorofluoromethane	2.2	µg/m^3	7.9E-01	µg/m^3	NA	---	NA	2.1E+00	µg/m^3	7.0E-01	mg/m^3	0.0030
Total - Ferry Ct - Unit 72										Total Cancer Risk	1.4E-04				Total Hazard Index	1.6
										Groundwater COC Cancer Risk	7.0E-05				Groundwater COC Hazard Index	0.32

Table E-7A
Calculation of COPC Cancer Risks and Noncancer Hazards - Indoor Air Exposure - Residents
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Average Daily Concentration		Inhalation Unit Risk		Cancer Risk	Average Daily Concentration		RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Air	Indoor Air	Ferry Ct - Unit 82	Inhalation	1,1,2-Trichloro-1,2,2-trifluoroethane	0.4	µg/m^3	1.4E-01	µg/m^3	NA	---	NA	3.9E-01	µg/m^3	3.0E+01	mg/m^3	0.000013
				1,2,4-Trimethylbenzene	0.83	µg/m^3	3.0E-01	µg/m^3	NA	---	NA	8.0E-01	µg/m^3	7.0E-03	mg/m^3	0.11
				1,2-Dichloroethane	1.8	µg/m^3	6.5E-01	µg/m^3	2.6E-05	(µg/m^3)$^{-1}$	1.7E-05	1.7E+00	µg/m^3	7.0E-03	mg/m^3	0.25
				1,3-Butadine	0.1	µg/m^3	3.6E-02	µg/m^3	3.0E-05	(µg/m^3)$^{-1}$	1.1E-06	9.7E-02	µg/m^3	2.0E-03	mg/m^3	0.048
				2-Butanone	2.4	µg/m^3	8.6E-01	µg/m^3	NA	---	NA	2.3E+00	µg/m^3	5.0E+00	mg/m^3	0.00046
				4-Ethyltoluene	0.54	µg/m^3	1.9E-01	µg/m^3	NA	---	NA	5.2E-01	µg/m^3	NA	---	---
				Benzene	1.0	µg/m^3	3.6E-01	µg/m^3	7.8E-06	(µg/m^3)$^{-1}$	2.8E-06	9.7E-01	µg/m^3	3.0E-02	mg/m^3	0.032
				Bromodichloromethane	0.39	µg/m^3	1.4E-01	µg/m^3	3.7E-05	(µg/m^3)$^{-1}$	5.2E-06	3.8E-01	µg/m^3	NA	---	---
				Carbon Tetrachloride	0.4	µg/m^3	1.4E-01	µg/m^3	6.0E-06	(µg/m^3)$^{-1}$	8.6E-07	3.9E-01	µg/m^3	1.0E-01	mg/m^3	0.0039
				Chloroform	1.7	µg/m^3	6.1E-01	µg/m^3	2.3E-05	(µg/m^3)$^{-1}$	1.4E-05	1.6E+00	µg/m^3	9.8E-02	mg/m^3	0.017
				Chloromethane	0.66	µg/m^3	2.4E-01	µg/m^3	NA	---	NA	6.4E-01	µg/m^3	9.0E-02	mg/m^3	0.0071
				Cyclohexane	0.25	µg/m^3	9.0E-02	µg/m^3	NA	---	NA	2.4E-01	µg/m^3	6.0E+00	mg/m^3	0.000040
				Dichlorodifluoromethane	1.8	µg/m^3	6.5E-01	µg/m^3	NA	---	NA	1.7E+00	µg/m^3	1.0E-01	mg/m^3	0.017
				Ethylbenzene	1.3	µg/m^3	4.7E-01	µg/m^3	2.5E-06	(µg/m^3)$^{-1}$	1.2E-06	1.3E+00	µg/m^3	1.0E+00	mg/m^3	0.0013
				Hexane	1.2	µg/m^3	4.3E-01	µg/m^3	NA	---	NA	1.2E+00	µg/m^3	7.0E-01	mg/m^3	0.0017
				m,p-Xylene	2	µg/m^3	7.2E-01	µg/m^3	NA	---	NA	1.9E+00	µg/m^3	1.0E-01	mg/m^3	0.019
				Methylene Chloride	3.1	µg/m^3	See Mutagenic Mode of Action calculations table.				3.1E-08	3.0E+00	µg/m^3	6.0E-01	mg/m^3	0.0050
				o-Xylene	0.95	µg/m^3	3.4E-01	µg/m^3	NA	---	NA	9.2E-01	µg/m^3	1.0E-01	mg/m^3	0.0092
				Styrene	1.1	µg/m^3	3.9E-01	µg/m^3	NA	---	NA	1.1E+00	µg/m^3	1.0E+00	mg/m^3	0.0011
				Tetrachloroethene	1.6	µg/m^3	5.7E-01	µg/m^3	2.6E-07	(µg/m^3)$^{-1}$	1.5E-07	1.5E+00	µg/m^3	4.0E-02	mg/m^3	0.039
				Toluene	4.6	µg/m^3	1.7E+00	µg/m^3	NA	---	NA	4.4E+00	µg/m^3	5.0E+00	mg/m^3	0.00089
				Trichlorofluoromethane	0.9	µg/m^3	3.2E-01	µg/m^3	NA	---	NA	8.7E-01	µg/m^3	7.0E-01	mg/m^3	0.0012
Total - Ferry Ct - Unit 82							Total Cancer Risk				4.2E-05	Total Hazard Index				0.57
							Groundwater COC Cancer Risk				1.8E-05	Groundwater COC Hazard Index				0.050

Table E-7A
Calculation of COPC Cancer Risks and Noncancer Hazards - Indoor Air Exposure - Residents
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Average Daily Concentration		Inhalation Unit Risk		Cancer Risk	Average Daily Concentration		RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Air	Indoor Air	500 Ferry	Inhalation	1,1,2-Trichloro-1,2,2-trifluoroethane	0.5	µg/m^3	1.8E-01	µg/m^3	NA	---	NA	4.8E-01	µg/m^3	3.0E+01	mg/m^3	0.000016
				1,2,4-Trichlorobenzene	0.45	µg/m^3	1.6E-01	µg/m^3	NA	---	NA	4.3E-01	µg/m^3	2.0E-03	mg/m^3	0.22
				1,2,4-Trimethylbenzene	18	µg/m^3	6.5E+00	µg/m^3	NA	---	NA	1.7E+01	µg/m^3	7.0E-03	mg/m^3	2.5
				1,3,5-Trimethylbenzene	5	µg/m^3	1.8E+00	µg/m^3	NA	---	NA	4.8E+00	µg/m^3	NA	---	---
				1,3-Butadine	0.1	µg/m^3	3.6E-02	µg/m^3	3.0E-05	(µg/m^3)$^{-1}$	1.1E-06	9.7E-02	µg/m^3	2.0E-03	mg/m^3	0.048
				2-Butanone	0.29	µg/m^3	1.0E-01	µg/m^3	NA	---	NA	2.8E-01	µg/m^3	5.0E+00	mg/m^3	0.000056
				4-Ethyltoluene	19	µg/m^3	6.8E+00	µg/m^3	NA	---	NA	1.8E+01	µg/m^3	NA	---	---
				Benzene	19	µg/m^3	6.8E+00	µg/m^3	7.8E-06	(µg/m^3)$^{-1}$	5.3E-05	1.8E+01	µg/m^3	3.0E-02	mg/m^3	0.61
				Carbon Tetrachloride	0.46	µg/m^3	1.7E-01	µg/m^3	6.0E-06	(µg/m^3)$^{-1}$	9.9E-07	4.4E-01	µg/m^3	1.0E-01	mg/m^3	0.0044
				Chloroform	0.78	µg/m^3	2.8E-01	µg/m^3	2.3E-05	(µg/m^3)$^{-1}$	6.4E-06	7.5E-01	µg/m^3	9.8E-02	mg/m^3	0.0077
				Chloromethane	0.91	µg/m^3	3.3E-01	µg/m^3	NA	---	NA	8.8E-01	µg/m^3	9.0E-02	mg/m^3	0.0098
				Cyclohexane	9.6	µg/m^3	3.4E+00	µg/m^3	NA	---	NA	9.3E+00	µg/m^3	6.0E+00	mg/m^3	0.0015
				Dichlorodifluoromethane	2.5	µg/m^3	9.0E-01	µg/m^3	NA	---	NA	2.4E+00	µg/m^3	1.0E-01	mg/m^3	0.024
				Ethylbenzene	20	µg/m^3	7.2E+00	µg/m^3	2.5E-06	(µg/m^3)$^{-1}$	1.8E-05	1.9E+01	µg/m^3	1.0E+00	mg/m^3	0.019
				Hexachlorobutadiene	0.56	µg/m^3	2.0E-01	µg/m^3	2.2E-05	(µg/m^3)$^{-1}$	4.4E-06	5.4E-01	µg/m^3	NA	---	---
				Hexane	74	µg/m^3	2.7E+01	µg/m^3	NA	---	NA	7.2E+01	µg/m^3	7.0E-01	mg/m^3	0.10
				m,p-Xylene	58	µg/m^3	2.1E+01	µg/m^3	NA	---	NA	5.6E+01	µg/m^3	1.0E-01	mg/m^3	0.56
				Methylene Chloride	2.25	µg/m^3	See Mutagenic Mode of Action calculations table.				2.2E-08	2.2E+00	µg/m^3	6.0E-01	mg/m^3	0.0036
				n-Heptane	37	µg/m^3	1.3E+01	µg/m^3	NA	---	NA	3.6E+01	µg/m^3	NA	---	---
				o-Xylene	20	µg/m^3	7.2E+00	µg/m^3	NA	---	NA	1.9E+01	µg/m^3	1.0E-01	mg/m^3	0.19
				Toluene	140	µg/m^3	5.0E+01	µg/m^3	NA	---	NA	1.4E+02	µg/m^3	5.0E+00	mg/m^3	0.027
				Trichloroethene	0.27	µg/m^3	See Mutagenic Mode of Action calculations table.				5.7E-07	2.6E-01	µg/m^3	2.0E-03	mg/m^3	0.13
				Trichlorofluoromethane	1.1	µg/m^3	3.9E-01	µg/m^3	NA	---	NA	1.0E+00	µg/m^3	7.0E-01	mg/m^3	0.0015
Total - 500 Ferry										Total Cancer Risk	8.5E-05				Total Hazard Index	4.4
										Groundwater COC Cancer Risk	7.8E-05				Groundwater COC Hazard Index	0.77

COPC - Contaminant of Potential Concern

EPC - Exposure Point Concentration

RfC - Reference Concentration

NA- Not Available

Groundwater COCs = Contaminants of concern based on residential risks exceeding 1x10^{-6} or Hazard Quotient of 1.0 determined by modelling potential indoor air risks from maximum shallow groundwater data. These COCs are: 1,1-dichloroethane, 1,1-dichloroethene, trichloroethene, vinyl chloride, benzene, chlorobenzene, chloroform, and ethylbenzene.

Table E-7B
Calculation of COPC Cancer Risks and Noncancer Hazards - Indoor Air Exposure - Workers
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Receptor Population: Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Average Daily Concentration		Unit Risk		Cancer Risk	Average Daily Concentration		RfC		Hazard
							Value	Units	Value	Units		Value	Units	Value	Units	Quotient
Air	Indoor Air	100 Veterans	Inhalation	1,1,1-Trichloroethane	2.4	µg/m^3	2.0E-01	µg/m^3	NA	---	NA	5.5E-01	µg/m^3	5.0E+00	mg/m^3	0.00011
				1,1,2-Trichloro-1,2,2-trifluoroethane	0.5	µg/m^3	4.1E-02	µg/m^3	NA	---	NA	1.2E-01	µg/m^3	3.0E+01	mg/m^3	0.0000038
				1,1-Dichloroethane	5.8	µg/m^3	4.8E-01	µg/m^3	1.6E-06	(µg/m^3)$^{-1}$	7.6E-07	1.3E+00	µg/m^3	NA	---	---
				1,1-Dichloroethene	2.6	µg/m^3	2.1E-01	µg/m^3	NA	---	NA	6.0E-01	µg/m^3	2.0E-01	mg/m^3	0.0030
				1,2,4-Trichlorobenzene	0.61	µg/m^3	5.0E-02	µg/m^3	NA	---	NA	1.4E-01	µg/m^3	2.0E-03	mg/m^3	0.070
				1,2,4-Trimethylbenzene	1.5	µg/m^3	1.2E-01	µg/m^3	NA	---	NA	3.5E-01	µg/m^3	7.0E-03	mg/m^3	0.049
				1,2-Dichloroethane	5.4	µg/m^3	4.4E-01	µg/m^3	2.6E-05	(µg/m^3)$^{-1}$	1.2E-05	1.2E+00	µg/m^3	7.0E-03	mg/m^3	0.18
				1,3,5-Trimethylbenzene	0.64	µg/m^3	5.3E-02	µg/m^3	NA	---	NA	1.5E-01	µg/m^3	NA	---	---
				1,3-Butadine	1.2	µg/m^3	9.9E-02	µg/m^3	3.0E-05	(µg/m^3)$^{-1}$	3.0E-06	2.8E-01	µg/m^3	2.0E-03	mg/m^3	0.14
				1,4-Dichlorobenzene	1.8	µg/m^3	1.5E-01	µg/m^3	1.1E-05	(µg/m^3)$^{-1}$	1.6E-06	4.1E-01	µg/m^3	8.0E-01	mg/m^3	0.00052
				2-Butanone	3.5	µg/m^3	2.9E-01	µg/m^3	NA	---	NA	8.1E-01	µg/m^3	5.0E+00	mg/m^3	0.00016
				4-Ethyltoluene	1.6	µg/m^3	1.3E-01	µg/m^3	NA	---	NA	3.7E-01	µg/m^3	NA	---	---
				Acrylonitrile	0.4	µg/m^3	3.3E-02	µg/m^3	6.8E-05	(µg/m^3)$^{-1}$	2.2E-06	9.2E-02	µg/m^3	2.0E-03	mg/m^3	0.046
				Benzene	3.3	µg/m^3	2.7E-01	µg/m^3	7.8E-06	(µg/m^3)$^{-1}$	2.1E-06	7.6E-01	µg/m^3	3.0E-02	mg/m^3	0.025
				Carbon Tetrachloride	0.5	µg/m^3	4.1E-02	µg/m^3	6.0E-06	(µg/m^3)$^{-1}$	2.5E-07	1.2E-01	µg/m^3	1.0E-01	mg/m^3	0.0012
				Chloroform	3.4	µg/m^3	2.8E-01	µg/m^3	2.3E-05	(µg/m^3)$^{-1}$	6.4E-06	7.8E-01	µg/m^3	9.8E-02	mg/m^3	0.0080
				Chloromethane	1.5	µg/m^3	1.2E-01	µg/m^3	NA	---	NA	3.5E-01	µg/m^3	9.0E-02	mg/m^3	0.0038
				cis-1,2-Dichloroethene	14	µg/m^3	1.2E+00	µg/m^3	NA	---	NA	3.2E+00	µg/m^3	NA	---	---
				Cyclohexane	0.76	µg/m^3	6.2E-02	µg/m^3	NA	---	NA	1.7E-01	µg/m^3	6.0E+00	mg/m^3	0.000029
				Dichlorodifluoromethane	6.4	µg/m^3	5.3E-01	µg/m^3	NA	---	NA	1.5E+00	µg/m^3	1.0E-01	mg/m^3	0.015
				Dichlorotetrafluoroethane	14	µg/m^3	1.2E+00	µg/m^3	NA	---	NA	3.2E+00	µg/m^3	NA	---	---
				Ethylbenzene	2.6	µg/m^3	2.1E-01	µg/m^3	2.5E-06	(µg/m^3)$^{-1}$	5.3E-07	6.0E-01	µg/m^3	1.0E+00	mg/m^3	0.00060
				Hexane	13	µg/m^3	1.1E+00	µg/m^3	NA	---	NA	3.0E+00	µg/m^3	7.0E-01	mg/m^3	0.0043
				m,p-Xylene	7.4	µg/m^3	6.1E-01	µg/m^3	NA	---	NA	1.7E+00	µg/m^3	1.0E-01	mg/m^3	0.017
				Methylene Chloride	2.5	µg/m^3	2.1E-01	µg/m^3	1.0E-08	(µg/m^3)$^{-1}$	2.1E-09	5.8E-01	µg/m^3	6.0E-01	mg/m^3	0.00096
				o-Xylene	2.2	µg/m^3	1.8E-01	µg/m^3	NA	---	NA	5.1E-01	µg/m^3	1.0E-01	mg/m^3	0.0051
				Styrene	9	µg/m^3	7.4E-01	µg/m^3	NA	---	NA	2.1E+00	µg/m^3	1.0E+00	mg/m^3	0.0021
				Tetrachloroethene	0.3	µg/m^3	2.5E-02	µg/m^3	2.6E-07	(µg/m^3)$^{-1}$	6.4E-09	6.9E-02	µg/m^3	4.0E-02	mg/m^3	0.0017
				Toluene	15	µg/m^3	1.2E+00	µg/m^3	NA	---	NA	3.5E+00	µg/m^3	5.0E+00	mg/m^3	0.00069
				Trichloroethene	5.4	µg/m^3	4.4E-01	µg/m^3	4.1E-06	(µg/m^3)$^{-1}$	1.8E-06	1.2E+00	µg/m^3	2.0E-03	mg/m^3	0.62
				Trichlorofluoromethane	2.5	µg/m^3	2.1E-01	µg/m^3	NA	---	NA	5.8E-01	µg/m^3	7.0E-01	mg/m^3	0.00082
Total - 100 Veterans										Total Cancer Risk	3.0E-05				Total Hazard Index	1.2
										Groundwater COC Cancer Risk	1.2E-05				Groundwater COC Hazard Index	0.66

Table E-7B
Calculation of COPC Cancer Risks and Noncancer Hazards - Indoor Air Exposure - Workers
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Receptor Population: Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Average Daily Concentration		Unit Risk		Cancer Risk	Average Daily Concentration		RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Air	Indoor Air	300 Ferry	Inhalation	1,1,1-Trichloroethane	0.98	µg/m^3	8.1E-02	µg/m^3	NA	---	NA	2.3E-01	µg/m^3	5.0E+00	mg/m^3	0.000045
				1,1,2-Trichloro-1,2,2-trifluoroethane	0.5	µg/m^3	4.1E-02	µg/m^3	NA	---	NA	1.2E-01	µg/m^3	3.0E+01	mg/m^3	0.0000038
				1,2,4-Trichlorobenzene	0.46	µg/m^3	3.8E-02	µg/m^3	NA	---	NA	1.1E-01	µg/m^3	2.0E-03	mg/m^3	0.053
				1,2,4-Trimethylbenzene	14	µg/m^3	1.2E+00	µg/m^3	NA	---	NA	3.2E+00	µg/m^3	7.0E-03	mg/m^3	0.46
				1,2-Dichloroethane	0.45	µg/m^3	3.7E-02	µg/m^3	2.6E-05	(µg/m^3)$^{-1}$	9.6E-07	1.0E-01	µg/m^3	7.0E-03	mg/m^3	0.015
				1,3,5-Trimethylbenzene	3.8	µg/m^3	3.1E-01	µg/m^3	NA	---	NA	8.7E-01	µg/m^3	NA	---	---
				1,3-Butadine	0.2	µg/m^3	1.6E-02	µg/m^3	3.0E-05	(µg/m^3)$^{-1}$	4.9E-07	4.6E-02	µg/m^3	2.0E-03	mg/m^3	0.023
				2-Butanone	11	µg/m^3	9.0E-01	µg/m^3	NA	---	NA	2.5E+00	µg/m^3	5.0E+00	mg/m^3	0.00051
				4-Ethyltoluene	12	µg/m^3	9.9E-01	µg/m^3	NA	---	NA	2.8E+00	µg/m^3	NA	---	---
				4-Methyl-2-Pentanone	0.61	µg/m^3	5.0E-02	µg/m^3	NA	---	NA	1.4E-01	µg/m^3	3.0E+00	mg/m^3	0.000047
				Benzene	7.3	µg/m^3	6.0E-01	µg/m^3	7.8E-06	(µg/m^3)$^{-1}$	4.7E-06	1.7E+00	µg/m^3	3.0E-02	mg/m^3	0.056
				Carbon Tetrachloride	0.5	µg/m^3	4.1E-02	µg/m^3	6.0E-06	(µg/m^3)$^{-1}$	2.5E-07	1.2E-01	µg/m^3	1.0E-01	mg/m^3	0.0012
				Chloroform	0.68	µg/m^3	5.6E-02	µg/m^3	2.3E-05	(µg/m^3)$^{-1}$	1.3E-06	1.6E-01	µg/m^3	9.8E-02	mg/m^3	0.0016
				Chloromethane	1.2	µg/m^3	9.9E-02	µg/m^3	NA	---	NA	2.8E-01	µg/m^3	9.0E-02	mg/m^3	0.0031
				cis-1,2-Dichloroethene	1.9	µg/m^3	1.6E-01	µg/m^3	NA	---	NA	4.4E-01	µg/m^3	NA	---	---
				Cyclohexane	5.2	µg/m^3	4.3E-01	µg/m^3	NA	---	NA	1.2E+00	µg/m^3	6.0E+00	mg/m^3	0.00020
				Dichlorodifluoromethane	5.9	µg/m^3	4.8E-01	µg/m^3	NA	---	NA	1.4E+00	µg/m^3	1.0E-01	mg/m^3	0.014
				Ethylbenzene	14	µg/m^3	1.2E+00	µg/m^3	2.5E-06	(µg/m^3)$^{-1}$	2.9E-06	3.2E+00	µg/m^3	1.0E+00	mg/m^3	0.0032
				Hexachlorobutadiene	0.4	µg/m^3	3.3E-02	µg/m^3	2.2E-05	(µg/m^3)$^{-1}$	7.2E-07	9.2E-02	µg/m^3	NA	---	---
				Hexane	24	µg/m^3	2.0E+00	µg/m^3	NA	---	NA	5.5E+00	µg/m^3	7.0E-01	mg/m^3	0.0079
				m,p-Xylene	39	µg/m^3	3.2E+00	µg/m^3	NA	---	NA	9.0E+00	µg/m^3	1.0E-01	mg/m^3	0.090
				Methylene Chloride	13	µg/m^3	1.1E+00	µg/m^3	1.0E-08	(µg/m^3)$^{-1}$	1.1E-08	3.0E+00	µg/m^3	6.0E-01	mg/m^3	0.0050
				o-Xylene	15	µg/m^3	1.2E+00	µg/m^3	NA	---	NA	3.5E+00	µg/m^3	1.0E-01	mg/m^3	0.035
				Styrene	2.7	µg/m^3	2.2E-01	µg/m^3	NA	---	NA	6.2E-01	µg/m^3	1.0E+00	mg/m^3	0.00062
				Tetrachloroethene	0.6	µg/m^3	4.9E-02	µg/m^3	2.6E-07	(µg/m^3)$^{-1}$	1.3E-08	1.4E-01	µg/m^3	4.0E-02	mg/m^3	0.0035
				Tetrahydrofuran	18	µg/m^3	1.5E+00	µg/m^3	NA	---	NA	4.1E+00	µg/m^3	2.0E+00	mg/m^3	0.0021
				Toluene	98	µg/m^3	8.1E+00	µg/m^3	NA	---	NA	2.3E+01	µg/m^3	5.0E+00	mg/m^3	0.0045
				trans-1,2-Dichloroethene	0.44	µg/m^3	3.6E-02	µg/m^3	NA	---	NA	1.0E-01	µg/m^3	6.0E-02	mg/m^3	0.0017
				Trichloroethene	5.4	µg/m^3	4.4E-01	µg/m^3	4.1E-06	(µg/m^3)$^{-1}$	1.8E-06	1.2E+00	µg/m^3	2.0E-03	mg/m^3	0.62
				Trichlorofluoromethane	1.1	µg/m^3	9.0E-02	µg/m^3	NA	---	NA	2.5E-01	µg/m^3	7.0E-01	mg/m^3	0.00036
				Vinyl Chloride	2.1	µg/m^3	1.7E-01	µg/m^3	4.4E-06	(µg/m^3)$^{-1}$	7.6E-07	4.8E-01	µg/m^3	1.0E-01	mg/m^3	0.0048
Total - 300 Ferry										Total Cancer Risk	1.4E-05				Total Hazard Index	1.4
										Groundwater COC Cancer Risk	1.1E-05				Groundwater COC Hazard Index	0.69

Table E-7B
Calculation of COPC Cancer Risks and Noncancer Hazards - Indoor Air Exposure - Workers
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Receptor Population: Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Average Daily Concentration		Unit Risk		Cancer Risk	Average Daily Concentration		RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Air	Indoor Air	326 Ferry	Inhalation	1,1,1-Trichloroethane	0.5	µg/m^3	4.1E-02	µg/m^3	NA	---	NA	1.2E-01	µg/m^3	5.0E+00	mg/m^3	0.000023
				1,1,2-Trichloro-1,2,2-trifluoroethane	0.6	µg/m^3	4.9E-02	µg/m^3	NA	---	NA	1.4E-01	µg/m^3	3.0E+01	mg/m^3	0.0000046
				1,2,4-Trichlorobenzene	0.4	µg/m^3	3.3E-02	µg/m^3	NA	---	NA	9.2E-02	µg/m^3	2.0E-03	mg/m^3	0.046
				1,2,4-Trimethylbenzene	1.4	µg/m^3	1.2E-01	µg/m^3	NA	---	NA	3.2E-01	µg/m^3	7.0E-03	mg/m^3	0.046
				1,3,5-Trimethylbenzene	0.54	µg/m^3	4.4E-02	µg/m^3	NA	---	NA	1.2E-01	µg/m^3	NA	---	---
				1,3-Butadine	0.4	µg/m^3	3.3E-02	µg/m^3	3.0E-05	(µg/m^3)$^{-1}$	9.9E-07	9.2E-02	µg/m^3	2.0E-03	mg/m^3	0.046
				2-Butanone	1.7	µg/m^3	1.4E-01	µg/m^3	NA	---	NA	3.9E-01	µg/m^3	5.0E+00	mg/m^3	0.000078
				4-Ethyltoluene	1.4	µg/m^3	1.2E-01	µg/m^3	NA	---	NA	3.2E-01	µg/m^3	NA	---	---
				4-Methyl-2-Pentanone	0.2	µg/m^3	1.6E-02	µg/m^3	NA	---	NA	4.6E-02	µg/m^3	3.0E+00	mg/m^3	0.000015
				Benzene	2.2	µg/m^3	1.8E-01	µg/m^3	7.8E-06	(µg/m^3)$^{-1}$	1.4E-06	5.1E-01	µg/m^3	3.0E-02	mg/m^3	0.017
				Carbon Tetrachloride	0.5	µg/m^3	4.1E-02	µg/m^3	6.0E-06	(µg/m^3)$^{-1}$	2.5E-07	1.2E-01	µg/m^3	1.0E-01	mg/m^3	0.0012
				Chloroform	2	µg/m^3	1.6E-01	µg/m^3	2.3E-05	(µg/m^3)$^{-1}$	3.8E-06	4.6E-01	µg/m^3	9.8E-02	mg/m^3	0.0047
				Chloromethane	0.97	µg/m^3	8.0E-02	µg/m^3	NA	---	NA	2.2E-01	µg/m^3	9.0E-02	mg/m^3	0.0025
				Cyclohexane	1.3	µg/m^3	1.1E-01	µg/m^3	NA	---	NA	3.0E-01	µg/m^3	6.0E+00	mg/m^3	0.000050
				Dichlorodifluoromethane	3.2	µg/m^3	2.6E-01	µg/m^3	NA	---	NA	7.4E-01	µg/m^3	1.0E-01	mg/m^3	0.0074
				Ethylbenzene	1.1	µg/m^3	9.0E-02	µg/m^3	2.5E-06	(µg/m^3)$^{-1}$	2.3E-07	2.5E-01	µg/m^3	1.0E+00	mg/m^3	0.00025
				Hexane	20	µg/m^3	1.6E+00	µg/m^3	NA	---	NA	4.6E+00	µg/m^3	7.0E-01	mg/m^3	0.0066
				m,p-Xylene	3.4	µg/m^3	2.8E-01	µg/m^3	NA	---	NA	7.8E-01	µg/m^3	1.0E-01	mg/m^3	0.0078
				Methylene Chloride	5.1	µg/m^3	4.2E-01	µg/m^3	1.0E-08	(µg/m^3)$^{-1}$	4.2E-09	1.2E+00	µg/m^3	6.0E-01	mg/m^3	0.0020
				o-Xylene	1.3	µg/m^3	1.1E-01	µg/m^3	NA	---	NA	3.0E-01	µg/m^3	1.0E-01	mg/m^3	0.0030
				Styrene	2.7	µg/m^3	2.2E-01	µg/m^3	NA	---	NA	6.2E-01	µg/m^3	1.0E+00	mg/m^3	0.00062
				Tetrachloroethene	1.2	µg/m^3	9.9E-02	µg/m^3	2.6E-07	(µg/m^3)$^{-1}$	2.6E-08	2.8E-01	µg/m^3	4.0E-02	mg/m^3	0.0069
				Toluene	5.6	µg/m^3	4.6E-01	µg/m^3	NA	---	NA	1.3E+00	µg/m^3	5.0E+00	mg/m^3	0.00026
				Trichloroethene	0.2	µg/m^3	1.6E-02	µg/m^3	4.1E-06	(µg/m^3)$^{-1}$	6.7E-08	4.6E-02	µg/m^3	2.0E-03	mg/m^3	0.023
				Trichlorofluoromethane	1.1	µg/m^3	9.0E-02	µg/m^3	NA	---	NA	2.5E-01	µg/m^3	7.0E-01	mg/m^3	0.00036
Total - 326 Ferry							Total Cancer Risk				6.7E-06	Total Hazard Index				0.22
							Groundwater COC Cancer Risk				5.5E-06	Groundwater COC Hazard Index				0.045

Table E-7B
Calculation of COPC Cancer Risks and Noncancer Hazards - Indoor Air Exposure - Workers
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Receptor Population: Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Average Daily Concentration		Unit Risk		Cancer Risk	Average Daily Concentration		RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Air	Indoor Air	335 Ferry	Inhalation	1,1,1-Trichloroethane	0.6	µg/m^3	4.9E-02	µg/m^3	NA	---	NA	1.4E-01	µg/m^3	5.0E+00	mg/m^3	0.000028
				1,2,4-Trimethylbenzene	0.79	µg/m^3	6.5E-02	µg/m^3	NA	---	NA	1.8E-01	µg/m^3	7.0E-03	mg/m^3	0.026
				2-Butanone	0.8	µg/m^3	6.6E-02	µg/m^3	NA	---	NA	1.8E-01	µg/m^3	5.0E+00	mg/m^3	0.000037
				4-Ethyltoluene	0.59	µg/m^3	4.8E-02	µg/m^3	NA	---	NA	1.4E-01	µg/m^3	NA	---	---
				Benzene	1.5	µg/m^3	1.2E-01	µg/m^3	7.8E-06	(µg/m^3)$^{-1}$	9.6E-07	3.5E-01	µg/m^3	3.0E-02	mg/m^3	0.012
				Chloromethane	1.2	µg/m^3	9.9E-02	µg/m^3	NA	---	NA	2.8E-01	µg/m^3	9.0E-02	mg/m^3	0.0031
				Cyclohexane	0.79	µg/m^3	6.5E-02	µg/m^3	NA	---	NA	1.8E-01	µg/m^3	6.0E+00	mg/m^3	0.000030
				Dichlorodifluoromethane	2.6	µg/m^3	2.1E-01	µg/m^3	NA	---	NA	6.0E-01	µg/m^3	1.0E-01	mg/m^3	0.0060
				Ethylbenzene	0.87	µg/m^3	7.2E-02	µg/m^3	2.5E-06	(µg/m^3)$^{-1}$	1.8E-07	2.0E-01	µg/m^3	1.0E+00	mg/m^3	0.00020
				Hexane	7	µg/m^3	5.8E-01	µg/m^3	NA	---	NA	1.6E+00	µg/m^3	7.0E-01	mg/m^3	0.0023
				m,p-Xylene	3.6	µg/m^3	3.0E-01	µg/m^3	NA	---	NA	8.3E-01	µg/m^3	1.0E-01	mg/m^3	0.0083
				Methylene Chloride	1.2	µg/m^3	9.9E-02	µg/m^3	1.0E-08	(µg/m^3)$^{-1}$	9.9E-10	2.8E-01	µg/m^3	6.0E-01	mg/m^3	0.00046
				o-Xylene	1	µg/m^3	8.2E-02	µg/m^3	NA	---	NA	2.3E-01	µg/m^3	1.0E-01	mg/m^3	0.0023
				Toluene	7.2	µg/m^3	5.9E-01	µg/m^3	NA	---	NA	1.7E+00	µg/m^3	5.0E+00	mg/m^3	0.00033
				Trichlorofluoromethane	3.1	µg/m^3	2.5E-01	µg/m^3	NA	---	NA	7.1E-01	µg/m^3	7.0E-01	mg/m^3	0.0010
Total - 335 Ferry										Total Cancer Risk	1.1E-06				Total Hazard Index	0.062
										Groundwater COC Cancer Risk	1.1E-06				Groundwater COC Hazard Index	0.012

Table E-7B
Calculation of COPC Cancer Risks and Noncancer Hazards - Indoor Air Exposure - Workers
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Receptor Population: Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Average Daily Concentration		Unit Risk		Cancer Risk	Average Daily Concentration		RfC		Hazard
							Value	Units	Value	Units		Value	Units	Value	Units	Quotient
Air	Indoor Air	444 Ferry	Inhalation	1,1,1-Trichloroethane	1.5	µg/m^3	1.2E-01	µg/m^3	NA	---	NA	3.5E-01	µg/m^3	5.0E+00	mg/m^3	0.000069
				1,1,2-Trichloro-1,2,2-trifluoroethane	0.4	µg/m^3	3.3E-02	µg/m^3	NA	---	NA	9.2E-02	µg/m^3	3.0E+01	mg/m^3	0.0000031
				1,2,4-Trimethylbenzene	5.2	µg/m^3	4.3E-01	µg/m^3	NA	---	NA	1.2E+00	µg/m^3	7.0E-03	mg/m^3	0.17
				1,3,5-Trimethylbenzene	3.7	µg/m^3	3.0E-01	µg/m^3	NA	---	NA	8.5E-01	µg/m^3	NA	---	---
				1,3-Butadine	0.2	µg/m^3	1.6E-02	µg/m^3	3.0E-05	(µg/m^3)$^{-1}$	4.9E-07	4.6E-02	µg/m^3	2.0E-03	mg/m^3	0.023
				2-Butanone	4.5	µg/m^3	3.7E-01	µg/m^3	NA	---	NA	1.0E+00	µg/m^3	5.0E+00	mg/m^3	0.00021
				4-Ethyltoluene	10	µg/m^3	8.2E-01	µg/m^3	NA	---	NA	2.3E+00	µg/m^3	NA	---	---
				4-Methyl-2-Pentanone	0.2	µg/m^3	1.6E-02	µg/m^3	NA	---	NA	4.6E-02	µg/m^3	3.0E+00	mg/m^3	0.000015
				Benzene	1.4	µg/m^3	1.2E-01	µg/m^3	7.8E-06	(µg/m^3)$^{-1}$	9.0E-07	3.2E-01	µg/m^3	3.0E-02	mg/m^3	0.011
				Carbon Tetrachloride	0.82	µg/m^3	6.7E-02	µg/m^3	6.0E-06	(µg/m^3)$^{-1}$	4.0E-07	1.9E-01	µg/m^3	1.0E-01	mg/m^3	0.0019
				Chloroform	0.88	µg/m^3	7.2E-02	µg/m^3	2.3E-05	(µg/m^3)$^{-1}$	1.7E-06	2.0E-01	µg/m^3	9.8E-02	mg/m^3	0.0021
				Chloromethane	0.81	µg/m^3	6.7E-02	µg/m^3	NA	---	NA	1.9E-01	µg/m^3	9.0E-02	mg/m^3	0.0021
				Cyclohexane	1.2	µg/m^3	9.9E-02	µg/m^3	NA	---	NA	2.8E-01	µg/m^3	6.0E+00	mg/m^3	0.000046
				Dichlorodifluoromethane	2.4	µg/m^3	2.0E-01	µg/m^3	NA	---	NA	5.5E-01	µg/m^3	1.0E-01	mg/m^3	0.0055
				Ethylbenzene	1.3	µg/m^3	1.1E-01	µg/m^3	2.5E-06	(µg/m^3)$^{-1}$	2.7E-07	3.0E-01	µg/m^3	1.0E+00	mg/m^3	0.00030
				Hexane	22	µg/m^3	1.8E+00	µg/m^3	NA	---	NA	5.1E+00	µg/m^3	7.0E-01	mg/m^3	0.0072
				m,p-Xylene	3.2	µg/m^3	2.6E-01	µg/m^3	NA	---	NA	7.4E-01	µg/m^3	1.0E-01	mg/m^3	0.0074
				Methylene Chloride	12	µg/m^3	9.9E-01	µg/m^3	1.0E-08	(µg/m^3)$^{-1}$	9.9E-09	2.8E+00	µg/m^3	6.0E-01	mg/m^3	0.0046
				o-Xylene	2.4	µg/m^3	2.0E-01	µg/m^3	NA	---	NA	5.5E-01	µg/m^3	1.0E-01	mg/m^3	0.0055
				Styrene	0.51	µg/m^3	4.2E-02	µg/m^3	NA	---	NA	1.2E-01	µg/m^3	1.0E+00	mg/m^3	0.00012
				Tetrachloroethene	0.5	µg/m^3	4.1E-02	µg/m^3	2.6E-07	(µg/m^3)$^{-1}$	1.1E-08	1.2E-01	µg/m^3	4.0E-02	mg/m^3	0.0029
				Toluene	11	µg/m^3	9.0E-01	µg/m^3	NA	---	NA	2.5E+00	µg/m^3	5.0E+00	mg/m^3	0.00051
				Trichlorofluoromethane	1.2	µg/m^3	9.9E-02	µg/m^3	NA	---	NA	2.8E-01	µg/m^3	7.0E-01	mg/m^3	0.00039
Total - 444 Ferry										Total Cancer Risk	3.7E-06				Total Hazard Index	0.25
										Groundwater COC Cancer Risk	2.8E-06				Groundwater COC Hazard Index	0.013

Table E-7B
Calculation of COPC Cancer Risks and Noncancer Hazards - Indoor Air Exposure - Workers
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Receptor Population: Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Average Daily Concentration		Unit Risk		Cancer Risk	Average Daily Concentration		RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Air	Indoor Air	500 Ferry	Inhalation	1,1,2-Trichloro-1,2,2-trifluoroethane	0.5	µg/m^3	4.1E-02	µg/m^3	NA	---	NA	1.2E-01	µg/m^3	3.0E+01	mg/m^3	0.0000038
				1,2,4-Trichlorobenzene	0.45	µg/m^3	3.7E-02	µg/m^3	NA	---	NA	1.0E-01	µg/m^3	2.0E-03	mg/m^3	0.052
				1,2,4-Trimethylbenzene	18	µg/m^3	1.5E+00	µg/m^3	NA	---	NA	4.1E+00	µg/m^3	7.0E-03	mg/m^3	0.59
				1,3,5-Trimethylbenzene	5	µg/m^3	4.1E-01	µg/m^3	NA	---	NA	1.2E+00	µg/m^3	NA	---	---
				1,3-Butadine	0.1	µg/m^3	8.2E-03	µg/m^3	3.0E-05	(µg/m^3)$^{-1}$	2.5E-07	2.3E-02	µg/m^3	2.0E-03	mg/m^3	0.012
				2-Butanone	0.29	µg/m^3	2.4E-02	µg/m^3	NA	---	NA	6.7E-02	µg/m^3	5.0E+00	mg/m^3	0.000013
				4-Ethyltoluene	19	µg/m^3	1.6E+00	µg/m^3	NA	---	NA	4.4E+00	µg/m^3	NA	---	---
				Benzene	19	µg/m^3	1.6E+00	µg/m^3	7.8E-06	(µg/m^3)$^{-1}$	1.2E-05	4.4E+00	µg/m^3	3.0E-02	mg/m^3	0.15
				Carbon Tetrachloride	0.46	µg/m^3	3.8E-02	µg/m^3	6.0E-06	(µg/m^3)$^{-1}$	2.3E-07	1.1E-01	µg/m^3	1.0E-01	mg/m^3	0.0011
				Chloroform	0.78	µg/m^3	6.4E-02	µg/m^3	2.3E-05	(µg/m^3)$^{-1}$	1.5E-06	1.8E-01	µg/m^3	9.8E-02	mg/m^3	0.0018
				Chloromethane	0.91	µg/m^3	7.5E-02	µg/m^3	NA	---	NA	2.1E-01	µg/m^3	9.0E-02	mg/m^3	0.0023
				Cyclohexane	9.6	µg/m^3	7.9E-01	µg/m^3	NA	---	NA	2.2E+00	µg/m^3	6.0E+00	mg/m^3	0.00037
				Dichlorodifluoromethane	2.5	µg/m^3	2.1E-01	µg/m^3	NA	---	NA	5.8E-01	µg/m^3	1.0E-01	mg/m^3	0.0058
				Ethylbenzene	20	µg/m^3	1.6E+00	µg/m^3	2.5E-06	(µg/m^3)$^{-1}$	4.1E-06	4.6E+00	µg/m^3	1.0E+00	mg/m^3	0.0046
				Hexachlorobutadiene	0.56	µg/m^3	4.6E-02	µg/m^3	2.2E-05	(µg/m^3)$^{-1}$	1.0E-06	1.3E-01	µg/m^3	NA	---	---
				Hexane	74	µg/m^3	6.1E+00	µg/m^3	NA	---	NA	1.7E+01	µg/m^3	7.0E-01	mg/m^3	0.024
				m,p-Xylene	58	µg/m^3	4.8E+00	µg/m^3	NA	---	NA	1.3E+01	µg/m^3	1.0E-01	mg/m^3	0.13
				Methylene Chloride	2.25	µg/m^3	1.8E-01	µg/m^3	1.0E-08	(µg/m^3)$^{-1}$	1.8E-09	5.2E-01	µg/m^3	6.0E-01	mg/m^3	0.00086
				n-Heptane	37	µg/m^3	3.0E+00	µg/m^3	NA	---	NA	8.5E+00	µg/m^3	NA	---	---
				o-Xylene	20	µg/m^3	1.6E+00	µg/m^3	NA	---	NA	4.6E+00	µg/m^3	1.0E-01	mg/m^3	0.046
				Toluene	140	µg/m^3	1.2E+01	µg/m^3	NA	---	NA	3.2E+01	µg/m^3	5.0E+00	mg/m^3	0.0064
				Trichloroethene	0.27	µg/m^3	2.2E-02	µg/m^3	4.1E-06	(µg/m^3)$^{-1}$	9.1E-08	6.2E-02	µg/m^3	2.0E-03	mg/m^3	0.031
				Trichlorofluoromethane	1.08	µg/m^3	8.9E-02	µg/m^3	NA	---	NA	2.5E-01	µg/m^3	7.0E-01	mg/m^3	0.00036
Total - 500 Ferry										Total Cancer Risk	1.9E-05				Total Hazard Index	1.1
										Groundwater COC Cancer Risk	1.8E-05				Groundwater COC Hazard Index	0.18

Table E-7B
Calculation of COPC Cancer Risks and Noncancer Hazards - Indoor Air Exposure - Workers
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Receptor Population: Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Average Daily Concentration		Unit Risk		Cancer Risk	Average Daily Concentration		RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Air	Indoor Air	608 Ferry	Inhalation	1,1,1-Trichloroethane	2.6	µg/m^3	2.1E-01	µg/m^3	NA	---	NA	6.0E-01	µg/m^3	5.0E+00	mg/m^3	0.00012
				1,1,2-Trichloro-1,2,2-trifluoroethane	0.43	µg/m^3	3.5E-02	µg/m^3	NA	---	NA	9.9E-02	µg/m^3	3.0E+01	mg/m^3	0.0000033
				1,1-Dichloroethane	0.22	µg/m^3	1.8E-02	µg/m^3	1.6E-06	(µg/m^3)$^{-1}$	2.9E-08	5.1E-02	µg/m^3	NA	---	---
				2-Butanone	1	µg/m^3	8.2E-02	µg/m^3	NA	---	NA	2.3E-01	µg/m^3	5.0E+00	mg/m^3	0.000046
				4-Ethyltoluene	0.26	µg/m^3	2.1E-02	µg/m^3	NA	---	NA	6.0E-02	µg/m^3	NA	---	---
				Benzene	0.61	µg/m^3	5.0E-02	µg/m^3	7.8E-06	(µg/m^3)$^{-1}$	3.9E-07	1.4E-01	µg/m^3	3.0E-02	mg/m^3	0.0047
				Carbon Tetrachloride	0.4	µg/m^3	3.3E-02	µg/m^3	6.0E-06	(µg/m^3)$^{-1}$	2.0E-07	9.2E-02	µg/m^3	1.0E-01	mg/m^3	0.00092
				Chloromethane	0.81	µg/m^3	6.7E-02	µg/m^3	NA	---	NA	1.9E-01	µg/m^3	9.0E-02	mg/m^3	0.0021
				Dichlorodifluoromethane	2.95	µg/m^3	2.4E-01	µg/m^3	NA	---	NA	6.8E-01	µg/m^3	1.0E-01	mg/m^3	0.0068
				Hexane	8.2	µg/m^3	6.7E-01	µg/m^3	NA	---	NA	1.9E+00	µg/m^3	7.0E-01	mg/m^3	0.0027
				m,p-Xylene	0.48	µg/m^3	3.9E-02	µg/m^3	NA	---	NA	1.1E-01	µg/m^3	1.0E-01	mg/m^3	0.0011
				Methylene Chloride	5	µg/m^3	4.1E-01	µg/m^3	1.0E-08	(µg/m^3)$^{-1}$	4.1E-09	1.2E+00	µg/m^3	6.0E-01	mg/m^3	0.0019
				o-Xylene	0.18	µg/m^3	1.5E-02	µg/m^3	NA	---	NA	4.1E-02	µg/m^3	1.0E-01	mg/m^3	0.00041
				Tetrahydrofuran	0.72	µg/m^3	5.9E-02	µg/m^3	NA	---	NA	1.7E-01	µg/m^3	2.0E+00	mg/m^3	0.000083
				Toluene	0.95	µg/m^3	7.8E-02	µg/m^3	NA	---	NA	2.2E-01	µg/m^3	5.0E+00	mg/m^3	0.000044
				Trichloroethene	1.3	µg/m^3	1.1E-01	µg/m^3	4.1E-06	(µg/m^3)$^{-1}$	4.4E-07	3.0E-01	µg/m^3	2.0E-03	mg/m^3	0.15
				Trichlorofluoromethane	1.1	µg/m^3	9.0E-02	µg/m^3	NA	---	NA	2.5E-01	µg/m^3	7.0E-01	mg/m^3	0.00036
Total - 608 Ferry							Total Cancer Risk				1.1E-06	Total Hazard Index				0.17
							Groundwater COC Cancer Risk				8.6E-07	Groundwater COC Hazard Index				0.15

Table E-7B
Calculation of COPC Cancer Risks and Noncancer Hazards - Indoor Air Exposure - Workers
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Receptor Population: Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Average Daily Concentration		Unit Risk		Cancer Risk	Average Daily Concentration		RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Air	Indoor Air	411 Barnum Fashionbug	Inhalation	1,1,1-Trichloroethane	0.61	µg/m^3	5.0E-02	µg/m^3	NA	---	NA	1.4E-01	µg/m^3	5.0E+00	mg/m^3	0.000028
				1,2,4-Trimethylbenzene	1.7	µg/m^3	1.4E-01	µg/m^3	NA	---	NA	3.9E-01	µg/m^3	7.0E-03	mg/m^3	0.056
				1,2-Dichloroethane	4.4	µg/m^3	3.6E-01	µg/m^3	2.6E-05	(µg/m^3)$^{-1}$	9.4E-06	1.0E+00	µg/m^3	7.0E-03	mg/m^3	0.15
				1,3,5-Trimethylbenzene	1	µg/m^3	8.2E-02	µg/m^3	NA	---	NA	2.3E-01	µg/m^3	NA	---	---
				2-Butanone	5.7	µg/m^3	4.7E-01	µg/m^3	NA	---	NA	1.3E+00	µg/m^3	5.0E+00	mg/m^3	0.00026
				4-Ethyltoluene	1.5	µg/m^3	1.2E-01	µg/m^3	NA	---	NA	3.5E-01	µg/m^3	NA	---	---
				Benzene	3.1	µg/m^3	2.5E-01	µg/m^3	7.8E-06	(µg/m^3)$^{-1}$	2.0E-06	7.1E-01	µg/m^3	3.0E-02	mg/m^3	0.024
				Carbon Tetrachloride	0.39	µg/m^3	3.2E-02	µg/m^3	6.0E-06	(µg/m^3)$^{-1}$	1.9E-07	9.0E-02	µg/m^3	1.0E-01	mg/m^3	0.00090
				Chloromethane	0.81	µg/m^3	6.7E-02	µg/m^3	NA	---	NA	1.9E-01	µg/m^3	9.0E-02	mg/m^3	0.0021
				Cyclohexane	2.2	µg/m^3	1.8E-01	µg/m^3	NA	---	NA	5.1E-01	µg/m^3	6.0E+00	mg/m^3	0.000084
				Dichlorodifluoromethane	5.9	µg/m^3	4.8E-01	µg/m^3	NA	---	NA	1.4E+00	µg/m^3	1.0E-01	mg/m^3	0.014
				Ethylbenzene	2.2	µg/m^3	1.8E-01	µg/m^3	2.5E-06	(µg/m^3)$^{-1}$	4.6E-07	5.2E-01	µg/m^3	1.0E+00	mg/m^3	0.00052
				Hexane	2.0	µg/m^3	1.7E-01	µg/m^3	NA	---	NA	4.7E-01	µg/m^3	7.0E-01	mg/m^3	0.00067
				m,p-Xylene	3.9	µg/m^3	3.2E-01	µg/m^3	NA	---	NA	8.9E-01	µg/m^3	1.0E-01	mg/m^3	0.0089
				Methylene Chloride	1.8	µg/m^3	1.4E-01	µg/m^3	1.0E-08	(µg/m^3)$^{-1}$	1.4E-09	4.0E-01	µg/m^3	6.0E-01	mg/m^3	0.00067
				o-Xylene	1.6	µg/m^3	1.3E-01	µg/m^3	NA	---	NA	3.7E-01	µg/m^3	1.0E-01	mg/m^3	0.0037
				Styrene	0.56	µg/m^3	4.6E-02	µg/m^3	NA	---	NA	1.3E-01	µg/m^3	1.0E+00	mg/m^3	0.00013
				Toluene	114	µg/m^3	9.4E+00	µg/m^3	NA	---	NA	2.6E+01	µg/m^3	5.0E+00	mg/m^3	0.0052
				Trichloroethene	1.3	µg/m^3	1.0E-01	µg/m^3	4.1E-06	(µg/m^3)$^{-1}$	4.2E-07	2.9E-01	µg/m^3	2.0E-03	mg/m^3	0.14
				Trichlorofluoromethane	19	µg/m^3	1.6E+00	µg/m^3	NA	---	NA	4.4E+00	µg/m^3	7.0E-01	mg/m^3	0.0062
Total - 411 Barnum - Fashionbug										Total Cancer Risk	1.3E-05				Total Hazard Index	0.41
										Groundwater COC Cancer Risk	2.9E-06				Groundwater COC Hazard Index	0.17

Table E-7B
Calculation of COPC Cancer Risks and Noncancer Hazards - Indoor Air Exposure - Workers
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Receptor Population: Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Average Daily Concentration		Unit Risk		Cancer Risk	Average Daily Concentration		RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Air	Indoor Air	411 Barnum Gamestop	Inhalation	1,2,4-Trimethylbenzene	0.44	µg/m^3	3.6E-02	µg/m^3	NA	---	NA	1.0E-01	µg/m^3	7.0E-03	mg/m^3	0.014
				1,2-Dichloroethane	0.41	µg/m^3	3.4E-02	µg/m^3	2.6E-05	(µg/m^3)$^{-1}$	8.8E-07	9.4E-02	µg/m^3	7.0E-03	mg/m^3	0.013
				1,3-Butadine	0.25	µg/m^3	2.1E-02	µg/m^3	3.0E-05	(µg/m^3)$^{-1}$	6.2E-07	5.8E-02	µg/m^3	2.0E-03	mg/m^3	0.029
				2-Butanone	11	µg/m^3	9.0E-01	µg/m^3	NA	---	NA	2.5E+00	µg/m^3	5.0E+00	mg/m^3	0.00051
				4-Ethyltoluene	0.55	µg/m^3	4.5E-02	µg/m^3	NA	---	NA	1.3E-01	µg/m^3	NA	---	---
				Benzene	1.9	µg/m^3	1.6E-01	µg/m^3	7.8E-06	(µg/m^3)$^{-1}$	1.2E-06	4.4E-01	µg/m^3	3.0E-02	mg/m^3	0.015
				Carbon Tetrachloride	0.38	µg/m^3	3.1E-02	µg/m^3	6.0E-06	(µg/m^3)$^{-1}$	1.9E-07	8.7E-02	µg/m^3	1.0E-01	mg/m^3	0.00087
				Chloromethane	0.83	µg/m^3	6.8E-02	µg/m^3	NA	---	NA	1.9E-01	µg/m^3	9.0E-02	mg/m^3	0.0021
				Cyclohexane	0.73	µg/m^3	6.0E-02	µg/m^3	NA	---	NA	1.7E-01	µg/m^3	6.0E+00	mg/m^3	0.000028
				Dichlorodifluoromethane	3.6	µg/m^3	3.0E-01	µg/m^3	NA	---	NA	8.3E-01	µg/m^3	1.0E-01	mg/m^3	0.0083
				Ethylbenzene	0.97	µg/m^3	8.0E-02	µg/m^3	2.5E-06	(µg/m^3)$^{-1}$	2.0E-07	2.2E-01	µg/m^3	1.0E+00	mg/m^3	0.00022
				Hexane	2.9	µg/m^3	2.3E-01	µg/m^3	NA	---	NA	6.6E-01	µg/m^3	7.0E-01	mg/m^3	0.00094
				m,p-Xylene	2.8	µg/m^3	2.3E-01	µg/m^3	NA	---	NA	6.4E-01	µg/m^3	1.0E-01	mg/m^3	0.0064
				Methylene Chloride	2.6	µg/m^3	2.1E-01	µg/m^3	1.0E-08	(µg/m^3)$^{-1}$	2.1E-09	6.0E-01	µg/m^3	6.0E-01	mg/m^3	0.0010
				o-Xylene	1.1	µg/m^3	9.0E-02	µg/m^3	NA	---	NA	2.5E-01	µg/m^3	1.0E-01	mg/m^3	0.0025
				Styrene	0.6	µg/m^3	4.9E-02	µg/m^3	NA	---	NA	1.4E-01	µg/m^3	1.0E+00	mg/m^3	0.00014
				Toluene	11	µg/m^3	9.2E-01	µg/m^3	NA	---	NA	2.6E+00	µg/m^3	5.0E+00	mg/m^3	0.00052
				Trichlorofluoromethane	3.3	µg/m^3	2.7E-01	µg/m^3	NA	---	NA	7.6E-01	µg/m^3	7.0E-01	mg/m^3	0.0011
Total - 411 Barnum - Gamestop										Total Cancer Risk	3.1E-06				Total Hazard Index	0.096
										Groundwater COC Cancer Risk	1.4E-06				Groundwater COC Hazard Index	0.015

