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September 30, 2011

Mr. John A. Carrigan
Section Chief, Solid Waste Management
Department of Environmental Protection
Northeast Regional Office
205B Lowell Street
Wilmington, Massachusetts 01887

Subject: Annual Water Quality Monitoring
Haverhill Landfill – June 2011
City of Haverhill, Massachusetts and Aggregate Industries, Inc.

Dear Mr. Carrigan:

Between June 21 and June 24, 2011, Camp Dresser & McKee Inc. (CDM) personnel performed annual water quality monitoring at the Haverhill Landfill (Site) in Haverhill, Massachusetts. This sampling was performed in accordance with the Interim Environmental Monitoring Plan dated November 15, 2002, approved by the Massachusetts Department of Environmental Protection (MassDEP) on December 5, 2002, and recommendations presented in the Supplemental Comprehensive Site Assessment (CSA), dated February 2009. Per a request from CDM to MassDEP dated December 28, 2009 (see Appendix A), the frequency of water quality monitoring has been reduced to an annual basis, rather than semi-annual, based on the consistency of historic results. Though a formal written response to this request was never received from MassDEP, it is CDM's understanding through discussions with MassDEP that the annual frequency is acceptable. The December 28, 2009 correspondence also included a request to reduce the number of surface water monitoring stations based on historic results and the limited number of exceedances of standards observed. As a response was never received, a complete set of surface water samples was collected. CDM will formally submit a request for reduced monitoring in the near future.

Annual Water Quality Monitoring

Between June 21 and June 24, 2011, CDM personnel performed annual water quality monitoring at the site, including the collection of surface water and groundwater samples. Water quality samples were analyzed by Absolute Resource Associates (formerly Resource Laboratories, LLC) in Portsmouth, New Hampshire. CDM has reviewed the laboratory reports and considers these facilities' procedures to be of acceptable quality for periodic monitoring and reporting.

In accordance with 310 CMR 19.132, all of the surface water and groundwater results have been compared with both the federal and state Maximum Contaminant Levels (MCLs) and Secondary Maximum Contaminant Levels (SMCLs) for drinking water. As the site is also subject to the requirements of the Massachusetts Contingency Plan (MCP), the groundwater results have also been compared with GW-3 Standards. Consistent with each well's location on the site, some results were

SDMS DocID 494746

also compared to GW-1 Standards. The GW-1 designation areas (i.e., High and Medium Yield Aquifer Areas) are shown on Figure 1, Groundwater Resources and Potential Receptors, included in Appendix B. All wells are designated GW-3 wells, and the following identifies monitoring wells which are located in the designated GW-1 area.

GW-1 Area Wells	
MW-13S	MW-15D
MW-13D	MW-16S
MW-14S	MW-18S
MW-14D	MW-18D
MW-15SR	MW-19D
MW-15M	ERT-4

Surface water sample results have also been compared with the National Recommended Water Quality Criteria (NRWQC).

In order to comply with revised MassDEP Solid Waste Management Regulations, calcium and sodium were added in October 2006 to the list of metals included in groundwater and surface water analysis.

Groundwater Monitoring

CDM collected groundwater samples from the following monitoring well locations: MW-10S/ M/D, MW-11S, MW-12S, MW-13S/D, MW-14S/D, MW-15SR/M/D, MW-16S, MW-17S, MW-18S/D, MW-19D, and ERT-4. Monitoring wells MW-9 and ERT-19 were previously added to the monitoring program in February 2008 per the Proposed Work Plan for the Supplemental CSA, dated September 2006 (prior to February 2008 these wells had not been sampled since 1995); however, these wells were removed from the sampling plan prior to the September 2009 event based on the consistency of the analytical results from these wells during the February and August 2008 rounds. All well locations are shown on Figure 2, Site Plan and Groundwater Contours – June 2011, included in Appendix B.

All groundwater monitoring wells were analyzed for alkalinity, nitrate nitrogen, total dissolved solids (TDS), chloride, sulfate, chemical oxygen demand (COD), volatile organic compounds (VOCs), calcium, sodium, arsenic, barium, cadmium, chromium, copper, iron, lead, manganese, mercury, selenium, silver, zinc, and total cyanide. Additionally, samples collected from wells located along the Merrimack River, MW-12S, MW-13S/D, MW-14S/D, and MW-18S/D, were analyzed for hardness.

Tidal Conditions

Since the Merrimack River is tidally influenced in the area of the landfill, sampling of monitoring wells adjacent to the Merrimack River and Johnson Creek is performed as close to low tide conditions as

possible. It is expected that monitoring well sampling performed during low tide would be more indicative of any contaminant concentrations in groundwater leaving the landfill rather than the background concentrations of contaminants in the river. The wells that are adjacent to the Merrimack River and require sampling at low tide are MW-12S, MW-13S/D, MW-14S/D, and MW-18S/D.

On June 22, 2011, samples were collected from well MW-12S at 11:05 a.m. and from well couplet MW-13S/D between 12:05 p.m. and 1:05 p.m. On June 23, 2011, samples were collected from MW-14S/D between 11:50 a.m. and 12:05 p.m. and from wells MW-18S and MW-18D at 12:10 p.m. and 12:50 p.m., respectively. The tidal schedule for these two days of monitoring is shown in the tidal schedule in Table 1 of Appendix C. In addition to the anticipated low tide schedule, field staff visually confirm low tide conditions prior to sampling.

Weather

No precipitation was reported within the 48-hour period prior to the monitoring event, and approximately 0.35 inches of precipitation was recorded during the monitoring period of June 21 to June 24.

Groundwater Levels

The groundwater levels for this sampling round are presented in Table 2 in Appendix C. These levels were collected on June 21, 2011 and are consistent with previous monitoring rounds. These levels were compared with the contours interpolated during the September 2009 round. The contours were updated to reflect June 2011 conditions and are included on Figure 2 located in Appendix B. Regional groundwater flow across the landfill site remains in a northeast and eastern direction toward the Merrimack River and Johnson Creek, respectively.

Groundwater Monitoring Results

Results of GW-1 Designated Wells

Sample results of wells located within the designated GW-1 area are presented in Table 3 and Table 4 located in Appendix C, with comparison to the MCP GW-1 and GW-3 standards (as updated; effective February 14, 2008) as well as the federal and state drinking water standards as required by 310 CMR 19.132. As indicated in Table 3 and Table 4, MCLs were exceeded in the following groundwater samples:

- Arsenic was detected at concentrations that exceeded the MCL in the samples collected from monitoring wells ERT-4, MW-13S, MW-13D (parent and duplicate), and MW-15M with concentrations of 630 ug/L, 170 ug/L, 150 ug/L (parent and duplicate), and 190 ug/L, respectively. These concentrations exceed both the MCL and GW-1 standard of 10 ug/L. Historically, samples collected from wells MW-13S (1.1 ug/L to 70 ug/L), MW-13D (126 ug/L to 190 ug/L), MW-14D (4.0 ug/L to 21 ug/L) , MW-15M (105 ug/L to 280 ug/L), and MW-18S (7.0 ug/L to 25 ug/L) have exhibited concentrations of arsenic in exceedance of the MCL and GW-1 standard. The arsenic

concentration in monitoring well ERT-4 was significantly greater than the September 2009 sampling result, however, is comparable to previous rounds. The arsenic concentration of 170 ug/L detected in the MW-13S sample was higher than the range of 1.1 ug/L to 70 ug/L in previous rounds. The results from the remaining wells are consistent with previous rounds, with only minor fluctuations.

As indicated in Table 3 and Table 4, SMCLs were exceeded in the following groundwater samples:

- Iron was detected at concentrations that exceed the SMCL of 300 ug/L in samples collected from wells ERT-4, MW-13S, MW-13D (parent and duplicate samples), MW-14S, MW-14D, MW-15M, and MW-18S at concentrations of 53,000 ug/L, 960 ug/L, 8,100 ug/L (8,200 ug/L in the duplicate sample), 3,700 ug/L, 760 ug/L, 43,000 ug/L, and 2,900 ug/L, respectively.

- Manganese was detected at concentrations that exceed the SMCL of 50 ug/L in the samples collected from wells ERT-4, MW-13S, MW-13D (parent and duplicate), MW-14S, MW-14D, MW-15M, MW-15D (parent and duplicate), MW-18S, MW-18D, and MW-19D at concentrations of 90 ug/L, 510 ug/L, 2,800 ug/L (2,700 ug/L in the duplicate sample), 430 ug/L, 270 ug/L, 400 ug/L, 220 ug/L (210 ug/L in the duplicate sample), 90 ug/L, 300 ug/L, and 250 ug/L, respectively.

- Sodium was detected at concentrations that exceed the SMCL of 20,000 ug/L in the samples collected from wells ERT-4, MW-13D (parent and duplicate), MW-14S, MW-14D, MW-15SR, MW-15M, MW-15D (parent and duplicate), MW-16S, and MW-18S at concentrations of 53,000 ug/L, 120,000 ug/L (parent and duplicate samples), 23,000 ug/L, 52,000 ug/L, 22,000 ug/L, 69,000 ug/L, 46,000 ug/L (45,000 ug/L in the duplicate sample), 29,000 ug/L, and 22,000 ug/L, respectively.

- TDS was detected at concentrations that exceed the SMCL of 500 ug/L in samples collected from wells ERT-4, MW-13D, and MW-15M at concentrations of 700 ug/L, 880 ug/L, and 700 ug/L, respectively.

- pH was measured at 6.03, 5.56, 6.07, 6.18, 6.30, 5.50, and 6.12 in samples collected from wells MW-13S, MW-14S, MW-15SR, MW-15D, MW-16S, MW-18S, and MW-18D, respectively. These measurements do not fall within the specified SMCL pH range of 6.5 to 8.5.

- 1,4-Dioxane was detected in samples collected from well MW-13D (parent and duplicate) at concentrations of 65 ug/L and 74 ug/L. These concentrations exceed the Massachusetts SMCL of 0.3 ug/L and GW-1 standard of 3 ug/L. 1,4-Dioxane was previously detected at this location during each round since August 2008 in exceedance of applicable Massachusetts standards.

Results of GW-3 Designated Wells

The results from the GW-3 wells are presented in Table 5 and Table 6 located in Appendix C where they are compared to the GW-3 standards (as updated; effective February 14, 2008) and federal and

state drinking water standards as required by 310 CMR 19.132. As indicated in Table 5 and Table 6, MCLs were exceeded in the following groundwater samples:

- Arsenic was detected above the MCL of 10 ug/L in the samples collected from wells MW-10M and MW-10D with concentrations of 32 ug/L and 18 ug/L, respectively. However, these concentrations do not exceed the GW-3 standard of 900 ug/L. Monitoring wells MW-10M/D have historically exhibited high arsenic concentrations in the past with values ranging between 22 ug/L and 44 ug/L. Therefore, these results are consistent with historical results.

- There were no MCL or GW-3 standard exceedances in samples collected for VOC analysis.

As indicated in Tables 5 and Table 6, SMCLs were exceeded in the following groundwater samples:

- Iron was detected at a concentration that exceeds the SMCL of 300 ug/L in the sample collected from well MW-11S at a concentration of 660 ug/L.

- Manganese was detected at concentrations that exceed the SMCL of 50 ug/L in the samples collected from wells MW-10M, MW-10D, and MW-11S at respective concentrations of 90 ug/L, 70 ug/L, and 110 ug/L.

- pH was measured at 5.27, 6.28, 5.20, and 6.05, in samples collected from wells MW-10S, MW-10D, MW-12S, and MW-17S, respectively. These measurements do not fall within the specified SMCL pH range of 6.5 to 8.5.

- There were no SMCL exceedances for VOCs in the samples collected for analysis.

As stated in the prior Water Quality Monitoring Report, PCBs, pesticides, and SVOC analyses are no longer performed as they were previously removed from the monitoring program due to the lack of MCL, SMCL, GW-1 and GW-3 Standard exceedances.

Surface Water Monitoring

On June 22, 2011, CDM collected surface water samples from the following locations: SW-100, SW-101, SW-103, and SW-104 through SW-112. Surface water location SW-102, located in the wetlands to the west of the Northern Mound, could not be sampled since it was dry. Off-site surface water sampling locations SW-115 and SW-116 were removed from the sampling plan prior to the September 2009 round, as proposed in the February 2009 Supplemental CSA. Surface water sampling locations are shown on Figure 2 in Appendix B, except surface water sampling locations SW-103, SW-110, and SW-111 which are beyond the boundaries of the site plan and are shown on Figure 3, Off-Site Surface Water Sample Locations, included in Appendix B. The analytical results of the surface water sampling are presented in Table 7, included in Appendix C.

As with the groundwater monitoring results, 310 CMR 19.132 requires surface water results to be compared to the federal and state drinking water MCLs and SMCLs. In addition to those standards, all of the surface water results have been compared to EPA's National Recommended Water Quality Criteria (NRWQC). Hardness is factored into calculating the NRWQC standards for cadmium, chromium, copper, lead, nickel, silver, and zinc. Table 7 in Appendix C presents the hardness dependent standards calculated using the hardness result from this sampling round for each individual surface water sampling location.

The GW-1, GW-2, and GW-3 Standards established by the Massachusetts Contingency Plan (MCP) were not used as a comparison, since these standards only apply to groundwater.

All surface water samples were analyzed for alkalinity, nitrate nitrogen, TDS, chloride, sulfate, COD, calcium, sodium, aluminum, arsenic, barium, cadmium, chromium, copper, iron, lead, manganese, mercury, nickel, selenium, silver, zinc, total cyanide, and hardness. Effective following the March 2006 sampling round, VOC testing of surface water was eliminated.

Surface Water Monitoring Results

As indicated in Table 7 there were no MCL exceedances in any of the surface water samples collected in June 2011.

As summarized in Table 7, SMCLs were exceeded in the following water samples:

- Iron was detected in the sample collected from location SW-109 at a concentration of 350 ug/L, exceeding the SMCL of 300 ug/L.
- Manganese was detected at concentrations exceeding the Massachusetts SMCL of 50 ug/L in samples collected from surface water locations SW-105, SW-107, SW-108, and SW-112, at concentrations of 100 ug/L, 80 ug/L, 100 ug/L, and 60 ug/L, respectively.
- Sodium was detected at concentrations exceeding the Massachusetts SMCL of 20,000 ug/L in samples collected from surface water locations SW-101, SW-103, SW-104, SW-109 (parent and duplicate), SW-110, and SW-111 (parent and duplicate), at concentrations of 27,000 ug/L, 27,000 ug/L, 27,000 ug/L, 34,000 ug/L (38,000 ug/L in the duplicate sample), 23,000 ug/L, and 26,000 ug/L (27,000 ug/L in the duplicate sample), respectively.

NRWQC were exceeded in the following surface water samples:

- Total Alkalinity exceeded the NRWQC of 20 mg/L at SW-100, SW-105, SW-106, SW-107, SW-108, SW-109, SW-111, and SW-112 with concentrations of 62 mg/L, 33 mg/L, 31 mg/L, 31 mg/L, 33 mg/L, 45 mg/L, 34 mg/L, and 28 mg/L, respectively.

- Although the lab followed standard operating procedures for this event, reporting limits for cadmium, chromium (total), copper, lead, nickel, selenium, silver, and zinc exceeded NRWQC standards for multiple surface water sampling stations. CDM will work with the analytical laboratory for future rounds to assure that the laboratory achieves the lowest reporting limits possible.

The lab results and chains of custody for the groundwater and surface water monitoring are included in Appendix D.

Interpretation of Water Quality Monitoring Results

The following discusses in further detail the interpretation of water quality results.

Analytical Results

The groundwater analytical results during the June 2011 sampling event are consistent when compared to historic data collected during and subsequent to previous CSA investigations. The concentrations of arsenic detected in site-wide samples collected from background wells (MW-10S, MW-10M, MW-10D), the well in the wetland swale to the west of the Southern Mound (MW-11S), wells along the Merrimack River (MW-12S, MW-13D, MW-14S, MW-14D, MW-18S, MW-18D), and wells along Johnson Creek (MW-15SR, MW-15M, MW-15D, MW-16S, MW-17S, and MW-19D) during the June 2011 sampling event are on the same order of magnitude as prior results. The arsenic concentration in monitoring well ERT-4, located along Johnson Creek, was significantly greater than the September 2009 result; however, the September 2009 result appears to be an anomaly, and therefore the June 2011 result is comparable to previous rounds. The most recent arsenic concentration detected in the MW-13S sample was significantly higher than several previous rounds since interim monitoring began. A mild arsenic plume segment is believed to exist in the vicinity of the MW-13 cluster, as previously documented in the Supplemental CSA.

As is typically observed, iron and manganese concentrations detected in site-wide groundwater monitoring wells remained consistent or with minor fluctuations when compared to previous sampling rounds.

Sodium

Exceedances of the SMCL were observed for sodium in a number of monitoring wells along the Merrimack River, Johnson Creek, and Aggregate's former batch plant property, with concentrations ranging from 22,000 ug/L to 120,000 ug/L. Salinity from tidal influences in the Merrimack River and Johnson Creek may account for the sodium present in monitoring wells located along the river and creek (MW-13D, MW-14S/D, MW-15SR/M/D, and MW-18S). Monitoring wells ERT-4, MW-16S, and MW-19D are located in the vicinity of Aggregate's former batch plant operations and elevated concentrations of sodium in these wells may be due to salting of access roads in this area.

Detections of sodium exceeding the SMCL were also observed in surface water samples collected from locations along the Merrimack River upgradient and adjacent to the site (SW-101, SW-103, SW-104, SW-110, and SW-111) and in the tributary to Johnson Creek (SW-109) with concentrations ranging from 23,000 ug/L to 38,000 ug/L. In addition to these aforementioned locations, concentrations observed at locations along Johnson Creek (SW-105, SW-106, SW-107, SW-108, and SW-112) historically fluctuate above and below the SMCL but decreased during the June 2011 round with concentrations ranging between 15,000 ug/L and 18,000 ug/L. Sodium concentrations at surface water sampling locations may also be due to tidal influence or roadway runoff, depending on the monitoring location. SW-100, located in the wetland swale to the west of the Southern Mound, is the sole location still sampled at which sodium concentrations have consistently remained below the SMCL likely because it is not tidally influenced or in the vicinity of the access road.

Hardness

Hardness was determined for the surface water monitoring stations, as it factors into the calculations for determining NRWQC for cadmium, chromium, copper, lead, nickel, silver, and zinc. The hardness values analyzed by the laboratory are shown on Table 7 in Appendix C. Also shown in Table 7 are the calculated average hardness values for each surface water station (Merrimack River, Johnson Creek, confluence of Merrimack River and Johnson Creek, and the swale) based on sampling conducted at each location during the June 2011 sampling event. In general, the laboratory determined hardness values for the surface water stations located in the Merrimack River (SW-101, SW-103, SW-104, SW-110, and SW-111) are similar, ranging between 30 mg/L and 32 mg/L. For surface water stations along Johnson Creek (SW-106, SW-107, SW-108, SW-109, and SW-112), the laboratory hardness values ranged between 47 mg/L and 80 mg/L. This may be reflective of the higher calcium concentrations in Johnson Creek, also a likely component of road salts. Sampling location SW-100 is located within the wetlands on the eastern edge of the site, with a hardness value of 99 mg/L. Sampling location SW-105 is located at the confluence of the Merrimack River and Johnson Creek, with a hardness value of 53 mg/L.

VOCs

With the exception of 1,4-dioxane at MW-13D above applicable standards, VOCs continue to remain below laboratory reporting limits or detected at trace concentrations in all site-wide groundwater monitoring well locations.

Recommendations

Results discussed above indicate that groundwater and surface water quality at the Haverhill Landfill has generally remained consistent with historic data. Arsenic, iron, and manganese concentrations in groundwater and surface water continue to indicate some impacts from the landfill, but arsenic continues to remain the primary constituent of concern. In consideration of the above results and

conclusions based on prior monitoring results, the following recommendations for future sampling are provided:

- Continued sampling at an annual frequency with reduced surface water sampling stations, per the December 28, 2009 correspondence to MassDEP "Request for Reduction in Scope – Interim Environmental Monitoring Plan." CDM will submit this monitoring program as a BWP SW-45 permit application. Sampling parameters for both groundwater and surface water will also be identified in the permit application.

- Review surface water detection limits to ensure that hardness dependent parameters reach required detection limits.

Please do not hesitate to call me at (617) 452 6532 if you have any questions.

Very truly yours,

Andrew B. Miller, P.E.
Associate
Camp Dresser & McKee Inc.

Enclosures

cc: Janet Waldron - MassDEP, Boston
Abdul Turay - MassDEP, Boston
Derrick Golden - EPA Region I
Robert Ward – Haverhill Water/Wastewater Division
Dennis Lydon - Aggregate Industries
Scott Colby – Aggregate Industries
Michael Leon, Esq. - Nutter, McClennen & Fish, LLP
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Craig Campbell, Esq. - Aggregate outside counsel
Bruce Haskell - CDM
William Swanson, LSP - CDM
Haverhill Information Repository
File: CSA/4.4.5f.xxix

Appendix A

CDM Letter to MassDEP dated December 28, 2009

One Cambridge Place, 50 Hampshire Street
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December 28, 2009

Mr. John A. Carrigan
Section Chief, Solid Waste Management
Department of Environmental Protection
Northeast Regional Office
205B Lowell Street
Wilmington, Massachusetts 01887

Subject: Request for Reduction in Scope - Interim Environmental Monitoring Plan
Haverhill Landfill
Haverhill, Massachusetts

Dear Mr. Carrigan:

On behalf of the City of Haverhill (the City) and Aggregate Industries-Northeast Region, Inc. (Aggregate), Camp Dresser & McKee Inc. (CDM) requests your approval of proposed reductions in scope to the Interim Environmental Monitoring Program at the Haverhill Landfill. Presented below is background information on the current program, followed by specific requests to: (1) reduce the frequency of semiannual water quality monitoring to an annual basis; and, (2) reduce the number of surface water monitoring stations. Please note that no change to the quarterly landfill gas-monitoring program is requested at this time.

Monitoring Plan Background

Environmental monitoring has continued at the Haverhill Landfill since the Massachusetts Department of Environmental Protection (MassDEP) issued a conditional approval of the Comprehensive Site Assessment (CSA) on September 9, 2002. Implementation initially proceeded in accordance with CDM's Interim Environmental Monitoring plan dated November 15, 2002 which was approved by MassDEP in correspondence of December 5, 2002. This program included sampling of 14 monitoring wells and ten surface water stations (see Table 1 and Figure 1) for metals, general chemistry parameters, and volatile organic compounds (VOCs).

Based on a May 9, 2005 request by CDM, analysis of VOCs in surface water samples was eliminated following the March 2006 monitoring round, as approved in MassDEP correspondence dated June 2, 2005. Also in 2005, CDM incorporated surface water station SW-112 upgradient along Johnson Creek, recognizing that the upgradient location SW-109 was on a tributary to Johnson Creek.

As part of the Supplemental Comprehensive Site Assessment (CSA), three additional monitoring wells were installed and three existing site monitoring wells were re-activated for sampling. Sampling of these wells occurred twice during 2008 for metals, general chemistry parameters, VOCs, SVOCs, pesticides and PCBs.

Recently, CDM submitted a report (November 17, 2009) presenting the semi-annual water quality monitoring results of September 2009.

Water Quality Review

The Supplemental CSA (CDM, February 2009) summarized in table form (Appendix F) historic water quality data for metals, general chemistry parameters and VOC s for all monitoring wells and surface water stations from December 2002 through 2008. Appendix F of the Supplemental CSA also presented PCB, pesticide and SVOC data for additional monitoring wells added to the CSA sampling schedule in 2008.

Figure 5-9 of the Supplemental CSA identified parameters exceeding applicable standards for all groundwater and surface water stations sampled in February and August 2008. The 2008 data indicated no exceedances of standards in surface water except copper at SW-104 in the Merrimack River (concentration of 6.6 ug/L compared to NRWQC of 6 ug/L). September 2009 sampling revealed a slight copper exceedance of the NRWQC at SW-104 and SW-106. In groundwater, only arsenic concentrations consistently exceeded standards. Other parameters occurring in site groundwater exceeding standards included iron, manganese, sodium, cadmium and total dissolved solids. VOC occurrence in groundwater has been intermittent with only a few minor exceedances of standards. SVOCs, PCBs and pesticide results in groundwater have consistently been below laboratory detection limits or detected at trace concentrations.

Proposed Environmental Monitoring Program

Based on historical water quality sampling results, the following revisions are proposed to the interim monitoring program, as outlined in Table 1.

- ***Reduce the frequency of semiannual water quality monitoring to an annual basis:*** Based on the consistent results of water quality monitoring over the last seven years and few exceedances of standards, we are requesting a reduction in sampling frequency to an annual basis. As sampling was just conducted in September 2009, the next monitoring round would occur in September 2010. This will be prior to the start of closure construction of the Southern Mound. A proposed monitoring program will be submitted with the final Corrective Action Design (CAD) for the Southern Mound to address monitoring requirements during closure construction as well as during the post-closure monitoring period.

- ***Reduce the number of surface water samples:*** As surface water data shows very few exceedances of standards, we are requesting that the number of surface water samples collected be reduced to five samples. These locations are outlined in Table 1 and shown on Figure 1. Rational for the five proposed surface water stations is as follows:

CDM

- SW-104 - Located within the Merrimack River near MW-13S/D, this station would continue to provide an indication of any potential contaminant discharge direct from the landfill to the river;
- SW-105 - Located at the river/creek confluence, this station serves as a direct downgradient location to groundwater flow from the landfill and also a downgradient location along Johnson Creek;
- SW-108 - Located within the creek at the National Grid corridor, this station would detect any groundwater contaminant migration moving east from the landfill and discharging into the creek, particularly arsenic;
- SW-106 - A sample location in Johnson Creek, upgradient of the landfill site; and,
- SW-100 - A sample location within the wetland west of the landfill.

Thank you in advance for your consideration of this proposed reduction in the Interim Environmental Monitoring program at the Haverhill Landfill. If you require more information or have questions about this request, please call me at 617-452-6532.

Very truly yours,

Andrew B. Miller, P.E.
Associate
Camp Dresser & McKee Inc.

Attachments

cc: Abdul Turay, MassDEP-NERO
Janet Waldron, MassDEP-Boston
Derrick Golden, EPA Region I
Robert Ward, Haverhill Water/Wastewater Division
Dennis Lydon, Aggregate Industries
Scott Colby, Aggregate Industries
Michael Leon, Esq., Nutter McClennen & Fish
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Craig Campbell, Esq., outside counsel to Aggregate
Bruce Haskell, CDM
William Swanson, LSP, CDM
Information Repository
Files: CSA/4.4.5e

Table 1
Interm Environmental Monitoring
Haverhill Landfill

Monitoring Station	Description of Monitoring Station Location	Approved Interim Environmental Monitoring Plan (2002)	Incorporated for Supplemental CSA (2008)	Proposed Interim Environmental Monitoring Plan (December 2009)	
Monitoring Wells					
MW-10S/M/D	southwest corner	√		√	Alkalinity Total Dissolved Solids (TDS) Nitrate-Nitrogen Cyanide Sulfate Chloride Calcium Sodium Chemical Oxygen Demand (COD) Hardness Metals (1) Field Parameters (2) VOCs
MW-11S	west of Southern Mound	√		√	
MW-12S	northwest of Northern Mound	√		√	
MW-13S/D	floodplain of Merrimack River	√		√	
MW-14S/D	floodplain of Merrimack River	√		√	
MW-15SR/M/D	northeast of Southern Mound, along Johnson Creek	√		√	
MW-16S	east of Southern Mound	√		√	
MW-17S	southeast of Southern Mound	√		√	
MW-9	floodplain of Merrimack River		√		
ERT-19	east of Southern Mound, along Johnson Creek		√		
ERT-4	east of Southern Mound, along Johnson Creek		√	√	
MW-19D	east of Southern Mound, along Johnson Creek		√	√	
MW-18S/D	northeast of Northern Mound at confluence of Merrimack River and Johnson Creek		√	√	
Surface Water Stations					
SW-100	swale west of Southern Mound	√		√	Alkalinity Total Dissolved Solids (TDS) Nitrate-Nitrogen Cyanide Sulfate Chloride Calcium Sodium Chemical Oxygen Demand (COD) Hardness Metals (1) Field Parameters (2)
SW-101	Merrimack River near wetland swale outlet	√			
SW-102	wetland west of Northern Mound	√			
SW-103	Merrimack River upgradient of landfill	√			
SW-104	Merrimack River along Northern Mound	√		√	
SW-105	confluence of Johnson Creek and Merrimack River	√		√	
SW-106	Johnson Creek - background	√		√	
SW-107	Johnson Creek	√			
SW-108	Johnson Creek at National Grid Corridor	√			
SW-109	upgradient tributary to Johnson Creek - background	√			
SW-112	Johnson Creek - upgradient	√*			

* Added in 2005 as SW-109 is an upgradient tributary to Johnson Creek

(1) Metals: arsenic, barium, cadmium, chromium, copper, iron, lead, manganese, mercury, selenium, silver, zinc

(2) Field parameters: pH, specific conductivity, temperature, dissolved oxygen

Filename: PW_XM1\0522\37609\04 DESIGN SERV. NM_5%\01GENERAL\10CADD\CSTPL110.DWG Xref's: [SITEBASF,] Plotted: BRIGGSAR

[HAVERHILL, MA – LANDFILL SITE ASSESSMENT]

LEGEND

	EDGE OF WASTE (APPROX.)
	PROPERTY LINE
	WETLANDS DELINEATION LINE
SW/SED-109	SURFACE WATER/SEDIMENT SAMPLING LOCATION
MW-17S EL. 18.52	GROUNDWATER MONITORING WELL LOCATION
CDM-2	LANDFILL GAS MONITORING WELL LOCATION
VENT 22	LANDFILL GAS VENT LOCATION
SGP-2	LANDFILL SOIL GAS PROBE LOCATION
ID NUMBER	PROPOSED STATIONS FOR INTERIM ENVIRONMENTAL MONITORING AS PROPOSED TO MASSDEP IN DECEMBER 2009

NOTES:

1. TOPOGRAPHIC PLAN PREPARED BY EASTERN TOPOGRAPHICS FOR THE CITY OF HAVERHILL AND REFLECTS EXISTING GROUND CONDITIONS ON APRIL 13, 1992.
2. PROPERTY SURVEY AND FIELD SURVEY CONDUCTED BY RICHARD F. KAMINSKI & ASSOCIATES, INC., LAWRENCE, MASSACHUSETTS. PROPERTY LINE PLAN PREPARED ON NOVEMBER 16, 1992. SEVERAL OF THE PROPERTY LINES WERE DEVELOPED FROM AN UNDATED CITY ASSESSOR'S MAP AND THE PROPERTY LINES ARE APPROXIMATE.
3. ELEVATION DATUM IS BASED ON THE MEAN SEA LEVEL DATUM (MSL).
4. EDGE OF WASTE ALONG MERRIMACK RIVER BASED ON PREVIOUS INVESTIGATIONS AND SITE VISITS.

1" = 340'
170 0 340

REV. NO.	DATE	DRWN	CHKD	REMARKS
1	01/09	D. VAN SCHALKWYK	A. MILLER	REVISED FOR WORK PLAN FOR ECOLOGICAL RISK ASSESSMENT
2	11/09	A. RUSSELL BRIGGS	A. MILLER	REVISED FOR DECEMBER 2009 INTERIM ENVIRONMENTAL MONITORING

DESIGNED BY: J. KEEFE
DRAWN BY: F. CONTRERAS
SHEET CHK'D BY: J. KEEFE
CROSS CHK'D BY: A. MILLER
APPROVED BY: A. MILLER
DATE: JANUARY 2009

CDM Camp Dresser & McKee

CITY OF HAVERHILL, MASSACHUSETTS
& AGGREGATE INDUSTRIES
HAVERHILL, MASSACHUSETTS

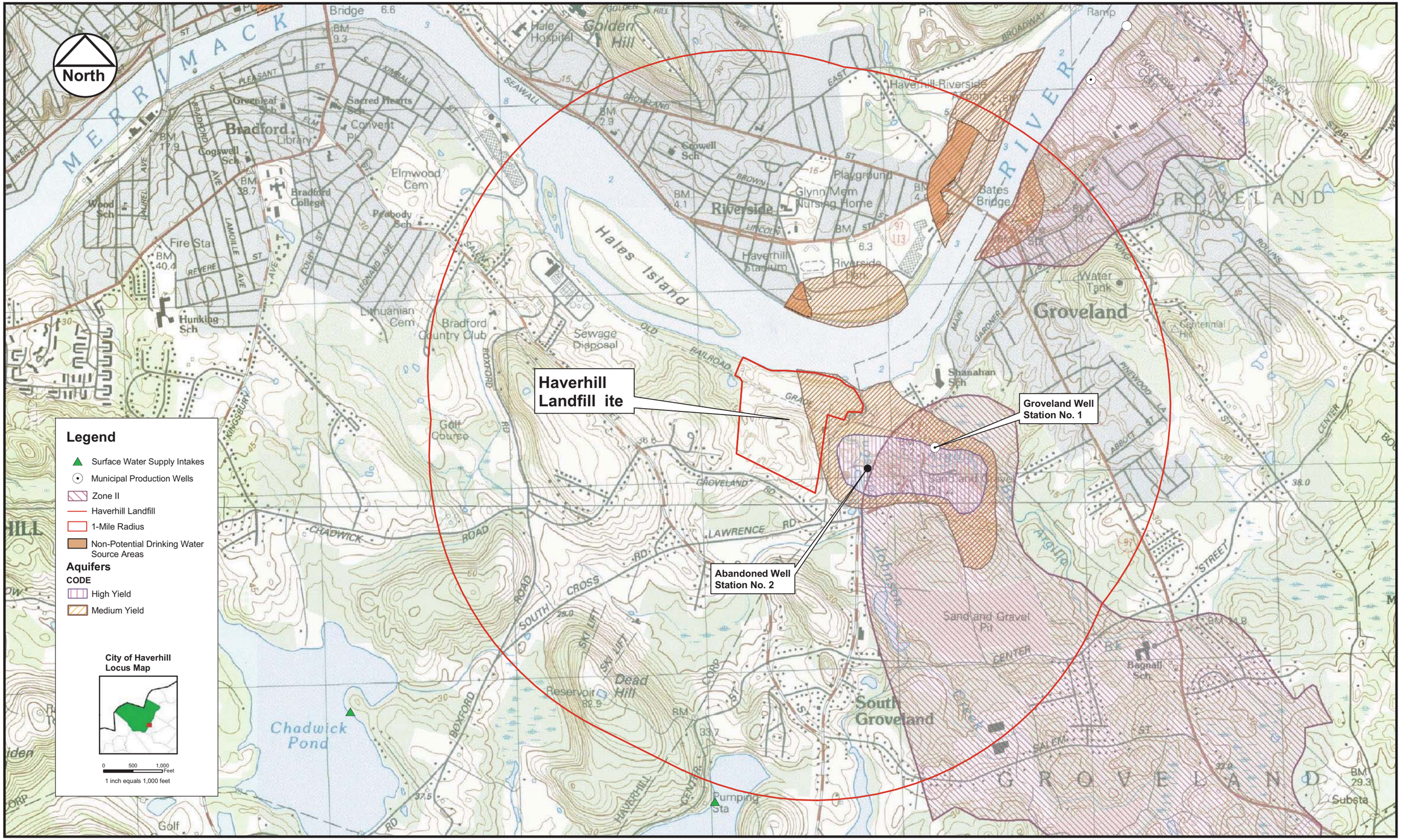
PROPOSED INTERIM ENVIRONMENTAL MONITORING – DECEMBER 2009 HAVERHILL LANDFILL CLOSURE PROJECT

PROJECT NO. 0522-37609
FILE NAME: CSTPL110

FIGURE NO.
1

Appendix B

Figures

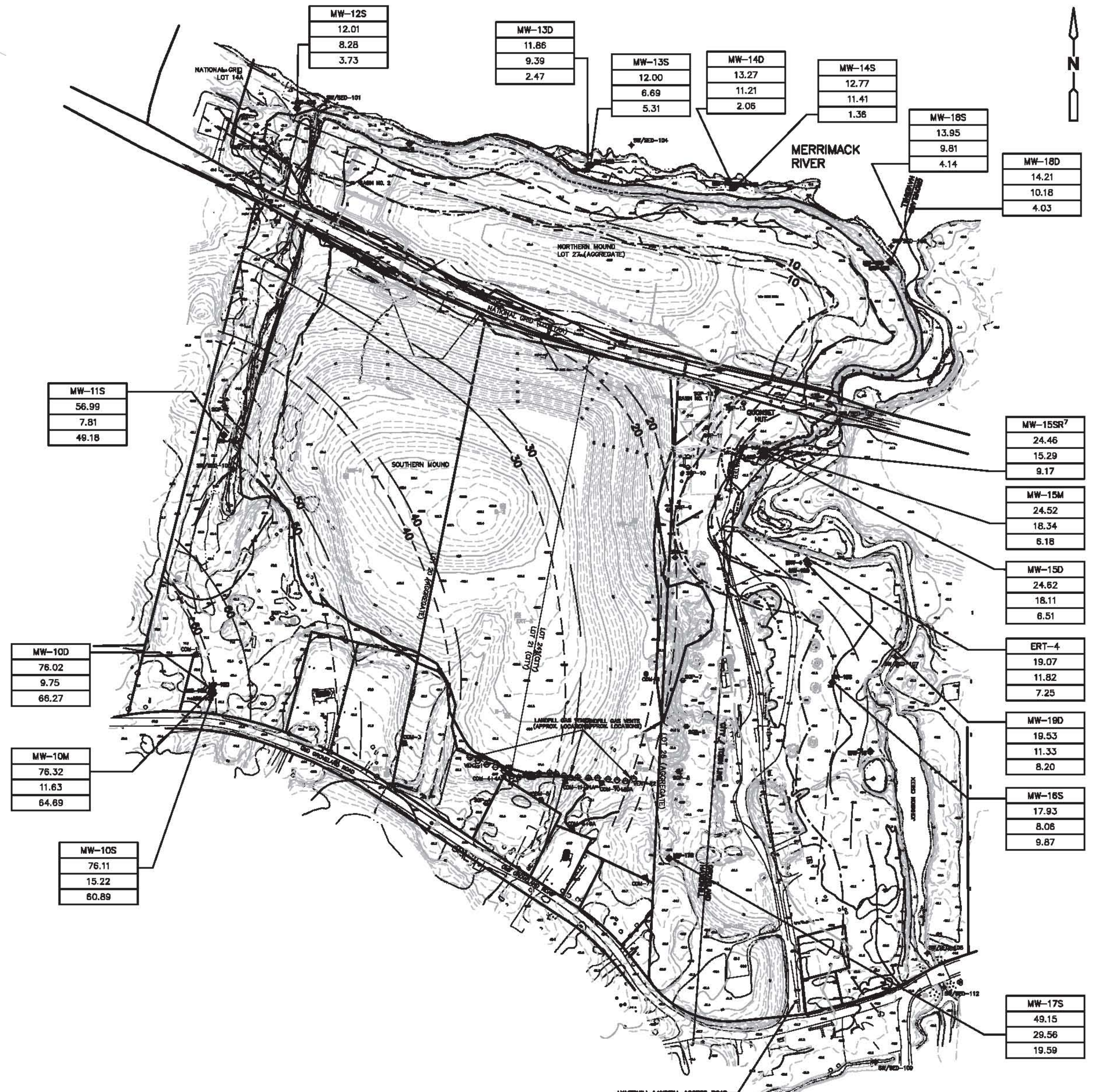


Haverhill Municipal Landfill Closure Project
Haverhill, Massachusetts

Figure 1
Groundwater Resources and Potential Receptors

CDM

Filename: S:\0522\83058\04 DESIGN SERVICES NM_100%\02 CIVIL\10 CADD\CSTPL009.DWG Xref's: [XSTPL000-REV] Plotted by: GRYSZKIEWICZSME Time: 9/08/2011 11:30:00 AM [HAVERHILL, MA – LANDFILL SITE ASSESSMENT]



LEGEND

- EDGE OF WASTE (APPROX.)
- PROPERTY LINE
- BORDERING VEGETATED WETLAND LINE
- INLAND BANK LINE
- NON-JURISDICTIONAL/ISOLATED WETLAND LINE
- LIMIT OF 100-FOOT BUFFER ZONE
- LIMIT OF 200-FOOT RIVERFRONT AREA
- LIMIT OF 100 YEAR FLOODPLAIN
- LIMIT OF TOWN OF GROVELAND 100-FOOT BUFFER ZONE TO LAND SUBJECT TO FLOODING
- 10' CONTOUR – PRIOR TO GRADING AND SHAPING PROJECTS
- 2' CONTOUR – PRIOR TO GRADING AND SHAPING PROJECTS
- SPOT ELEVATION – PRIOR TO GRADING AND SHAPING PROJECT
- TREE LINE
- WATER SERVICE
- CITY OF HAVERHILL/ TOWN OF GROVELAND BOUNDARY
- LOT LINE
- FENCE
- DRAINAGE PIPE
- STONE BOUND
- UTILITY POLE
- OVERBURDEN GROUNDWATER CONTOUR (FT-MSL)
- BEDROCK GROUNDWATER CONTOUR (FT-MSL)
- COM-1 LANDFILL GAS MONITORING WELL
- SW/SED-109 SURFACE WATER/SEDIMENT SAMPLING LOCATION
- MW-19D GROUNDWATER MONITORING WELL LOCATION
- VENT 22 LANDFILL GAS VENT LOCATION
- SGP-2 LANDFILL SOIL GAS PROBE LOCATION

Monitoring Well Number	MW-10S
Elevation to Top of PVC Casing (ft. NGVD)	76.11
Depth to Water (ft.)	15.22
GW Elevation (ft. NGVD)	60.89

NOTES

1. TOPOGRAPHIC PLAN PREPARED BY EASTERN TOPOGRAPHICS FOR THE CITY OF HAVERHILL AND REFLECTS EXISTING GROUND CONDITIONS ON APRIL 13, 1992.
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3. ELEVATION DATUM IS BASED ON THE MEAN SEA LEVEL DATUM (MSL).
4. EDGE OF WASTE ALONG MERRIMACK RIVER BASED ON PREVIOUS INVESTIGATIONS AND SITE VISITS.
5. GROUNDWATER ELEVATIONS AT EACH WELL MEASURED ON JUNE 21, 2011.
6. GROUNDWATER CONTOURS SHOWN REFLECT SITE CONDITIONS BASED ON PREVIOUS DATA. GROUNDWATER ELEVATIONS COLLECTED IN JUNE 2011 ARE CONSISTENT.
7. MW-15SR REPLACED MW-15S IN NOVEMBER 2004, AND WAS SUBSEQUENTLY SURVEYED BY RICHARD F. KAMINSKI & ASSOCIATES, INC. DURING THE FALL OF 2005. THIS PLAN REFLECTS THE UPDATED TOP OF PVC ELEVATION. WELLS MW-16S/D, MW-19D, ERT-4, ERT-19 AND MW-9 WERE SURVEYED IN MARCH/APRIL 2006.