Table E-7B
Calculation of COPC Cancer Risks and Noncancer Hazards - Indoor Air Exposure - Workers
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Receptor Population: Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Average Daily Concentration		Unit Risk		Cancer Risk	Average Daily Concentration		RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Air	Indoor Air	411 Barnum Marshalls	Inhalation	1,1,1-Trichloroethane	3.6	µg/m^3	3.0E-01	µg/m^3	NA	---	NA	8.4E-01	µg/m^3	5.0E+00	mg/m^3	0.00017
				1,1,2-Trichloro-1,2,2-trifluoroethane	0.47	µg/m^3	3.9E-02	µg/m^3	NA	---	NA	1.1E-01	µg/m^3	3.0E+01	mg/m^3	0.0000036
				1,2,4-Trimethylbenzene	1.3	µg/m^3	1.1E-01	µg/m^3	NA	---	NA	3.0E-01	µg/m^3	7.0E-03	mg/m^3	0.043
				1,2-Dichloroethane	6.1	µg/m^3	5.0E-01	µg/m^3	2.6E-05	(µg/m^3)$^{-1}$	1.3E-05	1.4E+00	µg/m^3	7.0E-03	mg/m^3	0.20
				1,2-Dichloropropane	2.3	µg/m^3	1.9E-01	µg/m^3	1.0E-05	(µg/m^3)$^{-1}$	1.9E-06	5.4E-01	µg/m^3	4.0E-03	mg/m^3	0.13
				1,3-Butadine	0.13	µg/m^3	1.1E-02	µg/m^3	3.0E-05	(µg/m^3)$^{-1}$	3.2E-07	3.0E-02	µg/m^3	2.0E-03	mg/m^3	0.015
				2-Butanone	5.0	µg/m^3	4.1E-01	µg/m^3	NA	---	NA	1.2E+00	µg/m^3	5.0E+00	mg/m^3	0.00023
				4-Ethyltoluene	1.2	µg/m^3	9.9E-02	µg/m^3	NA	---	NA	2.8E-01	µg/m^3	NA	---	---
				4-Methyl-2-Pentanone	0.21	µg/m^3	1.7E-02	µg/m^3	NA	---	NA	4.8E-02	µg/m^3	3.0E+00	mg/m^3	0.000016
				Benzene	2.8	µg/m^3	2.3E-01	µg/m^3	7.8E-06	(µg/m^3)$^{-1}$	1.8E-06	6.4E-01	µg/m^3	3.0E-02	mg/m^3	0.021
				Carbon Tetrachloride	0.41	µg/m^3	3.4E-02	µg/m^3	6.0E-06	(µg/m^3)$^{-1}$	2.0E-07	9.4E-02	µg/m^3	1.0E-01	mg/m^3	0.00094
				Chloromethane	1.1	µg/m^3	8.7E-02	µg/m^3	NA	---	NA	2.4E-01	µg/m^3	9.0E-02	mg/m^3	0.0027
				Cyclohexane	1.3	µg/m^3	1.1E-01	µg/m^3	NA	---	NA	3.0E-01	µg/m^3	6.0E+00	mg/m^3	0.000049
				Dichlorodifluoromethane	4.9	µg/m^3	4.0E-01	µg/m^3	NA	---	NA	1.1E+00	µg/m^3	1.0E-01	mg/m^3	0.011
				Ethylbenzene	2.9	µg/m^3	2.4E-01	µg/m^3	2.5E-06	(µg/m^3)$^{-1}$	6.0E-07	6.7E-01	µg/m^3	1.0E+00	mg/m^3	0.00067
				Hexane	1.9	µg/m^3	1.6E-01	µg/m^3	NA	---	NA	4.4E-01	µg/m^3	7.0E-01	mg/m^3	0.00063
				m,p-Xylene	5.8	µg/m^3	4.8E-01	µg/m^3	NA	---	NA	1.3E+00	µg/m^3	1.0E-01	mg/m^3	0.013
				Methylene Chloride	2.6	µg/m^3	2.1E-01	µg/m^3	1.0E-08	(µg/m^3)$^{-1}$	2.1E-09	6.0E-01	µg/m^3	6.0E-01	mg/m^3	0.0010
				o-Xylene	2.0	µg/m^3	1.7E-01	µg/m^3	NA	---	NA	4.6E-01	µg/m^3	1.0E-01	mg/m^3	0.0046
				Styrene	2.3	µg/m^3	1.9E-01	µg/m^3	NA	---	NA	5.3E-01	µg/m^3	1.0E+00	mg/m^3	0.00053
				Tetrachloroethene	0.53	µg/m^3	4.4E-02	µg/m^3	2.6E-07	(µg/m^3)$^{-1}$	1.1E-08	1.2E-01	µg/m^3	4.0E-02	mg/m^3	0.0030
				Tetrahydrofuran	2.5	µg/m^3	2.1E-01	µg/m^3	NA	---	NA	5.8E-01	µg/m^3	2.0E+00	mg/m^3	0.00029
				Toluene	209	µg/m^3	1.7E+01	µg/m^3	NA	---	NA	4.8E+01	µg/m^3	5.0E+00	mg/m^3	0.0096
				Trichloroethene	0.43	µg/m^3	3.5E-02	µg/m^3	4.1E-06	(µg/m^3)$^{-1}$	1.4E-07	9.9E-02	µg/m^3	2.0E-03	mg/m^3	0.049
				Trichlorofluoromethane	13	µg/m^3	1.1E+00	µg/m^3	NA	---	NA	3.0E+00	µg/m^3	7.0E-01	mg/m^3	0.0043
Total - 411 Barnum - Marshalls							Total Cancer Risk				1.8E-05	Total Hazard Index				0.52
							Groundwater COC Cancer Risk				2.5E-06	Groundwater COC Hazard Index				0.071

Table E-7B
Calculation of COPC Cancer Risks and Noncancer Hazards - Indoor Air Exposure - Workers
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Receptor Population: Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Average Daily Concentration		Unit Risk		Cancer Risk	Average Daily Concentration		RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Air	Indoor Air	411 Barnum McDonalds	Inhalation	1,1,1-Trichloroethane	2.7	µg/m^3	2.2E-01	µg/m^3	NA	---	NA	6.2E-01	µg/m^3	5.0E+00	mg/m^3	0.00012
				1,1,2-Trichloro-1,2,2-trifluoroethane	0.5	µg/m^3	4.1E-02	µg/m^3	NA	---	NA	1.2E-01	µg/m^3	3.0E+01	mg/m^3	0.0000038
				1,2,4-Trimethylbenzene	0.27	µg/m^3	2.2E-02	µg/m^3	NA	---	NA	6.2E-02	µg/m^3	7.0E-03	mg/m^3	0.0089
				1,3-Butadine	0.1	µg/m^3	8.2E-03	µg/m^3	3.0E-05	(µg/m^3)$^{-1}$	2.5E-07	2.3E-02	µg/m^3	2.0E-03	mg/m^3	0.012
				2-Butanone	1	µg/m^3	8.2E-02	µg/m^3	NA	---	NA	2.3E-01	µg/m^3	5.0E+00	mg/m^3	0.000046
				4-Ethyltoluene	0.31	µg/m^3	2.5E-02	µg/m^3	NA	---	NA	7.1E-02	µg/m^3	NA	---	---
				Benzene	1	µg/m^3	8.2E-02	µg/m^3	7.8E-06	(µg/m^3)$^{-1}$	6.4E-07	2.3E-01	µg/m^3	3.0E-02	mg/m^3	0.0077
				Carbon Tetrachloride	0.5	µg/m^3	4.1E-02	µg/m^3	6.0E-06	(µg/m^3)$^{-1}$	2.5E-07	1.2E-01	µg/m^3	1.0E-01	mg/m^3	0.0012
				Chloroform	1.4	µg/m^3	1.2E-01	µg/m^3	2.3E-05	(µg/m^3)$^{-1}$	2.6E-06	3.2E-01	µg/m^3	9.8E-02	mg/m^3	0.0033
				Chloromethane	0.8	µg/m^3	6.6E-02	µg/m^3	NA	---	NA	1.8E-01	µg/m^3	9.0E-02	mg/m^3	0.0020
				Dichlorodifluoromethane	2.2	µg/m^3	1.8E-01	µg/m^3	NA	---	NA	5.1E-01	µg/m^3	1.0E-01	mg/m^3	0.0051
				Ethylbenzene	0.3	µg/m^3	2.5E-02	µg/m^3	2.5E-06	(µg/m^3)$^{-1}$	6.2E-08	6.9E-02	µg/m^3	1.0E+00	mg/m^3	0.000069
				Hexane	4.3	µg/m^3	3.5E-01	µg/m^3	NA	---	NA	9.9E-01	µg/m^3	7.0E-01	mg/m^3	0.0014
				m,p-Xylene	0.7	µg/m^3	5.8E-02	µg/m^3	NA	---	NA	1.6E-01	µg/m^3	1.0E-01	mg/m^3	0.0016
				Methylene Chloride	1.3	µg/m^3	1.1E-01	µg/m^3	1.0E-08	(µg/m^3)$^{-1}$	1.1E-09	3.0E-01	µg/m^3	6.0E-01	mg/m^3	0.00050
				o-Xylene	0.3	µg/m^3	2.5E-02	µg/m^3	NA	---	NA	6.9E-02	µg/m^3	1.0E-01	mg/m^3	0.00069
				Tetrachloroethene	0.3	µg/m^3	2.5E-02	µg/m^3	2.6E-07	(µg/m^3)$^{-1}$	6.4E-09	6.9E-02	µg/m^3	4.0E-02	mg/m^3	0.0017
				Toluene	1.9	µg/m^3	1.6E-01	µg/m^3	NA	---	NA	4.4E-01	µg/m^3	5.0E+00	mg/m^3	0.000087
				Trichloroethene	1.1	µg/m^3	9.0E-02	µg/m^3	4.1E-06	(µg/m^3)$^{-1}$	3.7E-07	2.5E-01	µg/m^3	2.0E-03	mg/m^3	0.13
				Trichlorofluoromethane	1.1	µg/m^3	9.0E-02	µg/m^3	NA	---	NA	2.5E-01	µg/m^3	7.0E-01	mg/m^3	0.00036
				Vinyl Chloride	1	µg/m^3	8.2E-02	µg/m^3	4.4E-06	(µg/m^3)$^{-1}$	3.6E-07	2.3E-01	µg/m^3	1.0E-01	mg/m^3	0.0023
Total - 411 Barnum - McDonalds										Total Cancer Risk	4.6E-06				Total Hazard Index	0.18
										Groundwater COC Cancer Risk	4.1E-06				Groundwater COC Hazard Index	0.14

Table E-7B
Calculation of COPC Cancer Risks and Noncancer Hazards - Indoor Air Exposure - Workers
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Receptor Population: Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Average Daily Concentration		Unit Risk		Cancer Risk	Average Daily Concentration		RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Air	Indoor Air	411 Barnum Movie Theatre	Inhalation	1,1,1-Trichloroethane	2.0	µg/m^3	1.6E-01	µg/m^3	NA	---	NA	4.6E-01	µg/m^3	5.0E+00	mg/m^3	0.000091
				1,1,2-Trichloro-1,2,2-trifluoroethane	0.49	µg/m^3	4.0E-02	µg/m^3	NA	---	NA	1.1E-01	µg/m^3	3.0E+01	mg/m^3	0.0000038
				1,3-Butadine	0.1	µg/m^3	8.2E-03	µg/m^3	3.0E-05	(µg/m^3)$^{-1}$	2.5E-07	2.3E-02	µg/m^3	2.0E-03	mg/m^3	0.012
				1,4-Dichlorobenzene	0.84	µg/m^3	6.9E-02	µg/m^3	1.1E-05	(µg/m^3)$^{-1}$	7.6E-07	1.9E-01	µg/m^3	8.0E-01	mg/m^3	0.00024
				2-Butanone	1	µg/m^3	8.2E-02	µg/m^3	NA	---	NA	2.3E-01	µg/m^3	5.0E+00	mg/m^3	0.000046
				4-Ethyltoluene	0.27	µg/m^3	2.2E-02	µg/m^3	NA	---	NA	6.2E-02	µg/m^3	NA	---	---
				Benzene	1	µg/m^3	8.2E-02	µg/m^3	7.8E-06	(µg/m^3)$^{-1}$	6.4E-07	2.3E-01	µg/m^3	3.0E-02	mg/m^3	0.0077
				Carbon Tetrachloride	0.43	µg/m^3	3.5E-02	µg/m^3	6.0E-06	(µg/m^3)$^{-1}$	2.1E-07	9.9E-02	µg/m^3	1.0E-01	mg/m^3	0.00099
				Chloromethane	0.79	µg/m^3	6.5E-02	µg/m^3	NA	---	NA	1.8E-01	µg/m^3	9.0E-02	mg/m^3	0.0020
				Dichlorodifluoromethane	3.9	µg/m^3	3.2E-01	µg/m^3	NA	---	NA	9.0E-01	µg/m^3	1.0E-01	mg/m^3	0.0090
				Hexane	3.5	µg/m^3	2.9E-01	µg/m^3	NA	---	NA	8.1E-01	µg/m^3	7.0E-01	mg/m^3	0.0012
				m,p-Xylene	0.92	µg/m^3	7.6E-02	µg/m^3	NA	---	NA	2.1E-01	µg/m^3	1.0E-01	mg/m^3	0.0021
				Methylene Chloride	0.98	µg/m^3	8.1E-02	µg/m^3	1.0E-08	(µg/m^3)$^{-1}$	8.1E-10	2.3E-01	µg/m^3	6.0E-01	mg/m^3	0.00038
				o-Xylene	0.33	µg/m^3	2.7E-02	µg/m^3	NA	---	NA	7.6E-02	µg/m^3	1.0E-01	mg/m^3	0.00076
				Styrene	0.89	µg/m^3	7.3E-02	µg/m^3	NA	---	NA	2.0E-01	µg/m^3	1.0E+00	mg/m^3	0.00020
				Tetrachloroethene	0.49	µg/m^3	4.0E-02	µg/m^3	2.6E-07	(µg/m^3)$^{-1}$	1.0E-08	1.1E-01	µg/m^3	4.0E-02	mg/m^3	0.0028
				Toluene	3.4	µg/m^3	2.8E-01	µg/m^3	NA	---	NA	7.7E-01	µg/m^3	5.0E+00	mg/m^3	0.00015
				Trichlorofluoromethane	2.9	µg/m^3	2.4E-01	µg/m^3	NA	---	NA	6.7E-01	µg/m^3	7.0E-01	mg/m^3	0.00095
Total - 411 Barnum - Movie Theatre										Total Cancer Risk	1.9E-06				Total Hazard Index	0.040
										Groundwater COC Cancer Risk	6.4E-07				Groundwater COC Hazard Index	0.0077

Table E-7B
Calculation of COPC Cancer Risks and Noncancer Hazards - Indoor Air Exposure - Workers
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Receptor Population: Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Average Daily Concentration		Unit Risk		Cancer Risk	Average Daily Concentration		RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Air	Indoor Air	411 Barnum Payless	Inhalation	1,2,4-Trimethylbenzene	12	µg/m^3	9.9E-01	µg/m^3	NA	---	NA	2.8E+00	µg/m^3	7.0E-03	mg/m^3	0.40
				1,2-Dichloroethane	90	µg/m^3	7.4E+00	µg/m^3	2.6E-05	(µg/m^3)$^{-1}$	1.9E-04	2.1E+01	µg/m^3	7.0E-03	mg/m^3	3.0
				1,2-Dichloropropane	36	µg/m^3	2.9E+00	µg/m^3	1.0E-05	(µg/m^3)$^{-1}$	2.9E-05	8.2E+00	µg/m^3	4.0E-03	mg/m^3	2.0
				1,3,5-Trimethylbenzene	4.9	µg/m^3	4.0E-01	µg/m^3	NA	---	NA	1.1E+00	µg/m^3	NA	---	---
				2-Butanone	164	µg/m^3	1.3E+01	µg/m^3	NA	---	NA	3.8E+01	µg/m^3	5.0E+00	mg/m^3	0.0075
				4-Ethyltoluene	11	µg/m^3	8.8E-01	µg/m^3	NA	---	NA	2.5E+00	µg/m^3	NA	---	---
				Acrylonitrile	0.77	µg/m^3	6.3E-02	µg/m^3	6.8E-05	(µg/m^3)$^{-1}$	4.3E-06	1.8E-01	µg/m^3	2.0E-03	mg/m^3	0.089
				Benzene	24	µg/m^3	2.0E+00	µg/m^3	7.8E-06	(µg/m^3)$^{-1}$	1.5E-05	5.5E+00	µg/m^3	3.0E-02	mg/m^3	0.18
				Chloroform	1.1	µg/m^3	9.3E-02	µg/m^3	2.3E-05	(µg/m^3)$^{-1}$	2.1E-06	2.6E-01	µg/m^3	9.8E-02	mg/m^3	0.0027
				Chloromethane	1.2	µg/m^3	9.9E-02	µg/m^3	NA	---	NA	2.8E-01	µg/m^3	9.0E-02	mg/m^3	0.0031
				Cyclohexane	24	µg/m^3	2.0E+00	µg/m^3	NA	---	NA	5.5E+00	µg/m^3	6.0E+00	mg/m^3	0.00091
				Dichlorodifluoromethane	14	µg/m^3	1.2E+00	µg/m^3	NA	---	NA	3.2E+00	µg/m^3	1.0E-01	mg/m^3	0.032
				Ethylbenzene	50	µg/m^3	4.1E+00	µg/m^3	2.5E-06	(µg/m^3)$^{-1}$	1.0E-05	1.2E+01	µg/m^3	1.0E+00	mg/m^3	0.012
				Hexane	4.6	µg/m^3	3.7E-01	µg/m^3	NA	---	NA	1.0E+00	µg/m^3	7.0E-01	mg/m^3	0.0015
				m,p-Xylene	72	µg/m^3	5.9E+00	µg/m^3	NA	---	NA	1.7E+01	µg/m^3	1.0E-01	mg/m^3	0.17
				Methylene Chloride	12	µg/m^3	9.9E-01	µg/m^3	1.0E-08	(µg/m^3)$^{-1}$	9.9E-09	2.8E+00	µg/m^3	6.0E-01	mg/m^3	0.0046
				n-Heptane	58	µg/m^3	4.8E+00	µg/m^3	NA	---	NA	1.3E+01	µg/m^3	NA	---	---
				o-Xylene	35	µg/m^3	2.9E+00	µg/m^3	NA	---	NA	8.1E+00	µg/m^3	1.0E-01	mg/m^3	0.081
				Styrene	23	µg/m^3	1.9E+00	µg/m^3	NA	---	NA	5.3E+00	µg/m^3	1.0E+00	mg/m^3	0.0053
				Toluene	2930	µg/m^3	2.4E+02	µg/m^3	NA	---	NA	6.7E+02	µg/m^3	5.0E+00	mg/m^3	0.13
				Trichloroethene	5.8	µg/m^3	4.7E-01	µg/m^3	4.1E-06	(µg/m^3)$^{-1}$	1.9E-06	1.3E+00	µg/m^3	2.0E-03	mg/m^3	0.66
				Trichlorofluoromethane	51	µg/m^3	4.2E+00	µg/m^3	NA	---	NA	1.2E+01	µg/m^3	7.0E-01	mg/m^3	0.017
Total - 411 Barnum - Payless							Total Cancer Risk				2.6E-04	Total Hazard Index				6.8
							Groundwater COC Cancer Risk				3.0E-05	Groundwater COC Hazard Index				0.86

Table E-7B
Calculation of COPC Cancer Risks and Noncancer Hazards - Indoor Air Exposure - Workers
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Receptor Population: Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Average Daily Concentration		Unit Risk		Cancer Risk	Average Daily Concentration		RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Air	Indoor Air	411 Barnum Post Office	Inhalation	1,1,1-Trichloroethane	4.2	µg/m³	3.4E-01	µg/m³	NA	---	NA	9.6E-01	µg/m³	5.0E+00	mg/m³	0.00019
				1,1,2-Trichloro-1,2,2-trifluoroethane	0.4	µg/m³	3.3E-02	µg/m³	NA	---	NA	9.2E-02	µg/m³	3.0E+01	mg/m³	0.0000031
				1,2,4-Trimethylbenzene	1.7	µg/m³	1.4E-01	µg/m³	NA	---	NA	3.9E-01	µg/m³	7.0E-03	mg/m³	0.056
				1,2-Dichloroethane	0.36	µg/m³	3.0E-02	µg/m³	2.6E-05	(µg/m³)$^{-1}$	7.7E-07	8.3E-02	µg/m³	7.0E-03	mg/m³	0.012
				1,3,5-Trimethylbenzene	0.98	µg/m³	8.1E-02	µg/m³	NA	---	NA	2.3E-01	µg/m³	NA	---	---
				1,3-Butadine	0.13	µg/m³	1.1E-02	µg/m³	3.0E-05	(µg/m³)$^{-1}$	3.2E-07	3.0E-02	µg/m³	2.0E-03	mg/m³	0.015
				1,4-Dichlorobenzene	0.27	µg/m³	2.2E-02	µg/m³	1.1E-05	(µg/m³)$^{-1}$	2.4E-07	6.2E-02	µg/m³	8.0E-01	mg/m³	0.000078
				2-Butanone	6.2	µg/m³	5.1E-01	µg/m³	NA	---	NA	1.4E+00	µg/m³	5.0E+00	mg/m³	0.00029
				4-Ethyltoluene	1.4	µg/m³	1.2E-01	µg/m³	NA	---	NA	3.2E-01	µg/m³	NA	---	---
				Benzene	1.29	µg/m³	1.1E-01	µg/m³	7.8E-06	(µg/m³)$^{-1}$	8.3E-07	3.0E-01	µg/m³	3.0E-02	mg/m³	0.0099
				Carbon Tetrachloride	0.38	µg/m³	3.1E-02	µg/m³	6.0E-06	(µg/m³)$^{-1}$	1.9E-07	8.7E-02	µg/m³	1.0E-01	mg/m³	0.00087
				Chloroform	1.1	µg/m³	9.3E-02	µg/m³	2.3E-05	(µg/m³)$^{-1}$	2.1E-06	2.6E-01	µg/m³	9.8E-02	mg/m³	0.0027
				Chloromethane	0.76	µg/m³	6.2E-02	µg/m³	NA	---	NA	1.7E-01	µg/m³	9.0E-02	mg/m³	0.0019
				Cyclohexane	0.9	µg/m³	7.4E-02	µg/m³	NA	---	NA	2.1E-01	µg/m³	6.0E+00	mg/m³	0.000035
				Dichlorodifluoromethane	3.1	µg/m³	2.5E-01	µg/m³	NA	---	NA	7.1E-01	µg/m³	1.0E-01	mg/m³	0.0071
				Ethylbenzene	0.56	µg/m³	4.6E-02	µg/m³	2.5E-06	(µg/m³)$^{-1}$	1.2E-07	1.3E-01	µg/m³	1.0E+00	mg/m³	0.00013
				Hexane	5.8	µg/m³	4.8E-01	µg/m³	NA	---	NA	1.3E+00	µg/m³	7.0E-01	mg/m³	0.0019
				m,p-Xylene	2.1	µg/m³	1.7E-01	µg/m³	NA	---	NA	4.7E-01	µg/m³	1.0E-01	mg/m³	0.0047
				Methylene Chloride	0.7	µg/m³	5.8E-02	µg/m³	1.0E-08	(µg/m³)$^{-1}$	5.8E-10	1.6E-01	µg/m³	6.0E-01	mg/m³	0.00027
				o-Xylene	0.7	µg/m³	5.8E-02	µg/m³	NA	---	NA	1.6E-01	µg/m³	1.0E-01	mg/m³	0.0016
				Styrene	0.4	µg/m³	3.3E-02	µg/m³	NA	---	NA	9.2E-02	µg/m³	1.0E+00	mg/m³	0.000092
				Toluene	15	µg/m³	1.2E+00	µg/m³	NA	---	NA	3.5E+00	µg/m³	5.0E+00	mg/m³	0.00069
				Trichloroethene	1.3	µg/m³	1.1E-01	µg/m³	4.1E-06	(µg/m³)$^{-1}$	4.4E-07	3.0E-01	µg/m³	2.0E-03	mg/m³	0.15
				Trichlorofluoromethane	6.7	µg/m³	5.5E-01	µg/m³	NA	---	NA	1.5E+00	µg/m³	7.0E-01	mg/m³	0.0022
Total - 411 Barnum - Post Office							Total Cancer Risk				5.0E-06	Total Hazard Index				0.27
							Groundwater COC Cancer Risk				3.5E-06	Groundwater COC Hazard Index				0.16

Table E-7B
Calculation of COPC Cancer Risks and Noncancer Hazards - Indoor Air Exposure - Workers
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Receptor Population: Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Average Daily Concentration		Unit Risk		Cancer Risk	Average Daily Concentration		RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Air	Indoor Air	411 Barnum Sally's Beauty	Inhalation	1,2,4-Trimethylbenzene	1.1	µg/m³	9.4E-02	µg/m³	NA	---	NA	2.6E-01	µg/m³	7.0E-03	mg/m³	0.037
				1,3,5-Trimethylbenzene	0.4	µg/m³	3.3E-02	µg/m³	NA	---	NA	9.2E-02	µg/m³	NA	---	---
				2-Butanone	77	µg/m³	6.3E+00	µg/m³	NA	---	NA	1.8E+01	µg/m³	5.0E+00	mg/m³	0.0035
				4-Ethyltoluene	1.0	µg/m³	8.5E-02	µg/m³	NA	---	NA	2.4E-01	µg/m³	NA	---	---
				Acrylonitrile	0.31	µg/m³	2.5E-02	µg/m³	6.8E-05	$(\mu g/m^3)^{-1}$	1.7E-06	7.1E-02	µg/m³	2.0E-03	mg/m³	0.036
				Benzene	1.9	µg/m³	1.6E-01	µg/m³	7.8E-06	$(\mu g/m^3)^{-1}$	1.2E-06	4.5E-01	µg/m³	3.0E-02	mg/m³	0.015
				Chloromethane	1.1	µg/m³	9.0E-02	µg/m³	NA	---	NA	2.5E-01	µg/m³	9.0E-02	mg/m³	0.0028
				Cyclohexane	1	µg/m³	8.2E-02	µg/m³	NA	---	NA	2.3E-01	µg/m³	6.0E+00	mg/m³	0.000038
				Dichlorodifluoromethane	3.9	µg/m³	3.2E-01	µg/m³	NA	---	NA	9.0E-01	µg/m³	1.0E-01	mg/m³	0.0090
				Ethylbenzene	1.4	µg/m³	1.1E-01	µg/m³	2.5E-06	$(\mu g/m^3)^{-1}$	2.8E-07	3.1E-01	µg/m³	1.0E+00	mg/m³	0.00031
				Hexane	2.7	µg/m³	2.2E-01	µg/m³	NA	---	NA	6.2E-01	µg/m³	7.0E-01	mg/m³	0.00089
				m,p-Xylene	3.1	µg/m³	2.5E-01	µg/m³	NA	---	NA	7.1E-01	µg/m³	1.0E-01	mg/m³	0.0071
				Methylene Chloride	3.8	µg/m³	3.1E-01	µg/m³	1.0E-08	$(\mu g/m^3)^{-1}$	3.1E-09	8.7E-01	µg/m³	6.0E-01	mg/m³	0.0015
				n-Heptane	27	µg/m³	2.2E+00	µg/m³	NA	---	NA	6.2E+00	µg/m³	NA	---	---
				o-Xylene	1.3	µg/m³	1.1E-01	µg/m³	NA	---	NA	3.0E-01	µg/m³	1.0E-01	mg/m³	0.0030
				Styrene	0.89	µg/m³	7.3E-02	µg/m³	NA	---	NA	2.0E-01	µg/m³	1.0E+00	mg/m³	0.00020
				Tetrahydrofuran	6	µg/m³	4.9E-01	µg/m³	NA	---	NA	1.4E+00	µg/m³	2.0E+00	mg/m³	0.00069
				Toluene	20	µg/m³	1.6E+00	µg/m³	NA	---	NA	4.6E+00	µg/m³	5.0E+00	mg/m³	0.00092
				Trichlorofluoromethane	4.9	µg/m³	4.0E-01	µg/m³	NA	---	NA	1.1E+00	µg/m³	7.0E-01	mg/m³	0.0016
Total - 411 Barnum - Sally's Beauty							Total Cancer Risk				3.3E-06	Total Hazard Index				0.12
							Groundwater COC Cancer Risk				1.5E-06	Groundwater COC Hazard Index				0.015

Table E-7B
Calculation of COPC Cancer Risks and Noncancer Hazards - Indoor Air Exposure - Workers
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Receptor Population: Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Average Daily Concentration		Unit Risk		Cancer Risk	Average Daily Concentration		RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Air	Indoor Air	411 Barnum Sleepy's	Inhalation	1,1,1-Trichloroethane	0.61	µg/m^3	5.0E-02	µg/m^3	NA	---	NA	1.4E-01	µg/m^3	5.0E+00	mg/m^3	0.000028
				1,2,4-Trimethylbenzene	3.1	µg/m^3	2.5E-01	µg/m^3	NA	---	NA	7.1E-01	µg/m^3	7.0E-03	mg/m^3	0.10
				1,2-Dichloroethane	7.4	µg/m^3	6.1E-01	µg/m^3	2.6E-05	(µg/m^3)$^{-1}$	1.6E-05	1.7E+00	µg/m^3	7.0E-03	mg/m^3	0.24
				1,2-Dichloropropane	6.2	µg/m^3	5.1E-01	µg/m^3	1.0E-05	(µg/m^3)$^{-1}$	5.1E-06	1.4E+00	µg/m^3	4.0E-03	mg/m^3	0.36
				1,3,5-Trimethylbenzene	1.8	µg/m^3	1.5E-01	µg/m^3	NA	---	NA	4.1E-01	µg/m^3	NA	---	---
				2-Butanone	13	µg/m^3	1.1E+00	µg/m^3	NA	---	NA	3.0E+00	µg/m^3	5.0E+00	mg/m^3	0.00061
				4-Ethyltoluene	3.2	µg/m^3	2.6E-01	µg/m^3	NA	---	NA	7.4E-01	µg/m^3	NA	---	---
				Benzene	3.2	µg/m^3	2.7E-01	µg/m^3	7.8E-06	(µg/m^3)$^{-1}$	2.1E-06	7.4E-01	µg/m^3	3.0E-02	mg/m^3	0.025
				Chloromethane	0.83	µg/m^3	6.8E-02	µg/m^3	NA	---	NA	1.9E-01	µg/m^3	9.0E-02	mg/m^3	0.0021
				Cyclohexane	2.2	µg/m^3	1.8E-01	µg/m^3	NA	---	NA	5.0E-01	µg/m^3	6.0E+00	mg/m^3	0.000084
				Dichlorodifluoromethane	19	µg/m^3	1.6E+00	µg/m^3	NA	---	NA	4.4E+00	µg/m^3	1.0E-01	mg/m^3	0.044
				Ethylbenzene	6.1	µg/m^3	5.0E-01	µg/m^3	2.5E-06	(µg/m^3)$^{-1}$	1.3E-06	1.4E+00	µg/m^3	1.0E+00	mg/m^3	0.0014
				Hexane	2.0	µg/m^3	1.7E-01	µg/m^3	NA	---	NA	4.7E-01	µg/m^3	7.0E-01	mg/m^3	0.00067
				m,p-Xylene	8.9	µg/m^3	7.3E-01	µg/m^3	NA	---	NA	2.0E+00	µg/m^3	1.0E-01	mg/m^3	0.020
				Methylene Chloride	6.1	µg/m^3	5.0E-01	µg/m^3	1.0E-08	(µg/m^3)$^{-1}$	5.0E-09	1.4E+00	µg/m^3	6.0E-01	mg/m^3	0.0023
				n-Heptane	11.8	µg/m^3	9.7E-01	µg/m^3	NA	---	NA	2.7E+00	µg/m^3	NA	---	---
				o-Xylene	4	µg/m^3	3.3E-01	µg/m^3	NA	---	NA	9.2E-01	µg/m^3	1.0E-01	mg/m^3	0.0092
				Styrene	2.1	µg/m^3	1.7E-01	µg/m^3	NA	---	NA	4.8E-01	µg/m^3	1.0E+00	mg/m^3	0.00048
				Toluene	320	µg/m^3	2.6E+01	µg/m^3	NA	---	NA	7.4E+01	µg/m^3	5.0E+00	mg/m^3	0.015
				Trichloroethene	13	µg/m^3	1.1E+00	µg/m^3	4.1E-06	(µg/m^3)$^{-1}$	4.4E-06	3.0E+00	µg/m^3	2.0E-03	mg/m^3	1.5
				Trichlorofluoromethane	78	µg/m^3	6.4E+00	µg/m^3	NA	---	NA	1.8E+01	µg/m^3	7.0E-01	mg/m^3	0.026
Total - 411 Barnum - Sleepy's										Total Cancer Risk	2.9E-05				Total Hazard Index	2.4
										Groundwater COC Cancer Risk	7.7E-06				Groundwater COC Hazard Index	1.5

Table E-7B
Calculation of COPC Cancer Risks and Noncancer Hazards - Indoor Air Exposure - Workers
Raymark - OU2 - Groundwater
Stratford, Connecticut

Scenario Timeframe: Current/Future
Receptor Population: Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Average Daily Concentration		Unit Risk		Cancer Risk	Average Daily Concentration		RfC		Hazard
							Value	Units	Value	Units		Value	Units	Value	Units	Quotient
Air	Indoor Air	411 Barnum	Inhalation	1,1,2-Trichloro-1,2,2-trifluoroethane	2.9	µg/m^3	2.4E-01	µg/m^3	NA	---	NA	6.8E-01	µg/m^3	3.0E+01	mg/m^3	0.000023
		T-Mobile		1,2-Dichloroethane	0.41	µg/m^3	3.4E-02	µg/m^3	2.6E-05	(µg/m^3)$^{-1}$	8.8E-07	9.4E-02	µg/m^3	7.0E-03	mg/m^3	0.013
				2-Butanone	3.7	µg/m^3	3.0E-01	µg/m^3	NA	---	NA	8.5E-01	µg/m^3	5.0E+00	mg/m^3	0.00017
				Benzene	1.55	µg/m^3	1.3E-01	µg/m^3	7.8E-06	(µg/m^3)$^{-1}$	9.9E-07	3.6E-01	µg/m^3	3.0E-02	mg/m^3	0.012
				Chloromethane	0.93	µg/m^3	7.6E-02	µg/m^3	NA	---	NA	2.1E-01	µg/m^3	9.0E-02	mg/m^3	0.0024
				Dichlorodifluoromethane	3.4	µg/m^3	2.8E-01	µg/m^3	NA	---	NA	7.8E-01	µg/m^3	1.0E-01	mg/m^3	0.0078
				Ethylbenzene	0.66	µg/m^3	5.4E-02	µg/m^3	2.5E-06	(µg/m^3)$^{-1}$	1.4E-07	1.5E-01	µg/m^3	1.0E+00	mg/m^3	0.00015
				Hexane	1.7	µg/m^3	1.4E-01	µg/m^3	NA	---	NA	4.0E-01	µg/m^3	7.0E-01	mg/m^3	0.00057
				m,p-Xylene	1.8	µg/m^3	1.4E-01	µg/m^3	NA	---	NA	4.0E-01	µg/m^3	1.0E-01	mg/m^3	0.0040
				Methylene Chloride	2.0	µg/m^3	1.6E-01	µg/m^3	1.0E-08	(µg/m^3)$^{-1}$	1.6E-09	4.5E-01	µg/m^3	6.0E-01	mg/m^3	0.00076
				o-Xylene	0.61	µg/m^3	5.0E-02	µg/m^3	NA	---	NA	1.4E-01	µg/m^3	1.0E-01	mg/m^3	0.0014
				Styrene	0.99	µg/m^3	8.1E-02	µg/m^3	NA	---	NA	2.3E-01	µg/m^3	1.0E+00	mg/m^3	0.00023
				Toluene	11	µg/m^3	9.0E-01	µg/m^3	NA	---	NA	2.5E+00	µg/m^3	5.0E+00	mg/m^3	0.00051
				Trichloroethene	2.7	µg/m^3	2.2E-01	µg/m^3	4.1E-06	(µg/m^3)$^{-1}$	9.1E-07	6.2E-01	µg/m^3	2.0E-03	mg/m^3	0.31
				Trichlorofluoromethane	4.3	µg/m^3	3.5E-01	µg/m^3	NA	---	NA	9.9E-01	µg/m^3	7.0E-01	mg/m^3	0.0014
Total - 411 Barnum - T-Mobile										Total Cancer Risk	2.9E-06				Total Hazard Index	0.36
										Groundwater COC Cancer Risk	2.0E-06				Groundwater COC Hazard Index	0.32

COPC - Contaminant of Potential Concern

EPC - Exposure Point Concentration

RfC - Reference Concentration

NA- Not Available

Groundwater COCs = Contaminants of concern based on industrial/commercial worker risks exceeding 1x10^{-6} or Hazard Quotient of 1.0 determined by modelling potential indoor air risks from maximum shallow groundwater data. These COCs are: 1,1-dichloroethane, trichloroethene chloride, benzene, chlorobenzene, chloroform, and ethylbenzene.

APPENDIX F

Interdepartmental Memo Report

To: Ronald Curran, Environmental Analyst 3
Remediation Division/Southwestern District
Bureau of Water Protection and Land Reuse
Connecticut Department of Energy and Environmental Protection

From: Timothy Baird, Environmental Analyst 2
Site Assessment and Support Unit
Emergency Response and Spill Prevention Division
Bureau of Materials Management and Compliance Assurance
Connecticut Department of Energy and Environmental Protection

Date: August 6, 2014

RE: Limited Subsurface Investigation @ 734 Ferry Boulevard, Stratford, CT
SASU Project #: SAS-12-0033

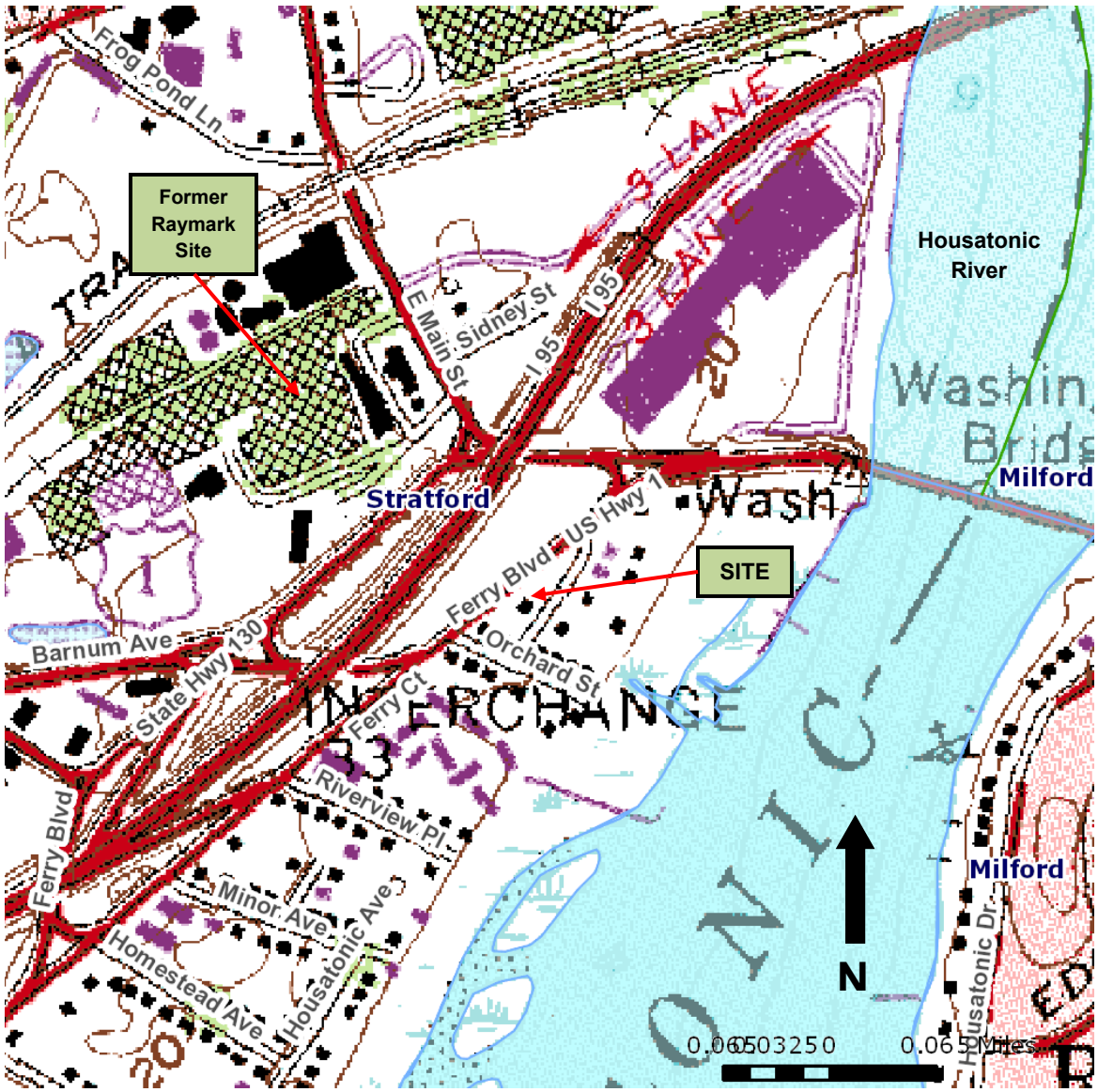


Figure 1, Site Location Map

Background:

The EPA installed numerous monitoring wells (MWs) in the area due to recent investigation and/or remedial activities performed at and around the former Raymark Industries Superfund site, which is located NW of the site (see Figure 1). Two of these MWs, MW-604S (shallow) and MW-604D (deep), were installed in the town's right-of-way near the southwest corner of 734 Ferry Boulevard property (see Figure 2). EPA-funded consultants collected groundwater (GW) samples from MW-604S/D in April & August 2012 and reported the presence of many volatile organic compounds (VOCs) including benzene, MTBE (gasoline compounds), and chlorobenzne (a common auto parts washer), at relatively high concentrations. Some metals and other compounds were also detected. Due to their previous knowledge of constituents of concern and plume dimensions emanating from the Raymark site, the EPA informed the DEEP/Remediation Division that the Sunoco station may be the source, or a contributing source, of the contamination discovered at MW-604S/D. It is likely that many non-reported gasoline spills have occurred and impacted the surface on-site, as well as along Ferry Boulevard and Interstate 95 north of the subject property. In 2003, the EPA reported the presence of MTBE at 1,800 ug/L at MW-202D. This MW (since destroyed) was located north of Ferry Boulevard and was assumed to be upgradient of the Sunoco site. The DEEP/Remediation Division requested that the SAS Unit perform a subsurface investigation at 734 Ferry Boulevard to determine if the Sunoco station has a source of contamination. According to the current property owner, Mr. David Crosby, the site's current motor fuel underground storage tanks (USTs) are in regulatory compliance. These USTs were installed in the same UST grave as the previous generation of tanks. The GW on-site is classified as GB.

Methods:

A Geoprobe ™ subsurface sampling machine was used to collect continuous soil cores (at two locations) and to install a total of ten narrow-diameter MWs throughout the site. GW was gauged from the top of each MW with an electronic water level indicator. Although measureable light non-aqueous phase liquid (LNAPL) was never observed in any of the MWs on-site, a slight sheen may have been present in a GW sample collected at GP-6. While four soil samples were procured, numerous GW samples were collected during the assessment (one by bailer and the rest with a peristaltic pump). Please note that the GW samples collected by the peristaltic pump were done so after some purging occurred, but were not by low-flow methodology. All samples were submitted to either the DEEP Mobile Analytical Laboratory or to a certified, commercial laboratory for analyses. The continuous soil cores and purged GW were field-screened with a photo ionization detector (PID) during field activities. A level and rod was used to conduct the overland survey; this data was used to produce AutoCAD ™ site map.

The DEEP Mobile Laboratory provides non-certified, screening-level analytical methods (which follow a lab specific QA/QC program) but does not follow the CT DEEP's Reasonable Confidence Protocols (RCPs). The mobile laboratory results are based on non-RCP screening-level analyses, and are to be used only for investigative purposes. Any comparisons to DEEP's Remediation Standard Regulations (RSRs) should be to examine the relative degree of contamination, and not to determine regulatory compliance. Determination of RSR compliance can be achieved through confirmational analyses by a CT approved environmental laboratory which adheres to the RCPs.

RESULTS:

Table 1, MW and Soil Boring Data

Location ID	TOC Elevation (feet, relative to BM)	Grade Elevation (feet, relative to BM)	Depth Interval (feet, below grade)	Elevation Interval (feet, relative to BM)	Description	Soil Sample Depth Interval (feet, below grade)	PID Reading
GP-1	98.75	NM	4.8 – 14.4	93.9 – 84.3	9.6'long well screen (0.75" diameter MW installed)	NA	NA
			0.0 – 0.2	98.7 – 98.5	Grass with brown organic topsoil	NA	NA
			0.2 – 0.7	98.5 – 98.0	Asphalt (old road bedding?)	NA	ND @ 0.5'
			0.7 – 1.4	98.0 – 97.3	Medium brown sand with fine gravel	NA	ND @ 1.0'
			1.4 – 1.6	97.3 – 97.1	Fine brown sand with silt	NA	ND @ 1.5'
			1.6 – 2.3	97.1 – 96.4	Fine dark brown sand with silt	NA	ND @ 2.0'
			2.3 – 4.2	96.4 – 94.5	Fine brown sand with silt and coarse gravel or cobbles (end of 4.0' core recovery)	NA	ND @ 2.3' ND @ 4.2'
			4.2 – 6.1	94.5 – 92.6	Light brown fine-medium sand with gravel (end of 4.0' core recovery)	NA	ND @ 4.5' ND @ 5.0' ND @ 5.5' ND @ 6.0'
			8.0 – 11.0	90.7 – 87.7	soils not accurately logged due to acetate liner failure in 4.0' core; start of saturation unknown	NA	NA
			11.0 – 12.0	87.7 – 86.7	Brown fine-medium sand with gravel (moist)	NA	ND @ 11.5'
			12.0 – 13.0	86.7 – 85.7	Brown medium sand with some silt and gravel (wet)	12.0'	ND @ 12.0' ND @ 12.5'
			13.0 – 14.0	85.7 – 84.7	Light brown fine-medium sand with gravel (end of 2.0' core recovery)	NA	ND @ 13.0' ND @ 13.5'
			14.0 – 15.0	84.7 – 83.7	Brown medium sand with gravel	NA	ND @ 14.5'
			15.0 – 16.0	83.7 – 82.7	Brown medium sand with significant gravel (end of 2.0 core recovery)	NA	ND @ 15.5'
GP-2	99.98	NM	4.9 – 14.5	95.1 – 85.5	9.6'long well screen (0.75" diameter MW installed)	NA	NA
GP-3	99.73	NM	4.9 – 14.5	94.8 – 85.2	9.6'long well screen (0.75" diameter MW installed)	NA	NA
GP-4	99.91	NM	4.9 – 14.5	95.0 – 85.4	9.6'long well screen (0.75" diameter MW installed)	NA	NA
GP-5	101.30	NM	9.4 – 19.0	91.9 – 82.3	9.6'long well screen (0.75" diameter MW installed)	NA	NA
GP-6	101.56	NM	7.9 – 17.5	93.7 – 84.1	9.6'long well screen (0.75" diameter MW installed)	NA	NA
			0.0 – 0.4	101.6 – 101.2	Grass with dark brown organic topsoil	NA	ND @ 0.2'
			0.4 – 0.8	101.2 – 100.8	Gravel with asphalt (old road bedding?)	NA	ND @ 0.6'
			0.8 – 1.2	100.8 – 100.4	Fine-medium brown sand with fine gravel	NA	ND @ 1.0'
			1.2 – 2.1	100.4 – 99.5	Crushed rock	NA	ND @ 1.5'
			2.1 – 2.7	99.5 – 98.9	Fine brown sand (end of 4.0' core recovery)	NA	ND @ 2.2'
			4.0 – 4.1	97.6 – 97.5	Dark brown fine sand with some silt	NA	ND @ 4.0'
			4.1 – 4.7	97.5 – 96.9	Light brown medium sand and gravel	NA	ND @ 4.5'

RESULTS (cont.):

Table 1 (cont.), MW and Soil Boring Data

Location ID	TOC Elevation (feet, relative to BM)	Grade Elevation (feet, relative to BM)	Depth Interval (feet, below grade)	Elevation Interval (feet, relative to BM)	Description	Soil Sample Depth Interval (feet, below grade)	PID Reading
GP-6	101.56	NM	7.9 – 17.5	93.7 – 84.1	9.6'long well screen (0.75" diameter MW installed)	NA	NA
			4.7 – 5.1	96.9 – 96.5	Brown fine sand with gravel	NA	ND @ 5.0'
			5.1 – 5.4	96.5 – 96.2	Crushed rock	NA	ND @ 5.2'
			5.4 – 5.9	96.2 – 95.7	Light brown medium sand and gravel	NA	ND @ 5.7'
			5.9 – 6.3	95.7 – 95.3	Crushed rock (end of 4.0' core recovery)	NA	ND @ 6.0'
			8.0 – 8.3	93.6 – 93.3	Light brown fine-medium sand and gravel	NA	ND @ 8.1'
			8.3 – 8.6	93.3 – 93.0	Crushed rock	NA	ND @ 8.5'
			8.6 – 10.8	93.0 – 90.8	Brown fine-medium sand and gravel; soils moist @ 10.0' (end of 4.0' core recovery)	NA	ND @ 9.0' ND @ 9.5' ND @ 10.0' ND @ 10.5'
			12.0 – 12.5	89.6 – 89.1	Brown coarse sand and gravel (wet)	NA	ND @ 12.2'
			12.5 – 12.8	89.1 – 88.8	Black fine sand and gravel	NA	2 IU @ 12.7'
			12.8 – 13.3	88.8 – 88.3	Black coarse sand and gravel (end of 3.0' core recovery)	13.0 – 13.2	20 IU @ 13.2'
			15.0 – 18.0	86.6 – 83.6	soils not accurately logged due to acetate liner failure in 3.0' core; soils likely near 15.5' were fine brown sand and gravel with some silt; deeper soils were black fine-medium sand and gravel; (end of 3.0' core recovery)	~ 15.5	3 IU @ ~ 15.5'
GP-7	101.48	NM	8.9 – 18.5	92.6 – 83.0	9.6'long well screen (0.75" diameter MW installed)	NA	NA
GP-8	97.79	NM	4.9 – 14.5	92.9 – 83.3	9.6'long well screen (0.75" diameter MW installed)	NA	NA
GP-9	97.62	NM	4.9 – 14.5	92.7 – 83.1	9.6'long well screen (0.75" diameter MW installed)	NA	NA
GP-10	97.39	NM	4.9 – 14.5	92.5 – 82.9	9.6'long well screen (0.75" diameter MW installed)	NA	NA

Comments:

- Because curb boxes were installed at each MW location, the top of casing (TOC) at each MW is below grade.
- The annular space around each MW was backfilled with coarse sand and a layer of bentonite to prevent surface water infiltration.

RESULTS (cont.):

Table 2, Groundwater Sample Analytical Results (DEEP Mobile Laboratory)

Collector's Number	FB0278	TB1506	TB1507	TB1508	TB1510	TB1511	RSR Criteria
Location ID	MW-604S	GP-1	GP-2	GP-3	GP-4	GP-5	
Sample Date	9/19/12	10/18/12	10/18/12	10/18/12	10/22/12	10/22/12	
							Res VC
Parameters:							ug/L
Benzene	**375 (e)**	ND<2	ND<2	ND<2	ND<2	**233**	**215**
Toluene	3	ND<2	ND<2	ND<2	ND<2	417	**23,500**
Ethylbenzene	24	ND<2	10	ND<2	ND<2	545	**50,000**
Xylenes	30	ND<4	7	ND<4	ND<4	1,815	**21,300**
MTBE	105 (e)	6	ND<2	ND<2	ND<2	ND<200	**50,000**
1,2,4-Trimethylbenzene	23	ND<2	41	ND<2	ND<2	1,193	**NE**
1,3,5-Trimethylbenzene	2	ND<2	4	ND<2	ND<2	377	**NE**
1,1-Dichloroethane	ND<2	3	ND<2	ND<2	ND<2	ND<200	**34,600**
Chlorobenzene	59	6	ND<2	ND<2	14	ND<200	**1,800**
Acetone	ND<10	ND<10	ND<10	ND<10	ND<10	ND<1,000	**50,000**
Methyl Ethyl Ketone	ND<10	ND<10	ND<10	ND<10	ND<10	ND<1,000	**50,000**
Bromodichloromethane	ND<2	ND<2	ND<2	ND<2	ND<2	ND<200	**NE**
Iso-Propylbenzene	8	ND<2	6	ND<2	ND<2	ND<200	**NE**
n-Propylbenzene	9	ND<2	23	ND<2	ND<2	ND<200	**NE**
sec-Butylbenzene	ND<2	ND<2	5	ND<2	ND<2	ND<200	**NE**
4-iso-Propyltoluene	ND<2	ND<2	3	ND<2	ND<2	ND<200	**NE**
Naphthalene	27	ND<2	11	ND<2	ND<2	284	**NE**
tert-Butylbenzene	3	ND<2	ND<2	ND<2	ND<2	ND<200	**NE**
Diisopropyl ether	2	ND<2	ND<2	ND<2	ND<2	ND<200	**NE**
Ethyl-tert-butyl ether	6	ND<2	ND<2	ND<2	ND<2	ND<200	**NE**
Dibromofluoromethane	ND	ND	~ 10	ND	ND	ND	**NE**
Fluorobenzene	ND	ND	~ 30	ND	ND	ND	**NE**
TPH	NT	186	856	190	ND<200	2,932	**NE**

Comments:

- No other VOCs were reported than what is presented above.
- **Bolded** and shaded values represent a likely exceedence to one or more of the RSR criteria.
- Sample FB0278 (MW-604S) was collected with a disposable bailer after approximately three MW volumes of GW were evacuated.
- Dibromofluoromethane and Fluorobenzene were reported in sample TB1507 as "tentatively identified compounds" and given estimated concentrations.
- (e) = Analytical result is estimated due to being outside the upper quantitation limit.

RESULTS (cont.)

Table 2 (cont.), Groundwater Sample Analytical Results (DEEP Mobile Laboratory)

Collector's Number	TB1515	TB1517	TB1519	TB1520	TB1521	RSR Criteria
Location ID	GP-6	GP-7	GP-8	GP-9	GP-10	
Sample Date	10/22/12	10/22/12	10/26/12	10/26/12	10/26/12	
						Res VC
Parameters:						ug/L
Benzene	**379**	ND<2	ND<2	112 (e)	ND<40	**215**
Toluene	8,821	ND<2	ND<2	ND<2	ND<40	**23,500**
Ethylbenzene	3,479	45	ND<2	93	190	**50,000**
Xylenes	18,961	25	ND<4	25	680	**21,300**
MTBE	ND<200	ND<2	6	50	ND<40	**50,000**
1,2,4-Trimethylbenzene	4,572	149	ND<2	98	1,070	**NE**
1,3,5-Trimethylbenzene	1,375	17	ND<2	10	295	**NE**
1,1-Dichloroethane	ND<200	ND<2	ND<2	ND<2	ND<40	**34,600**
Chlorobenzene	ND<200	ND<2	2	22	ND<40	**1,800**
Acetone	ND<1,000	ND<10	ND<10	ND<10	ND<200	**50,000**
Methyl Ethyl Ketone	ND<1,000	ND<10	ND<10	ND<10	ND<200	**50,000**
Bromodichloromethane	ND<200	ND<2	ND<2	ND<2	ND<40	**NE**
Iso-Propylbenzene	ND<200	32	ND<2	13	54	**NE**
n-Propylbenzene	739	126	ND<2	38	201	**NE**
sec-Butylbenzene	ND<200	14	ND<2	3	ND<40	**NE**
4-iso-Propyltoluene	ND<200	8	ND<2	ND<2	ND<40	**NE**
Naphthalene	987	40	ND<2	23	136	**NE**
tert-Butylbenzene	624	ND<2	ND<2	ND<2	ND<40	**NE**
Diisopropyl ether	ND<200	ND<2	ND<2	ND<2	ND<40	**NE**
Ethyl-tert-butyl ether	ND<200	ND<2	ND<2	ND<2	ND<40	**NE**
Dibromofluoromethane	ND	ND	ND	ND	ND	**NE**
Fluorobenzene	ND	ND	ND	ND	ND	**NE**
TPH	3,932	1,496	366	376	3,672	**NE**

Comments:

- No other VOCs were reported than what is presented above.
- **Bolded** and shaded values represent a likely exceedence to one or more of the RSR criteria.
- Field staff observed that sample TB1515 (GP-6) may have had a slight layer of LNAPL. The mobile laboratory chemists independently provided a narrative note with their results that read "Sample TB1515 had a strong odor and possible sheen on the surface, therefore, the analysis was performed on a portion of the sample that was obtained from the subsurface."
- (e) = Analytical result is estimated due to being outside the upper quantitation limit.

RESULTS (cont.)

Table 3, Groundwater Sample Analytical Results (DEEP Mobile Laboratory)

Collector's Number	**TB1531**	**TB1532**	**TB1533**	**TB1534**	**TB1535**	**RSR Criteria**
Location ID	**GP-5**	**GP-6**	**GP-9**	**GP-10**	**MW-604S**	
Sample Date	**11/29/12**	**11/29/12**	**11/29/12**	**11/29/12**	**11/29/12**	
						Res VC
Parameters:						ug/L
Benzene	144	**322**	27	ND<2	25	**215**
Toluene	89	3,933	ND<2	ND<2	ND<2	**23,500**
Ethylbenzene	235	1,886	ND<2	55	ND<2	**50,000**
Xylenes	610	8,665	ND<4	167 (e)	ND<4	**21,300**
MTBE	ND<40	ND<100	112 (e)	3	185 (e)	**50,000**
1,2,4-Trimethylbenzene	436	2,120	3	367 (e)	ND<2	**NE**
1,3,5-Trimethylbenzene	117	660	ND<2	76	ND<2	**NE**
1,1-Dichloroethane	ND<40	ND<100	ND<2	ND<2	3	**34,600**
Chlorobenzene	ND<40	ND<100	42	ND<2	104 (e)	**1,800**
Acetone	ND<200	ND<500	ND<10	13	ND<10	**50,000**
Methyl Ethyl Ketone	ND<200	ND<500	ND<10	17	ND<10	**50,000**
Bromodichloromethane	ND<40	ND<100	ND<2	3	ND<2	**NE**
Iso-Propylbenzene	ND<40	109	3	21	ND<2	**NE**
n-Propylbenzene	68	381	6	67	ND<2	**NE**
sec-Butylbenzene	ND<40	ND<100	ND<2	6	ND<2	**NE**
4-iso-Propyltoluene	ND<40	ND<100	ND<2	15	ND<2	**NE**
Naphthalene	104	568	ND<2	58	3	**NE**
tert-Butylbenzene	ND<40	287	ND<2	49	ND<2	**NE**
Diisopropyl ether	ND<40	ND<100	ND<2	ND<2	ND<2	**NE**
Ethyl-tert-butyl ether	ND<40	ND<100	ND<2	ND<2	ND<2	**NE**
Dibromofluoromethane	ND	ND	ND	ND	ND	**NE**
Fluorobenzene	ND	ND	ND	ND	ND	**NE**
TPH	1,570	2,680	278	744	228	**NE**
Fingerprint	ND	ND	NT	NT	ND	**NE**

Comments:

- No other VOCs were reported than what is presented above.
- **Bolded** and shaded values represent a likely exceedence to one or more of the RSR criteria.
- (e) = Analytical result is estimated due to being outside the upper quantitation limit.

RESULTS (cont.)

Table 4, Groundwater Sample Analytical Results (Phoenix Environmental Laboratory)

Collector's Number	**TB1531**	**TB1532**	**TB1533**	**TB1534**	**TB1535**	**RSR Criteria**
Location ID	**GP-5**	**GP-6**	**GP-9**	**GP-10**	**MW-604S**	
Sample Date	**11/29/12**	**11/29/12**	**11/29/12**	**11/29/12**	**11/29/12**	
						Res VC
Parameters:						ug/L
VOCs (see below)			Not tested	Not tested		
Benzene	170	**310**			29	**215**
Toluene	170	4,000			ND<1	**23,500**
Ethylbenzene	340	1,800			ND<1	**50,000**
Total Xylenes	1,010	8,300			1.3	**21,300**
MTBE	21	ND<40			220	**50,000**
1,2,4-Trimethylbenzene	680	2,200			2.5	**NE**
1,3,5-Trimethylbenzene	170	810			ND<1	**NE**
1,1-Dichloroethane	ND<1	ND<40			3	**34,600**
Chlorobenzene	ND<1	ND<40			120	**1,800**
cis-1,2-Dichloroethene	ND<1	ND<40			2.2	**NE**
Isopropylbenzene	31	120			ND<1	**NE**
n-Butylbenzene	21	97			ND<1	**NE**
n-Propylbenzene	95	470			ND<1	**NE**
sec-Butylbenzene	11	ND<40			ND<1	**NE**
p-Isopropyltoluene	3.9	80			ND<1	**NE**
2-Isopropyltoluene	1.4	ND<40			ND<1	**NE**
4-Isopropyltoluene	NR	NR			NR	**NE**
Naphthalene	160	1,100			15	**NE**
tert-Butylbenzene	ND<1	ND<40			ND<1	**NE**
Trichloroethene	ND<1	ND<40			1.5	**219**
Di-isopropyl ether	ND<10	ND<400			ND<10	**NE**
Ethyl tert-butyl ether	ND<10	ND<400			ND<10	**NE**
Dibromofluoromethane	NR	NR			NR	**NE**
Fluorobenzene	NR	NR			NR	**NE**
ETPH (mg/L)	3.2	6.1	0.19	1.8	ND<0.07	**NE**
Fingerprint	**	**	#	+	ND	**NE**
SVOCs (see below)		Not tested	Not tested	Not tested	Not tested	
2-Methylnapthalene	110					**NE**
Naphthalene	190					**NE**
Acenaphthene	0.25					**NE**
Acenaphthylene	0.09					**NE**
Phenanthrene	0.21					**NE**

RESULTS (cont.)

Table 4 comments:

- No other VOCs, including oxygenates, were reported than what is presented above. VOC results listed in ug/L.
- No other SVOCs were reported than what is presented above. SVOC results listed in ug/L.
- **Bolded** and shaded values represent a likely exceedence to one or more of the RSR criteria.
- ** = "Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C20. The sample was quantitated against a C9 – C36 alkane hydrocarbon standard".
- # = "Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C18. The sample was quantitated against a C9 – C36 alkane hydrocarbon standard".
- + = "Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C16. The sample was quantitated against a C9 – C36 alkane hydrocarbon standard".

Table 5, Soil Sample Analytical Results (DEEP Mobile Laboratory)

Collector's Number	**TB1505**	**RSR Criteria**	
Location ID	**GP-1**		
Sample Depth	**12.0'**		
		GB PMC	**Res DEC**
Parameters:		mg/kg	mg/kg
TPH	187	**500**	**500**

Table 6, Soil Sample Analytical Results (Phoenix Environmental Laboratory)

Collector's Number	**TB1503**	**TB1514**	**TB1516**	**RSR Criteria**	
Location ID	**GP-1**	**GP-6**	**GP-6**		
Sample Depth	**12.0'**	**13.0'**	**15.5'**		
				GB PMC	**Res DEC**
Parameters:				mg/kg	mg/kg
Benzene	ND<0.005	0.022	ND<1.2 *	**0.2**	**21**
Toluene	ND<0.005	0.92	**34**	**20**	**500**
Ethylbenzene	0.0084	0.64	**43**	**10.1**	**500**
Xylenes	0.016	3.3	**251**	**19.5**	**500**
Chlorobenzene	ND<0.005	ND<0.005	ND<1.2	**20.0**	**500**
MTBE	ND<0.01	ND<0.011	ND<2.4	**20.0**	**500**
1,2,4-Trimethylbenzene	0.014	1.6	150	**NE**	**500**
1,3,5-Trimethylbenzene	ND<0.005	0.49	50	**NE**	**500**
Isopropylbenzene	ND<0.005	0.0055	5.5	**NE**	**NE**
Naphthalene	ND<0.005	0.34	27	**56**	**1,000**
n-Butylbenzene	ND<0.005	ND<0.0055	6.8	**NE**	**NE**
n-Propylbenzene	ND<0.005	0.36	27	**NE**	**NE**
Sec-Butylbenzene	ND<0.005	ND<0.0055	2.8	**NE**	**NE**

RESULTS (cont.)

Table 6 comments:

- No other VOCs were reported than what is presented above.
- **Bolded** and shaded values represent an exceedence to one or more of the RSR criteria.
- * = The reporting limit for benzene associated with sample #TB1516 is greater than the GB PMC criteria. Therefore, it's possible that benzene is present at concentrations greater than the established critieria.

Table 7, MW Gauging Data

Location ID	GP-1	GP-2	GP-3	GP-4	GP-5	GP-6
Date/Time	11/9/12 1130	11/9/12 1130	11/9/12 1130	11/9/12 1130	11/9/12 1130	11/9/12 1130
TOC Elevation	98.75'	99.98'	99.73'	99.91'	101.30'	101.56'
Well Casing Height Above (+) or Below (-) Grade	NM	NM	NM	NM	NM	NM
SPP Depth from TOC	NA	NA	NA	NA	NA	NA
GW Depth from TOC	9.08'	10.28'	10.09'	10.32'	11.61'	11.83'
SPP Elevation	NA	NA	NA	NA	NA	NA
GW Elevation	89.67'	89.70'	89.64'	89.59'	89.69'	89.73'
SPP Thickness	0	0	0	0	0	0

Location ID	GP-7	GP-8	GP-9	GP-10	MW-604S
Date/Time	11/9/12 1130	11/9/12 1130	11/9/12 1130	11/9/12 1130	11/9/12 1130
TOC Elevation	101.48'	97.79'	97.62'	97.39'	97.46'
Well Casing Height Above (+) or Below (-) Grade	NM	NM	NM	NM	NM
SPP Depth from TOC	NA	NA	NA	NA	NA
GW Depth from TOC	11.86'	8.02'	7.93'	7.64'	7.68'
SPP Elevation	NA	NA	NA	NA	NA
GW Elevation	89.62'	89.77'	89.69'	89.75'	89.78'
SPP Thickness	0	0	0	0	0

Location ID	GP-1	GP-2	GP-3	GP-4	GP-5	GP-6
Date/Time	11/9/12 1230	11/9/12 1230	11/9/12 1230	11/9/12 1230	11/9/12 1230	11/9/12 1230
TOC Elevation	98.75'	99.98'	99.73'	99.91'	101.30'	101.56'
Well Casing Height Above (+) or Below (-) Grade	NM	NM	NM	NM	NM	NM
SPP Depth from TOC	NA	NA	NA	NA	NA	NA
GW Depth from TOC	9.08'	10.28'	10.09'	10.32'	11.61'	11.83'
SPP Elevation	NA	NA	NA	NA	NA	NA
GW Elevation	89.67'	89.70'	89.64'	89.59'	89.69'	89.73'
SPP Thickness	0	0	0	0	0	0

RESULTS (cont.)

Table 7 (cont.), MW Gauging Data

Location ID	GP-7	GP-8	GP-9	GP-10	MW-604S
Date/Time	11/9/12 1230	11/9/12 1230	11/9/12 1230	11/9/12 1230	11/9/12 1230
TOC Elevation	101.48'	97.79'	97.62'	97.39'	97.46'
Well Casing Height Above (+) or Below (-) Grade	NM	NM	NM	NM	NM
SPP Depth from TOC	NA	NA	NA	NA	NA
GW Depth from TOC	11.86'	8.02'	7.93'	7.64'	7.68'
SPP Elevation	NA	NA	NA	NA	NA
GW Elevation	89.62'	89.77'	89.69'	89.75'	89.78'
SPP Thickness	0	0	0	0	0

Table 7 Comments:

- Two rounds of GW gauging were performed on 11/9/12 at 11:30 am and 12:30 pm. Exact depths to GW were recorded at each MW over the hour, which appear to confirm static conditions.

Table 8, MW Gauging Data

Location ID	GP-1	GP-2	GP-3	GP-4	GP-5	GP-6
Date/Time	4/5/13 1015	4/5/13 1015	4/5/13 1015	4/5/13 1015	4/5/13 1015	4/5/13 1015
TOC Elevation	98.75'	99.98'	99.73'	99.91'	101.30'	101.56'
Well Casing Height Above (+) or Below (-) Grade	NM	NM	NM	NM	NM	NM
SPP Depth from TOC	NA	NA	NA	NA	NA	NA
GW Depth from TOC	8.76'	9.95'	9.79'	10.03'	11.36'	11.55'
SPP Elevation	NA	NA	NA	NA	NA	NA
GW Elevation	89.99'	90.03'	89.94'	89.88'	89.94'	90.01'
SPP Thickness	0	0	0	0	0	0

Location ID	GP-7	GP-8	GP-9	GP-10	MW-604S
Date/Time	4/5/13 1015	4/5/13 1015	4/5/13 1015	4/5/13 1015	4/5/13 1015
TOC Elevation	101.48'	97.79'	97.62'	97.39'	97.46'
Well Casing Height Above (+) or Below (-) Grade	NM	NM	NM	NM	NM
SPP Depth from TOC	NA	NA	NA	NA	NA
GW Depth from TOC	11.55'	7.81'	7.75'	7.38'	7.51'
SPP Elevation	NA	NA	NA	NA	NA
GW Elevation	89.93'	89.98'	89.87'	90.01'	89.95'
SPP Thickness	0	0	0	0	0

RESULTS (cont.)

Table 8 (cont.), MW Gauging Data

Location ID	GP-1	GP-2	GP-3	GP-4	GP-5	GP-6
Date/Time	4/5/13 1115	4/5/13 1115	4/5/13 1115	4/5/13 1115	4/5/13 1115	4/5/13 1115
TOC Elevation	98.75’	99.98’	99.73’	99.91’	101.30’	101.56’
Well Casing Height Above (+) or Below (-) Grade	NM	NM	NM	NM	NM	NM
SPP Depth from TOC	NA	NA	NA	NA	NA	NA
GW Depth from TOC	8.75’	9.94’	9.78’	10.02’	11.35’	11.55’
SPP Elevation	NA	NA	NA	NA	NA	NA
GW Elevation	90.00’	90.04’	89.95’	89.89’	89.95’	90.01’
SPP Thickness	0	0	0	0	0	0

Location ID	GP-7	GP-8	GP-9	GP-10	MW-604S
Date/Time	4/5/13 1115	4/5/13 1115	4/5/13 1115	4/5/13 1115	4/5/13 1115
TOC Elevation	101.48’	97.79’	97.62’	97.39’	97.46’
Well Casing Height Above (+) or Below (-) Grade	NM	NM	NM	NM	NM
SPP Depth from TOC	NA	NA	NA	NA	NA
GW Depth from TOC	11.55’	7.81’	7.73’	7.38’	7.51’
SPP Elevation	NA	NA	NA	NA	NA
GW Elevation	89.93’	89.98’	89.89’	90.01’	89.95’
SPP Thickness	0	0	0	0	0

Location ID	GP-1	GP-2	GP-3	GP-4	GP-5	GP-6
Date/Time	4/5/13 1215	4/5/13 1215	4/5/13 1215	4/5/13 1215	4/5/13 1215	4/5/13 1215
TOC Elevation	98.75’	99.98’	99.73’	99.91’	101.30’	101.56’
Well Casing Height Above (+) or Below (-) Grade	NM	NM	NM	NM	NM	NM
SPP Depth from TOC	NA	NA	NA	NA	NA	NA
GW Depth from TOC	8.73’	9.93’	9.78’	10.02’	11.33’	11.54’
SPP Elevation	NA	NA	NA	NA	NA	NA
GW Elevation	90.02’	90.05’	89.95’	89.89’	89.97’	90.02’
SPP Thickness	0	0	0	0	0	0

RESULTS (cont.)

Table 8 (cont.), MW Gauging Data

Location ID	GP-7	GP-8	GP-9	GP-10	MW-604S
Date/Time	4/5/13 1215	4/5/13 1215	4/5/13 1215	4/5/13 1215	4/5/13 1215
TOC Elevation	101.48’	97.79’	97.62’	97.39’	97.46’
Well Casing Height Above (+) or Below (-) Grade	NM	NM	NM	NM	NM
SPP Depth from TOC	NA	NA	NA	NA	NA
GW Depth from TOC	11.54’	7.78’	7.73’	7.39’	7.50’
SPP Elevation	NA	NA	NA	NA	NA
GW Elevation	89.94’	90.01’	89.89’	90.00’	89.96’
SPP Thickness	0	0	0	0	0

Location ID	GP-1	GP-2	GP-3	GP-4	GP-5	GP-6
Date/Time	4/5/13 1315	4/5/13 1315	4/5/13 1315	4/5/13 1315	4/5/13 1315	4/5/13 1315
TOC Elevation	98.75’	99.98’	99.73’	99.91’	101.30’	101.56’
Well Casing Height Above (+) or Below (-) Grade	NM	NM	NM	NM	NM	NM
SPP Depth from TOC	NA	NA	NA	NA	NA	NA
GW Depth from TOC	8.74’	9.94’	9.77’	10.02’	11.33’	11.54’
SPP Elevation	NA	NA	NA	NA	NA	NA
GW Elevation	90.01’	90.04’	89.96’	89.89’	89.97’	90.02’
SPP Thickness	0	0	0	0	0	0

Location ID	GP-7	GP-8	GP-9	GP-10	MW-604S
Date/Time	4/5/13 1315	4/5/13 1315	4/5/13 1315	4/5/13 1315	4/5/13 1315
TOC Elevation	101.48’	97.79’	97.62’	97.39’	97.46’
Well Casing Height Above (+) or Below (-) Grade	NM	NM	NM	NM	NM
SPP Depth from TOC	NA	NA	NA	NA	NA
GW Depth from TOC	11.55’	7.79’	7.74’	7.36’	7.50’
SPP Elevation	NA	NA	NA	NA	NA
GW Elevation	89.93’	90.00’	89.88’	90.03’	89.96’
SPP Thickness	0	0	0	0	0

RESULTS (cont.)

Table 8 (cont.), MW Gauging Data

Location ID	GP-1	GP-2	GP-3	GP-4	GP-5	GP-6
Date/Time	4/5/13 1415	4/5/13 1415	4/5/13 1415	4/5/13 1415	4/5/13 1415	4/5/13 1415
TOC Elevation	98.75'	99.98'	99.73'	99.91'	101.30'	101.56'
Well Casing Height Above (+) or Below (-) Grade	NM	NM	NM	NM	NM	NM
SPP Depth from TOC	NA	NA	NA	NA	NA	NA
GW Depth from TOC	8.74'	9.95'	9.78'	10.03'	11.34'	11.55'
SPP Elevation	NA	NA	NA	NA	NA	NA
GW Elevation	90.01'	90.03'	89.95'	89.88'	89.96'	90.01'
SPP Thickness	0	0	0	0	0	0

Location ID	GP-7	GP-8	GP-9	GP-10	MW-604S
Date/Time	4/5/13 1415	4/5/13 1415	4/5/13 1415	4/5/13 1415	4/5/13 1415
TOC Elevation	101.48'	97.79'	97.62'	97.39'	97.46'
Well Casing Height Above (+) or Below (-) Grade	NM	NM	NM	NM	NM
SPP Depth from TOC	NA	NA	NA	NA	NA
GW Depth from TOC	11.55'	7.79'	7.75'	7.38'	7.50'
SPP Elevation	NA	NA	NA	NA	NA
GW Elevation	89.93'	90.00'	89.87'	90.01'	89.96'
SPP Thickness	0	0	0	0	0

Table 8 Comments:

- Five rounds of GW gauging were performed on 4/5/13 between 10:15 am and 14:15 pm to determine if tidal influence affects GW elevations on-site. Exact depths to GW were recorded at each MW hourly over that time period. According to the Stratford tide chart, high tide was expected at 8:12 am, while low tide was scheduled for 2:38 pm.

Conclusions:

Based on the analytical results from soil and GW samples collected in the vicinity of the site's gasoline UST grave, it appears likely that a source of gasoline contamination exists on-site. Benzene was the only VOC reported above the applicable Remediation Standard Regulation (RSR) GW criteria (RES VC). The above criteria concentrations were found at GP-5, GP-6 and MW-604S and can be likely be attributed to the historic and/or active gasoline UST system on-site. While other moderate to high-levels of VOCs and TPH/ETPH were also reported on-site, no other GW RSR exceedences exist.

Based on the numerous GW gauging events, the GW gradient was found to be indeterminate. Overall, the on-site gradient was found to be very flat with a slope calculated at only 0.1%. Other factors which could influence contaminant transport off-site include the native surficial material (sand and gravel), the possibility of tidal influence, and the absence of LNAPL. Some anomalous GW mounding and depressions were also observed.

Conclusions (cont.):

The highest concentrations of MTBE were reported at MW-604S. Because MTBE was found at lower concentrations in the GW samples collected from MWs situated near the existing gasoline UST grave, it appears that the MTBE reported at MW-604S may have been transported there from an off-site source or was associated with leaking cars awaiting service. This claim can be supported by the moderate to high levels of MTBE at GP-9, which is located in the adjacent car storage area.

It appears that the presence of chlorobenzene reported in GW samples collected during the assessment did not originate on-site. The highest level of chlorobenzene was reported at MW-604S (120 ug/L), while the second highest concentration was found at GP-9 (42 ug/L). The likelihood of an off-site source can also be supported by the detection of low levels of trichloroethylene (TCE) at MW-604S. TCE was not detected above reporting limits in any other GW sample collected on-site.

The soil samples collected at GP-6 document the presence of several VOCs at concentrations above the RSR/GB PMC. No exceedences were reported to the RES DEC. The soil contamination at GP-6 appears to be associated with the historic and/or active gasoline USTs immediately adjacent to the north. Only low-levels of soil TPH contamination was reported at GP-1.

Follow-Up:

Per the request of SAS Unit staff and to comply with agency spill reporting requirements, Mr. Crosby notified the DEEP dispatch center on 11/29/12 of the presence of petroleum-based contamination discovered during the DEEP's limited assessment at 734 Ferry Boulevard (case #: 2012-06964).

During August and September 2013, Mr. Crosby retained *Geoscience Technical Service, Inc.* to oversee the on-site removal of three gasoline underground storage tanks (USTs) and their associated transfer lines and dispensers. The site's USTs were registered with the DEEP (per requirements) and an agency compliance inspection performed in September 2012 identified no significant violations. Once the three USTs were removed, evidence of soil contamination was observed. Mr. David Cook, the licensed environmental professional (LEP) overseeing the site work notified the DEEP of the presence of soil contamination (case #: 2013-04194). In total, 402.8 tons of contaminated soil was excavated from the site and properly disposed. Although some contaminated soils were left in place, GW quality on-site should improve due to the documented soil excavation project.

The site was renovated through the installation of new gasoline USTs, transfer piping, and dispensers. Mr. Cook has performed two rounds of post-excavation GW monitoring at three MWs (GP-5, GP-6, and GP-9) and is expected to perform at least two additional rounds of quarterly sampling.

MAPS:

Figure 2, Bing ™ Aerial Map of Site
With Approximate DEEP & EPA MW Locations

MAPS (cont.)

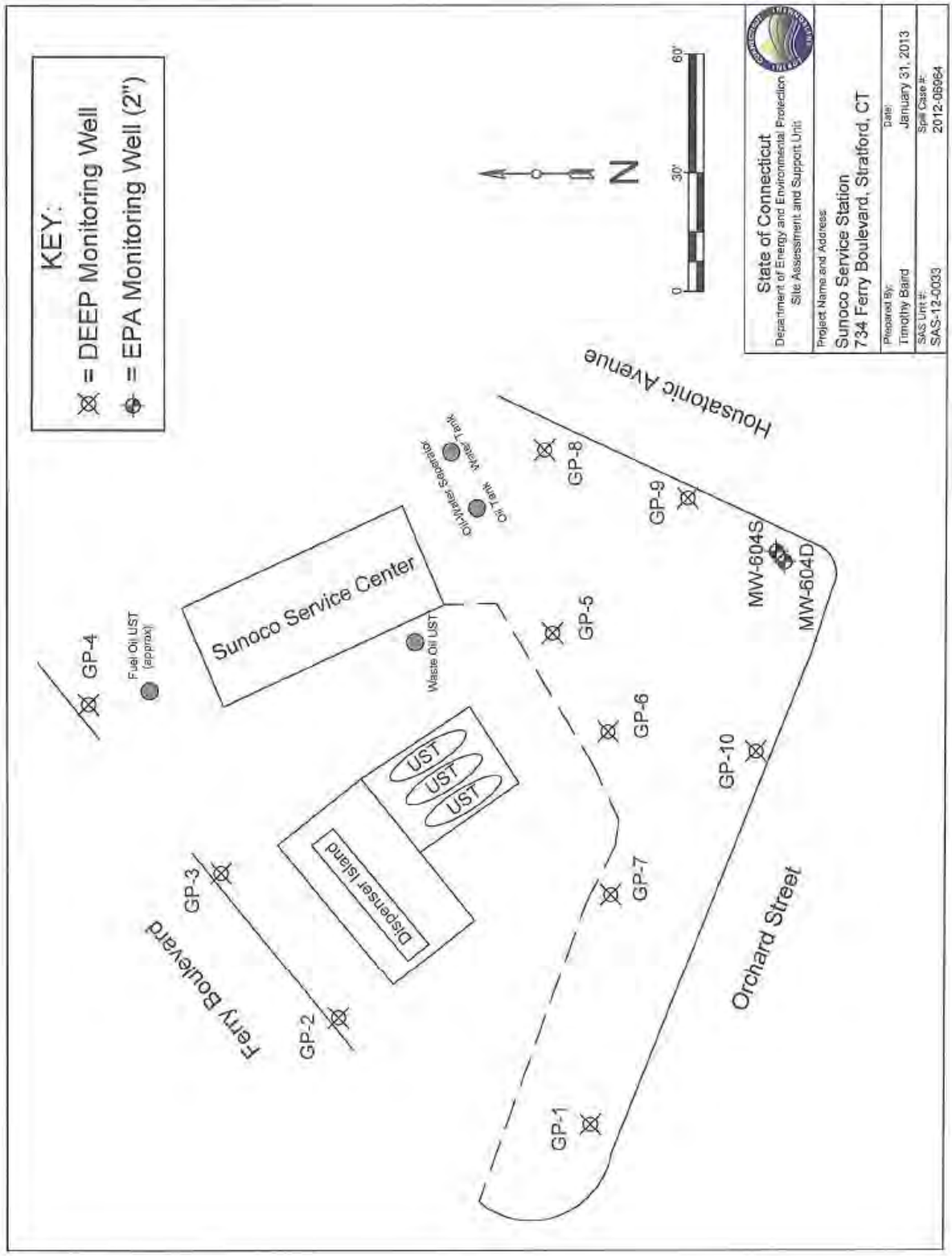


Figure 3, Site Map with MW Locations and Designations

GEOSCIENCE TECHNICAL SERVICES, INC.

Box 1036, Old Lyme, CT 06371
(860) 434-3144

GROUND WATER MONITORING CONDUCTED IN MARCH 2014

734 FERRY BOULEVARD STRATFORD, CONNECTICUT

submitted to

David Crosby
Ferry Boulevard Sunoco
734 Ferry Boulevard
Stratford, Connecticut

April 9, 2014

GEOSCIENCE TECHNICAL SERVICES, INC.

Box 1036, Old Lyme, CT 06371
(860) 434-3144

April 9, 2014

David Crosby
Ferry Boulevard Sunoco
734 Ferry Boulevard
Stratford CT 06614

Dear Mr. Crosby:

This letter documents ground water monitoring performed at 734 Ferry Boulevard in Stratford CT (Figure 1). The property contains Ferry Boulevard Sunoco, a gasoline service station. Underground fuel tanks, transfer lines, and dispensers were replaced in early fall 2013 and Geoscience Technical Services prepared a closure report. Four hundred and two tons of contaminated soil were excavated and disposed. The contamination appeared to have originated from an earlier generation of underground tanks and transfer lines. In 2012, the Department of Energy & Environmental Protection (CTDEEP) installed and sampled several ground water monitoring wells at the site. Upon reviewing the closure report, CTDEEP requested that Mr. Crosby initiate quarterly ground water monitoring of three of their wells: GP-5, GP-6, and GP-9. This report documents the first quarter of monitoring.

ground water sampling

On March 21, 2014, 1-inch diameter CTDEEP monitoring wells GP-5, GP-6, and GP-9 were examined. Depths to water were measured with a Solinst electonic meter and total well depths were determined with a tape. No floating product was found in the wells. Sampling was conducted using a peristaltic pump and disposable polyethylene tubing. Prior to sampling, purging was conducted to induce infiltration of fresh water from the formation. A YSI meter with a flow-through cell was used to determine when water quality parameters had stabilized. After stabilization, samples were collected in glass vials with hydrochloric acid preservative. The vials were kept in a cooler in the field and in a refrigerator at the office prior to pickup by the lab. Field notes are contained in Appendix A.

sample analysis

The samples were analyzed by Complete Environmental Testing for petroleum-related volatile organic compounds (VOC's) by method 8260C. The analyses were

performed following reasonable confidence protocol (RCP) established by CTDEEP. QA/QC information is included in the lab report. The method preservation and holding time requirements were met, samples were received by the lab in a condition consistent with that described on the chain of custody forms, and the samples were received at a temperature less than 4 degrees C. Nonconformances with RCP performance criteria concerned two petroleum-related VOC's, naphthalene and 1,2,3 trichlorobenzene, in the samples. The lab calibration sample recovery was high for these VOC's. This implies that any measured concentrations of the VOC's in these samples could be overstated. 1,2,3-trichlorobenzene was not detected in the samples. Naphthalene was detected in all three samples but there are no applicable criteria for naphthalene in CTDEEP's Remediation Standard Regulations. We conclude that the data are usable for the intended purpose, namely evaluation of compliance with applicable criteria in the Remediation Standard Regulations.

results

The lab report documenting the analyses and associated QA/QC information is contained in Appendix A. Results are compared with applicable RSR criteria in Table 1. The criteria are keyed to the GB ground water quality classification at the site.

Ten to eleven gasoline-related VOC's were detected in the samples. GP-6 had the highest concentrations which were in the parts per billion to low parts per million range. Concentrations of benzene, ethylbenzene, and 1,2,4-trimethylbenzene exceeded the residential ground water volatilization criteria (RGWVC). The benzene concentration also exceeded the surface water protection criterion.

VOC concentrations in GP-5 and GP-9 were in the parts per billion range. The concentration of 1,2,4-trimethylbenzene in GP-5 exceeded the RGWVC. There were no exceedances of RSR criteria in GP-9.

comparison with previous data

CTDEEP had sampled site wells on 10/11/12 and on two occasions probably keyed to the tidal cycle on 11/29/12. Total VOC's from these samplings are compared below with those from the samples collected on 3/21/14. Concentrations are in ug/l.

date	GP-5	GP-6	GP-9
10/22/12	4,864	39,937	487
11/29/12	1,803	18,931	193
11/29/12	2,884	19,287	not sampled
3/21/14	2,924	9,328	341

Concentrations were in the same range as 2012 for GP-5 and GP-9. Total VOC's decreased substantially in the GP-6 3/21/14 sample. The decrease may reflect soil remediation conducted at Ferry Boulevard Sunoco in 2013.

water table elevations

On March 21, relative elevations of certain well casing tops were measured with a surveyors level. An elevation of 100 feet was arbitrarily assigned to the lowest casing top. These data were coupled with measured depths to water to calculate relative water table elevations as shown below.

well	casing top elevation	depth to water	water table elevation
GP-1	101.24'	9.58'	91.66'
GP-2	102.35'	10.70'	91.65'
GP-5	103.70'	12.05'	91.65'
GP-6	103.98'	12.29'	91.69'
GP-9	100.00'	8.42'	91.58'

The relative water table elevations are plotted in Figure 3. There was little elevation difference across the site with variability about 0.1 foot. The elevation at GP-9 was slightly lower than the others suggesting a gradient towards the east to southeast. Because of proximity to the Housatonic River, water table elevations at the site may be subject to tidal effects. An east to southeast gradient places lightly impacted GP-9 downgradient from the more impacted GP-5 and GP-6.

Please call me if you have any questions.

Yours truly,

David O. Cook

David O. Cook, Ph.D.
President

cc: Tim Baird, CTDEEP

Table 1. Concentrations of VOC's detected ground water samples. Concentrations are in ug/l.

VOC	GP-5	GP-6	GP-9	SWPC	RGWVC	I/CGWVC
MTBE	<25	<5	<5	NE	21000	50000
benzene	62	1900	30	710	130	310
toluene	64	1800	<1	4000000	7100	41000
chlorobenzene	22	<1	100	420000	1800	6150
ethylbenzene	350	1200	38	580000	2700	36000
xylenes	980	2800	4.1	NE	8700	48000
isopropylbenzene	27	91	9.8	NE	2800	6800
n-propylbenzene	110	220	28	NE	NE	NE
1,3,5 trimethylbenzene	270	180	8	NE	280	3900
1,2,4-trimethylbenzene	830	710	100	NE	360	4800
sec-butylbenzene	8.7	13	3.7	NE	1500	20000
n-butylbenzene	<5	<1	<1	NE	1500	21000
4-isopropyltoluene	<5	3.7	<1	NE	1600	NE
naphthalene	200	410	19	NE	NE	NE

ND = not detected
SWPC = surface water protection criteria
RGWVC = residential ground water volatilization criteria
I/CGWVC = industrial/commercial ground water volatilization criteria
NE = not established

Figure 1. Site location map.

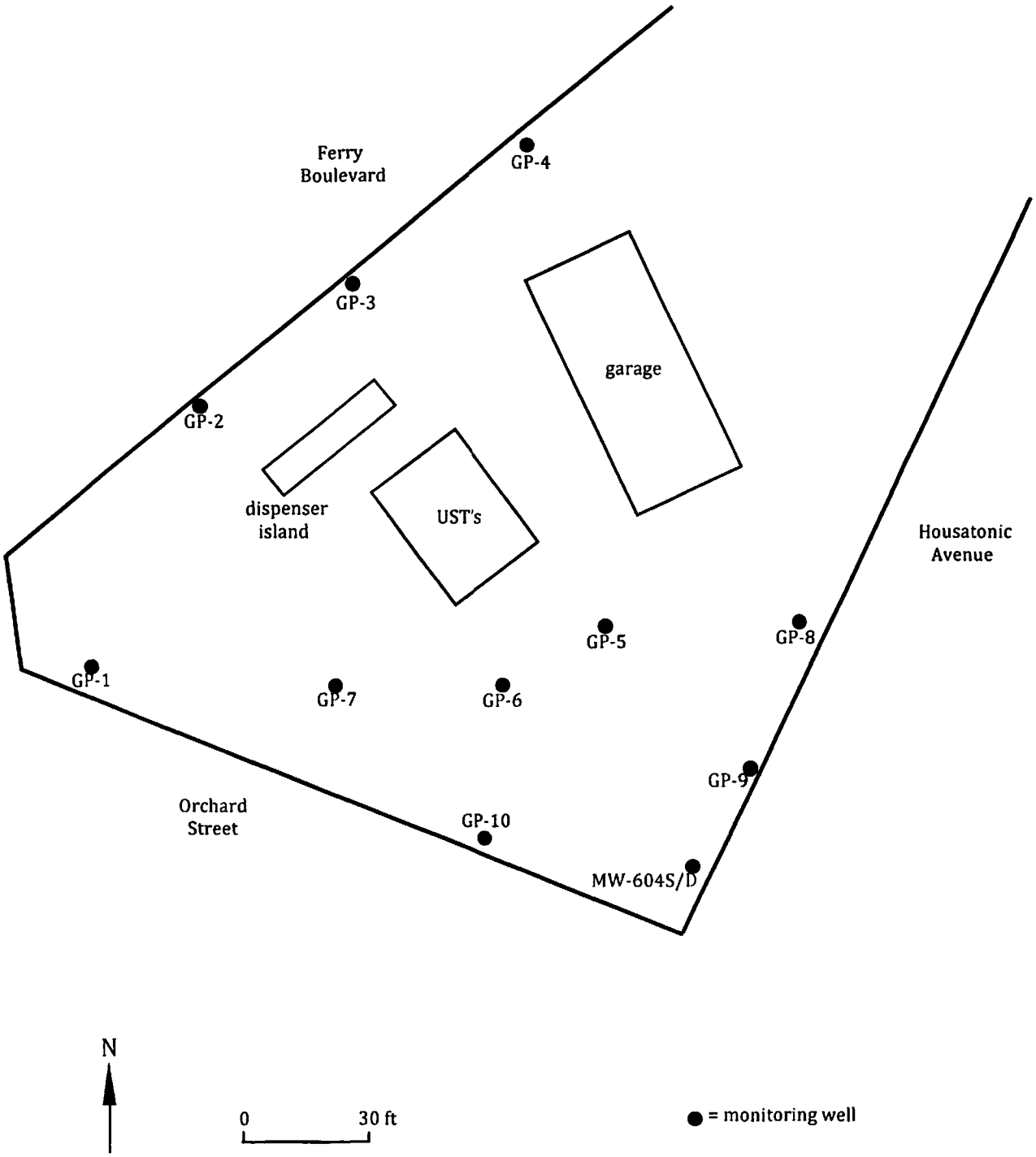


Figure 2. Locations of ground water monitoring wells.

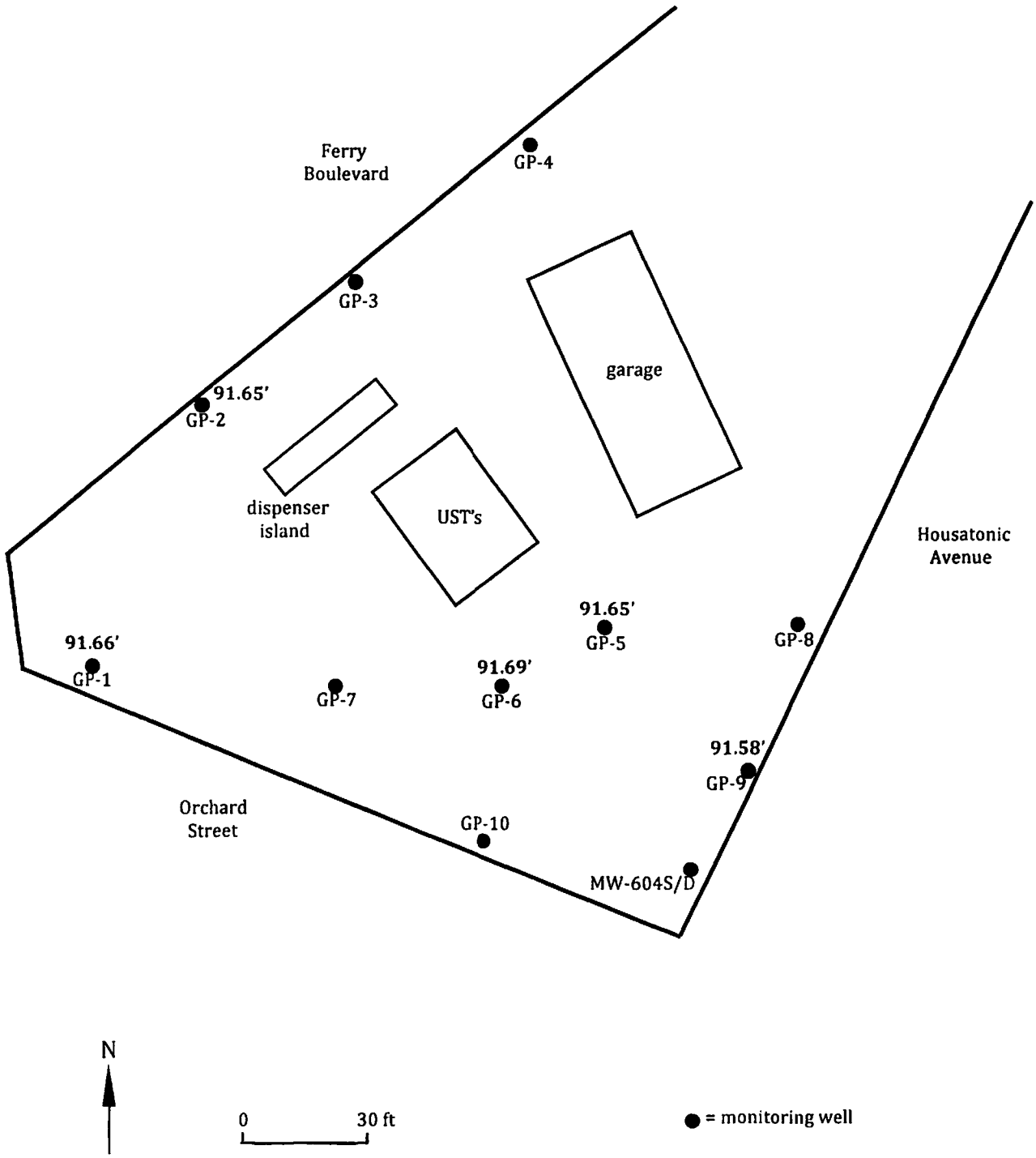


Figure 3. Water table elevations measured on March 21, 2014.

Appendix A. Field notes.

GROUND-WATER SAMPLING RECORD

Well ID: GP-5
Date: 3/21/14

Facility Name: 734 Ferry Blvd

Well Depth: 18.0 ft. Depth to Water: 12.05 ft. Well Diameter: 1 -inch
Water Column: 5.95 ft.
Vol. Water 1 Well Volume: 0.041 gals/ft x ft = 0.244 gallons
Vol. Water 3 Well Volumes: gallons x 3 = 0.732 gallons
Casing Material: PVC
Sampling Representative: SPD
Type of Pump: Peristaltic Tubing Material: Poly/Silicon
Sampling Point Set at: 15.0' ft.
Type Water Quality Meter and Flow-Through Cell None
Type Water Level Meter None
Weather Conditions: None
Other Observations::
- Very Slight fat. odor - Leachate 1st Poll
- Slight Sheen Begin Purge 10:50a

GROUND-WATER SAMPLING PARAMETERS

Time	Water Level	Volume Pumped	Pumping Rate	D.O. (mg/l)	Temp. (C°)	S.C. (mS/cm)	pH	ORP (mV)	Turbidity (NTU)
10:56	5.95	0.4	0.1 g/m	24.3	10.65	1.215	6.45	-8.5	3.78
11:02		1.0		10.0	10.53	1.312	6.38	-5.1	3.37
11:08		1.6		8.6	10.89	1.316	6.33	-12.2	2.12
11:12		2.2		8.5	11.00	1.308	6.42	-11.0	1.34
			Collect Sample @				11:22am		

Finished purging at _____ Sampled at: _____
Type Analytical Tests: MVOC

Samples delivered to: CET by SPD at 1:45pm

Stabilization Criteria:

D.O.	+/- 10%
Turb.	+/- 10%
S.C.	+/- 3%
ORP	+/- 10
pH	+/- 0.1

Other Comments: _____

GROUND-WATER SAMPLING RECORD

Well ID: 6P-6
Date: 5/21/14

Facility Name: 734 Ferry Blvd

Well Depth: ~18.0' ft. Depth to Water: 12.29 ft. Well Diameter: 1 -inch
Water Column: 5.71 ft.
Vol. Water 1 Well Volume: 0.041 gals/ft x ft = 0.234 gallons
Vol. Water 3 Well Volumes: gallons x 3 = 0.702 gallons
Casing Material: PVC
Sampling Representative: SPD
Type of Pump: Peristaltic Tubing Material: Poly/Silicon
Sampling Point Set at: ~15.5' ft.
Type Water Quality Meter and Flow-Through Cell YSI/Lamotte
Type Water Level Meter Solinst
Weather Conditions: Clear 45°F
Other Observations:
- Moderate Petroleum Odor
- Slight Sheen Begin Purge 10:07am

GROUND-WATER SAMPLING PARAMETERS

Time	Water Level	Volume Pumped	Pumping Rate	D.O. (mg/l)	Temp. (C°)	S.C. (mS/cm)	pH	ORP (mV)	Turbidity (NTU)
10:14	5.74	0.7	0.1 g/m	15.4	10.70	1.203	6.40	-82.1	10.2
10:19		1.2		7.5	10.79	1.166	6.48	-85.9	4.94
10:36		2.9		3.7	11.20	1.136	6.56	-73.2	3.07
10:41		3.4		3.5	11.42	1.132	6.57	-70.1	2.40
			Collect Sample @ 10:42am						

Finished purging at Sampled at:
Type Analytical Tests: AVOC

Samples delivered to: CET by SPD at 1:45pm

Stabilization Criteria:

D.O.	+/- 10%
Turb.	+/- 10%
S.C.	+/- 3%
ORP	+/- 10
pH	+/- 0.1

Other Comments:

GROUND-WATER SAMPLING RECORD

Well ID: GP-9
Date: 3-21-14

Facility Name: 734 Ferry Blvd

Well Depth: 14.5 ft. Depth to Water: 8.42 ft. Well Diameter: 1 -inch
Water Column: 6.08 ft.
Vol. Water 1 Well Volume: 0.041 gals/ft x ft = 0.250 gallons
Vol. Water 3 Well Volumes: gallons x 3 = 0.748 gallons
Casing Material: PVC
Sampling Representative: SPD
Type of Pump: Same Tubing Material: Same
Sampling Point Set at: 11.5' ft.
Type Water Quality Meter and Flow-Through Cell Same
Type Water Level Meter Same
Weather Conditions: Same
Other Observations:: A lot of
- Moderate Pet odor - Leachate in Flo-thru
- Slight Sheen Begin Purge 11:43a

GROUND-WATER SAMPLING PARAMETERS

Time	Water Level	Volume Pumped	Pumping Rate	D.O. (mg/l)	Temp. (C°)	S.C. (mS/cm)	pH	ORP (mV)	Turbidity (NTU)
11:46	6.08	0.3	6.1 gpm	2.50	10.19	1.900	6.33	4.9	30.2
11:53		1.0		12.1	10.00	1.488	6.26	-48.1	29.7
12:00		1.7		13.0	10.05	1.371	6.31	-64.4	32.0
12:14		3.1		13.6	9.99	1.361	6.26	-67.8	29.0
			Collect Sample @ 12:16pm						

Finished purging at Sampled at:
Type Analytical Tests: AVOC

Samples delivered to: CET by SPD at 1:45pm

Stabilization Criteria:

D.O.	+/- 10%
Turb.	+/- 10%
S.C.	+/- 3%
ORP	+/- 10
pH	+/- 0.1

Other Comments:

ID	BS	FS	HI	gd Elev	▽		gw Elev
GP-9	8.70		108.70	100.00	8.42		91.58
GP-5		5.00		103.70	12.05		91.65
GP-6		4.72		103.98	12.29		91.69
GP-2		6.35		102.35	10.70		91.65
GP-1		7.46		101.24	9.58		91.66

Appendix B. Lab report on analysis of ground water samples.

80 Lupes Drive
Stratford, CT 06615

COMPLETE ENVIRONMENTAL TESTING, INC.

Tel: (203) 377-9984
Fax: (203) 377-9952
e-mail: cet1@cetlabs.com

Client: Mr. David Cook
Geoscience Tech. Services, Inc
P.O. Box 1036
Old Lyme, CT 06371

Analytical Report

CET# 4030410

Report Date: March 27, 2014
Project: 734 Ferry Blvd, Stratford

Connecticut Laboratory Certificate: PH 0116
Massachussetts laboratory Certificate.: M-CT903
Rhode Island Certification: 199

New York Certification: 11982
Florida Laboratory Certification: E871064

SAMPLE SUMMARY

The sample(s) were received at 2.4°C.

This report contains analytical data associated with following samples only.

Sample ID	Laboratory ID	Matrix	Collection Date/Time	Receipt Date
GP-6	4030410-01	Water	3/21/2014 10:42	03/21/2014
GP-5	4030410-02	Water	3/21/2014 11:22	03/21/2014
GP-9	4030410-03	Water	3/21/2014 12:16	03/21/2014
Trip Blank	4030410-04	Water	3/21/2014	03/21/2014

CET #:4030410
Project: 734 Ferry Blvd, Stratford

Client Sample ID GP-6
Lab ID: 4030410-01

Volatile Organics **Analyst: JS**
Method: EPA 8260C **Matrix: Water**

Analyte	Result (ug/L)	RL (ug/L)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Methyl-t-Butyl Ether (MTBE)	ND	5.0	1	EPA 5030C	B4C2417	03/24/2014	03/24/2014 21:43	
Benzene	**1900**	1.0	1	EPA 5030C	B4C2417	03/24/2014	03/24/2014 21:43	E
Toluene	**1300**	1.0	1	EPA 5030C	B4C2417	03/24/2014	03/24/2014 21:43	E
Chlorobenzene	ND	1.0	1	EPA 5030C	B4C2417	03/24/2014	03/24/2014 21:43	
Ethylbenzene	**1200**	1.0	1	EPA 5030C	B4C2417	03/24/2014	03/24/2014 21:43	E
m+p Xylenes	**1800**	1.0	1	EPA 5030C	B4C2417	03/24/2014	03/24/2014 21:43	E
o-Xylene	**1000**	1.0	1	EPA 5030C	B4C2417	03/24/2014	03/24/2014 21:43	E
Styrene	ND	1.0	1	EPA 5030C	B4C2417	03/24/2014	03/24/2014 21:43	
Isopropylbenzene	**91**	1.0	1	EPA 5030C	B4C2417	03/24/2014	03/24/2014 21:43	
Bromobenzene	ND	1.0	1	EPA 5030C	B4C2417	03/24/2014	03/24/2014 21:43	
n-Propylbenzene	**220**	1.0	1	EPA 5030C	B4C2417	03/24/2014	03/24/2014 21:43	E
2-Chlorotoluene	ND	1.0	1	EPA 5030C	B4C2417	03/24/2014	03/24/2014 21:43	
4-Chlorotoluene	ND	1.0	1	EPA 5030C	B4C2417	03/24/2014	03/24/2014 21:43	
1,3,5-Trimethylbenzene	**180**	1.0	1	EPA 5030C	B4C2417	03/24/2014	03/24/2014 21:43	
tert-Butylbenzene	ND	1.0	1	EPA 5030C	B4C2417	03/24/2014	03/24/2014 21:43	
1,2,4-Trimethylbenzene	**710**	1.0	1	EPA 5030C	B4C2417	03/24/2014	03/24/2014 21:43	E
sec-Butylbenzene	**13**	1.0	1	EPA 5030C	B4C2417	03/24/2014	03/24/2014 21:43	
1,3-Dichlorobenzene	ND	1.0	1	EPA 5030C	B4C2417	03/24/2014	03/24/2014 21:43	
4-Isopropyltoluene	**3.7**	1.0	1	EPA 5030C	B4C2417	03/24/2014	03/24/2014 21:43	
1,4-Dichlorobenzene	ND	1.0	1	EPA 5030C	B4C2417	03/24/2014	03/24/2014 21:43	
1,2-Dichlorobenzene	ND	1.0	1	EPA 5030C	B4C2417	03/24/2014	03/24/2014 21:43	
n-Butylbenzene	ND	1.0	1	EPA 5030C	B4C2417	03/24/2014	03/24/2014 21:43	
1,2,4-Trichlorobenzene	ND	1.0	1	EPA 5030C	B4C2417	03/24/2014	03/24/2014 21:43	
Hexachlorobutadiene	ND	0.45	1	EPA 5030C	B4C2417	03/24/2014	03/24/2014 21:43	
Naphthalene	**410**	1.0	1	EPA 5030C	B4C2417	03/24/2014	03/24/2014 21:43	E
1,2,3-Trichlorobenzene	ND	1.0	1	EPA 5030C	B4C2417	03/24/2014	03/24/2014 21:43	
Surrogate: 1,2-Dichloroethane-d4	*84.8 %*		*70 - 130*		B4C2417	03/24/2014	*03/24/2014 21:43*	
Surrogate: Toluene-d8	*109 %*		*70 - 130*		B4C2417	03/24/2014	*03/24/2014 21:43*	
Surrogate: 4-Bromofluorobenzene	*104 %*		*70 - 130*		B4C2417	03/24/2014	*03/24/2014 21:43*	

CET #:4030410
Project: 734 Ferry Blvd, Stratford

Client Sample ID GP-6
Lab ID: 4030410-01RE1

Volatile Organics **Analyst: JS**
Method: EPA 8260C **Matrix: Water**

Analyte	Result (ug/L)	RL (ug/L)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Methyl-t-Butyl Ether (MTBE)	ND	100	20	EPA 5030C	B4C2616	03/26/2014	03/26/2014 14:30	
Benzene	**4100**	20	20	EPA 5030C	B4C2616	03/26/2014	03/26/2014 14:30	
Toluene	**2200**	20	20	EPA 5030C	B4C2616	03/26/2014	03/26/2014 14:30	
Chlorobenzene	ND	20	20	EPA 5030C	B4C2616	03/26/2014	03/26/2014 14:30	
Ethylbenzene	**1700**	20	20	EPA 5030C	B4C2616	03/26/2014	03/26/2014 14:30	
m+p Xylenes	**3900**	20	20	EPA 5030C	B4C2616	03/26/2014	03/26/2014 14:30	
o-Xylene	**1300**	20	20	EPA 5030C	B4C2616	03/26/2014	03/26/2014 14:30	
Styrene	ND	20	20	EPA 5030C	B4C2616	03/26/2014	03/26/2014 14:30	
Isopropylbenzene	**74**	20	20	EPA 5030C	B4C2616	03/26/2014	03/26/2014 14:30	
Bromobenzene	ND	20	20	EPA 5030C	B4C2616	03/26/2014	03/26/2014 14:30	
n-Propylbenzene	**270**	20	20	EPA 5030C	B4C2616	03/26/2014	03/26/2014 14:30	
2-Chlorotoluene	ND	20	20	EPA 5030C	B4C2616	03/26/2014	03/26/2014 14:30	
4-Chlorotoluene	ND	20	20	EPA 5030C	B4C2616	03/26/2014	03/26/2014 14:30	
1,3,5-Trimethylbenzene	**160**	20	20	EPA 5030C	B4C2616	03/26/2014	03/26/2014 14:30	
tert-Butylbenzene	ND	20	20	EPA 5030C	B4C2616	03/26/2014	03/26/2014 14:30	
1,2,4-Trimethylbenzene	**1200**	20	20	EPA 5030C	B4C2616	03/26/2014	03/26/2014 14:30	
sec-Butylbenzene	ND	20	20	EPA 5030C	B4C2616	03/26/2014	03/26/2014 14:30	
1,3-Dichlorobenzene	ND	20	20	EPA 5030C	B4C2616	03/26/2014	03/26/2014 14:30	
4-Isopropyltoluene	ND	20	20	EPA 5030C	B4C2616	03/26/2014	03/26/2014 14:30	
1,4-Dichlorobenzene	ND	20	20	EPA 5030C	B4C2616	03/26/2014	03/26/2014 14:30	
1,2-Dichlorobenzene	ND	20	20	EPA 5030C	B4C2616	03/26/2014	03/26/2014 14:30	
n-Butylbenzene	ND	20	20	EPA 5030C	B4C2616	03/26/2014	03/26/2014 14:30	
1,2,4-Trichlorobenzene	ND	20	20	EPA 5030C	B4C2616	03/26/2014	03/26/2014 14:30	
Hexachlorobutadiene	ND	9.0	20	EPA 5030C	B4C2616	03/26/2014	03/26/2014 14:30	
Naphthalene	**650**	20	20	EPA 5030C	B4C2616	03/26/2014	03/26/2014 14:30	
1,2,3-Trichlorobenzene	ND	20	20	EPA 5030C	B4C2616	03/26/2014	03/26/2014 14:30	
Surrogate: 1,2-Dichloroethane-d4	*106 %*		*70 - 130*		B4C2616	03/26/2014	*03/26/2014 14:30*	
Surrogate: Toluene-d8	*92.4 %*		*70 - 130*		B4C2616	03/26/2014	*03/26/2014 14:30*	
Surrogate: 4-Bromofluorobenzene	*90.4 %*		*70 - 130*		B4C2616	03/26/2014	*03/26/2014 14:30*	

CET #:4030410
Project: 734 Ferry Blvd, Stratford

Client Sample ID GP-5
Lab ID: 4030410-02

Volatile Organics **Analyst: JS**
Method: EPA 8260C **Matrix: Water**

Analyte	Result (ug/L)	RL (ug/L)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Methyl-t-Butyl Ether (MTBE)	ND	25	5	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:56	
Benzene	**62**	5.0	5	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:56	
Toluene	**64**	5.0	5	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:56	
Chlorobenzene	**22**	5.0	5	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:56	
Ethylbenzene	**350**	5.0	5	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:56	
m+p Xylenes	**720**	5.0	5	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:56	
o-Xylene	**260**	5.0	5	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:56	
Styrene	ND	5.0	5	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:56	
Isopropylbenzene	**27**	5.0	5	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:56	
Bromobenzene	ND	5.0	5	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:56	
n-Propylbenzene	**110**	5.0	5	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:56	
2-Chlorotoluene	ND	5.0	5	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:56	
4-Chlorotoluene	ND	5.0	5	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:56	
1,3,5-Trimethylbenzene	**270**	5.0	5	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:56	
tert-Butylbenzene	ND	5.0	5	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:56	
1,2,4-Trimethylbenzene	**830**	5.0	5	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:56	
sec-Butylbenzene	**8.7**	5.0	5	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:56	
1,3-Dichlorobenzene	ND	5.0	5	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:56	
4-Isopropyltoluene	ND	5.0	5	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:56	
1,4-Dichlorobenzene	ND	5.0	5	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:56	
1,2-Dichlorobenzene	ND	5.0	5	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:56	
n-Butylbenzene	ND	5.0	5	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:56	
1,2,4-Trichlorobenzene	ND	5.0	5	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:56	
Hexachlorobutadiene	ND	2.3	5	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:56	
Naphthalene	**200**	5.0	5	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:56	
1,2,3-Trichlorobenzene	ND	5.0	5	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:56	
Surrogate: 1,2-Dichloroethane-d4	*106 %*		*70 - 130*		B4C2616	03/26/2014	*03/26/2014 13:56*	
Surrogate: Toluene-d8	*94.8 %*		*70 - 130*		B4C2616	03/26/2014	*03/26/2014 13:56*	
Surrogate: 4-Bromofluorobenzene	*92.0 %*		*70 - 130*		B4C2616	03/26/2014	*03/26/2014 13:56*	

CET #:4030410
Project: 734 Ferry Blvd, Stratford

Client Sample ID GP-9
Lab ID: 4030410-03

Volatile Organics **Analyst: JS**

Method: EPA 8260C **Matrix: Water**

Analyte	Result (ug/L)	RL (ug/L)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Methyl-t-Butyl Ether (MTBE)	ND	5.0	1	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:20	
Benzene	**30**	1.0	1	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:20	
Toluene	ND	1.0	1	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:20	
Chlorobenzene	**100**	1.0	1	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:20	
Ethylbenzene	**38**	1.0	1	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:20	
m+p Xylenes	**4.1**	1.0	1	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:20	
o-Xylene	ND	1.0	1	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:20	
Styrene	ND	1.0	1	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:20	
Isopropylbenzene	**9.8**	1.0	1	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:20	
Bromobenzene	ND	1.0	1	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:20	
n-Propylbenzene	**28**	1.0	1	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:20	
2-Chlorotoluene	ND	1.0	1	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:20	
4-Chlorotoluene	ND	1.0	1	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:20	
1,3,5-Trimethylbenzene	**8.0**	1.0	1	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:20	
tert-Butylbenzene	ND	1.0	1	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:20	
1,2,4-Trimethylbenzene	**100**	1.0	1	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:20	
sec-Butylbenzene	**3.7**	1.0	1	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:20	
1,3-Dichlorobenzene	ND	1.0	1	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:20	
4-Isopropyltoluene	ND	1.0	1	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:20	
1,4-Dichlorobenzene	ND	1.0	1	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:20	
1,2-Dichlorobenzene	ND	1.0	1	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:20	
n-Butylbenzene	ND	1.0	1	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:20	
1,2,4-Trichlorobenzene	ND	1.0	1	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:20	
Hexachlorobutadiene	ND	0.45	1	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:20	
Naphthalene	**19**	1.0	1	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:20	
1,2,3-Trichlorobenzene	ND	1.0	1	EPA 5030C	B4C2616	03/26/2014	03/26/2014 13:20	
Surrogate: 1,2-Dichloroethane-d4	*107 %*		*70 - 130*		B4C2616	03/26/2014	*03/26/2014 13:20*	
Surrogate: Toluene-d8	*94.5 %*		*70 - 130*		B4C2616	03/26/2014	*03/26/2014 13:20*	
Surrogate: 4-Bromofluorobenzene	*90.2 %*		*70 - 130*		B4C2616	03/26/2014	*03/26/2014 13:20*	