1" = 340'
170 0 340

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: S. GRYSZKIEWICZ
DRAWN BY: S. GRYSZKIEWICZ
SHEET CHK'D BY: N. JONES
CROSS CHK'D BY: A. MILLER
APPROVED BY: A. MILLER
DATE: SEPTEMBER 2011

CDM Camp Dresser & McKee

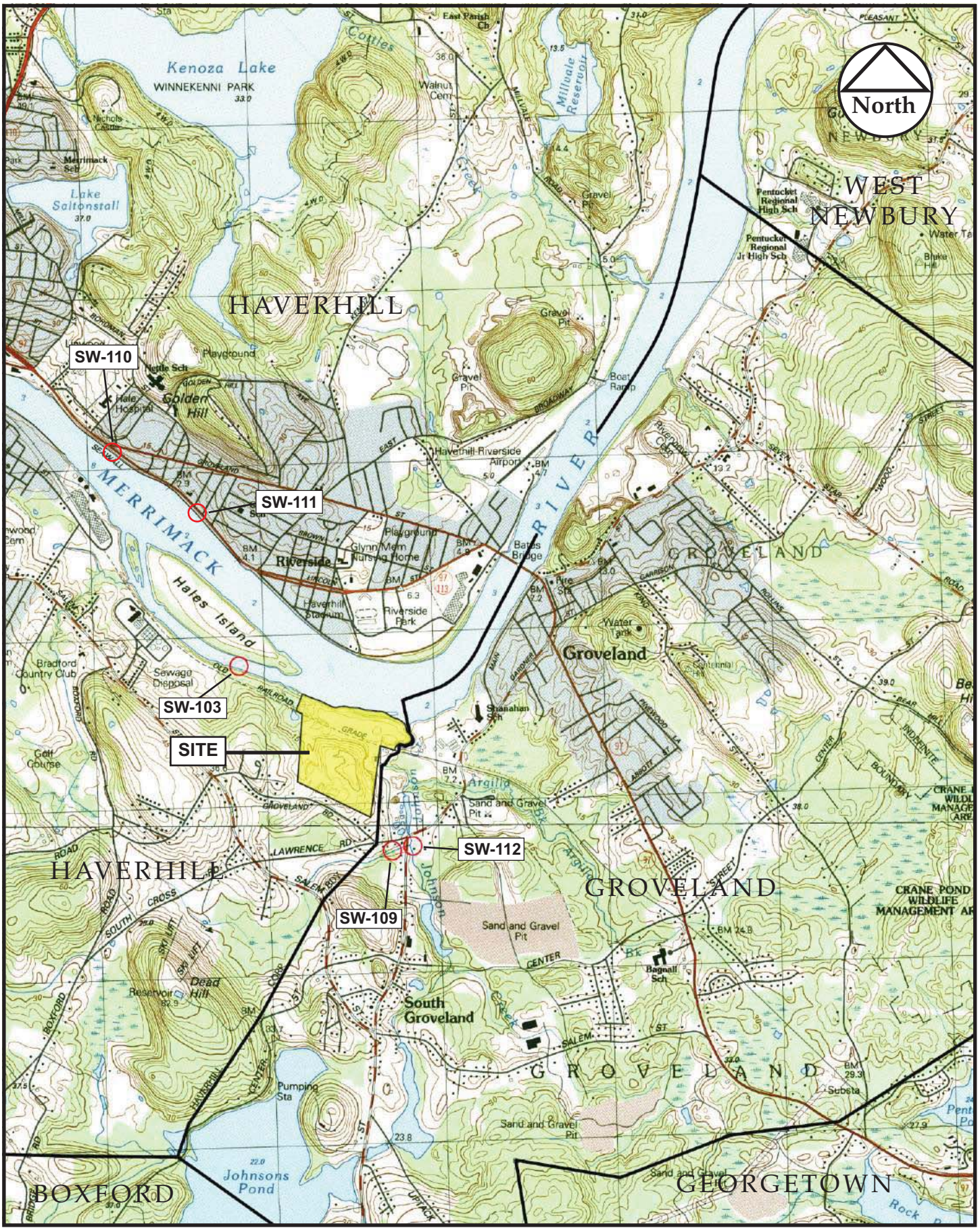
CITY OF HAVERHILL
HAVERHILL, MASSACHUSETTS

INTERIM MONITORING PROGRAM

SITE PLAN AND GROUNDWATER CONTOURS
JUNE 2011

PROJECT NO. 0522/37606/46134
FILE NAME: CSTPL009

2



0 2000 4000
Scale in Feet

○ = Off-Site Surface Water Sample Location

Haverhill Municipal Landfill Project
Haverhill, Massachusetts

CDM

Figure 3
Off-Site Surface Water Sample Locations

Appendix C

Tables

Table 1

Tidal Schedule at the Merrimack River Entrance, Massachusetts[1]

Interim Monitoring - June 2011

Haverhill Landfill, Haverhill, Massachusetts

42.8167°N, 70.8167°W

Date	Time (EDT)[2]	Height (feet)	High or Low Tide
6/22/2011	**4:56**	7.75	High Tide
6/22/2011	**11:53**	0.73	Low Tide
6/22/2011	**17:32**	7.63	High Tide
6/23/2011	**0:20**	1.32	Low Tide
6/23/2011	**5:47**	7.38	High Tide
6/23/2011	**12:40**	1.04	Low Tide
6/23/2011	**18:20**	7.59	High Tide
6/24/2011	**1:15**	1.40	Low Tide
6/24/2011	**6:41**	7.07	High Tide
6/24/2011	**13:28**	1.30	Low Tide
6/24/2011	**19:09**	7.59	High Tide

[1] Source: Massachusetts Marine Trades Association

[2] Tides at site assumed to be 1 to 3 hours behind tides shown.

Table 2
Summary of Groundwater Elevations
Interim Monitoring - June 21, 2011
Haverhill Landfill, Haverhill, Massachusetts

Monitoring Well Number	Elevation to Top of PVC Casing [1] (ft. NGVD)	Depth to Water [2] (ft.)	Groundwater Elevation (ft. NGVD)
ERT-4	19.07	11.82	7.25
MW-10S	76.11	15.22	60.89
MW-10M	76.32	11.63	64.69
MW-10D	76.02	9.75	66.27
MW-11S	56.99	7.81	49.18
MW-12S	12.01	8.28	3.73
MW-13S	12.00	6.69	5.31
MW-13D	11.86	9.39	2.47
MW-14S	12.77	11.41	1.36
MW-14D	13.27	11.21	2.06
MW-15SR	24.46	15.29	9.17
MW-15M	24.52	18.34	6.18
MW-15D	24.62	18.11	6.51
MW-16S	17.93	8.06	9.87
MW-17S	49.15	29.56	19.59
MW-18S	13.95	9.81	4.14
MW-18D	14.21	10.18	4.03
MW-19D	19.53	11.33	8.20

Notes

(1) Elevation as surveyed by Kaminski & Associates Inc. during winter 2000, with the exception of well MW-15SR that was surveyed by Kaminski & Associates Inc. during fall 2005, wells MW-18S/D and MW-19D that were surveyed by ASEC Corporation on 3/24/08, and well ERT-4 that was surveyed by ASEC Corporation on 4/07/08.

(2) Depth to water measured from top of PVC casing

Table 3
Groundwater Sampling Results for GW-1 Wells
Metals, Conventional and Field Parameters
June 2011
Haverhill Landfill, Haverhill, Massachusetts

				SAMPLING DATE	6/23/2011	6/22/2011	6/22/2011	6/22/2011	6/23/2011	6/23/2011	6/23/2011
				RES LABORATORY SAMPLING NUMBER	21858-008	21842-002	21842-003	21842-007	21858-004	21858-005	21858-001
				CDM SAMPLING NUMBER	**ERT-4***	**MW-13S***	**MW-13D***	**MW-13D***	**MW-14S***	**MW-14D***	**MW-15SR***
METALS	***MA and EPA DRINKING WATER STANDARDS [11,12,15]***	***MCP GW-1 STANDARDS [13]***	***MCP GW-3 STANDARDS [13]***	***UNITS***				Duplicate			
Arsenic	10 (1,3)	10	900	ug/L	630	170	150	150	9	10	< 8
Barium	2,000 (1,3)	2,000	50,000	ug/L	310	110	190	190	140	< 50	< 50
Cadmium	5 (1,3)	5	4	ug/L	< 4	< 4	< 4	< 4	< 4	< 4	< 4
Calcium	NL	NL	NL	ug/L	76,000	62,000	120,000	120,000	100,000	33,000	50,000
Chromium (total)	100 (1,3)	100	300	ug/L	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Copper	1,000 (2,4)	NL	NL	ug/L	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Iron	300 (2,4)	NL	NL	ug/L	53,000	960	8,100	8,200	3,700	760	< 50
Lead	15 (1,3,10)	15	10	ug/L	< 8	< 8	< 8	< 8	< 8	< 8	< 8
Manganese	50 (2,4)	NL	NL	ug/L	90	510	2800	2700	430	270	50
Mercury	2 (1,3)	2	20	ug/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Selenium	50 (1,3)	50	100	ug/L	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Silver	100 (2,4)	100	7	ug/L	< 7	< 7	< 7	< 7	< 7	< 7	< 7
Sodium	20,000 (2)	NL	NL	ug/L	53,000	15,000	120,000	120,000	23,000	52,000	22,000
Zinc	5,000 (2,4)	5,000	900	ug/L	< 50	< 50	< 50	< 50	< 50	< 50	< 50
CONVENTIONAL PARAMETERS											
Total Dissolved Solids (Residue, Filterable)	500 (2,4)	NL	NL	mg/L	700	300	880	-	440	300	260
Sulfate	250 (2,4)	NL	NL	mg/L	24	45	52	-	5.9	14	31
Chloride	250 (2,4)	NL	NL	mg/L	120	21	180	-	35	74	9.1
Alkalinity, Total (as CaCO3)	NL	NL	NL	mg/L	510	140	440	-	270	92	150
Nitrogen, (N)	10 (1,3)	NL	NL	mg/L	< 0.1	< 0.1	< 0.1	-	< 0.1	< 0.1	0.8
Chemical Oxygen Demand	NL	NL	NL	mg/L	65	<25	63	-	42	< 25	< 25
Hardness (CaCO3)	NL	NL	NL	mg/L	-	210	520	-	300	120	-
FIELD PARAMETERS											
pH	6.5-8.5 (2,4)	NL	NL		6.54	6.03	6.56	-	5.56	7.41	6.07
Specific Conductivity	NL	NL	NL	umhos	1,779	419	1,240	-	638	433	354
Temperature	NL	NL	NL	degrees C	12.55	15.33	14.50	-	13.82	13.42	11.48
Dissolved Oxygen	NL	NL	NL	mg/L	0.22	0.54	0.34	-	0.19	0.25	0.79
INORGANIC PARAMETERS											
Cyanide (total)	200 (1,3,9)	200 (20)	30 (20)	ug/L	<20	<20	<20	<20	<20	<20	<20

Notes:
(1) Massachusetts Drinking Water Standard (MCL)
(2) Massachusetts Drinking Water Secondary Standard or Guideline (SMCL)
(3) EPA Primary Drinking Water Standard (MCL)
(4) EPA Secondary Drinking Water Standard (SMCL)
(5) --
(6) --
(7) --
(8) --
(9) Cyanide expressed as free, or physiologically available cyanide.
(10) Action Level
(11) Massachusetts State Drinking Water Standards; dated 2011
(12) Environmental Protection Agency Drinking Water Regulations; as posted on www.epa.gov as of May 2009.
(13) MCP GW-1 and GW-3 Standards (Method 1); version February 14, 2008
(14) --
(15) The lower of Massachusetts and EPA MCL or SMCL is listed.
(16) --
(17) --
(18) --
(19) --
(20) Cyanide expressed as Physiologically Available Cyanide (PAC). In the absence of measured PAC, the standard is applicable to Total Cyanide.

NL = No Limit.

"-" Indicates that the sample was not analyzed for that consitutent.
Yellow shading indicates an exceedence of EPA or MA drinking water standards.
Blue shading indicates and exceedence of the low end of the range for the aluminum EPA or MA secondary drinking water standard.
Bold outlining indicates an exceedence of MCL GW-1 standards.
Bolded text indicates an exceedence of MCP GW-3 standards.
< : Not Detected above laboratory reporting limit
* Indicates a well to which MCP GW-1 standards apply.
MA and EPA drinking water standards, and MCP GW-3 standards apply to all wells.

Data qualifiers:
M: The percent recoveries for the matrix spike and/or matrix spike
duplicate were outside the acceptance limits of 90% - 110%.
All other batch QC was within acceptance.

Table 3 (cont)
Groundwater Sampling Results for GW-1 Wells
Metals, Conventional and Field Parameters
June 2011
Haverhill Landfill, Haverhill, Massachusetts

				SAMPLING DATE	6/23/2011	6/23/2011	6/23/2011	6/22/2011	6/23/2011	6/23/2011	6/22/2011
				RES LABORATORY SAMPLING NUMBER	21858-002	21858-003	21858-012	21842-005	21858-006	21858-007	21842-006
				CDM SAMPLING NUMBER	**MW-15M***	**MW-15D***	**MW-15D***	**MW-16S***	**MW-18S***	**MW-18D***	**MW-19D***
METALS	***MA and EPA DRINKING WATER STANDARDS [11,12,15]***	***MCP GW-1 STANDARDS [13]***	***MCP GW-3 STANDARDS [13]***	***UNITS***			Duplicate				
Arsenic	10 (1,3)	10	900	ug/L	190	8	< 8	< 8	< 8	< 8	< 8
Barium	2,000 (1,3)	2,000	50,000	ug/L	570	< 50	< 50	< 50	< 50	< 50	< 50
Cadmium	5 (1,3)	5	4	ug/L	< 4	< 4	< 4	< 4	< 4	< 4	< 4
Calcium	NL	NL	NL	ug/L	82,000	17,000	17,000	7,900	25,000	38,000	41,000
Chromium (total)	100 (1,3)	100	300	ug/L	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Copper	1,000 (2,4)	NL	NL	ug/L	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Iron	300 (2,4)	NL	NL	ug/L	43,000	260	210	< 50	2,900	< 50	140
Lead	15 (1,3,10)	15	10	ug/L	< 8	< 8	< 8	< 8	< 8	< 8	< 8
Manganese	50 (2,4)	NL	NL	ug/L	400	220	210	< 30	90	300	250
Mercury	2 (1,3)	2	20	ug/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Selenium	50 (1,3)	50	100	ug/L	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Silver	100 (2,4)	100	7	ug/L	< 7	< 7	< 7	< 7	< 7	< 7	< 7
Sodium	20,000 (2)	NL	NL	ug/L	69,000	46,000	45,000	29,000	22,000	12,000	17,000
Zinc	5,000 (2,4)	5,000	900	ug/L	< 50	< 50	< 50	< 50	< 50	< 50	< 50
CONVENTIONAL PARAMETERS											
Total Dissolved Solids (Residue, Filterable)	500 (2,4)	NL	NL	mg/L	700	230	-	140	180	180	360
Sulfate	250 (2,4)	NL	NL	mg/L	42	14	-	14	6.9	14	7.5
Chloride	250 (2,4)	NL	NL	mg/L	95	15	-	4.6	34 M	23	72
Alkalinity, Total (as CaCO3)	NL	NL	NL	mg/L	490	130	-	68	70	87	86
Nitrogen, (N)	10 (1,3)	NL	NL	mg/L	< 0.1	< 0.1	-	< 0.1	< 0.1	< 0.1	< 0.1
Chemical Oxygen Demand	NL	NL	NL	mg/L	63	< 25	-	< 25	< 25	< 25	< 25
Hardness (CaCO3)	NL	NL	NL	mg/L	-	-	-	-	76	110	-
FIELD PARAMETERS											
pH	6.5-8.5 (2,4)	NL	NL		6.50	6.18	-	6.30	5.50	6.12	7.75
Specific Conductivity	NL	NL	NL	umhos	1,343	330	-	192	258	236	402
Temperature	NL	NL	NL	degrees C	12.86	13.99	-	12.41	14.68	13.08	13.07
Dissolved Oxygen	NL	NL	NL	mg/L	0.36	0.23	-	2.37	0.50	0.39	0.27
INORGANIC PARAMETERS											
Cyanide (total)	200 (1,3,9)	200 (20)	30 (20)	ug/L	<20	<20	<20	<20	<20	<20	<20

Notes:
(1) Massachusetts Drinking Water Standard (MCL)
(2) Massachusetts Drinking Water Secondary Standard or Guideline (SMCL)
(3) EPA Primary Drinking Water Standard (MCL)
(4) EPA Secondary Drinking Water Standard (SMCL)
(5) --
(6) --
(7) --
(8) --
(9) Cyanide expressed as free, or physiologically available cyanide.
(10) Action Level
(11) Massachusetts State Drinking Water Standards; dated 2011
(12) Environmental Protection Agency Drinking Water Regulations; as posted on www.epa.gov as of May 2009.
(13) MCP GW-1 and GW-3 Standards (Method 1); version February 14, 2008
(14) --
(15) The lower of Massachusetts and EPA MCL or SMCL is listed.
(16) --
(17) --
(18) --
(19) --
(20) Cyanide expressed as Physiologically Available Cyanide (PAC). In the absence of measured PAC, the standard is applicable to Total Cyanide.

NL = No Limit.

"-" Indicates that the sample was not analyzed for that consitutent.
Yellow shading indicates an exceedence of EPA or MA drinking water standards.
Blue shading indicates and exceedence of the low end of the range for the aluminum EPA or MA secondary drinking water standard.
Bold outlining indicates an exceedence of MCL GW-1 standards.
Bolded text indicates an exceedence of MCP GW-3 standards.
< : Not Detected above laboratory reporting limit
* Indicates a well to which MCP GW-1 standards apply.
MA and EPA drinking water standards, and MCP GW-3 standards apply to all wells.

Data qualifiers:
M: The percent recoveries for the matrix spike and/or matrix spike
duplicate were outside the acceptance limits of 90% - 110%.
All other batch QC was within acceptance.

Table 4
Groundwater Sampling Results for GW-1 Wells
Volatile Organic Compounds (VOCs)
June 2011
Haverhill Landfill, Haverhill, Massachusetts

				SAMPLING DATE	6/23/2011	6/22/2011	6/22/2011	6/22/2011	6/23/2011	6/23/2011	6/23/2011	6/23/2011
				ANALYSIS DATE	6/29/2011	6/24/2011	6/29/2011	6/29/2011	6/28/2011	6/28/2011	6/28/2011	6/29/2011
				LABORATORY SAMPLING NUMBER	21858-008	21842-002	21842-003	21842-007	21858-004	21858-005	21858-001	21858-002
				CDM SAMPLING NUMBER	**ERT-4***	**MW-13S***	**MW-13D***	**MW-13D***	**MW-14S***	**MW-14D***	**MW-15SR***	**MW-15M***
VOCs	***MA and EPA DRINKING WATER STANDARDS [7,8,11]***	***MCP GW-1 STANDARDS [9]***	***MCP GW-3 STANDARDS [9]***	***UNITS***				Duplicate				
1,1,1,2-Tetrachloroethane	NL	5	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,1,1-Trichloroethane	200 (1,3)	200	20,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,1,2,2-Tetrachloroethane	NL	2	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,1,2-Trichloroethane	5 (1,3)	5	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,1-Dichloroethane	70 (2)	70	20,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,1-Dichloroethene	7 (1,3)	7	30,000	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloropropene	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2,3-Trichlorobenzene	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2,3-Trichloropropane	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2,4-Trichlorobenzene	70 (1,3)	70	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2,4-Trimethylbenzene	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-Dibromo-3-chloropropane	0.2 (1,3)	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-Dibromoethane	0.02 (1)	0.02	50,000.00	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-Dichlorobenzene	600 (1,3)	600	2,000	ug/L	< 2	< 2	5	6	< 2	< 2	< 2	< 2
1,2-Dichloroethane	5 (1,3)	5	20,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-Dichloropropane	5 (1,3)	5	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,3,5-Trimethylbenzene	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,3-Dichlorobenzene	NL	40	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,3-Dichloropropane	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,4-Dichlorobenzene	5 (1)	5	8,000	ug/L	3	< 2	< 2	2	< 2	< 2	< 2	2
1,4-Dioxane	0.3 (2)	3	50,000	ug/L	< 50	< 50	**65**	**74**	< 50	< 50	< 50	< 50
2,2-Dichloropropane	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
2-Butanone	4000 (2)	4,000	50,000	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Chlorotoluene	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
2-Hexanone	NL	NL	NL	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-Chlorotoluene	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
4-Isopropyltoluene	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
4-Methyl-2-pentanone	350 (2)	350	50,000	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Acetone	6300 (2)	6,300	50,000	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	5 (1,3)	5	10,000	ug/L	3	< 2	< 2	< 2	< 2	< 2	< 2	3
Bromobenzene	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Bromochloromethane	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Bromodichloromethane	NL	3	50,000	ug/L	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6
Bromoform	NL	4	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Bromomethane	10 (2)	10	800	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Carbon disulfide	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Carbon tetrachloride	5 (1,3)	5	5,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Chlorobenzene	100 (1,3)	100	1,000	ug/L	4	< 2	10	12	3	< 2	< 2	4
Chloroethane	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Chloroform	70 (2)	70	20,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Chloromethane	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
cis-1,2-Dichloroethene	70 (1,3)	70	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
cis-1,3-Dichloropropene	NL	(5)	(5)	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Dibromochloromethane	NL	2	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Dibromomethane	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Dichlorodifluoromethane	1400 (2)	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Diethyl ether	NL	NL	NL	ug/L	6	< 2	11	11	< 2	10	< 2	8
Diisopropyl ether	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Ethylbenzene	700 (1,3)	700	5,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Ethyl tertiary butyl ether	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Hexachlorobutadiene	NL	1	3,000	ug/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Isopropylbenzene	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	7	< 2	< 2	< 2
m,p-Xylene	10000 (1,3,6)	10,000 (1,3,6)	5,000 (6)	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2

Table 4 (cont)
Groundwater Sampling Results for GW-1 Wells
Volatile Organic Compounds (VOCs)
June 2011
Haverhill Landfill, Haverhill, Massachusetts

				SAMPLING DATE	6/23/2011	6/22/2011	6/22/2011	6/22/2011	6/23/2011	6/23/2011	6/23/2011	6/23/2011
				ANALYSIS DATE	6/29/2011	6/24/2011	6/29/2011	6/29/2011	6/28/2011	6/28/2011	6/28/2011	6/29/2011
				LABORATORY SAMPLING NUMBER	21858-008	21842-002	21842-003	21842-007	21858-004	21858-005	21858-001	21858-002
				CDM SAMPLING NUMBER	**ERT-4***	**MW-13S***	**MW-13D***	**MW-13D***	**MW-14S***	**MW-14D***	**MW-15SR***	**MW-15M***
VOCs	***MA and EPA DRINKING WATER STANDARDS*** [7,8,11]	***MCP GW-1 STANDARDS*** [9]	***MCP GW-3 STANDARDS*** [9]	***UNITS***				Duplicate				
Methyl tert-butyl ether	70 (2)	70	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Methylene chloride	5 (1,3)	5	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Naphthalene	140 (2)	140	20,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
n-Butylbenzene	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
n-Propylbenzene	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
o-Xylene	10000 (1,3,6)	10,000 (6)	5,000 (6)	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
sec-Butylbenzene	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Styrene	100 (1,3)	100	6,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
t-Butanol (TBA)	120 (2)	NL	NL	ug/L	< 30	< 30	45	49	< 30	< 30	< 30	< 30
tert-Butylbenzene	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Tertiary Amyl Methyl Ether	90 (2)	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Tetrachloroethene	5 (1,3)	5	30,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Tetrahydrofuran	1300 (2)	NL	NL	ug/L	10	< 2	< 2	< 2	3	< 2	< 2	11
Toluene	1000 (1,3)	1,000	40,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
trans-1,2-Dichloroethene	100 (1,3)	100	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
trans-1,3-Dichloropropene	NL (5)	(5)	(5)	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Trichloroethene	5 (1,3)	5	5,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Trichlorofluoromethane	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Vinyl chloride	2 (1,3)	2	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2

Notes:
(1) Massachusetts Drinking Water Standard (MCL)
(2) Massachusetts Drinking Water Secondary Standard (SMCL) or Guideline.
(3) EPA Primary Drinking Water Standard (MCL)
(4) EPA Secondary Drinking Water Standard (SMCL)
(5) MA MCL for 1,3-Dichloropropene is 0.4 ug/L, MCP GW-3 standard is 2,000 ug/L and GW-1 standard is 0.5 ug/L.
Since a particular stereoisomer is not specified, a comparison can not be made to the standard.
(6) Listed standard is for total xylenes, no individual isomer standards exist.
(7) Massachusetts State Drinking Water Standards; dated 2011.
(8) Environmental Protection Agency Drinking Water Regulations; as posted on www.epa.gov as of May 2009.
(9) MCP GW-1 and GW-3 Standards (Method 1); version February 14, 2008.
(10) --
(11) The lower of Massachusetts and EPA MCL is listed.
NL: no limit

"-" Indicates that the sample was not analyzed for that consitutent.
Yellow shading indicates an exceedence of EPA or MA drinking water standards.
Bold outlining indicates an exceedence of MCL GW-1 standards.
Bolded text indicates an exceedence of MCP GW-3 standards.
< : Not Detected above laboratory reporting limit
* Indicates a well to which MCP GW-1 standards apply.
MA and EPA drinking water standards, and MCP GW-3 standards apply to all wells.

Table 4 (cont)
Groundwater Sampling Results for GW-1 Wells
Volatile Organic Compounds (VOCs)
June 2011
Haverhill Landfill, Haverhill, Massachusetts

				SAMPLING DATE	6/23/2011	6/23/2011	6/22/2011	6/23/2011	6/23/2011	6/22/2011
				ANALYSIS DATE	6/28/2011	6/29/2011	6/24/2011	6/28/2011	6/28/2011	6/24/2011
				LABORATORY SAMPLING NUMBER	21858-003	21858-012	21842-005	21858-006	21858-007	21842-006
				CDM SAMPLING NUMBER	**MW-15D***	**MW-15D***	**MW-16S***	**MW-18S***	**MW-18D***	**MW-19D***
VOCs	***MA and EPA DRINKING WATER STANDARDS [7,8,11]***	***MCP GW-1 STANDARDS [9]***	***MCP GW-3 STANDARDS [9]***	***UNITS***		Duplicate				
1,1,1,2-Tetrachloroethane	NL	5	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,1,1-Trichloroethane	200 (1,3)	200	20,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,1,2,2-Tetrachloroethane	NL	2	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,1,2-Trichloroethane	5 (1,3)	5	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,1-Dichloroethane	70 (2)	70	20,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,1-Dichloroethene	7 (1,3)	7	30,000	ug/L	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloropropene	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,2,3-Trichlorobenzene	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,2,3-Trichloropropane	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,2,4-Trichlorobenzene	70 (1,3)	70	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,2,4-Trimethylbenzene	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,2-Dibromo-3-chloropropane	0.2 (1,3)	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,2-Dibromoethane	0.02 (1)	0.02	50,000.00	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,2-Dichlorobenzene	600 (1,3)	600	2,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,2-Dichloroethane	5 (1,3)	5	20,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,2-Dichloropropane	5 (1,3)	5	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,3,5-Trimethylbenzene	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,3-Dichlorobenzene	NL	40	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,3-Dichloropropane	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,4-Dichlorobenzene	5 (1)	5	8,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,4-Dioxane	0.3 (2)	3	50,000	ug/L	< 50	< 50	< 50	< 50	< 50	< 50
2,2-Dichloropropane	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
2-Butanone	4000 (2)	4,000	50,000	ug/L	< 10	< 10	< 10	< 10	< 10	< 10
2-Chlorotoluene	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
2-Hexanone	NL	NL	NL	ug/L	< 10	< 10	< 10	< 10	< 10	< 10
4-Chlorotoluene	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
4-Isopropyltoluene	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
4-Methyl-2-pentanone	350 (2)	350	50,000	ug/L	< 10	< 10	< 10	< 10	< 10	< 10
Acetone	6300 (2)	6,300	50,000	ug/L	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	5 (1,3)	5	10,000	ug/L	< 2	< 2	< 2	< 2	< 2	2
Bromobenzene	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Bromochloromethane	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Bromodichloromethane	NL	3	50,000	ug/L	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6
Bromoform	NL	4	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Bromomethane	10 (2)	10	800	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Carbon disulfide	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Carbon tetrachloride	5 (1,3)	5	5,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Chlorobenzene	100 (1,3)	100	1,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Chloroethane	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Chloroform	70 (2)	70	20,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Chloromethane	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
cis-1,2-Dichloroethene	70 (1,3)	70	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
cis-1,3-Dichloropropene	NL	(5)	(5)	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Dibromochloromethane	NL	2	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Dibromomethane	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Dichlorodifluoromethane	1400 (2)	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Diethyl ether	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	8
Diisopropyl ether	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Ethylbenzene	700 (1,3)	700	5,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Ethyl tertiary butyl ether	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Hexachlorobutadiene	NL	1	3,000	ug/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Isopropylbenzene	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
m,p-Xylene	10000 (1,3,6)	10,000 (1,3,6)	5,000 (6)	ug/L	< 2	< 2	< 2	< 2	< 2	< 2

Table 4 (cont)
Groundwater Sampling Results for GW-1 Wells
Volatile Organic Compounds (VOCs)
June 2011
Haverhill Landfill, Haverhill, Massachusetts

				SAMPLING DATE	6/23/2011	6/23/2011	6/22/2011	6/23/2011	6/23/2011	6/22/2011
				ANALYSIS DATE	6/28/2011	6/29/2011	6/24/2011	6/28/2011	6/28/2011	6/24/2011
				LABORATORY SAMPLING NUMBER	21858-003	21858-012	21842-005	21858-006	21858-007	21842-006
				CDM SAMPLING NUMBER	**MW-15D***	**MW-15D***	**MW-16S***	**MW-18S***	**MW-18D***	**MW-19D***
VOCs	***MA and EPA DRINKING WATER STANDARDS [7,8,11]***	***MCP GW-1 STANDARDS [9]***	***MCP GW-3 STANDARDS [9]***	***UNITS***		Duplicate				
Methyl tert-butyl ether	70 (2)	70	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Methylene chloride	5 (1,3)	5	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Naphthalene	140 (2)	140	20,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
n-Butylbenzene	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
n-Propylbenzene	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
o-Xylene	10000 (1,3,6)	10,000 (6)	5,000 (6)	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
sec-Butylbenzene	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Styrene	100 (1,3)	100	6,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
t-Butanol (TBA)	120 (2)	NL	NL	ug/L	< 30	< 30	< 30	< 30	< 30	< 30
tert-Butylbenzene	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Tertiary Amyl Methyl Ether	90 (2)	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Tetrachloroethene	5 (1,3)	5	30,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Tetrahydrofuran	1300 (2)	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	4
Toluene	1000 (1,3)	1,000	40,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
trans-1,2-Dichloroethene	100 (1,3)	100	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
trans-1,3-Dichloropropene	NL (5)	(5)	(5)	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Trichloroethene	5 (1,3)	5	5,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Trichlorofluoromethane	NL	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Vinyl chloride	2 (1,3)	2	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2

Notes:
(1) Massachusetts Drinking Water Standard (MCL)
(2) Massachusetts Drinking Water Secondary Standard (SMCL) or Guideline.
(3) EPA Primary Drinking Water Standard (MCL)
(4) EPA Secondary Drinking Water Standard (SMCL)
(5) MA MCL for 1,3-Dichloropropene is 0.4 ug/L, MCP GW-3 standard is 2,000 ug/L and GW-1 standard is 0.5 ug/L.
Since a particular stereoisomer is not specified, a comparison can not be made to the standard.
(6) Listed standard is for total xylenes, no individual isomer standards exist.
(7) Massachusetts State Drinking Water Standards; dated 2011.
(8) Environmental Protection Agency Drinking Water Regulations; as posted on www.epa.gov as of May 2009.
(9) MCP GW-1 and GW-3 Standards (Method 1); version February 14, 2008.
(10) --
(11) The lower of Massachusetts and EPA MCL is listed.
NL: no limit

"-" Indicates that the sample was not analyzed for that consitutent.
Yellow shading indicates an exceedence of EPA or MA drinking water standards.
Bold outlining indicates an exceedence of MCL GW-1 standards.
Bolded text indicates an exceedence of MCP GW-3 standards.
< : Not Detected above laboratory reporting limit
* Indicates a well to which MCP GW-1 standards apply.
MA and EPA drinking water standards, and MCP GW-3 standards apply to all wells.

Table 5
Groundwater Sampling Results for GW-3 Wells
Metals, Conventional and Field Parameters
June 2011
Haverhill Landfill, Haverhill, Massachusetts

			SAMPLING DATE	6/23/2011	6/23/2011	6/23/2011	6/22/2011	6/22/2011	6/24/2011
			RES LABORATORY SAMPLING NUMBER	21858-009	21858-010	21858-011	21842-004	21842-001	21858-015
			CDM SAMPLING NUMBER	**MW-10S**	**MW-10M**	**MW-10D**	**MW-11S**	**MW-12S**	**MW-17S**
METALS	***MA and EPA DRINKING WATER STANDARDS [11,12,15]***	***MCP GW-3 STANDARDS [13]***	***UNITS***						
Arsenic	10 (1,3)	900	ug/L	< 8	32	18	< 8	< 8	< 8
Barium	2,000 (1,3)	50,000	ug/L	< 50	< 50	< 50	< 50	< 50	< 50
Cadmium	5 (1,3)	4	ug/L	< 4	< 4	< 4	< 4	< 4	< 4
Calcium	NL	NL	ug/L	7,900	30,000	27,000	17,000	32,000	5,700
Chromium (total)	100 (1,3)	300	ug/L	< 50	< 50	< 50	< 50	< 50	< 50
Copper	1,000 (2,4)	NL	ug/L	< 50	< 50	< 50	< 50	< 50	< 50
Iron	300 (2,4)	NL	ug/L	< 50	< 50	70	660	< 50	< 50
Lead	15 (1,3,10)	10	ug/L	< 8	< 8	< 8	< 8	< 8	< 8
Manganese	50 (2,4)	NL	ug/L	< 30	90	70	110	< 30	< 30
Mercury	2 (1,3)	20	ug/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Selenium	50 (1,3)	100	ug/L	< 50	< 50	< 50	< 50	< 50	< 50
Silver	100 (2,4)	7	ug/L	< 7	< 7	< 7	< 7	< 7	< 7
Sodium	20,000 (2)	NL	ug/L	2,500	9,500	10,000	7,300	9,400	4,400
Zinc	5,000 (2,4)	900	ug/L	< 50	< 50	< 50	< 50	< 50	< 50
CONVENTIONAL PARAMETERS									
Total Dissolved Solids (Residue, Filterable)	500 (2,4)	NL	mg/L	68	170	170	130	170	67
Sulfate	250 (2,4)	NL	mg/L	6.1	38	33	34	27	12
Chloride	250 (2,4)	NL	mg/L	2.2	17	13	4.8	15	4.5
Alkalinity, Total (as CaCO3)	NL	NL	mg/L	20	48	70	41	64	12
Nitrogen, (N) (18)	10 (1,3)	NL	mg/L	0.200	< 0.1	< 0.1	< 0.1	2.0	< 0.1
Chemical Oxygen Demand	NL	NL	mg/L	< 25	< 25	< 25	< 25	< 25	< 25
Hardness (CaCO3)	NL	NL	mg/L	-	-	-	-	110	-
FIELD PARAMETERS									
pH	6.5-8.5 (2,4)	NL		5.27	7.58	6.28	6.85	5.20	6.05
Specific Conductivity	NL	NL	umhos	65	265	239	167	256	79
Temperature	NL	NL	degrees C	12.57	11.35	10.36	11.95	9.96	9.92
Dissolved Oxygen	NL	NL	mg/L	6.95	0.26	0.22	0.42	0.72	8.86
INORGANIC PARAMETERS									
Cyanide (total)	200 (1,3,9)	30 (20)	ug/L	<20	<20	<20	<20	<20	<20

Notes:
(1) Massachusetts Drinking Water Standard (MCL)
(2) Massachusetts Drinking Water Secondary Standard or Guideline (SMCL)
(3) EPA Primary Drinking Water Standard (MCL)
(4) EPA Secondary Drinking Water Standard (SMCL)
(5) --
(6) --
(7) --
(8) --
(9) Cyanide expressed as free, or physiologically available cyanide.
(10) Action Level
(11) Massachusetts State Drinking Water Standards; dated 2011
(12) Environmental Protection Agency Drinking Water Regulations; as posted on www.epa.gov as of May 2009.
(13) MCP GW-1 and GW-3 Standards (Method 1); version February 14, 2008
(14) --
(15) The lower of Massachusetts and EPA MCL or SMCL is listed.
(16) --
(17) --
(18) --
(19) --
(20) Cyanide expressed as Physiologically Available Cyanide (PAC). In the absence of measured PAC, the standard is applicable to Total Cyanide.

NL = No Limit.

Yellow shading indicates and exceedence of drinking water standards.
Bolded text indicates an exceedence of MCP GW-3 standards.
< : Not Detected above laboratory reporting limit
* : Indicates a well to which MCP GW-1 standards apply.