CET #:4030410
Project: 734 Ferry Blvd, Stratford

Client Sample ID Trip Blank
Lab ID: 4030410-04

Volatile Organics **Analyst: JS**
Method: EPA 8260C **Matrix: Water**

Analyte	Result (ug/L)	RL (ug/L)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Methyl-t-Butyl Ether (MTBE)	ND	5.0	1	EPA 5030C	B4C2509	03/25/2014	03/25/2014 17:46	
Benzene	ND	1.0	1	EPA 5030C	B4C2509	03/25/2014	03/25/2014 17:46	
Toluene	ND	1.0	1	EPA 5030C	B4C2509	03/25/2014	03/25/2014 17:46	
Chlorobenzene	ND	1.0	1	EPA 5030C	B4C2509	03/25/2014	03/25/2014 17:46	
Ethylbenzene	ND	1.0	1	EPA 5030C	B4C2509	03/25/2014	03/25/2014 17:46	
m+p Xylenes	ND	1.0	1	EPA 5030C	B4C2509	03/25/2014	03/25/2014 17:46	
o-Xylene	ND	1.0	1	EPA 5030C	B4C2509	03/25/2014	03/25/2014 17:46	
Styrene	ND	1.0	1	EPA 5030C	B4C2509	03/25/2014	03/25/2014 17:46	
Isopropylbenzene	ND	1.0	1	EPA 5030C	B4C2509	03/25/2014	03/25/2014 17:46	
Bromobenzene	ND	1.0	1	EPA 5030C	B4C2509	03/25/2014	03/25/2014 17:46	
n-Propylbenzene	ND	1.0	1	EPA 5030C	B4C2509	03/25/2014	03/25/2014 17:46	
2-Chlorotoluene	ND	1.0	1	EPA 5030C	B4C2509	03/25/2014	03/25/2014 17:46	
4-Chlorotoluene	ND	1.0	1	EPA 5030C	B4C2509	03/25/2014	03/25/2014 17:46	
1,3,5-Trimethylbenzene	ND	1.0	1	EPA 5030C	B4C2509	03/25/2014	03/25/2014 17:46	
tert-Butylbenzene	ND	1.0	1	EPA 5030C	B4C2509	03/25/2014	03/25/2014 17:46	
1,2,4-Trimethylbenzene	ND	1.0	1	EPA 5030C	B4C2509	03/25/2014	03/25/2014 17:46	
sec-Butylbenzene	ND	1.0	1	EPA 5030C	B4C2509	03/25/2014	03/25/2014 17:46	
1,3-Dichlorobenzene	ND	1.0	1	EPA 5030C	B4C2509	03/25/2014	03/25/2014 17:46	
4-Isopropyltoluene	ND	1.0	1	EPA 5030C	B4C2509	03/25/2014	03/25/2014 17:46	
1,4-Dichlorobenzene	ND	1.0	1	EPA 5030C	B4C2509	03/25/2014	03/25/2014 17:46	
1,2-Dichlorobenzene	ND	1.0	1	EPA 5030C	B4C2509	03/25/2014	03/25/2014 17:46	
n-Butylbenzene	ND	1.0	1	EPA 5030C	B4C2509	03/25/2014	03/25/2014 17:46	
1,2,4-Trichlorobenzene	ND	1.0	1	EPA 5030C	B4C2509	03/25/2014	03/25/2014 17:46	
Hexachlorobutadiene	ND	0.45	1	EPA 5030C	B4C2509	03/25/2014	03/25/2014 17:46	
Naphthalene	ND	1.0	1	EPA 5030C	B4C2509	03/25/2014	03/25/2014 17:46	
1,2,3-Trichlorobenzene	ND	1.0	1	EPA 5030C	B4C2509	03/25/2014	03/25/2014 17:46	
Surrogate: 1,2-Dichloroethane-d4	*92.8 %*		*70 - 130*		B4C2509	03/25/2014	*03/25/2014 17:46*	
Surrogate: Toluene-d8	*101 %*		*70 - 130*		B4C2509	03/25/2014	*03/25/2014 17:46*	
Surrogate: 4-Bromofluorobenzene	*98.9 %*		*70 - 130*		B4C2509	03/25/2014	*03/25/2014 17:46*	

CET #:4030410
Project: 734 Ferry Blvd, Stratford

QUALITY CONTROL SECTION

Batch B4C2417 - EPA 8260C

Analyte	Result (ug/L)	RL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Blank (B4C2417-BLK1)					Prepared: 3/24/2014 Analyzed: 3/24/2014				
Methyl-t-Butyl Ether (MTBE)	ND	5.0							
Benzene	ND	1.0							
Toluene	ND	1.0							
Chlorobenzene	ND	1.0							
Ethylbenzene	ND	1.0							
m+p Xylenes	ND	1.0							
o-Xylene	ND	1.0							
Styrene	ND	1.0							
Isopropylbenzene	ND	1.0							
Bromobenzene	ND	1.0							
n-Propylbenzene	ND	1.0							
2-Chlorotoluene	ND	1.0							
4-Chlorotoluene	ND	1.0							
1,3,5-Trimethylbenzene	ND	1.0							
tert-Butylbenzene	ND	1.0							
1,2,4-Trimethylbenzene	ND	1.0							
sec-Butylbenzene	ND	1.0							
1,3-Dichlorobenzene	ND	1.0							
4-Isopropyltoluene	ND	1.0							
1,4-Dichlorobenzene	ND	1.0							
1,2-Dichlorobenzene	ND	1.0							
n-Butylbenzene	ND	1.0							
1,2,4-Trichlorobenzene	ND	1.0							
Hexachlorobutadiene	ND	0.45							
Naphthalene	ND	1.0							
1,2,3-Trichlorobenzene	ND	1.0							
Surrogate: 1,2-Dichloroethane-d4					*93.3*	*70 - 130*			
Surrogate: Toluene-d8					*102*	*70 - 130*			
Surrogate: 4-Bromofluorobenzene					*99.0*	*70 - 130*			
LCS (B4C2417-BS1)					Prepared: 3/24/2014 Analyzed: 3/24/2014				
Methyl-t-Butyl Ether (MTBE)	58.7	5.0	50.000		117	70 - 130			
Benzene	54.7	1.0	50.000		109	70 - 130			
Toluene	52.8	1.0	50.000		106	70 - 130			
Chlorobenzene	50.4	1.0	50.000		101	70 - 130			
Ethylbenzene	52.5	1.0	50.000		105	70 - 130			
m+p Xylenes	98.9	1.0	100.000		98.9	70 - 130			
o-Xylene	51.5	1.0	50.000		103	70 - 130			
Styrene	49.1	1.0	50.000		98.1	70 - 130			
Isopropylbenzene	50.1	1.0	50.000		100	70 - 130			
Bromobenzene	50.4	1.0	50.000		101	70 - 130			
n-Propylbenzene	49.7	1.0	50.000		99.4	70 - 130			
2-Chlorotoluene	43.7	1.0	50.000		87.3	70 - 130			
4-Chlorotoluene	59.1	1.0	50.000		118	70 - 130			
1,3,5-Trimethylbenzene	50.1	1.0	50.000		100	70 - 130			
tert-Butylbenzene	48.4	1.0	50.000		96.9	70 - 130			
1,2,4-Trimethylbenzene	49.0	1.0	50.000		98.0	70 - 130			
sec-Butylbenzene	45.7	1.0	50.000		91.4	70 - 130			
1,3-Dichlorobenzene	48.3	1.0	50.000		96.6	70 - 130			

CET #:4030410

Project: 734 Ferry Blvd, Stratford

Analyte	Result (ug/L)	RL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
LCS (B4C2417-BS1) - Continued					Prepared: 3/24/2014 Analyzed: 3/24/2014				
4-Isopropyltoluene	46.6	1.0	50.000		93.2	70 - 130			
1,4-Dichlorobenzene	48.4	1.0	50.000		96.8	70 - 130			
1,2-Dichlorobenzene	49.6	1.0	50.000		99.2	70 - 130			
n-Butylbenzene	45.2	1.0	50.000		90.3	70 - 130			
1,2,4-Trichlorobenzene	51.1	1.0	50.000		102	70 - 130			
Hexachlorobutadiene	43.3	0.45	50.000		86.5	70 - 130			
Naphthalene	54.5	1.0	50.000		109	70 - 130			
1,2,3-Trichlorobenzene	53.5	1.0	50.000		107	70 - 130			
Surrogate: 1,2-Dichloroethane-d4					*94.9*	*70 - 130*			
Surrogate: Toluene-d8					*103*	*70 - 130*			
Surrogate: 4-Bromofluorobenzene					*102*	*70 - 130*			
Calibration Check (B4C2417-CCV1)					Prepared: 3/24/2014 Analyzed: 3/24/2014				
Methyl-t-Butyl Ether (MTBE)	56.0	5.0	50.000		112	70 - 130			
Benzene	51.0	1.0	50.000		102	70 - 130			
Toluene	50.2	1.0	50.000		100	80 - 120			
Chlorobenzene	49.2	1.0	50.000		98.3	70 - 130			
Ethylbenzene	51.0	1.0	50.000		102	80 - 120			
m+p Xylenes	95.2	1.0	100.000		95.2	70 - 130			
o-Xylene	50.4	1.0	50.000		101	70 - 130			
Styrene	49.4	1.0	50.000		98.8	70 - 130			
Isopropylbenzene	48.1	1.0	50.000		96.3	70 - 130			
Bromobenzene	47.6	1.0	50.000		95.2	70 - 130			
n-Propylbenzene	45.7	1.0	50.000		91.4	70 - 130			
2-Chlorotoluene	43.6	1.0	50.000		87.3	70 - 130			
4-Chlorotoluene	54.5	1.0	50.000		109	70 - 130			
1,3,5-Trimethylbenzene	47.3	1.0	50.000		94.6	70 - 130			
tert-Butylbenzene	46.1	1.0	50.000		92.2	70 - 130			
1,2,4-Trimethylbenzene	46.8	1.0	50.000		93.7	70 - 130			
sec-Butylbenzene	44.1	1.0	50.000		88.2	70 - 130			
1,3-Dichlorobenzene	46.7	1.0	50.000		93.4	70 - 130			
4-Isopropyltoluene	45.3	1.0	50.000		90.6	70 - 130			
1,4-Dichlorobenzene	47.0	1.0	50.000		93.9	70 - 130			
1,2-Dichlorobenzene	47.8	1.0	50.000		95.7	70 - 130			
n-Butylbenzene	43.6	1.0	50.000		87.2	70 - 130			
1,2,4-Trichlorobenzene	44.0	1.0	50.000		88.0	70 - 130			
Hexachlorobutadiene	39.6	0.45	50.000		79.2	70 - 130			
Naphthalene	38.3	1.0	50.000		76.6	70 - 130			
1,2,3-Trichlorobenzene	38.9	1.0	50.000		77.8	70 - 130			
Surrogate: 1,2-Dichloroethane-d4					*94.9*	*70 - 130*			
Surrogate: Toluene-d8					*103*	*70 - 130*			
Surrogate: 4-Bromofluorobenzene					*101*	*70 - 130*			

CET #:4030410
Project: 734 Ferry Blvd, Stratford

Batch B4C2509 - EPA 8260C

Analyte	Result (ug/L)	RL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Blank (B4C2509-BLK1)					Prepared: 3/25/2014 Analyzed: 3/25/2014				
Methyl-t-Butyl Ether (MTBE)	ND	5.0							
Benzene	ND	1.0							
Toluene	ND	1.0							
Chlorobenzene	ND	1.0							
Ethylbenzene	ND	1.0							
m+p Xylenes	ND	1.0							
o-Xylene	ND	1.0							
Styrene	ND	1.0							
Isopropylbenzene	ND	1.0							
Bromobenzene	ND	1.0							
n-Propylbenzene	ND	1.0							
2-Chlorotoluene	ND	1.0							
4-Chlorotoluene	ND	1.0							
1,3,5-Trimethylbenzene	ND	1.0							
tert-Butylbenzene	ND	1.0							
1,2,4-Trimethylbenzene	ND	1.0							
sec-Butylbenzene	ND	1.0							
1,3-Dichlorobenzene	ND	1.0							
4-Isopropyltoluene	ND	1.0							
1,4-Dichlorobenzene	ND	1.0							
1,2-Dichlorobenzene	ND	1.0							
n-Butylbenzene	ND	1.0							
1,2,4-Trichlorobenzene	ND	1.0							
Hexachlorobutadiene	ND	0.45							
Naphthalene	ND	1.0							
1,2,3-Trichlorobenzene	ND	1.0							
Surrogate: 1,2-Dichloroethane-d4					*96.5*	*70 - 130*			
Surrogate: Toluene-d8					*102*	*70 - 130*			
Surrogate: 4-Bromofluorobenzene					*101*	*70 - 130*			
LCS (B4C2509-BS1)					Prepared: 3/25/2014 Analyzed: 3/25/2014				
Methyl-t-Butyl Ether (MTBE)	55.8	5.0	50.000		112	70 - 130			
Benzene	51.1	1.0	50.000		102	70 - 130			
Toluene	49.4	1.0	50.000		98.9	70 - 130			
Chlorobenzene	44.5	1.0	50.000		89.0	70 - 130			
Ethylbenzene	45.9	1.0	50.000		91.7	70 - 130			
m+p Xylenes	88.0	1.0	100.000		88.0	70 - 130			
o-Xylene	45.9	1.0	50.000		91.8	70 - 130			
Styrene	43.3	1.0	50.000		86.7	70 - 130			
Isopropylbenzene	44.3	1.0	50.000		88.7	70 - 130			
Bromobenzene	45.4	1.0	50.000		90.7	70 - 130			
n-Propylbenzene	45.2	1.0	50.000		90.5	70 - 130			
2-Chlorotoluene	38.4	1.0	50.000		76.9	70 - 130			
4-Chlorotoluene	58.3	1.0	50.000		117	70 - 130			
1,3,5-Trimethylbenzene	45.6	1.0	50.000		91.1	70 - 130			
tert-Butylbenzene	44.4	1.0	50.000		88.8	70 - 130			
1,2,4-Trimethylbenzene	45.1	1.0	50.000		90.3	70 - 130			
sec-Butylbenzene	41.6	1.0	50.000		83.2	70 - 130			
1,3-Dichlorobenzene	45.3	1.0	50.000		90.6	70 - 130			
4-Isopropyltoluene	43.5	1.0	50.000		87.0	70 - 130			
1,4-Dichlorobenzene	45.8	1.0	50.000		91.7	70 - 130			

CET #:4030410

Project: 734 Ferry Blvd, Stratford

Analyte	Result (ug/L)	RL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
LCS (B4C2509-BS1) - Continued					Prepared: 3/25/2014 Analyzed: 3/25/2014				
1,2-Dichlorobenzene	46.4	1.0	50.000		92.8	70 - 130			
n-Butylbenzene	42.5	1.0	50.000		85.0	70 - 130			
1,2,4-Trichlorobenzene	46.2	1.0	50.000		92.4	70 - 130			
Hexachlorobutadiene	39.8	0.45	50.000		79.7	70 - 130			
Naphthalene	55.6	1.0	50.000		111	70 - 130			
1,2,3-Trichlorobenzene	48.7	1.0	50.000		97.5	70 - 130			
Surrogate: 1,2-Dichloroethane-d4					*94.6*	*70 - 130*			
Surrogate: Toluene-d8					*103*	*70 - 130*			
Surrogate: 4-Bromofluorobenzene					*102*	*70 - 130*			
Calibration Check (B4C2509-CCV1)					Prepared: 3/25/2014 Analyzed: 3/25/2014				
Methyl-t-Butyl Ether (MTBE)	58.0	5.0	50.000		116	70 - 130			
Benzene	53.2	1.0	50.000		106	70 - 130			
Toluene	52.5	1.0	50.000		105	80 - 120			
Chlorobenzene	45.4	1.0	50.000		90.9	70 - 130			
Ethylbenzene	46.8	1.0	50.000		93.7	80 - 120			
m+p Xylenes	90.2	1.0	100.000		90.2	70 - 130			
o-Xylene	48.4	1.0	50.000		96.8	70 - 130			
Styrene	46.1	1.0	50.000		92.2	70 - 130			
Isopropylbenzene	45.5	1.0	50.000		91.0	70 - 130			
Bromobenzene	48.7	1.0	50.000		97.4	70 - 130			
n-Propylbenzene	45.2	1.0	50.000		90.3	70 - 130			
2-Chlorotoluene	41.3	1.0	50.000		82.6	70 - 130			
4-Chlorotoluene	60.2	1.0	50.000		120	70 - 130			
1,3,5-Trimethylbenzene	47.8	1.0	50.000		95.5	70 - 130			
tert-Butylbenzene	47.0	1.0	50.000		93.9	70 - 130			
1,2,4-Trimethylbenzene	47.7	1.0	50.000		95.3	70 - 130			
sec-Butylbenzene	44.0	1.0	50.000		88.0	70 - 130			
1,3-Dichlorobenzene	47.3	1.0	50.000		94.5	70 - 130			
4-Isopropyltoluene	44.6	1.0	50.000		89.2	70 - 130			
1,4-Dichlorobenzene	47.8	1.0	50.000		95.5	70 - 130			
1,2-Dichlorobenzene	47.8	1.0	50.000		95.5	70 - 130			
n-Butylbenzene	41.8	1.0	50.000		83.5	70 - 130			
1,2,4-Trichlorobenzene	42.8	1.0	50.000		85.7	70 - 130			
Hexachlorobutadiene	37.4	0.45	50.000		74.7	70 - 130			
Naphthalene	52.5	1.0	50.000		105	70 - 130			
1,2,3-Trichlorobenzene	38.5	1.0	50.000		76.9	70 - 130			
Surrogate: 1,2-Dichloroethane-d4					*92.7*	*70 - 130*			
Surrogate: Toluene-d8					*102*	*70 - 130*			
Surrogate: 4-Bromofluorobenzene					*101*	*70 - 130*			

CET #:4030410
Project: 734 Ferry Blvd, Stratford

Batch B4C2616 - EPA 8260C

Analyte	Result (ug/L)	RL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Blank (B4C2616-BLK1)					Prepared: 3/26/2014 Analyzed: 3/26/2014				
Methyl-t-Butyl Ether (MTBE)	ND	5.0							
Benzene	ND	1.0							
Toluene	ND	1.0							
Chlorobenzene	ND	1.0							
Ethylbenzene	ND	1.0							
m+p Xylenes	ND	1.0							
o-Xylene	ND	1.0							
Styrene	ND	1.0							
Isopropylbenzene	ND	1.0							
Bromobenzene	ND	1.0							
n-Propylbenzene	ND	1.0							
2-Chlorotoluene	ND	1.0							
4-Chlorotoluene	ND	1.0							
1,3,5-Trimethylbenzene	ND	1.0							
tert-Butylbenzene	ND	1.0							
1,2,4-Trimethylbenzene	ND	1.0							
sec-Butylbenzene	ND	1.0							
1,3-Dichlorobenzene	ND	1.0							
4-Isopropyltoluene	ND	1.0							
1,4-Dichlorobenzene	ND	1.0							
1,2-Dichlorobenzene	ND	1.0							
n-Butylbenzene	ND	1.0							
1,2,4-Trichlorobenzene	ND	1.0							
Hexachlorobutadiene	ND	0.45							
Naphthalene	ND	1.0							
1,2,3-Trichlorobenzene	ND	1.0							
Surrogate: 1,2-Dichloroethane-d4					*102*	*70 - 130*			
Surrogate: Toluene-d8					*92.5*	*70 - 130*			
Surrogate: 4-Bromofluorobenzene					*86.1*	*70 - 130*			
LCS (B4C2616-BS1)					Prepared: 3/26/2014 Analyzed: 3/26/2014				
Methyl-t-Butyl Ether (MTBE)	48.2	5.0	50.000		96.3	70 - 130			
Benzene	54.5	1.0	50.000		109	70 - 130			
Toluene	51.6	1.0	50.000		103	70 - 130			
Chlorobenzene	58.0	1.0	50.000		116	70 - 130			
Ethylbenzene	53.0	1.0	50.000		106	70 - 130			
m+p Xylenes	113	1.0	100.000		113	70 - 130			
o-Xylene	53.1	1.0	50.000		106	70 - 130			
Styrene	55.2	1.0	50.000		110	70 - 130			
Isopropylbenzene	54.2	1.0	50.000		108	70 - 130			
Bromobenzene	54.2	1.0	50.000		108	70 - 130			
n-Propylbenzene	58.6	1.0	50.000		117	70 - 130			
2-Chlorotoluene	57.3	1.0	50.000		115	70 - 130			
4-Chlorotoluene	53.0	1.0	50.000		106	70 - 130			
1,3,5-Trimethylbenzene	58.3	1.0	50.000		117	70 - 130			
tert-Butylbenzene	60.1	1.0	50.000		120	70 - 130			
1,2,4-Trimethylbenzene	57.2	1.0	50.000		114	70 - 130			
sec-Butylbenzene	61.0	1.0	50.000		122	70 - 130			
1,3-Dichlorobenzene	59.5	1.0	50.000		119	70 - 130			
4-Isopropyltoluene	58.8	1.0	50.000		118	70 - 130			
1,4-Dichlorobenzene	58.0	1.0	50.000		116	70 - 130			

CET #:4030410

Project: 734 Ferry Blvd, Stratford

Analyte	Result (ug/L)	RL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
LCS (B4C2616-BS1) - Continued					Prepared: 3/26/2014 Analyzed: 3/26/2014				
1,2-Dichlorobenzene	60.5	1.0	50.000		121	70 - 130			
n-Butylbenzene	55.8	1.0	50.000		112	70 - 130			
1,2,4-Trichlorobenzene	61.1	1.0	50.000		122	70 - 130			
Hexachlorobutadiene	58.9	0.45	50.000		118	70 - 130			
Naphthalene	71.0	1.0	50.000		142	70 - 130			H
1,2,3-Trichlorobenzene	73.1	1.0	50.000		146	70 - 130			H
Surrogate: 1,2-Dichloroethane-d4					*105*	*70 - 130*			
Surrogate: Toluene-d8					*92.6*	*70 - 130*			
Surrogate: 4-Bromofluorobenzene					*93.0*	*70 - 130*			
Calibration Check (B4C2616-CCV1)					Prepared: 3/26/2014 Analyzed: 3/26/2014				
Methyl-t-Butyl Ether (MTBE)	44.5	5.0	50.000		88.9	70 - 130			
Benzene	49.3	1.0	50.000		98.6	70 - 130			
Toluene	47.8	1.0	50.000		95.6	80 - 120			
Chlorobenzene	55.2	1.0	50.000		110	70 - 130			
Ethylbenzene	49.8	1.0	50.000		99.7	80 - 120			
m+p Xylenes	106	1.0	100.000		106	70 - 130			
o-Xylene	50.3	1.0	50.000		101	70 - 130			
Styrene	53.1	1.0	50.000		106	70 - 130			
Isopropylbenzene	51.2	1.0	50.000		102	70 - 130			
Bromobenzene	51.3	1.0	50.000		103	70 - 130			
n-Propylbenzene	54.3	1.0	50.000		109	70 - 130			
2-Chlorotoluene	54.6	1.0	50.000		109	70 - 130			
4-Chlorotoluene	50.0	1.0	50.000		100	70 - 130			
1,3,5-Trimethylbenzene	55.0	1.0	50.000		110	70 - 130			
tert-Butylbenzene	57.6	1.0	50.000		115	70 - 130			
1,2,4-Trimethylbenzene	54.1	1.0	50.000		108	70 - 130			
sec-Butylbenzene	57.8	1.0	50.000		116	70 - 130			
1,3-Dichlorobenzene	56.1	1.0	50.000		112	70 - 130			
4-Isopropyltoluene	55.5	1.0	50.000		111	70 - 130			
1,4-Dichlorobenzene	54.6	1.0	50.000		109	70 - 130			
1,2-Dichlorobenzene	57.2	1.0	50.000		114	70 - 130			
n-Butylbenzene	52.7	1.0	50.000		105	70 - 130			
1,2,4-Trichlorobenzene	51.8	1.0	50.000		104	70 - 130			
Hexachlorobutadiene	52.6	0.45	50.000		105	70 - 130			
Naphthalene	49.2	1.0	50.000		98.4	70 - 130			
1,2,3-Trichlorobenzene	52.1	1.0	50.000		104	70 - 130			
Surrogate: 1,2-Dichloroethane-d4					*106*	*70 - 130*			
Surrogate: Toluene-d8					*93.0*	*70 - 130*			
Surrogate: 4-Bromofluorobenzene					*95.9*	*70 - 130*			

CET #:4030410
Project: 734 Ferry Blvd, Stratford

Questions related to this report should be directed to David Ditta, Timothy Fusco, or Robert Blake at 203-377-9984.

Sincerely.

David Ditta
Laboratory Director

Report Comments:

ND is None Detected at the specified detection limit
All analyses were performed in house unless a Reference Laboratory is listed.
Samples will be disposed of 30 days after the report date.
Sample Result Flags:
E- The result is estimated, above the calibration range.
H- The surrogate recovery is above the control limits.
L- The surrogate recovery is below the control limits.
B- The compound was detected in the laboratory blank.
P- The Relative Percent Difference (RPD) of dual column analyses exceeds 40%.
D- The RPD between the sample and the sample duplicate is high. Sample Homogenity may be a problem.
All results met standard operating procedures unless indicated by a data qualifier next to a sample result, or a narration in the QC report.
Complete Environmental Testing is only responsible for the certified testing and is not directly responsible for the integrity of the sample before laboratory receipt.

80 Lupes Drive
Stratford, CT 06615

COMPLETE ENVIRONMENTAL TESTING, INC.

Tel: (203) 377-9984
Fax: (203) 377-9952
email: cet1@cetlabs.com

Quality Control Definitions and Abbreviations

Internal Standard (IS)	An Analyte added to each sample or sample extract. An internal standard is used to monitor retention time, calculate relative response, and quantify analytes of interest.
Surrogate Recovery	The % recovery for non-tarer organic compounds that are spiked into all samples. Used to determine method performance.
Continuing Calibration	An analytical standard analyzed with each set of samples to verify initial calibration of the system.
Batch	Samples that are analyzed together with the same method, sequence and lot of reagents within the same time period.
ND	Not detected
RL	Reporting Limit
Dilution	Multiplier added to detection levels (MDL) and/or sample results due to interferences and/or high concentration of target compounds.
Duplicate	Result from the duplicate analysis of a sample.
Result	Amount of analyte found in a sample.
Spike Level	Amount of analyte added to a sample
Matrix Spike Result	Amount of analyte found including amount that was spiked.
Matrix Spike Dup	Amount of analyte foun in duplicate spikes including amount that was spike.
Matrix Spike % Recovery	% Recovery of spiked amount in sample.
Matrix Spike Dup % Recovery	% Recovery of spiked duplicate amount in sample.
RPD	Relative percent difference between Matrix Spike and Matrix Spike Duplicate.
Blank	Method Blank that has been taken through all steps of the analysis.
LCS % Recovery	Laboratory Control Sample percent recovery. The amount of analyte recovered from a fortified sample.
Recovery Limits	A range within which specified measurements results must fall to be compliant.
CC	Calibration Verification

Flags:

- H- Recovery is above the control limits
- L- Recovery is below the control limits
- B- Compound detected in the Blank
- P- RPD of dual column results exceeds 40%
- #- Sample result too high for accurate spike recovery.

Connecticut Laboratory Certification PH0116
Massachussets Laboratory Certification M-CT903
Rhode Island Certification 199

New York Certification 11982
Florida Laboratory Certification E871064

REASONABLE CONFIDENCE PROTOCOL
LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

Laboratory Name: Complete Environmental Testing, Inc.

Client: Geoscience Techincal Services, Inc.

Project Location: 734 Ferry Blvd, Stratford

Project Number:

Laboratory Sample ID(s):
4030410-01 thru 4030410-04

Sample Date(s):
03/21/2014

List RCP Methods Used:
EPA 8260C

CET #: 4030410

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CTDEP method-specific Reasonable Confidence Protocol documents?	☑ Yes ☐ No
1A	Were the method specified preservation and holding time requirements met?	☑ Yes ☐ No
1B	VPH and EPH Methods only: Was the VPH and EPH method conducted without significant modifications (see Section 11.3 of respective RCP methods)?	☐ Yes ☐ No ☑ N/A
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	☑ Yes ☐ No
3	Were samples received at an appropriate temperature (< 6 degrees C.)?	☑ Yes ☐ No ☐ N/A
4	Were all QA/QC performance criteria specified in the CT DEP Reasonable Confidence Protocol documents achieved?	☐ Yes ☑ No
5a	a) Were reporting limits specified or referenced on the chain-of-custody?	☐ Yes ☑ No
5b	b) Were these reporting limits met?	☐ Yes ☐ No
6	For each analytical method referenced in this laboratory report package, were results reported for all consituents identified in the mehod-specific analyte lists preented in the Reasonable Confidence Protocol documents?	☐ Yes ☑ No
7	Are project specific matrix spikes and laboratory duplicates included with this data set?	☐ Yes ☑ No

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A, or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence."
This form may not be altered and all questions must be answered.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete.

Authorized Signature: **Position:** Laboratory Director

Printed Name: David Ditta **Date:** 03/27/2014

Name of Laboratory: Complete Environmental Testing, Inc.

This certification form is to be used for RCP methods only.

RCP Case Narrative

4- See Exceptions Report Below

6- The client requested a subset of the CT 8260 list.

7- Project specific QC was not requested by the client.

4- Exceptions Report

Analyte	QC Type	Exception	Result	RPD	Recovery (%)	Batch/Sample ID
1,2,3-Trichlorobenzene	LCS	High			146	B4C2616
Naphthalene	LCS	High			142	B4C2616

QC Batch Report

Batch Number	CET ID	Sample ID	Specific Method	Matrix	Collection Date
B4C2417	4030410-01	GP-6	EPA 8260C	Water	03/21/2014
B4C2509	4030410-04	Trip Blank	EPA 8260C	Water	03/21/2014
B4C2616	4030410-01RE1	GP-6	EPA 8260C	Water	03/21/2014
B4C2616	4030410-02	GP-5	EPA 8260C	Water	03/21/2014
B4C2616	4030410-03	GP-9	EPA 8260C	Water	03/21/2014

CET

COMPLETE ENVIRONMENTAL TESTING, INC.

4030410

)F CUSTODY RECORD

CET # _____

Volatile Soils Only:

Date and Time in Freezer
Client:
CET:

80 Lupes Drive
Stratford, CT 06615
Tel: (203) 377-9984
Fax: (203) 377-9952
e-mail: cet1@cetlabs.com
Bottle Request e-mail: bottleorders@cetlabs.com

Matrix: A=Air, S=Soil, W=Water, DW=Drinking W., C=Cassette, Solid, Wipe, Other (Specify)

Turnaround Time ** (check one): Same Day *, Next Day *, 2-3 Days *, Std (5-7 Days)

Sample ID	Date/Time	Matrix	Same Day *	Next Day *	2-3 Days *	Std (5-7 Days)	8260 CT List	8260 Aromatics	8260 Halogens	CT ETPH	8270 CT List	8270 PNAs	PCBs	Pesticides	Herbicides	13 Priority Poll	8 RCRA	TOTAL	TCLP	SPLP	Field Filtered	Lab To Filter	TOTAL # OF CONT.	NOTE #
GP-6	3/21/14 10:45a	W				X		X															2	
GP-5	11:22a							X															2	
GP-9	1:16p							X															2	
	TRIP							X															1	

PRESERVATIVE (Cl–HCl, N–HNO_3, S–H_2SO_4, Na–NaOH, C=Cool, O–Other)

CONTAINER TYPE (P–Plastic, G–Glass, V–Vial, O–Other)

Soil VOCs Only (M=MeOH B=Sodium Bisulfate W=Water F=Empty Vial E=Encore)

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:
[signature]	3-21-14 1:14p	[signature]
RELINQUISHED BY:	DATE/TIME	RECEIVED BY:
RELINQUISHED BY:	DATE/TIME	RECEIVED BY:

NOTES:

Client / Reporting Information

Company Name: GeoScience Technical Services

Address: P.O. Box 1026

City: OLD LYME State: CT Zip: 06371

Report To: D. Cook E-mail:

Phone #: 860 434-3144 Fax #:

Project Information

Project Contact: D. Cook PO #:

Project: 734 Ferry Blvd Project #:

Location: Stratford, CT Collector(s): S. Dumas

QA/QC: ☐ Std ☐ Site Specific (MS/MSD) * ☒ RCP Pkg * ☐ DQAW *

Data Report: ☒ Email ☒ PDF ☐ Excel ☐ Other

RSR Reporting Limits (check one): ☐ GA ☐ GB ☐ SWP ☐ Other (specify)

Lab Use:
Evidence of Cooling: 2.4 (Y) or N
Temp Upon Receipt: _____ °C

SHEET 1 OF 1

* Additional charge may apply. ** TAT begins when the samples are received at the Lab and all issues are resolved. TAT for samples received after 3 p.m. will start on the next business day.

REV. 12/11

GEOSCIENCE TECHNICAL SERVICES, INC.

Box 1036, Old Lyme, CT 06371
(860) 434-3144

GROUND WATER MONITORING CONDUCTED IN JUNE 2014

734 FERRY BOULEVARD STRATFORD, CONNECTICUT

submitted to

David Crosby
Ferry Boulevard Sunoco
734 Ferry Boulevard
Stratford, Connecticut

July 8, 2014

GEOSCIENCE TECHNICAL SERVICES, INC.

Box 1036, Old Lyme, CT 06371
(860) 434-3144

July 8, 2014

David Crosby
Ferry Boulevard Sunoco
734 Ferry Boulevard
Stratford CT 06614

Dear Mr. Crosby:

This letter documents ground water monitoring performed at 734 Ferry Boulevard, Stratford CT (Figure 1) in June 2014. The property contains Ferry Boulevard Sunoco, a gasoline service station. Underground fuel tanks, transfer lines, and dispensers were replaced in early fall 2013 and Geoscience Technical Services prepared a closure report. Four hundred and two tons of contaminated soil were excavated and disposed. The contamination appeared to have originated from an earlier generation of underground tanks and transfer lines.

The Department of Energy & Environmental Protection (CTDEEP) had installed and sampled several ground water monitoring wells at the site in 2012. Upon reviewing the closure report, CTDEEP requested that Mr. Crosby initiate quarterly ground water monitoring of three of their wells: GP-5, GP-6, and GP-9. The first quarter of monitoring was performed in March 2014. This report documents the second quarter of monitoring.

ground water sampling

On June 10, 2014, 1-inch diameter CTDEEP monitoring wells GP-5, GP-6, and GP-9 were examined. Depths to water were measured with a Solinst electonic meter and total well depths were determined with a tape. No floating product was found in the wells. Sampling was conducted using a peristaltic pump and disposable polyethylene tubing. Prior to sampling, purging was conducted to induce infiltration of fresh water from the formation. A YSI meter with a flow-through cell was used to determine when water quality parameters had stabilized. After stabilization, samples were collected in glass vials with hydrochloric acid preservative. The vials were kept in a cooler in the field and in a refrigerator at the office prior to pickup by the lab. Field notes are contained in Appendix A.

sample analysis

The samples were analyzed by Complete Environmental Testing for petroleum-related volatile organic compounds (VOC's) by method 8260C. The analyses were performed following reasonable confidence protocol (RCP) established by CTDEEP. QA/QC information is included in the lab report. The method preservation and holding time requirements were met, samples were received by the lab in a condition consistent with that described on the chain of custody forms, and the samples were received at a temperature of 4.4 degrees C. All RCP QA/QC performance criteria were met. We conclude that the data are usable for the intended purpose, namely evaluation of compliance with applicable criteria in the Remediation Standard Regulations.

results

The lab report documenting the analyses and associated QA/QC information is contained in Appendix B. Results are compared with applicable RSR criteria in Table 1. The criteria are keyed to the GB ground water quality classification at the site.

Eight to nine gasoline-related VOC's were detected in the samples. GP-5 and GP-6 had the highest concentrations which were in the parts per billion to low parts per million range. VOC concentrations in GP-9 were in the low parts per billion range.

Exceedences of RSR criteria include:

1,2,4- trimethylbenzene exceeded the ground water residential volatilization criterion in GP-5 and GP-6

benzene exceeded the surface water protection criterion and the ground water residential and industrial/commercial volatilization criteria in GP-5

comparison with previous data

CTDEEP had sampled site wells on 10/11/12 and on two occasions probably keyed to the tidal cycle on 11/29/12. Total VOC's from these samplings are compared below with those from the samples collected in March and June 2014. Concentrations are in ug/l.

date	GP-5	GP-6	GP-9
10/22/12	4,864	39,937	487
11/29/12	1,803	18,931	193
11/29/12	2,884	19,287	not sampled
3/21/14	2,924	9,328	341
6/10/14	4,461	9,763	414

Relative to past results, the total VOC concentration measured in GP-5 on 6/10/14 was exceeded only on 10/22/12. Total VOC's remained substantially lower in GP-6 than

in 2012, probably reflecting remediation which was performed in 2013. Total VOC's in downgradient well GP-9 were in the same range as in the past.

water table elevations

On March 21, relative elevations of certain well casing tops were measured with a surveyors level. An elevation of 100 feet was arbitrarily assigned to the lowest casing top. These data were coupled with depths to water measured on 6/10/14 to calculate relative water table elevations as shown below.

well	casing top elevation	depth to water	water table elevation
GP-5	103.70'	11.49'	92.21'
GP-6	103.98'	11.75'	92.23'
GP-9	100.00'	7.88'	92.12'

The relative water table elevations are plotted in Figure 3. Elevations at GP-5 and GP-6 were within 0.02 feet and GP-9 was 0.09 and 0.11 lower. This indicates a gradient towards the east to southeast which is similar to that measured in March 2013. As in March, the east to southeast gradient indicates that concentrations of VOC's in shallow ground water exiting the property along the east boundary do not exceed RSR criteria.

Please call me if you have any questions.

Yours truly,

David O. Cook

David O. Cook, Ph.D.
President

cc: Tim Baird, CTDEEP

Table 1. Concentrations of VOC's detected ground water samples. Concentrations are in ug/l.

VOC	GP-5	GP-6	GP-9	SWPC	RGWVC	I/CGWVC
MTBE	<250	<100	120	NE	21000	50000
benzene	1500	93	46	710	130	310
toluene	110	1700	<1	4000000	7100	41000
chlorobenzene	<50	<20	100	420000	1800	6150
ethylbenzene	720	980	66	580000	2700	36000
xylenes	1290	5200	<1	NE	8700	48000
isopropylbenzene	<50	30	6.5	NE	2800	6800
n-propylbenzene	91	130	25	NE	NE	NE
1,3,5 trimethylbenzene	120	230	<1	NE	280	3900
1,2,4-trimethylbenzene	440	1100	34	NE	360	4800
sec-butylbenzene	<50	<20	2.5	NE	1500	20000
n-butylbenzene	<50	<20	<1	NE	1500	21000
4-isopropyltoluene	<50	<20	<1	NE	1600	NE
naphthalene	190	300	14	NE	NE	NE

ND = not detected
SWPC = surface water protection criteria
RGWVC = residential ground water volatilization criteria
I/CGWVC = industrial/commercial ground water volatilization criteria
NE = not established

Figure 1. Site location map.

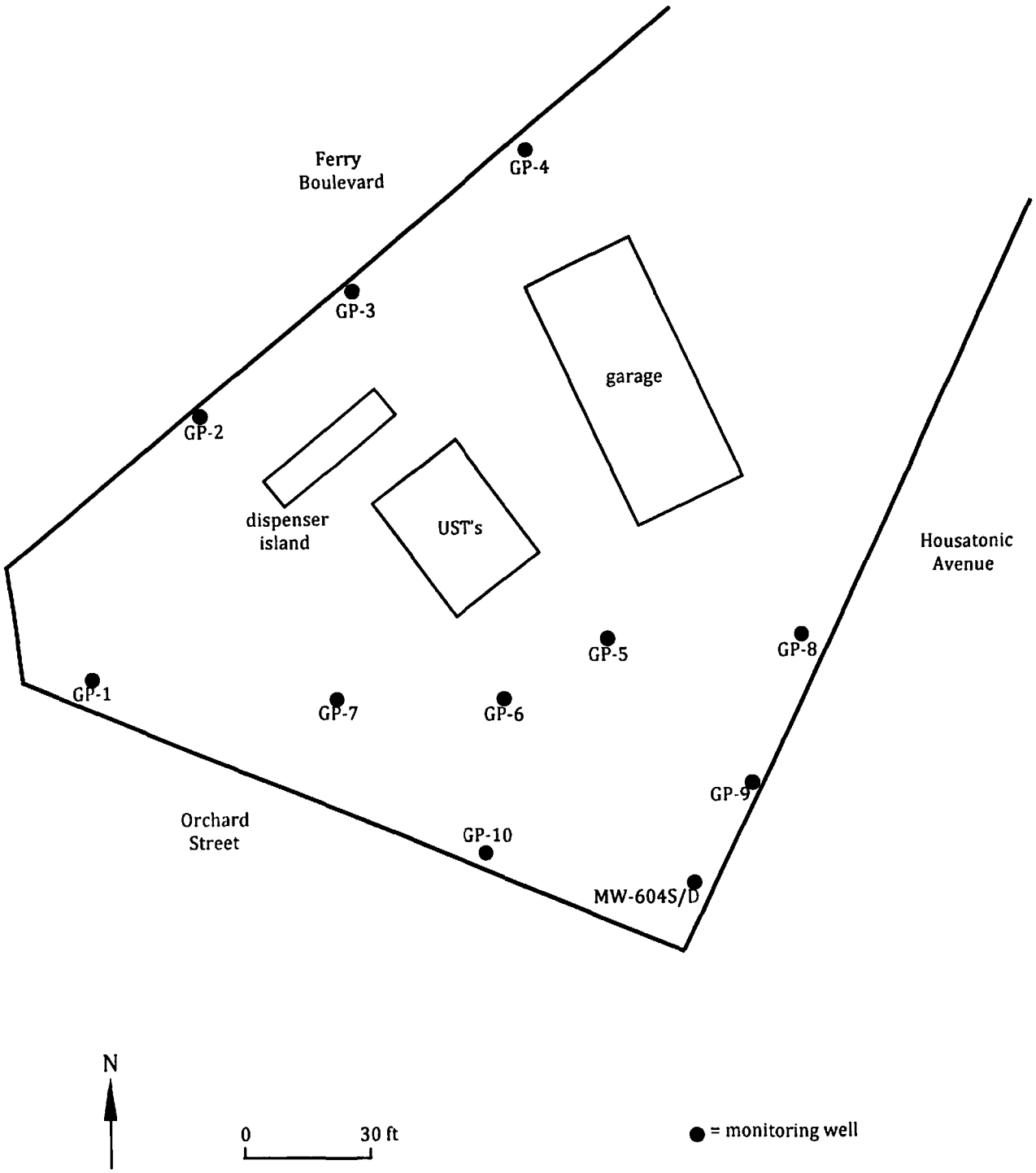


Figure 2. Locations of ground water monitoring wells.

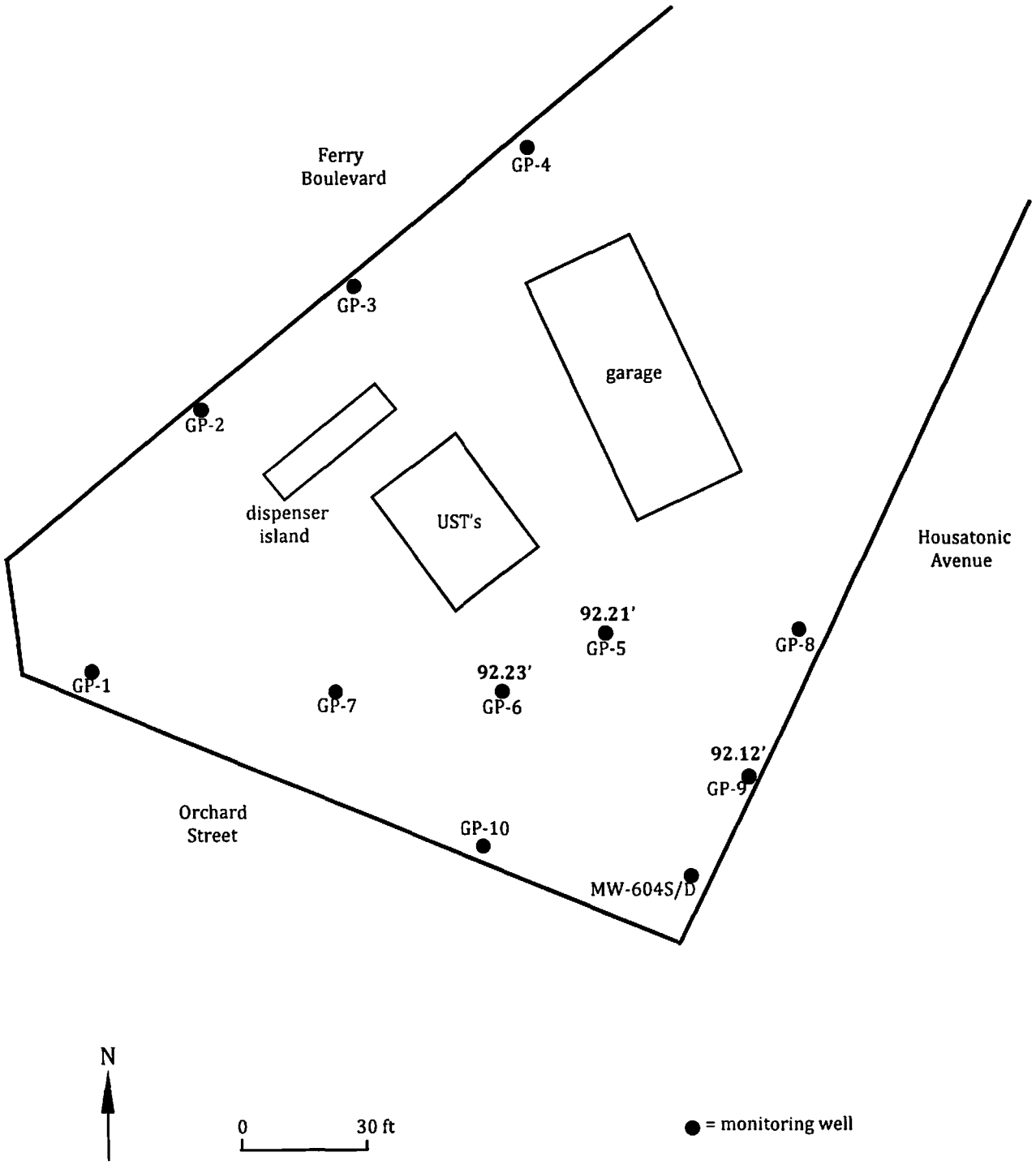


Figure 3. Water table elevations measured on June 10, 2014.

Appendix A. Ground water sampling log.

GROUND-WATER SAMPLING RECORD

Well ID: 6R5
Date: 6-10-14

Facility Name: Ferry Blvd

Well Depth: 18.0' ft. Depth to Water: 11.49 ft. Well Diameter: 1 -inch
Water Column: 6.51 ft.
Vol. Water 1 Well Volume: 0.041 gals/ft x ft = 0.270 gallons
Vol. Water 3 Well Volumes: gallons x 3 = 0.800 gallons
Casing Material: PVC
Sampling Representative: SPD
Type of Pump: Same Tubing Material: Same
Sampling Point Set at: 21.5' ft.
Type Water Quality Meter and Flow-Through Cell Same
Type Water Level Meter Same
Weather Conditions: Same
Other Observations:: Begin Purge 1:33 pm
moderate weathered gasoline odor - slight sheen

GROUND-WATER SAMPLING PARAMETERS

Time	Water Level	Volume Pumped	Pumping Rate	D.O. (mg/l)	Temp. (C°)	S.C. (mS/cm)	pH	ORP (mV)	Turbidity (NTU)
1:36		0.3	0.1 g/m	13.4	14.53	0.174	6.31	-85.8	751.0
1:42		0.9		4.4	14.38	1.159	6.10	-62.6	23.5
1:48		1.5		4.6	14.27	1.170	6.05	-57.3	12.0
1:53		2.0		4.3	14.25	1.173	5.99	-52.3	6.03
			Collect @ 1:56pm						

Finished purging at _____ Sampled at: _____
Type Analytical Tests: AVOCs

Samples delivered to: _____ by _____ at _____

Stabilization Criteria:

D.O.	+/- 10%
Turb.	+/- 10%
S.C.	+/- 3%
ORP	+/- 10
pH	+/- 0.1

Other Comments: _____

GROUND-WATER SAMPLING RECORD

Well ID: CP-6
Date: 6-10-14

Facility Name: Ferry Blvd

Well Depth: 18.0' ft. Depth to Water: 11.75 ft. Well Diameter: 1 -inch
Water Column: 6.25 ft.
Vol. Water 1 Well Volume: 0.041 gals/ft x ft = 0.260 gallons
Vol. Water 3 Well Volumes: gallons x 3 = 0.769 gallons
Casing Material: PVC
Sampling Representative: SPO
Type of Pump: Peristaltic Tubing Material: Poly/Silicon
Sampling Point Set at: 2.5' ft.
Type Water Quality Meter and Flow-Through Cell YSI / Lamotte
Type Water Level Meter Solinst
Weather Conditions: Overcast, Humid, 75°F
Other Observations::
Begin Purge 1:05pm
moderate Weathered gasoline odor

GROUND-WATER SAMPLING PARAMETERS

Time	Water Level	Volume Pumped	Pumping Rate	D.O. (mg/l)	Temp. (C°)	S.C. (mS/cm)	pH	ORP (mV)	Turbidity (NTU)
1:09		0.4	0.1 g/m	8.0	14.33	1.013	5.90	-141.5	4.94
1:15		1.0		4.3	14.15	1.019	5.92	-104.5	3.15
1:22		1.7		3.3	14.16	1.027	6.11	-87.3	2.88
1:27		2.2		2.8	14.19	1.027	6.15	-84.3	3.14
			Collect Sample C				1:27pm		

Finished purging at Sampled at:
Type Analytical Tests: SVOCs

Samples delivered to: by at

Stabilization Criteria:

D.O.	+/- 10%
Turb.	+/- 10%
S.C.	+/- 3%
ORP	+/- 10
pH	+/- 0.1

Other Comments:

GROUND-WATER SAMPLING RECORD

Well ID: GP-9
Date: 6-10-14

Facility Name: Ferry Blvd

Well Depth: 14.5 ft. Depth to Water: 7.88 ft. Well Diameter: 1 -inch
Water Column: 6.62 ft.
Vol. Water 1 Well Volume: 0.041 gals/ft x ft = 0.271 gallons
Vol. Water 3 Well Volumes: gallons x 3 = 0.814 gallons
Casing Material: PVC
Sampling Representative: JPD
Type of Pump: SAME Tubing Material: SAME
Sampling Point Set at: ~11.0 ft.
Type Water Quality Meter and Flow-Through Cell SAME
Type Water Level Meter SAME
Weather Conditions: SAME
Other Observations:: Begin Purge 2:00pm
Slight Weathered gasoline odor

GROUND-WATER SAMPLING PARAMETERS

Time	Water Level	Volume Pumped	Pumping Rate	D.O. (mg/l)	Temp. (C°)	S.C. (mS/cm)	pH	ORP (mV)	Turbidity (NTU)
2:03		0.3	0.1 gl/m	17.0	15.18	1.808	6.05	-31.8	48.0
2:08		0.8		8.9	14.65	1.317	5.83	-52.4	8.81
2:13		1.3		10.8	14.46	1.119	5.82	-46.6	3.57
2:18		1.8		12.7	14.31	1.014	5.77	-43.2	2.46
			Collect Sample @ 2:19pm						

Finished purging at Sampled at:
Type Analytical Tests: AVOCs

Samples delivered to: by at

Stabilization Criteria:

D.O.	+/- 10%
Turb.	+/- 10%
S.C.	+/- 3%
ORP	+/- 10
pH	+/- 0.1

Other Comments:

Appendix B. Report from Complete Environmental Testing on sample analysis.

80 Lupes Drive
Stratford, CT 06615

COMPLETE ENVIRONMENTAL TESTING, INC.

Tel: (203) 377-9984
Fax: (203) 377-9952
e-mail: cet1@cetlabs.com

Client: Mr. David Cook
Geoscience Tech. Services, Inc
P.O. Box 1036
Old Lyme, CT 06371

Analytical Report

CET# 4060318

Report Date: June 24, 2014
Project: 734 Ferry Blvd, Stratford

Connecticut Laboratory Certificate: PH 0116
Massachussetts laboratory Certificate.: M-CT903
Rhode Island Certification: 199

New York Certification: 11982
Florida Laboratory Certification: E871064

SAMPLE SUMMARY

The sample(s) were received at 4.4°C.

This report contains analytical data associated with following samples only.

Sample ID	Laboratory ID	Matrix	Collection Date/Time	Receipt Date
GP-6	4060318-01	Water	6/10/2014 13:27	06/11/2014
GP-5	4060318-02	Water	6/10/2014 13:56	06/11/2014
GP-9	4060318-03	Water	6/10/2014 14:19	06/11/2014
TRIP	4060318-04	Water	6/10/2014	06/11/2014

CET #:4060318
Project: 734 Ferry Blvd, Stratford

Client Sample ID GP-6
Lab ID: 4060318-01

Volatile Organics **Analyst: JS**

Method: EPA 8260C **Matrix: Water**

Analyte	Result (ug/L)	RL (ug/L)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Methyl-t-Butyl Ether (MTBE)	ND	100	20	EPA 5030C	B4F1918	06/19/2014	06/19/2014 16:15	
Benzene	**93**	20	20	EPA 5030C	B4F1918	06/19/2014	06/19/2014 16:15	
Toluene	**1700**	20	20	EPA 5030C	B4F1918	06/19/2014	06/19/2014 16:15	
Chlorobenzene	ND	20	20	EPA 5030C	B4F1918	06/19/2014	06/19/2014 16:15	
Ethylbenzene	**980**	20	20	EPA 5030C	B4F1918	06/19/2014	06/19/2014 16:15	
m+p Xylenes	**3600**	20	20	EPA 5030C	B4F1918	06/19/2014	06/19/2014 16:15	
o-Xylene	**1600**	20	20	EPA 5030C	B4F1918	06/19/2014	06/19/2014 16:15	
Styrene	ND	20	20	EPA 5030C	B4F1918	06/19/2014	06/19/2014 16:15	
Isopropylbenzene	**30**	20	20	EPA 5030C	B4F1918	06/19/2014	06/19/2014 16:15	
Bromobenzene	ND	20	20	EPA 5030C	B4F1918	06/19/2014	06/19/2014 16:15	
n-Propylbenzene	**130**	20	20	EPA 5030C	B4F1918	06/19/2014	06/19/2014 16:15	
2-Chlorotoluene	ND	20	20	EPA 5030C	B4F1918	06/19/2014	06/19/2014 16:15	
4-Chlorotoluene	ND	20	20	EPA 5030C	B4F1918	06/19/2014	06/19/2014 16:15	
1,3,5-Trimethylbenzene	**230**	20	20	EPA 5030C	B4F1918	06/19/2014	06/19/2014 16:15	
tert-Butylbenzene	ND	20	20	EPA 5030C	B4F1918	06/19/2014	06/19/2014 16:15	
1,2,4-Trimethylbenzene	**1100**	20	20	EPA 5030C	B4F1918	06/19/2014	06/19/2014 16:15	
sec-Butylbenzene	ND	20	20	EPA 5030C	B4F1918	06/19/2014	06/19/2014 16:15	
1,3-Dichlorobenzene	ND	20	20	EPA 5030C	B4F1918	06/19/2014	06/19/2014 16:15	
4-Isopropyltoluene	ND	20	20	EPA 5030C	B4F1918	06/19/2014	06/19/2014 16:15	
1,4-Dichlorobenzene	ND	20	20	EPA 5030C	B4F1918	06/19/2014	06/19/2014 16:15	
1,2-Dichlorobenzene	ND	20	20	EPA 5030C	B4F1918	06/19/2014	06/19/2014 16:15	
n-Butylbenzene	ND	20	20	EPA 5030C	B4F1918	06/19/2014	06/19/2014 16:15	
1,2,4-Trichlorobenzene	ND	20	20	EPA 5030C	B4F1918	06/19/2014	06/19/2014 16:15	
Hexachlorobutadiene	ND	9.0	20	EPA 5030C	B4F1918	06/19/2014	06/19/2014 16:15	
Naphthalene	**300**	20	20	EPA 5030C	B4F1918	06/19/2014	06/19/2014 16:15	
1,2,3-Trichlorobenzene	ND	20	20	EPA 5030C	B4F1918	06/19/2014	06/19/2014 16:15	
Surrogate: 1,2-Dichloroethane-d4	*111 %*		*70 - 130*		B4F1918	06/19/2014	*06/19/2014 16:15*	
Surrogate: Toluene-d8	*98.1 %*		*70 - 130*		B4F1918	06/19/2014	*06/19/2014 16:15*	
Surrogate: 4-Bromofluorobenzene	*98.9 %*		*70 - 130*		B4F1918	06/19/2014	*06/19/2014 16:15*	

Client Sample ID GP-5
Lab ID: 4060318-02

Volatile Organics **Analyst: JS**

Method: EPA 8260C **Matrix: Water**

Analyte	Result (ug/L)	RL (ug/L)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Methyl-t-Butyl Ether (MTBE)	ND	250	50	EPA 5030C	B4F2323	06/23/2014	06/23/2014 15:54	
Benzene	**1500**	50	50	EPA 5030C	B4F2323	06/23/2014	06/23/2014 15:54	
Toluene	**110**	50	50	EPA 5030C	B4F2323	06/23/2014	06/23/2014 15:54	
Chlorobenzene	ND	50	50	EPA 5030C	B4F2323	06/23/2014	06/23/2014 15:54	
Ethylbenzene	**720**	50	50	EPA 5030C	B4F2323	06/23/2014	06/23/2014 15:54	
m+p Xylenes	**1100**	50	50	EPA 5030C	B4F2323	06/23/2014	06/23/2014 15:54	
o-Xylene	**190**	50	50	EPA 5030C	B4F2323	06/23/2014	06/23/2014 15:54	
Styrene	ND	50	50	EPA 5030C	B4F2323	06/23/2014	06/23/2014 15:54	
Isopropylbenzene	ND	50	50	EPA 5030C	B4F2323	06/23/2014	06/23/2014 15:54	
Bromobenzene	ND	50	50	EPA 5030C	B4F2323	06/23/2014	06/23/2014 15:54	
n-Propylbenzene	**91**	50	50	EPA 5030C	B4F2323	06/23/2014	06/23/2014 15:54	
2-Chlorotoluene	ND	50	50	EPA 5030C	B4F2323	06/23/2014	06/23/2014 15:54	
4-Chlorotoluene	ND	50	50	EPA 5030C	B4F2323	06/23/2014	06/23/2014 15:54	
1,3,5-Trimethylbenzene	**120**	50	50	EPA 5030C	B4F2323	06/23/2014	06/23/2014 15:54	
tert-Butylbenzene	ND	50	50	EPA 5030C	B4F2323	06/23/2014	06/23/2014 15:54	
1,2,4-Trimethylbenzene	**440**	50	50	EPA 5030C	B4F2323	06/23/2014	06/23/2014 15:54	
sec-Butylbenzene	ND	50	50	EPA 5030C	B4F2323	06/23/2014	06/23/2014 15:54	
1,3-Dichlorobenzene	ND	50	50	EPA 5030C	B4F2323	06/23/2014	06/23/2014 15:54	
4-Isopropyltoluene	ND	50	50	EPA 5030C	B4F2323	06/23/2014	06/23/2014 15:54	
1,4-Dichlorobenzene	ND	50	50	EPA 5030C	B4F2323	06/23/2014	06/23/2014 15:54	
1,2-Dichlorobenzene	ND	50	50	EPA 5030C	B4F2323	06/23/2014	06/23/2014 15:54	
n-Butylbenzene	ND	50	50	EPA 5030C	B4F2323	06/23/2014	06/23/2014 15:54	
1,2,4-Trichlorobenzene	ND	50	50	EPA 5030C	B4F2323	06/23/2014	06/23/2014 15:54	
Hexachlorobutadiene	ND	23	50	EPA 5030C	B4F2323	06/23/2014	06/23/2014 15:54	
Naphthalene	**190**	50	50	EPA 5030C	B4F2323	06/23/2014	06/23/2014 15:54	
1,2,3-Trichlorobenzene	ND	50	50	EPA 5030C	B4F2323	06/23/2014	06/23/2014 15:54	
Surrogate: 1,2-Dichloroethane-d4	*112 %*		*70 - 130*		B4F2323	06/23/2014	*06/23/2014 15:54*	
Surrogate: Toluene-d8	*95.8 %*		*70 - 130*		B4F2323	06/23/2014	*06/23/2014 15:54*	
Surrogate: 4-Bromofluorobenzene	*89.3 %*		*70 - 130*		B4F2323	06/23/2014	*06/23/2014 15:54*	

Client Sample ID GP-9
Lab ID: 4060318-03

Volatile Organics **Analyst: JS**

Method: EPA 8260C **Matrix: Water**

Analyte	Result (ug/L)	RL (ug/L)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Methyl-t-Butyl Ether (MTBE)	120	5.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:09	
Benzene	46	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:09	
Toluene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:09	
Chlorobenzene	100	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:09	
Ethylbenzene	66	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:09	
m+p Xylenes	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:09	
o-Xylene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:09	
Styrene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:09	
Isopropylbenzene	6.5	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:09	
Bromobenzene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:09	
n-Propylbenzene	25	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:09	
2-Chlorotoluene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:09	
4-Chlorotoluene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:09	
1,3,5-Trimethylbenzene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:09	
tert-Butylbenzene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:09	
1,2,4-Trimethylbenzene	34	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:09	
sec-Butylbenzene	2.5	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:09	
1,3-Dichlorobenzene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:09	
4-Isopropyltoluene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:09	
1,4-Dichlorobenzene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:09	
1,2-Dichlorobenzene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:09	
n-Butylbenzene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:09	
1,2,4-Trichlorobenzene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:09	
Hexachlorobutadiene	ND	0.45	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:09	
Naphthalene	14	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:09	
1,2,3-Trichlorobenzene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:09	
Surrogate: 1,2-Dichloroethane-d4	*102 %*		*70 - 130*		B4F1918	06/19/2014	*06/19/2014 18:09*	
Surrogate: Toluene-d8	*98.4 %*		*70 - 130*		B4F1918	06/19/2014	*06/19/2014 18:09*	
Surrogate: 4-Bromofluorobenzene	*93.4 %*		*70 - 130*		B4F1918	06/19/2014	*06/19/2014 18:09*	

Client Sample ID TRIP
Lab ID: 4060318-04

Volatile Organics **Analyst: JS**
Method: EPA 8260C **Matrix: Water**

Analyte	Result (ug/L)	RL (ug/L)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Methyl-t-Butyl Ether (MTBE)	ND	5.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:47	
Benzene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:47	
Toluene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:47	
Chlorobenzene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:47	
Ethylbenzene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:47	
m+p Xylenes	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:47	
o-Xylene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:47	
Styrene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:47	
Isopropylbenzene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:47	
Bromobenzene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:47	
n-Propylbenzene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:47	
2-Chlorotoluene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:47	
4-Chlorotoluene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:47	
1,3,5-Trimethylbenzene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:47	
tert-Butylbenzene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:47	
1,2,4-Trimethylbenzene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:47	
sec-Butylbenzene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:47	
1,3-Dichlorobenzene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:47	
4-Isopropyltoluene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:47	
1,4-Dichlorobenzene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:47	
1,2-Dichlorobenzene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:47	
n-Butylbenzene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:47	
1,2,4-Trichlorobenzene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:47	
Hexachlorobutadiene	ND	0.45	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:47	
Naphthalene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:47	
1,2,3-Trichlorobenzene	ND	1.0	1	EPA 5030C	B4F1918	06/19/2014	06/19/2014 18:47	
Surrogate: 1,2-Dichloroethane-d4	*110 %*		*70 - 130*		B4F1918	06/19/2014	*06/19/2014 18:47*	
Surrogate: Toluene-d8	*97.1 %*		*70 - 130*		B4F1918	06/19/2014	*06/19/2014 18:47*	
Surrogate: 4-Bromofluorobenzene	*85.5 %*		*70 - 130*		B4F1918	06/19/2014	*06/19/2014 18:47*	

QUALITY CONTROL SECTION

Batch B4F1918 - EPA 8260C

Analyte	Result (ug/L)	RL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Blank (B4F1918-BLK1)					Prepared: 6/19/2014 Analyzed: 6/19/2014				
Methyl-t-Butyl Ether (MTBE)	ND	5.0							
Benzene	ND	1.0							
Toluene	ND	1.0							
Chlorobenzene	ND	1.0							
Ethylbenzene	ND	1.0							
m+p Xylenes	ND	1.0							
o-Xylene	ND	1.0							
Styrene	ND	1.0							
Isopropylbenzene	ND	1.0							
Bromobenzene	ND	1.0							
n-Propylbenzene	ND	1.0							
2-Chlorotoluene	ND	1.0							
4-Chlorotoluene	ND	1.0							
1,3,5-Trimethylbenzene	ND	1.0							
tert-Butylbenzene	ND	1.0							
1,2,4-Trimethylbenzene	ND	1.0							
sec-Butylbenzene	ND	1.0							
1,3-Dichlorobenzene	ND	1.0							
4-Isopropyltoluene	ND	1.0							
1,4-Dichlorobenzene	ND	1.0							
1,2-Dichlorobenzene	ND	1.0							
n-Butylbenzene	ND	1.0							
1,2,4-Trichlorobenzene	ND	1.0							
Hexachlorobutadiene	ND	0.45							
Naphthalene	ND	1.0							
1,2,3-Trichlorobenzene	ND	1.0							
Surrogate: 1,2-Dichloroethane-d4					*111*	*70 - 130*			
Surrogate: Toluene-d8					*98.3*	*70 - 130*			
Surrogate: 4-Bromofluorobenzene					*85.5*	*70 - 130*			
LCS (B4F1918-BS1)					Prepared: 6/19/2014 Analyzed: 6/19/2014				
Methyl-t-Butyl Ether (MTBE)	55.0	5.0	50.000		110	70 - 130			
Benzene	51.5	1.0	50.000		103	70 - 130			
Toluene	51.9	1.0	50.000		104	70 - 130			
Chlorobenzene	49.7	1.0	50.000		99.3	70 - 130			
Ethylbenzene	52.1	1.0	50.000		104	70 - 130			
m+p Xylenes	108	1.0	100.000		108	70 - 130			
o-Xylene	59.2	1.0	50.000		118	70 - 130			
Styrene	55.1	1.0	50.000		110	70 - 130			
Isopropylbenzene	56.4	1.0	50.000		113	70 - 130			
Bromobenzene	49.5	1.0	50.000		99.0	70 - 130			
n-Propylbenzene	51.4	1.0	50.000		103	70 - 130			
2-Chlorotoluene	55.4	1.0	50.000		111	70 - 130			
4-Chlorotoluene	47.2	1.0	50.000		94.3	70 - 130			
1,3,5-Trimethylbenzene	54.4	1.0	50.000		109	70 - 130			
tert-Butylbenzene	52.4	1.0	50.000		105	70 - 130			
1,2,4-Trimethylbenzene	51.8	1.0	50.000		104	70 - 130			
sec-Butylbenzene	50.9	1.0	50.000		102	70 - 130			
1,3-Dichlorobenzene	50.5	1.0	50.000		101	70 - 130			

Analyte	Result (ug/L)	RL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
LCS (B4F1918-BS1) - Continued					Prepared: 6/19/2014 Analyzed: 6/19/2014				
4-Isopropyltoluene	53.1	1.0	50.000		106	70 - 130			
1,4-Dichlorobenzene	49.0	1.0	50.000		98.0	70 - 130			
1,2-Dichlorobenzene	52.4	1.0	50.000		105	70 - 130			
n-Butylbenzene	54.4	1.0	50.000		109	70 - 130			
1,2,4-Trichlorobenzene	42.1	1.0	50.000		84.2	70 - 130			
Hexachlorobutadiene	47.0	0.45	50.000		94.1	70 - 130			
Naphthalene	40.7	1.0	50.000		81.5	70 - 130			
1,2,3-Trichlorobenzene	44.2	1.0	50.000		88.4	70 - 130			
Surrogate: 1,2-Dichloroethane-d4					*101*	*70 - 130*			
Surrogate: Toluene-d8					*102*	*70 - 130*			
Surrogate: 4-Bromofluorobenzene					*107*	*70 - 130*			

CET #:4060318
Project: 734 Ferry Blvd, Stratford

Batch B4F2323 - EPA 8260C

Analyte	Result (ug/L)	RL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Blank (B4F2323-BLK1)					Prepared: 6/23/2014 Analyzed: 6/23/2014				
Methyl-t-Butyl Ether (MTBE)	ND	5.0							
Benzene	ND	1.0							
Toluene	ND	1.0							
Chlorobenzene	ND	1.0							
Ethylbenzene	ND	1.0							
m+p Xylenes	ND	1.0							
o-Xylene	ND	1.0							
Styrene	ND	1.0							
Isopropylbenzene	ND	1.0							
Bromobenzene	ND	1.0							
n-Propylbenzene	ND	1.0							
2-Chlorotoluene	ND	1.0							
4-Chlorotoluene	ND	1.0							
1,3,5-Trimethylbenzene	ND	1.0							
tert-Butylbenzene	ND	1.0							
1,2,4-Trimethylbenzene	ND	1.0							
sec-Butylbenzene	ND	1.0							
1,3-Dichlorobenzene	ND	1.0							
4-Isopropyltoluene	ND	1.0							
1,4-Dichlorobenzene	ND	1.0							
1,2-Dichlorobenzene	ND	1.0							
n-Butylbenzene	ND	1.0							
1,2,4-Trichlorobenzene	ND	1.0							
Hexachlorobutadiene	ND	0.45							
Naphthalene	ND	1.0							
1,2,3-Trichlorobenzene	ND	1.0							
Surrogate: 1,2-Dichloroethane-d4					*111*	*70 - 130*			
Surrogate: Toluene-d8					*98.1*	*70 - 130*			
Surrogate: 4-Bromofluorobenzene					*88.1*	*70 - 130*			
LCS (B4F2323-BS1)					Prepared: 6/23/2014 Analyzed: 6/23/2014				
Methyl-t-Butyl Ether (MTBE)	53.4	5.0	50.000		107	70 - 130			
Benzene	51.5	1.0	50.000		103	70 - 130			
Toluene	52.1	1.0	50.000		104	70 - 130			
Chlorobenzene	41.0	1.0	50.000		82.0	70 - 130			
Ethylbenzene	42.0	1.0	50.000		84.0	70 - 130			
m+p Xylenes	88.5	1.0	100.000		88.5	70 - 130			
o-Xylene	46.0	1.0	50.000		91.9	70 - 130			
Styrene	44.4	1.0	50.000		88.7	70 - 130			
Isopropylbenzene	45.2	1.0	50.000		90.4	70 - 130			
Bromobenzene	43.4	1.0	50.000		86.8	70 - 130			
n-Propylbenzene	48.0	1.0	50.000		96.0	70 - 130			
2-Chlorotoluene	56.5	1.0	50.000		113	70 - 130			
4-Chlorotoluene	36.7	1.0	50.000		73.3	70 - 130			
1,3,5-Trimethylbenzene	50.9	1.0	50.000		102	70 - 130			
tert-Butylbenzene	50.4	1.0	50.000		101	70 - 130			
1,2,4-Trimethylbenzene	48.7	1.0	50.000		97.4	70 - 130			
sec-Butylbenzene	49.6	1.0	50.000		99.3	70 - 130			
1,3-Dichlorobenzene	48.8	1.0	50.000		97.6	70 - 130			
4-Isopropyltoluene	51.8	1.0	50.000		104	70 - 130			
1,4-Dichlorobenzene	48.0	1.0	50.000		95.9	70 - 130			

CET #:4060318

Project: 734 Ferry Blvd, Stratford

Analyte	Result (ug/L)	RL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
LCS (B4F2323-BS1) - Continued					Prepared: 6/23/2014 Analyzed: 6/23/2014				
1,2-Dichlorobenzene	49.4	1.0	50.000		98.8	70 - 130			
n-Butylbenzene	51.9	1.0	50.000		104	70 - 130			
1,2,4-Trichlorobenzene	42.2	1.0	50.000		84.5	70 - 130			
Hexachlorobutadiene	50.1	0.45	50.000		100	70 - 130			
Naphthalene	37.3	1.0	50.000		74.5	70 - 130			
1,2,3-Trichlorobenzene	44.0	1.0	50.000		87.9	70 - 130			
Surrogate: 1,2-Dichloroethane-d4					*94.9*	*70 - 130*			
Surrogate: Toluene-d8					*99.2*	*70 - 130*			
Surrogate: 4-Bromofluorobenzene					*90.6*	*70 - 130*			

Questions related to this report should be directed to David Ditta, Timothy Fusco, or Robert Blake at 203-377-9984.

Sincerely,

David Ditta
Laboratory Director

Report Comments:

ND is None Detected at the specified detection limit
All analyses were performed in house unless a Reference Laboratory is listed.
Samples will be disposed of 30 days after the report date.
Sample Result Flags:
E- The result is estimated, above the calibration range.
H- The surrogate recovery is above the control limits.
L- The surrogate recovery is below the control limits.
B- The compound was detected in the laboratory blank.
P- The Relative Percent Difference (RPD) of dual column analyses exceeds 40%.
D- The RPD between the sample and the sample duplicate is high. Sample Homogenity may be a problem.
+- The Surrogate was diluted out.
*- The analyte has a QC outlier. Please refer to QC section of the report.
All results met standard operating procedures unless indicated by a data qualifier next to a sample result, or a narration in the QC report.
Complete Environmental Testing is only responsible for the certified testing and is not directly responsible for the integrity of the sample before laboratory receipt.

80 Lupes Drive
Stratford, CT 06615

COMPLETE ENVIRONMENTAL TESTING, INC.

Tel: (203) 377-9984
Fax: (203) 377-9952
email: cetl@cetlabs.com

Quality Control Definitions and Abbreviations

Internal Standard (IS)	An Analyte added to each sample or sample extract. An internal standard is used to monitor retention time, calculate relative response, and quantify analytes of interest.
Surrogate Recovery	The % recovery for non-tarer organic compounds that are spiked into all samples. Used to determine method performance.
Continuing Calibration	An analytical standard analyzed with each set of samples to verify initial calibration of the system.
Batch	Samples that are analyzed together with the same method, sequence and lot of reagents within the same time period.
ND	Not detected
RL	Reporting Limit
Dilution	Multiplier added to detection levels (MDL) and/or sample results due to interferences and/or high concentration of target compounds.
Duplicate	Result from the duplicate analysis of a sample.
Result	Amount of analyte found in a sample.
Spike Level	Amount of analyte added to a sample
Matrix Spike Result	Amount of analyte found including amount that was spiked.
Matrix Spike Dup	Amount of analyte foun in duplicate spikes including amount that was spike.
Matrix Spike % Recovery	% Recovery of spiked amount in sample.
Matrix Spike Dup % Recovery	% Recovery of spiked duplicate amount in sample.
RPD	Relative percent difference between Matrix Spike and Matrix Spike Duplicate.
Blank	Method Blank that has been taken through all steps of the analysis.
LCS % Recovery	Laboratory Control Sample percent recovery. The amount of analyte recovered from a fortified sample.
Recovery Limits	A range within which specified measurements results must fall to be compliant.
CC	Calibration Verification

Flags:

- H- Recovery is above the control limits
- L- Recovery is below the control limits
- B- Compound detected in the Blank
- P- RPD of dual column results exceeds 40%
- #- Sample result too high for accurate spike recovery.

Connecticut Laboratory Certification PH0116
Massachussets Laboratory Certification M-CT903
Rhode Island Certification 199

New York Certification 11982
Florida Laboratory Certification E871064

REASONABLE CONFIDENCE PROTOCOL
LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

Laboratory Name: Complete Environmental Testing, Inc.

Client: Geoscience Techincal Services, Inc.

Project Location: 734 Ferry Blvd, Stratford

Project Number:

Laboratory Sample ID(s):
4060318-01 thru 4060318-04

Sample Date(s):
06/11/2014

List RCP Methods Used:
EPA 8260C

CET #: 4060318

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CTDEP method-specific Reasonable Confidence Protocol documents?	☑ Yes ☐ No
1A	Were the method specified preservation and holding time requirements met?	☑ Yes ☐ No
1B	VPH and EPH Methods only: Was the VPH and EPH method conducted without significant modifications (see Section 11.3 of respective RCP methods)?	☐ Yes ☐ No ☑ N/A
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	☑ Yes ☐ No
3	Were samples received at an appropriate temperature (< 6 degrees C.)?	☑ Yes ☐ No ☐ N/A
4	Were all QA/QC performance criteria specified in the CT DEP Reasonable Confidence Protocol documents achieved?	☑ Yes ☐ No
5a	a) Were reporting limits specified or referenced on the chain-of-custody?	☐ Yes ☑ No
5b	b) Were these reporting limits met?	☐ Yes ☐ No
6	For each analytical method referenced in this laboratory report package, were results reported for all consituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	☐ Yes ☑ No
7	Are project specific matrix spikes and laboratory duplicates included with this data set?	☐ Yes ☑ No

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A, or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence."
This form may not be altered and all questions must be answered.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete.

Authorized Signature: **Position:** Laboratory Director

Printed Name: David Ditta **Date:** 06/24/2014

Name of Laboratory: Complete Environmental Testing, Inc.

This certification form is to be used for RCP methods only.

6- The client requested a subset of the CT 8260 list.

7- Project specific QC was not requested by the client.

QC Batch Report

Batch Number	CET ID	Sample ID	Specific Method	Matrix	Collection Date
B4F1918	4060318-01	GP-6	EPA 8260C	Water	06/11/2014
B4F1918	4060318-03	GP-9	EPA 8260C	Water	06/11/2014
B4F1918	4060318-04	TRIP	EPA 8260C	Water	06/11/2014
B4F2323	4060318-02	GP-5	EPA 8260C	Water	06/11/2014

CET

COMPLETE ENVIRONMENTAL TESTING

4060318

CET #

Volatile Soils Only:

Date and Time in Freezer

Client:

CET:

N OF CUSTODY RECORD

80 Lupes Drive
Stratford, CT 06615
Tel: (203) 377-9984
Fax: (203) 377-9952
e-mail: cet1@cetlabs.com
Bottle Request e-mail: bottleorders@cetlabs.com

Matrix: A=Air, S=Soil, W=Water, DW=Drinking W., C=Cassette, Solid, Wipe, Other (Specify)

Turnaround Time ** (check one): Same Day *, Next Day *, 2-3 Days *, Std (5-7 Days)

Sample ID	Date/Time	Matrix	Same Day *	Next Day *	2-3 Days *	Std (5-7 Days)	8260 CT List	8260 Aromatics	8260 Halogens	CT ETPH	8270 CT List	8270 PNAs	PCBs	Pesticides	Herbicides	13 Priority Poll	8 RCRA	TOTAL	TCLP	SPLP	Field Filtered	Lab To Filter	Additional Analysis	TOTAL # OF CONT.	NOTE #
GP-6	6-10-14 1:37pm	W				X		✓																3	
GP-5	↓ 1:51pm	↓				↓		✓																3	
GP-9	↓ 2:19pm	↓				↓		✓																3	
TRIP								✓																1	

	8260 CT List	8260 Aromatics	8260 Halogens
PRESERVATIVE (Cl–HCl, N–HNO_3, S–H_2SO_4, Na–NaOH, C=Cool, O–Other)	C		
CONTAINER TYPE (P–Plastic, G–Glass, V–Vial, O–Other)	V		
Soil VOCs Only (M=MeOH B=Sodium Bisulfate W=Water F=Empty Vial E=Encore)			

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:
[signature]	6/11/14 1245	[signature]
[signature]	6-11-14 1530	[signature]

NOTES:

Client / Reporting Information

Company Name: Confidence Technical Services

Address: P.O. Box 1036

City: Old Lyme State: CT Zip: 06371

Report To: D. Cook E-mail:

Phone #: 860-434-3144 Fax #:

Project Information

Project Contact: D. Cook PO #:

Project: 734 Ferry Blvd Project #:

Location: Stratford, CT Collector(s): J. Dumas

QA/QC: ☐ Std ☐ Site Specific (MS/MSD) * ☒ RCP Pkg * ☐ DQAW *

Data Report: ☒ Email ☒ PDF ☐ Excel ☐ Other

RSR Reporting Limits (check one): ☐ GA ☐ GB ☐ SWP ☐ Other (specify)

Lab Use:
Evidence of Cooling: Y or N
Temp Upon Receipt 4.4 °C

SHEET 1 OF 1

Additional charge may apply. ** TAT begins when the samples are received at the Lab and all issues are resolved. TAT for samples received after 3 p.m. will start on the next business day.

REV. 12/11

GEOSCIENCE TECHNICAL SERVICES, INC.

Box 1036, Old Lyme, CT 06371
(860) 434-3144

UNDERGROUND STORAGE TANK CLOSURE REPORT

FERRY BOULEVARD SUNOCO
734 FERRY BOULEVARD
STRATFORD, CONNECTICUT

submitted to

David Crosby
Ferry Boulevard Sunoco
734 Ferry Boulevard
Stratford, Connecticut

September 30, 2013

GEOSCIENCE TECHNICAL SERVICES, INC.

Box 1036, Old Lyme, CT 06371
(860) 434-3144

September 30, 2013

Ferry Boulevard Sunoco
734 Ferry Boulevard
Stratford CT 06614
attn: David Crosby

re: underground storage tank closure at 734 Ferry Boulevard, Stratford CT

Dear Mr. Crosby:

This report documents removal of three underground gasoline tanks and associated pumps and lines at 734 Ferry Boulevard in Stratford. The property is occupied by Ferry Boulevard Sunoco who sell gas and perform auto repairs. A gas station has been located at the site since 1958. Buildings in the neighborhood have municipal water service and the quality of underlying ground water is designated GB.

A subsurface investigation was conducted at the site by the Connecticut Department of Energy & Environmental Protection. The investigation included making ten Geoprobe borings and installing shallow ground water monitoring wells in the borings. Ground water samples were collected from these wells along with adjacent deep and shallow wells which had been installed by the U.S. Environmental Protection Agency. Draft results provided to us include data from rounds of ground water monitoring conducted in October and November 2012, limited soil testing data, and maps of water table elevations measured in November 2012 and April 2013. Volatile organic compounds (VOC's) related to petroleum were detected in the soil samples and most of the ground water samples. Certain soil and ground water samples contained concentrations of benzene which exceed criteria in the Remediation Standard Regulations (RSR's). The hydraulic gradients were complicated and may reflect tidal effects from the nearby Housatonic River. The draft results were not accompanied by a narrative discussing potential sources of the VOC's.

tank description

The three tanks were composed of cathodically-protected stiP3 steel and had capacities of 6,280 gallons. They were installed side by side with the long axes oriented northwest-southeast as shown in Figure 1. The tanks had contained unleaded gasoline since their installation in July 1984. They replaced earlier tanks at the same location.

Transfer lines consisted of fiberglass-reinforced plastic and had been installed in January 1995.

The tanks were registered with CTDEEP by Ferry Boulevard Sunoco under site 138-8306. Identification numbers are R2, R3, and U1. The most recent notification was dated March 14, 2011. A compliance inspection was performed by CTDEEP on September 19, 2012 and no violations were found.

tank removal

Prior to removal, the gasoline tanks were run dry by normal fueling of vehicles. Residual gas was pumped by Ferry Boulevard Sunoco into a drum to be used for lawnmowers and property maintenance equipment.

The tanks were removed by John Morgan Company on August 8, 2013. Removal took place with an excavator after the overlying concrete was broken up and the tops were exposed. The tanks, which were identical, were 6 feet in diameter and 30 feet long. All three were in very good condition with the labels intact and no rusting, pitting, or holes. The cathodic protection bags remained attached.

Because the tanks were installed side by side, there was a single excavation. Soil in the excavation was as follows:

0 to 6 feet – medium brown gravelly sand
below 6 feet – gray gravelly sand, darker with increasing depth, petroleum odor

The water table was located at the level of the tank bottoms, about 11 to 12 feet below the ground surface.

Because contaminated soil was encountered, notification was made to CTDEEP on the spill hotline. Number 2013-4194 was assigned to the incident. CTDEEP declined to visit the site with the understanding that impacted soil would be removed. A copy of the incident report is contained in Appendix A.

The tank removal was witnessed by Stratford Fire Marshal Brian Lampart. Photographs taken during the removal are contained in Appendix B.

The tanks were cleaned and cut up by John Morgan Company. The metal was taken to Sims Metal in New Haven for recycling.

pump and transfer line removal

The pumps and transfer lines were removed on August 29. The transfer line route is shown in Figure 1. The former pump island was about 12 feet from the edge of the excavation made to accommodate replacement tanks. Where the pipes entered the north

excavation wall, dark-colored soil with a petroleum odor was observed around older metal pipes which had been abandoned in place.

After removing the pumps and lines, soil at the island location was excavated to a depth of 6 feet. Soil on the south sidewall was stained around the old pipes. The soil consisted of gravelly sand, similar to that in the tank grave.

soil sampling after removals

Soil samples were collected from graves of the gasoline tanks and from below the pumps and transfer lines.

gasoline tanks Samples were collected from the graves of the gasoline tanks at the locations shown in Figure 2. One sample was collected from the north and south sidewalls of each tank grave, from the west sidewall of westernmost tank T1 grave, from the east sidewall of easternmost gasoline tank (T3) grave, and from two locations along the bottom axis of each tank grave. The sidewall samples were taken at the level of the tank bottoms about 11 feet below the ground surface. The bottom samples were taken from saturated soil at a depth of about 12 feet. Sample collection took place with the excavator blade.

pumps One soil sample was collected from beneath each of the two pumps (P-E to P-W). Locations of the pump and line samples are shown in Figure 3. The samples were taken at a depth of 6 feet after removal of the pumps and underlying equipment. Collection took place with a hand auger.

transfer lines Two samples were collected from beneath the transfer lines between the two pumps (locations L-1 and L-2 shown in Figure 3). The transfer lines had been removed and the samples were taken at a depth of 3 to 4 feet on the island excavation south sidewall. A hand auger was used for collection.

sample analysis

The samples were analyzed by Complete Environmental Testing (Stratford CT) following CTDEEP protocol for closure of underground tanks as described in the document titled "Sampling and Analytical Methods for UST Closure". All samples were analyzed for aromatic volatile organic compounds (VOC's) by method 8260C. They were not analyzed for leachable lead because the removed tanks had not contained leaded gas.

The analyses were performed following reasonable confidence protocol (RCP) established by CTDEEP. QA/QC information is included in the reports from Complete Environmental Testing. The method preservation and holding time requirements were met, samples were received by the lab in a condition consistent with that described on the chain of custody forms, and samples were received at a temperature less than 4 degrees C. QA/QC issues pertaining to contaminants of concern involved initial calibration

percent relative standard deviations for VOC's which were high in the following samples.

T2-N, T2-S, and T3-N – o-xylene, isopropylbenzene, 1,3,5-trimethylbenzene, and naphthalene.

The initial calibration relative standard deviation is non-directional as regards whether measured concentrations could be higher or lower. For this reason, we believe that data for the samples are usable for the intended purpose, namely evaluation of whether releases occurred from the removed items.

analytical results – tank grave samples

The analytical report for the tank grave samples is contained in Appendix C and the data are listed in Tables 1 to 3. In the tables, concentrations are compared with criteria in the RSR's. Note that the GB pollutant mobility criteria are not applicable because the tank related samples were collected below the seasonal high water table. The samples were collected at a depth of 11 to 12 feet when the water table was about 12 feet deep. In August, the water table would have been near the seasonal low.

The data are summarized by tank below.

tank T1

sample	# VOC's detected	concentr. range (ug/kg)	# RSR exceedences
T1-N	9	8.2 – 40	none
T1-S	11	12 – 4100	none
T1-W	11	14 – 2000	none
T1-BN	10	10000 – 374000	seven GBPMC
T1-BS	10	78 – 9800	one GBPMC

tank T2

sample	# VOC's detected	concentr. range (ug/kg)	# RSR exceedences
T2-N	10	5.8 – 33	none
T2-S	5	5.3 – 26	none
T2-BN	11	1200 – 90000	three GBPMC
T2-BS	8	54 – 660	none

tank T3

sample	# VOC's detected	concentr. range (ug/kg)	# RSR exceedences
T3-N	3	6.6 – 8.9	none
T3-E	8	65 – 1400	none
T3-S	8	66 – 1400	none
T3-BN	11	380 – 74000	two GBPMC
T3-BS	8	1400 – 61000	two GBPMC

analytical results – pump and line samples

The lab report for analysis of pump and line samples is contained in Appendix D and listed in Table 4. The data are summarized as follows.

sample	# VOC's detected	concentr. range (ug/kg)	# RSR exceedences
PE	9	72 – 3300	none
PW	9	740 – 110000	two + one E* GBPMC
LE	8	250 – 14000	one E* GBPMC
LW	2	5.9 - 6.9-	none

E* - detection limit exceeds GAPMC

soil removal

excavation The removed gasoline tanks were replaced by two fiberglass-reinforced plastic tanks: one with a capacity of 12,000 gallons and one with a capacity of 8,000 gallons. The latter tank is divided into two 4,000 gallon compartments. The new tanks were installed in the same location as the former tanks. In preparation for installation, a rectangular area with dimensions of 38 feet (north-south) by 31 feet (east-west) was excavated later in August to a depth of 12 feet. Shallow soil to a depth of about 6 feet was light in color and had PID readings at or near background. This soil was considered clean and stockpiled for reuse as fill. Underlying soil became darker in color and a petroleum odor was evident with increasing depth. This soil was stockpiled separately for disposal. Soil excavated from beneath the pumps and lines was added to the contaminated stockpile. Unlike shallow soil at the former tank location, soil beneath the pumps and lines was impacted by petroleum.

Two qualify the soil for disposal, three samples from beneath each of the removed tanks were analyzed for TCLP lead. The TCLP lead concentrations were 0.015, 0.042, and 0.12 mg/l.

Excavated soil was trucked to the Phoenix Soil facility in Waterbury. Sixteen truckloads of soil were delivered to Phoenix on August 19, August 20, and September 16 by A. P. Marquardt. The total weight received at the facility was 402.80 tons. Manifests and waybills documenting the transportation and disposal are contained in Appendix E.

sampling and analysis To document the quality of soil in the excavation, samples were collected from the four sidewalls and from four points on the bottom. Sample locations are shown in Figure 4. Collection took place with a shovel. The soil samples were processed and preserved in the same manner as the facility grave samples. At the time of sampling, the water table coincided with the excavation bottom at a depth of 12 feet.

The samples were analyzed by Complete Environmental Testing for aromatic VOC's by method 8260C. The analyses were performed following reasonable confidence protocol (RCP) and QA/QC information is contained in the report from

Complete Environmental Testing (Appendix F). There were no QA/QC issues or nonconformances with RCP criteria.

analytical results – excavation samples Concentrations of VOC's detected in the excavation soil samples are listed in Table 5 and summarized below.

sample	# VOC's detected	concentr. range (ug/kg)	# RSR exceedences
N	11	720 – 344000	six GBPMC
E	10	590 – 61000	one GBPMC
S	10	810 – 115000	four + one E*
W	10	1600 – 288000	four + one E*
B-NE	11	1100 – 346000	six
B-SE	10	8300 – 1510000	**
B-SW	10	57 – 5900	one GBPMC
B-NW	11	1100 – 258000	six GBPMC

E* - detection limit exceeds GBPMC
** six GBPMC, one also RDEC, one also RDEC and I/CDEC

The GBPMC are not applicable because the samples were collected beneath the seasonal high water table.

evaluation

petroleum releases The intent of the facility grave sampling was to determine whether releases had occurred from the removed tanks, pumps, and lines.

The gasoline tank system had been monitored electronically and no leakage was detected. The system had undergone a CTDEEP inspection in September 2012 and no violations were found. All three tanks were in good condition upon removal and showed no evidence of leakage. The cathodic protection bags, which had been replaced ten years ago, were attached to the removed tanks. The lines, which had been installed in 1995, were intact when removed.

Petroleum-related VOC's were detected in all of the soil samples collected in the tank grave and beneath the pumps and lines. Some VOC's had concentrations in the parts per million range.

Because of the tank/line condition and the tank system monitoring, we believe that the VOC's did not result from leakage from the removed facilities. It is likely that they are residual in the soil from previous generations of tanks and lines. A gas station has been operating at this location since 1958. Where older lines were exposed in excavation sidewalls, they were surrounded by dark-colored soil. The mix of VOC's including relatively high levels of the trimethylbenzenes and the absence of MTBE is suggestive of older gasoline. In our experience, contamination discovered during removals of underground gasoline tanks meeting current requirements usually relates to earlier generations of tanks.

contaminated soil remaining in place VOC's were detected in all of the excavation samples. Concentrations of some individual VOC's were in the parts per million range in seven of the eight samples. Concentrations exceeded the GBPMC in the seven samples, however, the GBPMC are not applicable below the seasonal high water table where sampling took place. There were two exceedences of direct exposure criteria in the bottom-southeast sample: benzene exceeded the residential DEC and xylenes exceeded both the residential and industrial/commercial DEC. Because this soil is located below the new tanks, the potential for exposure to humans is negligible.

The volume of petroleum-impacted soil in the subsurface was reduced by removal of 402 tons of soil. In the tank area, the soil was removed to the seasonal low water table. Additional removal was not feasible because of the limited size of the site and the permeable nature of subsurface gravelly sand.

The contamination encountered in the tank removals was undoubtedly related to VOC's measured by CTDEEP in ground water from adjacent wells. Removal of impacted soil should lead to improvement in ground water quality. Because some contaminated soil remains in place, VOC's will persist in ground water at the property for an extended period while undergoing natural attenuation.

Please call me if you have any questions.

Yours truly,

David O. Cook

David O. Cook, Ph.D.
President

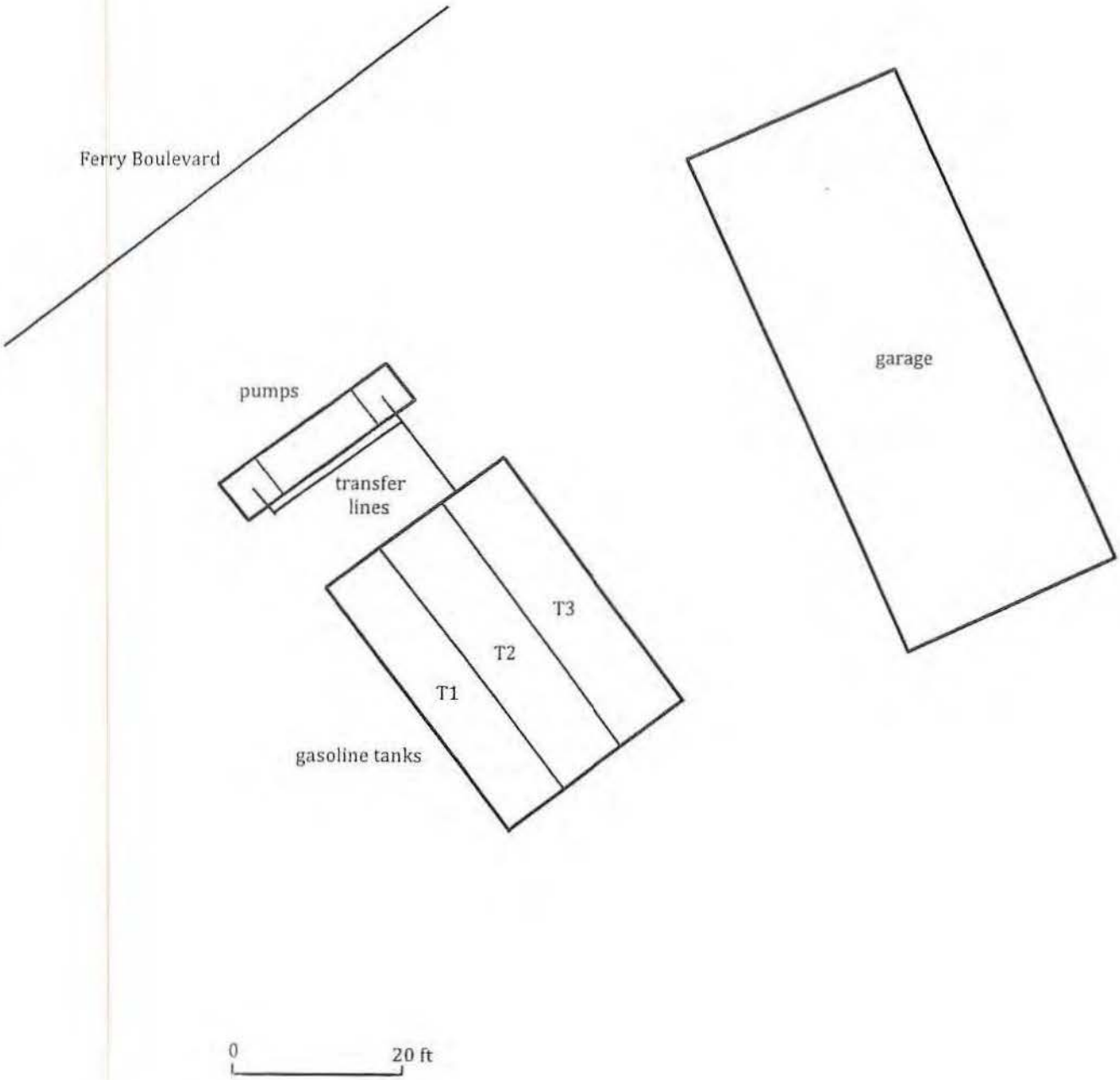


Figure 1. Sketch showing the site layout.

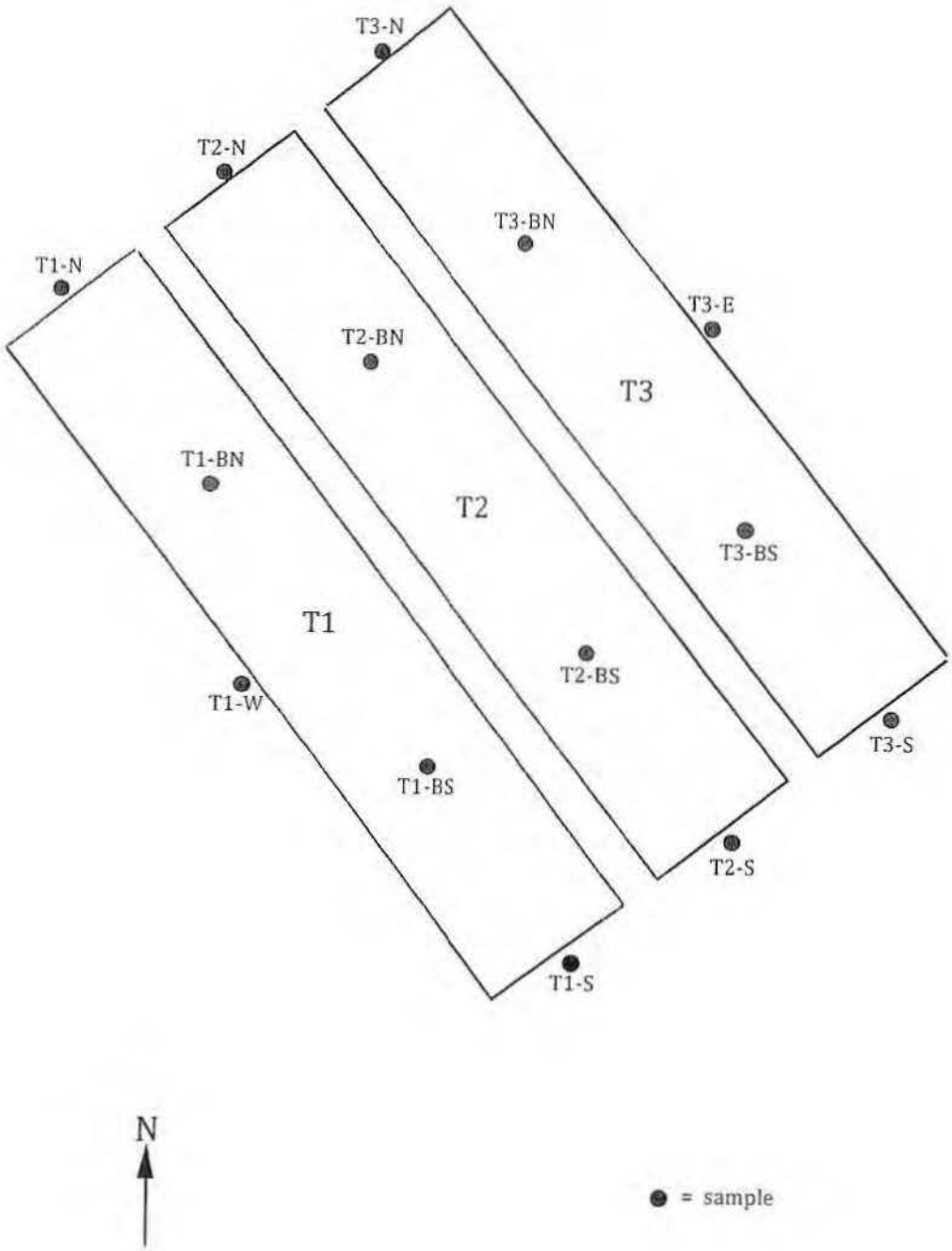


Figure 2. Locations of tank grave soil samples.

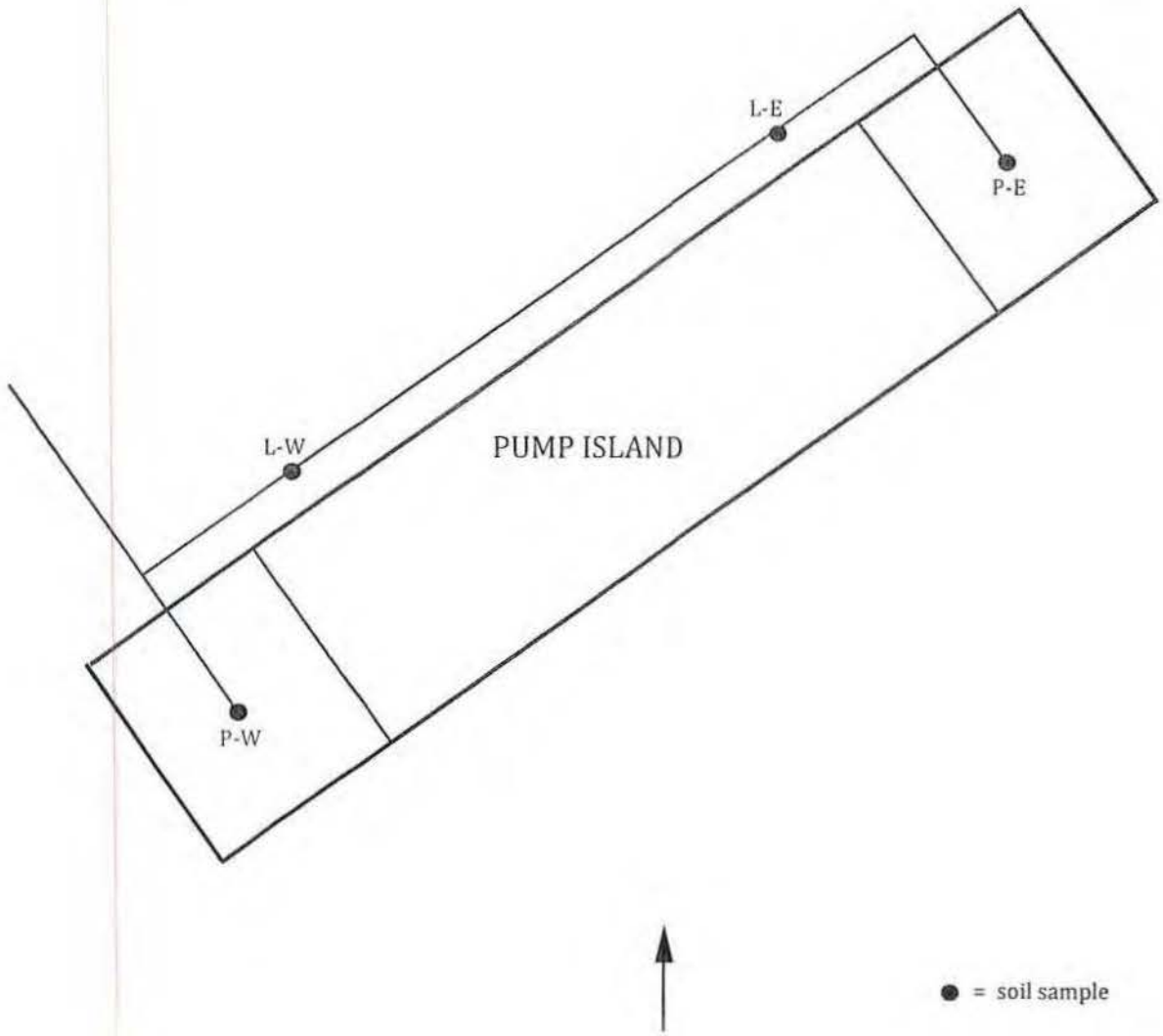


Figure 3. Locations of pump and line samples.

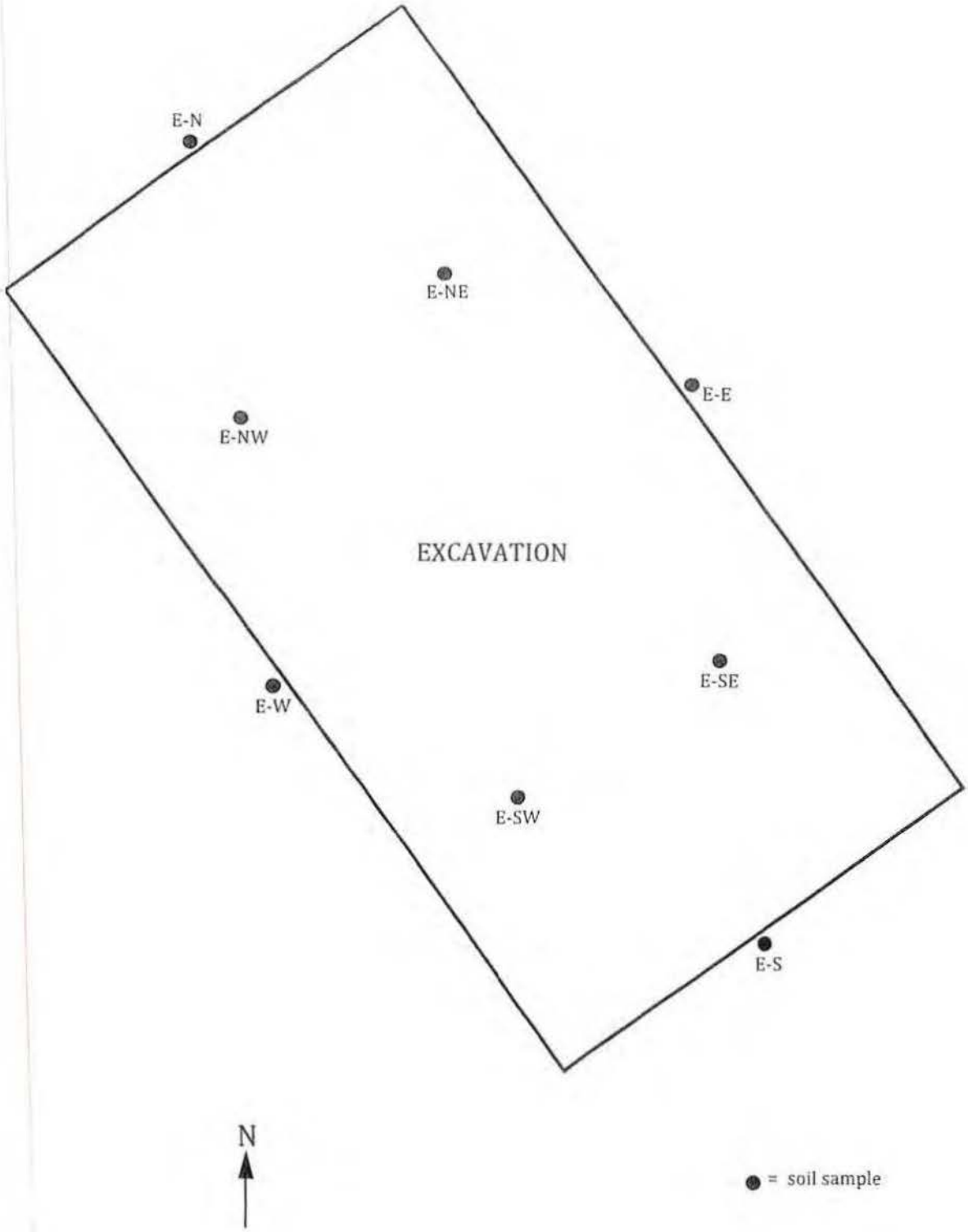


Figure 4. Locations of soil samples in excavation.