Table 6
Groundwater Sampling Results for GW-3 Wells
Volatile Organic Compounds (VOCs)
June 2011
Haverhill Landfill, Haverhill, Massachusetts

			SAMPLING DATE	6/23/2011	6/23/2011	6/23/2011	6/22/2011	6/22/2011	6/24/2011
			ANALYSIS DATE	6/28/2011	6/28/2011	6/28/2011	6/27/2011	6/24/2011	6/28/2011
			LABORATORY SAMPLING NUMBER	21858-009	21858-010	21858-011	21842-004	21842-001	21858-015
			CDM SAMPLING NUMBER	**MW-10S**	**MW-10M**	**MW-10D**	**MW-11S**	**MW-12S**	**MW-17S**
VOCs	***MA and EPA DRINKING WATER STANDARDS [7,9,11]***	***MCP GW-3 STANDARDS[9]***	***UNITS***						
1,1,1,2-Tetrachloroethane	NL	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,1,1-Trichloroethane	200 (1,3)	20,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,1,2,2-Tetrachloroethane	NL	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,1,2-Trichloroethane	5 (1,3)	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,1-Dichloroethane	70 (2)	20,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,1-Dichloroethene	7 (1,3)	30,000	ug/L	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloropropene	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,2,3-Trichlorobenzene	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,2,3-Trichloropropane	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,2,4-Trichlorobenzene	70 (1,3)	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,2,4-Trimethylbenzene	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,2-Dibromo-3-chloropropane	0.2 (1,3)	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,2-Dibromoethane	0.02 (1)	50,000.00	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,2-Dichlorobenzene	600 (1,3)	2,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,2-Dichloroethane	5 (1,3)	20,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,2-Dichloropropane	5 (1,3)	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,3,5-Trimethylbenzene	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,3-Dichlorobenzene	NL	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,3-Dichloropropane	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,4-Dichlorobenzene	5 (1)	8,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
1,4-Dioxane	0.3 (2)	50,000	ug/L	< 50	< 50	< 50	< 50	< 50	< 50
2,2-Dichloropropane	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
2-Butanone	4000 (2)	50,000	ug/L	< 10	< 10	< 10	< 10	< 10	< 10
2-Chlorotoluene	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
2-Hexanone	NL	NL	ug/L	< 10	< 10	< 10	< 10	< 10	< 10
4-Chlorotoluene	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
4-Isopropyltoluene	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
4-Methyl-2-pentanone	350 (2)	50,000	ug/L	< 10	< 10	< 10	< 10	< 10	< 10
Acetone	6300 (2)	50,000	ug/L	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	5 (1,3)	10,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Bromobenzene	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Bromochloromethane	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Bromodichloromethane	NL	50,000	ug/L	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6
Bromoform	NL	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Bromomethane	10 (2)	800	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Carbon disulfide	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Carbon tetrachloride	5 (1,3)	5,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Chlorobenzene	100 (1,3)	1,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Chloroethane	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Chloroform	70 (2)	20,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Chloromethane	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
cis-1,2-Dichloroethene	70 (1,3)	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
cis-1,3-Dichloropropene	NL	(5)	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Dibromochloromethane	NL	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Dibromomethane	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Dichlorodifluoromethane	1400 (2)	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Diethyl ether	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Diisopropyl ether	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Ethylbenzene	700 (1,3)	5,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Ethyl tertiary butyl ether	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Hexachlorobutadiene	NL	3,000	ug/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Isopropylbenzene	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
m,p-Xylene	10000 (1,3,6)	5,000 (6)	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Methyl tert-butyl ether	70 (2)	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2

Table 6 (cont)
Groundwater Sampling Results for GW-3 Wells
Volatile Organic Compounds (VOCs)
June 2011
Haverhill Landfill, Haverhill, Massachusetts

			SAMPLING DATE	6/23/2011	6/23/2011	6/23/2011	6/22/2011	6/22/2011	6/24/2011
			ANALYSIS DATE	6/28/2011	6/28/2011	6/28/2011	6/27/2011	6/24/2011	6/28/2011
			LABORATORY SAMPLING NUMBER	21858-009	21858-010	21858-011	21842-004	21842-001	21858-015
			CDM SAMPLING NUMBER	**MW-10S**	**MW-10M**	**MW-10D**	**MW-11S**	**MW-12S**	**MW-17S**
VOCs	***MA and EPA DRINKING WATER STANDARDS [7,9,11]***	***MCP GW-3 STANDARDS[9]***	***UNITS***						
Methylene chloride	5 (1,3)	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Naphthalene	140 (2)	20,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
n-Butylbenzene	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
n-Propylbenzene	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
o-Xylene	10000 (1,3,6)	5,000 (6)	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
sec-Butylbenzene	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Styrene	100 (1,3)	6,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
t-Butanol (TBA)	120 (2)	NL	ug/L	< 30	< 30	< 30	< 30	< 30	< 30
tert-Butylbenzene	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Tertiary Amyl Methyl Ether	90 (2)	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Tetrachloroethene	5 (1,3)	30,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Tetrahydrofuran	1300 (2)	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Toluene	1000 (1,3)	40,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
trans-1,2-Dichloroethene	100 (1,3)	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
trans-1,3-Dichloropropene	NL (5)	(5)	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Trichloroethene	5 (1,3)	5,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Trichlorofluoromethane	NL	NL	ug/L	< 2	< 2	< 2	< 2	< 2	< 2
Vinyl chloride	2 (1,3)	50,000	ug/L	< 2	< 2	< 2	< 2	< 2	< 2

Notes:
(1) Massachusetts Drinking Water Standard (MCL)
(2) Massachusetts Drinking Water Secondary Standard (SMCL) or Guideline.
(3) EPA Primary Drinking Water Standard (MCL)
(4) EPA Secondary Drinking Water Standard (SMCL)
(5) MA MCL for 1,3-Dichloropropene is 0.4 ug/L, MCP GW-3 standard is 2,000 ug/L and GW-1 standard is 0.5 ug/L.
Since a particular stereoisomer is not specified, a comparison can not be made to the standard.
(6) Listed standard is for total xylenes, no individual isomer standards exist.
(7) Massachusetts State Drinking Water Standards; dated 2011.
(8) Environmental Protection Agency Drinking Water Regulations; as posted on www.epa.gov as of May 2009.
(9) MCP GW-1 and GW-3 Standards (Method 1); version February 14, 2008.
(10) --
(11) The lower of Massachusetts and EPA MCL is listed.
NL: no limit

Table 7
Surface Water Sampling Results
Metals, Conventional and Field Parameters
June 2011
Haverhill Landfill, Haverhill, Massachusetts

							SAMPLING DATE	6/22/2011	6/22/2011	6/22/2011	6/22/2011	6/22/2011	6/22/2011	6/22/2011	6/22/2011	6/22/2011	6/22/2011	6/22/2011	6/22/2011	6/22/2011	6/22/2011
							RES LABORATORY SAMPLING NUMBER	21845-001	21845-002	21845-003	21845-004	21845-005	21845-006	21845-007	21845-008	21845-009	21845-013	21845-010	21845-011	21845-015	21845-012
							CDM SAMPLING NUMBER	**SW-100[c]**	**SW-101[a]**	**SW-103[a]**	**SW-104[a]**	**SW-105[d]**	**SW-106[b]**	**SW-107[b]**	**SW-108[b]**	**SW-109[b]**	**SW-109[b]**	**SW-110[a]**	**SW-111[a]**	**SW-111[a]**	**SW-112[b]**
METALS	***MA and EPA DRINKING WATER STANDARDS[11,12,15]***		***NRWQC[14]***					***UNITS***										Duplicate			Duplicate	
			Merrimack River	***Johnson Creek***	***Swale***	***Confluence (SW-105)***	***Notes***														
Aluminum	50 - 200	(2,4,21)	NL	NL	NL	NL		ug/L	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Arsenic	10	(1,3)	150	150	150	150		ug/L	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8
Barium	2,000	(1,3)	NL	NL	NL	NL		ug/L	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Cadmium	5	(1,3)	0.11	0.16	0.24	0.16	(5)	ug/L	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
Calcium	NL		NL	NL	NL	NL		ug/L	27,000	7,900	7,900	8,400	14,000	12,000	12,000	13,000	21,000	20,000	8,000	8,000	8,000	12,000
Chromium (total)	100	(1,3)	28	46	74	44	(5,16)	ug/L	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Copper	1,000	(2,4)	3	5	9	5	(5,6)	ug/L	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Iron	300	(2,4)	1,000	1,000	1,000	1,000		ug/L	< 50	200	120	150	280	170	160	230	**350**	280	220	200	210	270
Lead	15	(1,3,10)	0.7	1.3	2.5	1.3	(5)	ug/L	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8
Manganese	50	(2,4)	NL	NL	NL	NL		ug/L	< 30	< 30	< 30	30	**100**	50	**80**	**100**	30	30	< 30	< 30	< 30	**60**
Mercury	2	(1,3)	0.77	0.77	0.77	0.77		ug/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Nickel	100	(2)	19	32	52	30	(5)	ug/L	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Selenium	50	(1,3)	5	5	5	5	(7)	ug/L	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Silver	100	(2,4)	0.43	1.16	3.16	1.08	(5,8)	ug/L	< 7	< 7	< 7	< 7	< 7	< 7	< 7	< 7	< 7	< 7	< 7	< 7	< 7	< 7
Sodium	20,000	(2)	NL	NL	NL	NL		ug/L	11,000	**27,000**	**27,000**	**27,000**	18,000	16,000	16,000	18,000	**34,000**	**38,000**	**23,000**	**26,000**	**27,000**	15,000
Zinc	5,000	(2,4)	44	72	117	69	(5)	ug/L	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
CONVENTIONAL PARAMETERS																						
Total Dissolved Solids (Residue, Filterable)	500	(2,4)	NL	NL	NL	NL		mg/L	170	130	130	130	120	130	130	130	230	-	130	140	-	110
Sulfate	250	(2,4)	NL	NL	NL	NL		mg/L	24	6.4	6.4	6.4	7.9	7.5	7.6	7.8	11	-	6.3	6.3	-	7.2
Chloride	250	(2,4)	230	230	230	230		mg/L	11	42	42	42	29	26	26	29	63 M	-	43	44	-	23
Alkalinity, Total (as CaCO3)	NL		20	20	20	20		mg/L	62	14	15	15	33	31	31	33	45	-	20	34	-	28
Nitorgen, (N)	10	(1,3)	NL	NL	NL	NL		mg/L	0.9	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.6	-	0.4	0.4	-	0.1
Chemical Oxygen Demand	NL		NL	NL	NL	NL		mg/L	< 25	< 25	< 25	< 25	< 25	< 25	< 25	<25	<25	-	< 25	< 25	-	< 25
Hardness (CaCO3)	NL		NL	NL	NL	NL		mg/L	99	30	30	32	53	49	49	52	80	-	30	31	-	47
FIELD PARAMETERS																						
pH	6.5-8.5	(2,4)	6.5-9.0	6.5-9.0	6.5-9.0	6.5-9.0			7.06	7.35	7.39	7.48	7.18	7.31	7.44	7.31	7.23	-	7.52	7.55	-	7.41
Specific Conductivity	NL		NL	NL	NL	NL		umhos	233	202	206	206	194	192	190	188	352	-	203	211	-	181
Temperature	NL						(17)	degrees C	18.99	24.00	22.86	23.31	21.21	21.50	21.48	21.48	18.96	-	22.50	22.61	-	21.62
Dissolved Oxygen	NL						(17)	mg/L	8.67	9.40	8.79	8.75	9.36	7.30	7.13	9.15	9.66	-	7.72	8.18	-	9.84
INORGANIC PARAMETERS																						
Cyanide (total)	200	(1,3,9)	5.2	5.2	5.2	5.2	(9)	ug/L	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Thallium	2	(1,3)	NL	NL	NL	NL		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
(1) Massachusetts Drinking Water Standard (MCL)
(2) Massachusetts Drinking Water Secondary Standard or Guideline (SMCL)
(3) EPA Primary Drinking Water Standard (MCL)
(4) EPA Secondary Drinking Water Standard (SMCL)
(5) This criteria is dependent on hardness in the water.Values shown in the tables are based on an average hardness at the site of 19.4 mg/L for samples near Merrimack River, 48 mg/L for samples near Johnson Creek, 78 mg/L for samples near the swale, and 22 mg/L for the confluence of Merrimack River and Johnson Creek (SW-105).
(6) When the concentration of dissolved organic carbon is elevated, copper is substatially less toxic and use of Water-Effect Ratios might be appropriate.
(7) This value is for total recoverable selenium, but there is a formula to change it to dissolved Se
(8) No Criterion Continuous Concentration (CCC) was available so Criterion Maximum Concentration (CMC) was used
(9) Cyanide expressed as free, or physiologically available cyanide.
(10) Action Level
(11) Massachusetts State Drinking Water Standards; dated 2011
(12) Environmental Protection Agency Drinking Water Regulations; as posted on www.epa.gov as of May 2009.
(13) --
(14) NRWQC - National Recommended Water Quality Criteria; version dated 2009
(15) The lower of Massachusetts and EPA MCL or SMCL is listed.
(16) Standard listed is for Chromium III. No standard is established for Total Chromium.
(17) Species Dependent Criteria
(18) --
(19) --
(20) --
(21) A range is specified for the aluminum secondary standard. Guidance relating to this standard provided by EPA, and adopted by Massachusetts, indicates that 50 ug/L is the optimal value for the secondary standard,but that the range is provided because certain systems may have difficulty meeting this criteria. For the purposes of these tables, any aluminum concentration above 50 ug/L is considered an exceedance, and is highlighted.

"-" Indicates that the sample was not analyzed for that consitutent.
Bolded text indicates an exceedence of EPA or MA drinking water standards.
Blue shading indicates and exceedence of the low end of the range for the aluminum EPA or MA secondary drinking water standard.
Yellow shading indicates an exceedence of NRWQC.
SW-102 was not sampled because this location was dry.

a: Sample location is near the Merrimack River; Merrimack River criteria apply.
b: Sample location is near Johnson Creek; Johnson Creek criteria apply.
c: Sample location is near the swale; swale criteria apply.
d: Sample location is at the confluence of the Merrimack River and Johnson Creek; confluence criteria apply.

Data qualifiers:
M: The percent recoveries for the matrix spike and/or matrix spike duplicate were outside the acceptance limits of 90% - 110%. All other batch QC was within acceptance.
below the laboratory's practical quantitation level. (Can be equivalent to either J or B)

Appendix D

Laboratory Analytical Reports and Chain of Custody

Absolute Resource associates
124 Heritage Avenue #10 Portsmouth, NH 03801

Nathan Jones
Camp Dresser and McKee Inc.
50 Hampshire Street
Cambridge, MA 02139

PO Number: None
Job ID: 21842
Date Received: 6/23/11

Project: Haverhill LF 0522 83058

Attached please find results for the analysis of the samples received on the date referenced above.

Unless otherwise noted in the attached report, the analyses performed met the requirements of Absolute Resource Associates' Quality Assurance Plan. The Standard Operating Procedures are based upon USEPA SW-846, USEPA Methods for Chemical Analysis of Water and Wastewater, Standard Methods for the Examination of Water and Wastewater and other recognized methodologies. The results contained in this report pertain only to the samples as indicated on the chain of custody.

Absolute Resource Associates maintains certification with the agencies listed below.

We appreciate the opportunity to provide laboratory services. If you have any questions regarding the enclosed report, please contact the laboratory and we will be glad to assist you.

Sincerely,
Absolute Resource Associates

(for)

Sue Sylvester
Principal, General Manager

Date of Approval: 7/15/2011
Total number of pages: 65

Absolute Resource Associates Certifications

New Hampshire	1732	Massachusetts	M-NH902
Maine	NH903		

Project ID: Haverhill LF 0522 83058
Lab ID: 21842

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
MW-12	Water	6/22/2011 11:05	21842-001	
				Silver in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				VOCs in water by 8260
				Alkalinity in water by SM2320B
				Chloride in water by 300.0A
				Chemical Oxygen Demand by 410.4
				Total cyanide in waste water by SM4500CN-E
				Nitrate-N in water (NO3) by 300.0A
				Sulfate in water (SO4) by 300.0A
				Total Dissolved Solids by SM2540C
MW-13S	Water	6/22/2011 12:05	21842-002	
				Silver in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				VOCs in water by 8260
				Alkalinity in water by SM2320B
				Chloride in water by 300.0A
				Chemical Oxygen Demand by 410.4
				Total cyanide in waste water by SM4500CN-E
				Nitrate-N in water (NO3) by 300.0A
				Sulfate in water (SO4) by 300.0A
				Total Dissolved Solids by SM2540C
MW-13D	Water	6/22/2011 13:05	21842-003	
				Silver in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010

Absolute Resource associates

Project ID: Haverhill LF 0522 83058
Lab ID: 21842

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
MW-13D	Water	6/22/2011 13:05	21842-003	
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				VOCs in water by 8260
				Alkalinity in water by SM2320B
				Chloride in water by 300.0A
				Chemical Oxygen Demand by 410.4
				Total cyanide in waste water by SM4500CN-E
				Nitrate-N in water (NO3) by 300.0A
				Sulfate in water (SO4) by 300.0A
				Total Dissolved Solids by SM2540C
MW-11S	Water	6/22/2011 14:50	21842-004	
				Silver in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				VOCs in water by 8260
				Alkalinity in water by SM2320B
				Chloride in water by 300.0A
				Chemical Oxygen Demand by 410.4
				Total cyanide in waste water by SM4500CN-E
				Nitrate-N in water (NO3) by 300.0A
				Sulfate in water (SO4) by 300.0A
				Total Dissolved Solids by SM2540C
MW-16S	Water	6/22/2011 15:30	21842-005	
				Silver in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010

Absolute Resource associates

Project ID: Haverhill LF 0522 83058
Lab ID: 21842

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
MW-16S	Water	6/22/2011 15:30	21842-005	
				Sodium in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				VOCs in water by 8260
				Alkalinity in water by SM2320B
				Chloride in water by 300.0A
				Chemical Oxygen Demand by 410.4
				Total cyanide in waste water by SM4500CN-E
				Nitrate-N in water (NO3) by 300.0A
				Sulfate in water (SO4) by 300.0A
				Total Dissolved Solids by SM2540C
MW-19D	Water	6/22/2011 16:20	21842-006	
				Silver in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				VOCs in water by 8260
				Alkalinity in water by SM2320B
				Chloride in water by 300.0A
				Chemical Oxygen Demand by 410.4
				Total cyanide in waste water by SM4500CN-E
				Nitrate-N in water (NO3) by 300.0A
				Sulfate in water (SO4) by 300.0A
				Total Dissolved Solids by SM2540C
DUP-3	Water	6/22/2011	21842-007	
				Silver in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				VOCs in water by 8260

Absolute Resource associates

Project ID: Haverhill LF 0522 83058
Lab ID: 21842

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
DUP-3	Water	6/22/2011	21842-007	
				Total cyanide in waste water by SM4500CN-E
EB-3	Water	6/22/2011 13:15	21842-008	
				Silver in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				VOCs in water by 8260
Trip Blank	Water	6/22/2011	21842-009	
				VOCs in water by 8260
MW-12	Water	6/22/2011 11:05	21842-010	
				Total Hardness (includes Ca & Mg) by SM2340B
				Water Digestion for ICP Analysis
				Calcium in water by 200.7
				Magnesium in water by 200.7
MW-13S	Water	6/22/2011 12:05	21842-011	
				Total Hardness (includes Ca & Mg) by SM2340B
				Water Digestion for ICP Analysis
				Calcium in water by 200.7
				Magnesium in water by 200.7
MW-13D	Water	6/22/2011 13:05	21842-012	
				Total Hardness (includes Ca & Mg) by SM2340B
				Water Digestion for ICP Analysis
				Calcium in water by 200.7
				Magnesium in water by 200.7

Absolute Resource associates

Project ID: Haverhill LF 0522 83058
Job ID: 21842
Sample#: 21842-001
Sample ID: MW-12
Matrix: Water
Received on ice at 6˚C, in satisfactory condition.
Sampled: 6/22/11 11:05

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
chloromethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
vinyl chloride	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
bromomethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
chloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
diethyl ether	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
acetone	< 10	10	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
methylene chloride	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
carbon disulfide	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
isopropyl ether (DIPE)	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
ethyl t-butyl ether (ETBE)	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
t-butanol (TBA)	< 30	30	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
2-butanone (MEK)	< 10	10	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
2,2-dichloropropane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
chloroform	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
bromochloromethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
tetrahydrofuran (THF)	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
1,1-dichloropropene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
t-amyl-methyl ether (TAME)	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
carbon tetrachloride	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
benzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
trichloroethene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
bromodichloromethane	< 0.6	0.6	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
1,4-dioxane	< 50	50	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
dibromomethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
toluene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
2-hexanone	< 10	10	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
1,3-dichloropropane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
tetrachloroethene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522 83058
Job ID: 21842
Sample#: 21842-001
Sample ID: MW-12
Matrix: Water
Received on ice at 6˚C, in satisfactory condition.
Sampled: 6/22/11 11:05

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dibromochloromethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
chlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
ethylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
m&p-xylenes	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
o-xylene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
styrene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
bromoform	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
isopropylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
1,2,3-trichloropropane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
n-propylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
bromobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
1,3,5-trimethylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
2-chlorotoluene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
4-chlorotoluene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
tert-butylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
1,2,4-trimethylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
sec-butylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
1,3-dichlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
4-isopropyltoluene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
1,4-dichlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
1,2-dichlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
n-butylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
1,2,4-trichlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
hexachlorobutadiene	< 0.5	0.5	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
naphthalene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
1,2,3-trichlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**97**	78-114	%	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
toluene-D8 SUR	**100**	88-110	%	1	LMM		1101241	6/24/11	13:42	SW5030B8260B
4-bromofluorobenzene SUR	**97**	86-115	%	1	LMM		1101241	6/24/11	13:42	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522 83058
Job ID: 21842
Sample#: 21842-002
Sample ID: MW-13S
Matrix: Water
Received on ice at 6˚C, in satisfactory condition.
Sampled: 6/22/11 12:05

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
chloromethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
vinyl chloride	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
bromomethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
chloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
diethyl ether	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
acetone	< 10	10	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
methylene chloride	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
carbon disulfide	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
isopropyl ether (DIPE)	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
ethyl t-butyl ether (ETBE)	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
t-butanol (TBA)	< 30	30	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
2-butanone (MEK)	< 10	10	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
2,2-dichloropropane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
chloroform	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
bromochloromethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
tetrahydrofuran (THF)	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
1,1-dichloropropene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
t-amyl-methyl ether (TAME)	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
carbon tetrachloride	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
benzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
trichloroethene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
bromodichloromethane	< 0.6	0.6	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
1,4-dioxane	< 50	50	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
dibromomethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
toluene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
2-hexanone	< 10	10	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
1,3-dichloropropane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
tetrachloroethene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522 83058
Job ID: 21842
Sample#: 21842-002
Sample ID: MW-13S
Matrix: Water
Received on ice at 6˚C, in satisfactory condition.
Sampled: 6/22/11 12:05

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dibromochloromethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
chlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
ethylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
m&p-xylenes	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
o-xylene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
styrene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
bromoform	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
isopropylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
1,2,3-trichloropropane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
n-propylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
bromobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
1,3,5-trimethylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
2-chlorotoluene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
4-chlorotoluene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
tert-butylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
1,2,4-trimethylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
sec-butylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
1,3-dichlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
4-isopropyltoluene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
1,4-dichlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
1,2-dichlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
n-butylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
1,2,4-trichlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
hexachlorobutadiene	< 0.5	0.5	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
naphthalene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
1,2,3-trichlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**99**	78-114	%	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
toluene-D8 SUR	**98**	88-110	%	1	LMM		1101241	6/24/11	11:41	SW5030B8260B
4-bromofluorobenzene SUR	**94**	86-115	%	1	LMM		1101241	6/24/11	11:41	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522 83058
Job ID: 21842
Sample#: 21842-003
Sample ID: MW-13D
Matrix: Water
Received on ice at 6˚C, in satisfactory condition.
Sampled: 6/22/11 13:05

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
chloromethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
vinyl chloride	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
bromomethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
chloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
diethyl ether	**11**	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
acetone	< 10	10	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
methylene chloride	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
carbon disulfide	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
isopropyl ether (DIPE)	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
ethyl t-butyl ether (ETBE)	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
t-butanol (TBA)	**45**	30	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
2-butanone (MEK)	< 10	10	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
2,2-dichloropropane	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
chloroform	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
bromochloromethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
tetrahydrofuran (THF)	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
1,1-dichloropropene	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
t-amyl-methyl ether (TAME)	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
carbon tetrachloride	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
benzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
trichloroethene	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
bromodichloromethane	< 0.6	0.6	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
1,4-dioxane	**65** #	50	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
dibromomethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
toluene	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
2-hexanone	< 10	10	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
1,3-dichloropropane	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
tetrachloroethene	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522 83058
Job ID: 21842
Sample#: 21842-003
Sample ID: MW-13D
Matrix: Water
Received on ice at 6˚C, in satisfactory condition.
Sampled: 6/22/11 13:05

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dibromochloromethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
chlorobenzene	**10**	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
ethylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
m&p-xylenes	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
o-xylene	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
styrene	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
bromoform	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
isopropylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
1,2,3-trichloropropane	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
n-propylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
bromobenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
1,3,5-trimethylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
2-chlorotoluene	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
4-chlorotoluene	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
tert-butylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
1,2,4-trimethylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
sec-butylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
1,3-dichlorobenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
4-isopropyltoluene	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
1,4-dichlorobenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
1,2-dichlorobenzene	**5**	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
n-butylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
1,2,4-trichlorobenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
hexachlorobutadiene	< 0.5	0.5	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
naphthalene	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
1,2,3-trichlorobenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**100**	78-114	%	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
toluene-D8 SUR	**97**	88-110	%	1	LMM		1101285	6/29/11	17:30	SW5030B8260B
4-bromofluorobenzene SUR	**90**	86-115	%	1	LMM		1101285	6/29/11	17:30	SW5030B8260B

 # The associated LCS/D showed high recovery for this compound. This compound is known to be problematic in the method. The reported concentration is an estimate.

Absolute Resource associates

Project ID: Haverhill LF 0522 83058
Job ID: 21842
Sample#: 21842-004
Sample ID: MW-11S
Matrix: Water
Received on ice at 6˚C, in satisfactory condition.
Sampled: 6/22/11 14:50

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
chloromethane	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
vinyl chloride	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
bromomethane	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
chloroethane	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
diethyl ether	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
acetone	< 10	10	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
methylene chloride	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
carbon disulfide	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
isopropyl ether (DIPE)	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
ethyl t-butyl ether (ETBE)	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
t-butanol (TBA)	< 30	30	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
2-butanone (MEK)	< 10	10	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
2,2-dichloropropane	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
chloroform	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
bromochloromethane	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
tetrahydrofuran (THF)	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
1,1-dichloropropene	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
t-amyl-methyl ether (TAME)	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
carbon tetrachloride	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
benzene	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
trichloroethene	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
bromodichloromethane	< 0.6	0.6	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
1,4-dioxane	< 50	50	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
dibromomethane	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
toluene	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
2-hexanone	< 10	10	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
1,3-dichloropropane	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
tetrachloroethene	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522 83058
Job ID: 21842
Sample#: 21842-004
Sample ID: MW-11S
Matrix: Water
Received on ice at 6˚C, in satisfactory condition.
Sampled: 6/22/11 14:50

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dibromochloromethane	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
chlorobenzene	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
ethylbenzene	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
m&p-xylenes	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
o-xylene	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
styrene	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
bromoform	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
isopropylbenzene	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
1,2,3-trichloropropane	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
n-propylbenzene	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
bromobenzene	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
1,3,5-trimethylbenzene	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
2-chlorotoluene	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
4-chlorotoluene	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
tert-butylbenzene	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
1,2,4-trimethylbenzene	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
sec-butylbenzene	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
1,3-dichlorobenzene	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
4-isopropyltoluene	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
1,4-dichlorobenzene	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
1,2-dichlorobenzene	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
n-butylbenzene	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
1,2,4-trichlorobenzene	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
hexachlorobutadiene	< 0.5	0.5	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
naphthalene	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
1,2,3-trichlorobenzene	< 2	2	ug/L	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**97**	78-114	%	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
toluene-D8 SUR	**97**	88-110	%	1	LMM		1101259	6/27/11	19:21	SW5030B8260B
4-bromofluorobenzene SUR	**99**	86-115	%	1	LMM		1101259	6/27/11	19:21	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522 83058
Job ID: 21842
Sample#: 21842-005
Sample ID: MW-16S
Matrix: Water
Received on ice at 6˚C, in satisfactory condition.
Sampled: 6/22/11 15:30

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
chloromethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
vinyl chloride	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
bromomethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
chloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
diethyl ether	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
acetone	< 10	10	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
methylene chloride	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
carbon disulfide	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
isopropyl ether (DIPE)	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
ethyl t-butyl ether (ETBE)	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
t-butanol (TBA)	< 30	30	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
2-butanone (MEK)	< 10	10	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
2,2-dichloropropane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
chloroform	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
bromochloromethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
tetrahydrofuran (THF)	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
1,1-dichloropropene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
t-amyl-methyl ether (TAME)	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
carbon tetrachloride	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
benzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
trichloroethene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
bromodichloromethane	< 0.6	0.6	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
1,4-dioxane	< 50	50	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
dibromomethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
toluene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
2-hexanone	< 10	10	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
1,3-dichloropropane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
tetrachloroethene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522 83058
Job ID: 21842
Sample#: 21842-005
Sample ID: MW-16S
Matrix: Water
Received on ice at 6˚C, in satisfactory condition.
Sampled: 6/22/11 15:30

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dibromochloromethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
chlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
ethylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
m&p-xylenes	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
o-xylene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
styrene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
bromoform	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
isopropylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
1,2,3-trichloropropane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
n-propylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
bromobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
1,3,5-trimethylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
2-chlorotoluene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
4-chlorotoluene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
tert-butylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
1,2,4-trimethylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
sec-butylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
1,3-dichlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
4-isopropyltoluene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
1,4-dichlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
1,2-dichlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
n-butylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
1,2,4-trichlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
hexachlorobutadiene	< 0.5	0.5	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
naphthalene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
1,2,3-trichlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**99**	78-114	%	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
toluene-D8 SUR	**97**	88-110	%	1	LMM		1101241	6/24/11	12:12	SW5030B8260B
4-bromofluorobenzene SUR	**92**	86-115	%	1	LMM		1101241	6/24/11	12:12	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522 83058
Job ID: 21842
Sample#: 21842-006
Sample ID: MW-19D
Matrix: Water
Received on ice at 6˚C, in satisfactory condition.
Sampled: 6/22/11 16:20

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
chloromethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
vinyl chloride	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
bromomethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
chloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
diethyl ether	**8**	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
acetone	< 10	10	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
methylene chloride	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
carbon disulfide	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
isopropyl ether (DIPE)	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
ethyl t-butyl ether (ETBE)	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
t-butanol (TBA)	< 30	30	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
2-butanone (MEK)	< 10	10	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
2,2-dichloropropane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
chloroform	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
bromochloromethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
tetrahydrofuran (THF)	**4**	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
1,1-dichloropropene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
t-amyl-methyl ether (TAME)	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
carbon tetrachloride	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
benzene	**2**	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
trichloroethene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
bromodichloromethane	< 0.6	0.6	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
1,4-dioxane	< 50	50	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
dibromomethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
toluene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
2-hexanone	< 10	10	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
1,3-dichloropropane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
tetrachloroethene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522 83058
Job ID: 21842
Sample#: 21842-006
Sample ID: MW-19D
Matrix: Water
Received on ice at 6˚C, in satisfactory condition.
Sampled: 6/22/11 16:20

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dibromochloromethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
chlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
ethylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
m&p-xylenes	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
o-xylene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
styrene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
bromoform	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
isopropylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
1,2,3-trichloropropane	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
n-propylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
bromobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
1,3,5-trimethylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
2-chlorotoluene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
4-chlorotoluene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
tert-butylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
1,2,4-trimethylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
sec-butylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
1,3-dichlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
4-isopropyltoluene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
1,4-dichlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
1,2-dichlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
n-butylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
1,2,4-trichlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
hexachlorobutadiene	< 0.5	0.5	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
naphthalene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
1,2,3-trichlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**96**	78-114	%	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
toluene-D8 SUR	**97**	88-110	%	1	LMM		1101241	6/24/11	13:14	SW5030B8260B
4-bromofluorobenzene SUR	**92**	86-115	%	1	LMM		1101241	6/24/11	13:14	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522 83058
Job ID: 21842
Sample#: 21842-007
Sample ID: DUP-3
Matrix: Water
Received on ice at 6˚C, in satisfactory condition.
Sampled: 6/22/11

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
chloromethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
vinyl chloride	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
bromomethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
chloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
diethyl ether	**11**	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
acetone	< 10	10	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
methylene chloride	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
carbon disulfide	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
isopropyl ether (DIPE)	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
ethyl t-butyl ether (ETBE)	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
t-butanol (TBA)	**49**	30	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
2-butanone (MEK)	< 10	10	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
2,2-dichloropropane	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
chloroform	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
bromochloromethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
tetrahydrofuran (THF)	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
1,1-dichloropropene	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
t-amyl-methyl ether (TAME)	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
carbon tetrachloride	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
benzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
trichloroethene	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
bromodichloromethane	< 0.6	0.6	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
1,4-dioxane	**74** #	50	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
dibromomethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
toluene	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
2-hexanone	< 10	10	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
1,3-dichloropropane	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
tetrachloroethene	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522 83058
Job ID: 21842
Sample#: 21842-007
Sample ID: DUP-3
Matrix: Water
Received on ice at 6˚C, in satisfactory condition.
Sampled: 6/22/11

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dibromochloromethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
chlorobenzene	**12**	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
ethylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
m&p-xylenes	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
o-xylene	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
styrene	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
bromoform	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
isopropylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
1,2,3-trichloropropane	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
n-propylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
bromobenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
1,3,5-trimethylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
2-chlorotoluene	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
4-chlorotoluene	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
tert-butylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
1,2,4-trimethylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
sec-butylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
1,3-dichlorobenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
4-isopropyltoluene	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
1,4-dichlorobenzene	**2**	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
1,2-dichlorobenzene	**6**	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
n-butylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
1,2,4-trichlorobenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
hexachlorobutadiene	< 0.5	0.5	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
naphthalene	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
1,2,3-trichlorobenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**99**	78-114	%	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
toluene-D8 SUR	**97**	88-110	%	1	LMM		1101285	6/29/11	18:00	SW5030B8260B
4-bromofluorobenzene SUR	**96**	86-115	%	1	LMM		1101285	6/29/11	18:00	SW5030B8260B

 # The associated LCS/D showed high recovery for this compound. This compound is known to be problematic in the method. The reported concentration is an estimate.

Absolute Resource associates

Project ID: Haverhill LF 0522 83058
Job ID: 21842
Sample#: 21842-008
Sample ID: EB-3
Matrix: Water
Received on ice at 6˚C, in satisfactory condition.
Sampled: 6/22/11 13:15

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
chloromethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
vinyl chloride	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
bromomethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
chloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
diethyl ether	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
acetone	< 10	10	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
methylene chloride	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
carbon disulfide	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
isopropyl ether (DIPE)	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
ethyl t-butyl ether (ETBE)	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
t-butanol (TBA)	< 30	30	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
2-butanone (MEK)	< 10	10	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
2,2-dichloropropane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
chloroform	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
bromochloromethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
tetrahydrofuran (THF)	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
1,1-dichloropropene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
t-amyl-methyl ether (TAME)	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
carbon tetrachloride	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
benzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
trichloroethene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
bromodichloromethane	< 0.6	0.6	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
1,4-dioxane	< 50	50	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
dibromomethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
toluene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
2-hexanone	< 10	10	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
1,3-dichloropropane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
tetrachloroethene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522 83058
Job ID: 21842
Sample#: 21842-008
Sample ID: EB-3
Matrix: Water
Received on ice at 6˚C, in satisfactory condition.
Sampled: 6/22/11 13:15

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dibromochloromethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
chlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
ethylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
m&p-xylenes	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
o-xylene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
styrene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
bromoform	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
isopropylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
1,2,3-trichloropropane	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
n-propylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
bromobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
1,3,5-trimethylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
2-chlorotoluene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
4-chlorotoluene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
tert-butylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
1,2,4-trimethylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
sec-butylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
1,3-dichlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
4-isopropyltoluene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
1,4-dichlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
1,2-dichlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
n-butylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
1,2,4-trichlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
hexachlorobutadiene	< 0.5	0.5	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
naphthalene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
1,2,3-trichlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**101**	78-114	%	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
toluene-D8 SUR	**97**	88-110	%	1	LMM		1101241	6/24/11	12:43	SW5030B8260B
4-bromofluorobenzene SUR	**96**	86-115	%	1	LMM		1101241	6/24/11	12:43	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522 83058
Job ID: 21842
Sample#: 21842-009
Sample ID: Trip Blank
Matrix: Water
Received on ice at 6˚C, in satisfactory condition.
Sampled: 6/22/11

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
chloromethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
vinyl chloride	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
bromomethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
chloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
diethyl ether	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
acetone	< 10	10	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
methylene chloride	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
carbon disulfide	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
isopropyl ether (DIPE)	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
ethyl t-butyl ether (ETBE)	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
t-butanol (TBA)	< 30	30	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
2-butanone (MEK)	< 10	10	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
2,2-dichloropropane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
chloroform	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
bromochloromethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
tetrahydrofuran (THF)	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
1,1-dichloropropene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
t-amyl-methyl ether (TAME)	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
carbon tetrachloride	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
benzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
trichloroethene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
bromodichloromethane	< 0.6	0.6	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
1,4-dioxane	< 50	50	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
dibromomethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
toluene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
2-hexanone	< 10	10	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
1,3-dichloropropane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
tetrachloroethene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522 83058
Job ID: 21842
Sample#: 21842-009
Sample ID: Trip Blank
Matrix: Water
Received on ice at 6˚C, in satisfactory condition.
Sampled: 6/22/11

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dibromochloromethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
chlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
ethylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
m&p-xylenes	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
o-xylene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
styrene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
bromoform	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
isopropylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
1,2,3-trichloropropane	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
n-propylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
bromobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
1,3,5-trimethylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
2-chlorotoluene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
4-chlorotoluene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
tert-butylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
1,2,4-trimethylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
sec-butylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
1,3-dichlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
4-isopropyltoluene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
1,4-dichlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
1,2-dichlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
n-butylbenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
1,2,4-trichlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
hexachlorobutadiene	< 0.5	0.5	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
naphthalene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
1,2,3-trichlorobenzene	< 2	2	ug/L	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**102**	78-114	%	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
toluene-D8 SUR	**97**	88-110	%	1	LMM		1101241	6/24/11	11:09	SW5030B8260B
4-bromofluorobenzene SUR	**93**	86-115	%	1	LMM		1101241	6/24/11	11:09	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522 83058
Job ID: 21842

Sample#: 21842-001
Sample ID: MW-12
Matrix: Water
Sampled: 6/22/11 11:05

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
Arsenic	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	17:01	SW3005A6010C
Barium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	17:01	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101316	7/5/11	17:01	SW3005A6010C
Calcium	**32**	0.5	mg/L	1	BJS		1101316	7/5/11	17:01	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	17:01	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	17:01	SW3005A6010C
Iron	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	17:01	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	17:01	SW3005A6010C
Manganese	< 0.03	0.03	mg/L	1	BJS		1101316	7/5/11	17:01	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4285	6/30/11	11:54	SW7470A
Selenium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	17:01	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101316	7/5/11	17:01	SW3005A6010C
Sodium	**9.4**	0.5	mg/L	1	BJS		1101316	7/5/11	17:01	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	17:01	SW3005A6010C

Sample#: 21842-002
Sample ID: MW-13S
Matrix: Water
Sampled: 6/22/11 12:05

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
Arsenic	**0.17**	0.008	mg/L	1	BJS		1101316	7/5/11	17:10	SW3005A6010C
Barium	**0.11**	0.05	mg/L	1	BJS		1101316	7/5/11	17:10	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101316	7/5/11	17:10	SW3005A6010C
Calcium	**62**	0.5	mg/L	1	BJS		1101316	7/5/11	17:10	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	17:10	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	17:10	SW3005A6010C
Iron	**0.96**	0.05	mg/L	1	BJS		1101316	7/5/11	17:10	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	17:10	SW3005A6010C
Manganese	**0.51**	0.03	mg/L	1	BJS		1101316	7/5/11	17:10	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4285	6/30/11	11:56	SW7470A
Selenium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	17:10	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101316	7/5/11	17:10	SW3005A6010C
Sodium	**15**	0.5	mg/L	1	BJS		1101316	7/5/11	17:10	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	17:10	SW3005A6010C

Absolute Resource associates

Project ID: Haverhill LF 0522 83058
Job ID: 21842

Sample#: 21842-003
Sample ID: MW-13D
Matrix: Water
Sampled: 6/22/11 13:05

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Arsenic	**0.15**	0.008	mg/L	1	BJS		1101316	7/5/11	17:16	SW3005A6010C
Barium	**0.19**	0.05	mg/L	1	BJS		1101316	7/5/11	17:16	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101316	7/5/11	17:16	SW3005A6010C
Calcium	**120**	10	mg/L	20	BJS		1101316	7/5/11	17:23	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	17:16	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	17:16	SW3005A6010C
Iron	**8.1**	0.05	mg/L	1	BJS		1101316	7/5/11	17:16	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	17:16	SW3005A6010C
Manganese	**2.8**	0.03	mg/L	1	BJS		1101316	7/5/11	17:16	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4285	6/30/11	11:58	SW7470A
Selenium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	17:16	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101316	7/5/11	17:16	SW3005A6010C
Sodium	**120**	10	mg/L	20	BJS		1101316	7/5/11	17:23	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	17:16	SW3005A6010C

Sample#: 21842-004
Sample ID: MW-11S
Matrix: Water
Sampled: 6/22/11 14:50

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Arsenic	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	17:30	SW3005A6010C
Barium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	17:30	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101316	7/5/11	17:30	SW3005A6010C
Calcium	**17**	0.5	mg/L	1	BJS		1101316	7/5/11	17:30	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	17:30	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	17:30	SW3005A6010C
Iron	**0.66**	0.05	mg/L	1	BJS		1101316	7/5/11	17:30	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	17:30	SW3005A6010C
Manganese	**0.11**	0.03	mg/L	1	BJS		1101316	7/5/11	17:30	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4285	6/30/11	12:03	SW7470A
Selenium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	17:30	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101316	7/5/11	17:30	SW3005A6010C
Sodium	**7.3**	0.5	mg/L	1	BJS		1101316	7/5/11	17:30	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	17:30	SW3005A6010C

Absolute Resource associates

Project ID: Haverhill LF 0522 83058
Job ID: 21842

Sample#: 21842-005
Sample ID: MW-16S
Matrix: Water
Sampled: 6/22/11 15:30

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
Arsenic	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	17:36	SW3005A6010C
Barium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	17:36	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101316	7/5/11	17:36	SW3005A6010C
Calcium	**7.9**	0.5	mg/L	1	BJS		1101316	7/5/11	17:36	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	17:36	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	17:36	SW3005A6010C
Iron	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	17:36	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	17:36	SW3005A6010C
Manganese	< 0.03	0.03	mg/L	1	BJS		1101316	7/5/11	17:36	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4285	6/30/11	12:05	SW7470A
Selenium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	17:36	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101316	7/5/11	17:36	SW3005A6010C
Sodium	**29**	0.5	mg/L	1	BJS		1101316	7/5/11	17:36	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	17:36	SW3005A6010C

Sample#: 21842-006
Sample ID: MW-19D
Matrix: Water
Sampled: 6/22/11 16:20

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
Arsenic	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	17:42	SW3005A6010C
Barium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	17:42	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101316	7/5/11	17:42	SW3005A6010C
Calcium	**41**	0.5	mg/L	1	BJS		1101316	7/5/11	17:42	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	17:42	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	17:42	SW3005A6010C
Iron	**0.14**	0.05	mg/L	1	BJS		1101316	7/5/11	17:42	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	17:42	SW3005A6010C
Manganese	**0.25**	0.03	mg/L	1	BJS		1101316	7/5/11	17:42	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4285	6/30/11	12:07	SW7470A
Selenium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	17:42	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101316	7/5/11	17:42	SW3005A6010C
Sodium	**17**	0.5	mg/L	1	BJS		1101316	7/5/11	17:42	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	17:42	SW3005A6010C

Absolute Resource associates

Project ID: Haverhill LF 0522 83058
Job ID: 21842

Sample#: 21842-007
Sample ID: DUP-3
Matrix: Water
Sampled: 6/22/11

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Arsenic	**0.15**	0.008	mg/L	1	BJS		1101316	7/5/11	17:47	SW3005A6010C
Barium	**0.19**	0.05	mg/L	1	BJS		1101316	7/5/11	17:47	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101316	7/5/11	17:47	SW3005A6010C
Calcium	**120**	10	mg/L	20	BJS		1101316	7/5/11	17:57	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	17:47	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	17:47	SW3005A6010C
Iron	**8.2**	0.05	mg/L	1	BJS		1101316	7/5/11	17:47	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	17:47	SW3005A6010C
Manganese	**2.7**	0.03	mg/L	1	BJS		1101316	7/5/11	17:47	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4285	6/30/11	12:09	SW7470A
Selenium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	17:47	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101316	7/5/11	17:47	SW3005A6010C
Sodium	**120**	10	mg/L	20	BJS		1101316	7/5/11	17:57	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	17:47	SW3005A6010C

Sample#: 21842-008
Sample ID: EB-3
Matrix: Water
Sampled: 6/22/11 13:15

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Arsenic	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	18:04	SW3005A6010C
Barium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	18:04	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101316	7/5/11	18:04	SW3005A6010C
Calcium	< 0.5	0.5	mg/L	1	BJS		1101316	7/5/11	18:04	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	18:04	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	18:04	SW3005A6010C
Iron	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	18:04	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	18:04	SW3005A6010C
Manganese	< 0.03	0.03	mg/L	1	BJS		1101316	7/5/11	18:04	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4285	6/30/11	12:10	SW7470A
Selenium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	18:04	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101316	7/5/11	18:04	SW3005A6010C
Sodium	< 0.5	0.5	mg/L	1	BJS		1101316	7/5/11	18:04	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	18:04	SW3005A6010C

Sample#: 21842-010
Sample ID: MW-12
Matrix: Water
Sampled: 6/22/11 11:05

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Hardness (as CaCO3)	**110**	3	mg/L	1		6/29/11	4288			SM2340B

Absolute Resource associates

Project ID: Haverhill LF 0522 83058
Job ID: 21842

Sample#: 21842-011
Sample ID: MW-13S
Matrix: Water
Sampled: 6/22/11 12:05

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Hardness (as CaCO3)	**210**	3	mg/L	1		6/29/11	4288			SM2340B

Sample#: 21842-012
Sample ID: MW-13D
Matrix: Water
Sampled: 6/22/11 13:05

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Hardness (as CaCO3)	**520**	3	mg/L	1		6/29/11	4288			SM2340B

Absolute Resource associates

Project ID: Haverhill LF 0522 83058
Job ID: 21842

Sample#: 21842-001
Sample ID: MW-12
Matrix: Water
Sampled: 6/22/11 11:05

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Alkalinity, total (as CaCO3)	**64**	5	mg/L	1	APA		1101311	7/5/11		SM2320B
Chemical Oxygen Demand (COD)	< 25	25	mg/L	1	APA		1101342	7/7/11		E410.4
Chloride	**15**	0.5	mg/L	1	JLZ		1101256	6/23/11	19:38	E300.0A
Cyanide, total	< 0.02	0.02	mg/L	1	APA		1101291	6/28/11		SM4500CN-E
Nitrate-N	**2.0**	0.1	mg/L	1	JLZ		1101256	6/23/11	19:38	E300.0A
Sulfate	**27**	0.5	mg/L	1	JLZ		1101256	6/23/11	19:38	E300.0A
Total Dissolved Solids (TDS)	**170**	20	mg/L	1	APA		1101267	6/27/11		SM2540C

Sample#: 21842-002
Sample ID: MW-13S
Matrix: Water
Sampled: 6/22/11 12:05

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Alkalinity, total (as CaCO3)	**140**	5	mg/L	1	APA		1101311	7/5/11		SM2320B
Chemical Oxygen Demand (COD)	< 25	25	mg/L	1	APA		1101342	7/7/11		E410.4
Chloride	**21**	0.5	mg/L	1	JLZ		1101256	6/23/11	19:49	E300.0A
Cyanide, total	< 0.02	0.02	mg/L	1	APA		1101291	6/28/11		SM4500CN-E
Nitrate-N	< 0.1	0.1	mg/L	1	JLZ		1101256	6/23/11	19:49	E300.0A
Sulfate	**45**	0.5	mg/L	1	JLZ		1101256	6/23/11	19:49	E300.0A
Total Dissolved Solids (TDS)	**300**	20	mg/L	1	APA		1101267	6/27/11		SM2540C