Table 1. Volatile organic compounds detected in soil samples from tank T1 grave. Concentrations are in ug/kg.

compound	T1-N	T1-S	T1-W	T1-BN	T1-S	GBPMC	RDEC	I/CDEC
MTBE	<7	<5	<5	<6400	<300	20000	500000	1000000
benzene	<7	12	14	19000	660	200	21000	200000
toluene	<7	26	20	150000	3200	67000	500000	1000000
ethylbenzene	17	53	100	97000	2200	10100	500000	1000000
xylenes	20	740	341	374000	9800	19500	500000	1000000
isopropylbenzene	8.2	190	45	15000	320	132000	500000	1000000
n-propylbenzene	40	72	190	66000	1300	14000	500000	1000000
1,3,5-trimethylbenzene	28	1600	360	100000	2600	70000	500000	1000000
tert-butylbenzene	<7	<5	<5	<130	<59	14000	500000	1000000
1,2,4-trimethylbenzene	72	7400	2000	370000	8400	70000	500000	1000000
sec-butylbenzene	9.9	820	41	<1300	<59	14000	500000	1000000
4-isopropyltoluene	<7	14	21	10000	78	41800	500000	1000000
n-butylbenzene	33	<5	<5	<1300	<59	14000	500000	1000000
naphthalene	29	4100	650	75000	2100	56000	1000000	2500000

GBPMC = GB pollutant mobility criteria
RDEC = residential direct exposure criteria
I/CDEC = industrial/commercial direct exposure criteria

Table 2. Volatile organic compounds detected in soil samples from tank T2 grave. Concentrations are in ug/kg.

compound	T2-N	T2-S	T2-BN	T2-BS	GBPMC	RDEC	I/CDEC
MTBE	<5	<5	<970	<230	20000	500000	1000000
benzene	6.1	6.5	2200	54	200	21000	200000
toluene	5.8	<5	13000	69	67000	500000	1000000
ethylbenzene	24	<5	18000	190	10100	500000	1000000
xylenes	25	7.7	90000	270	19500	500000	1000000
isopropylbenzene	6.1	<5	3000	<46	132000	500000	1000000
n-propylbenzene	33	<<5	13000	120	14000	500000	1000000
1,3,5-trimethylbenzene	5.9	6.4	26000	130	70000	500000	1000000
tert-butylbenzene	<5	<5	<190	<46	14000	500000	1000000
1,2,4-trimethylbenzene	31	26	19000	660	70000	500000	1000000
sec-butylbenzene	7.1	<5	1900	<46	14000	500000	1000000
4-isopropyltoluene	<5	<5	1200	<46	41800	500000	1000000
n-butylbenzene	<5	<5	<190	<46	14000	500000	1000000
naphthalene	8.5	5.3	10000	87	56000	1000000	2500000

GBPMC = GB pollutant mobility criteria
RDEC = residential direct exposure criteria
I/CDEC = industrial/commercial direct exposure criteria

Table 3. Volatile organic compounds detected in soil samples from tank T3 grave. Concentrations are in ug/kg.

compound	T3-N	T3-E	T3-S	T3-BN	T3-BS	GBPMC	RDEC	I/CDEC
MTBE	<5	<290	<270	<1000	<3000	20000	500000	1000000
benzene	<5	150	220	380	<590	200	21000	200000
toluene	<5	65	66	1200	2700	67000	500000	1000000
ethylbenzene	6.6	250	440	3900	5800	10100	500000	1000000
xylenes	7.4	530	487	18700	42000	19500	500000	1000000
isopropylbenzene	<5	<59	<54	1000	1400	132000	500000	1000000
n-propylbenzene	<5	150	180	5600	4900	14000	500000	1000000
1,3,5-trimethylbenzene	<5	370	110	19000	17000	70000	500000	1000000
tert-butylbenzene	<5	<59	<54	<210	<590	14000	500000	1000000
1,2,4-trimethylbenzene	8.9	1400	1400	74000	61000	70000	500000	1000000
sec-butylbenzene	<5	<59	<54	960	<590	14000	500000	1000000
4-isopropyltoluene	<5	<59	<54	640	<590	41800	500000	1000000
n-butylbenzene	<5	<59	<54	<210	<590	14000	500000	1000000
naphthalene	<5	79	420	22000	22000	56000	1000000	2500000

GBPMC = GB pollutant mobility criteria
RDEC = residential direct exposure criteria
I/CDEC = industrial/commercial direct exposure criteria

Table 4. Volatile organic compounds detected in pump and line soil samples. Concentrations are in ug/kg.

compound	PE	PW	LE	LW	GBPMC	RDEC	I/CDEC
MTBE	<250	<2500	<1100	<5	20000	500000	1000000
benzene	<50	<500	<230	<5	200	21000	200000
toluene	72	740	250	<5	67000	500000	1000000
ethylbenzene	380	4200	380	<5	10100	500000	1000000
xylenes	2210	32300	2100	6.9	19500	500000	1000000
isopropylbenzene	78	1900	<230	<5	132000	500000	1000000
n-propylbenzene	520	12000	600	<5	14000	500000	1000000
1,3,5-trimethylbenzene	740	32000	5200	<5	70000	500000	1000000
tert-butylbenzene	<50	<500	<230	<5	14000	500000	1000000
1,2,4-trimethylbenzene	3300	110000	14000	5.9	70000	500000	1000000
sec-butylbenzene	79	<500	<230	<5	14000	500000	1000000
4-isopropyltoluene	<50	1400	270	<5	41800	500000	1000000
n-butylbenzene	<50	<500	<230	<5	14000	500000	1000000
naphthalene	1300	22000	2100	<5	56000	1000000	2500000

GBPMC = GB pollutant mobility criteria
RDEC = residential direct exposure criteria
I/CDEC = industrial/commercial direct exposure criteria

Table 5. Volatile organic compounds detected in soil samples from the excavation. Concentrations are in ug/kg.

compound	N	E	S	W	GBPMC	RDEC	I/CDEC
MTBE	<2600	<1000	<2500	<5000	20000	500000	1000000
benzene	720	<200	<500	<1000	200	21000	200000
toluene	43000	4500	11000	35000	67000	500000	1000000
ethylbenzene	72000	8900	21000	56000	10100	500000	1000000
xylenes	344000	49000	115000	288000	19500	500000	1000000
isopropylbenzene	13000	2000	3600	8700	132000	500000	1000000
n-propylbenzene	55000	8100	15000	36000	14000	500000	1000000
1,3,5-trimethylbenzene	83000	18000	29000	63000	70000	500000	1000000
tert-butylbenzene	<510	<200	<500	<1000	14000	500000	1000000
1,2,4-trimethylbenzene	300000	61000	98000	220000	70000	500000	1000000
sec-butylbenzene	5800	940	1500	3200	14000	500000	1000000
4-isopropyltoluene	3200	590	810	1600	41800	500000	1000000
n-butylbenzene	<510	<200	<500	<1000	14000	500000	1000000
naphthalene	38000	7900	13000	23000	56000	1000000	2500000

GBPMC = GB pollutant mobility criteria
RDEC = residential direct exposure criteria
I/CDEC = industrial/commercial direct exposure criteria

Table 5, continued

compound	B-NE	B-SE	B-SW	B-NW	GBPMC	RDEC	I/CDEC
MTBE	<4900	<24000	<230	<2400	20000	500000	1000000
benzene	8800	110000	600	3700	200	21000	200000
toluene	220000	970000	3300	100000	67000	500000	1000000
ethylbenzene	73000	270000	1100	54000	10100	500000	1000000
xylenes	346000	1510000	5900	258000	19500	500000	1000000
isopropylbenzene	6400	20000	120	6100	132000	500000	1000000
n-propylbenzene	29000	110000	550	26000	14000	500000	1000000
1,3,5-trimethylbenzene	35000	210000	1300	37000	70000	500000	1000000
tert-butylbenzene	<980	<4800	<46	<480	14000	500000	1000000
1,2,4-trimethylbenzene	150000	730000	3800	140000	70000	500000	1000000
sec-butylbenzene	2000	8300	57	2100	14000	500000	1000000
4-isopropyltoluene	1100	<4800	<46	1100	41800	500000	1000000
n-butylbenzene	<980	<4800	<46	<480	14000	500000	1000000
naphthalene	10000	84000	750	13000	56000	1000000	2500000

GBPMC = GB pollutant mobility criteria
RDEC = residential direct exposure criteria
I/CDEC = industrial/commercial direct exposure criteria

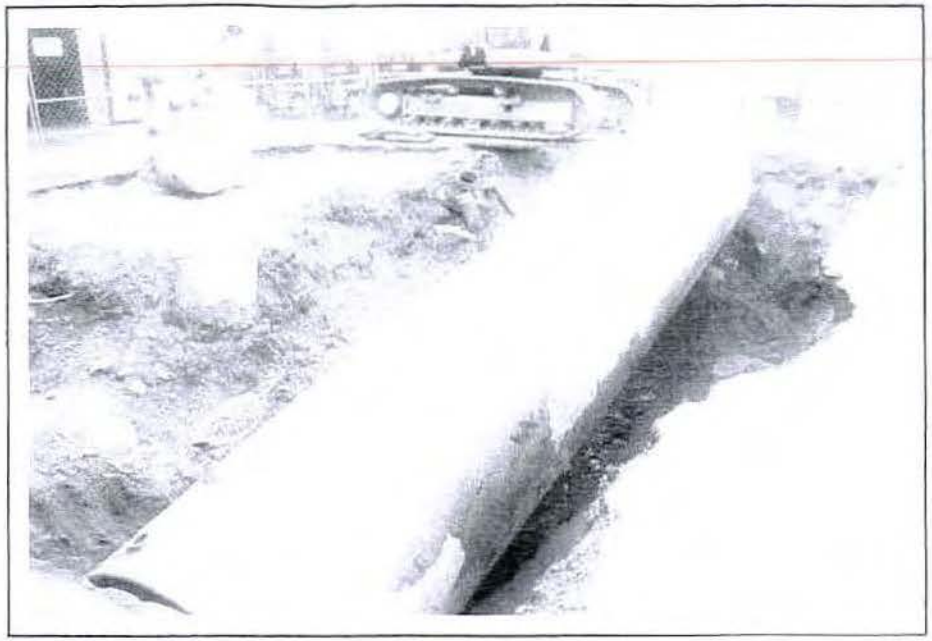
Appendix A. CTDEEP spill incident report.

Connecticut Department of Energy and Environmental Protection
Emergency Response and Spill Prevention Division
Emergency Incident Report

Case No.: 2013-04194
Staff Receiving Call: 202 LANDRY, ROBIN Assigned To: 000 NO RESPONSE
Date Reported: 08/08/2013 Time Reported: 9:57
Date of Release: 08/08/2013 Time of Release: UNKNOWN
Town of Release: STRATFORD State of Release: CT
Location of Reported Release: 734 FERRY BLVD
Reported By: DAVID COOK Phone: (860) 391-3365 Ext:
Representing: GEO SCIENCE TECHNICAL SERVICES
Responsible Party: DAVID CROSBY Phone: (203) 977-4753
Street Address:
Town: State: Zip Code:
Does the Responsible Party Accept Financial Responsibility?
Release Type: PETROLEUM
Release Substance: HEATING OIL
Media: GROUND SURFACE
Total Quantity: 0 Gallons 0 Cubic Yards 0 Cubic Feet 0 Drums 0 Pounds
Emergency Measures: (3) 6000 gallon tank removal
Has the Release Been Terminated?: YES
Type of Waterbody Affected: NONE
Name of Waterbody Affected:
Total Quantity Recovered: 0 Total Quantity in Water: 0
Corrective Actions Taken: REMOVED TANK SOIL REMOVED
INVESTIGATED

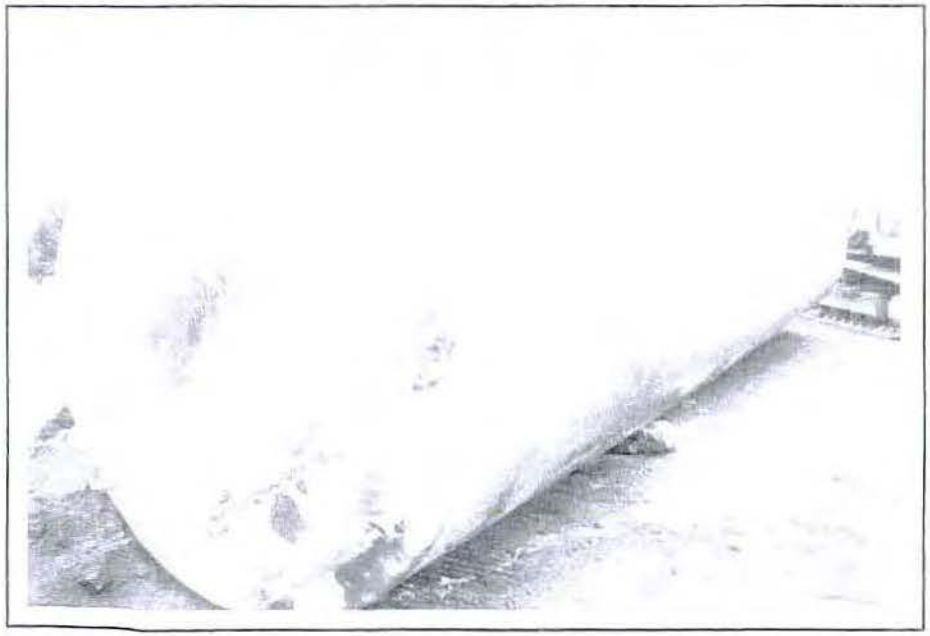
Discharge Class: COMMERCIAL
Cause of Incident: FUEL TANK FAILURE
Agencies Notified: DEP DISPATCH
Status: CLOSED

Appendix B. Photographs taken during tank removal.

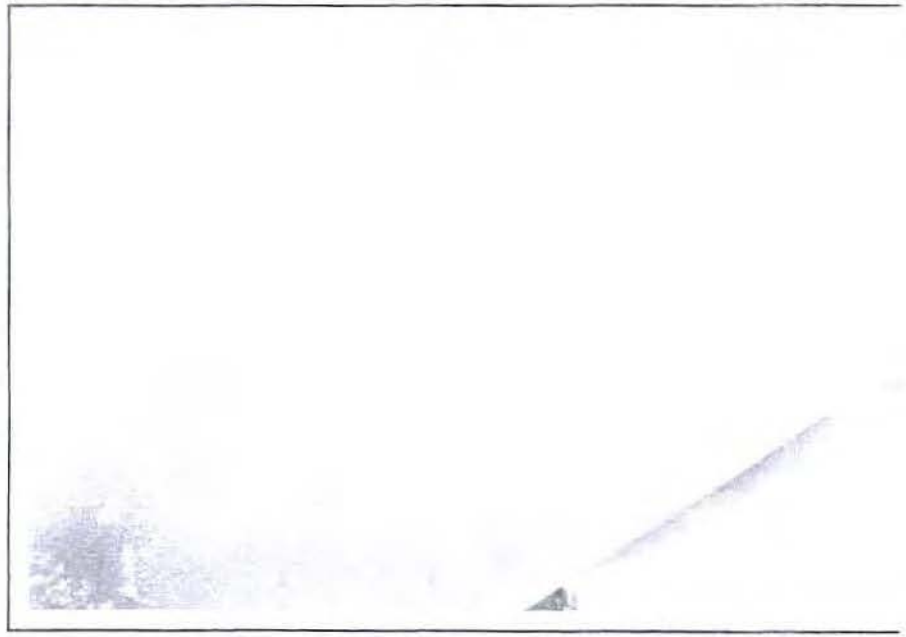


tank T1

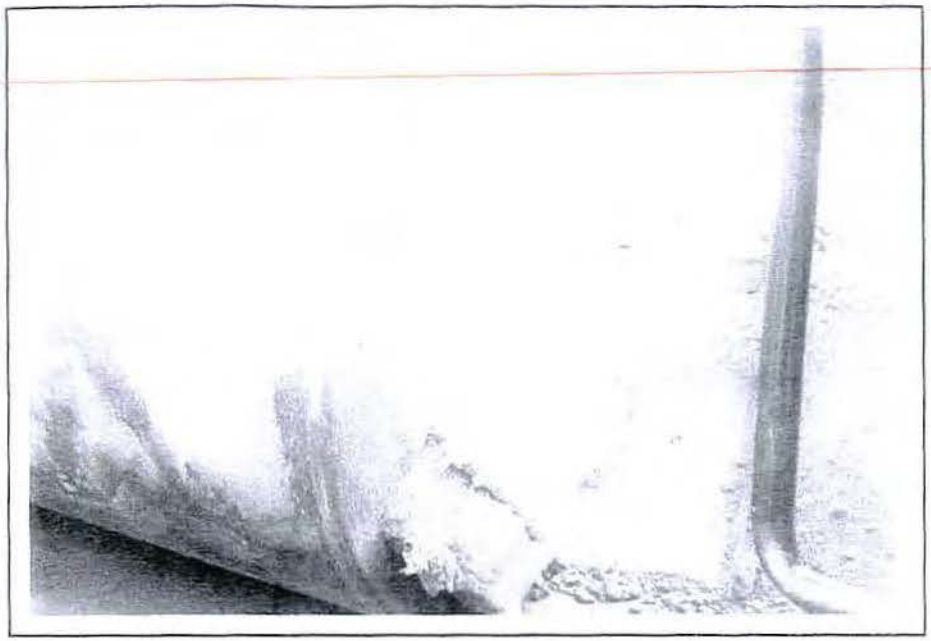
T1



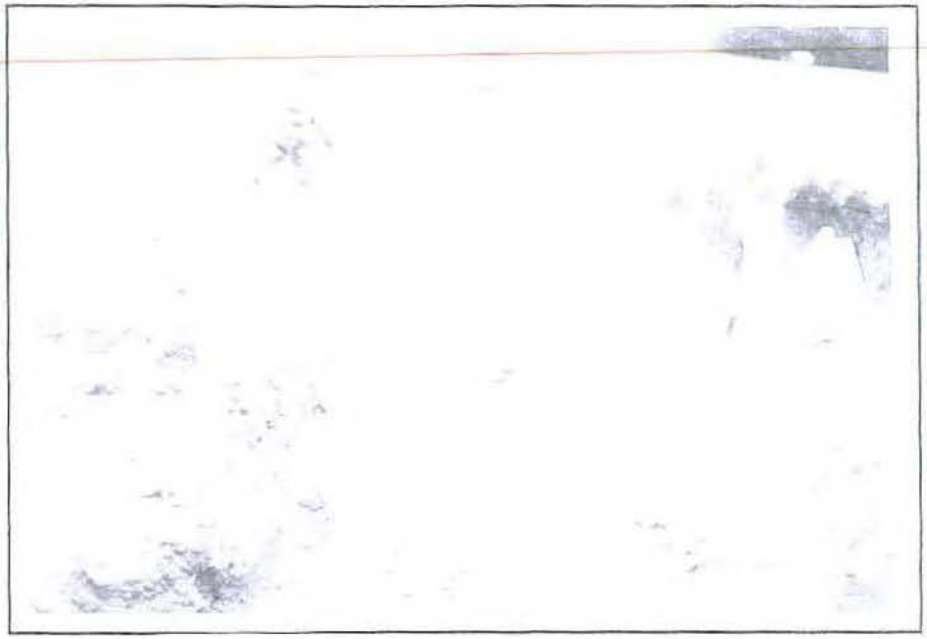
T1



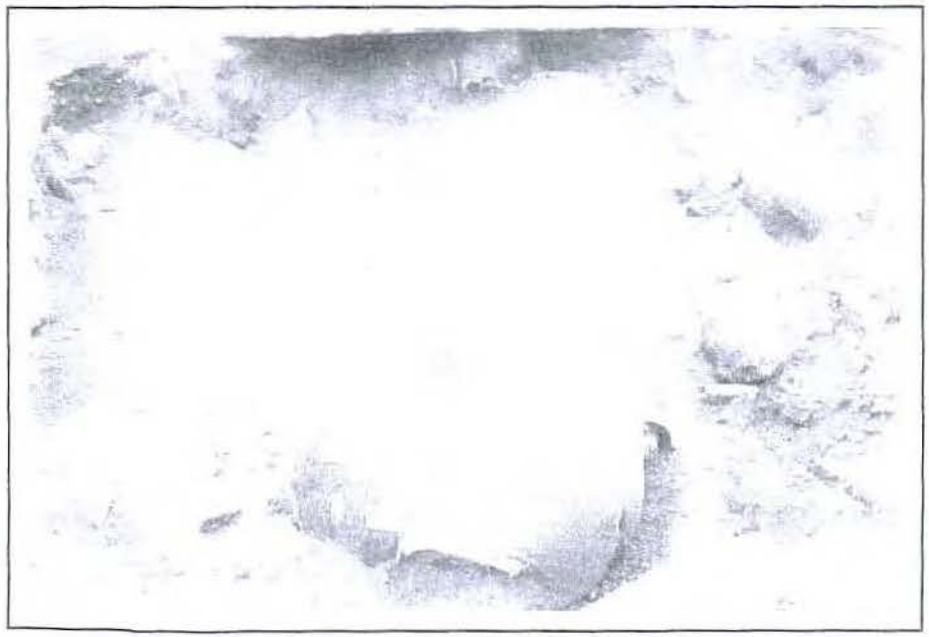
T1



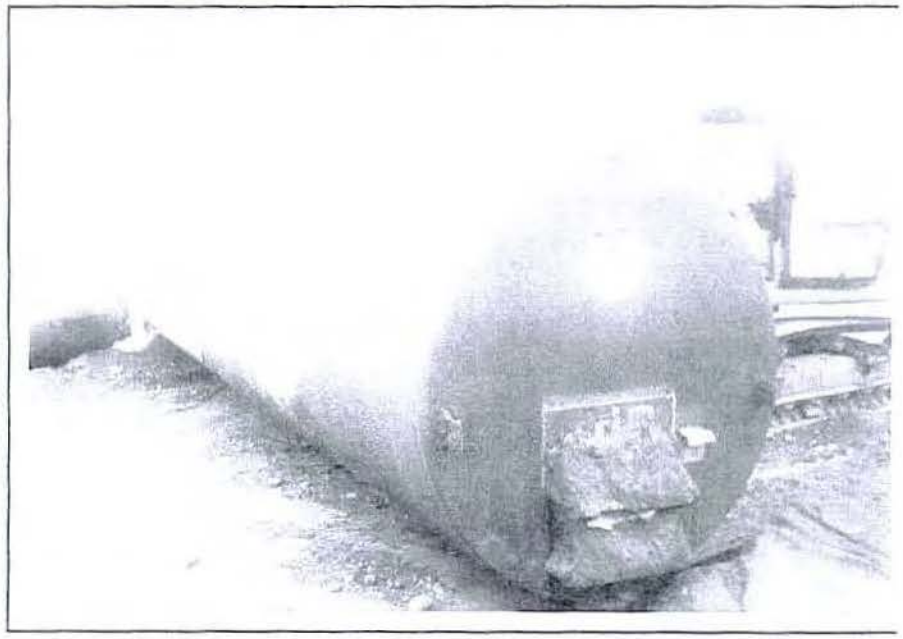
T1



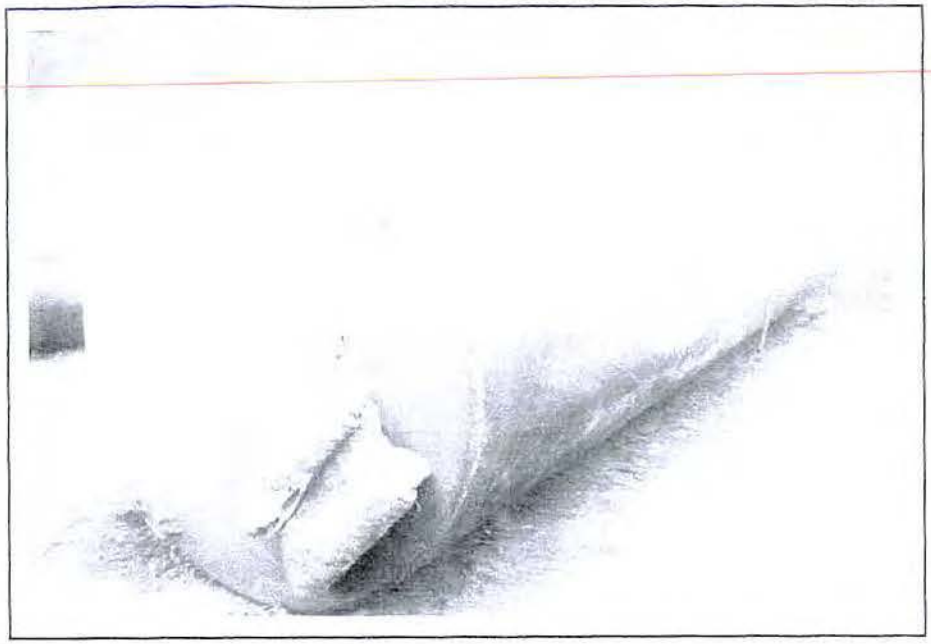
T1 grave



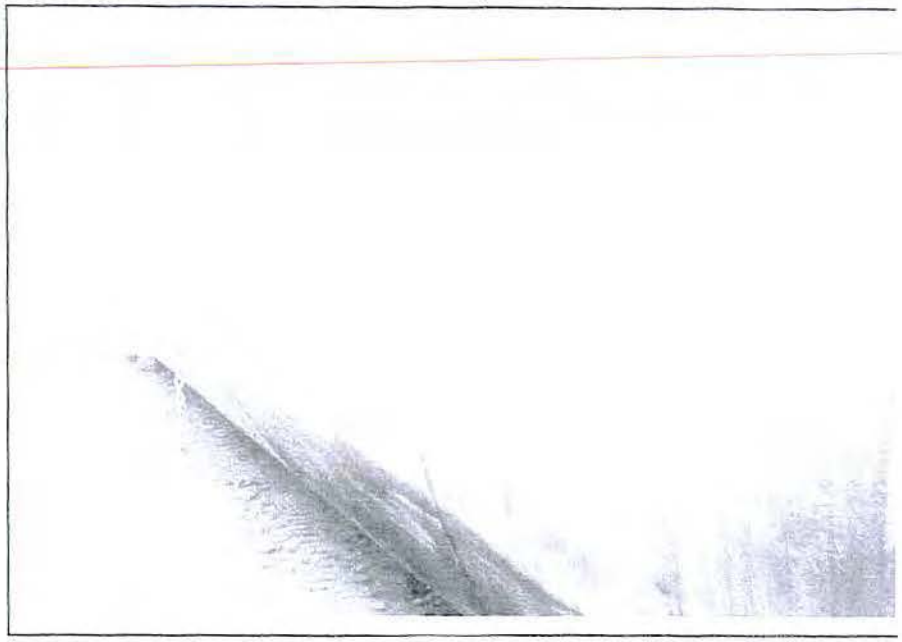
tank T2



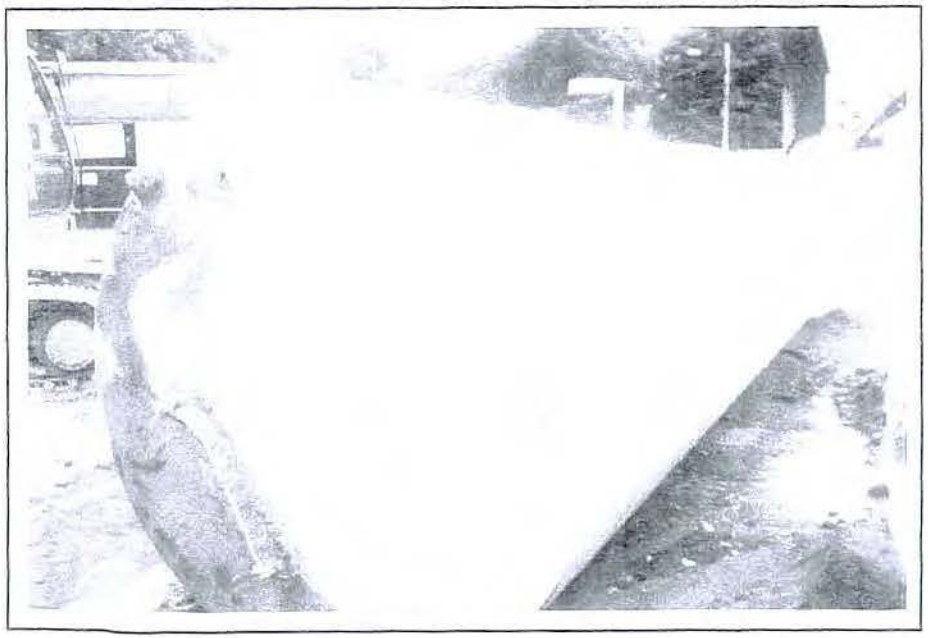
T2



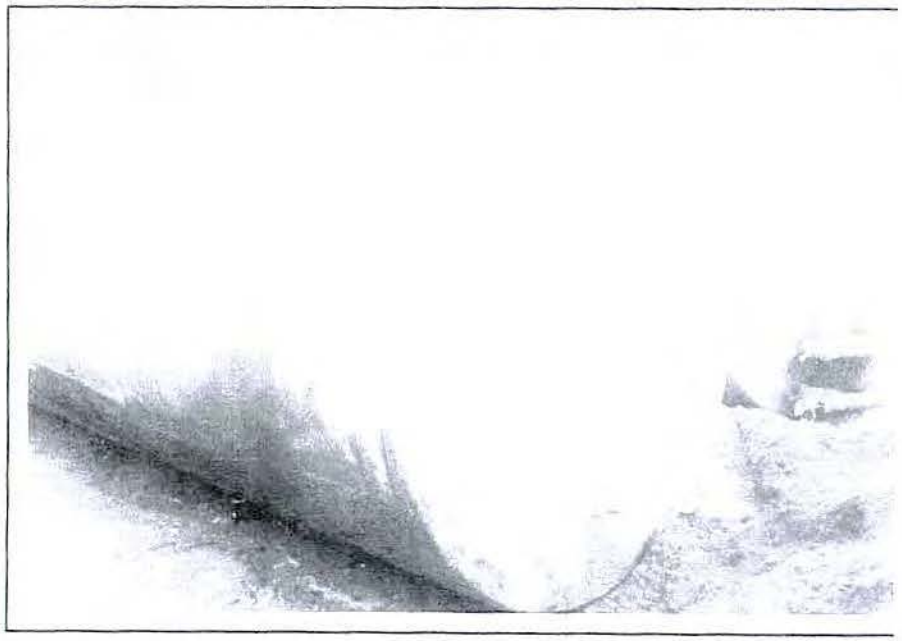
T2



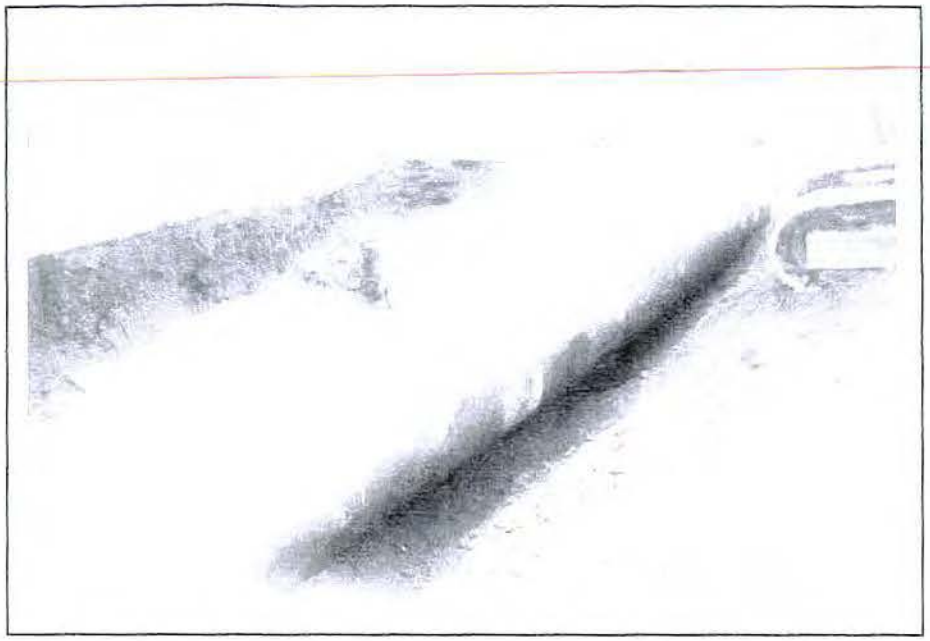
T2



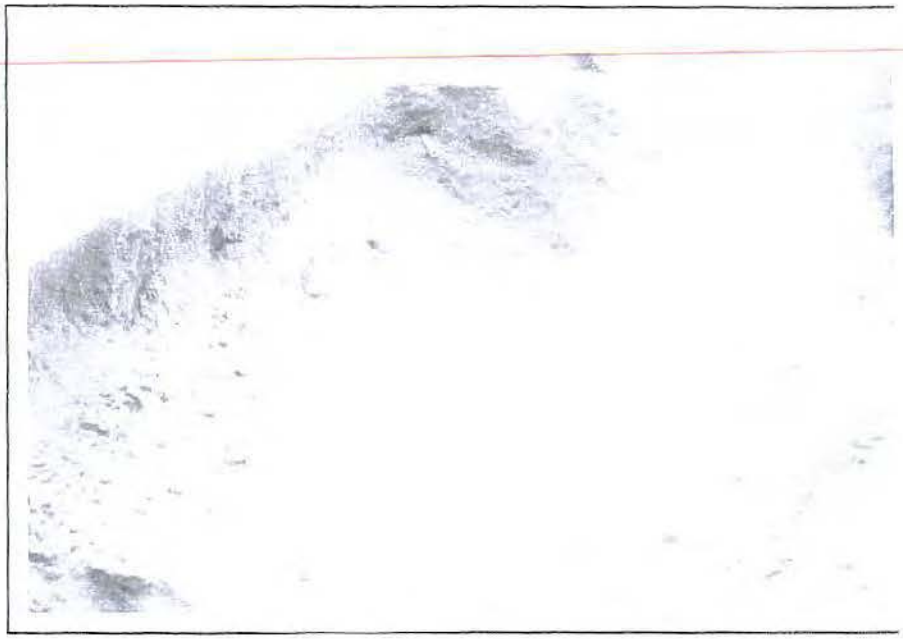
T2



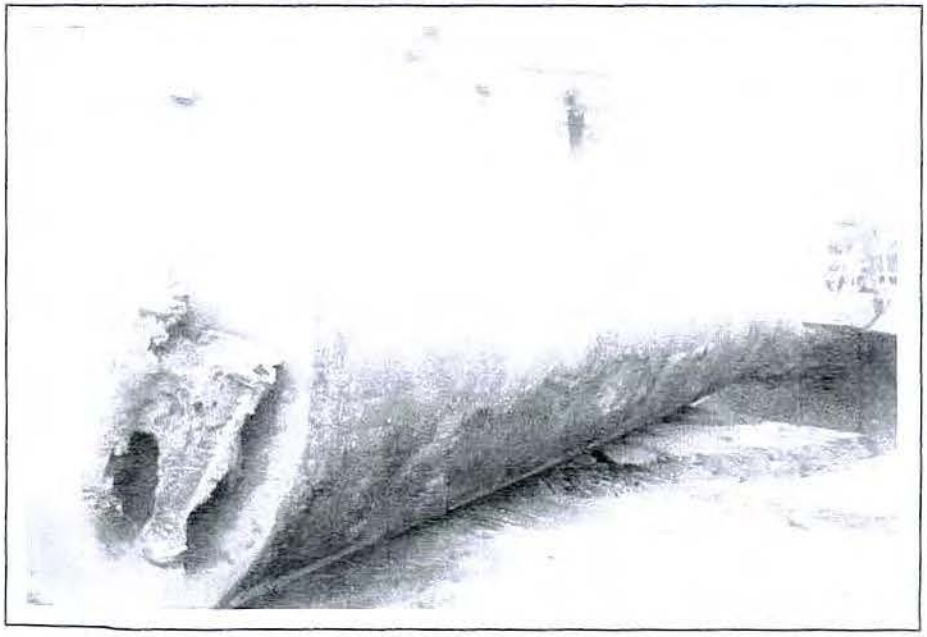
T2



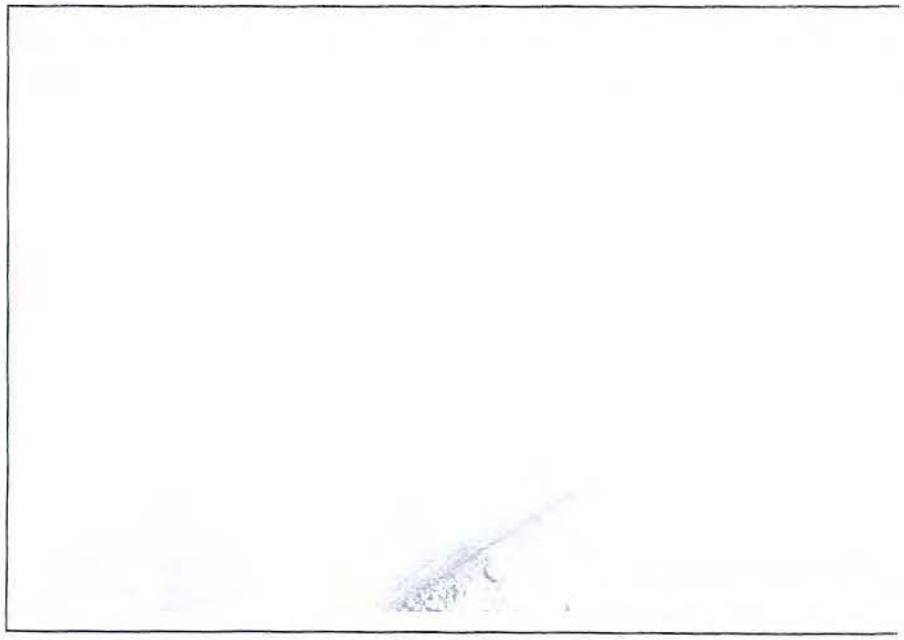
tank T3



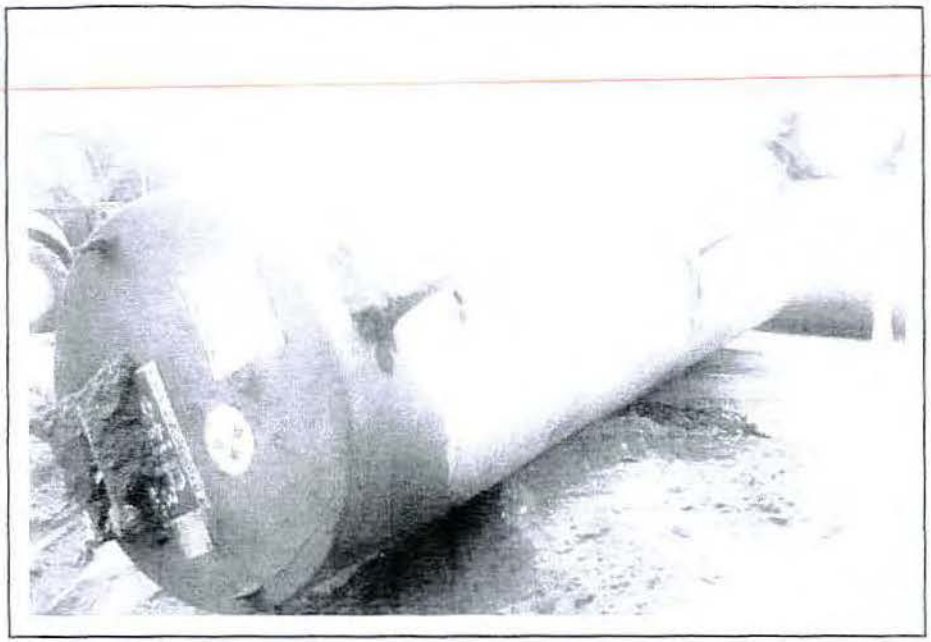
T3 grave



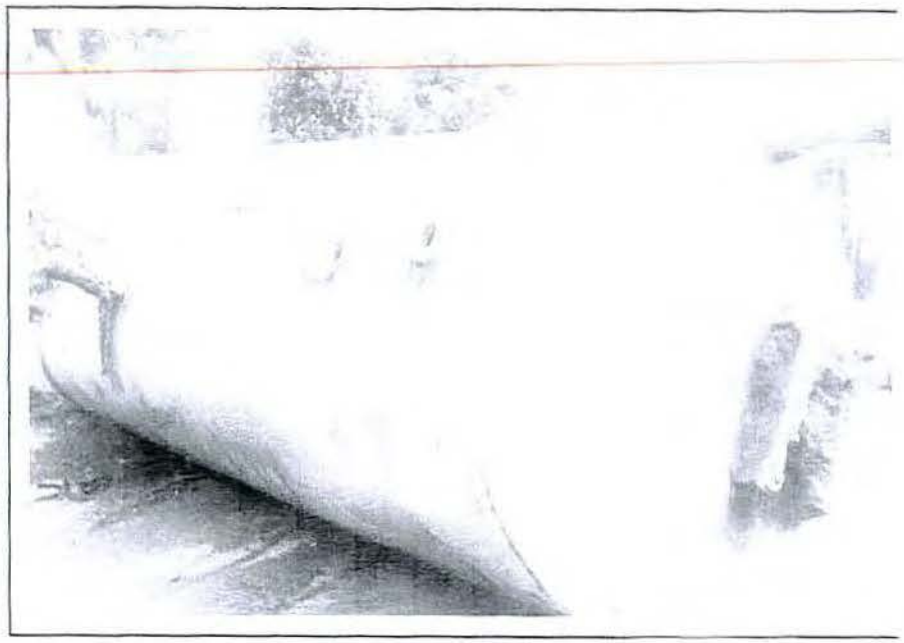
T3



T3



T3



T3

Appendix C. Lab report on analysis of tank grave soil samples.

COMPLETE ENVIRONMENTAL TESTING, INC.

80 Lupes Drive
Stratford, CT 06615

Tel: (203) 377-9984
Fax: (203) 377-9952
e-mail: cet1@cetlabs.com

Client: Mr. David Cook
Geoscience Tech. Services, Inc
P.O. Box 1036
Old Lyme, CT 06371

Analytical Report

CET # 13080231

Report Date: August 15, 2013
Client Project: 734 Ferry Blvd, Stratford

nnecticut Laboratory Certification PH 0116
sachusetts Laboratory Certification M-CT903
Rhode Island Certification 199

New York Certification 11982
Florida Laboratory Certification E871064

August 15, 2013

CET#: 13080231
Project: 734 Ferry Blvd, Stratford

SAMPLE SUMMARY:

This report contains analytical data associated with the following samples only:

CETID	Client Sample ID	Matrix	Collection Date	Collection Time	Receipt Date
AF40258	T1-N	Soil	8/8/2013	9:10	08/08/2013
AF40259	T1-W	Soil	8/8/2013	9:13	08/08/2013
AF40260	T1-S	Soil	8/8/2013	9:16	08/08/2013
AF40261	T1-BN	Soil	8/8/2013	9:21	08/08/2013
AF40262	T1-BS	Soil	8/8/2013	9:26	08/08/2013
AF40263	T2-N	Soil	8/8/2013	11:16	08/08/2013
AF40264	T2-BN	Soil	8/8/2013	11:20	08/08/2013
AF40265	T2-BS	Soil	8/8/2013	11:24	08/08/2013
AF40266	T2-S	Soil	8/8/2013	11:28	08/08/2013
AF40267	T3-N	Soil	8/8/2013	12:23	08/08/2013
AF40268	T3-E	Soil	8/8/2013	12:38	08/08/2013
AF40269	T3-S	Soil	8/8/2013	12:27	08/08/2013
AF40270	T3-BN	Soil	8/8/2013	12:31	08/08/2013
AF40271	T3-BS	Soil	8/8/2013	12:35	08/08/2013

Sample temperature upon receipt was 4.1 degrees C

ANALYSIS:

Total Solids [EPA 160.3 mo] Units: percent

Client ID	T1-N	T1-W	T1-S	T1-BN	T1-BS
CET ID	AF40258	AF40259	AF40260	AF40261	AF40262
Date Analyzed	8/13/2013	8/13/2013	8/13/2013	8/13/2013	8/13/2013
Total Solids	83	92	90	74	78

Total Solids [EPA 160.3 mo] Units: percent

Client ID	T2-N	T2-BN	T2-BS	T2-S	T3-N
CET ID	AF40263	AF40264	AF40265	AF40266	AF40267
Date Analyzed	8/13/2013	8/13/2013	8/13/2013	8/13/2013	8/13/2013
Total Solids	91	91	89	91	90

Total Solids [EPA 160.3 mo] Units: percent

Client ID	T3-E	T3-S	T3-BN	T3-BS
CET ID	AF40268	AF40269	AF40270	AF40271
Date Analyzed	8/13/2013	8/13/2013	8/13/2013	8/13/2013
Total Solids	90	90	92	80

CET#: 13080231
Project: 734 Ferry Blvd, Stratford

.olatile Org. Dilution [EPA 8260C] Units: ug/kg (Dry Wt)

Client ID	T1-W	T1-S	T1-BN	T1-BS	T2-BN
CET ID	AF40259	AF40260	AF40261	AF40262	AF40264
Date Analyzed	8/13/2013	8/13/2013	8/13/2013	8/13/2013	8/14/2013
Dilution	48.6	96.5	941.6	45.9	176.5
Methyl-t-Butyl Ether (MTBE)	ND < 270	ND < 540	ND < 6400	ND < 300	ND < 970
Benzene	300	ND < 110	19000	660	2200
Toluene	920	220	150000	3200	13000
Chlorobenzene	ND < 53	ND < 110	ND < 1300	ND < 59	ND < 190
Ethylbenzene	670	580	97000	2200	18000
m+p Xylenes	1400	1600	280000	7300	69000
o-Xylene	410	300	94000	2500	21000
Styrene	ND < 53	ND < 110	ND < 1300	ND < 59	ND < 190
Isopropylbenzene	78	190	15000	320	3000
Bromobenzene	ND < 53	ND < 110	ND < 1300	ND < 59	ND < 190
n-Propylbenzene	290	750	66000	1300	13000
2-Chlorotoluene	ND < 53	ND < 110	ND < 1300	ND < 59	ND < 190
4-Chlorotoluene	ND < 53	ND < 110	ND < 1300	ND < 59	ND < 190
1,3,5-Trimethylbenzene	360	1600	100000	2600	26000
tert-Butylbenzene	ND < 53	ND < 110	ND < 1300	ND < 59	ND < 190
1,2,4-Trimethylbenzene	2000	7400	370000	8400	19000
sec-Butylbenzene	ND < 53	ND < 110	ND < 1300	ND < 59	1900
1,3-Dichlorobenzene	ND < 53	ND < 110	ND < 1300	ND < 59	ND < 190
4-Isopropyltoluene	ND < 53	240	10000	78	1200
1,4-Dichlorobenzene	ND < 53	ND < 110	ND < 1300	ND < 59	ND < 190
1,2-Dichlorobenzene	ND < 53	ND < 110	ND < 1300	ND < 59	ND < 190
n-Butylbenzene	ND < 53	ND < 110	ND < 1300	ND < 59	ND < 190
,2,4-Trichlorobenzene	ND < 53	ND < 110	ND < 1300	ND < 59	ND < 190
Hexachlorobutadiene	ND < 53	ND < 110	ND < 1300	ND < 59	ND < 190
Naphthalene	650	4100	75000	2100	10000
1,2,3-Trichlorobenzene	ND < 53	ND < 110	ND < 1300	ND < 59	ND < 190
1,2 Dichloroethane-d4 (SURR) 70-130	94.6	86.3	81.9	102	89
toluene-d8 (SURR) 70-130	99.3	101	102	104	105
4-bromofluorobenzene (SURR) 70-130	106	93.8	101	100	104

Volatile Org. Dilution [EPA 8260C] Units: ug/kg (Dry Wt)

Client ID	T2-BS	T3-E	T3-S	T3-BN	T3-BS
CET ID	AF40265	AF40268	AF40269	AF40270	AF40271
Date Analyzed	8/13/2013	8/13/2013	8/13/2013	8/14/2013	8/13/2013
Dilution	40.6	52.8	48.3	191.2	473.5
Methyl-t-Butyl Ether (MTBE)	ND < 230	ND < 290	ND < 270	ND < 1000	ND < 3000
Benzene	54	150	220	380	ND < 590
Toluene	69	65	66	1200	2700
Chlorobenzene	ND < 46	ND < 59	ND < 54	ND < 210	ND < 590
Ethylbenzene	190	250	440	3900	5800
m+p Xylenes	270	530	430	14000	30000
o-Xylene	ND < 46	ND < 59	57	4700	12000
Styrene	ND < 46	ND < 59	ND < 54	ND < 210	ND < 590
Isopropylbenzene	ND < 46	ND < 59	ND < 54	1000	1400
Bromobenzene	ND < 46	ND < 59	ND < 54	ND < 210	ND < 590
n-Propylbenzene	120	150	180	5600	4900
2-Chlorotoluene	ND < 46	ND < 59	ND < 54	ND < 210	ND < 590
Chlorotoluene	ND < 46	ND < 59	ND < 54	ND < 210	ND < 590

CET#: 13080231
Project: 734 Ferry Blvd, Stratford

olatile Org. Dilution [EPA 8260C] Units: ug/kg (Dry Wt)

Client ID	T2-BS	T3-E	T3-S	T3-BN	T3-BS
1,3,5-Trimethylbenzene	130	370	110	19000	17000
tert-Butylbenzene	ND < 46	ND < 59	ND < 54	ND < 210	ND < 590
1,2,4-Trimethylbenzene	660	1400	1400	74000	61000
sec-Butylbenzene	ND < 46	ND < 59	ND < 54	960	ND < 590
1,3-Dichlorobenzene	ND < 46	ND < 59	ND < 54	ND < 210	ND < 590
4-Isopropyltoluene	ND < 46	ND < 59	ND < 54	640	ND < 590
1,4-Dichlorobenzene	ND < 46	ND < 59	ND < 54	ND < 210	ND < 590
1,2-Dichlorobenzene	ND < 46	ND < 59	ND < 54	ND < 210	ND < 590
n-Butylbenzene	ND < 46	ND < 59	ND < 54	ND < 210	ND < 590
1,2,4-Trichlorobenzene	ND < 46	ND < 59	ND < 54	ND < 210	ND < 590
Hexachlorobutadiene	ND < 46	ND < 59	ND < 54	ND < 210	ND < 590
Naphthalene	87	79	420	22000	22000
1,2,3-Trichlorobenzene	ND < 46	ND < 59	ND < 54	ND < 210	ND < 590
1,2 Dichloroethane-d4 (SURR) 70-130	90.8	92.5	91.9	99	92.6
toluene-d8 (SURR) 70-130	102	103	102	103	101
4-bromofluorobenzene (SURR) 70-130	100	96.6	96.8	103	105

Volatile Organics [EPA 8260C] Units: ug/kg (Dry Wt)

Client ID	T1-N	T1-W	T1-S	T2-N	T2-S
CET ID	AF40258	AF40259	AF40260	AF40263	AF40266
Date Analyzed	8/10/2013	8/10/2013	8/10/2013	8/14/2013	8/14/2013
Dilution	2.2	1.7	1.7	1.8	1.8
Methyl-t-Butyl Ether (MTBE)	ND < 7.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0
enzene	ND < 7.0	14	12	6.1	6.5
oluene	ND < 7.0	20	26	5.8	ND < 5.0
Chlorobenzene	ND < 7.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0
Ethylbenzene	17	100	53	24	ND < 5.0
m+p Xylenes	20	280	510	20	7.7
o-Xylene	ND < 7.0	61	230	5.0	ND < 5.0
Styrene	ND < 7.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0
Isopropylbenzene	8.2	45	1200E	6.1	ND < 5.0
Bromobenzene	ND < 7.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0
n-Propylbenzene	40	190	72	33	ND < 5.0
2-Chlorotoluene	ND < 7.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0
4-Chlorotoluene	ND < 7.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0
1,3,5-Trimethylbenzene	28	620E	680E	5.9	6.4
tert-Butylbenzene	ND < 7.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0
1,2,4-Trimethylbenzene	72	1000E	1000E	31	26
sec-Butylbenzene	9.9	41	820E	7.1	ND < 5.0
1,3-Dichlorobenzene	ND < 7.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0
4-Isopropyltoluene	ND < 7.0	21	14	ND < 5.0	ND < 5.0
1,4-Dichlorobenzene	ND < 7.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0
1,2-Dichlorobenzene	ND < 7.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0
n-Butylbenzene	33	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0
1,2,4-Trichlorobenzene	ND < 7.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0
Hexachlorobutadiene	ND < 7.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0
Naphthalene	29	1100E	480E	8.5	5.3
1,2,3-Trichlorobenzene	ND < 7.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0
1,2 Dichloroethane-d4 (SURR) 70-130	104	104	107	111	112
toluene-d8 (SURR) 70-130	102	102	99.9	103	102
bromofluorobenzene (SURR) 70-130	105	98.8	97.3	98.2	95.5

August 15, 2013

CET#: 13080231
Project: 734 Ferry Blvd, Stratford

olatile Organics [EPA 8260C] Units: ug/kg (Dry Wt)

Client ID	T2-S	T3-N
CET ID	AF40266	AF40267
Date Analyzed	8/14/2013	8/14/2013
Dilution	1.8	1.7
Methyl-t-Butyl Ether (MTBE)	ND < 5.0	ND < 5.0
Benzene	6.5	ND < 5.0
Toluene	ND < 5.0	ND < 5.0
Chlorobenzene	ND < 5.0	ND < 5.0
Ethylbenzene	ND < 5.0	6.6
m+p Xylenes	7.7	7.4
o-Xylene	ND < 5.0	ND < 5.0
Styrene	ND < 5.0	ND < 5.0
Isopropylbenzene	ND < 5.0	ND < 5.0
Bromobenzene	ND < 5.0	ND < 5.0
n-Propylbenzene	ND < 5.0	ND < 5.0
2-Chlorotoluene	ND < 5.0	ND < 5.0
4-Chlorotoluene	ND < 5.0	ND < 5.0
1,3,5-Trimethylbenzene	6.4	ND < 5.0
tert-Butylbenzene	ND < 5.0	ND < 5.0
1,2,4-Trimethylbenzene	26	8.9
sec-Butylbenzene	ND < 5.0	ND < 5.0
1,3-Dichlorobenzene	ND < 5.0	ND < 5.0
4-Isopropyltoluene	ND < 5.0	ND < 5.0
1,4-Dichlorobenzene	ND < 5.0	ND < 5.0
1,2-Dichlorobenzene	ND < 5.0	ND < 5.0
n-Butylbenzene	ND < 5.0	ND < 5.0
,2,4-Trichlorobenzene	ND < 5.0	ND < 5.0
Hexachlorobutadiene	ND < 5.0	ND < 5.0
Naphthalene	5.3	ND < 5.0
1,2,3-Trichlorobenzene	ND < 5.0	ND < 5.0
1,2 Dichloroethane-d4 (SURR) 70-130	112	113
toluene-d8 (SURR) 70-130	102	104
4-bromofluorobenzene (SURR) 70-130	95.5	95.4

Questions related to this report should be directed to David Ditta, Timothy Fusco, or Robert Blake at 203-377-9984.

Sincerely,

David Ditta
Laboratory Director

CET#: 13080231
Project: 734 Ferry Blvd, Stratford

.eport Comments:

1. ND is None Detected at the specified detection limit.
2. All analyses were performed in house unless a Reference Laboratory is listed.
3. Samples will be disposed of 30 days after the report date.
4. Sample Result Flags:
   E - The result is estimated, above the calibration range.
   H - The surrogate recovery is above the control limits.
   L - The surrogate recovery is below the control limits.
   B - The compound was detected in the laboratory blank.
   P - The Relative Percent Difference (RPD) of dual column analyses exceeds 40%.
   D - The RPD between the sample and the sample duplicate is high. Sample homogeneity may be a problem.
5. All results met standard operating procedures unless indicated by a data qualifier next to a sample result, or a narration in the QC report.

CET #: 13080231

Volatile Soils Only:

Date and Time in Freezer
Client:
CET:

CHAIN OF CUSTODY RECORD

CET
COMPLETE ENVIRONMENTAL TESTING, INC.

80 Lupes Drive
Stratford, CT 06615
Tel: (203) 377-9984
Fax: (203) 377-9952
e-mail: cet1@cetlabs.com
Bottle Request e-mail: bottleorders@cetlabs.com

Matrix: A=Air, S=Soil, W=Water, DW=Drinking W, C=Cassette, Solid, Wipe, Other (Specify)

Turnaround Time ** (check one): Same Day *, Next Day *, 2-3 Days *, Std (5-7 Days)

Organics: 8260 CT List, 8260 Aromatics, 8260 Halogens, CT ETPH, 8270 CT List, 8270 PNAs, PCBs, Pesticides, Herbicides

Metals (check all that apply): 13 Priority Poll, 8 RCRA, TOTAL, TCLP, SPLP, Field Filtered, Lab To Filter

Additional Analysis

Sample ID	Date/Time	Matrix	Same Day *	Next Day *	2-3 Days *	Std (5-7 Days)	8260 CT List	8260 Aromatics	8260 Halogens	CT ETPH	8270 CT List	8270 PNAs	PCBs	Pesticides	Herbicides	13 Priority Poll	8 RCRA	TOTAL	TCLP	SPLP	Field Filtered	Lab To Filter	TOTAL # OF CONT.	NOTE #
T1-N	8/8/13 0910	S				X		X															4	1
T1-W	0913																							2
T1-S	0916																							2
T1-BN	0921																							3
T1-BS	0926																							2
T2-N	1116																							1
T2-BN	1120																							3
T2-BS	1124																							
T2-S	1128																							
T3-N	1123																							

PRESERVATIVE (Cl-HCl, N-HNO_3, S-H_2SO_4, Na-NaOH, C=Cool, O-Other): C

CONTAINER TYPE (P-Plastic, G-Glass, V-Vial, O-Other): V

Soil VOCs Only (M=MeOH, B=Sodium Bisulfate, W=Water, F=Empty Vial, E=Encore): M/B

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:
D Cook	8/8/13	15:02 [illegible]
RELINQUISHED BY:	DATE/TIME	RECEIVED BY:
RELINQUISHED BY:	DATE/TIME	RECEIVED BY:

NOTES:
1 PID 50-150 PPM
2 PID 400-700 PPM
3 PID 900-1400 PPM
others < 50 PPM

Client / Reporting Information

Company Name: Geoscience Technical Services
Address: PO Box 1036
City: Old Lyme State: CT Zip: 06371
Report To: D. Cook E-mail:
Phone #: 860 391-3365 Fax #:

Project Information

Project Contact: D. Cook PO #:
Project: 734 Ferry Blvd Project #:
Location: Stratford CT Collector(s): D. Cook

QA/QC: ☐ Std ☐ Site Specific (MS/MSD) * ☒ RCP Pkg * ☒ DQAW *
Data Report: ☒ Email ☒ PDF ☐ Excel ☐ Other
RSR Reporting Limits (check one): ☐ GA ☒ GB ☐ SWP ☐ Other (specify)

Lab Use:
Evidence of Cooling: Temp Upon Receipt 4.1 (Y) °C or N

SHEET 1 OF 2

* Additional charge may apply. ** TAT begins when the samples are received at the Lab and all issues are resolved. TAT for samples received after 3 p.m. will start on the next business day. REV 12/11

CET #: 13080231

Volatile Soils Only:

Date and Time in Freezer
Client:
CET:

CHAIN OF CUSTODY RECORD

CET
COMPLETE ENVIRONMENTAL TESTING, INC.

80 Lupes Drive
Stratford, CT 06615
Tel: (203) 377-9984
Fax: (203) 377-9952
e-mail: cet1@cetlabs.com
Bottle Request e-mail: bottleorders@cetlabs.com

Matrix: A=Air, S=Soil, W=Water, DW=Drinking W, C=Cassette, Solid, Wipe, Other (Specify)

Turnaround Time ** (check one): Same Day *, Next Day *, 2-3 Days *, Std (5-7 Days)

Organics: 8260 CT List, 8260 Aromatics, 8260 Halogens, CT ETPH, 8270 CT List, 8270 PNAs, PCBs, Pesticides, Herbicides

Metals (check all that apply): 13 Priority Poll, 8 RCRA, TOTAL, TCLP, SPLP, Field Filtered, Lab To Filter

Additional Analysis

Sample ID	Date/Time	Matrix	Same Day *	Next Day *	2-3 Days *	Std (5-7 Days)	8260 CT List	8260 Aromatics	8260 Halogens	CT ETPH	8270 CT List	8270 PNAs	PCBs	Pesticides	Herbicides	13 Priority Poll	8 RCRA	TOTAL	TCLP	SPLP	Field Filtered	Lab To Filter	TOTAL # OF CONT.	NOTE #
T3-E	8/8/13 1258	S				X		X															4	1
T3-S	1227																							1
T3-BN	1231																							3
T3-BS	1235																							1

PRESERVATIVE (Cl-HCl, N-HNO_3, S-H_2SO_4, Na-NaOH, C=Cool, O-Other)			C
CONTAINER TYPE (P-Plastic, G-Glass, V-Vial, O-Other)			V
Soil VOCs Only (M=MeOH B=Sodium Bisulfate W=Water F=Empty Vial E=Encore)			W/B
RELINQUISHED BY: D Cook	DATE/TIME: 8/8/13 15:02	RECEIVED BY: [signature]	
RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	
RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	

NOTES: see page 1

Client / Reporting Information

Company Name: Geoscience Technical Services
Address: PO Box 1036
City: Old Lyme State: CT Zip: 06371
Report To: D. Cook E-mail:
Phone #: 860 391-3365 Fax #:

Project Information

Project Contact: D. Cook PO #:
Project: 734 Ferry Blvd Project #:
Location: Stratford CT Collector(s): D Cook

QA/QC: ☐ Std ☐ Site Specific (MS/MSD) * ☒ RCP Pkg * ☒ DQAW *
Data Report: ☒ Email ☒ PDF ☐ Excel ☐ Other
RSR Reporting Limits (check one): ☐ GA ☒ GB ☐ SWP ☐ Other (specify)

Lab Use:
Evidence of Cooling: Y or N
Temp Upon Receipt 4.1 °C

SHEET 2 OF 2

* Additional charge may apply ** TAT begins when the samples are received at the Lab and all issues are resolved. TAT for samples received after 3 p.m. will start on the next business day. REV. 12/11

REASONABLE CONFIDENCE PROTOCOL
LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

Laboratory Name: Complete Environmental Testing, Inc.