Sample#: 21842-003
Sample ID: MW-13D
Matrix: Water
Sampled: 6/22/11 13:05

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Alkalinity, total (as CaCO3)	**440**	5	mg/L	1	APA		1101311	7/5/11		SM2320B
Chemical Oxygen Demand (COD)	**63**	25	mg/L	1	APA		1101342	7/7/11		E410.4
Chloride	**180**	2.5	mg/L	5	JLZ		1101323	7/5/11	20:32	E300.0A
Cyanide, total	< 0.02	0.02	mg/L	1	APA		1101292	6/29/11		SM4500CN-E
Nitrate-N	< 0.1	0.1	mg/L	1	JLZ		1101256	6/23/11	20:01	E300.0A
Sulfate	**52**	0.5	mg/L	1	JLZ		1101256	6/23/11	20:01	E300.0A
Total Dissolved Solids (TDS)	**880**	20	mg/L	1	APA		1101267	6/27/11		SM2540C

Project ID: Haverhill LF 0522 83058
Job ID: 21842

Sample#: 21842-004
Sample ID: MW-11S
Matrix: Water
Sampled: 6/22/11 14:50

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Alkalinity, total (as CaCO3)	**41**	5	mg/L	1	APA		1101311	7/5/11		SM2320B
Chemical Oxygen Demand (COD)	< 25	25	mg/L	1	APA		1101342	7/7/11		E410.4
Chloride	**4.8**	0.5	mg/L	1	JLZ		1101256	6/23/11	20:13	E300.0A
Cyanide, total	< 0.02	0.02	mg/L	1	APA		1101291	6/28/11		SM4500CN-E
Nitrate-N	< 0.1	0.1	mg/L	1	JLZ		1101256	6/23/11	20:13	E300.0A
Sulfate	**34**	0.5	mg/L	1	JLZ		1101256	6/23/11	20:13	E300.0A
Total Dissolved Solids (TDS)	**130**	20	mg/L	1	APA		1101267	6/27/11		SM2540C

Sample#: 21842-005
Sample ID: MW-16S
Matrix: Water
Sampled: 6/22/11 15:30

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Alkalinity, total (as CaCO3)	**68**	5	mg/L	1	APA		1101311	7/5/11		SM2320B
Chemical Oxygen Demand (COD)	< 25	25	mg/L	1	APA		1101342	7/7/11		E410.4
Chloride	**4.6**	0.5	mg/L	1	JLZ		1101256	6/23/11	20:25	E300.0A
Cyanide, total	< 0.02	0.02	mg/L	1	APA		1101291	6/28/11		SM4500CN-E
Nitrate-N	< 0.1	0.1	mg/L	1	JLZ		1101256	6/23/11	20:25	E300.0A
Sulfate	**14**	0.5	mg/L	1	JLZ		1101256	6/23/11	20:25	E300.0A
Total Dissolved Solids (TDS)	**140**	20	mg/L	1	APA		1101267	6/27/11		SM2540C

Sample#: 21842-006
Sample ID: MW-19D
Matrix: Water
Sampled: 6/22/11 16:20

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Alkalinity, total (as CaCO3)	**86**	5	mg/L	1	APA		1101311	7/5/11		SM2320B
Chemical Oxygen Demand (COD)	< 25	25	mg/L	1	APA		1101342	7/7/11		E410.4
Chloride	**72**	0.5	mg/L	1	JLZ		1101256	6/23/11	21:00	E300.0A
Cyanide, total	< 0.02	0.02	mg/L	1	APA		1101291	6/28/11		SM4500CN-E
Nitrate-N	< 0.1	0.1	mg/L	1	JLZ		1101256	6/23/11	21:00	E300.0A
Sulfate	**7.5**	0.5	mg/L	1	JLZ		1101256	6/23/11	21:00	E300.0A
Total Dissolved Solids (TDS)	**360**	20	mg/L	1	APA		1101267	6/27/11		SM2540C

Sample#: 21842-007
Sample ID: DUP-3
Matrix: Water
Sampled: 6/22/11

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Cyanide, total	< 0.02	0.02	mg/L	1	APA		1101291	6/28/11		SM4500CN-E

Absolute Resource associates

Quality Control Report

124 Heritage Avenue Unit 10
Portsmouth, NH 03801
www.absoluteresourceassociates.com

MassDEP Analytical Protocol Certification Form

Laboratory Name: **Absolute Resource Associates** Project #: 0522 83058

Project Location: Massachusetts RTN:

This Form provides certifications for the following data set: **21842**

Matrices: Groundwater/Surface Water ☑ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☑	MassDEP VPH CAM IV A ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☐	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☐	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9014 Total Cyanide/PAC CAM VIA ☑	6860 Perchlorate CAM VIII B ☐	

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	Yes☑ No☐
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	Yes☑ No☐
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	Yes☑ No☐
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	Yes☑ No☐
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modifications(s)? (Refer to the individual methods for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	Yes☐ No☐ Yes☐ No☐
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	Yes☑ No☐

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	Yes☑ No*☐

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	Yes☑ No*☐
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes☐ No*☑

* All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: (for) **Position: Lab Director**

Printed Name: Susan C. Sylvester **Date: 7/15/11**

Sample Integrity Table

Parameter	Method	Matrix	Minimum Volume	Recommended Container(s)	Required Preservation	Holding Time
Volatile Organics	EPA 8260	Aqueous	40mL	2 x 40mL VOA Vials with Teflon lined septa	Cool to ≤6°C 1:1 HCl to pH <2	14 Days
Volatile Organics	EPA 8260	Solid	40mL	1 x 40mL VOA Vial with 10mLs Methanol and 1 unpreserved container for percent moisture	Cool to ≤6°C Methanol	14 Days
Semivolatile Organics	EPA 8270	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	7 Days
Semivolatile Organics	EPA 8270	Solid	20g	4oz Amber Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
Organochlorine Pesticides	EPA 8081	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	7 Days
Organochlorine Pesticides	EPA 8081	Solid	20g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
PCBs	EPA 8082	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	365 Days
PCBs	EPA 8082	Solid	20g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	365 Days
Herbicides (subcontracted)	EPA 8151	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	7 Days
Herbicides (subcontracted)	EPA 8151	Solid	30g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
MA DEP VPH	MADEP VPH	Aqueous	40mL	2 x 40mL VOA Vials with Teflon lined septa	Cool to ≤6°C 1:1 HCl to pH <2	14 Days
MA DEP VPH	MADEP VPH	Solid	40mL	1 x 40mL VOA Vial with 10mLs Methanol and 1 unpreserved container for percent moisture	Cool to ≤6°C Methanol	28 Days
MA DEP EPH	MADEP EPH	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C 1:1 H_2SO_4 to pH <2	14 Days
MA DEP EPH	MADEP EPH	Solid	30g	4oz Amber Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
Total Metals	EPA 6010	Aqueous	100mL	250mL Polyethylene Bottle	1:1 HNO_3 to pH <2	180 Days
Dissolved Metals	EPA 6010	Aqueous	100mL	250mL Polyethylene Bottle	Filter First 1:1 HNO_3 to pH <2	180 Days
Total Metals	EPA 6010	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	180 Days
Total Mercury (may be combined with Total Metals)	EPA 7470	Aqueous	100mL	125mL Polyethylene Bottle	1:1 HNO_3 to pH <2	28 Days
Total Mercury (may be combined with Total Metals)	EPA 7471	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	28 Days
Chromium, Hexavalent	EPA 7196	Aqueous	100mL	125mL Polyethylene Bottle	Cool to ≤6°C (NH4)2SO4 buffer	28 Days
Chromium, Hexavalent (subcontract)	EPA 7196	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	30 Days
Cyanide, Total	EPA 9014	Aqueous	125mL	125mL Polyethylene Bottle	Cool to ≤6°C 1:1 NaOH to pH >8	14 Days
Cyanide, Total	EPA 9014	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days

Absolute Resource Associates
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Portsmouth, NH 03801
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Case Narrative
Lab # 21842

Sample Receiving and Chain of Custody Discrepancies

Samples were received in acceptable condition, at 6 degrees C, on ice, and in accordance with sample handling, preservation and integrity guidelines.
The complete quality control package containing raw data, instrument calibration information, response summaries, etc. has been submitted under separate cover.

Calibration

See the included table for a list of compounds quantitated by quadratic equation.

Method Blank

No exceptions noted.

Surrogate Recoveries

No exceptions noted.

Laboratory Control Sample Results

VOC: The LCS/D1101241 did not meet the acceptance criteria for bromomethane. The LCS1101241 did not meet the acceptance criteria for 1,4-dioxane. These compounds showed high recoveries. The impacted samples have been qualified accordingly. There is no impact to the field samples that these analytes were not detected in. The LCS/D1101241 did not meet the acceptance criteria for bromoform. Since <10% of the compounds were outside of the acceptance criteria, reanalysis is not required.
VOC: The relative percent difference between the LCS and LCSD1101259 was outside the acceptance criteria for acetone, 2-butanone (MEK), 1,4-dioxane, and 2-hexanone. The percent recovery for these analytes in each QC parameter was within the acceptance criteria. No impact to the data suspected.
VOC: The LCS/D1101285 did not meet the acceptance criteria for bromomethane and 1,4-dioxane. These compounds showed high recoveries. The impacted samples have been qualified accordingly. There is no impact to the field samples that these analytes were not detected in.

Matrix Spike/Matrix Spike Duplicate/Duplicate Results

VOC: The MS/D for 21842-003 did not meet the acceptance criteria for bromomethane and 1,4-dioxane. These compounds are known to be problematic in the method. The MS did not meet the acceptance criteria for chloroethane. The recovery for this compound was acceptable in the MSD.
Metals: The native concentrations of calcium and sodium in the sample 21842-003MS/D was greater than four times the spiking concentration. Due to this relatively high native concentration, percent recovery evaluation is not practical.

Other

VOC: The response factor for acetone was outside the CAM requested limit in the continuing calibration verification. This analyte was not detected in the associated samples. No impact to the data suspected.

MassDEP Analytical Protocol Certification Form Questions A through I

No explanation is needed for Questions A through I answered in the affirmative.
Question I: Metals: The MCP required metals were not requested by the customer. Box I is "No."

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Quantitation by Quadratic Equation
Lab # 21842

Quantitation of the following compounds was based on a quadratic equation

Bromomethane
Acetone
2-butanone (MEK)
tetrahydrofuran (THF)
1,1,1-Trichloroethane
Carbon tetrachloride
t-amyl-methyl ether (TAME)
Trichloroethene
Bromodichloromethane
1,4-dioxane
4-methyl-2-pentanone (MIBK)
2-Hexanone
cis-1,3-dichloropropene
trans-1,3-Dichloropropene
Dibromochloromethane
1,1,1,2-Tetrachloroethane
Bromoform
1,1,2,2-Tetrachloroethane
1,2-dibromo-3-chloropropane (DBCP)
1,2,4-trichlorobenzene
hexachlorobutadiene
naphthalene

- QC Report -

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits	RPD	RPD Limit
SW5030B8260B	BLK1101241	dichlorodifluoromethane		<	2	ug/L					
		chloromethane		<	2	ug/L					
		vinyl chloride		<	2	ug/L					
		bromomethane		<	2	ug/L					
		chloroethane		<	2	ug/L					
		trichlorofluoromethane		<	2	ug/L					
		diethyl ether		<	10	ug/L					
		acetone		<	50	ug/L					
		1,1-dichloroethene		<	1	ug/L					
		methylene chloride		<	5	ug/L					
		carbon disulfide		<	2	ug/L					
		methyl t-butyl ether (MTBE)		<	2	ug/L					
		trans-1,2-dichloroethene		<	2	ug/L					
		isopropyl ether (DIPE)		<	2	ug/L					
		ethyl t-butyl ether (ETBE)		<	2	ug/L					
		1,1-dichloroethane		<	2	ug/L					
		t-butanol (TBA)		<	30	ug/L					
		2-butanone (MEK)		<	10	ug/L					
		2,2-dichloropropane		<	2	ug/L					
		cis-1,2-dichloroethene		<	2	ug/L					
		chloroform		<	2	ug/L					
		bromochloromethane		<	2	ug/L					
		tetrahydrofuran (THF)		<	10	ug/L					
		1,1,1-trichloroethane		<	2	ug/L					
		1,1-dichloropropene		<	2	ug/L					
		t-amyl-methyl ether (TAME)		<	2	ug/L					
		carbon tetrachloride		<	2	ug/L					
		1,2-dichloroethane		<	2	ug/L					
		benzene		<	2	ug/L					
		trichloroethene		<	2	ug/L					
		1,2-dichloropropane		<	2	ug/L					
		bromodichloromethane		<	0.6	ug/L					
		1,4-dioxane		<	50	ug/L					
		dibromomethane		<	2	ug/L					
		4-methyl-2-pentanone (MIBK)		<	10	ug/L					
		cis-1,3-dichloropropene		<	2	ug/L					
		toluene		<	2	ug/L					
		trans-1,3-dichloropropene		<	2	ug/L					
		2-hexanone		<	10	ug/L					
		1,1,2-trichloroethane		<	2	ug/L					
		1,3-dichloropropane		<	2	ug/L					
		tetrachloroethene		<	2	ug/L					
		dibromochloromethane		<	2	ug/L					
		1,2-dibromoethane (EDB)		<	2	ug/L					
		chlorobenzene		<	2	ug/L					
		1,1,1,2-tetrachloroethane		<	2	ug/L					
		ethylbenzene		<	2	ug/L					
		m&p-xylenes		<	2	ug/L					
		o-xylene		<	2	ug/L					
		styrene		<	2	ug/L					

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Method	QC ID	Parameter	Associated Sample		Result	Units Amt Added	%R	Limits		RPD	RPD Limit
SW5030B8260B	BLK1101241	bromoform		<	2	ug/L					
		isopropylbenzene		<	2	ug/L					
		1,1,2,2-tetrachloroethane		<	2	ug/L					
		1,2,3-trichloropropane		<	2	ug/L					
		n-propylbenzene		<	2	ug/L					
		bromobenzene		<	2	ug/L					
		1,3,5-trimethylbenzene		<	2	ug/L					
		2-chlorotoluene		<	2	ug/L					
		4-chlorotoluene		<	2	ug/L					
		tert-butylbenzene		<	2	ug/L					
		1,2,4-trimethylbenzene		<	2	ug/L					
		sec-butylbenzene		<	2	ug/L					
		1,3-dichlorobenzene		<	2	ug/L					
		4-isopropyltoluene		<	2	ug/L					
		1,4-dichlorobenzene		<	2	ug/L					
		1,2-dichlorobenzene		<	2	ug/L					
		n-butylbenzene		<	2	ug/L					
		1,2-dibromo-3-chloropropane		<	2	ug/L					
		1,2,4-trichlorobenzene		<	2	ug/L					
		hexachlorobutadiene		<	0.5	ug/L					
		naphthalene		<	5	ug/L					
		1,2,3-trichlorobenzene		<	2	ug/L					
		dibromofluoromethane SUR			100	%		78	114		
		toluene-D8 SUR			98	%		88	110		
		4-bromofluorobenzene SUR			94	%		86	115		

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5030B8260B	LCS1101241	dichlorodifluoromethane			17	ug/L	20	86		70	130		
		chloromethane			18	ug/L	20	92		70	130		
		vinyl chloride			17	ug/L	20	84		70	130		
		bromomethane			30	ug/L	20	152	*	70	130		
		chloroethane			21	ug/L	20	107		70	130		
		trichlorofluoromethane			20	ug/L	20	99		70	130		
		diethyl ether			21	ug/L	20	104		70	130		
		acetone		<	50	ug/L	20	86					
		1,1-dichloroethene			18	ug/L	20	88		70	130		
		methylene chloride			20	ug/L	20	101		70	130		
		carbon disulfide			15	ug/L	20	74		70	130		
		methyl t-butyl ether (MTBE)			20	ug/L	20	98		70	130		
		trans-1,2-dichloroethene			19	ug/L	20	93		70	130		
		isopropyl ether (DIPE)			20	ug/L	20	101		70	130		
		ethyl t-butyl ether (ETBE)			20	ug/L	20	98		70	130		
		1,1-dichloroethane			18	ug/L	20	91		70	130		
		t-butanol (TBA)			110	ug/L	100	108		70	130		
		2-butanone (MEK)			18	ug/L	20	89		70	130		
		2,2-dichloropropane			18	ug/L	20	91		70	130		
		cis-1,2-dichloroethene			21	ug/L	20	106		70	130		
		chloroform			22	ug/L	20	108		70	130		
		bromochloromethane			22	ug/L	20	109		70	130		
		tetrahydrofuran (THF)			23	ug/L	20	113		70	130		
		1,1,1-trichloroethane			19	ug/L	20	93		70	130		
		1,1-dichloropropene			21	ug/L	20	104		70	130		
		t-amyl-methyl ether (TAME)			21	ug/L	20	105		70	130		
		carbon tetrachloride			15	ug/L	20	76		70	130		
		1,2-dichloroethane			22	ug/L	20	108		70	130		
		benzene			21	ug/L	20	107		70	130		
		trichloroethene			20	ug/L	20	98		70	130		
		1,2-dichloropropane			19	ug/L	20	93		70	130		
		bromodichloromethane			17	ug/L	20	83		70	130		
		1,4-dioxane			53	ug/L	40	132	*	70	130		
		dibromomethane			18	ug/L	20	88		70	130		
		4-methyl-2-pentanone (MIBK)			18	ug/L	20	91		70	130		
		cis-1,3-dichloropropene			18	ug/L	20	90		70	130		
		toluene			20	ug/L	20	102		70	130		
		trans-1,3-dichloropropene			17	ug/L	20	84		70	130		
		2-hexanone			17	ug/L	20	85		70	130		
		1,1,2-trichloroethane			18	ug/L	20	90		70	130		
		1,3-dichloropropane			20	ug/L	20	101		70	130		
		tetrachloroethene			22	ug/L	20	110		70	130		
		dibromochloromethane			14	ug/L	20	69	*	70	130		
		1,2-dibromoethane (EDB)			18	ug/L	20	90		70	130		
		chlorobenzene			20	ug/L	20	102		70	130		
		1,1,1,2-tetrachloroethane			16	ug/L	20	79		70	130		
		ethylbenzene			22	ug/L	20	111		70	130		
		m&p-xylenes			44	ug/L	40	111		70	130		
		o-xylene			22	ug/L	20	109		70	130		
		styrene			19	ug/L	20	97		70	130		
		bromoform			12	ug/L	20	61	*	70	130		

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030B8260B	LCS1101241	isopropylbenzene		21	ug/L	20	103	70	130		
		1,1,2,2-tetrachloroethane		23	ug/L	20	114	70	130		
		1,2,3-trichloropropane		21	ug/L	20	105	70	130		
		n-propylbenzene		23	ug/L	20	115	70	130		
		bromobenzene		21	ug/L	20	104	70	130		
		1,3,5-trimethylbenzene		22	ug/L	20	110	70	130		
		2-chlorotoluene		22	ug/L	20	112	70	130		
		4-chlorotoluene		23	ug/L	20	113	70	130		
		tert-butylbenzene		23	ug/L	20	114	70	130		
		1,2,4-trimethylbenzene		23	ug/L	20	113	70	130		
		sec-butylbenzene		23	ug/L	20	115	70	130		
		1,3-dichlorobenzene		22	ug/L	20	111	70	130		
		4-isopropyltoluene		22	ug/L	20	111	70	130		
		1,4-dichlorobenzene		21	ug/L	20	104	70	130		
		1,2-dichlorobenzene		23	ug/L	20	116	70	130		
		n-butylbenzene		23	ug/L	20	116	70	130		
		1,2-dibromo-3-chloropropane		15	ug/L	20	76	70	130		
		1,2,4-trichlorobenzene		20	ug/L	20	100	70	130		
		hexachlorobutadiene		21	ug/L	20	105	70	130		
		naphthalene		19	ug/L	20	93	70	130		
		1,2,3-trichlorobenzene		22	ug/L	20	110	70	130		
		dibromofluoromethane SUR		98	%			78	114		
		toluene-D8 SUR		98	%			88	110		
		4-bromofluorobenzene SUR		103	%			86	115		

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5030B8260B	LCSD1101241	dichlorodifluoromethane			18	ug/L	20	88		70	130	2	20
		chloromethane			18	ug/L	20	92		70	130	1	20
		vinyl chloride			17	ug/L	20	86		70	130	2	20
		bromomethane			29	ug/L	20	146	*	70	130	4	20
		chloroethane			22	ug/L	20	109		70	130	3	20
		trichlorofluoromethane			20	ug/L	20	102		70	130	3	20
		diethyl ether			21	ug/L	20	106		70	130	2	20
		acetone		<	50	ug/L	20	87				1	20
		1,1-dichloroethene			18	ug/L	20	89		70	130	1	20
		methylene chloride			20	ug/L	20	102		70	130	1	20
		carbon disulfide			15	ug/L	20	76		70	130	2	20
		methyl t-butyl ether (MTBE)			20	ug/L	20	102		70	130	4	20
		trans-1,2-dichloroethene			20	ug/L	20	98		70	130	4	20
		isopropyl ether (DIPE)			20	ug/L	20	102		70	130	2	20
		ethyl t-butyl ether (ETBE)			20	ug/L	20	102		70	130	3	20
		1,1-dichloroethane			19	ug/L	20	93		70	130	2	20
		t-butanol (TBA)			110	ug/L	100	106		70	130	1	20
		2-butanone (MEK)			18	ug/L	20	92		70	130	4	20
		2,2-dichloropropane			18	ug/L	20	91		70	130	1	20
		cis-1,2-dichloroethene			22	ug/L	20	108		70	130	2	20
		chloroform			22	ug/L	20	109		70	130	1	20
		bromochloromethane			22	ug/L	20	109		70	130	0	20
		tetrahydrofuran (THF)			22	ug/L	20	112		70	130	1	20
		1,1,1-trichloroethane			19	ug/L	20	95		70	130	2	20
		1,1-dichloropropene			21	ug/L	20	104		70	130	0	20
		t-amyl-methyl ether (TAME)			22	ug/L	20	108		70	130	3	20
		carbon tetrachloride			16	ug/L	20	82		70	130	7	20
		1,2-dichloroethane			22	ug/L	20	110		70	130	2	20
		benzene			22	ug/L	20	108		70	130	1	20
		trichloroethene			20	ug/L	20	98		70	130	0	20
		1,2-dichloropropane			19	ug/L	20	95		70	130	3	20
		bromodichloromethane			18	ug/L	20	89		70	130	6	20
		1,4-dioxane		<	50	ug/L	40	122		70	130	8	20
		dibromomethane			18	ug/L	20	91		70	130	4	20
		4-methyl-2-pentanone (MIBK)			18	ug/L	20	92		70	130	1	20
		cis-1,3-dichloropropene			19	ug/L	20	94		70	130	4	20
		toluene			21	ug/L	20	103		70	130	1	20
		trans-1,3-dichloropropene			18	ug/L	20	89		70	130	5	20
		2-hexanone			17	ug/L	20	84		70	130	1	20
		1,1,2-trichloroethane			18	ug/L	20	91		70	130	1	20
		1,3-dichloropropane			20	ug/L	20	102		70	130	2	20
		tetrachloroethene			22	ug/L	20	109		70	130	1	20
		dibromochloromethane			15	ug/L	20	76		70	130	10	20
		1,2-dibromoethane (EDB)			19	ug/L	20	95		70	130	5	20
		chlorobenzene			20	ug/L	20	102		70	130	0	20
		1,1,1,2-tetrachloroethane			17	ug/L	20	87		70	130	10	20
		ethylbenzene			22	ug/L	20	112		70	130	1	20
		m&p-xylenes			45	ug/L	40	112		70	130	1	20
		o-xylene			22	ug/L	20	111		70	130	2	20
		styrene			20	ug/L	20	98		70	130	1	20
		bromoform			13	ug/L	20	67	*	70	130	9	20

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030B8260B	LCSD1101241	isopropylbenzene		21	ug/L	20	104	70	130	1	20
		1,1,2,2-tetrachloroethane		23	ug/L	20	115	70	130	1	20
		1,2,3-trichloropropane		21	ug/L	20	104	70	130	1	20
		n-propylbenzene		23	ug/L	20	114	70	130	1	20
		bromobenzene		21	ug/L	20	106	70	130	2	20
		1,3,5-trimethylbenzene		22	ug/L	20	111	70	130	0	20
		2-chlorotoluene		23	ug/L	20	113	70	130	1	20
		4-chlorotoluene		23	ug/L	20	114	70	130	1	20
		tert-butylbenzene		22	ug/L	20	112	70	130	1	20
		1,2,4-trimethylbenzene		23	ug/L	20	114	70	130	0	20
		sec-butylbenzene		23	ug/L	20	114	70	130	1	20
		1,3-dichlorobenzene		22	ug/L	20	112	70	130	1	20
		4-isopropyltoluene		22	ug/L	20	112	70	130	1	20
		1,4-dichlorobenzene		21	ug/L	20	105	70	130	2	20
		1,2-dichlorobenzene		23	ug/L	20	115	70	130	1	20
		n-butylbenzene		23	ug/L	20	116	70	130	1	20
		1,2-dibromo-3-chloropropane		16	ug/L	20	81	70	130	7	20
		1,2,4-trichlorobenzene		20	ug/L	20	101	70	130	1	20
		hexachlorobutadiene		22	ug/L	20	108	70	130	3	20
		naphthalene		19	ug/L	20	94	70	130	1	20
		1,2,3-trichlorobenzene		23	ug/L	20	115	70	130	5	20
		dibromofluoromethane SUR		100	%			78	114		
		toluene-D8 SUR		98	%			88	110		
		4-bromofluorobenzene SUR		105	%			86	115		

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample		Result	Units Amt Added	%R	Limits	RPD	RPD Limit
SW5030B8260B	BLK1101259	dichlorodifluoromethane		<	2	ug/L				
		chloromethane		<	2	ug/L				
		vinyl chloride		<	2	ug/L				
		bromomethane		<	2	ug/L				
		chloroethane		<	2	ug/L				
		trichlorofluoromethane		<	2	ug/L				
		diethyl ether		<	10	ug/L				
		acetone		<	50	ug/L				
		1,1-dichloroethene		<	1	ug/L				
		methylene chloride		<	5	ug/L				
		carbon disulfide		<	2	ug/L				
		methyl t-butyl ether (MTBE)		<	2	ug/L				
		trans-1,2-dichloroethene		<	2	ug/L				
		isopropyl ether (DIPE)		<	2	ug/L				
		ethyl t-butyl ether (ETBE)		<	2	ug/L				
		1,1-dichloroethane		<	2	ug/L				
		t-butanol (TBA)		<	30	ug/L				
		2-butanone (MEK)		<	10	ug/L				
		2,2-dichloropropane		<	2	ug/L				
		cis-1,2-dichloroethene		<	2	ug/L				
		chloroform		<	2	ug/L				
		bromochloromethane		<	2	ug/L				
		tetrahydrofuran (THF)		<	10	ug/L				
		1,1,1-trichloroethane		<	2	ug/L				
		1,1-dichloropropene		<	2	ug/L				
		t-amyl-methyl ether (TAME)		<	2	ug/L				
		carbon tetrachloride		<	2	ug/L				
		1,2-dichloroethane		<	2	ug/L				
		benzene		<	2	ug/L				
		trichloroethene		<	2	ug/L				
		1,2-dichloropropane		<	2	ug/L				
		bromodichloromethane		<	0.6	ug/L				
		1,4-dioxane		<	50	ug/L				
		dibromomethane		<	2	ug/L				
		4-methyl-2-pentanone (MIBK)		<	10	ug/L				
		cis-1,3-dichloropropene		<	2	ug/L				
		toluene		<	2	ug/L				
		trans-1,3-dichloropropene		<	2	ug/L				
		2-hexanone		<	10	ug/L				
		1,1,2-trichloroethane		<	2	ug/L				
		1,3-dichloropropane		<	2	ug/L				
		tetrachloroethene		<	2	ug/L				
		dibromochloromethane		<	2	ug/L				
		1,2-dibromoethane (EDB)		<	2	ug/L				
		chlorobenzene		<	2	ug/L				
		1,1,1,2-tetrachloroethane		<	2	ug/L				
		ethylbenzene		<	2	ug/L				
		m&p-xylenes		<	2	ug/L				
		o-xylene		<	2	ug/L				
		styrene		<	2	ug/L				
		bromoform		<	2	ug/L				

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample		Result	Units Amt Added	%R	Limits		RPD	RPD Limit
SW5030B8260B	BLK1101259	isopropylbenzene		<	2	ug/L					
		1,1,2,2-tetrachloroethane		<	2	ug/L					
		1,2,3-trichloropropane		<	2	ug/L					
		n-propylbenzene		<	2	ug/L					
		bromobenzene		<	2	ug/L					
		1,3,5-trimethylbenzene		<	2	ug/L					
		2-chlorotoluene		<	2	ug/L					
		4-chlorotoluene		<	2	ug/L					
		tert-butylbenzene		<	2	ug/L					
		1,2,4-trimethylbenzene		<	2	ug/L					
		sec-butylbenzene		<	2	ug/L					
		1,3-dichlorobenzene		<	2	ug/L					
		4-isopropyltoluene		<	2	ug/L					
		1,4-dichlorobenzene		<	2	ug/L					
		1,2-dichlorobenzene		<	2	ug/L					
		n-butylbenzene		<	2	ug/L					
		1,2-dibromo-3-chloropropane		<	2	ug/L					
		1,2,4-trichlorobenzene		<	2	ug/L					
		hexachlorobutadiene		<	0.5	ug/L					
		naphthalene		<	5	ug/L					
		1,2,3-trichlorobenzene		<	2	ug/L					
		dibromofluoromethane SUR			98	%		78	114		
		toluene-D8 SUR			96	%		88	110		
		4-bromofluorobenzene SUR			97	%		86	115		

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030B8260B	LCS1101259	dichlorodifluoromethane			14	ug/L	20	70	70	130		
		chloromethane			18	ug/L	20	92	70	130		
		vinyl chloride			19	ug/L	20	94	70	130		
		bromomethane			14	ug/L	20	71	70	130		
		chloroethane			19	ug/L	20	96	70	130		
		trichlorofluoromethane			18	ug/L	20	90	70	130		
		diethyl ether			19	ug/L	20	94	70	130		
		acetone		<	50	ug/L	20	177				
		1,1-dichloroethene			17	ug/L	20	86	70	130		
		methylene chloride			18	ug/L	20	91	70	130		
		carbon disulfide			16	ug/L	20	82	70	130		
		methyl t-butyl ether (MTBE)			20	ug/L	20	99	70	130		
		trans-1,2-dichloroethene			19	ug/L	20	93	70	130		
		isopropyl ether (DIPE)			18	ug/L	20	91	70	130		
		ethyl t-butyl ether (ETBE)			19	ug/L	20	95	70	130		
		1,1-dichloroethane			19	ug/L	20	94	70	130		
		t-butanol (TBA)			100	ug/L	100	104	70	130		
		2-butanone (MEK)			26	ug/L	20	129	70	130		
		2,2-dichloropropane			19	ug/L	20	95	70	130		
		cis-1,2-dichloroethene			19	ug/L	20	95	70	130		
		chloroform			19	ug/L	20	93	70	130		
		bromochloromethane			19	ug/L	20	97	70	130		
		tetrahydrofuran (THF)			20	ug/L	20	102	70	130		
		1,1,1-trichloroethane			18	ug/L	20	90	70	130		
		1,1-dichloropropene			19	ug/L	20	96	70	130		
		t-amyl-methyl ether (TAME)			19	ug/L	20	96	70	130		
		carbon tetrachloride			19	ug/L	20	93	70	130		
		1,2-dichloroethane			20	ug/L	20	98	70	130		
		benzene			18	ug/L	20	91	70	130		
		trichloroethene			18	ug/L	20	90	70	130		
		1,2-dichloropropane			19	ug/L	20	97	70	130		
		bromodichloromethane			19	ug/L	20	94	70	130		
		1,4-dioxane		<	50	ug/L	40	105	70	130		
		dibromomethane			19	ug/L	20	97	70	130		
		4-methyl-2-pentanone (MIBK)			18	ug/L	20	88	70	130		
		cis-1,3-dichloropropene			18	ug/L	20	89	70	130		
		toluene			19	ug/L	20	93	70	130		
		trans-1,3-dichloropropene			18	ug/L	20	89	70	130		
		2-hexanone			21	ug/L	20	107	70	130		
		1,1,2-trichloroethane			19	ug/L	20	94	70	130		
		1,3-dichloropropane			22	ug/L	20	108	70	130		
		tetrachloroethene			20	ug/L	20	99	70	130		
		dibromochloromethane			21	ug/L	20	103	70	130		
		1,2-dibromoethane (EDB)			22	ug/L	20	108	70	130		
		chlorobenzene			21	ug/L	20	103	70	130		
		1,1,1,2-tetrachloroethane			21	ug/L	20	104	70	130		
		ethylbenzene			19	ug/L	20	96	70	130		
		m&p-xylenes			41	ug/L	40	103	70	130		
		o-xylene			21	ug/L	20	103	70	130		
		styrene			21	ug/L	20	104	70	130		
		bromoform			18	ug/L	20	90	70	130		

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030B8260B	LCS1101259	isopropylbenzene		17	ug/L	20	87	70	130		
		1,1,2,2-tetrachloroethane		21	ug/L	20	106	70	130		
		1,2,3-trichloropropane		21	ug/L	20	105	70	130		
		n-propylbenzene		19	ug/L	20	96	70	130		
		bromobenzene		21	ug/L	20	105	70	130		
		1,3,5-trimethylbenzene		18	ug/L	20	92	70	130		
		2-chlorotoluene		22	ug/L	20	112	70	130		
		4-chlorotoluene		19	ug/L	20	95	70	130		
		tert-butylbenzene		18	ug/L	20	91	70	130		
		1,2,4-trimethylbenzene		19	ug/L	20	95	70	130		
		sec-butylbenzene		18	ug/L	20	88	70	130		
		1,3-dichlorobenzene		19	ug/L	20	95	70	130		
		4-isopropyltoluene		18	ug/L	20	90	70	130		
		1,4-dichlorobenzene		20	ug/L	20	99	70	130		
		1,2-dichlorobenzene		20	ug/L	20	99	70	130		
		n-butylbenzene		17	ug/L	20	87	70	130		
		1,2-dibromo-3-chloropropane		22	ug/L	20	110	70	130		
		1,2,4-trichlorobenzene		18	ug/L	20	88	70	130		
		hexachlorobutadiene		19	ug/L	20	95	70	130		
		naphthalene		19	ug/L	20	97	70	130		
		1,2,3-trichlorobenzene		18	ug/L	20	88	70	130		
		dibromofluoromethane SUR		97	%			78	114		
		toluene-D8 SUR		98	%			88	110		
		4-bromofluorobenzene SUR		96	%			86	115		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD		RPD Limit
SW5030B8260B	LCSD1101259	dichlorodifluoromethane			14	ug/L	20	71	70	130	1		20
		chloromethane			20	ug/L	20	98	70	130	6		20
		vinyl chloride			19	ug/L	20	96	70	130	2		20
		bromomethane			14	ug/L	20	70	70	130	1		20
		chloroethane			19	ug/L	20	96	70	130	1		20
		trichlorofluoromethane			18	ug/L	20	90	70	130	0		20
		diethyl ether			19	ug/L	20	93	70	130	1		20
		acetone		<	50	ug/L	20	93			62	*	20
		1,1-dichloroethene			17	ug/L	20	83	70	130	3		20
		methylene chloride			18	ug/L	20	92	70	130	2		20
		carbon disulfide			16	ug/L	20	80	70	130	3		20
		methyl t-butyl ether (MTBE)			20	ug/L	20	98	70	130	1		20
		trans-1,2-dichloroethene			18	ug/L	20	90	70	130	3		20
		isopropyl ether (DIPE)			19	ug/L	20	93	70	130	2		20
		ethyl t-butyl ether (ETBE)			19	ug/L	20	95	70	130	0		20
		1,1-dichloroethane			19	ug/L	20	94	70	130	0		20
		t-butanol (TBA)			88	ug/L	100	88	70	130	17		20
		2-butanone (MEK)			18	ug/L	20	90	70	130	36	*	20
		2,2-dichloropropane			16	ug/L	20	82	70	130	15		20
		cis-1,2-dichloroethene			18	ug/L	20	91	70	130	4		20
		chloroform			19	ug/L	20	93	70	130	0		20
		bromochloromethane			20	ug/L	20	98	70	130	1		20
		tetrahydrofuran (THF)			18	ug/L	20	92	70	130	10		20
		1,1,1-trichloroethane			18	ug/L	20	89	70	130	1		20
		1,1-dichloropropene			19	ug/L	20	97	70	130	0		20
		t-amyl-methyl ether (TAME)			19	ug/L	20	97	70	130	1		20
		carbon tetrachloride			19	ug/L	20	93	70	130	0		20
		1,2-dichloroethane			20	ug/L	20	101	70	130	3		20
		benzene			19	ug/L	20	93	70	130	1		20
		trichloroethene			18	ug/L	20	88	70	130	2		20
		1,2-dichloropropane			20	ug/L	20	98	70	130	1		20
		bromodichloromethane			19	ug/L	20	95	70	130	0		20
		1,4-dioxane		<	50	ug/L	40	81	70	130	25	*	20
		dibromomethane			19	ug/L	20	97	70	130	1		20
		4-methyl-2-pentanone (MIBK)			17	ug/L	20	87	70	130	2		20
		cis-1,3-dichloropropene			17	ug/L	20	85	70	130	4		20
		toluene			19	ug/L	20	93	70	130	0		20
		trans-1,3-dichloropropene			17	ug/L	20	84	70	130	5		20
		2-hexanone			17	ug/L	20	85	70	130	23	*	20
		1,1,2-trichloroethane			19	ug/L	20	95	70	130	2		20
		1,3-dichloropropane			21	ug/L	20	105	70	130	3		20
		tetrachloroethene			18	ug/L	20	92	70	130	7		20
		dibromochloromethane			20	ug/L	20	99	70	130	4		20
		1,2-dibromoethane (EDB)			20	ug/L	20	102	70	130	5		20
		chlorobenzene			20	ug/L	20	100	70	130	3		20
		1,1,1,2-tetrachloroethane			20	ug/L	20	101	70	130	2		20
		ethylbenzene			18	ug/L	20	89	70	130	8		20
		m&p-xylenes			39	ug/L	40	98	70	130	5		20
		o-xylene			20	ug/L	20	101	70	130	3		20
		styrene			21	ug/L	20	103	70	130	1		20
		bromoform			17	ug/L	20	84	70	130	7		20

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030B8260B	LCSD1101259	isopropylbenzene		17	ug/L	20	86	70	130	2	20
		1,1,2,2-tetrachloroethane		22	ug/L	20	112	70	130	5	20
		1,2,3-trichloropropane		21	ug/L	20	107	70	130	1	20
		n-propylbenzene		20	ug/L	20	98	70	130	2	20
		bromobenzene		22	ug/L	20	109	70	130	4	20
		1,3,5-trimethylbenzene		19	ug/L	20	95	70	130	2	20
		2-chlorotoluene		21	ug/L	20	105	70	130	6	20
		4-chlorotoluene		22	ug/L	20	108	70	130	13	20
		tert-butylbenzene		19	ug/L	20	95	70	130	5	20
		1,2,4-trimethylbenzene		20	ug/L	20	98	70	130	3	20
		sec-butylbenzene		18	ug/L	20	90	70	130	2	20
		1,3-dichlorobenzene		20	ug/L	20	98	70	130	3	20
		4-isopropyltoluene		18	ug/L	20	90	70	130	0	20
		1,4-dichlorobenzene		20	ug/L	20	99	70	130	1	20
		1,2-dichlorobenzene		20	ug/L	20	101	70	130	2	20
		n-butylbenzene		18	ug/L	20	88	70	130	0	20
		1,2-dibromo-3-chloropropane		22	ug/L	20	112	70	130	1	20
		1,2,4-trichlorobenzene		17	ug/L	20	87	70	130	0	20
		hexachlorobutadiene		18	ug/L	20	92	70	130	3	20
		naphthalene		19	ug/L	20	95	70	130	2	20
		1,2,3-trichlorobenzene		17	ug/L	20	87	70	130	1	20
		dibromofluoromethane SUR		97	%			78	114		
		toluene-D8 SUR		98	%			88	110		
		4-bromofluorobenzene SUR		95	%			86	115		

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample		Result	Units Amt Added	%R	Limits	RPD	RPD Limit
SW5030B8260B	BLK1101285	dichlorodifluoromethane		<	2	ug/L				
		chloromethane		<	2	ug/L				
		vinyl chloride		<	2	ug/L				
		bromomethane		<	2	ug/L				
		chloroethane		<	2	ug/L				
		trichlorofluoromethane		<	2	ug/L				
		diethyl ether		<	10	ug/L				
		acetone		<	50	ug/L				
		1,1-dichloroethene		<	1	ug/L				
		methylene chloride		<	5	ug/L				
		carbon disulfide		<	2	ug/L				
		methyl t-butyl ether (MTBE)		<	2	ug/L				
		trans-1,2-dichloroethene		<	2	ug/L				
		isopropyl ether (DIPE)		<	2	ug/L				
		ethyl t-butyl ether (ETBE)		<	2	ug/L				
		1,1-dichloroethane		<	2	ug/L				
		t-butanol (TBA)		<	30	ug/L				
		2-butanone (MEK)		<	10	ug/L				
		2,2-dichloropropane		<	2	ug/L				
		cis-1,2-dichloroethene		<	2	ug/L				
		chloroform		<	2	ug/L				
		bromochloromethane		<	2	ug/L				
		tetrahydrofuran (THF)		<	10	ug/L				
		1,1,1-trichloroethane		<	2	ug/L				
		1,1-dichloropropene		<	2	ug/L				
		t-amyl-methyl ether (TAME)		<	2	ug/L				
		carbon tetrachloride		<	2	ug/L				
		1,2-dichloroethane		<	2	ug/L				
		benzene		<	2	ug/L				
		trichloroethene		<	2	ug/L				
		1,2-dichloropropane		<	2	ug/L				
		bromodichloromethane		<	0.6	ug/L				
		1,4-dioxane		<	50	ug/L				
		dibromomethane		<	2	ug/L				
		4-methyl-2-pentanone (MIBK)		<	10	ug/L				
		cis-1,3-dichloropropene		<	2	ug/L				
		toluene		<	2	ug/L				
		trans-1,3-dichloropropene		<	2	ug/L				
		2-hexanone		<	10	ug/L				
		1,1,2-trichloroethane		<	2	ug/L				
		1,3-dichloropropane		<	2	ug/L				
		tetrachloroethene		<	2	ug/L				
		dibromochloromethane		<	2	ug/L				
		1,2-dibromoethane (EDB)		<	2	ug/L				
		chlorobenzene		<	2	ug/L				
		1,1,1,2-tetrachloroethane		<	2	ug/L				
		ethylbenzene		<	2	ug/L				
		m&p-xylenes		<	2	ug/L				
		o-xylene		<	2	ug/L				
		styrene		<	2	ug/L				
		bromoform		<	2	ug/L				

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample		Result	Units Amt Added	%R	Limits		RPD	RPD Limit
SW5030B8260B	BLK1101285	isopropylbenzene		<	2	ug/L					
		1,1,2,2-tetrachloroethane		<	2	ug/L					
		1,2,3-trichloropropane		<	2	ug/L					
		n-propylbenzene		<	2	ug/L					
		bromobenzene		<	2	ug/L					
		1,3,5-trimethylbenzene		<	2	ug/L					
		2-chlorotoluene		<	2	ug/L					
		4-chlorotoluene		<	2	ug/L					
		tert-butylbenzene		<	2	ug/L					
		1,2,4-trimethylbenzene		<	2	ug/L					
		sec-butylbenzene		<	2	ug/L					
		1,3-dichlorobenzene		<	2	ug/L					
		4-isopropyltoluene		<	2	ug/L					
		1,4-dichlorobenzene		<	2	ug/L					
		1,2-dichlorobenzene		<	2	ug/L					
		n-butylbenzene		<	2	ug/L					
		1,2-dibromo-3-chloropropane		<	2	ug/L					
		1,2,4-trichlorobenzene		<	2	ug/L					
		hexachlorobutadiene		<	0.5	ug/L					
		naphthalene		<	5	ug/L					
		1,2,3-trichlorobenzene		<	2	ug/L					
		dibromofluoromethane SUR			102	%		78	114		
		toluene-D8 SUR			97	%		88	110		
		4-bromofluorobenzene SUR			94	%		86	115		

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5030B8260B	LCS1101285	dichlorodifluoromethane			20	ug/L	20	98		70	130		
		chloromethane			20	ug/L	20	100		70	130		
		vinyl chloride			19	ug/L	20	94		70	130		
		bromomethane			40	ug/L	20	198	*	70	130		
		chloroethane			23	ug/L	20	116		70	130		
		trichlorofluoromethane			22	ug/L	20	108		70	130		
		diethyl ether			22	ug/L	20	109		70	130		
		acetone		<	50	ug/L	20	94					
		1,1-dichloroethene			19	ug/L	20	95		70	130		
		methylene chloride			21	ug/L	20	107		70	130		
		carbon disulfide			17	ug/L	20	86		70	130		
		methyl t-butyl ether (MTBE)			21	ug/L	20	107		70	130		
		trans-1,2-dichloroethene			21	ug/L	20	103		70	130		
		isopropyl ether (DIPE)			21	ug/L	20	107		70	130		
		ethyl t-butyl ether (ETBE)			21	ug/L	20	105		70	130		
		1,1-dichloroethane			20	ug/L	20	98		70	130		
		t-butanol (TBA)			110	ug/L	100	114		70	130		
		2-butanone (MEK)			19	ug/L	20	93		70	130		
		2,2-dichloropropane			21	ug/L	20	106		70	130		
		cis-1,2-dichloroethene			23	ug/L	20	113		70	130		
		chloroform			23	ug/L	20	115		70	130		
		bromochloromethane			23	ug/L	20	114		70	130		
		tetrahydrofuran (THF)			23	ug/L	20	117		70	130		
		1,1,1-trichloroethane			21	ug/L	20	105		70	130		
		1,1-dichloropropene			22	ug/L	20	109		70	130		
		t-amyl-methyl ether (TAME)			21	ug/L	20	107		70	130		
		carbon tetrachloride			20	ug/L	20	98		70	130		
		1,2-dichloroethane			22	ug/L	20	112		70	130		
		benzene			22	ug/L	20	112		70	130		
		trichloroethene			20	ug/L	20	99		70	130		
		1,2-dichloropropane			19	ug/L	20	94		70	130		
		bromodichloromethane			20	ug/L	20	101		70	130		
		1,4-dioxane			59	ug/L	40	148	*	70	130		
		dibromomethane			19	ug/L	20	95		70	130		
		4-methyl-2-pentanone (MIBK)			18	ug/L	20	88		70	130		
		cis-1,3-dichloropropene			20	ug/L	20	98		70	130		
		toluene			21	ug/L	20	105		70	130		
		trans-1,3-dichloropropene			19	ug/L	20	96		70	130		
		2-hexanone			17	ug/L	20	85		70	130		
		1,1,2-trichloroethane			19	ug/L	20	93		70	130		
		1,3-dichloropropane			19	ug/L	20	95		70	130		
		tetrachloroethene			21	ug/L	20	106		70	130		
		dibromochloromethane			17	ug/L	20	86		70	130		
		1,2-dibromoethane (EDB)			18	ug/L	20	89		70	130		
		chlorobenzene			19	ug/L	20	97		70	130		
		1,1,1,2-tetrachloroethane			19	ug/L	20	93		70	130		
		ethylbenzene			22	ug/L	20	108		70	130		
		m&p-xylenes			43	ug/L	40	107		70	130		
		o-xylene			21	ug/L	20	105		70	130		
		styrene			18	ug/L	20	92		70	130		
		bromoform			16	ug/L	20	81		70	130		

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030B8260B	LCS1101285	isopropylbenzene		20	ug/L	20	100	70	130		
		1,1,2,2-tetrachloroethane		22	ug/L	20	108	70	130		
		1,2,3-trichloropropane		19	ug/L	20	97	70	130		
		n-propylbenzene		22	ug/L	20	108	70	130		
		bromobenzene		20	ug/L	20	98	70	130		
		1,3,5-trimethylbenzene		21	ug/L	20	106	70	130		
		2-chlorotoluene		21	ug/L	20	105	70	130		
		4-chlorotoluene		22	ug/L	20	109	70	130		
		tert-butylbenzene		21	ug/L	20	105	70	130		
		1,2,4-trimethylbenzene		21	ug/L	20	107	70	130		
		sec-butylbenzene		22	ug/L	20	110	70	130		
		1,3-dichlorobenzene		21	ug/L	20	105	70	130		
		4-isopropyltoluene		21	ug/L	20	106	70	130		
		1,4-dichlorobenzene		20	ug/L	20	99	70	130		
		1,2-dichlorobenzene		22	ug/L	20	108	70	130		
		n-butylbenzene		23	ug/L	20	113	70	130		
		1,2-dibromo-3-chloropropane		18	ug/L	20	90	70	130		
		1,2,4-trichlorobenzene		19	ug/L	20	94	70	130		
		hexachlorobutadiene		21	ug/L	20	106	70	130		
		naphthalene		16	ug/L	20	82	70	130		
		1,2,3-trichlorobenzene		20	ug/L	20	102	70	130		
		dibromofluoromethane SUR		110	%			78	114		
		toluene-D8 SUR		100	%			88	110		
		4-bromofluorobenzene SUR		102	%			86	115		

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5030B8260B	LCSD1101285	dichlorodifluoromethane			19	ug/L	20	97		70	130	1	20
		chloromethane			20	ug/L	20	101		70	130	1	20
		vinyl chloride			19	ug/L	20	96		70	130	2	20
		bromomethane			45	ug/L	20	227	*	70	130	14	20
		chloroethane			24	ug/L	20	119		70	130	2	20
		trichlorofluoromethane			22	ug/L	20	109		70	130	0	20
		diethyl ether			22	ug/L	20	111		70	130	2	20
		acetone		<	50	ug/L	20	92				3	20
		1,1-dichloroethene			19	ug/L	20	94		70	130	1	20
		methylene chloride			22	ug/L	20	110		70	130	2	20
		carbon disulfide			17	ug/L	20	84		70	130	3	20
		methyl t-butyl ether (MTBE)			21	ug/L	20	107		70	130	1	20
		trans-1,2-dichloroethene			20	ug/L	20	101		70	130	1	20
		isopropyl ether (DIPE)			21	ug/L	20	107		70	130	0	20
		ethyl t-butyl ether (ETBE)			21	ug/L	20	105		70	130	1	20
		1,1-dichloroethane			20	ug/L	20	100		70	130	1	20
		t-butanol (TBA)			120	ug/L	100	115		70	130	1	20
		2-butanone (MEK)			19	ug/L	20	97		70	130	4	20
		2,2-dichloropropane			20	ug/L	20	102		70	130	4	20
		cis-1,2-dichloroethene			23	ug/L	20	114		70	130	1	20
		chloroform			23	ug/L	20	113		70	130	2	20
		bromochloromethane			23	ug/L	20	116		70	130	2	20
		tetrahydrofuran (THF)			23	ug/L	20	113		70	130	4	20
		1,1,1-trichloroethane			20	ug/L	20	102		70	130	3	20
		1,1-dichloropropene			21	ug/L	20	104		70	130	4	20
		t-amyl-methyl ether (TAME)			21	ug/L	20	106		70	130	1	20
		carbon tetrachloride			19	ug/L	20	97		70	130	1	20
		1,2-dichloroethane			22	ug/L	20	111		70	130	1	20
		benzene			22	ug/L	20	109		70	130	3	20
		trichloroethene			20	ug/L	20	99		70	130	0	20
		1,2-dichloropropane			18	ug/L	20	92		70	130	2	20
		bromodichloromethane			20	ug/L	20	101		70	130	0	20
		1,4-dioxane			62	ug/L	40	154	*	70	130	4	20
		dibromomethane			19	ug/L	20	94		70	130	1	20
		4-methyl-2-pentanone (MIBK)			18	ug/L	20	89		70	130	0	20
		cis-1,3-dichloropropene			19	ug/L	20	97		70	130	1	20
		toluene			21	ug/L	20	103		70	130	2	20
		trans-1,3-dichloropropene			19	ug/L	20	96		70	130	0	20
		2-hexanone			17	ug/L	20	83		70	130	2	20
		1,1,2-trichloroethane			18	ug/L	20	92		70	130	1	20
		1,3-dichloropropane			19	ug/L	20	94		70	130	1	20
		tetrachloroethene			20	ug/L	20	102		70	130	4	20
		dibromochloromethane			17	ug/L	20	86		70	130	0	20
		1,2-dibromoethane (EDB)			18	ug/L	20	91		70	130	2	20
		chlorobenzene			19	ug/L	20	95		70	130	2	20
		1,1,1,2-tetrachloroethane			18	ug/L	20	92		70	130	0	20
		ethylbenzene			21	ug/L	20	104		70	130	4	20
		m&p-xylenes			42	ug/L	40	104		70	130	2	20
		o-xylene			20	ug/L	20	102		70	130	3	20
		styrene			18	ug/L	20	90		70	130	2	20
		bromoform			16	ug/L	20	81		70	130	1	20

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030B8260B	LCSD1101285	isopropylbenzene		19	ug/L	20	96	70	130	5	20
		1,1,2,2-tetrachloroethane		22	ug/L	20	111	70	130	2	20
		1,2,3-trichloropropane		19	ug/L	20	94	70	130	3	20
		n-propylbenzene		22	ug/L	20	108	70	130	0	20
		bromobenzene		20	ug/L	20	99	70	130	1	20
		1,3,5-trimethylbenzene		21	ug/L	20	106	70	130	0	20
		2-chlorotoluene		21	ug/L	20	105	70	130	0	20
		4-chlorotoluene		22	ug/L	20	108	70	130	1	20
		tert-butylbenzene		22	ug/L	20	110	70	130	5	20
		1,2,4-trimethylbenzene		21	ug/L	20	107	70	130	0	20
		sec-butylbenzene		22	ug/L	20	108	70	130	1	20
		1,3-dichlorobenzene		21	ug/L	20	105	70	130	0	20
		4-isopropyltoluene		21	ug/L	20	106	70	130	1	20
		1,4-dichlorobenzene		20	ug/L	20	98	70	130	0	20
		1,2-dichlorobenzene		22	ug/L	20	109	70	130	1	20
		n-butylbenzene		22	ug/L	20	111	70	130	1	20
		1,2-dibromo-3-chloropropane		18	ug/L	20	92	70	130	2	20
		1,2,4-trichlorobenzene		18	ug/L	20	91	70	130	3	20
		hexachlorobutadiene		21	ug/L	20	103	70	130	3	20
		naphthalene		16	ug/L	20	81	70	130	0	20
		1,2,3-trichlorobenzene		20	ug/L	20	102	70	130	0	20
		dibromofluoromethane SUR		108	%			78	114		
		toluene-D8 SUR		102	%			88	110		
		4-bromofluorobenzene SUR		103	%			86	115		

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5030B8260B	MS1101285	dichlorodifluoromethane	21842-003		23	ug/L	20	117		70	130		
		chloromethane	21842-003		22	ug/L	20	111		70	130		
		vinyl chloride	21842-003		22	ug/L	20	109		70	130		
		bromomethane	21842-003		26	ug/L	20	131	*	70	130		
		chloroethane	21842-003		27	ug/L	20	132	*	70	130		
		trichlorofluoromethane	21842-003		25	ug/L	20	125		70	130		
		diethyl ether	21842-003		34	ug/L	20	117		70	130		
		acetone	21842-003	<	50	ug/L	20	91					
		1,1-dichloroethene	21842-003		21	ug/L	20	104		70	130		
		methylene chloride	21842-003		23	ug/L	20	115		70	130		
		carbon disulfide	21842-003		19	ug/L	20	93		70	130		
		methyl t-butyl ether (MTBE)	21842-003		23	ug/L	20	113		70	130		
		trans-1,2-dichloroethene	21842-003		22	ug/L	20	112		70	130		
		isopropyl ether (DIPE)	21842-003		22	ug/L	20	110		70	130		
		ethyl t-butyl ether (ETBE)	21842-003		22	ug/L	20	112		70	130		
		1,1-dichloroethane	21842-003		23	ug/L	20	108		70	130		
		t-butanol (TBA)	21842-003		170	ug/L	100	120		70	130		
		2-butanone (MEK)	21842-003		20	ug/L	20	98		70	130		
		2,2-dichloropropane	21842-003		25	ug/L	20	126		70	130		
		cis-1,2-dichloroethene	21842-003		26	ug/L	20	121		70	130		
		chloroform	21842-003		25	ug/L	20	124		70	130		
		bromochloromethane	21842-003		25	ug/L	20	123		70	130		
		tetrahydrofuran (THF)	21842-003		26	ug/L	20	121		70	130		
		1,1,1-trichloroethane	21842-003		22	ug/L	20	111		70	130		
		1,1-dichloropropene	21842-003		24	ug/L	20	120		70	130		
		t-amyl-methyl ether (TAME)	21842-003		23	ug/L	20	115		70	130		
		carbon tetrachloride	21842-003		20	ug/L	20	98		70	130		
		1,2-dichloroethane	21842-003		25	ug/L	20	123		70	130		
		benzene	21842-003		25	ug/L	20	122		70	130		
		trichloroethene	21842-003		22	ug/L	20	110		70	130		
		1,2-dichloropropane	21842-003		20	ug/L	20	97		70	130		
		bromodichloromethane	21842-003		20	ug/L	20	100		70	130		
		1,4-dioxane	21842-003		120	ug/L	40	144	*	70	130		
		dibromomethane	21842-003		20	ug/L	20	97		70	130		
		4-methyl-2-pentanone (MIBK)	21842-003		20	ug/L	20	96		70	130		
		cis-1,3-dichloropropene	21842-003		21	ug/L	20	103		70	130		
		toluene	21842-003		23	ug/L	20	113		70	130		
		trans-1,3-dichloropropene	21842-003		20	ug/L	20	97		70	130		
		2-hexanone	21842-003		19	ug/L	20	73		70	130		
		1,1,2-trichloroethane	21842-003		20	ug/L	20	98		70	130		
		1,3-dichloropropane	21842-003		20	ug/L	20	99		70	130		
		tetrachloroethene	21842-003		24	ug/L	20	118		70	130		
		dibromochloromethane	21842-003		16	ug/L	20	80		70	130		
		1,2-dibromoethane (EDB)	21842-003		19	ug/L	20	94		70	130		
		chlorobenzene	21842-003		33	ug/L	20	115		70	130		
		1,1,1,2-tetrachloroethane	21842-003		18	ug/L	20	89		70	130		
		ethylbenzene	21842-003		23	ug/L	20	116		70	130		
		m&p-xylenes	21842-003		46	ug/L	40	114		70	130		
		o-xylene	21842-003		22	ug/L	20	112		70	130		
		styrene	21842-003		20	ug/L	20	96		70	130		
		bromoform	21842-003		16	ug/L	20	78		70	130		

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030B8260B	MS1101285	isopropylbenzene	21842-003	22	ug/L	20	109	70	130		
		1,1,2,2-tetrachloroethane	21842-003	23	ug/L	20	117	70	130		
		1,2,3-trichloropropane	21842-003	21	ug/L	20	104	70	130		
		n-propylbenzene	21842-003	24	ug/L	20	121	70	130		
		bromobenzene	21842-003	21	ug/L	20	106	70	130		
		1,3,5-trimethylbenzene	21842-003	23	ug/L	20	116	70	130		
		2-chlorotoluene	21842-003	23	ug/L	20	116	70	130		
		4-chlorotoluene	21842-003	24	ug/L	20	117	70	130		
		tert-butylbenzene	21842-003	24	ug/L	20	119	70	130		
		1,2,4-trimethylbenzene	21842-003	24	ug/L	20	117	70	130		
		sec-butylbenzene	21842-003	25	ug/L	20	122	70	130		
		1,3-dichlorobenzene	21842-003	23	ug/L	20	115	70	130		
		4-isopropyltoluene	21842-003	24	ug/L	20	119	70	130		
		1,4-dichlorobenzene	21842-003	23	ug/L	20	108	70	130		
		1,2-dichlorobenzene	21842-003	29	ug/L	20	124	70	130		
		n-butylbenzene	21842-003	26	ug/L	20	129	70	130		
		1,2-dibromo-3-chloropropane	21842-003	18	ug/L	20	89	70	130		
		1,2,4-trichlorobenzene	21842-003	21	ug/L	20	102	70	130		
		hexachlorobutadiene	21842-003	24	ug/L	20	119	70	130		
		naphthalene	21842-003	18	ug/L	20	86	70	130		
		1,2,3-trichlorobenzene	21842-003	23	ug/L	20	113	70	130		
		dibromofluoromethane SUR	21842-003	110	%			78	114		
		toluene-D8 SUR	21842-003	101	%			88	110		
		4-bromofluorobenzene SUR	21842-003	102	%			86	115		

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD		RPD Limit
SW5030B8260B	MSD1101285	dichlorodifluoromethane	21842-003		24	ug/L	20	119		70	130	1		20
		chloromethane	21842-003		22	ug/L	20	112		70	130	1		20
		vinyl chloride	21842-003		23	ug/L	20	109		70	130	1		20
		bromomethane	21842-003		33	ug/L	20	166	*	70	130	24	*	20
		chloroethane	21842-003		26	ug/L	20	127		70	130	3		20
		trichlorofluoromethane	21842-003		26	ug/L	20	128		70	130	2		20
		diethyl ether	21842-003		34	ug/L	20	117		70	130	0		20
		acetone	21842-003	<	50	ug/L	20	84				7		20
		1,1-dichloroethene	21842-003		21	ug/L	20	105		70	130	1		20
		methylene chloride	21842-003		23	ug/L	20	115		70	130	0		20
		carbon disulfide	21842-003		19	ug/L	20	93		70	130	1		20
		methyl t-butyl ether (MTBE)	21842-003		23	ug/L	20	112		70	130	1		20
		trans-1,2-dichloroethene	21842-003		23	ug/L	20	113		70	130	1		20
		isopropyl ether (DIPE)	21842-003		23	ug/L	20	116		70	130	5		20
		ethyl t-butyl ether (ETBE)	21842-003		23	ug/L	20	114		70	130	1		20
		1,1-dichloroethane	21842-003		23	ug/L	20	108		70	130	0		20
		t-butanol (TBA)	21842-003		160	ug/L	100	113		70	130	4		20
		2-butanone (MEK)	21842-003		20	ug/L	20	98		70	130	1		20
		2,2-dichloropropane	21842-003		25	ug/L	20	125		70	130	1		20
		cis-1,2-dichloroethene	21842-003		26	ug/L	20	124		70	130	2		20
		chloroform	21842-003		25	ug/L	20	124		70	130	0		20
		bromochloromethane	21842-003		25	ug/L	20	125		70	130	1		20
		tetrahydrofuran (THF)	21842-003		26	ug/L	20	122		70	130	0		20
		1,1,1-trichloroethane	21842-003		23	ug/L	20	112		70	130	1		20
		1,1-dichloropropene	21842-003		25	ug/L	20	122		70	130	1		20
		t-amyl-methyl ether (TAME)	21842-003		23	ug/L	20	112		70	130	2		20
		carbon tetrachloride	21842-003		21	ug/L	20	103		70	130	5		20
		1,2-dichloroethane	21842-003		24	ug/L	20	120		70	130	3		20
		benzene	21842-003		25	ug/L	20	121		70	130	1		20
		trichloroethene	21842-003		22	ug/L	20	109		70	130	1		20
		1,2-dichloropropane	21842-003		20	ug/L	20	100		70	130	3		20
		bromodichloromethane	21842-003		21	ug/L	20	104		70	130	4		20
		1,4-dioxane	21842-003		120	ug/L	40	143	*	70	130	0		20
		dibromomethane	21842-003		20	ug/L	20	96		70	130	1		20
		4-methyl-2-pentanone (MIBK)	21842-003		19	ug/L	20	94		70	130	1		20
		cis-1,3-dichloropropene	21842-003		21	ug/L	20	104		70	130	1		20
		toluene	21842-003		23	ug/L	20	113		70	130	0		20
		trans-1,3-dichloropropene	21842-003		20	ug/L	20	100		70	130	3		20
		2-hexanone	21842-003		18	ug/L	20	71		70	130	3		20
		1,1,2-trichloroethane	21842-003		19	ug/L	20	95		70	130	3		20
		1,3-dichloropropane	21842-003		20	ug/L	20	98		70	130	1		20
		tetrachloroethene	21842-003		23	ug/L	20	116		70	130	2		20
		dibromochloromethane	21842-003		17	ug/L	20	83		70	130	4		20
		1,2-dibromoethane (EDB)	21842-003		19	ug/L	20	92		70	130	2		20
		chlorobenzene	21842-003		33	ug/L	20	115		70	130	0		20
		1,1,1,2-tetrachloroethane	21842-003		19	ug/L	20	92		70	130	3		20
		ethylbenzene	21842-003		23	ug/L	20	117		70	130	0		20
		m&p-xylenes	21842-003		46	ug/L	40	114		70	130	0		20
		o-xylene	21842-003		22	ug/L	20	112		70	130	0		20
		styrene	21842-003		19	ug/L	20	96		70	130	0		20
		bromoform	21842-003		16	ug/L	20	79		70	130	1		20

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030B8260B	MSD1101285	isopropylbenzene	21842-003	22	ug/L	20	107	70	130	1	20
		1,1,2,2-tetrachloroethane	21842-003	23	ug/L	20	117	70	130	0	20
		1,2,3-trichloropropane	21842-003	20	ug/L	20	99	70	130	4	20
		n-propylbenzene	21842-003	24	ug/L	20	121	70	130	0	20
		bromobenzene	21842-003	21	ug/L	20	107	70	130	1	20
		1,3,5-trimethylbenzene	21842-003	23	ug/L	20	116	70	130	1	20
		2-chlorotoluene	21842-003	23	ug/L	20	117	70	130	1	20
		4-chlorotoluene	21842-003	24	ug/L	20	118	70	130	1	20
		tert-butylbenzene	21842-003	24	ug/L	20	119	70	130	0	20
		1,2,4-trimethylbenzene	21842-003	24	ug/L	20	118	70	130	0	20
		sec-butylbenzene	21842-003	25	ug/L	20	125	70	130	2	20
		1,3-dichlorobenzene	21842-003	23	ug/L	20	115	70	130	0	20
		4-isopropyltoluene	21842-003	24	ug/L	20	119	70	130	1	20
		1,4-dichlorobenzene	21842-003	23	ug/L	20	108	70	130	0	20
		1,2-dichlorobenzene	21842-003	29	ug/L	20	122	70	130	1	20
		n-butylbenzene	21842-003	26	ug/L	20	128	70	130	0	20
		1,2-dibromo-3-chloropropane	21842-003	19	ug/L	20	92	70	130	4	20
		1,2,4-trichlorobenzene	21842-003	21	ug/L	20	101	70	130	1	20
		hexachlorobutadiene	21842-003	24	ug/L	20	121	70	130	2	20
		naphthalene	21842-003	18	ug/L	20	88	70	130	2	20
		1,2,3-trichlorobenzene	21842-003	23	ug/L	20	116	70	130	2	20
		dibromofluoromethane SUR	21842-003	109	%			78	114		
		toluene-D8 SUR	21842-003	100	%			88	110		
		4-bromofluorobenzene SUR	21842-003	101	%			86	115		

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
E200.7	BLK4288	Calcium		<	0.5	mg/L						
		Magnesium		<	0.3	mg/L						
E200.7	DUP4288	Calcium	21829-011		17	mg/L					1	20
		Magnesium	21829-011		2.9	mg/L					0	20
E200.7	LCS4288	Calcium			0.5	mg/L	0.5	104	80	120		
		Magnesium			0.5	mg/L	0.5	109	80	120		
E200.7	LCSD4288	Calcium			0.5	mg/L	0.5	100	80	120	3	20
		Magnesium			0.5	mg/L	0.5	109	80	120	1	20
E200.7	MS4288	Calcium	21829-011		18	mg/L	0.5	162	75	125		
		Magnesium	21829-011		3.4	mg/L	0.5	112	75	125		
E200.7	MS4288	Calcium	21845-019		10	mg/L	0.5	123	75	125		
		Magnesium	21845-019		2.1	mg/L	0.5	112	75	125		
E200.7	MSD4288	Calcium	21845-019		10	mg/L	0.5	117	75	125	0	20
		Magnesium	21845-019		2.1	mg/L	0.5	110	75	125	0	20

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW3005A6010C	BLK1101316	Silver		<	0.005	mg/L						
		Arsenic		<	0.008	mg/L						
		Barium		<	0.05	mg/L						
		Calcium		<	0.5	mg/L						
		Cadmium		<	0.004	mg/L						
		Chromium		<	0.05	mg/L						
		Copper		<	0.05	mg/L						
		Iron		<	0.05	mg/L						
		Manganese		<	0.03	mg/L						
		Sodium		<	0.5	mg/L						
		Lead		<	0.01	mg/L						
		Selenium		<	0.05	mg/L						
		Zinc		<	0.05	mg/L						
SW3005A6010C	LCS1101316	Silver			0.26	mg/L	0.25	104	80	120		
		Arsenic			0.50	mg/L	0.5	100	80	120		
		Barium			0.50	mg/L	0.5	101	80	120		
		Calcium		<	0.5	mg/L	0.5	97	80	120		
		Cadmium			0.49	mg/L	0.5	99	80	120		
		Chromium			0.50	mg/L	0.5	100	80	120		
		Copper			0.51	mg/L	0.5	102	80	120		
		Iron			0.50	mg/L	0.5	101	80	120		
		Manganese			0.51	mg/L	0.5	103	80	120		
		Sodium			4.8	mg/L	5	95	80	120		
		Lead			0.50	mg/L	0.5	99	80	120		
		Selenium			0.50	mg/L	0.5	100	80	120		
		Zinc			0.50	mg/L	0.5	99	80	120		

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW3005A6010C	MS1101316	Iron	21832-001	45	mg/L	0.5	-392	*	75	125		
		Manganese	21832-001	1.2	mg/L	0.5	75		75	125		
SW3005A6010C	MS1101316	Silver	21842-003	0.44	mg/L	0.5	89		75	125		
		Arsenic	21842-003	1.3	mg/L	1	111		75	125		
		Barium	21842-003	1.2	mg/L	1	103		75	125		
		Calcium	21842-003	110	mg/L	1	-1024	*	75	125		
		Cadmium	21842-003	1.0	mg/L	1	104		75	125		
		Chromium	21842-003	1.1	mg/L	1	107		75	125		
		Copper	21842-003	1.1	mg/L	1	112		75	125		
		Iron	21842-003	9.2	mg/L	1	117		75	125		
		Manganese	21842-003	3.9	mg/L	1	115		75	125		
		Sodium	21842-003	130	mg/L	10	127	*	75	125		
		Lead	21842-003	1.00	mg/L	1	100		75	125		
		Selenium	21842-003	1.1	mg/L	1	115		75	125		
		Zinc	21842-003	1.1	mg/L	1	105		75	125		
SW3005A6010C	MS1101316	Silver	21845-010	0.27	mg/L	0.25	107		75	125		
		Arsenic	21845-010	0.54	mg/L	0.5	109		75	125		
		Barium	21845-010	0.54	mg/L	0.5	105		75	125		
		Calcium	21845-010	8.3	mg/L	0.5	64	*	75	125		
		Cadmium	21845-010	0.53	mg/L	0.5	106		75	125		
		Chromium	21845-010	0.54	mg/L	0.5	108		75	125		
		Copper	21845-010	0.56	mg/L	0.5	112		75	125		
		Iron	21845-010	0.74	mg/L	0.5	105		75	125		
		Manganese	21845-010	0.57	mg/L	0.5	111		75	125		
		Sodium	21845-010	31	mg/L	5	157	*	75	125		
		Lead	21845-010	0.52	mg/L	0.5	104		75	125		
		Selenium	21845-010	0.55	mg/L	0.5	111		75	125		
		Zinc	21845-010	0.55	mg/L	0.5	109		75	125		
SW3005A6010C	MS1101316	Silver	21858-003	0.26	mg/L	0.25	106		75	125		
		Arsenic	21858-003	0.54	mg/L	0.5	106		75	125		
		Barium	21858-003	0.53	mg/L	0.5	104		75	125		
		Calcium	21858-003	19	mg/L	0.5	280	*	75	125		
		Cadmium	21858-003	0.53	mg/L	0.5	105		75	125		
		Chromium	21858-003	0.54	mg/L	0.5	108		75	125		
		Copper	21858-003	0.56	mg/L	0.5	111		75	125		
		Iron	21858-003	0.75	mg/L	0.5	97		75	125		
		Manganese	21858-003	0.77	mg/L	0.5	109		75	125		
		Sodium	21858-003	52	mg/L	5	110		75	125		
		Lead	21858-003	0.52	mg/L	0.5	104		75	125		
		Selenium	21858-003	0.55	mg/L	0.5	112		75	125		
		Zinc	21858-003	0.54	mg/L	0.5	108		75	125		

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW3005A6010C	MSD1101316	Iron	21832-001	48	mg/L	0.5	104		75	125	5	20
		Manganese	21832-001	1.3	mg/L	0.5	81		75	125	2	20
SW3005A6010C	MSD1101316	Silver	21842-003	0.47	mg/L	0.5	95		75	125	6	20
		Arsenic	21842-003	1.3	mg/L	1	112		75	125	1	20
		Barium	21842-003	1.2	mg/L	1	103		75	125	0	20
		Calcium	21842-003	110	mg/L	1	-914	*	75	125	1	20
		Cadmium	21842-003	1.0	mg/L	1	105		75	125	1	20
		Chromium	21842-003	1.1	mg/L	1	108		75	125	1	20
		Copper	21842-003	1.1	mg/L	1	114		75	125	2	20
		Iron	21842-003	9.2	mg/L	1	117		75	125	0	20
		Manganese	21842-003	3.9	mg/L	1	114		75	125	0	20
		Sodium	21842-003	130	mg/L	10	124		75	125	0	20
		Lead	21842-003	1.0	mg/L	1	101		75	125	1	20
		Selenium	21842-003	1.2	mg/L	1	116		75	125	1	20
		Zinc	21842-003	1.1	mg/L	1	105		75	125	1	20
SW3005A6010C	MSD1101316	Silver	21845-010	0.27	mg/L	0.25	107		75	125	0	20
		Arsenic	21845-010	0.54	mg/L	0.5	108		75	125	0	20
		Barium	21845-010	0.54	mg/L	0.5	105		75	125	0	20
		Calcium	21845-010	8.3	mg/L	0.5	71	*	75	125	0	20
		Cadmium	21845-010	0.53	mg/L	0.5	106		75	125	0	20
		Chromium	21845-010	0.54	mg/L	0.5	109		75	125	0	20
		Copper	21845-010	0.56	mg/L	0.5	111		75	125	0	20
		Iron	21845-010	0.74	mg/L	0.5	105		75	125	0	20
		Manganese	21845-010	0.57	mg/L	0.5	111		75	125	0	20
		Sodium	21845-010	31	mg/L	5	161	*	75	125	1	20
		Lead	21845-010	0.53	mg/L	0.5	105		75	125	1	20
		Selenium	21845-010	0.55	mg/L	0.5	110		75	125	1	20
		Zinc	21845-010	0.55	mg/L	0.5	109		75	125	0	20
SW3005A6010C	MSD1101316	Silver	21858-003	0.25	mg/L	0.25	101		75	125	5	20
		Arsenic	21858-003	0.54	mg/L	0.5	107		75	125	1	20
		Barium	21858-003	0.54	mg/L	0.5	104		75	125	0	20
		Calcium	21858-003	18	mg/L	0.5	188	*	75	125	3	20
		Cadmium	21858-003	0.52	mg/L	0.5	105		75	125	1	20
		Chromium	21858-003	0.54	mg/L	0.5	108		75	125	0	20
		Copper	21858-003	0.56	mg/L	0.5	112		75	125	0	20
		Iron	21858-003	0.74	mg/L	0.5	97		75	125	0	20
		Manganese	21858-003	0.77	mg/L	0.5	110		75	125	1	20
		Sodium	21858-003	52	mg/L	5	110		75	125	0	20
		Lead	21858-003	0.52	mg/L	0.5	103		75	125	1	20
		Selenium	21858-003	0.55	mg/L	0.5	112		75	125	0	20
		Zinc	21858-003	0.54	mg/L	0.5	108		75	125	0	20

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW7470A	BLK4285	Mercury		<	0.0002	mg/L						
SW7470A	LCS4285	Mercury			0.0020	mg/L	0.002	101	80	120		
SW7470A	LCSD4285	Mercury			0.0020	mg/L	0.002	100	80	120	0	20
SW7470A	MS4285	Mercury	21842-003		0.0016	mg/L	0.002	78	75	125		
SW7470A	MS4285	Mercury	21845-010		0.0021	mg/L	0.002	103	75	125		
SW7470A	MSD4285	Mercury	21842-003		0.0016	mg/L	0.002	78	75	125	1	20
SW7470A	MSD4285	Mercury	21845-010		0.0021	mg/L	0.002	103	75	125	0	20

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
E300.0A	BLK1101256	Chloride		<	0.5	mg/L							
		Nitrate-N		<	0.1	mg/L							
		Sulfate		<	0.5	mg/L							
E300.0A	DUP1101256	Chloride	21842-005		4.6	mg/L						0	10
		Nitrate-N	21842-005	<	0.1	mg/L							10
		Sulfate	21842-005		14	mg/L						0	10
E300.0A	LCS1101256	Chloride			97	mg/L	100	97		90	110		
		Nitrate-N			9.4	mg/L	10	94		90	110		
		Sulfate			96	mg/L	100	96		90	110		
E300.0A	MS1101256	Chloride	21837-005		29	mg/L	16	75	*	90	110		
		Nitrate-N	21837-005		1.5	mg/L	1.66	87	*	90	110		
		Sulfate	21837-005		24	mg/L	16	90		90	110		
E300.0A	MS1101256	Chloride	21842-005		20	mg/L	16	94		90	110		
		Nitrate-N	21842-005		1.7	mg/L	1.66	95		90	110		
		Sulfate	21842-005		29	mg/L	16	90		90	110		
E300.0A	BLK1101323	Chloride		<	0.5	mg/L							
E300.0A	LCS1101323	Chloride			96	mg/L	100	96		90	110		
E410.4	DUP1101342	Chemical Oxygen Demand	21842-003		60	mg/L						4	25
E410.4	LCS1101342	Chemical Oxygen Demand			510	mg/L	500	103		75	125		
E410.4	MS1101342	Chemical Oxygen Demand	21842-003		560	mg/L	500	100		75	125		
E410.4	MSD1101342	Chemical Oxygen Demand	21842-003		560	mg/L	500	99		75	125	1	20
E410.4	PB1101342	Chemical Oxygen Demand		<	5	mg/L					5		
SM2320B	DUP1101311	Alkalinity, total (as CaCO3)	21845-009		45	mg/L						0	25
SM2320B	LCS1101311	Alkalinity, total (as CaCO3)			25	mg/L	25	100		80	120		
SM2320B	PB1101311	Alkalinity, total (as CaCO3)		<	5	mg/L					5		
SM2540C	DUP1101267	Total Dissolved Solids (TDS)	21845-001		170	mg/L						1	20
SM2540C	DUP1101267	Total Dissolved Solids (TDS)	21845-011		140	mg/L						1	20
SM2540C	LCS1101267	Total Dissolved Solids (TDS)			11.0	mg/L	10.6	104		75	125		
SM2540C	PB1101267	Total Dissolved Solids (TDS)		<	10	mg/L					10		

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SM4500CN-E	LCS1101291	Cyanide, total			0.11	mg/L	0.1	107	75	125		
SM4500CN-E	LCSD1101291	Cyanide, total			0.54	mg/L	0.5	108	75	125		20
SM4500CN-E	PB1101291	Cyanide, total		<	0.01	mg/L						
SM4500CN-E	DUP1101292	Cyanide, total	21842-003	<	0.01	mg/L						20
SM4500CN-E	LCS1101292	Cyanide, total			0.10	mg/L	0.1	102	75	125		
SM4500CN-E	LCSD1101292	Cyanide, total			0.53	mg/L	0.5	106	75	125		20
SM4500CN-E	MS1101292	Cyanide, total	21842-003		0.49	mg/L	0.5	99	75	125		
SM4500CN-E	MSD1101292	Cyanide, total	21842-003		0.50	mg/L	0.5	100	75	125	2	20
SM4500CN-E	PB1101292	Cyanide, total		<	0.01	mg/L						

Absolute Resource associates

Absolute Resource associates
124 Heritage Avenue #10
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

21842

Company Name: CDM
Company Address: 50 Hampshire St, Cambridge MA
Report To: Nathan Jones
Phone #: 617-452-6563
Invoice To: Nathan Jones

Project Name: Haverhill LF
Project #: 0522 83058
Project Location: NH (MA) ME VT ___ Other
Protocol: (RCRA) SDWA NPDES (MCP) NHDES OTHER
Reporting Limits: QAPP (GW-1) S-1 EPA DW Other GW-3
Quote #_____ ☐ NH GREE/ODD Fund Pricing
PO #_____

ANALYSIS REQUEST

☑ VOC 8260 ☐ VOC 8260 NHDES ☐ VOC 8260 MADEP
☐ VOC 624 ☐ VOC BTEX ☐ MBE, only ☐ VOC 8021VT
☐ VPH MADEP ☐ MEGRO ☐ GRO 8015
☐ VOC 524.2 ☐ VOC 524.2 NH List ☐ Gases-List:
☐ TPH ☐ DRO 8015 ☐ MEDRO ☐ EPH MADEP ☐ TPH Fingerprint
☐ 8270PAH ☐ 8270ABN ☐ 625 ☐ EDB 504.1
☐ 8082 PCB ☐ 8081 Pesticides ☐ 608 Pest/PCB
☐ O&G 1664 ☐ Mineral O&G SM5520F
☐ pH ☐ BOD ☐ Conductivity ☐ Turbidity
☐ TSS ☐ TDS ☐ TS ☐ TVS ☑ Alkalinity
☑ RCRA Metals ☐ Priority Pollutant Metals ☐ TAL Metals
☐ Total Metals-list:
☑ Dissolved Metals-list: Ca, Na, Fe, Mn, Al, Ni, Cu, Zn
☐ Ammonia ☑ COD ☐ TKN ☐ TON
☐ T-Phosphorus ☐ Phenols ☐ Bacteria P/A ☐ Bacteria MPN
☑ Cyanide ☐ Sulfide ☐ Nitrate + Nitrite ☐ Ortho P
☑ Nitrate ☐ Nitrite ☑ Chloride ☑ Sulfate ☐ Bromide ☐ Fluoride
☐ Corrosivity ☐ Reactive CN ☐ Reactive S- ☐ Ignitibility/FP
☐ TCLP Metals ☐ TCLP VOC ☐ TCLP SVOC ☐ TCLP Pesticide
Subcontract: ☐ TOC ☐ Grain Size ☐ TCLP Herbicides
Hardness (Total) CaCO3
Dissolved Metals Ca, Zn, Cu, Na, Fe, Mn
Grab (G) or Composite (C)

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	SOLID	OTHER	Preservation Method: HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER (Specify)	Sampling: DATE	TIME	SAMPLER	VOC 8260	VOC 8260 NHDES	VOC 8260 MADEP	TSS	TDS	RCRA Metals	Total Metals	Dissolved Metals	Ammonia	Cyanide	Nitrate	Chloride	Sulfate	Hardness (Total)	Dissolved Metals	Grab (G) or Composite (C)
2184201 -10	MW-12	9	X			X	X	X	X			6-22-11	11:05		X			X		X		X	X	X				X		G
-11 02	MW-13S	9	X										12:05															X		
-12 03	MW-13D	15	X										13:05															X		
04	MW-11S	8	X										1450																	
05	MW-16S	8	X										1530																	
06	MW-19D	8	X										1620																	
07	Dup-3	4	X			X	X		X				—		X					X				X					X	
08	EB-3	3	X										1315		X					X									X	
09	Trip Blank (1)	1				X						6-14-11			X															

Total Hardness

TAT REQUESTED
Priority (24 hr)* ☐
Expedited (48 hr)* ☐
Standard (10 Business Days) ☑
*Date Needed _____

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS MS/MSD2 collected at MW-13 — Diss Metals, CN, VOC per bottles rear @ 6/23

REPORTING INSTRUCTIONS ☑ PDF (e-mail address) JONESNE@CDM.COM
☐ HARD COPY REQUIRED ☑ FAX (FAX#)_____ ☑ OTHER (specify) E-mail

RECEIVED ON ICE ☑ YES ☐ NO
TEMPERATURE 0 °C

CUSTODY RECORD
QSD-01 Revision 12/23/10

Relinquished by Sampler:	Date	Time	Received by:	Date	Time
[signature]	6-22-11	1730			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by Laboratory: [signature] Way Bill#:	6/23/11	15:32

Absolute Resource associates
124 Heritage Avenue #10 Portsmouth, NH 03801

Nathan Jones
Camp Dresser and McKee Inc.
50 Hampshire Street
Cambridge, MA 02139

PO Number: None
Job ID: 21845
Date Received: 6/23/11

Project: Haverhill LF 0522-83058

Attached please find results for the analysis of the samples received on the date referenced above.

Unless otherwise noted in the attached report, the analyses performed met the requirements of Absolute Resource Associates' Quality Assurance Plan. The Standard Operating Procedures are based upon USEPA SW-846, USEPA Methods for Chemical Analysis of Water and Wastewater, Standard Methods for the Examination of Water and Wastewater and other recognized methodologies. The results contained in this report pertain only to the samples as indicated on the chain of custody.

Absolute Resource Associates maintains certification with the agencies listed below.

We appreciate the opportunity to provide laboratory services. If you have any questions regarding the enclosed report, please contact the laboratory and we will be glad to assist you.