Client: Geoscience Tech. Services, Inc

Project Location: 734 Ferry Blvd, Stratford

Project Number:

Laboratory Sample ID(s): AF40258 – AF400271

Sampling Date(s): 8/8/13

List RCP Methods Used (e.g., 8260, 8270, et cetera):

CET#: 13080231

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CT DEP method-specific Reasonable Confidence Protocol documents?	☒Yes ☐No
1A	Were the method specified preservation and holding time requirements met?	☒Yes ☐No
1B	**VPH and EPH Methods only:** Was the VPH or EPH method conducted without significant modifications (see section 11.3 of respective RCP methods)	☐Yes ☐ No ☒ N/A
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	☒Yes ☐No
3	Were samples received at an appropriate temperature (<6°C)?	☒Yes ☐ No ☐N/A
4	Were all QA/QC performance criteria specified in the CT DEP Reasonable Confidence Protocol documents achieved?	☐Yes ☒No
5	a) Were reporting limits specified or referenced on the chain-of custody? b) Were these reporting limits met?	☒Yes ☐No ☒Yes ☐No
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	☐Yes ☒No
7	Are project-specific matrix spikes and laboratory duplicates included in this data set?	☐Yes ☒No

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A, or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence". This form may not be altered and all questions must be answered.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete.

Authorized Signature: _____ **Position:** Laboratory Director

Printed Name: David Ditta **Date:** 8/16/13

Name of Laboratory: Complete Environmental Testing, Inc.

This certification form is to be used for RCP methods only.

COMPLETE ENVIRONMENTAL TESTING, INC.

80Lupes Drive
Stratford, CT 06615

Tel: (203) 377-9984
Fax: (203) 377-9952
e-mail: cet1@cetlabs.com

QA Report

Project: 734 Ferry Blvd, Stratford
CET#: 13080231

Blank/LCS Report

QA Type: Volatile Organics Date Analyzed: 8/9/2013 Batch ID: 87597

Analyte	Blank	LCS%Rec	LCS CL
Methyl-t-Butyl Ether (MTBE)	ND<5.0	88	70-130
Benzene	ND<1.0	93	70-130
Toluene	ND<1.0	100	70-130
Chlorobenzene	ND<1.0	108	70-130
Ethylbenzene	ND<1.0	109	70-130
+p Xylenes	ND<1.0	106	70-130
Xylene	ND<1.0	107	70-130
Styrene	ND<1.0	109	70-130
Isopropylbenzene	ND<1.0	103	70-130
Bromobenzene	ND<1.0	111	70-130
n-Propylbenzene	ND<1.0	116	70-130
2-Chlorotoluene	ND<1.0	100	70-130
4-Chlorotoluene	ND<1.0	122	70-130
1,3,5-Trimethylbenzene	ND<1.0	108	70-130
tert-Butylbenzene	ND<1.0	107	70-130
1,2,4-Trimethylbenzene	ND<1.0	111	70-130
sec-Butylbenzene	ND<1.0	103	70-130
1,3-Dichlorobenzene	ND<1.0	106	70-130
4-Isopropyltoluene	ND<1.0	103	70-130
1,4-Dichlorobenzene	ND<1.0	104	70-130
1,2-Dichlorobenzene	ND<1.0	105	70-130
n-Butylbenzene	ND<1.0	100	70-130
1,2,4-Trichlorobenzene	ND<1.0	87	70-130
Hexachlorobutadiene	ND<0.45	80	70-130
Naphthalene	ND<1.0	97	70-130
1,2,3-Trichlorobenzene	ND<1.0	89	70-130

All associated samples: AF40258 AF40259 AF40260 AF40261

Project: 734 Ferry Blvd, Stratford
Cet#: 13080231

QA Type: Volatile Org. Dilution Date Analyzed: 8/13/2013 Batch ID: 87666

Analyte	Blank	LCS%Rec	LCS CL
Methyl-t-Butyl Ether (MTBE)	ND<5.0	93	70-130
Benzene	ND<5.0	103	70-130
Toluene	ND<5.0	108	70-130
Chlorobenzene	ND<5.0	108	70-130
Ethylbenzene	ND<5.0	109	70-130
m+p Xylenes	ND<5.0	111	70-130
o-Xylene	ND<5.0	108	70-130
Styrene	ND<5.0	109	70-130
Isopropylbenzene	ND<5.0	101	70-130
Bromobenzene	ND<5.0	110	70-130
n-Propylbenzene	ND<5..0	112	70-130
2-Chlorotoluene	ND<5.0	115	70-130
4-Chlorotoluene	ND<5.0	89	70-130
1,3,5-Trimethylbenzene	ND<5.0	103	70-130
tert-Butylbenzene	ND<5.0	95	70-130
1,2,4-Trimethylbenzene	ND<5.0	104	70-130
sec-Butylbenzene	ND<5.0	92	70-130
1,3-Dichlorobenzene	ND<5.0	94	70-130
4-Isopropyltoluene	ND<5.0	93	70-130
1,4-Dichlorobenzene	ND<5.0	95	70-130
1,2-Dichlorobenzene	ND<5.0	92	70-130
n-Butylbenzene	ND<5.0	93	70-130
1,2,4-Trichlorobenzene	ND<5.0	75	70-130
Hexachlorobutadiene	ND<5.0	67 L	70-130
Naphthalene	ND<5.0	84	70-130
1,2,3-Trichlorobenzene	ND<5.0	77	70-130

associated samples: AF40259 AF40260 AF40261 AF40262 AF40265 AF40268 AF40269 AF40271

QA Type: Volatile Org. Dilution Date Analyzed: 8/14/2013 Batch ID: 87685

Analyte	Blank	LCS%Rec	LCS CL
Methyl-t-Butyl Ether (MTBE)	ND<5.0	105	70-130
Benzene	ND<5.0	106	70-130
Toluene	ND<5.0	107	70-130
Chlorobenzene	ND<5.0	104	70-130
Ethylbenzene	ND<5.0	106	70-130
m+p Xylenes	ND<5.0	107	70-130
o-Xylene	ND<5.0	112	70-130
Styrene	ND<5.0	109	70-130
Isopropylbenzene	ND<5.0	114	70-130
Bromobenzene	ND<5.0	100	70-130
n-Propylbenzene	ND<5..0	115	70-130
2-Chlorotoluene	ND<5.0	95	70-130
4-Chlorotoluene	ND<5.0	117	70-130
1,3,5-Trimethylbenzene	ND<5.0	108	70-130
tert-Butylbenzene	ND<5.0	109	70-130
1,2,4-Trimethylbenzene	ND<5.0	109	70-130
sec-Butylbenzene	ND<5.0	106	70-130
1,3-Dichlorobenzene	ND<5.0	105	70-130

Project: 734 Ferry Blvd, Stratford
Cet#: 13080231

QA Type: Volatile Org. Dilution Date Analyzed: 8/14/2013 Batch ID: 87685

Analyte	Blank	LCS%Rec	LCS CL
4-Isopropyltoluene	ND<5.0	108	70-130
1,4-Dichlorobenzene	ND<5.0	102	70-130
1,2-Dichlorobenzene	ND<5.0	101	70-130
n-Butylbenzene	ND<5.0	109	70-130
1,2,4-Trichlorobenzene	ND<5.0	107	70-130
Hexachlorobutadiene	ND<5.0	86	70-130
Naphthalene	ND<5.0	102	70-130
1,2,3-Trichlorobenzene	ND<5.0	102	70-130

All associated samples: AF40264 AF40270

QA Type: Volatile Organics Date Analyzed: 8/14/2013 Batch ID: 87688

Analyte	Blank	LCS%Rec	LCS CL
Methyl-t-Butyl Ether (MTBE)	ND<5.0	105	70-130
Benzene	ND<1.0	106	70-130
Toluene	ND<1.0	107	70-130
Chlorobenzene	ND<1.0	104	70-130
Ethylbenzene	ND<1.0	106	70-130
m+p Xylenes	ND<1.0	107	70-130
o-Xylene	ND<1.0	112	70-130
Styrene	ND<1.0	109	70-130
Isopropylbenzene	ND<1.0	114	70-130
Bromobenzene	ND<1.0	100	70-130
n-Propylbenzene	ND<1.0	115	70-130
2-Chlorotoluene	ND<1.0	95	70-130
4-Chlorotoluene	ND<1.0	117	70-130
1,3,5-Trimethylbenzene	ND<1.0	108	70-130
t-Butylbenzene	ND<1.0	109	70-130
1,2,4-Trimethylbenzene	ND<1.0	109	70-130
sec-Butylbenzene	ND<1.0	106	70-130
1,3-Dichlorobenzene	ND<1.0	105	70-130
4-Isopropyltoluene	ND<1.0	108	70-130
1,4-Dichlorobenzene	ND<1.0	102	70-130
1,2-Dichlorobenzene	ND<1.0	101	70-130
n-Butylbenzene	ND<1.0	109	70-130
1,2,4-Trichlorobenzene	ND<1.0	107	70-130
Hexachlorobutadiene	ND<0.45	86	70-130
Naphthalene	ND<1.0	102	70-130
1,2,3-Trichlorobenzene	ND<1.0	102	70-130

All associated samples: AF40263 AF40266 AF40267

Initial Cal. Report

Compound	Batch#	%RSD	Limits
Initial Calibration VOC			
1,2,4-Trichlorobenzene	87597	25 H	20
Hexachlorobutadiene	87597	39 H	20
1,2,3-Trichlorobenzene	87597	24 H	20
All associated samples: AF40258 AF40259 AF40260 AF40261			
Initial Calibration VOC			
o-Xylene	87688	21 H	20
Isopropylbenzene	87688	22 H	20
1,3,5-Trimethylbenzene	87688	21 H	20
Naphthalene	87688	24 H	20
All associated samples: AF40263 AF40266 AF40267			

Cont. Cal. Report

Compound	Batch#	Result	Limits	Analysis Date
Volatile Organics Cont Cal				
Hexachlorobutadiene	87666	30 L	35-65	8/13/2013
All associated samples: AF40259 AF40260 AF40261 AF40262 AF40265 AF40268 AF40269 AF40271				

QC Batch Report

Volatile Organics Batch 87597

CET ID	Client Sample ID	Matrix	Collection Date
AF40258	T1-N	Soil	8/8/2013
AF40259	T1-W	Soil	8/8/2013
AF40260	T1-S	Soil	8/8/2013
AF40261	T1-BN	Soil	8/8/2013

Volatile Org. Dilution Batch 87666

CET ID	Client Sample ID	Matrix	Collection Date
AF40259	T1-W	Soil	8/8/2013
AF40260	T1-S	Soil	8/8/2013
AF40261	T1-BN	Soil	8/8/2013
AF40262	T1-BS	Soil	8/8/2013
AF40265	T2-BS	Soil	8/8/2013
AF40268	T3-E	Soil	8/8/2013
AF40269	T3-S	Soil	8/8/2013
AF40271	T3-BS	Soil	8/8/2013

Volatile Org. Dilution Batch 87685

CET ID	Client Sample ID	Matrix	Collection Date
AF40264	T2-BN	Soil	8/8/2013
AF40270	T3-BN	Soil	8/8/2013

Volatile Organics Batch 87688

CET ID	Client Sample ID	Matrix	Collection Date
AF40263	T2-N	Soil	8/8/2013
AF40266	T2-S	Soil	8/8/2013
AF40267	T3-N	Soil	8/8/2013

Narrative

4. Hexachlorobutadiene LCS recovery low (67%) for batch 87666.
   1,2,4-Trichlorobenzene Initial Cal % RSD high(25%) for batch 87597.
   Hexachlorobutadiene Initial Cal % RSD high(39%) for batch 87597.
   1,2,3-Trichlorobenzene Initial Cal % RSD high(24%) for batch 87597.
   o-Xylene Initial Cal % RSD high(21%) for batch 87688.
   Isopropylbenzene Initial Cal % RSD high(22%) for batch 87688.
   1,3,5-Trimethylbenzene Initial Cal % RSD high(21%) for batch 87688.
   Naphthalene Initial Cal % RSD high(24%) for batch 87688.
   Hexachlorobutadiene CC low for batch 87666.

6. The client has requested a subset of the CT 8260 list.

7. Project specific QC was not requested by the client.

COMPLETE ENVIRONMENTAL TESTING, INC.

80 Lupes Drive
Stratford, CT 06615

Tel: (203) 377-9984
Fax: (203) 377-9952
e-mail: cet1@cetlabs.com

Quality Control Definitions and Abbreviations

Internal Std. (IS)	An analyte added to each sample or sample extract. An internal standard is used to monitor retention time, calculate relative response, and quantify analytes of interest.
Surrogate Rec.(Surr Rec)	The % recovery for non-target organic compounds that are spiked into all samples. Used to determine method performance.
Continuing Calibration	An analytical standard analyzed with each set of samples to verify initial calibration of the system.
Batch	Samples that are analyzed together with the same method, sequence and lot of reagents within the same time period. Samples are of the same matrix.
ND	Not detected.
Dilution	Multiplier applied to detection levels (MDL) and/or sample results due to interferences and/or high concentration of target compounds.
Duplicate	Result from the duplicate analysis of a sample.
Samp. Res.	Amount of analyte found in a sample.
Spk. Amt. (Amt)	Amount of analyte added to a sample.
Spk. Res.	Amount of analyte found including amount that was spiked.
Spk. Dup. Res.	Amount of analyte found in duplicate spikes including amount that was spiked.
MS%R	% recovery of spiked amount in sample.
MSD%R	% recovery of spiked duplicate amount in sample.
RPD	Relative percent difference between MS and MSD
Blank	Method blank that has been taken through all steps of the analysis.
LCS % Rec.	Laboratory Control Sample percent recovery. The amount of analyte recovered from a fortified sample.
Control Limits	A range within which specified measurement results must fall to be compliant.
LCS CL	Control limits for Laboratory Control Sample.
MS CL	Control limits for matrix spike and matrix spike dup.
RPD CL	Control limits for RPD.
Cont. Cal. (CC)	Continuing Calibration

Flags:

H-	Recovery is above control limits
L-	Recovery is below control limits
B-	Compound detected in the Blank
P-	RPD of dual column results exceeds 40%
#-	Sample result too high for accurate spike recovery

Connecticut Laboratory Certification PH 0116
Massachusetts Laboratory Certification M-CT903
Rhode Island Certification 199

New York Certification 11982
Florida Laboratory Certification E871064

Appendix D. Lab report on analysis of pump and line soil samples.

COMPLETE ENVIRONMENTAL TESTING, INC.

80 Lupes Drive
Stratford, CT 06615

Tel: (203) 377-9984
Fax: (203) 377-9952
e-mail: cet1@cetlabs.com

Client: Mr. David Cook
Geoscience Tech. Services, Inc
P.O. Box 1036
Old Lyme, CT 06371

Analytical Report

CET # 13080776

Report Date: September 11, 2013
Client Project: 734 Ferry Blvd, Stratford

Connecticut Laboratory Certification PH 0116
Massachusetts Laboratory Certification M-CT903
Rhode Island Certification 199

New York Certification 11982
Florida Laboratory Certification E871064

CET#: 13080776
Project: 734 Ferry Blvd, Stratford

SAMPLE SUMMARY:

This report contains analytical data associated with the following samples only:

CETID	Client Sample ID	Matrix	Collection Date	Collection Time	Receipt Date
AF42079	PE	Soil	8/29/2013	11:15	08/29/2013
AF42080	PW	Soil	8/29/2013	11:25	08/29/2013
AF42081	LE	Soil	8/29/2013	11:10	08/29/2013
AF42082	LW	Soil	8/29/2013	11:20	08/29/2013

Sample temperature upon receipt was 3.5 degrees C

ANALYSIS:

Total Solids [EPA 160.3 mo] Units: percent

Client ID	PE	PW	LE	LW
CET ID	AF42079	AF42080	AF42081	AF42082
Date Analyzed	8/30/2013	8/30/2013	8/30/2013	8/30/2013
Total Solids	96	92	89	89

Volatile Org. Dilution [EPA 8260C] Units: ug/kg (Dry Wt)

Client ID	PE	PW	LE
CET ID	AF42079	AF42080	AF42081
Date Analyzed	9/5/2013	9/9/2013	9/9/2013
Dilution	47.3	463.0	202.4
Methyl-t-Butyl Ether (MTBE)	ND < 250	ND < 2500	ND < 1100
Benzene	ND < 50	ND < 500	ND < 230
Toluene	72	740	250
Chlorobenzene	ND < 50	ND < 500	ND < 230
Ethylbenzene	380	4200	380
m+p Xylenes	1600	24000	1700
o-Xylene	610	8300	400
Styrene	ND < 50	ND < 500	ND < 230
Isopropylbenzene	78	1900	ND < 230
Bromobenzene	ND < 50	ND < 500	ND < 230
n-Propylbenzene	520	12000	600
2-Chlorotoluene	ND < 50	ND < 500	ND < 230
4-Chlorotoluene	ND < 50	ND < 500	ND < 230
1,3,5-Trimethylbenzene	740	32000	5200
tert-Butylbenzene	ND < 50	ND < 500	ND < 230
1,2,4-Trimethylbenzene	3300	110000	14000
sec-Butylbenzene	79	ND < 500	ND < 230
1,3-Dichlorobenzene	ND < 50	ND < 500	ND < 230
4-Isopropyltoluene	ND < 50	1400	270
1,4-Dichlorobenzene	ND < 50	ND < 500	ND < 230
1,2-Dichlorobenzene	ND < 50	ND < 500	ND < 230

CET#: 13080776
Project: 734 Ferry Blvd, Stratford

Volatile Org. Dilution [EPA 8260C] Units: ug/kg (Dry Wt)

Client ID	PE	PW	LE
n-Butylbenzene	ND < 50	ND < 500	ND < 230
1,2,4-Trichlorobenzene	ND < 50	ND < 500	ND < 230
Hexachlorobutadiene	ND < 50	ND < 500	ND < 230
Naphthalene	1300	22000	2100
1,2,3-Trichlorobenzene	ND < 50	ND < 500	ND < 230
1,2 Dichloroethane-d4 (SURR) 70-130	122	107	104
toluene-d8 (SURR) 70-130	107	107	107
4-bromofluorobenzene (SURR) 70-130	92.2	85	84.3

Volatile Organics [EPA 8260C] Units: ug/kg (Dry Wt)

Client ID	LW
CET ID	AF42082
Date Analyzed	9/5/2013
Dilution	1.5
Methyl-t-Butyl Ether (MTBE)	ND < 5.0
Benzene	ND < 5.0
Toluene	ND < 5.0
Chlorobenzene	ND < 5.0
Ethylbenzene	ND < 5.0
m+p Xylenes	6.9
o-Xylene	ND < 5.0
Styrene	ND < 5.0
Isopropylbenzene	ND < 5.0
Bromobenzene	ND < 5.0
n-Propylbenzene	ND < 5.0
2-Chlorotoluene	ND < 5.0
4-Chlorotoluene	ND < 5.0
1,3,5-Trimethylbenzene	ND < 5.0
tert-Butylbenzene	ND < 5.0
1,2,4-Trimethylbenzene	5.9
sec-Butylbenzene	ND < 5.0
1,3-Dichlorobenzene	ND < 5.0
4-Isopropyltoluene	ND < 5.0
1,4-Dichlorobenzene	ND < 5.0
1,2-Dichlorobenzene	ND < 5.0
n-Butylbenzene	ND < 5.0
1,2,4-Trichlorobenzene	ND < 5.0
Hexachlorobutadiene	ND < 5.0
Naphthalene	ND < 5.0
1,2,3-Trichlorobenzene	ND < 5.0
1,2 Dichloroethane-d4 (SURR) 70-130	112
toluene-d8 (SURR) 70-130	102
4-bromofluorobenzene (SURR) 70-130	104

CET#: 13080776
Project: 734 Ferry Blvd, Stratford

Questions related to this report should be directed to David Ditta, Timothy Fusco, or Robert Blake at 203-377-9984.

Sincerely,

David Ditta
Laboratory Director

Report Comments:

1. ND is None Detected at the specified detection limit.
2. All analyses were performed in house unless a Reference Laboratory is listed.
3. Samples will be disposed of 30 days after the report date.
4. Sample Result Flags:
   E - The result is estimated, above the calibration range.
   H - The surrogate recovery is above the control limits.
   L - The surrogate recovery is below the control limits.
   B - The compound was detected in the laboratory blank.
   P - The Relative Percent Difference (RPD) of dual column analyses exceeds 40%.
   D - The RPD between the sample and the sample duplicate is high. Sample homogeneity may be a problem.
5. All results met standard operating procedures unless indicated by a data qualifier next to a sample result, or a narration in the QC report.

CET # 13080776

Volatile Soils Only:

Date and Time in Freezer
Client:
CET:

CHAIN OF CUSTODY RECORD

CET
COMPLETE ENVIRONMENTAL TESTING, INC.

80 Lupes Drive
Stratford, CT 06615
Tel: (203) 377-9984
Fax: (203) 377-9952
e-mail: cet1@cetlabs.com
Bottle Request e-mail: bottleorders@cetlabs.com

Sample ID	Date/Time	Matrix (A=Air, S=Soil, W=Water, DW=Drinking W., C=Cassette, Solid, Wipe, Other (Specify))	Turnaround Time ** (check one): Same Day *	Next Day *	2-3 Days *	Std (5-7 Days)	Organics: 8260 CT List	8260 Aromatics	8260 Halogens	CT ETPH	8270 CT List	8270 PNAs	PCBs	Pesticides	Herbicides	Metals (check all that apply): 13 Priority Poll	8 RCRA	TOTAL	TCLP	SPLP	Field Filtered	Lab To Filter	Additional Analysis	TOTAL # OF CONT.	NOTE #
PE	8/29/13 1115	S				X		X																4	1
PW	1125																								1
LE	1110																								1
LW	1120																								2

PRESERVATIVE (Cl–HCl, N–HNO_3, S–H_2SO_4, Na–NaOH, C=Cool, O–Other)								C																													
CONTAINER TYPE (P–Plastic, G–Glass, V–Vial, O–Other)								V																													
Soil VOCs Only (M=MeOH B=Sodium Bisulfate W=Water F=Empty Vial E=Encore)								M/B																													

RELINQUISHED BY: Dand Cook DATE/TIME 8/29/13 1300 RECEIVED BY: [signature]
RELINQUISHED BY: DATE/TIME RECEIVED BY:
RELINQUISHED BY: DATE/TIME RECEIVED BY:

NOTES:
1. PID 300 - 700 ppm
2. PID 20 ppm

Client / Reporting Information

Company Name: Geoscience Technical Services
Address: PO Box 1036
City: Old Lyme State: CT Zip: 06371
Report To: D. Cook E-mail:
Phone #: 860 391-3365 Fax #:

Project Information

Project Contact: D. Cook PO #:
Project: 734 Ferry Blvd. Project #:
Location: Stratford CT Collector(s): D. Cook
QA/QC: ☐ Std ☐ Site Specific (MS/MSD) * ☒ RCP Pkg * ☒ DQAW *
Data Report: ☒ Email ☒ PDF ☐ Excel ☐ Other
RSR Reporting Limits (check one): ☒ GA ☐ GB ☐ SWP ☐ Other (specify)

Lab Use:
Evidence of Cooling: Y or N
Temp Upon Receipt 3.5 °C
SHEET 1 OF 1

* Additional charge may apply. ** TAT begins when the samples are received at the Lab and all issues are resolved. TAT for samples received after 3 p.m will start on the next business day. REV. 12/11

REASONABLE CONFIDENCE PROTOCOL
LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

Laboratory Name: Complete Environmental Testing, Inc.

Client: Geoscience Tech. Services, Inc

Project Location: 734 Ferry Blvd, Stratford

Project Number:

Laboratory Sample ID(s): AF42079 – AF42082

Sampling Date(s): 8/29/13

List RCP Methods Used (e.g., 8260, 8270, et cetera):

CET#: 13080776

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CT DEP method-specific Reasonable Confidence Protocol documents?	☒Yes ☐No
1A	Were the method specified preservation and holding time requirements met?	☒Yes ☐No
1B	**VPH and EPH Methods only:** Was the VPH or EPH method conducted without significant modifications (see section 11.3 of respective RCP methods)	☐Yes ☐ No ☒ N/A
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	☒Yes ☐No
3	Were samples received at an appropriate temperature (<6°C)?	☒Yes ☐ No ☐N/A
4	Were all QA/QC performance criteria specified in the CT DEP Reasonable Confidence Protocol documents achieved?	☐Yes ☒No
5	a) Were reporting limits specified or referenced on the chain-of custody? b) Were these reporting limits met?	☒Yes ☐No ☒Yes ☐No
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	☐Yes ☒No
7	Are project-specific matrix spikes and laboratory duplicates included in this data set?	☐Yes ☒No

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A, or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence". This form may not be altered and all questions must be answered.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete.

Authorized Signature: _____ **Position:** Laboratory Director

Printed Name: David Ditta **Date:** 9/12/13

Name of Laboratory: Complete Environmental Testing, Inc.

This certification form is to be used for RCP methods only.

COMPLETE ENVIRONMENTAL TESTING, INC.

80Lupes Drive
Stratford, CT 06615

Tel: (203) 377-9984
Fax: (203) 377-9952
e-mail: cet1@cetlabs.com

QA Report

Project: 734 Ferry Blvd, Stratford
CET#: 13080776

Blank/LCS Report

QA Type: Volatile Org. Dilution Date Analyzed: 9/5/2013 Batch ID: 88098

Analyte	Blank	LCS%Rec	LCS CL
Methyl-t-Butyl Ether (MTBE)	ND<5.0	104	70-130
Benzene	ND<5.0	110	70-130
Toluene	ND<5.0	104	70-130
Chlorobenzene	ND<5.0	113	70-130
Ethylbenzene	ND<5.0	109	70-130
m+p Xylenes	ND<5.0	101	70-130
o Xylene	ND<5.0	105	70-130
Styrene	ND<5.0	109	70-130
Isopropylbenzene	ND<5.0	104	70-130
Bromobenzene	ND<5.0	116	70-130
n-Propylbenzene	ND<5..0	110	70-130
2-Chlorotoluene	ND<5.0	114	70-130
4-Chlorotoluene	ND<5.0	111	70-130
1,3,5-Trimethylbenzene	ND<5.0	102	70-130
tert-Butylbenzene	ND<5.0	103	70-130
1,2,4-Trimethylbenzene	ND<5.0	100	70-130
sec-Butylbenzene	ND<5.0	107	70-130
1,3-Dichlorobenzene	ND<5.0	106	70-130
4-Isopropyltoluene	ND<5.0	105	70-130
1,4-Dichlorobenzene	ND<5.0	108	70-130
1,2-Dichlorobenzene	ND<5.0	105	70-130
n-Butylbenzene	ND<5.0	112	70-130
1,2,4-Trichlorobenzene	ND<5.0	92	70-130
Hexachlorobutadiene	ND<5.0	89	70-130
Naphthalene	ND<5.0	90	70-130
1,2,3-Trichlorobenzene	ND<5.0	91	70-130

All associated samples: AF42079

Project: 734 Ferry Blvd, Stratford
Cet#: 13080776

QA Type: Volatile Organics Date Analyzed: 9/5/2013 Batch ID: 88100

Analyte	Blank	LCS%Rec	LCS CL
Methyl-t-Butyl Ether (MTBE)	ND<5.0	100	70-130
Benzene	ND<1.0	91	70-130
Toluene	ND<1.0	95	70-130
Chlorobenzene	ND<1.0	83	70-130
Ethylbenzene	ND<1.0	80	70-130
m+p Xylenes	ND<1.0	87	70-130
o-Xylene	ND<1.0	84	70-130
Styrene	ND<1.0	87	70-130
Isopropylbenzene	ND<1.0	84	70-130
Bromobenzene	ND<1.0	81	70-130
n-Propylbenzene	ND<1.0	79	70-130
2-Chlorotoluene	ND<1.0	95	70-130
4-Chlorotoluene	ND<1.0	62 L	70-130
1,3,5-Trimethylbenzene	ND<1.0	81	70-130
tert-Butylbenzene	ND<1.0	81	70-130
1,2,4-Trimethylbenzene	ND<1.0	82	70-130
sec-Butylbenzene	ND<1.0	81	70-130
1,3-Dichlorobenzene	ND<1.0	87	70-130
4-Isopropyltoluene	ND<1.0	82	70-130
1,4-Dichlorobenzene	ND<1.0	86	70-130
1,2-Dichlorobenzene	ND<1.0	86	70-130
n-Butylbenzene	ND<1.0	81	70-130
1,2,4-Trichlorobenzene	ND<1.0	88	70-130
Hexachlorobutadiene	ND<0.45	83	70-130
Naphthalene	ND<1.0	87	70-130
1,2,3-Trichlorobenzene	ND<1.0	88	70-130

associated samples: AF42082

QA Type: Volatile Org. Dilution Date Analyzed: 9/9/2013 Batch ID: 88142

Analyte	Blank	LCS%Rec	LCS CL
Methyl-t-Butyl Ether (MTBE)	ND<5.0	106	70-130
Benzene	ND<5.0	102	70-130
Toluene	ND<5.0	104	70-130
Chlorobenzene	ND<5.0	104	70-130
Ethylbenzene	ND<5.0	112	70-130
m+p Xylenes	ND<5.0	108	70-130
o-Xylene	ND<5.0	111	70-130
Styrene	ND<5.0	104	70-130
Isopropylbenzene	ND<5.0	110	70-130
Bromobenzene	ND<5.0	123	70-130
n-Propylbenzene	ND<5..0	124	70-130
2-Chlorotoluene	ND<5.0	126	70-130
4-Chlorotoluene	ND<5.0	118	70-130
1,3,5-Trimethylbenzene	ND<5.0	109	70-130
tert-Butylbenzene	ND<5.0	115	70-130
1,2,4-Trimethylbenzene	ND<5.0	102	70-130

Project: 734 Ferry Blvd, Stratford
Cet#: 13080776

QA Type: Volatile Org. Dilution Date Analyzed: 9/9/2013 Batch ID: 88142

Analyte	Blank	LCS%Rec	LCS CL
sec-Butylbenzene	ND<5.0	121	70-130
1,3-Dichlorobenzene	ND<5.0	104	70-130
4-Isopropyltoluene	ND<5.0	117	70-130
1,4-Dichlorobenzene	ND<5.0	103	70-130
1,2-Dichlorobenzene	ND<5.0	100	70-130
n-Butylbenzene	ND<5.0	126	70-130
1,2,4-Trichlorobenzene	ND<5.0	95	70-130
Hexachlorobutadiene	ND<5.0	100	70-130
Naphthalene	ND<5.0	89	70-130
1,2,3-Trichlorobenzene	ND<5.0	89	70-130

All associated samples: AF42080 AF42081

Cont. Cal. Report

Compound	Batch#	Result	Limits	Analysis Date
Volatile Organics Cont Cal				
4-Chlorotoluene	88100	31 L	35-65	9/5/2013
All associated samples: AF42082				

QC Batch Report

Volatile Org. Dilution Batch 88098

CET ID	Client Sample ID	Matrix	Collection Date
AF42079	PE	Soil	8/29/2013

Volatile Organics Batch 88100

CET ID	Client Sample ID	Matrix	Collection Date
AF42082	LW	Soil	8/29/2013

Volatile Org. Dilution Batch 88142

CET ID	Client Sample ID	Matrix	Collection Date
AF42080	PW	Soil	8/29/2013
AF42081	LE	Soil	8/29/2013

Narrative

4. 4-Chlorotoluene LCS recovery low (62%) for batch 88100.
   4-Chlorotoluene CC low for batch 88100.

6. The client has requested a subset of the CT 8260 list.

7. Project specific QC was not requested by the client.

COMPLETE ENVIRONMENTAL TESTING, INC.

80 Lupes Drive
Stratford, CT 06615

Tel: (203) 377-9984
Fax: (203) 377-9952
e-mail: cetl@cetlabs.com

Quality Control Definitions and Abbreviations

Internal Std. (IS)	An analyte added to each sample or sample extract. An internal standard is used to monitor retention time, calculate relative response, and quantify analytes of interest.
Surrogate Rec.(Surr Rec)	The % recovery for non-target organic compounds that are spiked into all samples. Used to determine method performance.
Continuing Calibration	An analytical standard analyzed with each set of samples to verify initial calibration of the system.
Batch	Samples that are analyzed together with the same method, sequence and lot of reagents within the same time period. Samples are of the same matrix.
ND	Not detected.
Dilution	Multiplier applied to detection levels (MDL) and/or sample results due to interferences and/or high concentration of target compounds.
Duplicate	Result from the duplicate analysis of a sample.
Samp. Res.	Amount of analyte found in a sample.
Spk. Amt. (Amt)	Amount of analyte added to a sample.
Spk. Res.	Amount of analyte found including amount that was spiked.
Spk. Dup. Res.	Amount of analyte found in duplicate spikes including amount that was spiked.
MS%R	% recovery of spiked amount in sample.
MSD%R	% recovery of spiked duplicate amount in sample.
RPD	Relative percent difference between MS and MSD
Blank	Method blank that has been taken through all steps of the analysis.
LCS % Rec.	Laboratory Control Sample percent recovery. The amount of analyte recovered from a fortified sample.
Control Limits	A range within which specified measurement results must fall to be compliant.
LCS CL	Control limits for Laboratory Control Sample.
MS CL	Control limits for matrix spike and matrix spike dup.
RPD CL	Control limits for RPD.
Cont. Cal. (CC)	Continuing Calibration

Flags:

H-	Recovery is above control limits
L-	Recovery is below control limits
B-	Compound detected in the Blank
P-	RPD of dual column results exceeds 40%
#-	Sample result too high for accurate spike recovery

Connecticut Laboratory Certification PH 0116
Massachusetts Laboratory Certification M-CT903
Rhode Island Certification 199

New York Certification 11982
Florida Laboratory Certification E871064

Appendix F. Documentation of soil transportation and disposal.

84780 72453

NON-RCRA HAZARDOUS WASTE MANIFEST

MS F 59221

1 GENERATOR NAME AND MAILING ADDRESS
David A [illegible]
734 Ferry Blvd Stratford CT 06614

GENERATOR'S SITE ADDRESS
734 Ferry Blvd
Stratford CT 06614

2 GENERATOR'S PHONE (203) 377 4733

3 TRANSPORTER 1 COMPANY NAME	4 US EPA ID NUMBER	A. TRANSPORTER 1'S PHONE	TRANSPORTER'S PLATE NUMBER
~~S-S~~ SA&P Oil Management	NOT APPLICABLE	(860) 460-0500	47629-A
5 TRANSPORTER 2 COMPANY NAME	6 US EPA ID NUMBER	B. TRANSPORTER'S PHONE	TRANSPORTER'S PLATE NUMBER
	NOT APPLICABLE	( )	

7 DESIGNATED FACILITY NAME AND SITE ADDRESS	8 MAILING ADDRESS	C. FACILITY'S PHONE
PHOENIX SOIL LLC 130 FREIGHT STREET WATERBURY, CT 06702	PHOENIX SOIL LLC PO BOX 1750 WATERBURY, CT 06721-1750	(203)-759-0053

9 US DOT DESCRIPTION (INCLUDING PROPER SHIPPING NAME, HAZARD CLASS, AND ID NUMBER)	10 CONTAINERS NO.	TYPE	11 TOTAL QUANTITY	12 UNIT WT/VOL
a. CONNECTICUT REGULATED WASTE SOLID, NONE, NONE	001	DT	00020	T
b.				
c.				

D. ADDITIONAL DESCRIPTIONS FOR MATERIALS LISTED ABOVE	E. HANDLING CODES FOR WASTES LISTED ABOVE: INTERIM	FINAL
SOIL CONTAMINATED WITH PETROLEUM HYDROCARBONS	SO2	T57

13 SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION

14 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable national government regulations, and all applicable State of Connecticut laws and regulations. I certify that this material neither contains polychlorinated biphenyls (PCBs) in concentrations greater than 25 ppm, nor has been mixed in anyway with PCBs in concentrations greater than or equal to 50 ppm. I certify that the material listed above contained no free liquids at the time of loading.

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
David A [illegible]	[signature]	8	20	13

15 TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
CHARLES BAILEY	Charles Bailey	8	20	13

16 TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR

17 DISCREPANCY INDICATION SPACE

11(a) CORRECTED WEIGHT AS SCALED 26.53 TONS

FACILITY OWNER OR OPERATOR: CERTIFICATION OF RECEIPT OF WASTE MATERIALS COVERED BY THIS MANIFEST EXCEPT AS NOTED IN ITEM 17

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
S Herman	[signature]	8	20	13

Phoenix Soil LLC * P.O.Box 1750 * Waterbury CT 06721

REGISTRATION NUMBER 05862

Date
8/20/2013

VEHICLE INFORMATION

TicketNumber	Plate Number
119158	47629A

Manifest	Stream	Site Name:
PSF59221	22453	CROSBY, DAVID A

WEIGHT INFORMATION

Product ID
2

GrossWeight	Tare Weight	NetWeight
84780	31720	53060

Net Weight Tons
26.53

22453

NON-RCRA HAZARDOUS WASTE MANIFEST

PS F 59223

1 GENERATOR'S NAME AND MAILING ADDRESS David [illegible]		GENERATOR'S SITE ADDRESS [illegible]	
2 GENERATOR'S PHONE ( )			
3 TRANSPORTER 1 COMPANY NAME [illegible]	4 US EPA ID NUMBER NOT APPLICABLE	A. TRANSPORTER 1'S PHONE (860) 460 [illegible]	TRANSPORTER'S PLATE NUMBER [illegible]
5 TRANSPORTER 2 COMPANY NAME	6 US EPA ID NUMBER NOT APPLICABLE	B. TRANSPORTER 2'S PHONE ( )	TRANSPORTER'S PLATE NUMBER
7 DESIGNATED FACILITY NAME AND SITE ADDRESS PHOENIX SOIL LLC 130 FREIGHT STREET WATERBURY, CT 06702	8 MAILING ADDRESS PHOENIX SOIL LLC PO BOX 1750 WATERBURY, CT 06721-1750	C. FACILITY'S PHONE (203)-759-0053	

9 US DOT DESCRIPTION (INCLUDING PROPER SHIPPING NAME, HAZARD CLASS, AND ID NUMBER)	10 CONTAINERS NO	TYPE	11 TOTAL QUANTITY	12 UNIT WT/VOL
a. CONNECTICUT REGULATED WASTE SOLID, NONE, NONE	001	DT	00020	T
b.				
c.				

D. ADDITIONAL DESCRIPTIONS FOR MATERIALS LISTED ABOVE	E. HANDLING CODES FOR WASTES LISTED ABOVE	
	INTERIM	FINAL
SOIL CONTAMINATED WITH PETROLEUM HYDROCARBONS	SO2	T57

13 SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION

14 GENERATOR'S CERTIFICATION I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable national government regulations, and all applicable State of Connecticut laws and regulations. I certify that this material neither contains polychlorinated biphenyls (PCB's) in concentrations greater than 25 ppm, nor has been mixed in anyway with PCB's in concentrations greater than or equal to 50 ppm. I certify that the material listed above contained no free liquids at the time of loading

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
David A. [illegible]	[signature]	8	20	13

15 TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
Troy W. Iaffe	[signature]	8	20	13

16 TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR

17 DISCREPANCY INDICATION SPACE

11(a) CORRECTED WEIGHT AS SCALED 10.0 TON'S

18 FACILITY OWNER OR OPERATOR CERTIFICATION OF RECEIPT OF WASTE MATERIALS COVERED BY THIS MANIFEST EXCEPT AS NOTED IN ITEM 17

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
Sherman	[signature]	8	20	13

COPY 4 - TRANSPORTER

Phoenix Soil LLC * P.O.Box 1750 * Waterbury CT 06721

REGISTRATION NUMBER 05862

Date
8/20/2013

VEHICLE INFORMATION

TicketNumber	Plate Number
119157	53750A

Manifest	Stream	Site Name:
PSF59223	22453	CROSBY, DAVID A

WEIGHT INFORMATION

Product ID
2

GrossWeight	Tare Weight	NetWeight
81380	33380	48000

Net Weight Tons
24

NON-RCRA HAZARDOUS WASTE MANIFEST

PS F 59135

1 GENERATOR'S NAME AND MAILING ADDRESS Dave A Cless 734 Ferry St Stratford CT 06614		GENERATOR'S SITE ADDRESS 734 Ferry St Stratford CT 06614	
2 GENERATOR'S PHONE: (203) 377-[illegible]			
3 TRANSPORTER 1 COMPANY NAME AP Management	4 US EPA ID NUMBER NOT APPLICABLE	A TRANSPORTER 1'S PHONE (860) 410 5800	TRANSPORTER'S PLATE NUMBER 53750 AO
5 TRANSPORTER 2 COMPANY NAME	6 US EPA ID NUMBER NOT APPLICABLE	B TRANSPORTER 2'S PHONE ( )	TRANSPORTER'S PLATE NUMBER
7 DESIGNATED FACILITY NAME AND SITE ADDRESS PHOENIX SOIL LLC 130 FREIGHT STREET WATERBURY, CT 06702	8 MAILING ADDRESS PHOENIX SOIL LLC PO BOX 1750 WATERBURY, CT 06721-1750	C FACILITY'S PHONE (203)-759-0053	

9 US DOT DESCRIPTION (INCLUDING PROPER SHIPPING NAME, HAZARD CLASS, AND ID NUMBER)	10 CONTAINERS NO.	TYPE	11 TOTAL QUANTITY	12 UNIT WT/VOL
a. CONNECTICUT REGULATED WASTE SOLID, NONE, NONE	001	DT	00020	T
b.				
c.				

D ADDITIONAL DESCRIPTIONS FOR MATERIALS LISTED ABOVE	E. HANDLING CODES FOR WASTES LISTED ABOVE	
	INTERIM	FINAL
SOIL CONTAMINATED WITH PETROLEUM HYDROCARBONS	SO2	T57

13 SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION

14 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable national government regulations, and all applicable State of Connecticut laws and regulations. I certify that this material neither contains polychlorinated biphenyls (PCB's) in concentrations greater than 25 ppm, nor has been mixed in anyway with PCB's in concentrations greater than or equal to 50 ppm. I certify that the material listed above contained no free liquids at the time of loading.

	PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
14	Dave A Cless		8	26	13
15	TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS Troy Wendell		8	20	2013
16	TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS				
17	DISCREPANCY INDICATION SPACE 11(a) CORRECTED WEIGHT AS SCALED 7.53 TONS				
18	FACILITY OWNER OR OPERATOR: CERTIFICATION OF RECEIPT OF WASTE MATERIALS COVERED BY THIS MANIFEST EXCEPT AS NOTED IN ITEM 17				
	S Flavian		8	26	13

Phoenix Soil LLC * P.O.Box 1750 * Waterbury CT 06721

REGISTRATION NUMBER 05862

Date
8/20/2013

VEHICLE INFORMATION

TicketNumber	Plate Number
119162	53750A

Manifest	Stream	Site Name:
PSF59136	22453	CROSBY, DAVID A

WEIGHT INFORMATION

Product ID
2

GrossWeight	Tare Weight	NetWeight
78440	33380	45060

Net Weight Tons
22.53

84340

NON-RCRA HAZARDOUS WASTE MANIFEST

PS F 59136

DAVID (Tosty)

1 GENERATOR'S NAME AND MAILING ADDRESS Ferry Dr Stamford 754 Ferry Dr Stamford CT 06904	GENERATOR'S SITE ADDRESS 754 Ferry Dr Stamford CT 06904
2 GENERATOR'S PHONE ( )	

3 TRANSPORTER 1 COMPANY NAME	4 US EPA ID NUMBER	A TRANSPORTER 1'S PHONE	TRANSPORTER'S PLATE NUMBER
A&J Management	NOT APPLICABLE	(860) 761-0800	47677-A
5 TRANSPORTER 2 COMPANY NAME	**6 US EPA ID NUMBER**	**B TRANSPORTER 2'S PHONE**	**TRANSPORTER'S PLATE NUMBER**
Service Express	NOT APPLICABLE	(860)	

7 DESIGNATED FACILITY NAME AND SITE ADDRESS	8 MAILING ADDRESS	C FACILITY'S PHONE
PHOENIX SOIL LLC 130 FREIGHT STREET WATERBURY, CT 06702	PHOENIX SOIL LLC PO BOX 1750 WATERBURY, CT 06721-1750	(203)-759-0053

9 US DOT DESCRIPTION (INCLUDING PROPER SHIPPING NAME, HAZARD CLASS, AND ID NUMBER)	10 CONTAINERS NO	TYPE	11 TOTAL QUANTITY	12 UNIT WT/VOL
a. CONNECTICUT REGULATED WASTE SOLID, NONE, NONE	001	DT	00020	T
b.				
c.				

D ADDITIONAL DESCRIPTIONS FOR MATERIALS LISTED ABOVE	E HANDLING CODES FOR WASTES LISTED ABOVE	
	INTERIM	FINAL
SOIL CONTAMINATED WITH PETROLEUM HYDROCARBONS	SO2	T57

13 SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION

14 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable national government regulations, and all applicable State of Connecticut laws and regulations. I certify that this material neither contains polychlorinated biphenyls (PCB's) in concentrations greater than 25 ppm, nor has been mixed in anyway with PCB's in concentrations greater than or equal to 50 ppm. I certify that the material listed above contained no free liquids at the time of loading.

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
[illegible]	[signature]	8	20	13

15 TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
CHARLES BAILEY	Chas F Bailey	8	20	13

16 TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR

17 DISCREPANCY INDICATION SPACE

11(a) CORRECTED WEIGHT AS SCALED 26.31 TON'S

18 FACILITY OWNER OR OPERATOR: CERTIFICATION OF RECEIPT OF WASTE MATERIALS COVERED BY THIS MANIFEST EXCEPT AS NOTED IN ITEM 17

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
S Harman	S Harman	8	20	13

Phoenix Soil LLC * P.O.Box 1750 * Waterbury CT 06721

REGISTRATION NUMBER 05862

Date
8/20/2013

VEHICLE INFORMATION

TicketNumber	Plate Number
119164	47629A

Manifest	Stream	Site Name:
PSF59136	22453	CROSBY, DAVID A

WEIGHT INFORMATION

Product ID
2

GrossWeight	Tare Weight	NetWeight
84340	31720	52620

Net Weight Tons
26.31

20420 11415

NON-RCRA HAZARDOUS WASTE MANIFEST

PS F 59246

1 GENERATOR'S NAME AND MAILING ADDRESS
UAW 15 [illegible]
734 Fairfield Blvd Stamford CT 06611

GENERATOR SITE ADDRESS
734 Fairfield Blvd
Stamford CT

2 GENERATOR'S PHONE (203) 977-1713

3 TRANSPORTER 1 COMPANY NAME
Jamark

4 US EPA ID NUMBER
NOT APPLICABLE

A. TRANSPORTER 1'S PHONE
( )

TRANSPORTER'S PLATE NUMBER
K17760

5 TRANSPORTER 2 COMPANY NAME

6 US EPA ID NUMBER
NOT APPLICABLE

B. TRANSPORTER 2'S PHONE
( )

TRANSPORTER'S PLATE NUMBER

7 DESIGNATED FACILITY NAME AND SITE ADDRESS
PHOENIX SOIL LLC
130 FREIGHT STREET
WATERBURY, CT 06702

8 MAILING ADDRESS
PHOENIX SOIL LLC
PO BOX 1750
WATERBURY, CT 06721-1750

C. FACILITY'S PHONE
(203)-759-0053

9 US DOT DESCRIPTION (INCLUDING PROPER SHIPPING NAME, HAZARD CLASS, AND ID NUMBER)

	10 CONTAINERS NO.	TYPE	11 TOTAL QUANTITY	12 UNIT WT/VOL
a. CONNECTICUT REGULATED WASTE SOLID, NONE, NONE	001	DT	00020	T
b.				
c.				

D ADDITIONAL DESCRIPTIONS FOR MATERIALS LISTED ABOVE
SOIL CONTAMINATED WITH PETROLEUM HYDROCARBONS

E. HANDLING CODES FOR WASTES LISTED ABOVE
INTERIM: SO2
FINAL: T57

11 SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION

14 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable national government regulations, and all applicable State of Connecticut laws and regulations. I certify that this material neither contains polychlorinated biphenyls (PCB's) in concentrations greater than 25 ppm, nor has been mixed in anyway with PCB's in concentrations greater than or equal to 50 ppm. I certify that the material listed above contained no free liquids at the time of loading.

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
David A Crosby	[signature]	8	26	13

15 TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
[illegible]	[signature]	8	26	13

16 TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR

17 DISCREPANCY INDICATION SPACE

11(a) CORRECTED WEIGHT AS SCALED 26.03 TON'S

18 FACILITY OWNER OR OPERATOR CERTIFICATION OF RECEIPT OF WASTE MATERIALS COVERED BY THIS MANIFEST EXCEPT AS NOTED IN 17.

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
S Hawkins	[signature]	8	26	13

Dondi

Phoenix Soil LLC * P.O.Box 1750 * Waterbury CT 06721

REGISTRATION NUMBER 05862

Date
8/20/2013

VEHICLE INFORMATION

TicketNumber	Plate Number
119176	K97768

Manifest	Stream	Site Name:
PSF59246	22453	CROSBY, DAVID A

WEIGHT INFORMATION

Product ID
2

GrossWeight	Tare Weight	NetWeight
80420	28360	52060

Net Weight Tons
26.03

(3) · 7 14(10 22453

NON-RCRA HAZARDOUS WASTE MANIFEST

PS F 59241

1 GENERATOR NAME AND MAILING ADDRESS
[illegible]

GENERATOR'S SITE ADDRESS
[illegible]

2 GENERATOR'S PHONE ([illegible])

3 TRANSPORTER 1 COMPANY NAME	4 US EPA ID NUMBER	A TRANSPORTER 1'S PHONE	TRANSPORTER'S PLATE NUMBER
JAMARK Construction	NOT APPLICABLE	(203) 206 6016	5C518A

5 TRANSPORTER 2 COMPANY NAME	6 US EPA ID NUMBER	B TRANSPORTER 2'S PHONE	TRANSPORTER'S PLATE NUMBER
	NOT APPLICABLE	( )	

7 DESIGNATED FACILITY NAME AND SITE ADDRESS	8 MAILING ADDRESS	C FACILITY'S PHONE
PHOENIX SOIL LLC 130 FREIGHT STREET WATERBURY, CT 06702	PHOENIX SOIL LLC PO BOX 1750 WATERBURY, CT 06721-1750	(203)-759-0053

9 US DOT DESCRIPTION (INCLUDING PROPER SHIPPING NAME, HAZARD CLASS, AND ID NUMBER)	10 CONTAINERS NO.	TYPE	11 TOTAL QUANTITY	12 UNIT WT/VOL
a. CONNECTICUT REGULATED WASTE SOLID, NONE, NONE	001	DT	00020	T
b.				
c.				

D ADDITIONAL DESCRIPTIONS FOR MATERIALS LISTED ABOVE	E HANDLING CODES FOR WASTES LISTED ABOVE	
	INTERIM	FINAL
SOIL CONTAMINATED WITH PETROLEUM HYDROCARBONS	SO2	T57

13 SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION

Truck #085

14 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable national government regulations, and all applicable State of Connecticut laws and regulations. I certify that this material neither contains polychlorinated biphenyls (PCBs) in concentrations greater than 25 ppm, nor has been mixed in anyway with PCBs in concentrations greater than or equal to 50 ppm. I certify that the material listed above contained no free liquids at the time of loading.

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
[illegible]	[illegible]	5	20	13

15 TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
Mike Russo JAMARK	[illegible] Russo	5	20	13

16 TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR

17 DISCREPANCY INDICATION SPACE

11(a) CORRECTED WEIGHT AS SCALED 25.23 TON'S

18 FACILITY OWNER OR OPERATOR: CERTIFICATION OF RECEIPT OF WASTE MATERIALS COVERED BY THIS MANIFEST EXCEPT AS NOTED IN ITEM 17

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
[illegible]	[illegible]	5	20	13

Dant:

Phoenix Soil LLC * P.O.Box 1750 * Waterbury CT 06721

REGISTRATION NUMBER 05862

Date
8/20/2013

VEHICLE INFORMATION

TicketNumber	Plate Number
119175	50518A

Manifest	Stream	Site Name:
PSF59241	22453	CROSBY, DAVID A

WEIGHT INFORMATION

Product ID
2

GrossWeight	Tare Weight	NetWeight
77660	27200	50460

Net Weight Tons
25.23

D216U

NON-RCRA HAZARDOUS WASTE MANIFEST

PS F 59225

1 GENERATOR'S NAME AND MAILING ADDRESS David A Crosby 73 Long Dale St Hartford CT 06114	GENERATOR'S SITE ADDRESS 73 Long Dale Hartford CT 06114
2 GENERATOR'S PHONE (203) 377 4 18	

3 TRANSPORTER 1 COMPANY NAME	4 US EPA ID NUMBER	A TRANSPORTER 1'S PHONE	TRANSPORTER'S PLATE NUMBER
J G Parker	NOT APPLICABLE	( )	K97768
5 TRANSPORTER 2 COMPANY NAME	6 US EPA ID NUMBER	B TRANSPORTER 2'S PHONE	TRANSPORTER'S PLATE NUMBER
	NOT APPLICABLE	( )	

7 DESIGNATED FACILITY NAME AND SITE ADDRESS	8 MAILING ADDRESS	C FACILITY'S PHONE
PHOENIX SOIL LLC 130 FREIGHT STREET WATERBURY, CT 06702	PHOENIX SOIL LLC PO BOX 1750 WATERBURY, CT 06721-1750	(203)-759-0053

9 US DOT DESCRIPTION (INCLUDING PROPER SHIPPING NAME, HAZARD CLASS, AND ID NUMBER)	10 CONTAINERS NO.	TYPE	11 TOTAL QUANTITY	12 UNIT WT/VOL
a. CONNECTICUT REGULATED WASTE SOLID, NONE, NONE	001	DT	00020	T
b.				
c.				

D. ADDITIONAL DESCRIPTIONS FOR MATERIALS LISTED ABOVE	E. HANDLING CODES FOR WASTES LISTED ABOVE	
	INTERIM	FINAL
SOIL CONTAMINATED WITH PETROLEUM HYDROCARBONS	SO2	T57

13 SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION

T: 006

14 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable national government regulations, and all applicable State of Connecticut laws and regulations. I certify that this material neither contains polychlorinated biphenyls (PCB's) in concentrations greater than 25 ppm, nor has been mixed in anyway with PCB's in concentrations greater than or equal to 50 ppm. I certify that the material listed above contained no free liquids at the time of loading.

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
David A Crosby		8	2	15

15 TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
William J Parker			30	1

16 TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR

17 DISCREPANCY INDICATION SPACE

11(a) CORRECTED WEIGHT AS SCALED 26.90 TON'S

18 FACILITY OWNER OR OPERATOR CERTIFICATION OF RECEIPT OF WASTE MATERIALS COVERED BY THIS MANIFEST EXCEPT AS NOTED IN ITEM 13

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
S Harman		8	19	13

Dmdi

Phoenix Soil LLC * P.O.Box 1750 * Waterbury CT 06721

REGISTRATION NUMBER 05862

Date
8/20/2013

VEHICLE INFORMATION

TicketNumber	Plate Number
119161	K97768

Manifest	Stream	Site Name:
PSF59225	22453	CROSBY, DAVID A

WEIGHT INFORMATION

Product ID
2

GrossWeight	Tare Weight	NetWeight
82160	28360	53800

Net Weight Tons
26.9

(2)

NON-RCRA HAZARDOUS WASTE MANIFEST

PS F 59224

1 GENERATOR'S NAME AND MAILING ADDRESS David [illegible] Co LLC 73[illegible] Terry Bend St Hart Co 01114		GENERATOR'S SITE ADDRESS [illegible] St [illegible] Co 01114	
2 GENERATOR'S PHONE (413) 377			
3 TRANSPORTER 1 COMPANY NAME JMARK	4 US EPA ID NUMBER NOT APPLICABLE	A TRANSPORTER 1'S PHONE (203)266-6016	TRANSPORTER'S PLATE NUMBER 05184
5 TRANSPORTER 2 COMPANY NAME	6 US EPA ID NUMBER NOT APPLICABLE	B TRANSPORTER 2'S PHONE ( )	TRANSPORTER'S PLATE NUMBER
7 DESIGNATED FACILITY NAME AND SITE ADDRESS PHOENIX SOIL LLC 130 FREIGHT STREET WATERBURY, CT 06702	8 MAILING ADDRESS PHOENIX SOIL LLC PO BOX 1750 WATERBURY, CT 06721-1750	C FACILITY'S PHONE (203)-759-0053	

9 US DOT DESCRIPTION (INCLUDING PROPER SHIPPING NAME, HAZARD CLASS, AND ID NUMBER)	10 CONTAINERS NO	TYPE	11 TOTAL QUANTITY	12 UNIT WT/VOL
a. CONNECTICUT REGULATED WASTE SOLID, NONE, NONE X	001	DT	00020	T
b.				
c.				