Sincerely,
Absolute Resource Associates

(for)

Sue Sylvester
Principal, General Manager

Date of Approval: 7/15/2011
Total number of pages: 38

Absolute Resource Associates Certifications

New Hampshire	1732	Massachusetts	M-NH902
Maine	NH903		

Project ID: Haverhill LF 0522-83058
Lab ID: 21845

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
SW-100	Water	6/22/2011 11:00	21845-001	
				Silver in water by 6010
				Aluminum in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Nickel in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				Alkalinity in water by SM2320B
				Chloride in water by 300.0A
				Chemical Oxygen Demand by 410.4
				Total cyanide in waste water by SM4500CN-E
				Nitrate-N in water (NO3) by 300.0A
				Sulfate in water (SO4) by 300.0A
				Total Dissolved Solids by SM2540C
SW-101	Water	6/22/2011 10:30	21845-002	
				Silver in water by 6010
				Aluminum in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Nickel in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				Alkalinity in water by SM2320B
				Chloride in water by 300.0A
				Chemical Oxygen Demand by 410.4
				Total cyanide in waste water by SM4500CN-E
				Nitrate-N in water (NO3) by 300.0A
				Sulfate in water (SO4) by 300.0A
				Total Dissolved Solids by SM2540C
SW-103	Water	6/22/2011 9:45	21845-003	
				Silver in water by 6010
				Aluminum in water by 6010
				Arsenic in water by 6010

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Lab ID: 21845

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
SW-103	Water	6/22/2011 9:45	21845-003	
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Nickel in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				Alkalinity in water by SM2320B
				Chloride in water by 300.0A
				Chemical Oxygen Demand by 410.4
				Total cyanide in waste water by SM4500CN-E
				Nitrate-N in water (NO3) by 300.0A
				Sulfate in water (SO4) by 300.0A
				Total Dissolved Solids by SM2540C
SW-104	Water	6/22/2011 11:45	21845-004	
				Silver in water by 6010
				Aluminum in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Nickel in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				Alkalinity in water by SM2320B
				Chloride in water by 300.0A
				Chemical Oxygen Demand by 410.4
				Total cyanide in waste water by SM4500CN-E
				Nitrate-N in water (NO3) by 300.0A
				Sulfate in water (SO4) by 300.0A
				Total Dissolved Solids by SM2540C
SW-105	Water	6/22/2011 12:15	21845-005	
				Silver in water by 6010
				Aluminum in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Lab ID: 21845

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
SW-105	Water	6/22/2011 12:15	21845-005	
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Nickel in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				Alkalinity in water by SM2320B
				Chloride in water by 300.0A
				Chemical Oxygen Demand by 410.4
				Total cyanide in waste water by SM4500CN-E
				Nitrate-N in water (NO3) by 300.0A
				Sulfate in water (SO4) by 300.0A
				Total Dissolved Solids by SM2540C
SW-106	Water	6/22/2011 14:35	21845-006	
				Silver in water by 6010
				Aluminum in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Nickel in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				Alkalinity in water by SM2320B
				Chloride in water by 300.0A
				Chemical Oxygen Demand by 410.4
				Total cyanide in waste water by SM4500CN-E
				Nitrate-N in water (NO3) by 300.0A
				Sulfate in water (SO4) by 300.0A
				Total Dissolved Solids by SM2540C
SW-107	Water	6/22/2011 13:10	21845-007	
				Silver in water by 6010
				Aluminum in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Lab ID: 21845

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
SW-107	Water	6/22/2011 13:10	21845-007	
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Nickel in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				Alkalinity in water by SM2320B
				Chloride in water by 300.0A
				Chemical Oxygen Demand by 410.4
				Total cyanide in waste water by SM4500CN-E
				Nitrate-N in water (NO3) by 300.0A
				Sulfate in water (SO4) by 300.0A
				Total Dissolved Solids by SM2540C
SW-108	Water	6/22/2011 12:40	21845-008	
				Silver in water by 6010
				Aluminum in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Nickel in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				Alkalinity in water by SM2320B
				Chloride in water by 300.0A
				Chemical Oxygen Demand by 410.4
				Total cyanide in waste water by SM4500CN-E
				Nitrate-N in water (NO3) by 300.0A
				Sulfate in water (SO4) by 300.0A
				Total Dissolved Solids by SM2540C
SW-109	Water	6/22/2011 13:45	21845-009	
				Silver in water by 6010
				Aluminum in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Lab ID: 21845

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
SW-109	Water	6/22/2011 13:45	21845-009	
				Nickel in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				Alkalinity in water by SM2320B
				Chloride in water by 300.0A
				Chemical Oxygen Demand by 410.4
				Total cyanide in waste water by SM4500CN-E
				Nitrate-N in water (NO3) by 300.0A
				Sulfate in water (SO4) by 300.0A
				Total Dissolved Solids by SM2540C
SW-110	Water	6/22/2011 15:20	21845-010	
				Silver in water by 6010
				Aluminum in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Nickel in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				Alkalinity in water by SM2320B
				Chloride in water by 300.0A
				Chemical Oxygen Demand by 410.4
				Total cyanide in waste water by SM4500CN-E
				Nitrate-N in water (NO3) by 300.0A
				Sulfate in water (SO4) by 300.0A
				Total Dissolved Solids by SM2540C
SW-111	Water	6/22/2011 14:55	21845-011	
				Silver in water by 6010
				Aluminum in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Nickel in water by 6010
				Lead in water by 6010
				Selenium in water by 6010

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Lab ID: 21845

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
SW-111	Water	6/22/2011 14:55	21845-011	
				Zinc in water by 6010
				Alkalinity in water by SM2320B
				Chloride in water by 300.0A
				Chemical Oxygen Demand by 410.4
				Total cyanide in waste water by SM4500CN-E
				Nitrate-N in water (NO3) by 300.0A
				Sulfate in water (SO4) by 300.0A
				Total Dissolved Solids by SM2540C
SW-112	Water	6/22/2011 14:10	21845-012	
				Silver in water by 6010
				Aluminum in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Nickel in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				Alkalinity in water by SM2320B
				Chloride in water by 300.0A
				Chemical Oxygen Demand by 410.4
				Total cyanide in waste water by SM4500CN-E
				Nitrate-N in water (NO3) by 300.0A
				Sulfate in water (SO4) by 300.0A
				Total Dissolved Solids by SM2540C
DUP-1	Water	6/22/2011	21845-013	
				Silver in water by 6010
				Aluminum in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Nickel in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				Total cyanide in waste water by SM4500CN-E
EB-1	Water	6/22/2011 11:10	21845-014	

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Lab ID: 21845

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
EB-1	Water	6/22/2011 11:10	21845-014	
				Silver in water by 6010
				Aluminum in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Nickel in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
EB-2	Water	6/22/2011 15:45	21845-015	
				Silver in water by 6010
				Aluminum in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Nickel in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
DUP-2	Water	6/22/2011	21845-016	
				Silver in water by 6010
				Aluminum in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Nickel in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				Total cyanide in waste water by SM4500CN-E

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Lab ID: 21845

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
SW-100	Water	6/22/2011 11:00	21845-017	
				Total Hardness (includes Ca & Mg) by SM2340B
				Water Digestion for ICP Analysis
				Calcium in water by 200.7
				Magnesium in water by 200.7
SW-101	Water	6/22/2011 10:30	21845-018	
				Total Hardness (includes Ca & Mg) by SM2340B
				Water Digestion for ICP Analysis
				Calcium in water by 200.7
				Magnesium in water by 200.7
SW-103	Water	6/22/2011 9:45	21845-019	
				Total Hardness (includes Ca & Mg) by SM2340B
				Water Digestion for ICP Analysis
				Calcium in water by 200.7
				Magnesium in water by 200.7
SW-104	Water	6/22/2011 11:45	21845-020	
				Total Hardness (includes Ca & Mg) by SM2340B
				Water Digestion for ICP Analysis
				Calcium in water by 200.7
				Magnesium in water by 200.7
SW-105	Water	6/22/2011 12:15	21845-021	
				Total Hardness (includes Ca & Mg) by SM2340B
				Water Digestion for ICP Analysis
				Calcium in water by 200.7
				Magnesium in water by 200.7
SW-106	Water	6/22/2011 14:35	21845-022	
				Total Hardness (includes Ca & Mg) by SM2340B
				Water Digestion for ICP Analysis
				Calcium in water by 200.7
				Magnesium in water by 200.7
SW-107	Water	6/22/2011 13:10	21845-023	
				Total Hardness (includes Ca & Mg) by SM2340B
				Water Digestion for ICP Analysis
				Calcium in water by 200.7
				Magnesium in water by 200.7
SW-108	Water	6/22/2011 12:40	21845-024	
				Total Hardness (includes Ca & Mg) by SM2340B
				Water Digestion for ICP Analysis
				Calcium in water by 200.7
				Magnesium in water by 200.7
SW-109	Water	6/22/2011 13:45	21845-025	
				Total Hardness (includes Ca & Mg) by SM2340B
				Water Digestion for ICP Analysis
				Calcium in water by 200.7
				Magnesium in water by 200.7
SW-110	Water	6/22/2011 15:20	21845-026	
				Total Hardness (includes Ca & Mg) by SM2340B
				Water Digestion for ICP Analysis
				Calcium in water by 200.7
				Magnesium in water by 200.7
SW-111	Water	6/22/2011 14:55	21845-027	
				Total Hardness (includes Ca & Mg) by SM2340B

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Lab ID: 21845

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
SW-111	Water	6/22/2011 14:55	21845-027	
				Water Digestion for ICP Analysis
				Calcium in water by 200.7
				Magnesium in water by 200.7
SW-112	Water	6/22/2011 14:10	21845-028	
				Total Hardness (includes Ca & Mg) by SM2340B
				Water Digestion for ICP Analysis
				Calcium in water by 200.7
				Magnesium in water by 200.7

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21845

Sample#: 21845-001
Sample ID: SW-100
Matrix: Water
Sampled: 6/22/11 11:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Aluminum	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	18:49	SW3005A6010C
Arsenic	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	18:49	SW3005A6010C
Barium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	18:49	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101316	7/5/11	18:49	SW3005A6010C
Calcium	**27**	0.5	mg/L	1	BJS		1101316	7/5/11	18:49	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	18:49	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	18:49	SW3005A6010C
Iron	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	18:49	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	18:49	SW3005A6010C
Manganese	< 0.03	0.03	mg/L	1	BJS		1101316	7/5/11	18:49	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4285	6/30/11	12:12	SW7470A
Nickel	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	18:49	SW3005A6010C
Selenium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	18:49	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101316	7/5/11	18:49	SW3005A6010C
Sodium	**11**	0.5	mg/L	1	BJS		1101316	7/5/11	18:49	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	18:49	SW3005A6010C

Sample#: 21845-002
Sample ID: SW-101
Matrix: Water
Sampled: 6/22/11 10:30

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Aluminum	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	18:54	SW3005A6010C
Arsenic	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	18:54	SW3005A6010C
Barium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	18:54	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101316	7/5/11	18:54	SW3005A6010C
Calcium	**7.9**	0.5	mg/L	1	BJS		1101316	7/5/11	18:54	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	18:54	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	18:54	SW3005A6010C
Iron	**0.20**	0.05	mg/L	1	BJS		1101316	7/5/11	18:54	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	18:54	SW3005A6010C
Manganese	< 0.03	0.03	mg/L	1	BJS		1101316	7/5/11	18:54	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4285	6/30/11	12:14	SW7470A
Nickel	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	18:54	SW3005A6010C
Selenium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	18:54	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101316	7/5/11	18:54	SW3005A6010C
Sodium	**27**	0.5	mg/L	1	BJS		1101316	7/5/11	18:54	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	18:54	SW3005A6010C

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21845

Sample#: 21845-003
Sample ID: SW-103
Matrix: Water
Sampled: 6/22/11 9:45

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Aluminum	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	18:59	SW3005A6010C
Arsenic	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	18:59	SW3005A6010C
Barium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	18:59	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101316	7/5/11	18:59	SW3005A6010C
Calcium	**7.9**	0.5	mg/L	1	BJS		1101316	7/5/11	18:59	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	18:59	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	18:59	SW3005A6010C
Iron	**0.12**	0.05	mg/L	1	BJS		1101316	7/5/11	18:59	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	18:59	SW3005A6010C
Manganese	< 0.03	0.03	mg/L	1	BJS		1101316	7/5/11	18:59	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4285	6/30/11	12:25	SW7470A
Nickel	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	18:59	SW3005A6010C
Selenium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	18:59	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101316	7/5/11	18:59	SW3005A6010C
Sodium	**27**	0.5	mg/L	1	BJS		1101316	7/5/11	18:59	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	18:59	SW3005A6010C

Sample#: 21845-004
Sample ID: SW-104
Matrix: Water
Sampled: 6/22/11 11:45

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Aluminum	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:04	SW3005A6010C
Arsenic	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	19:04	SW3005A6010C
Barium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:04	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101316	7/5/11	19:04	SW3005A6010C
Calcium	**8.4**	0.5	mg/L	1	BJS		1101316	7/5/11	19:04	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:04	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:04	SW3005A6010C
Iron	**0.15**	0.05	mg/L	1	BJS		1101316	7/5/11	19:04	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	19:04	SW3005A6010C
Manganese	**0.03**	0.03	mg/L	1	BJS		1101316	7/5/11	19:04	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4285	6/30/11	12:27	SW7470A
Nickel	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:04	SW3005A6010C
Selenium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:04	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101316	7/5/11	19:04	SW3005A6010C
Sodium	**27**	0.5	mg/L	1	BJS		1101316	7/5/11	19:04	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:04	SW3005A6010C

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21845

Sample#: 21845-005
Sample ID: SW-105
Matrix: Water
Sampled: 6/22/11 12:15

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Aluminum	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:10	SW3005A6010C
Arsenic	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	19:10	SW3005A6010C
Barium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:10	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101316	7/5/11	19:10	SW3005A6010C
Calcium	**14**	0.5	mg/L	1	BJS		1101316	7/5/11	19:10	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:10	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:10	SW3005A6010C
Iron	**0.28**	0.05	mg/L	1	BJS		1101316	7/5/11	19:10	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	19:10	SW3005A6010C
Manganese	**0.10**	0.03	mg/L	1	BJS		1101316	7/5/11	19:10	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4285	6/30/11	12:41	SW7470A
Nickel	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:10	SW3005A6010C
Selenium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:10	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101316	7/5/11	19:10	SW3005A6010C
Sodium	**18**	0.5	mg/L	1	BJS		1101316	7/5/11	19:10	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:10	SW3005A6010C

Sample#: 21845-006
Sample ID: SW-106
Matrix: Water
Sampled: 6/22/11 14:35

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Aluminum	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:19	SW3005A6010C
Arsenic	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	19:19	SW3005A6010C
Barium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:19	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101316	7/5/11	19:19	SW3005A6010C
Calcium	**12**	0.5	mg/L	1	BJS		1101316	7/5/11	19:19	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:19	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:19	SW3005A6010C
Iron	**0.17**	0.05	mg/L	1	BJS		1101316	7/5/11	19:19	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	19:19	SW3005A6010C
Manganese	**0.05**	0.03	mg/L	1	BJS		1101316	7/5/11	19:19	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4285	6/30/11	12:34	SW7470A
Nickel	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:19	SW3005A6010C
Selenium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:19	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101316	7/5/11	19:19	SW3005A6010C
Sodium	**16**	0.5	mg/L	1	BJS		1101316	7/5/11	19:19	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:19	SW3005A6010C

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21845

Sample#: 21845-007
Sample ID: SW-107
Matrix: Water
Sampled: 6/22/11 13:10

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Aluminum	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:25	SW3005A6010C
Arsenic	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	19:25	SW3005A6010C
Barium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:25	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101316	7/5/11	19:25	SW3005A6010C
Calcium	**12**	0.5	mg/L	1	BJS		1101316	7/5/11	19:25	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:25	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:25	SW3005A6010C
Iron	**0.16**	0.05	mg/L	1	BJS		1101316	7/5/11	19:25	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	19:25	SW3005A6010C
Manganese	**0.08**	0.03	mg/L	1	BJS		1101316	7/5/11	19:25	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4285	6/30/11	12:36	SW7470A
Nickel	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:25	SW3005A6010C
Selenium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:25	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101316	7/5/11	19:25	SW3005A6010C
Sodium	**16**	0.5	mg/L	1	BJS		1101316	7/5/11	19:25	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:25	SW3005A6010C

Sample#: 21845-008
Sample ID: SW-108
Matrix: Water
Sampled: 6/22/11 12:40

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Aluminum	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:30	SW3005A6010C
Arsenic	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	19:30	SW3005A6010C
Barium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:30	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101316	7/5/11	19:30	SW3005A6010C
Calcium	**13**	0.5	mg/L	1	BJS		1101316	7/5/11	19:30	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:30	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:30	SW3005A6010C
Iron	**0.23**	0.05	mg/L	1	BJS		1101316	7/5/11	19:30	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	19:30	SW3005A6010C
Manganese	**0.10**	0.03	mg/L	1	BJS		1101316	7/5/11	19:30	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4285	6/30/11	12:37	SW7470A
Nickel	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:30	SW3005A6010C
Selenium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:30	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101316	7/5/11	19:30	SW3005A6010C
Sodium	**18**	0.5	mg/L	1	BJS		1101316	7/5/11	19:30	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:30	SW3005A6010C

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21845

Sample#: 21845-009
Sample ID: SW-109
Matrix: Water
Sampled: 6/22/11 13:45

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Aluminum	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:36	SW3005A6010C
Arsenic	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	19:36	SW3005A6010C
Barium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:36	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101316	7/5/11	19:36	SW3005A6010C
Calcium	**21**	0.5	mg/L	1	BJS		1101316	7/5/11	19:36	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:36	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:36	SW3005A6010C
Iron	**0.35**	0.05	mg/L	1	BJS		1101316	7/5/11	19:36	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	19:36	SW3005A6010C
Manganese	**0.03**	0.03	mg/L	1	BJS		1101316	7/5/11	19:36	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4285	6/30/11	12:39	SW7470A
Nickel	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:36	SW3005A6010C
Selenium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:36	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101316	7/5/11	19:36	SW3005A6010C
Sodium	**34**	0.5	mg/L	1	BJS		1101316	7/5/11	19:36	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:36	SW3005A6010C

Sample#: 21845-010
Sample ID: SW-110
Matrix: Water
Sampled: 6/22/11 15:20

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Aluminum	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:42	SW3005A6010C
Arsenic	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	19:42	SW3005A6010C
Barium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:42	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101316	7/5/11	19:42	SW3005A6010C
Calcium	**8.0**	0.5	mg/L	1	BJS		1101316	7/5/11	19:42	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:42	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:42	SW3005A6010C
Iron	**0.22**	0.05	mg/L	1	BJS		1101316	7/5/11	19:42	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	19:42	SW3005A6010C
Manganese	< 0.03	0.03	mg/L	1	BJS		1101316	7/5/11	19:42	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4285	6/30/11	12:28	SW7470A
Nickel	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:42	SW3005A6010C
Selenium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:42	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101316	7/5/11	19:42	SW3005A6010C
Sodium	**23**	0.5	mg/L	1	BJS		1101316	7/5/11	19:42	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	19:42	SW3005A6010C

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21845

Sample#: 21845-011
Sample ID: SW-111
Matrix: Water
Sampled: 6/22/11 14:55

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Aluminum	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:07	SW3005A6010C
Arsenic	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	21:07	SW3005A6010C
Barium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:07	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101316	7/5/11	21:07	SW3005A6010C
Calcium	**8.0**	0.5	mg/L	1	BJS		1101316	7/5/11	21:07	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:07	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:07	SW3005A6010C
Iron	**0.20**	0.05	mg/L	1	BJS		1101316	7/5/11	21:07	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	21:07	SW3005A6010C
Manganese	< 0.03	0.03	mg/L	1	BJS		1101316	7/5/11	21:07	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4285	6/30/11	12:43	SW7470A
Nickel	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:07	SW3005A6010C
Selenium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:07	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101316	7/5/11	21:07	SW3005A6010C
Sodium	**26**	0.5	mg/L	1	BJS		1101316	7/5/11	21:07	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:07	SW3005A6010C

Sample#: 21845-012
Sample ID: SW-112
Matrix: Water
Sampled: 6/22/11 14:10

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Aluminum	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:12	SW3005A6010C
Arsenic	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	21:12	SW3005A6010C
Barium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:12	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101316	7/5/11	21:12	SW3005A6010C
Calcium	**12**	0.5	mg/L	1	BJS		1101316	7/5/11	21:12	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:12	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:12	SW3005A6010C
Iron	**0.27**	0.05	mg/L	1	BJS		1101316	7/5/11	21:12	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	21:12	SW3005A6010C
Manganese	**0.06**	0.03	mg/L	1	BJS		1101316	7/5/11	21:12	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4285	6/30/11	12:44	SW7470A
Nickel	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:12	SW3005A6010C
Selenium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:12	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101316	7/5/11	21:12	SW3005A6010C
Sodium	**15**	0.5	mg/L	1	BJS		1101316	7/5/11	21:12	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:12	SW3005A6010C

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21845

Sample#: 21845-013
Sample ID: DUP-1
Matrix: Water
Sampled: 6/22/11

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Aluminum	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:21	SW3005A6010C
Arsenic	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	21:21	SW3005A6010C
Barium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:21	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101316	7/5/11	21:21	SW3005A6010C
Calcium	**20**	0.5	mg/L	1	BJS		1101316	7/5/11	21:21	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:21	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:21	SW3005A6010C
Iron	**0.28**	0.05	mg/L	1	BJS		1101316	7/5/11	21:21	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	21:21	SW3005A6010C
Manganese	**0.03**	0.03	mg/L	1	BJS		1101316	7/5/11	21:21	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4286	6/30/11	12:55	SW7470A
Nickel	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:21	SW3005A6010C
Selenium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:21	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101316	7/5/11	21:21	SW3005A6010C
Sodium	**38**	0.5	mg/L	1	BJS		1101316	7/5/11	21:21	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:21	SW3005A6010C

Sample#: 21845-014
Sample ID: EB-1
Matrix: Water
Sampled: 6/22/11 11:10

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Aluminum	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:25	SW3005A6010C
Arsenic	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	21:25	SW3005A6010C
Barium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:25	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101316	7/5/11	21:25	SW3005A6010C
Calcium	< 0.5	0.5	mg/L	1	BJS		1101316	7/5/11	21:25	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:25	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:25	SW3005A6010C
Iron	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:25	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	21:25	SW3005A6010C
Manganese	< 0.03	0.03	mg/L	1	BJS		1101316	7/5/11	21:25	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4286	6/30/11	12:57	SW7470A
Nickel	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:25	SW3005A6010C
Selenium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:25	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101316	7/5/11	21:25	SW3005A6010C
Sodium	< 0.5	0.5	mg/L	1	BJS		1101316	7/5/11	21:25	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:25	SW3005A6010C

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21845

Sample#: 21845-015
Sample ID: EB-2
Matrix: Water
Sampled: 6/22/11 15:45

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
Aluminum	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:29	SW3005A6010C
Arsenic	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	21:29	SW3005A6010C
Barium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:29	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101316	7/5/11	21:29	SW3005A6010C
Calcium	< 0.5	0.5	mg/L	1	BJS		1101316	7/5/11	21:29	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:29	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:29	SW3005A6010C
Iron	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:29	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	21:29	SW3005A6010C
Manganese	< 0.03	0.03	mg/L	1	BJS		1101316	7/5/11	21:29	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4286	6/30/11	12:59	SW7470A
Nickel	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:29	SW3005A6010C
Selenium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:29	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101316	7/5/11	21:29	SW3005A6010C
Sodium	< 0.5	0.5	mg/L	1	BJS		1101316	7/5/11	21:29	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:29	SW3005A6010C

Sample#: 21845-016
Sample ID: DUP-2
Matrix: Water
Sampled: 6/22/11

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
Aluminum	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:34	SW3005A6010C
Arsenic	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	21:34	SW3005A6010C
Barium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:34	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101316	7/5/11	21:34	SW3005A6010C
Calcium	**8.0**	0.5	mg/L	1	BJS		1101316	7/5/11	21:34	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:34	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:34	SW3005A6010C
Iron	**0.21**	0.05	mg/L	1	BJS		1101316	7/5/11	21:34	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101316	7/5/11	21:34	SW3005A6010C
Manganese	< 0.03	0.03	mg/L	1	BJS		1101316	7/5/11	21:34	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4286	6/30/11	13:01	SW7470A
Nickel	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:34	SW3005A6010C
Selenium	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:34	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101316	7/5/11	21:34	SW3005A6010C
Sodium	**27**	0.5	mg/L	1	BJS		1101316	7/5/11	21:34	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101316	7/5/11	21:34	SW3005A6010C

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21845

Sample#: 21845-017
Sample ID: SW-100
Matrix: Water
Sampled: 6/22/11 11:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Hardness (as CaCO3)	**99**	3	mg/L	1		6/29/11	4288			SM2340B

Sample#: 21845-018
Sample ID: SW-101
Matrix: Water
Sampled: 6/22/11 10:30

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Hardness (as CaCO3)	**30**	3	mg/L	1		6/29/11	4288			SM2340B

Sample#: 21845-019
Sample ID: SW-103
Matrix: Water
Sampled: 6/22/11 9:45

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Hardness (as CaCO3)	**30**	3	mg/L	1		6/29/11	4288			SM2340B

Sample#: 21845-020
Sample ID: SW-104
Matrix: Water
Sampled: 6/22/11 11:45

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Hardness (as CaCO3)	**32**	3	mg/L	1		6/29/11	4288			SM2340B

Sample#: 21845-021
Sample ID: SW-105
Matrix: Water
Sampled: 6/22/11 12:15

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Hardness (as CaCO3)	**53**	3	mg/L	1		6/29/11	4288			SM2340B

Sample#: 21845-022
Sample ID: SW-106
Matrix: Water
Sampled: 6/22/11 14:35

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Hardness (as CaCO3)	**49**	3	mg/L	1		6/29/11	4288			SM2340B

Project ID: Haverhill LF 0522-83058
Job ID: 21845

Sample#: 21845-023
Sample ID: SW-107
Matrix: Water
Sampled: 6/22/11 13:10

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Hardness (as CaCO3)	**49**	3	mg/L	1		6/29/11	4288			SM2340B

Sample#: 21845-024
Sample ID: SW-108
Matrix: Water
Sampled: 6/22/11 12:40

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Hardness (as CaCO3)	**52**	3	mg/L	1		6/29/11	4288			SM2340B

Sample#: 21845-025
Sample ID: SW-109
Matrix: Water
Sampled: 6/22/11 13:45

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Hardness (as CaCO3)	**80**	3	mg/L	1		6/29/11	4288			SM2340B

Sample#: 21845-026
Sample ID: SW-110
Matrix: Water
Sampled: 6/22/11 15:20

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Hardness (as CaCO3)	**30**	3	mg/L	1		6/29/11	4288			SM2340B

Sample#: 21845-027
Sample ID: SW-111
Matrix: Water
Sampled: 6/22/11 14:55

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Hardness (as CaCO3)	**31**	3	mg/L	1		6/29/11	4288			SM2340B

Sample#: 21845-028
Sample ID: SW-112
Matrix: Water
Sampled: 6/22/11 14:10

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Hardness (as CaCO3)	**47**	3	mg/L	1		6/29/11	4288			SM2340B

Project ID: Haverhill LF 0522-83058
Job ID: 21845

Sample#: 21845-001
Sample ID: SW-100
Matrix: Water
Sampled: 6/22/11 11:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Alkalinity, total (as CaCO3)	**62**	5	mg/L	1	APA		1101311	7/5/11		SM2320B
Chemical Oxygen Demand (COD)	< 25	25	mg/L	1	APA		1101342	7/7/11		E410.4
Chloride	**11**	0.5	mg/L	1	JLZ		1101256	6/23/11	21:12	E300.0A
Cyanide, total	< 0.02	0.02	mg/L	1	APA		1101292	6/29/11		SM4500CN-E
Nitrate-N	**0.9**	0.1	mg/L	1	JLZ		1101256	6/23/11	21:12	E300.0A
Sulfate	**24**	0.5	mg/L	1	JLZ		1101256	6/23/11	21:12	E300.0A
Total Dissolved Solids (TDS)	**170**	20	mg/L	1	APA		1101267	6/27/11		SM2540C

Sample#: 21845-002
Sample ID: SW-101
Matrix: Water
Sampled: 6/22/11 10:30

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Alkalinity, total (as CaCO3)	**14**	5	mg/L	1	APA		1101326	7/5/11		SM2320B
Chemical Oxygen Demand (COD)	< 25	25	mg/L	1	APA		1101342	7/7/11		E410.4
Chloride	**42**	0.5	mg/L	1	JLZ		1101256	6/23/11	21:24	E300.0A
Cyanide, total	< 0.02	0.02	mg/L	1	APA		1101292	6/29/11		SM4500CN-E
Nitrate-N	**0.4**	0.1	mg/L	1	JLZ		1101256	6/23/11	21:24	E300.0A
Sulfate	**6.4**	0.5	mg/L	1	JLZ		1101256	6/23/11	21:24	E300.0A
Total Dissolved Solids (TDS)	**130**	20	mg/L	1	APA		1101267	6/27/11		SM2540C

Sample#: 21845-003
Sample ID: SW-103
Matrix: Water
Sampled: 6/22/11 9:45

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Alkalinity, total (as CaCO3)	**15**	5	mg/L	1	APA		1101326	7/5/11		SM2320B
Chemical Oxygen Demand (COD)	< 25	25	mg/L	1	APA		1101342	7/7/11		E410.4
Chloride	**42**	0.5	mg/L	1	JLZ		1101256	6/23/11	21:35	E300.0A
Cyanide, total	< 0.02	0.02	mg/L	1	APA		1101292	6/29/11		SM4500CN-E
Nitrate-N	**0.4**	0.1	mg/L	1	JLZ		1101256	6/23/11	21:35	E300.0A
Sulfate	**6.4**	0.5	mg/L	1	JLZ		1101256	6/23/11	21:35	E300.0A
Total Dissolved Solids (TDS)	**130**	20	mg/L	1	APA		1101267	6/27/11		SM2540C

Project ID: Haverhill LF 0522-83058
Job ID: 21845

Sample#: 21845-004
Sample ID: SW-104
Matrix: Water
Sampled: 6/22/11 11:45

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Alkalinity, total (as CaCO3)	**15**	5	mg/L	1	APA		1101326	7/5/11		SM2320B
Chemical Oxygen Demand (COD)	< 25	25	mg/L	1	APA		1101342	7/7/11		E410.4
Chloride	**42**	0.5	mg/L	1	JLZ		1101256	6/23/11	21:47	E300.0A
Cyanide, total	< 0.02	0.02	mg/L	1	APA		1101292	6/29/11		SM4500CN-E
Nitrate-N	**0.4**	0.1	mg/L	1	JLZ		1101256	6/23/11	21:47	E300.0A
Sulfate	**6.4**	0.5	mg/L	1	JLZ		1101256	6/23/11	21:47	E300.0A
Total Dissolved Solids (TDS)	**130**	20	mg/L	1	APA		1101267	6/27/11		SM2540C

Sample#: 21845-005
Sample ID: SW-105
Matrix: Water
Sampled: 6/22/11 12:15

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Alkalinity, total (as CaCO3)	**33**	5	mg/L	1	APA		1101311	7/5/11		SM2320B
Chemical Oxygen Demand (COD)	< 25	25	mg/L	1	APA		1101342	7/7/11		E410.4
Chloride	**29**	0.5	mg/L	1	JLZ		1101258	6/23/11	22:46	E300.0A
Cyanide, total	< 0.02	0.02	mg/L	1	APA		1101292	6/29/11		SM4500CN-E
Nitrate-N	**0.1**	0.1	mg/L	1	JLZ		1101258	6/23/11	22:46	E300.0A
Sulfate	**7.9**	0.5	mg/L	1	JLZ		1101258	6/23/11	22:46	E300.0A
Total Dissolved Solids (TDS)	**120**	20	mg/L	1	APA		1101267	6/27/11		SM2540C

Sample#: 21845-006
Sample ID: SW-106
Matrix: Water
Sampled: 6/22/11 14:35

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Alkalinity, total (as CaCO3)	**31**	5	mg/L	1	APA		1101311	7/5/11		SM2320B
Chemical Oxygen Demand (COD)	< 25	25	mg/L	1	APA		1101342	7/7/11		E410.4
Chloride	**26**	0.5	mg/L	1	JLZ		1101258	6/23/11	22:58	E300.0A
Cyanide, total	< 0.02	0.02	mg/L	1	APA		1101292	6/29/11		SM4500CN-E
Nitrate-N	**0.1**	0.1	mg/L	1	JLZ		1101258	6/23/11	22:58	E300.0A
Sulfate	**7.5**	0.5	mg/L	1	JLZ		1101258	6/23/11	22:58	E300.0A
Total Dissolved Solids (TDS)	**130**	20	mg/L	1	APA		1101267	6/27/11		SM2540C

Project ID: Haverhill LF 0522-83058
Job ID: 21845

Sample#: 21845-007
Sample ID: SW-107
Matrix: Water
Sampled: 6/22/11 13:10

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Alkalinity, total (as CaCO3)	**31**	5	mg/L	1	APA		1101311	7/5/11		SM2320B
Chemical Oxygen Demand (COD)	< 25	25	mg/L	1	APA		1101342	7/7/11		E410.4
Chloride	**26**	0.5	mg/L	1	JLZ		1101258	6/23/11	23:10	E300.0A
Cyanide, total	< 0.02	0.02	mg/L	1	APA		1101292	6/29/11		SM4500CN-E
Nitrate-N	**0.1**	0.1	mg/L	1	JLZ		1101258	6/23/11	23:10	E300.0A
Sulfate	**7.6**	0.5	mg/L	1	JLZ		1101258	6/23/11	23:10	E300.0A
Total Dissolved Solids (TDS)	**130**	20	mg/L	1	APA		1101267	6/27/11		SM2540C

Sample#: 21845-008
Sample ID: SW-108
Matrix: Water
Sampled: 6/22/11 12:40

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Alkalinity, total (as CaCO3)	**33**	5	mg/L	1	APA		1101311	7/5/11		SM2320B
Chemical Oxygen Demand (COD)	< 25	25	mg/L	1	APA		1101342	7/7/11		E410.4
Chloride	**29**	0.5	mg/L	1	JLZ		1101258	6/23/11	23:22	E300.0A
Cyanide, total	< 0.02	0.02	mg/L	1	APA		1101292	6/29/11		SM4500CN-E
Nitrate-N	**0.1**	0.1	mg/L	1	JLZ		1101258	6/23/11	23:22	E300.0A
Sulfate	**7.8**	0.5	mg/L	1	JLZ		1101258	6/23/11	23:22	E300.0A
Total Dissolved Solids (TDS)	**130**	20	mg/L	1	APA		1101267	6/27/11		SM2540C

Sample#: 21845-009
Sample ID: SW-109
Matrix: Water
Sampled: 6/22/11 13:45

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Alkalinity, total (as CaCO3)	**45**	5	mg/L	1	APA		1101311	7/5/11		SM2320B
Chemical Oxygen Demand (COD)	< 25	25	mg/L	1	APA		1101342	7/7/11		E410.4
Chloride	**63** M	0.5	mg/L	1	JLZ		1101258	6/23/11	23:33	E300.0A
M = The percent recovery for the matrix spike was 39, outside the acceptance limits of 90% - 110%. All other batch QC was within acceptance. Matrix interference suspected.										
Cyanide, total	< 0.02	0.02	mg/L	1	APA		1101292	6/29/11		SM4500CN-E
Nitrate-N	**0.6**	0.1	mg/L	1	JLZ		1101258	6/23/11	23:33	E300.0A
Sulfate	**11**	0.5	mg/L	1	JLZ		1101258	6/23/11	23:33	E300.0A
Total Dissolved Solids (TDS)	**230**	20	mg/L	1	APA		1101267	6/27/11		SM2540C

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Project ID: Haverhill LF 0522-83058
Job ID: 21845

Sample#: 21845-010
Sample ID: SW-110
Matrix: Water
Sampled: 6/22/11 15:20

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Alkalinity, total (as CaCO3)	**20**	5	mg/L	1	APA		1101311	7/5/11		SM2320B
Chemical Oxygen Demand (COD)	< 25	25	mg/L	1	APA		1101343	7/7/11		E410.4
Chloride	**43**	0.5	mg/L	1	JLZ		1101258	6/23/11	23:57	E300.0A
Cyanide, total	< 0.02	0.02	mg/L	1	APA		1101293	6/30/11		SM4500CN-E
Nitrate-N	**0.4**	0.1	mg/L	1	JLZ		1101258	6/23/11	23:57	E300.0A
Sulfate	**6.3**	0.5	mg/L	1	JLZ		1101258	6/23/11	23:57	E300.0A
Total Dissolved Solids (TDS)	**130**	20	mg/L	1	APA		1101267	6/27/11		SM2540C

Sample#: 21845-011
Sample ID: SW-111
Matrix: Water
Sampled: 6/22/11 14:55

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Alkalinity, total (as CaCO3)	**34**	5	mg/L	1	APA		1101311	7/5/11		SM2320B
Chemical Oxygen Demand (COD)	< 25	25	mg/L	1	APA		1101342	7/7/11		E410.4
Chloride	**44**	0.5	mg/L	1	JLZ		1101258	6/24/02	0:09	E300.0A
Cyanide, total	< 0.02	0.02	mg/L	1	APA		1101292	6/29/11		SM4500CN-E
Nitrate-N	**0.4**	0.1	mg/L	1	JLZ		1101258	6/24/02	0:09	E300.0A
Sulfate	**6.3**	0.5	mg/L	1	JLZ		1101258	6/24/02	0:09	E300.0A
Total Dissolved Solids (TDS)	**140**	20	mg/L	1	APA		1101267	6/27/11		SM2540C

Sample#: 21845-012
Sample ID: SW-112
Matrix: Water
Sampled: 6/22/11 14:10

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Alkalinity, total (as CaCO3)	**28**	5	mg/L	1	APA		1101311	7/5/11		SM2320B
Chemical Oxygen Demand (COD)	< 25	25	mg/L	1	APA		1101342	7/7/11		E410.4
Chloride	**23**	0.5	mg/L	1	JLZ		1101258	6/24/02	0:20	E300.0A
Cyanide, total	< 0.02	0.02	mg/L	1	APA		1101292	6/29/11		SM4500CN-E
Nitrate-N	**0.1**	0.1	mg/L	1	JLZ		1101258	6/24/02	0:20	E300.0A
Sulfate	**7.2**	0.5	mg/L	1	JLZ		1101258	6/24/02	0:20	E300.0A
Total Dissolved Solids (TDS)	**110**	20	mg/L	1	APA		1101267	6/27/11		SM2540C

Sample#: 21845-013
Sample ID: DUP-1
Matrix: Water
Sampled: 6/22/11

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Cyanide, total	< 0.02	0.02	mg/L	1	APA		1101292	6/29/11		SM4500CN-E

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Project ID: Haverhill LF 0522-83058
Job ID: 21845
Sample#: 21845-016
Sample ID: DUP-2
Matrix: Water
Sampled: 6/22/11

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Cyanide, total	< 0.02	0.02	mg/L	1	APA		1101292	6/29/11		SM4500CN-E

Absolute Resource associates

Quality Control Report

124 Heritage Avenue Unit 10
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MassDEP Analytical Protocol Certification Form

Laboratory Name: **Absolute Resource Associates** Project #: 0522 83058

Project Location: Massachusetts RTN:

This Form provides certifications for the following data set: **21845**

Matrices: Groundwater/Surface Water ☑ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A ☐	7470/7471 Hg CAM III B ☑	MassDEP VPH CAM IV A ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☐	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☐	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9014 Total Cyanide/PAC CAM VIA ☑	6860 Perchlorate CAM VIII B ☐	

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	Yes☑ No☐
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	Yes☑ No☐
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	Yes☑ No☐
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	Yes☑ No☐
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modifications(s)? (Refer to the individual methods for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	Yes☐ No☐ Yes☐ No☐
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	Yes☑ No☐

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	Yes☑ No*☐

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	Yes☑ No*☐
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes☐ No*☑

* All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: (for) **Position: Lab Director**

Printed Name: Susan C. Sylvester **Date: 7/15/11**

Sample Integrity Table

Parameter	Method	Matrix	Minimum Volume	Recommended Container(s)	Required Preservation	Holding Time
Volatile Organics	EPA 8260	Aqueous	40mL	2 x 40mL VOA Vials with Teflon lined septa	Cool to ≤6°C 1:1 HCl to pH <2	14 Days
Volatile Organics	EPA 8260	Solid	40mL	1 x 40mL VOA Vial with 10mLs Methanol and 1 unpreserved container for percent moisture	Cool to ≤6°C Methanol	14 Days
Semivolatile Organics	EPA 8270	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	7 Days
Semivolatile Organics	EPA 8270	Solid	20g	4oz Amber Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
Organochlorine Pesticides	EPA 8081	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	7 Days
Organochlorine Pesticides	EPA 8081	Solid	20g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
PCBs	EPA 8082	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	365 Days
PCBs	EPA 8082	Solid	20g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	365 Days
Herbicides (subcontracted)	EPA 8151	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	7 Days
Herbicides (subcontracted)	EPA 8151	Solid	30g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
MA DEP VPH	MADEP VPH	Aqueous	40mL	2 x 40mL VOA Vials with Teflon lined septa	Cool to ≤6°C 1:1 HCl to pH <2	14 Days
MA DEP VPH	MADEP VPH	Solid	40mL	1 x 40mL VOA Vial with 10mLs Methanol and 1 unpreserved container for percent moisture	Cool to ≤6°C Methanol	28 Days
MA DEP EPH	MADEP EPH	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C 1:1 H_2SO_4 to pH <2	14 Days
MA DEP EPH	MADEP EPH	Solid	30g	4oz Amber Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
Total Metals	EPA 6010	Aqueous	100mL	250mL Polyethylene Bottle	1:1 HNO_3 to pH <2	180 Days
Dissolved Metals	EPA 6010	Aqueous	100mL	250mL Polyethylene Bottle	Filter First 1:1 HNO_3 to pH <2	180 Days
Total Metals	EPA 6010	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	180 Days
Total Mercury (may be combined with Total Metals)	EPA 7470	Aqueous	100mL	125mL Polyethylene Bottle	1:1 HNO_3 to pH <2	28 Days
Total Mercury (may be combined with Total Metals)	EPA 7471	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	28 Days
Chromium, Hexavalent	EPA 7196	Aqueous	100mL	125mL Polyethylene Bottle	Cool to ≤6°C (NH4)2SO4 buffer	28 Days
Chromium, Hexavalent (subcontract)	EPA 7196	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	30 Days
Cyanide, Total	EPA 9014	Aqueous	125mL	125mL Polyethylene Bottle	Cool to ≤6°C 1:1 NaOH to pH >8	14 Days
Cyanide, Total	EPA 9014	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days

Absolute Resource Associates
124 Heritage Avenue Unit 10
Portsmouth, NH 03801
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Case Narrative
Lab # 21845

Sample Receiving and Chain of Custody Discrepancies

Samples were received in acceptable condition, at 5 degrees C, on ice, and in accordance with sample handling, preservation and integrity guidelines.
The complete quality control package containing raw data, instrument calibration information, response summaries, etc. has been submitted under separate cover.

Calibration

No exceptions noted.

Method Blank

No exceptions noted.

Surrogate Recoveries

Not applicable.

Laboratory Control Sample Results

No exceptions noted.

Matrix Spike/Matrix Spike Duplicate/Duplicate Results

Metals: The native concentrations of calcium and sodium in the sample 21845-010MS/D was greater than four times the spiking concentration. Due to this relatively high native concentration, percent recovery evaluation is not practical.
Anions: The percent recovery for chloride in the matrix spike (21845-009) was 39%, outside the acceptance criteria of 90-110%. All other batch QC was within acceptance. Matrix interference is suspected.

Other

No other exceptions noted.

MassDEP Analytical Protocol Certification Form Questions A through I

No explanation is needed for Questions A through I answered in the affirmative.
Question I: Metals: The MCP required metals were not requested by the customer. Box I is "No."

- QC Report -

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
E200.7	BLK4288	Calcium		<	0.5	mg/L						
		Magnesium		<	0.3	mg/L						
E200.7	DUP4288	Calcium	21829-011		17	mg/L					1	20
		Magnesium	21829-011		2.9	mg/L					0	20
E200.7	LCS4288	Calcium			0.5	mg/L	0.5	104	80	120		
		Magnesium			0.5	mg/L	0.5	109	80	120		
E200.7	LCSD4288	Calcium			0.5	mg/L	0.5	100	80	120	3	20
		Magnesium			0.5	mg/L	0.5	109	80	120	1	20
E200.7	MS4288	Calcium	21829-011		18	mg/L	0.5	162	75	125		
		Magnesium	21829-011		3.4	mg/L	0.5	112	75	125		
E200.7	MS4288	Calcium	21845-019		10	mg/L	0.5	123	75	125		
		Magnesium	21845-019		2.1	mg/L	0.5	112	75	125		
E200.7	MSD4288	Calcium	21845-019		10	mg/L	0.5	117	75	125	0	20
		Magnesium	21845-019		2.1	mg/L	0.5	110	75	125	0	20

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW3005A6010C	BLK1101316	Silver		<	0.005	mg/L						
		Aluminum		<	0.05	mg/L						
		Arsenic		<	0.008	mg/L						
		Barium		<	0.05	mg/L						
		Calcium		<	0.5	mg/L						
		Cadmium		<	0.004	mg/L						
		Chromium		<	0.05	mg/L						
		Copper		<	0.05	mg/L						
		Iron		<	0.05	mg/L						
		Manganese		<	0.03	mg/L						
		Sodium		<	0.5	mg/L						
		Lead		<	0.01	mg/L						
		Selenium		<	0.05	mg/L						
		Zinc		<	0.05	mg/L						
SW3005A6010C	LCS1101316	Silver			0.26	mg/L	0.25	104	80	120		
		Arsenic			0.50	mg/L	0.5	100	80	120		
		Barium			0.50	mg/L	0.5	101	80	120		
		Calcium		<	0.5	mg/L	0.5	97	80	120		
		Cadmium			0.49	mg/L	0.5	99	80	120		
		Chromium			0.50	mg/L	0.5	100	80	120		
		Copper			0.51	mg/L	0.5	102	80	120		
		Iron			0.50	mg/L	0.5	101	80	120		
		Manganese			0.51	mg/L	0.5	103	80	120		
		Sodium			4.8	mg/L	5	95	80	120		
		Lead			0.50	mg/L	0.5	99	80	120		
		Selenium			0.50	mg/L	0.5	100	80	120		
		Zinc			0.50	mg/L	0.5	99	80	120		

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW3005A6010C	MS1101316	Iron	21832-001	45	mg/L	0.5	-392	*	75	125		
		Manganese	21832-001	1.2	mg/L	0.5	75		75	125		
SW3005A6010C	MS1101316	Silver	21842-003	0.44	mg/L	0.5	89		75	125		
		Arsenic	21842-003	1.3	mg/L	1	111		75	125		
		Barium	21842-003	1.2	mg/L	1	103		75	125		
		Calcium	21842-003	110	mg/L	1	-1024	*	75	125		
		Cadmium	21842-003	1.0	mg/L	1	104		75	125		
		Chromium	21842-003	1.1	mg/L	1	107		75	125		
		Copper	21842-003	1.1	mg/L	1	112		75	125		
		Iron	21842-003	9.2	mg/L	1	117		75	125		
		Manganese	21842-003	3.9	mg/L	1	115		75	125		
		Sodium	21842-003	130	mg/L	10	127	*	75	125		
		Lead	21842-003	1.00	mg/L	1	100		75	125		
		Selenium	21842-003	1.1	mg/L	1	115		75	125		
		Zinc	21842-003	1.1	mg/L	1	105		75	125		
SW3005A6010C	MS1101316	Silver	21845-010	0.27	mg/L	0.25	107		75	125		
		Aluminum	21845-010	0.55	mg/L	0.5	103		75	125		
		Arsenic	21845-010	0.54	mg/L	0.5	109		75	125		
		Barium	21845-010	0.54	mg/L	0.5	105		75	125		
		Calcium	21845-010	8.3	mg/L	0.5	64	*	75	125		
		Cadmium	21845-010	0.53	mg/L	0.5	106		75	125		
		Chromium	21845-010	0.54	mg/L	0.5	108		75	125		
		Copper	21845-010	0.56	mg/L	0.5	112		75	125		
		Iron	21845-010	0.74	mg/L	0.5	105		75	125		
		Manganese	21845-010	0.57	mg/L	0.5	111		75	125		
		Sodium	21845-010	31	mg/L	5	157	*	75	125		
		Nickel	21845-010	0.54	mg/L	0.5	108		75	125		
		Lead	21845-010	0.52	mg/L	0.5	104		75	125		
		Selenium	21845-010	0.55	mg/L	0.5	111		75	125		
		Zinc	21845-010	0.55	mg/L	0.5	109		75	125		
SW3005A6010C	MS1101316	Silver	21858-003	0.26	mg/L	0.25	106		75	125		
		Arsenic	21858-003	0.54	mg/L	0.5	106		75	125		
		Barium	21858-003	0.53	mg/L	0.5	104		75	125		
		Calcium	21858-003	19	mg/L	0.5	280	*	75	125		
		Cadmium	21858-003	0.53	mg/L	0.5	105		75	125		
		Chromium	21858-003	0.54	mg/L	0.5	108		75	125		
		Copper	21858-003	0.56	mg/L	0.5	111		75	125		
		Iron	21858-003	0.75	mg/L	0.5	97		75	125		
		Manganese	21858-003	0.77	mg/L	0.5	109		75	125		
		Sodium	21858-003	52	mg/L	5	110		75	125		
		Lead	21858-003	0.52	mg/L	0.5	104		75	125		
		Selenium	21858-003	0.55	mg/L	0.5	112		75	125		
		Zinc	21858-003	0.54	mg/L	0.5	108		75	125		

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW3005A6010C	MSD1101316	Iron	21832-001	48	mg/L	0.5	104		75	125	5	20
		Manganese	21832-001	1.3	mg/L	0.5	81		75	125	2	20
SW3005A6010C	MSD1101316	Silver	21842-003	0.47	mg/L	0.5	95		75	125	6	20
		Arsenic	21842-003	1.3	mg/L	1	112		75	125	1	20
		Barium	21842-003	1.2	mg/L	1	103		75	125	0	20
		Calcium	21842-003	110	mg/L	1	-914	*	75	125	1	20
		Cadmium	21842-003	1.0	mg/L	1	105		75	125	1	20
		Chromium	21842-003	1.1	mg/L	1	108		75	125	1	20
		Copper	21842-003	1.1	mg/L	1	114		75	125	2	20
		Iron	21842-003	9.2	mg/L	1	117		75	125	0	20
		Manganese	21842-003	3.9	mg/L	1	114		75	125	0	20
		Sodium	21842-003	130	mg/L	10	124		75	125	0	20
		Lead	21842-003	1.0	mg/L	1	101		75	125	1	20
		Selenium	21842-003	1.2	mg/L	1	116		75	125	1	20
		Zinc	21842-003	1.1	mg/L	1	105		75	125	1	20
SW3005A6010C	MSD1101316	Silver	21845-010	0.27	mg/L	0.25	107		75	125	0	20
		Aluminum	21845-010	0.56	mg/L	0.5	106		75	125	2	20
		Arsenic	21845-010	0.54	mg/L	0.5	108		75	125	0	20
		Barium	21845-010	0.54	mg/L	0.5	105		75	125	0	20
		Calcium	21845-010	8.3	mg/L	0.5	71	*	75	125	0	20
		Cadmium	21845-010	0.53	mg/L	0.5	106		75	125	0	20
		Chromium	21845-010	0.54	mg/L	0.5	109		75	125	0	20
		Copper	21845-010	0.56	mg/L	0.5	111		75	125	0	20
		Iron	21845-010	0.74	mg/L	0.5	105		75	125	0	20
		Manganese	21845-010	0.57	mg/L	0.5	111		75	125	0	20
		Sodium	21845-010	31	mg/L	5	161	*	75	125	1	20
		Nickel	21845-010	0.54	mg/L	0.5	108		75	125	0	20
		Lead	21845-010	0.53	mg/L	0.5	105		75	125	1	20
		Selenium	21845-010	0.55	mg/L	0.5	110		75	125	1	20
		Zinc	21845-010	0.55	mg/L	0.5	109		75	125	0	20
SW3005A6010C	MSD1101316	Silver	21858-003	0.25	mg/L	0.25	101		75	125	5	20
		Arsenic	21858-003	0.54	mg/L	0.5	107		75	125	1	20
		Barium	21858-003	0.54	mg/L	0.5	104		75	125	0	20
		Calcium	21858-003	18	mg/L	0.5	188	*	75	125	3	20
		Cadmium	21858-003	0.52	mg/L	0.5	105		75	125	1	20
		Chromium	21858-003	0.54	mg/L	0.5	108		75	125	0	20
		Copper	21858-003	0.56	mg/L	0.5	112		75	125	0	20
		Iron	21858-003	0.74	mg/L	0.5	97		75	125	0	20
		Manganese	21858-003	0.77	mg/L	0.5	110		75	125	1	20
		Sodium	21858-003	52	mg/L	5	110		75	125	0	20
		Lead	21858-003	0.52	mg/L	0.5	103		75	125	1	20
		Selenium	21858-003	0.55	mg/L	0.5	112		75	125	0	20
		Zinc	21858-003	0.54	mg/L	0.5	108		75	125	0	20

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW7470A	BLK4285	Mercury		<	0.0002	mg/L						
SW7470A	LCS4285	Mercury			0.0020	mg/L	0.002	101	80	120		
SW7470A	LCSD4285	Mercury			0.0020	mg/L	0.002	100	80	120	0	20
SW7470A	MS4285	Mercury	21842-003		0.0016	mg/L	0.002	78	75	125		
SW7470A	MS4285	Mercury	21845-010		0.0021	mg/L	0.002	103	75	125		
SW7470A	MSD4285	Mercury	21842-003		0.0016	mg/L	0.002	78	75	125	1	20
SW7470A	MSD4285	Mercury	21845-010		0.0021	mg/L	0.002	103	75	125	0	20
SW7470A	BLK4286	Mercury		<	0.0002	mg/L						
SW7470A	LCS4286	Mercury			0.0022	mg/L	0.002	108	80	120		
SW7470A	LCSD4286	Mercury			0.0021	mg/L	0.002	105	80	120	3	20
SW7470A	MS4286	Mercury	21858-003		0.0021	mg/L	0.002	103	75	125		
SW7470A	MSD4286	Mercury	21858-003		0.0020	mg/L	0.002	101	75	125	2	20

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
E300.0A	BLK1101256	Chloride		<	0.5	mg/L							
		Nitrate-N		<	0.1	mg/L							
		Sulfate		<	0.5	mg/L							
E300.0A	DUP1101256	Chloride	21842-005		4.6	mg/L						0	10
		Nitrate-N	21842-005	<	0.1	mg/L							10
		Sulfate	21842-005		14	mg/L						0	10
E300.0A	LCS1101256	Chloride			97	mg/L	100	97		90	110		
		Nitrate-N			9.4	mg/L	10	94		90	110		
		Sulfate			96	mg/L	100	96		90	110		
E300.0A	MS1101256	Chloride	21837-005		29	mg/L	16	75	*	90	110		
		Nitrate-N	21837-005		1.5	mg/L	1.66	87	*	90	110		
		Sulfate	21837-005		24	mg/L	16	90		90	110		
E300.0A	MS1101256	Chloride	21842-005		20	mg/L	16	94		90	110		
		Nitrate-N	21842-005		1.7	mg/L	1.66	95		90	110		
		Sulfate	21842-005		29	mg/L	16	90		90	110		
E300.0A	BLK1101258	Chloride		<	0.5	mg/L							
		Nitrate-N		<	0.1	mg/L							
		Sulfate		<	0.5	mg/L							
E300.0A	LCS1101258	Chloride			96	mg/L	100	96		90	110		
		Nitrate-N			9.1	mg/L	10	91		90	110		
		Sulfate			94	mg/L	100	94		90	110		
E300.0A	MS1101258	Chloride	21845-009		70	mg/L	16	39	*	90	110		
		Nitrate-N	21845-009		2.2	mg/L	1.66	95		90	110		
		Sulfate	21845-009		27	mg/L	16	95		90	110		
E410.4	DUP1101342	Chemical Oxygen Demand	21842-003		60	mg/L						4	25
E410.4	LCS1101342	Chemical Oxygen Demand			510	mg/L	500	103		75	125		
E410.4	MS1101342	Chemical Oxygen Demand	21842-003		560	mg/L	500	100		75	125		
E410.4	MSD1101342	Chemical Oxygen Demand	21842-003		560	mg/L	500	99		75	125	1	20
E410.4	PB1101342	Chemical Oxygen Demand		<	5	mg/L					5		
E410.4	DUP1101343	Chemical Oxygen Demand	21845-010	<	5	mg/L							25
E410.4	LCS1101343	Chemical Oxygen Demand			500	mg/L	500	101		75	125		
E410.4	MS1101343	Chemical Oxygen Demand	21845-010		520	mg/L	500	104		75	125		
E410.4	MSD1101343	Chemical Oxygen Demand	21845-010		520	mg/L	500	103		75	125	1	20
E410.4	PB1101343	Chemical Oxygen Demand		<	5	mg/L					5		

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SM2320B	DUP1101311	Alkalinity, total (as CaCO3)	21845-009		45	mg/L					0	25
SM2320B	LCS1101311	Alkalinity, total (as CaCO3)			25	mg/L	25	100	80	120		
SM2320B	PB1101311	Alkalinity, total (as CaCO3)		<	5	mg/L				5		
SM2320B	LCS1101326	Alkalinity, total (as CaCO3)			25	mg/L	25	100	80	120		
SM2320B	PB1101326	Alkalinity, total (as CaCO3)		<	5	mg/L				5		
SM2540C	DUP1101267	Total Dissolved Solids (TDS)	21845-001		170	mg/L					1	20
SM2540C	DUP1101267	Total Dissolved Solids (TDS)	21845-011		140	mg/L					1	20
SM2540C	LCS1101267	Total Dissolved Solids (TDS)			11.0	mg/L	10.6	104	75	125		
SM2540C	PB1101267	Total Dissolved Solids (TDS)		<	10	mg/L				10		
SM4500CN-E	DUP1101292	Cyanide, total	21842-003	<	0.01	mg/L						20
SM4500CN-E	LCS1101292	Cyanide, total			0.10	mg/L	0.1	102	75	125		
SM4500CN-E	LCSD1101292	Cyanide, total			0.53	mg/L	0.5	106	75	125		20
SM4500CN-E	MS1101292	Cyanide, total	21842-003		0.49	mg/L	0.5	99	75	125		
SM4500CN-E	MSD1101292	Cyanide, total	21842-003		0.50	mg/L	0.5	100	75	125	2	20
SM4500CN-E	PB1101292	Cyanide, total		<	0.01	mg/L						
SM4500CN-E	DUP1101293	Cyanide, total	21858-003	<	0.01	mg/L						20
SM4500CN-E	LCS1101293	Cyanide, total			0.10	mg/L	0.1	100	75	125		
SM4500CN-E	LCSD1101293	Cyanide, total			0.52	mg/L	0.5	104	75	125		20
SM4500CN-E	MS1101293	Cyanide, total	21845-010		0.48	mg/L	0.5	96	75	125		
SM4500CN-E	MS1101293	Cyanide, total	21858-003		0.52	mg/L	0.5	105	75	125		
SM4500CN-E	MSD1101293	Cyanide, total	21845-010		0.47	mg/L	0.5	95	75	125	2	20
SM4500CN-E	MSD1101293	Cyanide, total	21858-003		0.52	mg/L	0.5	105	75	125	0	20
SM4500CN-E	PB1101293	Cyanide, total		<	0.01	mg/L						

Absolute Resource associates

Absolute Resource associates
124 Heritage Avenue #10
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

21845

Company Name: CDM
Company Address: 50 HAMPSHIRE ST CAMBRIDGE MA
Report To: NATHAN JONES
Phone #: 617-452-6583
Invoice To: NATHAN JONES

Project Name: Haverhill LF
Project #: 0522-83058
Project Location: NH (MA) ME VT ___ Other
Protocol: (RCRA) SDWA NPDES (MCP) NHDES OTHER
Reporting Limits: QAPP (GW-1) S-1 EPA DW Other GW-3
Quote #_____ ☐ NH GREE/ODD Fund Pricing
PO #_____

ANALYSIS REQUEST

☐ VOC 8260 ☐ VOC 8260 NHDES ☐ VOC 8260 MADEP
☐ VOC 624 ☐ VOC BTEX ☐ MBE, only ☐ VOC 8021VT
☐ VPH MADEP ☐ MEGRO ☐ GRO 8015
☐ VOC 524.2 ☐ VOC 524.2 NH List ☐ Gases-List:
☐ TPH ☐ DRO 8015 ☐ MEDRO ☐ EPH MADEP ☐ TPH Fingerprint
☐ 8270PAH ☐ 8270ABN ☐ 625 ☐ EDB 504.1
☐ 8082 PCB ☐ 8081 Pesticides ☐ 608 Pest/PCB
☐ O&G 1664 ☐ Mineral O&G SM5520F
☐ pH ☐ BOD ☐ Conductivity ☐ Turbidity
☐ TSS ☐ TDS ☐ TS ☐ TVS ☐ Alkalinity
☑ RCRA Metals ☐ Priority Pollutant Metals ☐ TAL Metals
☐ Total Metals-list: 10155 per Fred 7/8/11
☑ Dissolved Metals-list: RCRA+Cu, Zn, Cr, Ni, Fe, Mn, Al, Ni
☐ Ammonia ☐ COD ☐ TKN ☐ TN ☐ TON
☐ T-Phosphorus ☐ Phenols ☐ Bacteria P/A ☐ Bacteria MPN
☑ Cyanide ☐ Sulfide ☐ Nitrate + Nitrite ☐ Ortho P
☑ Nitrate ☐ Nitrite ☑ Chloride ☑ Sulfate ☐ Bromide ☐ Fluoride
☐ Corrosivity ☐ Reactive CN ☐ Reactive S- ☐ Ignitibility/FP
☐ TCLP Metals ☐ TCLP VOC ☐ TCLP SVOC ☐ TCLP Pesticide
Subcontract: ☐ TOC ☐ Grain Size ☐ TCLP Herbicides

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	SOLID	OTHER	Preservation Method: HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER (Specify)	Sampling: DATE	TIME	SAMPLER	Total Hardness	Dissolved Metals-list: RCRA+Cu, Zn, Cr, Ni, Fe, Mn, Al, Ni	Cyanide	Nitrate	Chloride	Sulfate	TOTAL HARDNESS	Grab (G) or Composite (C)
-17 21845-01	SW-100	7	X				X	X	X			6-22-11	11:00	HY/BL		X	X	X	X	X	X	G
-18 -02	SW-101	7											10:30									
	SW-102	—																				
-19 -03	SW-103	7											9:45									
-20 -04	SW-104	7											11:45									
-21 -05	SW-105	7											12:15									
-22 -06	SW-106	7											14:35									
-23 -07	SW-107	7											13:10									
-24 -08	SW-108	7											12:40									
-25 -09	SW-109	7											13:45									
-26 -10	SW-110	9											15:20									

TAT REQUESTED
Priority (24 hr)* ☐
Expedited (48 hr)* ☐
Standard (10 Business Days) ☑
*Date Needed _____

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS MS/MSD-1 Collected AT SW-110

REPORTING INSTRUCTIONS ☑ PDF (e-mail address) JONESNE@CDM.COM
☐ HARD COPY REQUIRED ☑ FAX (FAX#) _____ ☑ OTHER (specify) E-Mail

RECEIVED ON ICE ☑ YES ☐ NO
TEMPERATURE 5.4 °C

CUSTODY RECORD
QSD-01 Revision 12/23/10

Relinquished by Sampler:	Date	Time	Received by:	Date	Time
[signature]	6-23-11	1530	—		
Relinquished by: —	Date	Time	Received by: —	Date	Time
Relinquished by: —	Date	Time	Received by Laboratory: [signature] Way Bill#:	6/23/11	15:30

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Absolute Resource associates
124 Heritage Avenue #10
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

21845

Company Name: CDM

Company Address: 50 HAMPSHIRE ST, CAMBRIDGE MA 02139

Report To: NATHAN JONES

Phone #: 617-452-6563

Invoice To: Nathan JONES

Project Name: Haverhill LF

Project #: 0522-83058

Project Location: NH (MA) ME VT Other

Protocol: (RCRA) SDWA NPDES (MCP) NHDES OTHER

Reporting Limits: QAPP (GW-1) S-1 EPA DW Other GW-3

Quote # ____ ☐ NH GREE/ODD Fund Pricing

PO # ____

ANALYSIS REQUEST

☐ VOC 8260 ☐ VOC 8260 NHDES ☐ VOC 8260 MADEP
☐ VOC 624 ☐ VOC BTEX ☐ MtBE, only ☐ VOC 8021VT
☐ VPH MADEP ☐ MEGRO ☐ GRO 8015
☐ VOC 524.2 ☐ VOC 524.2 NH List ☐ Gases-List:
☐ TPH ☐ DRO 8015 ☐ MEDRO ☐ EPH MADEP ☐ TPH Fingerprint
☐ 8270PAH ☐ 8270ABN ☐ 625 ☐ EDB 504.1
☐ 8082 PCB ☐ 8081 Pesticides ☐ 608 Pest/PCB
☐ O&G 1664 ☐ Mineral O&G SM5520F
☐ pH ☐ BOD ☐ Conductivity ☐ Turbidity
☐ TSS ☐ TS ☐ TVS ☐ Alkalinity
☑ RCRA Metals ☐ Priority Pollutant Metals ☐ TAL Metals
☐ Total Metals-list: ☑ Dissolved Metals-list: RCRA 8 + Cu, Zn, Ca, Na, Fe, Mn, Al, Ni, DISS per Grad test 123C
☐ Ammonia ☑ COD ☐ TKN ☐ TN ☐ TDN
☐ T-Phosphorus ☐ Phenols ☐ Bacteria P/A ☐ Bacteria MPN
☑ Cyanide ☐ Sulfide ☐ Nitrate + Nitrite ☐ Ortho P
☑ Nitrate ☐ Nitrite ☑ Chloride ☑ Sulfate ☐ Bromide ☐ Fluoride
☐ Corrosivity ☐ Reactive CN ☐ Reactive S- ☐ Ignitibility/FP
☐ TCLP Metals ☐ TCLP VOC ☐ TCLP SVOC ☐ TCLP Pesticide
Subcontract: ☐ TOC ☐ Grain Size ☐ TCLP Herbicides
Dissolved RCRA 8 + Cu, Zn, Ca, Na, Al, Ni,
Total Hardness
~~DISS RCRA 8 + Cu, Zn,~~
Grab (G) or Composite (C)

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	SOLID	OTHER	Preservation Method: HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER (Specify)	Sampling: DATE	TIME	SAMPLER	TSS	TS	TVS	RCRA Metals	Total Metals-list	Dissolved Metals-list	Ammonia	COD	Cyanide	Sulfide	Nitrate	Chloride	Sulfate	Dissolved RCRA 8 + Cu, Zn, Ca, Na, Al, Ni	Total Hardness	Grab (G) or Composite (C)
-27 (Total Hardness) 21845-11	SW-111	7	X				X	X	X			6-22-11	1455	MJ/BL		X		X		X	X		X		X				X	G
-28 -12	SW-112	7						X	X				1410			X		X		X	X		X		X				X	
-13	DUP-1	2							X				—					X					X					X		
-14	EB-1	1											11:10					X										X		
-15	EB-2	1					X						1545					X										X		
-16	DUP-2	2	X				X		X			6-22-11	—	MJ/BL				X					X					X		

TAT REQUESTED
Priority (24 hr)* ☐
Expedited (48 hr)* ☐
Standard (10 Business Days) ☑
*Date Needed ____

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS MS/MSD1 collected at SW-110

REPORTING INSTRUCTIONS ☑ PDF (e-mail address) JONESNE@CDM.COM
☐ HARD COPY REQUIRED ☐ FAX (FAX#) ____ ☐ OTHER (specify) ____

RECEIVED ON ICE ☑ YES ☐ NO
TEMPERATURE 5.4 °C

CUSTODY RECORD
QSD-01 Revision 12/23/10

Relinquished by Sampler:	Date	Time	Received by:	Date	Time
[signature]	6-23-11	1530	—		
Relinquished by: —	Date	Time	Received by: —	Date	Time
Relinquished by: —	Date	Time	Received by Laboratory: [signature]	6/23/11	15:30

Way Bill#:

Absolute Resource associates
124 Heritage Avenue #10 Portsmouth, NH 03801

Nathan Jones
Camp Dresser and McKee Inc.
50 Hampshire Street
Cambridge, MA 02139

PO Number: None
Job ID: 21858
Date Received: 6/24/11

Project: Haverhill LF 0522-83058

Attached please find results for the analysis of the samples received on the date referenced above.

Unless otherwise noted in the attached report, the analyses performed met the requirements of Absolute Resource Associates' Quality Assurance Plan. The Standard Operating Procedures are based upon USEPA SW-846, USEPA Methods for Chemical Analysis of Water and Wastewater, Standard Methods for the Examination of Water and Wastewater and other recognized methodologies. The results contained in this report pertain only to the samples as indicated on the chain of custody.

Absolute Resource Associates maintains certification with the agencies listed below.

We appreciate the opportunity to provide laboratory services. If you have any questions regarding the enclosed report, please contact the laboratory and we will be glad to assist you.

Sincerely,
Absolute Resource Associates

(for)

Sue Sylvester
Principal, General Manager

Date of Approval: 7/18/2011
Total number of pages: 76

Absolute Resource Associates Certifications

New Hampshire	1732	Massachusetts	M-NH902
Maine	NH903		

Project ID: Haverhill LF 0522-83058
Lab ID: 21858

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
MW-15SR	Water	6/23/2011 10:25	21858-001	
				Silver in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				VOCs in water by 8260
				Alkalinity in water by SM2320B
				Chloride in water by 300.0A
				Chemical Oxygen Demand by 410.4
				Total cyanide in waste water by SM4500CN-E
				Nitrate-N in water (NO3) by 300.0A
				Sulfate in water (SO4) by 300.0A
				Total Dissolved Solids by SM2540C
MW-15M	Water	6/23/2011 10:20	21858-002	
				Silver in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				VOCs in water by 8260
				Alkalinity in water by SM2320B
				Chloride in water by 300.0A
				Chemical Oxygen Demand by 410.4
				Total cyanide in waste water by SM4500CN-E
				Nitrate-N in water (NO3) by 300.0A
				Sulfate in water (SO4) by 300.0A
				Total Dissolved Solids by SM2540C
MW-15D	Water	6/23/2011 10:30	21858-003	
				Silver in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Lab ID: 21858

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
MW-15D	Water	6/23/2011 10:30	21858-003	
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				VOCs in water by 8260
				Alkalinity in water by SM2320B
				Chloride in water by 300.0A
				Chemical Oxygen Demand by 410.4
				Total cyanide in waste water by SM4500CN-E
				Nitrate-N in water (NO3) by 300.0A
				Sulfate in water (SO4) by 300.0A
				Total Dissolved Solids by SM2540C
MW-14S	Water	6/23/2011 11:50	21858-004	
				Silver in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				VOCs in water by 8260
				Alkalinity in water by SM2320B
				Chloride in water by 300.0A
				Chemical Oxygen Demand by 410.4
				Total cyanide in waste water by SM4500CN-E
				Nitrate-N in water (NO3) by 300.0A
				Sulfate in water (SO4) by 300.0A
				Total Dissolved Solids by SM2540C
MW-14D	Water	6/23/2011 12:03	21858-005	
				Silver in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Lab ID: 21858

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
MW-14D	Water	6/23/2011 12:03	21858-005	
				Sodium in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				VOCs in water by 8260
				Alkalinity in water by SM2320B
				Chloride in water by 300.0A
				Chemical Oxygen Demand by 410.4
				Total cyanide in waste water by SM4500CN-E
				Nitrate-N in water (NO3) by 300.0A
				Sulfate in water (SO4) by 300.0A
				Total Dissolved Solids by SM2540C
MW-18S	Water	6/23/2011 12:10	21858-006	
				Silver in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				VOCs in water by 8260
				Alkalinity in water by SM2320B
				Chloride in water by 300.0A
				Chemical Oxygen Demand by 410.4
				Total cyanide in waste water by SM4500CN-E
				Nitrate-N in water (NO3) by 300.0A
				Sulfate in water (SO4) by 300.0A
				Total Dissolved Solids by SM2540C
MW-18D	Water	6/23/2011 12:50	21858-007	
				Silver in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				VOCs in water by 8260

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Lab ID: 21858

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
MW-18D	Water	6/23/2011 12:50	21858-007	
				Alkalinity in water by SM2320B
				Chloride in water by 300.0A
				Chemical Oxygen Demand by 410.4
				Total cyanide in waste water by SM4500CN-E
				Nitrate-N in water (NO3) by 300.0A
				Sulfate in water (SO4) by 300.0A
				Total Dissolved Solids by SM2540C
ERT-4	Water	6/23/2011 13:11	21858-008	
				Silver in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				VOCs in water by 8260
				Alkalinity in water by SM2320B
				Chloride in water by 300.0A
				Chemical Oxygen Demand by 410.4
				Total cyanide in waste water by SM4500CN-E
				Nitrate-N in water (NO3) by 300.0A
				Sulfate in water (SO4) by 300.0A
				Total Dissolved Solids by SM2540C
MW-10S	Water	6/23/2011 15:20	21858-009	
				Silver in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				VOCs in water by 8260
				Alkalinity in water by SM2320B
				Chloride in water by 300.0A
				Chemical Oxygen Demand by 410.4
				Total cyanide in waste water by SM4500CN-E
				Nitrate-N in water (NO3) by 300.0A

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Lab ID: 21858

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
MW-10S	Water	6/23/2011 15:20	21858-009	
				Sulfate in water (SO4) by 300.0A
				Total Dissolved Solids by SM2540C
MW-10M	Water	6/23/2011 15:25	21858-010	
				Silver in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				VOCs in water by 8260
				Alkalinity in water by SM2320B
				Chloride in water by 300.0A
				Chemical Oxygen Demand by 410.4
				Total cyanide in waste water by SM4500CN-E
				Nitrate-N in water (NO3) by 300.0A
				Sulfate in water (SO4) by 300.0A
				Total Dissolved Solids by SM2540C
MW-10D	Water	6/23/2011 15:10	21858-011	
				Silver in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				VOCs in water by 8260
				Alkalinity in water by SM2320B
				Chloride in water by 300.0A
				Chemical Oxygen Demand by 410.4
				Total cyanide in waste water by SM4500CN-E
				Nitrate-N in water (NO3) by 300.0A
				Sulfate in water (SO4) by 300.0A
				Total Dissolved Solids by SM2540C
DUP-4	Water	6/23/2011	21858-012	
				Silver in water by 6010
				Arsenic in water by 6010

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Lab ID: 21858

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
DUP-4	Water	6/23/2011	21858-012	
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				VOCs in water by 8260
				Total cyanide in waste water by SM4500CN-E
EB-4	Water	6/23/2011 15:50	21858-013	
				Silver in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				VOCs in water by 8260
TB-2	Water	6/23/2011	21858-014	
				VOCs in water by 8260
MW-17S	Water	6/24/2011 9:55	21858-015	
				Silver in water by 6010
				Arsenic in water by 6010
				Barium in water by 6010
				Calcium in water by 6010
				Cadmium in water by 6010
				Chromium in water by 6010
				Copper in water by 6010
				Iron in water by 6010
				Mercury in water by 7470
				Manganese in water by 6010
				Sodium in water by 6010
				Lead in water by 6010
				Selenium in water by 6010
				Zinc in water by 6010
				VOCs in water by 8260
				Alkalinity in water by SM2320B
				Chloride in water by 300.0A
				Chemical Oxygen Demand by 410.4

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Lab ID: 21858

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
MW-17S	Water	6/24/2011 9:55	21858-015	
				Total cyanide in waste water by SM4500CN-E
				Nitrate-N in water (NO3) by 300.0A
				Sulfate in water (SO4) by 300.0A
				Total Dissolved Solids by SM2540C
MW-14S	Water	6/23/2011 11:50	21858-016	
				Total Hardness (includes Ca & Mg) by SM2340B
				Water Digestion for ICP Analysis
				Calcium in water by 200.7
				Magnesium in water by 200.7
MW-14D	Water	6/23/2011 12:03	21858-017	
				Total Hardness (includes Ca & Mg) by SM2340B
				Water Digestion for ICP Analysis
				Calcium in water by 200.7
				Magnesium in water by 200.7
MW-18S	Water	6/23/2011 12:10	21858-018	
				Total Hardness (includes Ca & Mg) by SM2340B
				Water Digestion for ICP Analysis
				Calcium in water by 200.7
				Magnesium in water by 200.7
MW-18D	Water	6/23/2011 12:50	21858-019	
				Total Hardness (includes Ca & Mg) by SM2340B
				Water Digestion for ICP Analysis
				Calcium in water by 200.7
				Magnesium in water by 200.7

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858
Sample#: 21858-001
Sample ID: MW-15SR
Matrix: Water
Received on ice at 4˚C, in satisfactory condition.
Sampled: 6/23/11 10:25

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
chloromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
vinyl chloride	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
bromomethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
chloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
diethyl ether	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
acetone	< 10	10	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
methylene chloride	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
carbon disulfide	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
isopropyl ether (DIPE)	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
ethyl t-butyl ether (ETBE)	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
t-butanol (TBA)	< 30	30	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
2-butanone (MEK)	< 10	10	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
2,2-dichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
chloroform	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
bromochloromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
tetrahydrofuran (THF)	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
1,1-dichloropropene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
t-amyl-methyl ether (TAME)	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
carbon tetrachloride	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
benzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
trichloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
bromodichloromethane	< 0.6	0.6	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
1,4-dioxane	< 50	50	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
dibromomethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
toluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
2-hexanone	< 10	10	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
1,3-dichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
tetrachloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858
Sample#: 21858-001
Sample ID: MW-15SR
Matrix: Water
Received on ice at 4˚C, in satisfactory condition.
Sampled: 6/23/11 10:25

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dibromochloromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
chlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
ethylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
m&p-xylenes	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
o-xylene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
styrene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
bromoform	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
isopropylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
1,2,3-trichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
n-propylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
bromobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
1,3,5-trimethylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
2-chlorotoluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
4-chlorotoluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
tert-butylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
1,2,4-trimethylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
sec-butylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
1,3-dichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
4-isopropyltoluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
1,4-dichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
1,2-dichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
n-butylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
1,2,4-trichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
hexachlorobutadiene	< 0.5	0.5	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
naphthalene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
1,2,3-trichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**98**	78-114	%	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
toluene-D8 SUR	**93**	88-110	%	1	LMM		1101265	6/28/11	4:12	SW5030B8260B
4-bromofluorobenzene SUR	**94**	86-115	%	1	LMM		1101265	6/28/11	4:12	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858
Sample#: 21858-002
Sample ID: MW-15M
Matrix: Water
Received on ice at 4˚C, in satisfactory condition.
Sampled: 6/23/11 10:20

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
chloromethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
vinyl chloride	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
bromomethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
chloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
diethyl ether	**8**	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
acetone	< 10	10	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
methylene chloride	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
carbon disulfide	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
isopropyl ether (DIPE)	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
ethyl t-butyl ether (ETBE)	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
t-butanol (TBA)	< 30	30	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
2-butanone (MEK)	< 10	10	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
2,2-dichloropropane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
chloroform	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
bromochloromethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
tetrahydrofuran (THF)	**11**	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
1,1-dichloropropene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
t-amyl-methyl ether (TAME)	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
carbon tetrachloride	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
benzene	**3**	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
trichloroethene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
bromodichloromethane	< 0.6	0.6	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
1,4-dioxane	< 50	50	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
dibromomethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
toluene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
2-hexanone	< 10	10	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
1,3-dichloropropane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
tetrachloroethene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858
Sample#: 21858-002
Sample ID: MW-15M
Matrix: Water
Received on ice at 4˚C, in satisfactory condition.
Sampled: 6/23/11 10:20

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dibromochloromethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
chlorobenzene	**4**	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
ethylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
m&p-xylenes	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
o-xylene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
styrene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
bromoform	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
isopropylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
1,2,3-trichloropropane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
n-propylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
bromobenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
1,3,5-trimethylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
2-chlorotoluene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
4-chlorotoluene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
tert-butylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
1,2,4-trimethylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
sec-butylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
1,3-dichlorobenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
4-isopropyltoluene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
1,4-dichlorobenzene	**2**	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
1,2-dichlorobenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
n-butylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
1,2,4-trichlorobenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
hexachlorobutadiene	< 0.5	0.5	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
naphthalene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
1,2,3-trichlorobenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**98**	78-114	%	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
toluene-D8 SUR	**96**	88-110	%	1	LMM		1101285	6/29/11	16:58	SW5030B8260B
4-bromofluorobenzene SUR	**95**	86-115	%	1	LMM		1101285	6/29/11	16:58	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858
Sample#: 21858-003
Sample ID: MW-15D
Matrix: Water
Received on ice at 4˚C, in satisfactory condition.
Sampled: 6/23/11 10:30

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
chloromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
vinyl chloride	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
bromomethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
chloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
diethyl ether	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
acetone	< 10	10	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
methylene chloride	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
carbon disulfide	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
isopropyl ether (DIPE)	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
ethyl t-butyl ether (ETBE)	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
t-butanol (TBA)	< 30	30	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
2-butanone (MEK)	< 10	10	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
2,2-dichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
chloroform	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
bromochloromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
tetrahydrofuran (THF)	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
1,1-dichloropropene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
t-amyl-methyl ether (TAME)	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
carbon tetrachloride	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
benzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
trichloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
bromodichloromethane	< 0.6	0.6	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
1,4-dioxane	< 50	50	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
dibromomethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
toluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
2-hexanone	< 10	10	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
1,3-dichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
tetrachloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858
Sample#: 21858-003
Sample ID: MW-15D
Matrix: Water
Received on ice at 4˚C, in satisfactory condition.
Sampled: 6/23/11 10:30

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dibromochloromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
chlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
ethylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
m&p-xylenes	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
o-xylene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
styrene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
bromoform	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
isopropylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
1,2,3-trichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
n-propylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
bromobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
1,3,5-trimethylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
2-chlorotoluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
4-chlorotoluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
tert-butylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
1,2,4-trimethylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
sec-butylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
1,3-dichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
4-isopropyltoluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
1,4-dichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
1,2-dichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
n-butylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
1,2,4-trichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
hexachlorobutadiene	< 0.5	0.5	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
naphthalene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
1,2,3-trichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**99**	78-114	%	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
toluene-D8 SUR	**95**	88-110	%	1	LMM		1101265	6/28/11	4:45	SW5030B8260B
4-bromofluorobenzene SUR	**94**	86-115	%	1	LMM		1101265	6/28/11	4:45	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858
Sample#: 21858-004
Sample ID: MW-14S
Matrix: Water
Received on ice at 4˚C, in satisfactory condition.
Sampled: 6/23/11 11:50

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
chloromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
vinyl chloride	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
bromomethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
chloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
diethyl ether	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
acetone	< 10	10	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
methylene chloride	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
carbon disulfide	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
isopropyl ether (DIPE)	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
ethyl t-butyl ether (ETBE)	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
t-butanol (TBA)	< 30	30	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
2-butanone (MEK)	< 10	10	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
2,2-dichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
chloroform	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
bromochloromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
tetrahydrofuran (THF)	**3**	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
1,1-dichloropropene	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
t-amyl-methyl ether (TAME)	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
carbon tetrachloride	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
benzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
trichloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
bromodichloromethane	< 0.6	0.6	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
1,4-dioxane	< 50	50	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
dibromomethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
toluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
2-hexanone	< 10	10	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
1,3-dichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
tetrachloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858
Sample#: 21858-004
Sample ID: MW-14S
Matrix: Water
Received on ice at 4˚C, in satisfactory condition.
Sampled: 6/23/11 11:50

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dibromochloromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
chlorobenzene	**3**	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
ethylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
m&p-xylenes	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
o-xylene	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
styrene	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
bromoform	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
isopropylbenzene	**7**	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
1,2,3-trichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
n-propylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
bromobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
1,3,5-trimethylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
2-chlorotoluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
4-chlorotoluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
tert-butylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
1,2,4-trimethylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
sec-butylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
1,3-dichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
4-isopropyltoluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
1,4-dichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
1,2-dichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
n-butylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
1,2,4-trichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
hexachlorobutadiene	< 0.5	0.5	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
naphthalene	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
1,2,3-trichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**108**	78-114	%	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
toluene-D8 SUR	**94**	88-110	%	1	LMM		1101265	6/28/11	10:17	SW5030B8260B
4-bromofluorobenzene SUR	**99**	86-115	%	1	LMM		1101265	6/28/11	10:17	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858
Sample#: 21858-005
Sample ID: MW-14D
Matrix: Water
Received on ice at 4˚C, in satisfactory condition.
Sampled: 6/23/11 12:03

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
chloromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
vinyl chloride	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
bromomethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
chloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
diethyl ether	**10**	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
acetone	< 10	10	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
methylene chloride	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
carbon disulfide	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
isopropyl ether (DIPE)	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
ethyl t-butyl ether (ETBE)	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
t-butanol (TBA)	< 30	30	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
2-butanone (MEK)	< 10	10	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
2,2-dichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
chloroform	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
bromochloromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
tetrahydrofuran (THF)	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
1,1-dichloropropene	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
t-amyl-methyl ether (TAME)	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
carbon tetrachloride	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
benzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
trichloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
bromodichloromethane	< 0.6	0.6	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
1,4-dioxane	< 50	50	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
dibromomethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
toluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
2-hexanone	< 10	10	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
1,3-dichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
tetrachloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858
Sample#: 21858-005
Sample ID: MW-14D
Matrix: Water
Received on ice at 4˚C, in satisfactory condition.
Sampled: 6/23/11 12:03

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dibromochloromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
chlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
ethylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
m&p-xylenes	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
o-xylene	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
styrene	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
bromoform	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
isopropylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
1,2,3-trichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
n-propylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
bromobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
1,3,5-trimethylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
2-chlorotoluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
4-chlorotoluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
tert-butylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
1,2,4-trimethylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
sec-butylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
1,3-dichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
4-isopropyltoluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
1,4-dichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
1,2-dichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
n-butylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
1,2,4-trichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
hexachlorobutadiene	< 0.5	0.5	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
naphthalene	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
1,2,3-trichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**99**	78-114	%	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
toluene-D8 SUR	**97**	88-110	%	1	LMM		1101265	6/28/11	9:44	SW5030B8260B
4-bromofluorobenzene SUR	**94**	86-115	%	1	LMM		1101265	6/28/11	9:44	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858
Sample#: 21858-006
Sample ID: MW-18S
Matrix: Water
Received on ice at 4˚C, in satisfactory condition.
Sampled: 6/23/11 12:10