D ADDITIONAL DESCRIPTIONS FOR MATERIALS LISTED ABOVE	E HANDLING CODES FOR WASTES LISTED ABOVE	
SOIL CONTAMINATED WITH PETROLEUM HYDROCARBONS	INTERIM SO2	FINAL T57

13 SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION

Truck #085

14 GENERATOR'S CERTIFICATION I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable national government regulations, and all applicable State of Connecticut laws and regulations. I certify that this material neither contains polychlorinated biphenyls (PCB's) in concentrations greater than 25 ppm, nor has been mixed in anyway with PCB's in concentrations greater than or equal to 50 ppm. I certify that the material listed above contained no free liquids at the time of loading.

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
David A Keating	[signature]	8	20	13

15 TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
Mike Russo JAMARK Cont.	Mike Russo	8	20	13

16 TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR

17 DISCREPANCY INDICATION SPACE

11(a) CORRECTED WEIGHT AS SCALED 26.33 TONS

FACILITY OWNER OR OPERATOR CERTIFICATION OF RECEIPT OF WASTE MATERIALS COVERED BY THIS MANIFEST EXCEPT AS NOTED IN ITEM 17

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
J Hayden	J Hayden	8	20	13

Dondi

Phoenix Soil LLC * P.O.Box 1750 * Waterbury CT 06721

REGISTRATION NUMBER 05862

Date
8/20/2013

VEHICLE INFORMATION

TicketNumber	Plate Number
119160	50518A

Manifest	Stream	Site Name:
PSF59224	22453	CROSBY, DAVID A

WEIGHT INFORMATION

Product ID
2

GrossWeight	Tare Weight	NetWeight
79800	27200	52600

Net Weight Tons
26.3

(1) 0 1100 0 2453

NON-RCRA HAZARDOUS WASTE MANIFEST

PS F 59220

1 GENERATOR'S NAME AND MAILING ADDRESS 734 Ferry Blvd Stratford CT		GENERATOR'S SITE ADDRESS 734 Ferry BLVD Stratford CT 06614	
2 GENERATOR'S PHONE (203) 377 4[illegible]			
3 TRANSPORTER 1 COMPANY NAME	4 US EPA ID NUMBER NOT APPLICABLE	A. TRANSPORTER 1'S PHONE (203) 706-6016	TRANSPORTER'S PLATE NUMBER 5C518-A
5 TRANSPORTER 2 COMPANY NAME	6 US EPA ID NUMBER NOT APPLICABLE	B. TRANSPORTER 2'S PHONE ( )	TRANSPORTER'S PLATE NUMBER
7 DESIGNATED FACILITY NAME AND SITE ADDRESS PHOENIX SOIL LLC 130 FREIGHT STREET WATERBURY, CT 06702	8 MAILING ADDRESS PHOENIX SOIL LLC PO BOX 1750 WATERBURY, CT 06721-1750	C. FACILITY'S PHONE (203)-759-0053	

9 US DOT DESCRIPTION (INCLUDING PROPER SHIPPING NAME, HAZARD CLASS, AND ID NUMBER)	10. CONTAINERS NO.	TYPE	11 TOTAL QUANTITY	12 UNIT WT/VOL
a. CONNECTICUT REGULATED WASTE SOLID, NONE, NONE	001	DT	00020	T
b. (2)				
c.				

D ADDITIONAL DESCRIPTIONS FOR MATERIALS LISTED ABOVE	E. HANDLING CODES FOR WASTES LISTED ABOVE	
SOIL CONTAMINATED WITH PETROLEUM HYDROCARBONS	INTERIM SO2	FINAL T57

13 SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION

Truck #C85

14 GENERATOR'S CERTIFICATION I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable national government regulations, and all applicable State of Connecticut laws and regulations. I certify that this material neither contains polychlorinated biphenyls (PCB's) in concentrations greater than 25 ppm, nor has been mixed in anyway with PCB's in concentrations greater than or equal to 50 ppm. I certify that the material listed above contained no free liquids at the time of loading.

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
D. J. A Crosby	[signature]	8	20	13

15 TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
Mike Russo JAMARK Const.	Mike Russo	8	20	13

16 TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR

17 DISCREPANCY INDICATION SPACE

11(a) CORRECTED WEIGHT AS SCALED 26.99 TONS

18 FACILITY OWNER OR OPERATOR CERTIFICATION OF RECEIPT OF WASTE MATERIALS COVERED BY THIS MANIFEST EXCEPT AS NOTED IN ITEM 17

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
Harman	[signature]	8	20	13

Dondi

COPY 4: TRANSPORTER

Phoenix Soil LLC * P.O.Box 1750 * Waterbury CT 06721

REGISTRATION NUMBER 05862

Date
8/20/2013

VEHICLE INFORMATION

TicketNumber	Plate Number
119155	50518A

Manifest	Stream	Site Name:
PSF59220	22453	CROSBY, DAVID A

WEIGHT INFORMATION

Product ID
2

GrossWeight	Tare Weight	NetWeight
81180	27200	53980

Net Weight Tons
26.99

NON-RCRA HAZARDOUS
WASTE MANIFEST

59219

GENERATOR'S SITE ADDRESS

	NOT APPLICABLE	A. TRANSPORTER 1'S PHONE ( )	TRANSPORTER'S PLATE NUMBER
	NOT APPLICABLE	B. TRANSPORTER 2'S PHONE ( )	TRANSPORTER'S PLATE NUMBER
PHOENIX SOIL LLC 130 FREIGHT STREET WATERBURY, CT 06702	PHOENIX SOIL LLC PO BOX 1750 WATERBURY, CT 06721-1750	C. FACILITY'S PHONE (203)-759-0053	

	NO	TYPE	TOTAL QUANTITY	UNIT WT/VOL
a. CONNECTICUT REGULATED WASTE SOLID, NONE, NONE	001	DT	00020	T
b.				
c.				

D. ADDITIONAL DESCRIPTIONS FOR MATERIALS LISTED ABOVE

SOIL CONTAMINATED WITH PETROLEUM HYDROCARBONS

E. HANDLING CODES FOR WASTES LISTED ABOVE

INTERIM: SO2 FINAL: T57

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR

11(a) CORRECTED WEIGHT AS SCALED ___ TONS

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR

Dondi

Phoenix Soil LLC * P.O.Box 1750 * Waterbury CT 06721

REGISTRATION NUMBER 05862

Date
8/20/2013

VEHICLE INFORMATION

TicketNumber	Plate Number
119156	K97768

Manifest	Stream	Site Name:
PSF59219	22453	CROSBY, DAVID A

WEIGHT INFORMATION

Product ID
2

GrossWeight	Tare Weight	NetWeight
80440	28360	52080

Net Weight Tons
26.04

NON-RCRA HAZARDOUS WASTE MANIFEST

PST 59217

1 GENERATOR'S NAME AND MAILING ADDRESS
DASTA 734 Ferry Blvd Stratford CT

GENERATOR'S SITE ADDRESS
734 Ferry Blvd Stratford CT 06614

2 GENERATOR'S PHONE ( )

3 TRANSPORTER 1 COMPANY NAME: Julian Development
4 US EPA ID NUMBER: NOT APPLICABLE
A. TRANSPORTER 1'S PHONE: ( )
TRANSPORTER'S PLATE NUMBER: 93880 A CT

5 TRANSPORTER 2 COMPANY NAME:
6 US EPA ID NUMBER: NOT APPLICABLE
B. TRANSPORTER 2'S PHONE: ( )
TRANSPORTER'S PLATE NUMBER:

7 DESIGNATED FACILITY NAME AND SITE ADDRESS
PHOENIX SOIL LLC
130 FREIGHT STREET
WATERBURY, CT 06702

8 MAILING ADDRESS
PHOENIX SOIL LLC
PO BOX 1750
WATERBURY, CT 06721-1750

C. FACILITY'S PHONE
(203)-759-0053

9a. US DOT DESCRIPTION (INCLUDING PROPER SHIPPING NAME, HAZARD CLASS, AND ID NUMBER)	10. CONTAINERS NO.	TYPE	11. TOTAL QUANTITY	12. UNIT WT/VOL
a. CONNECTICUT REGULATED WASTE SOLID, NONE, NONE	001	DT	00020	T
b.				
c.				

D. ADDITIONAL DESCRIPTIONS FOR MATERIALS LISTED ABOVE
SOIL CONTAMINATED WITH PETROLEUM HYDROCARBONS

E. HANDLING CODES FOR WASTES LISTED ABOVE
INTERIM: SO2
FINAL: T57

13 SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION

14 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable national government regulations, and all applicable State of Connecticut laws and regulations. I certify that this material neither contains polychlorinated biphenyls (PCB's) in concentrations greater than 25 ppm, nor has been mixed in anyway with PCB's in concentrations greater than or equal to 50 ppm. I certify that the material listed above contained no free liquids at the time of loading.

PRINTED/TYPED NAME: Paul A Cash
SIGNATURE:
MONTH 8 DAY 17 YEAR 13

15 TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS
PRINTED/TYPED NAME: Paul Lafond
SIGNATURE:
MONTH DAY YEAR

16 TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS
PRINTED/TYPED NAME
SIGNATURE
MONTH DAY YEAR

17 DISCREPANCY INDICATION SPACE
11(a) CORRECTED WEIGHT AS SCALED 26.33 TON'S

FACILITY OWNER OR OPERATOR CERTIFICATION OF RECEIPT OF WASTE MATERIALS COVERED BY THIS MANIFEST EXCEPT AS NOTED IN ITEM 17
PRINTED/TYPED NAME: S Harvelin
SIGNATURE: S Harvelin
MONTH 8 DAY 17 YEAR 13

Julian

Phoenix Soil LLC * P.O.Box 1750 * Waterbury CT 06721

REGISTRATION NUMBER 05862

Date
8/19/2013

VEHICLE INFORMATION

TicketNumber	Plate Number
119149	43880A

Manifest	Stream	Site Name:
PSF59217	22453	CROSBY, DAVID A

WEIGHT INFORMATION

Product ID
2

GrossWeight	Tare Weight	NetWeight
81720	29060	52660

Net Weight Tons
26.33

NON-RCRA HAZARDOUS WASTE MANIFEST

PS F 59218

1 GENERATOR'S NAME AND MAILING ADDRESS [illegible] 734 Ferry Blvd Stratford CT	GENERATOR'S SITE ADDRESS 734 Ferry Blvd Stratford CT 06614
2 GENERATOR'S PHONE: (203) 377.4773	

3 TRANSPORTER 1 COMPANY NAME	4 US EPA ID NUMBER	A. TRANSPORTER 1'S PHONE	TRANSPORTER'S PLATE NUMBER
G&L Trucking	NOT APPLICABLE	(860) 334-7540	307F5A CT
5 TRANSPORTER 2 COMPANY NAME	6 US EPA ID NUMBER	B. TRANSPORTER 2'S PHONE	TRANSPORTER'S PLATE NUMBER
	NOT APPLICABLE	( )	

7 DESIGNATED FACILITY NAME AND SITE ADDRESS	8 MAILING ADDRESS	C. FACILITY'S PHONE
PHOENIX SOIL LLC 130 FREIGHT STREET WATERBURY, CT 06702	PHOENIX SOIL LLC PO BOX 1750 WATERBURY, CT 06721-1750	(203)-759-0053

9 US DOT DESCRIPTION (INCLUDING PROPER SHIPPING NAME, HAZARD CLASS, AND ID NUMBER)	10 CONTAINERS NO	TYPE	11 TOTAL QUANTITY	12 UNIT WT/VOL
a. CONNECTICUT REGULATED WASTE SOLID, NONE, NONE	001	DT	00020	T
b.				
c.				

D. ADDITIONAL DESCRIPTIONS FOR MATERIALS LISTED ABOVE	E. HANDLING CODES FOR WASTES LISTED ABOVE	
	INTERIM	FINAL
SOIL CONTAMINATED WITH PETROLEUM HYDROCARBONS	SO2	T57

13 SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION

14 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable national government regulations, and all applicable State of Connecticut laws and regulations. I certify that this material neither contains polychlorinated biphenyls (PCB's) in concentrations greater than 25 ppm, nor has been mixed in anyway with PCB's in concentrations greater than or equal to 50 ppm. I certify that the material listed above contained no free liquids at the time of loading.

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
David A Crosby		8	1	13

15 TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
Gilles Gaudreau		8	19	13

16 TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR

17 DISCREPANCY INDICATION SPACE

11(a) CORRECTED WEIGHT AS SCALED 26-06 TON'S

18 FACILITY OWNER OR OPERATOR: CERTIFICATION OF RECEIPT OF WASTE MATERIALS COVERED BY THIS MANIFEST EXCEPT AS NOTED IN ITEM 17

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
S Barman		8	19	13

Phoenix Soil LLC * P.O.Box 1750 * Waterbury CT 06721

REGISTRATION NUMBER 05862

Date
8/19/2013

VEHICLE INFORMATION

TicketNumber	Plate Number
119150	30785A

Manifest	Stream	Site Name:
PSF59218	22453	CROSBY, DAVID A

WEIGHT INFORMATION

Product ID
2

GrossWeight	Tare Weight	NetWeight
84860	32740	52120

Net Weight Tons
26.06

NON-RCRA HAZARDOUS WASTE MANIFEST

PS F 59216

1 GENERATOR'S NAME AND MAILING ADDRESS DAVID A CICERO 734 Ferry Blvd Stratford CT		GENERATOR'S SITE ADDRESS 734 Ferry Blvd Stratford CT 06614	
2 GENERATOR'S PHONE (203) 377-4772			
3 TRANSPORTER 1 COMPANY NAME G&L Trucking	4 US EPA ID NUMBER NOT APPLICABLE	A. TRANSPORTER 1'S PHONE (860) 534-7540	TRANSPORTER'S PLATE NUMBER 307FSA CT
5 TRANSPORTER 2 COMPANY NAME	6 US EPA ID NUMBER NOT APPLICABLE	B TRANSPORTER 2'S PHONE ( )	TRANSPORTER'S PLATE NUMBER
7 DESIGNATED FACILITY NAME AND SITE ADDRESS PHOENIX SOIL LLC 130 FREIGHT STREET WATERBURY, CT 06702	8 MAILING ADDRESS PHOENIX SOIL LLC PO BOX 1750 WATERBURY, CT 06721-1750	C FACILITY'S PHONE (203)-759-0053	

9 US DOT DESCRIPTION (INCLUDING PROPER SHIPPING NAME, HAZARD CLASS, AND ID NUMBER)	10. CONTAINERS NO	TYPE	11 TOTAL QUANTITY	12 UNIT WT/VOL
a. CONNECTICUT REGULATED WASTE SOLID, NONE, NONE	001	DT	00020	T
b.				
c.				

D. ADDITIONAL DESCRIPTIONS FOR MATERIALS LISTED ABOVE	E. HANDLING CODES FOR WASTES LISTED ABOVE	
	INTERIM	FINAL
SOIL CONTAMINATED WITH PETROLEUM HYDROCARBONS	SO2	T57

13. SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION

14. GENERATOR'S CERTIFICATION I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable national government regulations, and all applicable State of Connecticut laws and regulations. I certify that this material no other contains polychlorinated biphenyls (PCB's) in concentrations greater than 25 ppm, nor has been mixed in anyway with PCB's in concentrations greater than or equal to 50 ppm. I certify that the material listed above contained no free liquids at the time of loading.

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
David A Cicero		8	19	13

15. TRANSPORTER 1 ACKNOWLEDGEMENT OF RECIPT OF MATERIALS

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
Gilles Gaudreau		8	19	13

16. TRANSPORTER 2 ACKNOWLEDGEMENT OF RECIPT OF MATERIALS

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR

17. DISCREPANCY INDICATION SPACE

11(a) CORRECTED WEIGHT AS SCALED 20.16 TON'S

18. FACILITY OWNER OR OPERATOR: CERTIFICATION OF RECIPT OF WASTE MATERIALS COVERED BY THIS MANIFEST EXCEPT AS NOTED IN ITEM 19

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
Sean Cre		8	19	13

Phoenix Soil LLC * P.O.Box 1750 * Waterbury CT 06721

REGISTRATION NUMBER 05862

Date
8/19/2013

VEHICLE INFORMATION

TicketNumber	Plate Number
119129	30785A

Manifest	Stream	Site Name:
PSF59216	22453	CROSBY, DAVID A

WEIGHT INFORMATION

Product ID
2

GrossWeight	Tare Weight	NetWeight
83060	32740	50320

Net Weight Tons
25.16

,0470 & 8755

NON-RCRA HAZARDOUS WASTE MANIFEST

PS F 59215

1 GENERATOR'S NAME AND MAILING ADDRESS
DAVID A CLESS
731 FERRY BLVD STRATFORD CT 06614

GENERATOR'S SITE ADDRESS
734 FERRY BLVD
STRATFORD CT 06614

2 GENERATOR'S PHONE (203) 377 4783

3 TRANSPORTER 1 COMPANY NAME	4 US EPA ID NUMBER	A. TRANSPORTER 1'S PHONE	TRANSPORTER'S PLATE NUMBER
G&L TRUCKING	NOT APPLICABLE	(860) 724-7540	307754 CT

5 TRANSPORTER 2 COMPANY NAME	6 US EPA ID NUMBER	B. TRANSPORTER 2'S PHONE	TRANSPORTER'S PLATE NUMBER
	NOT APPLICABLE	( )	

7 DESIGNATED FACILITY NAME AND SITE ADDRESS	8 MAILING ADDRESS	C. FACILITY'S PHONE
PHOENIX SOIL LLC 130 FREIGHT STREET WATERBURY, CT 06702	PHOENIX SOIL LLC PO BOX 1750 WATERBURY, CT 06721-1750	(203)-759-0053

9 US DOT DESCRIPTION (INCLUDING PROPER SHIPPING NAME, HAZARD CLASS, AND ID NUMBER)	10 CONTAINERS NO	TYPE	11 TOTAL QUANTITY	12 UNIT WT/VOL
a. CONNECTICUT REGULATED WASTE SOLID, NONE, NONE	001	DT	00020	T
b.				
c.				

D. ADDITIONAL DESCRIPTIONS FOR MATERIALS LISTED ABOVE	E. HANDLING CODES FOR WASTES LISTED ABOVE INTERIM	FINAL
SOIL CONTAMINATED WITH PETROLEUM HYDROCARBONS	SO2	T57

13 SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION

14 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable national government regulations, and all applicable State of Connecticut laws and regulations. I certify that this material neither contains polychlorinated biphenyls (PCB's) in concentrations greater than 25 ppm, nor has been mixed in anyway with PCB's in concentrations greater than or equal to 50 ppm. I certify that the material listed above contained no free liquids at the time of loading.

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
DAVID A CLESS		8	19	13

15 TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
Gilles Gaudreau		8	19	13

16 TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR

17 DISCREPANCY INDICATION SPACE

11(a) CORRECTED WEIGHT AS SCALED 20.35 TON'S

FACILITY OWNER OR OPERATOR: CERTIFICATION OF RECEIPT OF WASTE MATERIALS COVERED BY THIS MANIFEST EXCEPT AS NOTED IN ITEM 17

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
David Herman		8	19	13

Phoenix Soil LLC * P.O.Box 1750 * Waterbury CT 06721

REGISTRATION NUMBER 05862

Date
8/19/2013

VEHICLE INFORMATION

TicketNumber	Plate Number
119126	30785A

Manifest	Stream	Site Name:
PSF59215	22453	CROSBY, DAVID A

WEIGHT INFORMATION

Product ID
2

GrossWeight	Tare Weight	NetWeight
80440	32740	47700

Net Weight Tons
23.85

5274BLW 8 1580 22453

NON-RCRA HAZARDOUS WASTE MANIFEST

PS F 59214

1 GENERATOR'S NAME AND MAILING ADDRESS
DAVID A. CROSBY
734 FERRY BLVD
STRATFORD CT 06614

GENERATOR'S SITE ADDRESS
734 Ferry BLVD
Stratford CT 06614

2 GENERATOR'S PHONE (203) 377-4753

3 TRANSPORTER 1 COMPANY NAME	4 US EPA ID NUMBER	A. TRANSPORTER 1'S PHONE	TRANSPORTER'S PLATE NUMBER
	NOT APPLICABLE	(860) 337-7540	207854 CT
5 TRANSPORTER 2 COMPANY NAME	6 US EPA ID NUMBER	B. TRANSPORTER 2'S PHONE	TRANSPORTER'S PLATE NUMBER
	NOT APPLICABLE	( )	

7 DESIGNATED FACILITY NAME AND SITE ADDRESS	8 MAILING ADDRESS	C. FACILITY'S PHONE
PHOENIX SOIL LLC 130 FREIGHT STREET WATERBURY, CT 06702	PHOENIX SOIL LLC PO BOX 1750 WATERBURY, CT 06721-1750	(203)-759-0053

9 US DOT DESCRIPTION (INCLUDING PROPER SHIPPING NAME, HAZARD CLASS, AND ID NUMBER)	10. CONTAINERS NO.	TYPE	11 TOTAL QUANTITY	12 UNIT WT/VOL
a. CONNECTICUT REGULATED WASTE SOLID, NONE, NONE	001	DT	00020	T
b.				
c.				

D ADDITIONAL DESCRIPTIONS FOR MATERIALS LISTED ABOVE	E HANDLING CODES FOR WASTES LISTED ABOVE INTERIM	FINAL
SOIL CONTAMINATED WITH PETROLEUM HYDROCARBONS	SO2	T57

13 SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION

14 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable national government regulations and all applicable State of Connecticut laws and regulations. I certify that this material neither contains polychlorinated biphenyls (PCB's) in concentrations greater than 25 ppm, nor has been mixed in anyway with PCB's in concentrations greater than or equal to 50 ppm. I certify that the material listed above contained no free liquids at the time of loading.

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
DAVID A Crosby		8	19	13

15 TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
GILLES GAUDREAU		8	19	13

16 TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR

17 DISCREPANCY INDICATION SPACE

11(a) CORRECTED WEIGHT AS SCALED 24.42 TONS

FACILITY OWNER OR OPERATOR CERTIFICATION OF RECEIPT OF WASTE MATERIALS COVERED BY THIS MANIFEST EXCEPT AS NOTED IN ITEM 17

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
J Harman	J Harman	8	19	13

Phoenix Soil LLC * P.O.Box 1750 * Waterbury CT 06721

REGISTRATION NUMBER 05862

Date
8/19/2013

VEHICLE INFORMATION

TicketNumber	Plate Number
119123	30785A

Manifest	Stream	Site Name:
PSF59214	22453	CROSBY, DAVID A

WEIGHT INFORMATION

Product ID

GrossWeight	Tare Weight	NetWeight
81580	32740	48840

Net Weight Tons
24.42

30940 [illegible] 22453

NON-RCRA HAZARDOUS WASTE MANIFEST

PS A 126559

1 GENERATOR'S NAME AND MAILING ADDRESS: United Rentals Tank	GENERATOR'S SITE ADDRESS: 1341 Frontage Blvd Stratford CT
2 GENERATOR'S PHONE:	

3 TRANSPORTER 1 COMPANY NAME	4 US EPA ID NUMBER	A. TRANSPORTER 1'S PHONE	TRANSPORTER'S PLATE NUMBER
Tarr, Inc.	NOT APPLICABLE		
5 TRANSPORTER 2 COMPANY NAME	**6 US EPA ID NUMBER**	**B. TRANSPORTER 2'S PHONE**	**TRANSPORTER'S PLATE NUMBER**
	NOT APPLICABLE	( )	5143-A

7 DESIGNATED FACILITY NAME AND SITE ADDRESS	8 MAILING ADDRESS	C. FACILITY'S PHONE
PHOENIX SOIL LLC 130 FREIGHT STREET WATERBURY, CT 06702	PHOENIX SOIL LLC PO BOX 1750 WATERBURY, CT 06721-1750	(203)-759-0053

9 US DOT DESCRIPTION (INCLUDING PROPER SHIPPING NAME, HAZARD CLASS, AND ID NUMBER)	10 CONTAINERS NO	TYPE	11 TOTAL QUANTITY	12 UNIT WT/VOL
a. CONNECTICUT REGULATED WASTE SOLID, NONE, NONE	001	DT	00020	T
b.				
c.				

D. ADDITIONAL DESCRIPTIONS FOR MATERIALS LISTED ABOVE	E. HANDLING CODES FOR WASTES LISTED ABOVE: INTERIM	FINAL
SOIL CONTAMINATED WITH PETROLEUM HYDROCARBONS	SO2	T57

F. SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION

G. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled and are in all respects in proper condition for transport by highway according to applicable national government regulations, and all applicable State of Connecticut laws and regulations. I certify that this material neither contains polychlorinated biphenyls (PCB's) in concentrations greater than 25 ppm nor has been mixed in anyway with PCB's in concentrations greater than or equal to 50 ppm. I certify that the material listed above contained no free liquids at the time of loading.

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
James Jesup	[signature]	9	16	13

H. TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
[illegible] Jimmy Jes	[signature]	9	16	13

I. TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR

J. DISCREPANCY INDICATION SPACE

11(a) CORRECTED WEIGHT AS SCALED 16.12 TON'S

K. FACILITY OWNER OR OPERATOR CERTIFICATION OF RECEIPT OF WASTE MATERIALS COVERED BY THIS MANIFEST EXCEPT AS NOTED IN ITEM J.

PRINTED/TYPED NAME	SIGNATURE	MONTH	DAY	YEAR
[illegible]	[signature]	9	16	13

COPY 4: TRANSPORTER

Phoenix Soil LLC * P.O.Box 1750 * Waterbury CT 06721

REGISTRATION NUMBER 05862

Date
9/16/2013

VEHICLE INFORMATION

TicketNumber	Plate Number
119813	51143A

Manifest	Stream	Site Name:
PSA126559	22453	CROSBY, DAVID A

WEIGHT INFORMATION

Product ID
2

GrossWeight	Tare Weight	NetWeight
63180	30940	32240

Net Weight Tons
16.12

Appendix E. Lab report on analysis of excavation soil samples.

COMPLETE ENVIRONMENTAL TESTING, INC.

80 Lupes Drive
Stratford, CT 06615

Tel: (203) 377-9984
Fax: (203) 377-9952
e-mail: cet1@cetlabs.com

Client: Mr. David Cook
Geoscience Tech. Services, Inc
P.O. Box 1036
Old Lyme, CT 06371

Analytical Report

CET # 13080612

Report Date: September 5, 2013
Client Project: 734 Ferry Blvd, Stratford

Connecticut Laboratory Certification PH 0116
Massachusetts Laboratory Certification M-CT903
Rhode Island Certification 199

New York Certification 11982
Florida Laboratory Certification E871064

CET#: 13080612
Project: 734 Ferry Blvd, Stratford

SAMPLE SUMMARY:

This report contains analytical data associated with the following samples only:

CETID	Client Sample ID	Matrix	Collection Date	Collection Time	Receipt Date
AF41523	N	Soil	8/21/2013	8:09	08/22/2013
AF41524	E	Soil	8/21/2013	8:14	08/22/2013
AF41525	S	Soil	8/21/2013	8:20	08/22/2013
AF41526	W	Soil	8/21/2013	8:25	08/22/2013
AF41527	B-NE	Soil	8/21/2013	7:50	08/22/2013
AF41528	B-NW	Soil	8/21/2013	7:54	08/22/2013
AF41529	B-SE	Soil	8/21/2013	7:59	08/22/2013
AF41530	B-SW	Soil	8/21/2013	8:04	08/22/2013

Sample temperature upon receipt was 4.2 degrees C

ANALYSIS:

Total Solids [EPA 160.3 mo] Units: percent

Client ID	N	E	S	W	B-NE
CET ID	AF41523	AF41524	AF41525	AF41526	AF41527
Date Analyzed	8/26/2013	8/26/2013	8/26/2013	8/26/2013	8/26/2013
Total Solids	97	98	97	97	93

Total Solids [EPA 160.3 mo] Units: percent

Client ID	B-NW	B-SE	B-SW
CET ID	AF41528	AF41529	AF41530
Date Analyzed	8/26/2013	8/26/2013	8/26/2013
Total Solids	90	88	82

Volatile Org. Dilution [EPA 8260C] Units: ug/kg (Dry Wt)

Client ID	N	E	S	W	B-NE
CET ID	AF41523	AF41524	AF41525	AF41526	AF41527
Date Analyzed	9/3/2013	9/3/2013	9/3/2013	9/4/2013	9/4/2013
Dilution	496.5	199.0	485.4	978.4	911.6
Methyl-t-Butyl Ether (MTBE)	ND < 2600	ND < 1000	ND < 2500	ND < 5000	ND < 4900
Benzene	720	ND < 200	ND < 500	ND < 1000	8800
Toluene	43000	4500	11000	35000	220000
Chlorobenzene	ND < 510	ND < 200	ND < 500	ND < 1000	ND < 980
Ethylbenzene	72000	8900	21000	56000	73000
m+p Xylenes	260000	34000	83000	210000	250000
o-Xylene	84000	15000	32000	78000	96000
Styrene	ND < 510	ND < 200	ND < 500	ND < 1000	ND < 980
Isopropylbenzene	13000	2000	3600	8700	6400
Bromobenzene	ND < 510	ND < 200	ND < 500	ND < 1000	ND < 980
n-Propylbenzene	55000	8100	15000	36000	29000
2-Chlorotoluene	ND < 510	ND < 200	ND < 500	ND < 1000	ND < 980
4-Chlorotoluene	ND < 510	ND < 200	ND < 500	ND < 1000	ND < 980
1,3,5-Trimethylbenzene	83000	18000	29000	63000	35000

CET#: 13080612
Project: 734 Ferry Blvd, Stratford

olatile Org. Dilution [EPA 8260C] Units: ug/kg (Dry Wt)

Client ID	N	E	S	W	B-NE
tert-Butylbenzene	ND < 510	ND < 200	ND < 500	ND < 1000	ND < 980
1,2,4-Trimethylbenzene	300000	61000	98000	220000	150000
sec-Butylbenzene	5800	940	1500	3200	2000
1,3-Dichlorobenzene	ND < 510	ND < 200	ND < 500	ND < 1000	ND < 980
4-Isopropyltoluene	3200	590	810	1600	1100
1,4-Dichlorobenzene	ND < 510	ND < 200	ND < 500	ND < 1000	ND < 980
1,2-Dichlorobenzene	ND < 510	ND < 200	ND < 500	ND < 1000	ND < 980
n-Butylbenzene	ND < 510	ND < 200	ND < 500	ND < 1000	ND < 980
1,2,4-Trichlorobenzene	ND < 510	ND < 200	ND < 500	ND < 1000	ND < 980
Hexachlorobutadiene	ND < 510	ND < 200	ND < 500	ND < 1000	ND < 980
Naphthalene	38000	7900	13000	23000	10000
1,2,3-Trichlorobenzene	ND < 510	ND < 200	ND < 500	ND < 1000	ND < 980
1,2 Dichloroethane-d4 (SURR) 70-130	106	102	101	118	107
toluene-d8 (SURR) 70-130	106	102	103	111	106
4-bromofluorobenzene (SURR) 70-130	100	98.3	98.8	92.4	91.3

Volatile Org. Dilution [EPA 8260C] Units: ug/kg (Dry Wt)

Client ID	B-NW	B-SE	B-SW
CET ID	AF41528	AF41529	AF41530
Date Analyzed	9/3/2013	9/4/2013	9/3/2013
Dilution	431.0	4259.0	37.4
Methyl-t-Butyl Ether (MTBE)	ND < 2400	ND < 24000	ND < 230
Benzene	3700	110000	600
Toluene	100000	970000	3300
Chlorobenzene	ND < 480	ND < 4800	ND < 46
Ethylbenzene	54000	270000	1100
m+p Xylenes	190000	1100000	4200
o-Xylene	68000	410000	1700
Styrene	ND < 480	ND < 4800	ND < 46
Isopropylbenzene	6100	20000	120
Bromobenzene	ND < 480	ND < 4800	ND < 46
n-Propylbenzene	26000	110000	550
2-Chlorotoluene	ND < 480	ND < 4800	ND < 46
4-Chlorotoluene	ND < 480	ND < 4800	ND < 46
1,3,5-Trimethylbenzene	37000	210000	1300
tert-Butylbenzene	ND < 480	ND < 4800	ND < 46
1,2,4-Trimethylbenzene	140000	730000	3800
sec-Butylbenzene	2100	8300	57
1,3-Dichlorobenzene	ND < 480	ND < 4800	ND < 46
4-Isopropyltoluene	1100	ND < 4800	ND < 46
1,4-Dichlorobenzene	ND < 480	ND < 4800	ND < 46
1,2-Dichlorobenzene	ND < 480	ND < 4800	ND < 46
n-Butylbenzene	ND < 480	ND < 4800	ND < 46
1,2,4-Trichlorobenzene	ND < 480	ND < 4800	ND < 46
Hexachlorobutadiene	ND < 480	ND < 4800	ND < 46
Naphthalene	13000	84000	750
1,2,3-Trichlorobenzene	ND < 480	ND < 4800	ND < 46
1,2 Dichloroethane-d4 (SURR) 70-130	91.7	106	101
toluene-d8 (SURR) 70-130	103	105	101
4-bromofluorobenzene (SURR) 70-130	96.6	91.8	95.9

CET#: 13080612
Project: 734 Ferry Blvd, Stratford

_uestions related to this report should be directed to David Ditta, Timothy Fusco, or Robert Blake at 203-377-9984.

Sincerely,

David Ditta
Laboratory Director

Report Comments:

1. ND is None Detected at the specified detection limit.
2. All analyses were performed in house unless a Reference Laboratory is listed.
3. Samples will be disposed of 30 days after the report date.
4. Sample Result Flags:
   E - The result is estimated, above the calibration range.
   H - The surrogate recovery is above the control limits.
   L - The surrogate recovery is below the control limits.
   B - The compound was detected in the laboratory blank.
   P - The Relative Percent Difference (RPD) of dual column analyses exceeds 40%.
   D - The RPD between the sample and the sample duplicate is high. Sample homogeneity may be a problem.
5. All results met standard operating procedures unless indicated by a data qualifier next to a sample result, or a narration in the QC report.

CET

COMPLETE ENVIRONMENTAL TESTING, INC.

CHAIN OF CUSTODY RECORD

Volatile Soils Only: 1 2080 ~~2080~~ 60

Date and Time in Freezer

Client:

CET:

80 Lupes Drive
Stratford, CT 06615

Tel: (203) 377-9984
Fax: (203) 377-9952
e-mail: cet@cetlabs.com

Matrix: A=Air, S=Soil, W=Water, DW=Drinking W., C=Cassette, Solid, Wipe, Other (Specify)

Turnaround Time ** (check one): Same Day, 24 Hours, 2-3 Days, Standard

Organics: 8260 CT List, 8260 Aromatics, 8260 Halogens, SPLP 8260, TCLP 8260, TPH (418.1), CT ETPH, 8270 CT List, 8270 PNAs, PCBs, Pesticides

Metals (check all that apply): 13 Priority Poll, 8 RCRA, TOTAL, TCLP, SPLP, Field Filtered, Lab To Filter

Additional Analysis

Sample ID	Date/Time	Matrix	Same Day	24 Hours	2-3 Days	Standard	8260 CT List	8260 Aromatics	8260 Halogens	SPLP 8260	TCLP 8260	TPH (418.1)	CT ETPH	8270 CT List	8270 PNAs	PCBs	Pesticides	13 Priority Poll	8 RCRA	TOTAL	TCLP	SPLP	Field Filtered	Lab To Filter	TOTAL # OF CONT.	NOTE #
N	8/21/13 0809	S				X		X																	4	1
E	0814																									1
S	0820																									1
W	0825																									1
B-NE	0750																									1
B-NW	0754																									1
B-SE	0759																									2
B-SW	0804																									2

PRESERVATIVE (Cl-HCl, N-HNO_3, S-H_2SO_4, Na-NaOH, C=Cool, O-Other): C

CONTAINER TYPE (P-Plastic, G-Glass, V-Vial, O-Other): V

Soil VOCs Only (M=MeOH, B=Sodium Bisulfate, W=Water, F=Empty Vial, E=Encore): M/B

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:
D. Cook	8-22-13	1330
	8-22-13	1530

NOTES:
1. PID readings 600-700 ppm
2. " " 1100-1300 ppm

Client / Reporting Information

Company Name: Geoscience Technical Services

Address: PO Box 1036

City: Old Lyme State: CT Zip: 06371

Report To: D. Cook E-mail:

Phone #: 860 391-3365 Fax #:

Project Information

Project Contact: D. Cook PO #:

Project: 734 Ferry Blvd Project #:

Location: Stratford CT Collector(s): D. Cook

QA/QC: ☐ Std ☐ Site Specific (MS/MSD) * ☒ RCP Pkg * ☒ DAQW

Data Report: ☒ Email ☒ PDF ☐ Excel ☐ Other

RSR Reporting Limits (check one): ☒ GA ☐ GB ☐ SWP ☐ Other (Specify)

Lab Use: Evidence of Cooling: Y or N
Temp Upon Receipt 4.2 °C

SHEET 1 OF 1

* Additional charge may apply. ** TAT begins when the samples are received at the Lab. TAT for samples received after 3 p.m. will start on the next business day.

REV. 5/9/06

REASONABLE CONFIDENCE PROTOCOL
LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

Laboratory Name: Complete Environmental Testing, Inc.

Client: Geoscience Tech. Services, Inc

Project Location: 734 Ferry Blvd, Stratford

Project Number:

Laboratory Sample ID(s): AF41523 – AF41530

Sampling Date(s): 8/21/13

List RCP Methods Used (e.g., 8260, 8270, et cetera):

CET#: 13080612

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CT DEP method-specific Reasonable Confidence Protocol documents?	☒Yes ☐No
1A	Were the method specified preservation and holding time requirements met?	☒Yes ☐No
1B	**VPH and EPH Methods only:** Was the VPH or EPH method conducted without significant modifications (see section 11.3 of respective RCP methods)	☐Yes ☐ No ☒ N/A
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	☒Yes ☐No
3	Were samples received at an appropriate temperature (<6°C)?	☒Yes ☐ No ☐N/A
4	Were all QA/QC performance criteria specified in the CT DEP Reasonable Confidence Protocol documents achieved?	☒Yes ☐No
5	a) Were reporting limits specified or referenced on the chain-of custody? b) Were these reporting limits met?	☒Yes ☐No ☒Yes ☐No
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	☐Yes ☒No
7	Are project-specific matrix spikes and laboratory duplicates included in this data set?	☐Yes ☒No

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A, or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence". This form may not be altered and all questions must be answered.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete.

Authorized Signature: David Ditta **Position:** Laboratory Director

Printed Name: David Ditta **Date:** 9/6/13

Name of Laboratory: Complete Environmental Testing, Inc.

This certification form is to be used for RCP methods only.

COMPLETE ENVIRONMENTAL TESTING, INC.

80Lupes Drive
Stratford, CT 06615

Tel: (203) 377-9984
Fax: (203) 377-9952
e-mail: cet1@cetlabs.com

QA Report

Project: 734 Ferry Blvd, Stratford
CET#: 13080612

Blank/LCS Report

QA Type: Volatile Org. Dilution Date Analyzed: 9/3/2013 Batch ID: 88029

Analyte	Blank	LCS%Rec	LCS CL
Methyl-t-Butyl Ether (MTBE)	ND<5.0	102	70-130
Benzene	ND<5.0	108	70-130
Toluene	ND<5.0	104	70-130
Chlorobenzene	ND<5.0	109	70-130
Ethylbenzene	ND<5.0	111	70-130
m+p Xylenes	ND<5.0	105	70-130
o-Xylene	ND<5.0	108	70-130
Styrene	ND<5.0	110	70-130
Isopropylbenzene	ND<5.0	116	70-130
Bromobenzene	ND<5.0	113	70-130
n-Propylbenzene	ND<5..0	117	70-130
2-Chlorotoluene	ND<5.0	114	70-130
4-Chlorotoluene	ND<5.0	117	70-130
1,3,5-Trimethylbenzene	ND<5.0	110	70-130
tert-Butylbenzene	ND<5.0	116	70-130
1,2,4-Trimethylbenzene	ND<5.0	106	70-130
sec-Butylbenzene	ND<5.0	120	70-130
1,3-Dichlorobenzene	ND<5.0	112	70-130
4-Isopropyltoluene	ND<5.0	119	70-130
1,4-Dichlorobenzene	ND<5.0	111	70-130
1,2-Dichlorobenzene	ND<5.0	108	70-130
n-Butylbenzene	ND<5.0	122	70-130
1,2,4-Trichlorobenzene	ND<5.0	107	70-130
Hexachlorobutadiene	ND<5.0	106	70-130
Naphthalene	ND<5.0	97	70-130
1,2,3-Trichlorobenzene	ND<5.0	102	70-130

All associated samples: AF41523 AF41524 AF41525 AF41528 AF41530

Project: 734 Ferry Blvd, Stratford
Cet#: 13080612

QA Type: Volatile Org. Dilution Date Analyzed: 9/4/2013 Batch ID: 88062

Analyte	Blank	LCS%Rec	LCS CL
Methyl-t-Butyl Ether (MTBE)	ND<5.0	100	70-130
Benzene	ND<5.0	105	70-130
Toluene	ND<5.0	107	70-130
Chlorobenzene	ND<5.0	114	70-130
Ethylbenzene	ND<5.0	113	70-130
m+p Xylenes	ND<5.0	107	70-130
o-Xylene	ND<5.0	108	70-130
Styrene	ND<5.0	112	70-130
Isopropylbenzene	ND<5.0	109	70-130
Bromobenzene	ND<5.0	114	70-130
n-Propylbenzene	ND<5..0	110	70-130
2-Chlorotoluene	ND<5.0	109	70-130
4-Chlorotoluene	ND<5.0	115	70-130
1,3,5-Trimethylbenzene	ND<5.0	107	70-130
tert-Butylbenzene	ND<5.0	103	70-130
1,2,4-Trimethylbenzene	ND<5.0	105	70-130
sec-Butylbenzene	ND<5.0	108	70-130
1,3-Dichlorobenzene	ND<5.0	107	70-130
4-Isopropyltoluene	ND<5.0	108	70-130
1,4-Dichlorobenzene	ND<5.0	109	70-130
1,2-Dichlorobenzene	ND<5.0	105	70-130
n-Butylbenzene	ND<5.0	116	70-130
1,2,4-Trichlorobenzene	ND<5.0	97	70-130
Hexachlorobutadiene	ND<5.0	92	70-130
Naphthalene	ND<5.0	95	70-130
1,2,3-Trichlorobenzene	ND<5.0	95	70-130

All associated samples: AF41526 AF41527 AF41529

QC Batch Report

Volatile Org. Dilution Batch 88029

CET ID	Client Sample ID	Matrix	Collection Date
AF41523	N	Soil	8/21/2013
AF41524	E	Soil	8/21/2013
AF41525	S	Soil	8/21/2013
AF41528	B-NW	Soil	8/21/2013
AF41530	B-SW	Soil	8/21/2013

Volatile Org. Dilution Batch 88062

CET ID	Client Sample ID	Matrix	Collection Date
AF41526	W	Soil	8/21/2013
AF41527	B-NE	Soil	8/21/2013
AF41529	B-SE	Soil	8/21/2013

Narrative

6. The client has requested a subset of the CT 8260 list.

7. Project specific QC was not requested by the client.

COMPLETE ENVIRONMENTAL TESTING, INC.

80 Lupes Drive
Stratford, CT 06615

Tel: (203) 377-9984
Fax: (203) 377-9952
e-mail: cetl@cetlabs.com

Quality Control Definitions and Abbreviations

Internal Std. (IS)	An analyte added to each sample or sample extract. An internal standard is used to monitor retention time, calculate relative response, and quantify analytes of interest.
Surrogate Rec.(Surr Rec)	The % recovery for non-target organic compounds that are spiked into all samples. Used to determine method performance.
Continuing Calibration	An analytical standard analyzed with each set of samples to verify initial calibration of the system.
Batch	Samples that are analyzed together with the same method, sequence and lot of reagents within the same time period. Samples are of the same matrix.
ND	Not detected.
Dilution	Multiplier applied to detection levels (MDL) and/or sample results due to interferences and/or high concentration of target compounds.
Duplicate	Result from the duplicate analysis of a sample.
Samp. Res.	Amount of analyte found in a sample.
Spk. Amt. (Amt)	Amount of analyte added to a sample.
Spk. Res.	Amount of analyte found including amount that was spiked.
Spk. Dup. Res.	Amount of analyte found in duplicate spikes including amount that was spiked.
MS%R	% recovery of spiked amount in sample.
MSD%R	% recovery of spiked duplicate amount in sample.
RPD	Relative percent difference between MS and MSD
Blank	Method blank that has been taken through all steps of the analysis.
LCS % Rec.	Laboratory Control Sample percent recovery. The amount of analyte recovered from a fortified sample.
Control Limits	A range within which specified measurement results must fall to be compliant.
LCS CL	Control limits for Laboratory Control Sample.
MS CL	Control limits for matrix spike and matrix spike dup.
RPD CL	Control limits for RPD.
Cont. Cal. (CC)	Continuing Calibration

Flags:

H-	Recovery is above control limits
L-	Recovery is below control limits
B-	Compound detected in the Blank
P-	RPD of dual column results exceeds 40%
#-	Sample result too high for accurate spike recovery

Connecticut Laboratory Certification PH 0116
Massachusetts Laboratory Certification M-CT903
Rhode Island Certification 199

New York Certification 11982
Florida Laboratory Certification E871064

CET#: 13080612
Project: 734 Ferry Blvd, Stratford

uestions related to this report should be directed to David Ditta, Timothy Fusco, or Robert Blake at 203-377-9984.

Sincerely,

David Ditta
Laboratory Director

Report Comments:

1. ND is None Detected at the specified detection limit.
2. All analyses were performed in house unless a Reference Laboratory is listed.
3. Samples will be disposed of 30 days after the report date.
4. Sample Result Flags:
   E - The result is estimated, above the calibration range.
   H - The surrogate recovery is above the control limits.
   L - The surrogate recovery is below the control limits.
   B - The compound was detected in the laboratory blank.
   P - The Relative Percent Difference (RPD) of dual column analyses exceeds 40%.
   D - The RPD between the sample and the sample duplicate is high. Sample homogeneity may be a problem.
5. All results met standard operating procedures unless indicated by a data qualifier next to a sample result, or a narration in the QC report.

CET

COMPLETE ENVIRONMENTAL TESTING, INC.

CHAIN OF CUSTODY RECORD

Volatile Soils Only: 1 2080 ~~2014~~ 60

Date and Time in Freezer

Client:

CET:

80 Lupes Drive
Stratford, CT 06615

Tel: (203) 377-9984
Fax: (203) 377-9952
e-mail: cet@cetlabs.com

Sample ID	Date/Time	Matrix (A=Air, S=Soil, W=Water, DW=Drinking W, C=Cassette, Solid, Wipe, Other (Specify))	Turnaround Time ** (check one): Same Day	24 Hours	2-3 Days	Standard	8260 CT List	8260 Aromatics	8260 Halogens	SPLP 8260	TCLP 8260	TPH (418.1)	CT ETPH	8270 CT List	8270 PNAs	PCBs	Pesticides	13 Priority Poll	8 RCRA	TOTAL	TCLP	SPLP	Field Filtered	Lab To Filter	Additional Analysis	TOTAL # OF CONT.	NOTE #
N	8/21/13 0809	S				X		X																		4	1
E	0814																										1
S	0820																										1
W	0825																										1
B-NE	0750																										1
B-NW	0754																										1
B-SE	0759																										2
B-SW	0804																										2

PRESERVATIVE (Cl-HCl, N-HNO_3, S-H_2SO_4, Na-NaOH, C=Cool, O-Other): C

CONTAINER TYPE (P-Plastic, G-Glass, V-Vial, O-Other): V

Soil VOCs Only (M=MeOH B=Sodium Bisulfate W=Water F=Empty Vial E=Encore): M/B

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:
D. Cook	8-22-13 1330	
	8-22-13 1530	
RELINQUISHED BY:	DATE/TIME	RECEIVED BY:

NOTES:
1. PID readings 600-700 ppm
2. " " 1100-1300 ppm

Client / Reporting Information

Company Name: Geoscience Technical Services

Address: PO Box 1036

City: Old Lyme State: CT Zip: 06371

Report To: D. Cook E-mail:

Phone #: 860 391-3365 Fax #:

Project Information

Project Contact: D. Cook PO #:

Project: 734 Ferry Blvd Project #:

Location: Stratford CT Collector(s): D. Cook

QA/QC: ☐ Std ☐ Site Specific (MS/MSD) * ☒ RCP Pkg * ☒ DAQW

Data Report: ☒ Email ☒ PDF ☐ Excel ☐ Other

RSR Reporting Limits (check one): ☒ GA ☐ GB ☐ SWP ☐ Other (Specify)

Lab Use: Evidence of Cooling: Y or N
Temp Upon Receipt 4.2 °C

SHEET 1 OF 1

* Additional charge may apply. ** TAT begins when the samples are received at the Lab. TAT for samples received after 3 p.m. will start on the next business day.

REV. 5/9/06

REASONABLE CONFIDENCE PROTOCOL
LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

Laboratory Name: Complete Environmental Testing, Inc.

Client: Geoscience Tech. Services, Inc

Project Location: 734 Ferry Blvd, Stratford

Project Number:

Laboratory Sample ID(s): AF41523 – AF41530

Sampling Date(s): 8/21/13

List RCP Methods Used (e.g., 8260, 8270, et cetera):

CET#: 13080612

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CT DEP method-specific Reasonable Confidence Protocol documents?	☒Yes ☐No
1A	Were the method specified preservation and holding time requirements met?	☒Yes ☐No
1B	**VPH and EPH Methods only:** Was the VPH or EPH method conducted without significant modifications (see section 11.3 of respective RCP methods)	☐Yes ☐ No ☒ N/A
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	☒Yes ☐No
3	Were samples received at an appropriate temperature (<6°C)?	☒Yes ☐ No ☐N/A
4	Were all QA/QC performance criteria specified in the CT DEP Reasonable Confidence Protocol documents achieved?	☒Yes ☐No
5	a) Were reporting limits specified or referenced on the chain-of custody? b) Were these reporting limits met?	☒Yes ☐No ☒Yes ☐No
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	☐Yes ☒No
7	Are project-specific matrix spikes and laboratory duplicates included in this data set?	☐Yes ☒No

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A, or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence". This form may not be altered and all questions must be answered.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete.

Authorized Signature: David Ditta **Position:** Laboratory Director

Printed Name: David Ditta **Date:** 9/6/13

Name of Laboratory: Complete Environmental Testing, Inc.

This certification form is to be used for RCP methods only.

COMPLETE ENVIRONMENTAL TESTING, INC.

80Lupes Drive
Stratford, CT 06615

Tel: (203) 377-9984
Fax: (203) 377-9952
e-mail: cet1@cetlabs.com

QA Report

Project: 734 Ferry Blvd, Stratford
CET#: 13080612

Blank/LCS Report

QA Type: Volatile Org. Dilution Date Analyzed: 9/3/2013 Batch ID: 88029

Analyte	Blank	LCS%Rec	LCS CL
Methyl-t-Butyl Ether (MTBE)	ND<5.0	102	70-130
Benzene	ND<5.0	108	70-130
Toluene	ND<5.0	104	70-130
Chlorobenzene	ND<5.0	109	70-130
Ethylbenzene	ND<5.0	111	70-130
m+p Xylenes	ND<5.0	105	70-130
o-Xylene	ND<5.0	108	70-130
Styrene	ND<5.0	110	70-130
Isopropylbenzene	ND<5.0	116	70-130
Bromobenzene	ND<5.0	113	70-130
n-Propylbenzene	ND<5..0	117	70-130
2-Chlorotoluene	ND<5.0	114	70-130
4-Chlorotoluene	ND<5.0	117	70-130
1,3,5-Trimethylbenzene	ND<5.0	110	70-130
tert-Butylbenzene	ND<5.0	116	70-130
1,2,4-Trimethylbenzene	ND<5.0	106	70-130
sec-Butylbenzene	ND<5.0	120	70-130
1,3-Dichlorobenzene	ND<5.0	112	70-130
4-Isopropyltoluene	ND<5.0	119	70-130
1,4-Dichlorobenzene	ND<5.0	111	70-130
1,2-Dichlorobenzene	ND<5.0	108	70-130
n-Butylbenzene	ND<5.0	122	70-130
1,2,4-Trichlorobenzene	ND<5.0	107	70-130
Hexachlorobutadiene	ND<5.0	106	70-130
Naphthalene	ND<5.0	97	70-130
1,2,3-Trichlorobenzene	ND<5.0	102	70-130

All associated samples: AF41523 AF41524 AF41525 AF41528 AF41530

Project: 734 Ferry Blvd, Stratford
Cet#: 13080612

QA Type: Volatile Org. Dilution Date Analyzed: 9/4/2013 Batch ID: 88062

Analyte	Blank	LCS%Rec	LCS CL
Methyl-t-Butyl Ether (MTBE)	ND<5.0	100	70-130
Benzene	ND<5.0	105	70-130
Toluene	ND<5.0	107	70-130
Chlorobenzene	ND<5.0	114	70-130
Ethylbenzene	ND<5.0	113	70-130
m+p Xylenes	ND<5.0	107	70-130
o-Xylene	ND<5.0	108	70-130
Styrene	ND<5.0	112	70-130
Isopropylbenzene	ND<5.0	109	70-130
Bromobenzene	ND<5.0	114	70-130
n-Propylbenzene	ND<5..0	110	70-130
2-Chlorotoluene	ND<5.0	109	70-130
4-Chlorotoluene	ND<5.0	115	70-130
1,3,5-Trimethylbenzene	ND<5.0	107	70-130
tert-Butylbenzene	ND<5.0	103	70-130
1,2,4-Trimethylbenzene	ND<5.0	105	70-130
sec-Butylbenzene	ND<5.0	108	70-130
1,3-Dichlorobenzene	ND<5.0	107	70-130
4-Isopropyltoluene	ND<5.0	108	70-130
1,4-Dichlorobenzene	ND<5.0	109	70-130
1,2-Dichlorobenzene	ND<5.0	105	70-130
n-Butylbenzene	ND<5.0	116	70-130
1,2,4-Trichlorobenzene	ND<5.0	97	70-130
Hexachlorobutadiene	ND<5.0	92	70-130
Naphthalene	ND<5.0	95	70-130
1,2,3-Trichlorobenzene	ND<5.0	95	70-130

All associated samples: AF41526 AF41527 AF41529

QC Batch Report

Volatile Org. Dilution Batch 88029

CET ID	Client Sample ID	Matrix	Collection Date
AF41523	N	Soil	8/21/2013
AF41524	E	Soil	8/21/2013
AF41525	S	Soil	8/21/2013
AF41528	B-NW	Soil	8/21/2013
AF41530	B-SW	Soil	8/21/2013

Volatile Org. Dilution Batch 88062

CET ID	Client Sample ID	Matrix	Collection Date
AF41526	W	Soil	8/21/2013
AF41527	B-NE	Soil	8/21/2013
AF41529	B-SE	Soil	8/21/2013

Narrative

6. The client has requested a subset of the CT 8260 list.

7. Project specific QC was not requested by the client.

COMPLETE ENVIRONMENTAL TESTING, INC.

80 Lupes Drive
Stratford, CT 06615

Tel: (203) 377-9984
Fax: (203) 377-9952
e-mail: cetl@cetlabs.com

Quality Control Definitions and Abbreviations

Internal Std. (IS)	An analyte added to each sample or sample extract. An internal standard is used to monitor retention time, calculate relative response, and quantify analytes of interest.
Surrogate Rec.(Surr Rec)	The % recovery for non-target organic compounds that are spiked into all samples. Used to determine method performance.
Continuing Calibration	An analytical standard analyzed with each set of samples to verify initial calibration of the system.
Batch	Samples that are analyzed together with the same method, sequence and lot of reagents within the same time period. Samples are of the same matrix.
ND	Not detected.
Dilution	Multiplier applied to detection levels (MDL) and/or sample results due to interferences and/or high concentration of target compounds.
Duplicate	Result from the duplicate analysis of a sample.
Samp. Res.	Amount of analyte found in a sample.
Spk. Amt. (Amt)	Amount of analyte added to a sample.
Spk. Res.	Amount of analyte found including amount that was spiked.
Spk. Dup. Res.	Amount of analyte found in duplicate spikes including amount that was spiked.
MS%R	% recovery of spiked amount in sample.
MSD%R	% recovery of spiked duplicate amount in sample.
RPD	Relative percent difference between MS and MSD
Blank	Method blank that has been taken through all steps of the analysis.
LCS % Rec.	Laboratory Control Sample percent recovery. The amount of analyte recovered from a fortified sample.
Control Limits	A range within which specified measurement results must fall to be compliant.
LCS CL	Control limits for Laboratory Control Sample.
MS CL	Control limits for matrix spike and matrix spike dup.
RPD CL	Control limits for RPD.
Cont. Cal. (CC)	Continuing Calibration

Flags:

H-	Recovery is above control limits
L-	Recovery is below control limits
B-	Compound detected in the Blank
P-	RPD of dual column results exceeds 40%
#-	Sample result too high for accurate spike recovery

Connecticut Laboratory Certification PH 0116
Massachusetts Laboratory Certification M-CT903
Rhode Island Certification 199

New York Certification 11982
Florida Laboratory Certification E871064