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
chloromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
vinyl chloride	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
bromomethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
chloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
diethyl ether	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
acetone	< 10	10	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
methylene chloride	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
carbon disulfide	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
isopropyl ether (DIPE)	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
ethyl t-butyl ether (ETBE)	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
t-butanol (TBA)	< 30	30	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
2-butanone (MEK)	< 10	10	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
2,2-dichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
chloroform	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
bromochloromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
tetrahydrofuran (THF)	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
1,1-dichloropropene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
t-amyl-methyl ether (TAME)	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
carbon tetrachloride	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
benzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
trichloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
bromodichloromethane	< 0.6	0.6	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
1,4-dioxane	< 50	50	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
dibromomethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
toluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
2-hexanone	< 10	10	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
1,3-dichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
tetrachloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858
Sample#: 21858-006
Sample ID: MW-18S
Matrix: Water
Received on ice at 4˚C, in satisfactory condition.
Sampled: 6/23/11 12:10

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dibromochloromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
chlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
ethylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
m&p-xylenes	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
o-xylene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
styrene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
bromoform	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
isopropylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
1,2,3-trichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
n-propylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
bromobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
1,3,5-trimethylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
2-chlorotoluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
4-chlorotoluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
tert-butylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
1,2,4-trimethylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
sec-butylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
1,3-dichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
4-isopropyltoluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
1,4-dichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
1,2-dichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
n-butylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
1,2,4-trichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
hexachlorobutadiene	< 0.5	0.5	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
naphthalene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
1,2,3-trichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**97**	78-114	%	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
toluene-D8 SUR	**96**	88-110	%	1	LMM		1101265	6/28/11	5:18	SW5030B8260B
4-bromofluorobenzene SUR	**92**	86-115	%	1	LMM		1101265	6/28/11	5:18	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858
Sample#: 21858-007
Sample ID: MW-18D
Matrix: Water
Received on ice at 4˚C, in satisfactory condition.
Sampled: 6/23/11 12:50

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
chloromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
vinyl chloride	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
bromomethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
chloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
diethyl ether	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
acetone	< 10	10	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
methylene chloride	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
carbon disulfide	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
isopropyl ether (DIPE)	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
ethyl t-butyl ether (ETBE)	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
t-butanol (TBA)	< 30	30	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
2-butanone (MEK)	< 10	10	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
2,2-dichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
chloroform	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
bromochloromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
tetrahydrofuran (THF)	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
1,1-dichloropropene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
t-amyl-methyl ether (TAME)	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
carbon tetrachloride	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
benzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
trichloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
bromodichloromethane	< 0.6	0.6	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
1,4-dioxane	< 50	50	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
dibromomethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
toluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
2-hexanone	< 10	10	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
1,3-dichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
tetrachloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858
Sample#: 21858-007
Sample ID: MW-18D
Matrix: Water
Received on ice at 4˚C, in satisfactory condition.
Sampled: 6/23/11 12:50

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dibromochloromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
chlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
ethylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
m&p-xylenes	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
o-xylene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
styrene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
bromoform	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
isopropylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
1,2,3-trichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
n-propylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
bromobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
1,3,5-trimethylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
2-chlorotoluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
4-chlorotoluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
tert-butylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
1,2,4-trimethylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
sec-butylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
1,3-dichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
4-isopropyltoluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
1,4-dichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
1,2-dichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
n-butylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
1,2,4-trichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
hexachlorobutadiene	< 0.5	0.5	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
naphthalene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
1,2,3-trichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**97**	78-114	%	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
toluene-D8 SUR	**95**	88-110	%	1	LMM		1101265	6/28/11	5:51	SW5030B8260B
4-bromofluorobenzene SUR	**93**	86-115	%	1	LMM		1101265	6/28/11	5:51	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858
Sample#: 21858-008
Sample ID: ERT-4
Matrix: Water
Received on ice at 4˚C, in satisfactory condition.
Sampled: 6/23/11 13:11

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
chloromethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
vinyl chloride	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
bromomethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
chloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
diethyl ether	**6**	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
acetone	< 10	10	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
methylene chloride	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
carbon disulfide	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
isopropyl ether (DIPE)	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
ethyl t-butyl ether (ETBE)	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
t-butanol (TBA)	< 30	30	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
2-butanone (MEK)	< 10	10	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
2,2-dichloropropane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
chloroform	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
bromochloromethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
tetrahydrofuran (THF)	**10**	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
1,1-dichloropropene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
t-amyl-methyl ether (TAME)	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
carbon tetrachloride	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
benzene	**3**	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
trichloroethene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
bromodichloromethane	< 0.6	0.6	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
1,4-dioxane	< 50	50	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
dibromomethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
toluene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
2-hexanone	< 10	10	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
1,3-dichloropropane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
tetrachloroethene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858
Sample#: 21858-008
Sample ID: ERT-4
Matrix: Water
Received on ice at 4˚C, in satisfactory condition.
Sampled: 6/23/11 13:11

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dibromochloromethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
chlorobenzene	**4**	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
ethylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
m&p-xylenes	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
o-xylene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
styrene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
bromoform	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
isopropylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
1,2,3-trichloropropane	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
n-propylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
bromobenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
1,3,5-trimethylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
2-chlorotoluene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
4-chlorotoluene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
tert-butylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
1,2,4-trimethylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
sec-butylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
1,3-dichlorobenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
4-isopropyltoluene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
1,4-dichlorobenzene	**3**	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
1,2-dichlorobenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
n-butylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
1,2,4-trichlorobenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
hexachlorobutadiene	< 0.5	0.5	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
naphthalene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
1,2,3-trichlorobenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**96**	78-114	%	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
toluene-D8 SUR	**96**	88-110	%	1	LMM		1101285	6/29/11	16:27	SW5030B8260B
4-bromofluorobenzene SUR	**99**	86-115	%	1	LMM		1101285	6/29/11	16:27	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858
Sample#: 21858-009
Sample ID: MW-10S
Matrix: Water
Received on ice at 4˚C, in satisfactory condition.
Sampled: 6/23/11 15:20

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
chloromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
vinyl chloride	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
bromomethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
chloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
diethyl ether	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
acetone	< 10	10	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
methylene chloride	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
carbon disulfide	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
isopropyl ether (DIPE)	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
ethyl t-butyl ether (ETBE)	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
t-butanol (TBA)	< 30	30	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
2-butanone (MEK)	< 10	10	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
2,2-dichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
chloroform	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
bromochloromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
tetrahydrofuran (THF)	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
1,1-dichloropropene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
t-amyl-methyl ether (TAME)	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
carbon tetrachloride	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
benzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
trichloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
bromodichloromethane	< 0.6	0.6	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
1,4-dioxane	< 50	50	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
dibromomethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
toluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
2-hexanone	< 10	10	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
1,3-dichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
tetrachloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858
Sample#: 21858-009
Sample ID: MW-10S
Matrix: Water
Received on ice at 4˚C, in satisfactory condition.
Sampled: 6/23/11 15:20

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dibromochloromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
chlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
ethylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
m&p-xylenes	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
o-xylene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
styrene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
bromoform	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
isopropylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
1,2,3-trichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
n-propylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
bromobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
1,3,5-trimethylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
2-chlorotoluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
4-chlorotoluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
tert-butylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
1,2,4-trimethylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
sec-butylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
1,3-dichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
4-isopropyltoluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
1,4-dichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
1,2-dichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
n-butylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
1,2,4-trichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
hexachlorobutadiene	< 0.5	0.5	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
naphthalene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
1,2,3-trichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**97**	78-114	%	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
toluene-D8 SUR	**96**	88-110	%	1	LMM		1101265	6/28/11	6:24	SW5030B8260B
4-bromofluorobenzene SUR	**93**	86-115	%	1	LMM		1101265	6/28/11	6:24	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858
Sample#: 21858-010
Sample ID: MW-10M
Matrix: Water
Received on ice at 4˚C, in satisfactory condition.
Sampled: 6/23/11 15:25

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
chloromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
vinyl chloride	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
bromomethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
chloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
diethyl ether	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
acetone	< 10	10	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
methylene chloride	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
carbon disulfide	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
isopropyl ether (DIPE)	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
ethyl t-butyl ether (ETBE)	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
t-butanol (TBA)	< 30	30	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
2-butanone (MEK)	< 10	10	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
2,2-dichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
chloroform	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
bromochloromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
tetrahydrofuran (THF)	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
1,1-dichloropropene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
t-amyl-methyl ether (TAME)	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
carbon tetrachloride	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
benzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
trichloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
bromodichloromethane	< 0.6	0.6	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
1,4-dioxane	< 50	50	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
dibromomethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
toluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
2-hexanone	< 10	10	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
1,3-dichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
tetrachloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858
Sample#: 21858-010
Sample ID: MW-10M
Matrix: Water
Received on ice at 4˚C, in satisfactory condition.
Sampled: 6/23/11 15:25

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dibromochloromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
chlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
ethylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
m&p-xylenes	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
o-xylene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
styrene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
bromoform	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
isopropylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
1,2,3-trichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
n-propylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
bromobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
1,3,5-trimethylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
2-chlorotoluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
4-chlorotoluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
tert-butylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
1,2,4-trimethylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
sec-butylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
1,3-dichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
4-isopropyltoluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
1,4-dichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
1,2-dichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
n-butylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
1,2,4-trichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
hexachlorobutadiene	< 0.5	0.5	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
naphthalene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
1,2,3-trichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**99**	78-114	%	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
toluene-D8 SUR	**98**	88-110	%	1	LMM		1101265	6/28/11	6:57	SW5030B8260B
4-bromofluorobenzene SUR	**95**	86-115	%	1	LMM		1101265	6/28/11	6:57	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858
Sample#: 21858-011
Sample ID: MW-10D
Matrix: Water
Received on ice at 4˚C, in satisfactory condition.
Sampled: 6/23/11 15:10

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
chloromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
vinyl chloride	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
bromomethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
chloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
diethyl ether	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
acetone	< 10	10	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
methylene chloride	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
carbon disulfide	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
isopropyl ether (DIPE)	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
ethyl t-butyl ether (ETBE)	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
t-butanol (TBA)	< 30	30	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
2-butanone (MEK)	< 10	10	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
2,2-dichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
chloroform	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
bromochloromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
tetrahydrofuran (THF)	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
1,1-dichloropropene	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
t-amyl-methyl ether (TAME)	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
carbon tetrachloride	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
benzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
trichloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
bromodichloromethane	< 0.6	0.6	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
1,4-dioxane	< 50	50	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
dibromomethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
toluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
2-hexanone	< 10	10	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
1,3-dichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
tetrachloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858
Sample#: 21858-011
Sample ID: MW-10D
Matrix: Water
Received on ice at 4˚C, in satisfactory condition.
Sampled: 6/23/11 15:10

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dibromochloromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
chlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
ethylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
m&p-xylenes	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
o-xylene	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
styrene	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
bromoform	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
isopropylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
1,2,3-trichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
n-propylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
bromobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
1,3,5-trimethylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
2-chlorotoluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
4-chlorotoluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
tert-butylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
1,2,4-trimethylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
sec-butylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
1,3-dichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
4-isopropyltoluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
1,4-dichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
1,2-dichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
n-butylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
1,2,4-trichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
hexachlorobutadiene	< 0.5	0.5	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
naphthalene	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
1,2,3-trichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**99**	78-114	%	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
toluene-D8 SUR	**97**	88-110	%	1	LMM		1101265	6/28/11	7:30	SW5030B8260B
4-bromofluorobenzene SUR	**94**	86-115	%	1	LMM		1101265	6/28/11	7:30	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858
Sample#: 21858-012
Sample ID: DUP-4
Matrix: Water
Received on ice at 4˚C, in satisfactory condition.
Sampled: 6/23/11

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
chloromethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
vinyl chloride	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
bromomethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
chloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
diethyl ether	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
acetone	< 10	10	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
methylene chloride	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
carbon disulfide	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
isopropyl ether (DIPE)	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
ethyl t-butyl ether (ETBE)	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
t-butanol (TBA)	< 30	30	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
2-butanone (MEK)	< 10	10	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
2,2-dichloropropane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
chloroform	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
bromochloromethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
tetrahydrofuran (THF)	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
1,1-dichloropropene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
t-amyl-methyl ether (TAME)	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
carbon tetrachloride	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
benzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
trichloroethene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
bromodichloromethane	< 0.6	0.6	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
1,4-dioxane	< 50	50	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
dibromomethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
toluene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
2-hexanone	< 10	10	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
1,3-dichloropropane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
tetrachloroethene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858
Sample#: 21858-012
Sample ID: DUP-4
Matrix: Water
Received on ice at 4˚C, in satisfactory condition.
Sampled: 6/23/11

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dibromochloromethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
chlorobenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
ethylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
m&p-xylenes	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
o-xylene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
styrene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
bromoform	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
isopropylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
1,2,3-trichloropropane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
n-propylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
bromobenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
1,3,5-trimethylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
2-chlorotoluene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
4-chlorotoluene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
tert-butylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
1,2,4-trimethylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
sec-butylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
1,3-dichlorobenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
4-isopropyltoluene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
1,4-dichlorobenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
1,2-dichlorobenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
n-butylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
1,2,4-trichlorobenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
hexachlorobutadiene	< 0.5	0.5	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
naphthalene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
1,2,3-trichlorobenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**103**	78-114	%	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
toluene-D8 SUR	**98**	88-110	%	1	LMM		1101285	6/29/11	12:48	SW5030B8260B
4-bromofluorobenzene SUR	**94**	86-115	%	1	LMM		1101285	6/29/11	12:48	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858
Sample#: 21858-013
Sample ID: EB-4
Matrix: Water
Received on ice at 4˚C, in satisfactory condition.
Sampled: 6/23/11 15:50

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
chloromethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
vinyl chloride	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
bromomethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
chloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
diethyl ether	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
acetone	< 10	10	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
methylene chloride	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
carbon disulfide	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
isopropyl ether (DIPE)	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
ethyl t-butyl ether (ETBE)	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
t-butanol (TBA)	< 30	30	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
2-butanone (MEK)	< 10	10	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
2,2-dichloropropane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
chloroform	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
bromochloromethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
tetrahydrofuran (THF)	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
1,1-dichloropropene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
t-amyl-methyl ether (TAME)	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
carbon tetrachloride	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
benzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
trichloroethene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
bromodichloromethane	< 0.6	0.6	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
1,4-dioxane	< 50	50	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
dibromomethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
toluene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
2-hexanone	< 10	10	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
1,3-dichloropropane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
tetrachloroethene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858
Sample#: 21858-013
Sample ID: EB-4
Matrix: Water
Received on ice at 4˚C, in satisfactory condition.
Sampled: 6/23/11 15:50

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dibromochloromethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
chlorobenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
ethylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
m&p-xylenes	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
o-xylene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
styrene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
bromoform	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
isopropylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
1,2,3-trichloropropane	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
n-propylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
bromobenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
1,3,5-trimethylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
2-chlorotoluene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
4-chlorotoluene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
tert-butylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
1,2,4-trimethylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
sec-butylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
1,3-dichlorobenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
4-isopropyltoluene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
1,4-dichlorobenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
1,2-dichlorobenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
n-butylbenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
1,2,4-trichlorobenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
hexachlorobutadiene	< 0.5	0.5	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
naphthalene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
1,2,3-trichlorobenzene	< 2	2	ug/L	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**106**	78-114	%	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
toluene-D8 SUR	**99**	88-110	%	1	LMM		1101285	6/29/11	12:16	SW5030B8260B
4-bromofluorobenzene SUR	**91**	86-115	%	1	LMM		1101285	6/29/11	12:16	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858
Sample#: 21858-014
Sample ID: TB-2
Matrix: Water
Received on ice at 4˚C, in satisfactory condition.
Sampled: 6/23/11

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
chloromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
vinyl chloride	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
bromomethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
chloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
diethyl ether	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
acetone	< 10	10	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
methylene chloride	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
carbon disulfide	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
isopropyl ether (DIPE)	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
ethyl t-butyl ether (ETBE)	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
t-butanol (TBA)	< 30	30	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
2-butanone (MEK)	< 10	10	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
2,2-dichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
chloroform	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
bromochloromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
tetrahydrofuran (THF)	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
1,1-dichloropropene	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
t-amyl-methyl ether (TAME)	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
carbon tetrachloride	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
benzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
trichloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
bromodichloromethane	< 0.6	0.6	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
1,4-dioxane	< 50	50	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
dibromomethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
toluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
2-hexanone	< 10	10	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
1,3-dichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
tetrachloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858
Sample#: 21858-014
Sample ID: TB-2
Matrix: Water
Received on ice at 4˚C, in satisfactory condition.
Sampled: 6/23/11

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
dibromochloromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
chlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
ethylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
m&p-xylenes	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
o-xylene	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
styrene	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
bromoform	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
isopropylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
1,2,3-trichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
n-propylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
bromobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
1,3,5-trimethylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
2-chlorotoluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
4-chlorotoluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
tert-butylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
1,2,4-trimethylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
sec-butylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
1,3-dichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
4-isopropyltoluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
1,4-dichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
1,2-dichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
n-butylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
1,2,4-trichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
hexachlorobutadiene	< 0.5	0.5	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
naphthalene	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
1,2,3-trichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**97**	78-114	%	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
toluene-D8 SUR	**96**	88-110	%	1	LMM		1101265	6/28/11	2:33	SW5030B8260B
4-bromofluorobenzene SUR	**95**	86-115	%	1	LMM		1101265	6/28/11	2:33	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858
Sample#: 21858-015
Sample ID: MW-17S
Matrix: Water
Received on ice at 4˚C, in satisfactory condition.
Sampled: 6/24/11 9:55

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
chloromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
vinyl chloride	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
bromomethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
chloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
diethyl ether	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
acetone	< 10	10	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
methylene chloride	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
carbon disulfide	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
isopropyl ether (DIPE)	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
ethyl t-butyl ether (ETBE)	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
t-butanol (TBA)	< 30	30	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
2-butanone (MEK)	< 10	10	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
2,2-dichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
chloroform	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
bromochloromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
tetrahydrofuran (THF)	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
1,1-dichloropropene	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
t-amyl-methyl ether (TAME)	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
carbon tetrachloride	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
benzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
trichloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
bromodichloromethane	< 0.6	0.6	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
1,4-dioxane	< 50	50	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
dibromomethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
toluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
2-hexanone	< 10	10	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
1,3-dichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
tetrachloroethene	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858
Sample#: 21858-015
Sample ID: MW-17S
Matrix: Water
Received on ice at 4˚C, in satisfactory condition.
Sampled: 6/24/11 9:55

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
dibromochloromethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
chlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
ethylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
m&p-xylenes	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
o-xylene	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
styrene	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
bromoform	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
isopropylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
1,2,3-trichloropropane	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
n-propylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
bromobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
1,3,5-trimethylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
2-chlorotoluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
4-chlorotoluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
tert-butylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
1,2,4-trimethylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
sec-butylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
1,3-dichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
4-isopropyltoluene	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
1,4-dichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
1,2-dichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
n-butylbenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
1,2,4-trichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
hexachlorobutadiene	< 0.5	0.5	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
naphthalene	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
1,2,3-trichlorobenzene	< 2	2	ug/L	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**98**	78-114	%	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
toluene-D8 SUR	**95**	88-110	%	1	LMM		1101265	6/28/11	8:04	SW5030B8260B
4-bromofluorobenzene SUR	**96**	86-115	%	1	LMM		1101265	6/28/11	8:04	SW5030B8260B

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858

Sample#: 21858-001
Sample ID: MW-15SR
Matrix: Water
Sampled: 6/23/11 10:25

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
Arsenic	< 0.008	0.008	mg/L	1	BJS		1101333	7/6/11	17:31	SW3005A6010C
Barium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	17:31	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101333	7/6/11	17:31	SW3005A6010C
Calcium	**50**	0.5	mg/L	1	BJS		1101333	7/6/11	17:31	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	17:31	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	17:31	SW3005A6010C
Iron	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	17:31	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101333	7/6/11	17:31	SW3005A6010C
Manganese	**0.05**	0.03	mg/L	1	BJS		1101333	7/6/11	17:31	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4286	6/30/11	13:02	SW7470A
Selenium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	17:31	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101333	7/6/11	17:31	SW3005A6010C
Sodium	**22**	0.5	mg/L	1	BJS		1101333	7/6/11	17:31	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	17:31	SW3005A6010C

Sample#: 21858-002
Sample ID: MW-15M
Matrix: Water
Sampled: 6/23/11 10:20

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
Arsenic	**0.19**	0.008	mg/L	1	BJS		1101333	7/6/11	17:37	SW3005A6010C
Barium	**0.57**	0.05	mg/L	1	BJS		1101333	7/6/11	17:37	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101333	7/6/11	17:37	SW3005A6010C
Calcium	**82**	0.5	mg/L	1	BJS		1101333	7/6/11	17:37	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	17:37	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	17:37	SW3005A6010C
Iron	**43**	0.05	mg/L	1	BJS		1101333	7/6/11	17:37	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101333	7/6/11	17:37	SW3005A6010C
Manganese	**0.40**	0.03	mg/L	1	BJS		1101333	7/6/11	17:37	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4286	6/30/11	13:04	SW7470A
Selenium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	17:37	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101333	7/6/11	17:37	SW3005A6010C
Sodium	**69**	0.5	mg/L	1	BJS		1101333	7/6/11	17:37	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	17:37	SW3005A6010C

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858

Sample#: 21858-003
Sample ID: MW-15D
Matrix: Water
Sampled: 6/23/11 10:30

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
Arsenic	**0.008**	0.008	mg/L	1	BJS		1101333	7/6/11	17:43	SW3005A6010C
Barium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	17:43	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101333	7/6/11	17:43	SW3005A6010C
Calcium	**17**	0.5	mg/L	1	BJS		1101333	7/6/11	17:43	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	17:43	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	17:43	SW3005A6010C
Iron	**0.26**	0.05	mg/L	1	BJS		1101333	7/6/11	17:43	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101333	7/6/11	17:43	SW3005A6010C
Manganese	**0.22**	0.03	mg/L	1	BJS		1101333	7/6/11	17:43	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4286	6/30/11	13:06	SW7470A
Selenium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	17:43	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101333	7/6/11	17:43	SW3005A6010C
Sodium	**46**	0.5	mg/L	1	BJS		1101333	7/6/11	17:43	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	17:43	SW3005A6010C

Sample#: 21858-004
Sample ID: MW-14S
Matrix: Water
Sampled: 6/23/11 11:50

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
Arsenic	**0.009**	0.008	mg/L	1	BJS		1101333	7/6/11	17:51	SW3005A6010C
Barium	**0.14**	0.05	mg/L	1	BJS		1101333	7/6/11	17:51	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101333	7/6/11	17:51	SW3005A6010C
Calcium	**100**	10	mg/L	20	BJS		1101333	7/6/11	17:56	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	17:51	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	17:51	SW3005A6010C
Iron	**3.7**	1.0	mg/L	20	BJS		1101333	7/6/11	17:56	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101333	7/6/11	17:51	SW3005A6010C
Manganese	**0.43**	0.03	mg/L	1	BJS		1101333	7/6/11	17:51	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4286	6/30/11	13:11	SW7470A
Selenium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	17:51	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101333	7/6/11	17:51	SW3005A6010C
Sodium	**23**	10	mg/L	20	BJS		1101333	7/6/11	17:56	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	17:51	SW3005A6010C

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858

Sample#: 21858-005
Sample ID: MW-14D
Matrix: Water
Sampled: 6/23/11 12:03

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
Arsenic	**0.010**	0.008	mg/L	1	BJS		1101333	7/6/11	18:02	SW3005A6010C
Barium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	18:02	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101333	7/6/11	18:02	SW3005A6010C
Calcium	**33**	0.5	mg/L	1	BJS		1101333	7/6/11	18:02	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	18:02	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	18:02	SW3005A6010C
Iron	**0.76**	0.05	mg/L	1	BJS		1101333	7/6/11	18:02	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101333	7/6/11	18:02	SW3005A6010C
Manganese	**0.27**	0.03	mg/L	1	BJS		1101333	7/6/11	18:02	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4286	6/30/11	13:13	SW7470A
Selenium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	18:02	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101333	7/6/11	18:02	SW3005A6010C
Sodium	**52**	0.5	mg/L	1	BJS		1101333	7/6/11	18:02	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	18:02	SW3005A6010C

Sample#: 21858-006
Sample ID: MW-18S
Matrix: Water
Sampled: 6/23/11 12:10

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
Arsenic	< 0.008	0.008	mg/L	1	BJS		1101333	7/6/11	18:08	SW3005A6010C
Barium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	18:08	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101333	7/6/11	18:08	SW3005A6010C
Calcium	**25**	0.5	mg/L	1	BJS		1101333	7/6/11	18:08	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	18:08	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	18:08	SW3005A6010C
Iron	**2.9**	0.05	mg/L	1	BJS		1101333	7/6/11	18:08	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101333	7/6/11	18:08	SW3005A6010C
Manganese	**0.09**	0.03	mg/L	1	BJS		1101333	7/6/11	18:08	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4286	6/30/11	13:15	SW7470A
Selenium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	18:08	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101333	7/6/11	18:08	SW3005A6010C
Sodium	**22**	0.5	mg/L	1	BJS		1101333	7/6/11	18:08	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	18:08	SW3005A6010C

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858

Sample#: 21858-007
Sample ID: MW-18D
Matrix: Water
Sampled: 6/23/11 12:50

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
Arsenic	< 0.008	0.008	mg/L	1	BJS		1101333	7/6/11	18:13	SW3005A6010C
Barium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	18:13	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101333	7/6/11	18:13	SW3005A6010C
Calcium	**38**	0.5	mg/L	1	BJS		1101333	7/6/11	18:13	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	18:13	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	18:13	SW3005A6010C
Iron	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	18:13	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101333	7/6/11	18:13	SW3005A6010C
Manganese	**0.30**	0.03	mg/L	1	BJS		1101333	7/6/11	18:13	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4286	6/30/11	13:37	SW7470A
Selenium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	18:13	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101333	7/6/11	18:13	SW3005A6010C
Sodium	**12**	0.5	mg/L	1	BJS		1101333	7/6/11	18:13	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	18:13	SW3005A6010C

Sample#: 21858-008
Sample ID: ERT-4
Matrix: Water
Sampled: 6/23/11 13:11

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
Arsenic	**0.63**	0.008	mg/L	1	BJS		1101333	7/6/11	18:20	SW3005A6010C
Barium	**0.31**	0.05	mg/L	1	BJS		1101333	7/6/11	18:20	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101333	7/6/11	18:20	SW3005A6010C
Calcium	**76**	0.5	mg/L	1	BJS		1101333	7/6/11	18:20	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	18:20	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	18:20	SW3005A6010C
Iron	**53**	0.05	mg/L	1	BJS		1101333	7/6/11	18:20	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101333	7/6/11	18:20	SW3005A6010C
Manganese	**0.09**	0.03	mg/L	1	BJS		1101333	7/6/11	18:20	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4286	6/30/11	13:39	SW7470A
Selenium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	18:20	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101333	7/6/11	18:20	SW3005A6010C
Sodium	**53**	0.5	mg/L	1	BJS		1101333	7/6/11	18:20	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	18:20	SW3005A6010C

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858

Sample#: 21858-009
Sample ID: MW-10S
Matrix: Water
Sampled: 6/23/11 15:20

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
Arsenic	< 0.008	0.008	mg/L	1	BJS		1101333	7/6/11	18:59	SW3005A6010C
Barium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	18:59	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101333	7/6/11	18:59	SW3005A6010C
Calcium	**7.9**	0.5	mg/L	1	BJS		1101333	7/6/11	18:59	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	18:59	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	18:59	SW3005A6010C
Iron	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	18:59	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101333	7/6/11	18:59	SW3005A6010C
Manganese	< 0.03	0.03	mg/L	1	BJS		1101333	7/6/11	18:59	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4286	6/30/11	13:41	SW7470A
Selenium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	18:59	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101333	7/6/11	18:59	SW3005A6010C
Sodium	**2.5**	0.5	mg/L	1	BJS		1101333	7/6/11	18:59	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	18:59	SW3005A6010C

Sample#: 21858-010
Sample ID: MW-10M
Matrix: Water
Sampled: 6/23/11 15:25

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
Arsenic	**0.032**	0.008	mg/L	1	BJS		1101333	7/6/11	19:08	SW3005A6010C
Barium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	19:08	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101333	7/6/11	19:08	SW3005A6010C
Calcium	**30**	0.5	mg/L	1	BJS		1101333	7/6/11	19:08	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	19:08	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	19:08	SW3005A6010C
Iron	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	19:08	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101333	7/6/11	19:08	SW3005A6010C
Manganese	**0.09**	0.03	mg/L	1	BJS		1101333	7/6/11	19:08	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4286	6/30/11	13:42	SW7470A
Selenium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	19:08	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101333	7/6/11	19:08	SW3005A6010C
Sodium	**9.5**	0.5	mg/L	1	BJS		1101333	7/6/11	19:08	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	19:08	SW3005A6010C

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858

Sample#: 21858-011
Sample ID: MW-10D
Matrix: Water
Sampled: 6/23/11 15:10

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Arsenic	**0.018**	0.008	mg/L	1	BJS		1101333	7/6/11	19:14	SW3005A6010C
Barium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	19:14	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101333	7/6/11	19:14	SW3005A6010C
Calcium	**27**	0.5	mg/L	1	BJS		1101333	7/6/11	19:14	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	19:14	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	19:14	SW3005A6010C
Iron	**0.07**	0.05	mg/L	1	BJS		1101333	7/6/11	19:14	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101333	7/6/11	19:14	SW3005A6010C
Manganese	**0.07**	0.03	mg/L	1	BJS		1101333	7/6/11	19:14	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4286	6/30/11	13:44	SW7470A
Selenium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	19:14	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101333	7/6/11	19:14	SW3005A6010C
Sodium	**10**	0.5	mg/L	1	BJS		1101333	7/6/11	19:14	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	19:14	SW3005A6010C

Sample#: 21858-012
Sample ID: DUP-4
Matrix: Water
Sampled: 6/23/11

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Arsenic	< 0.008	0.008	mg/L	1	BJS		1101333	7/6/11	19:21	SW3005A6010C
Barium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	19:21	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101333	7/6/11	19:21	SW3005A6010C
Calcium	**17**	0.5	mg/L	1	BJS		1101333	7/6/11	19:21	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	19:21	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	19:21	SW3005A6010C
Iron	**0.21**	0.05	mg/L	1	BJS		1101333	7/6/11	19:21	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101333	7/6/11	19:21	SW3005A6010C
Manganese	**0.21**	0.03	mg/L	1	BJS		1101333	7/6/11	19:21	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4286	6/30/11	13:46	SW7470A
Selenium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	19:21	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101333	7/6/11	19:21	SW3005A6010C
Sodium	**45**	0.5	mg/L	1	BJS		1101333	7/6/11	19:21	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	19:21	SW3005A6010C

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858

Sample#: 21858-013
Sample ID: EB-4
Matrix: Water
Sampled: 6/23/11 15:50

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Arsenic	< 0.008	0.008	mg/L	1	BJS		1101333	7/6/11	19:27	SW3005A6010C
Barium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	19:27	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101333	7/6/11	19:27	SW3005A6010C
Calcium	< 0.5	0.5	mg/L	1	BJS		1101333	7/6/11	19:27	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	19:27	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	19:27	SW3005A6010C
Iron	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	19:27	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101333	7/6/11	19:27	SW3005A6010C
Manganese	< 0.03	0.03	mg/L	1	BJS		1101333	7/6/11	19:27	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4286	6/30/11	13:48	SW7470A
Selenium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	19:27	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101333	7/6/11	19:27	SW3005A6010C
Sodium	< 0.5	0.5	mg/L	1	BJS		1101333	7/6/11	19:27	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	19:27	SW3005A6010C

Sample#: 21858-015
Sample ID: MW-17S
Matrix: Water
Sampled: 6/24/11 9:55

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Arsenic	< 0.008	0.008	mg/L	1	BJS		1101333	7/6/11	19:34	SW3005A6010C
Barium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	19:34	SW3005A6010C
Cadmium	< 0.004	0.004	mg/L	1	BJS		1101333	7/6/11	19:34	SW3005A6010C
Calcium	**5.7**	0.5	mg/L	1	BJS		1101333	7/6/11	19:34	SW3005A6010C
Chromium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	19:34	SW3005A6010C
Copper	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	19:34	SW3005A6010C
Iron	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	19:34	SW3005A6010C
Lead	< 0.008	0.008	mg/L	1	BJS		1101333	7/6/11	19:34	SW3005A6010C
Manganese	< 0.03	0.03	mg/L	1	BJS		1101333	7/6/11	19:34	SW3005A6010C
Mercury	< 0.0002	0.0002	mg/L	1	AJD	6/30/11	4286	6/30/11	13:50	SW7470A
Selenium	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	19:34	SW3005A6010C
Silver	< 0.007	0.007	mg/L	1	BJS		1101333	7/6/11	19:34	SW3005A6010C
Sodium	**4.4**	0.5	mg/L	1	BJS		1101333	7/6/11	19:34	SW3005A6010C
Zinc	< 0.05	0.05	mg/L	1	BJS		1101333	7/6/11	19:34	SW3005A6010C

Sample#: 21858-016
Sample ID: MW-14S
Matrix: Water
Sampled: 6/23/11 11:50

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Hardness (as CaCO3)	**300**	3	mg/L	1		7/6/11	4300			SM2340B

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858

Sample#: 21858-017
Sample ID: MW-14D
Matrix: Water
Sampled: 6/23/11 12:03

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Hardness (as CaCO3)	**120**	3	mg/L	1		7/6/11	4300			SM2340B

Sample#: 21858-018
Sample ID: MW-18S
Matrix: Water
Sampled: 6/23/11 12:10

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Hardness (as CaCO3)	**76**	3	mg/L	1		7/6/11	4300			SM2340B

Sample#: 21858-019
Sample ID: MW-18D
Matrix: Water
Sampled: 6/23/11 12:50

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Hardness (as CaCO3)	**110**	3	mg/L	1		7/6/11	4300			SM2340B

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858

Sample#: 21858-001
Sample ID: MW-15SR
Matrix: Water
Sampled: 6/23/11 10:25

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Alkalinity, total (as CaCO3)	**150**	5	mg/L	1	APA		1101312	7/5/11		SM2320B
Chemical Oxygen Demand (COD)	< 25	25	mg/L	1	APA		1101343	7/7/11		E410.4
Chloride	**9.1**	0.5	mg/L	1	JLZ		1101260	6/24/11	16:53	E300.0A
Cyanide, total	< 0.02	0.02	mg/L	1	APA		1101293	6/30/11		SM4500CN-E
Nitrate-N	**0.8**	0.1	mg/L	1	JLZ		1101260	6/24/11	16:53	E300.0A
Sulfate	**31**	0.5	mg/L	1	JLZ		1101260	6/24/11	16:53	E300.0A
Total Dissolved Solids (TDS)	**260**	20	mg/L	1	APA		1101267	6/27/11		SM2540C

Sample#: 21858-002
Sample ID: MW-15M
Matrix: Water
Sampled: 6/23/11 10:20

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Alkalinity, total (as CaCO3)	**490**	5	mg/L	1	APA		1101312	7/5/11		SM2320B
Chemical Oxygen Demand (COD)	**63**	25	mg/L	1	APA		1101343	7/7/11		E410.4
Chloride	**95**	2.5	mg/L	5	JLZ		1101323	7/5/11	20:44	E300.0A
Cyanide, total	< 0.02	0.02	mg/L	1	APA		1101293	6/30/11		SM4500CN-E
Nitrate-N	< 0.1	0.1	mg/L	1	JLZ		1101260	6/24/11	17:05	E300.0A
Sulfate	**42**	0.5	mg/L	1	JLZ		1101260	6/24/11	17:05	E300.0A
Total Dissolved Solids (TDS)	**700**	20	mg/L	1	APA		1101267	6/27/11		SM2540C

Sample#: 21858-003
Sample ID: MW-15D
Matrix: Water
Sampled: 6/23/11 10:30

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Alkalinity, total (as CaCO3)	**130**	5	mg/L	1	APA		1101312	7/5/11		SM2320B
Chemical Oxygen Demand (COD)	< 25	25	mg/L	1	APA		1101343	7/7/11		E410.4
Chloride	**15**	0.5	mg/L	1	JLZ		1101260	6/24/11	17:17	E300.0A
Cyanide, total	< 0.02	0.02	mg/L	1	APA		1101293	6/30/11		SM4500CN-E
Nitrate-N	< 0.1	0.1	mg/L	1	JLZ		1101260	6/24/11	17:17	E300.0A
Sulfate	**14**	0.5	mg/L	1	JLZ		1101260	6/24/11	17:17	E300.0A
Total Dissolved Solids (TDS)	**230**	20	mg/L	1	APA		1101267	6/27/11		SM2540C

Absolute Resource associates

Project ID: Haverhill LF 0522-83058
Job ID: 21858

Sample#: 21858-004
Sample ID: MW-14S
Matrix: Water
Sampled: 6/23/11 11:50

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Alkalinity, total (as CaCO3)	**270**	5	mg/L	1	APA		1101312	7/5/11		SM2320B
Chemical Oxygen Demand (COD)	**42**	25	mg/L	1	APA		1101343	7/7/11		E410.4
Chloride	**35**	0.5	mg/L	1	JLZ		1101260	6/24/11	17:29	E300.0A
Cyanide, total	< 0.02	0.02	mg/L	1	APA		1101293	6/30/11		SM4500CN-E
Nitrate-N	< 0.1	0.1	mg/L	1	JLZ		1101260	6/24/11	17:29	E300.0A
Sulfate	**5.9**	0.5	mg/L	1	JLZ		1101260	6/24/11	17:29	E300.0A
Total Dissolved Solids (TDS)	**440**	20	mg/L	1	APA		1101284	6/29/11		SM2540C

Sample#: 21858-005
Sample ID: MW-14D
Matrix: Water
Sampled: 6/23/11 12:03

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Alkalinity, total (as CaCO3)	**92**	5	mg/L	1	APA		1101312	7/5/11		SM2320B
Chemical Oxygen Demand (COD)	< 25	25	mg/L	1	APA		1101343	7/7/11		E410.4
Chloride	**74**	0.5	mg/L	1	JLZ		1101260	6/24/11	17:40	E300.0A
Cyanide, total	< 0.02	0.02	mg/L	1	APA		1101293	6/30/11		SM4500CN-E
Nitrate-N	< 0.1	0.1	mg/L	1	JLZ		1101260	6/24/11	17:40	E300.0A
Sulfate	**14**	0.5	mg/L	1	JLZ		1101260	6/24/11	17:40	E300.0A
Total Dissolved Solids (TDS)	**300**	20	mg/L	1	APA		1101284	6/29/11		SM2540C

Sample#: 21858-006
Sample ID: MW-18S
Matrix: Water
Sampled: 6/23/11 12:10

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Alkalinity, total (as CaCO3)	**70**	5	mg/L	1	APA		1101312	7/5/11		SM2320B
Chemical Oxygen Demand (COD)	< 25	25	mg/L	1	APA		1101343	7/7/11		E410.4
Chloride	**34** M	0.5	mg/L	1	JLZ		1101260	6/24/11	17:52	E300.0A
M = The percent recovery for the matrix spike was 66, outside the acceptance limits of 90% - 110%. All other batch QC was within acceptance. Matrix interference suspected.										
Cyanide, total	< 0.02	0.02	mg/L	1	APA		1101293	6/30/11		SM4500CN-E
Nitrate-N	< 0.1	0.1	mg/L	1	JLZ		1101260	6/24/11	17:52	E300.0A
Sulfate	**6.9**	0.5	mg/L	1	JLZ		1101260	6/24/11	17:52	E300.0A
Total Dissolved Solids (TDS)	**180**	20	mg/L	1	APA		1101284	6/29/11		SM2540C

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Project ID: Haverhill LF 0522-83058
Job ID: 21858

Sample#: 21858-007
Sample ID: MW-18D
Matrix: Water
Sampled: 6/23/11 12:50

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Alkalinity, total (as CaCO3)	**87**	5	mg/L	1	APA		1101312	7/5/11		SM2320B
Chemical Oxygen Demand (COD)	< 25	25	mg/L	1	APA		1101343	7/7/11		E410.4
Chloride	**23**	0.5	mg/L	1	JLZ		1101260	6/24/11	18:27	E300.0A
Cyanide, total	< 0.02	0.02	mg/L	1	APA		1101293	6/30/11		SM4500CN-E
Nitrate-N	< 0.1	0.1	mg/L	1	JLZ		1101260	6/24/11	18:27	E300.0A
Sulfate	**14**	0.5	mg/L	1	JLZ		1101260	6/24/11	18:27	E300.0A
Total Dissolved Solids (TDS)	**180**	20	mg/L	1	APA		1101284	6/29/11		SM2540C

Sample#: 21858-008
Sample ID: ERT-4
Matrix: Water
Sampled: 6/23/11 13:11

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Alkalinity, total (as CaCO3)	**510**	5	mg/L	1	APA		1101312	7/5/11		SM2320B
Chemical Oxygen Demand (COD)	**65**	25	mg/L	1	APA		1101343	7/7/11		E410.4
Chloride	**120**	2.5	mg/L	5	JLZ		1101355	7/7/11	16:01	E300.0A
Cyanide, total	< 0.02	0.02	mg/L	1	APA		1101293	6/30/11		SM4500CN-E
Nitrate-N	< 0.1	0.1	mg/L	1	JLZ		1101260	6/24/11	18:39	E300.0A
Sulfate	**24**	0.5	mg/L	1	JLZ		1101260	6/24/11	18:39	E300.0A
Total Dissolved Solids (TDS)	**700**	20	mg/L	1	APA		1101284	6/29/11		SM2540C

Sample#: 21858-009
Sample ID: MW-10S
Matrix: Water
Sampled: 6/23/11 15:20

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Alkalinity, total (as CaCO3)	**20**	5	mg/L	1	APA		1101312	7/5/11		SM2320B
Chemical Oxygen Demand (COD)	< 25	25	mg/L	1	APA		1101343	7/7/11		E410.4
Chloride	**2.2**	0.5	mg/L	1	JLZ		1101260	6/24/11	18:51	E300.0A
Cyanide, total	< 0.02	0.02	mg/L	1	APA		1101293	6/30/11		SM4500CN-E
Nitrate-N	**0.2**	0.1	mg/L	1	JLZ		1101260	6/24/11	18:51	E300.0A
Sulfate	**6.1**	0.5	mg/L	1	JLZ		1101260	6/24/11	18:51	E300.0A
Total Dissolved Solids (TDS)	**68**	20	mg/L	1	APA		1101284	6/29/11		SM2540C

Project ID: Haverhill LF 0522-83058
Job ID: 21858

Sample#: 21858-010
Sample ID: MW-10M
Matrix: Water
Sampled: 6/23/11 15:25

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Alkalinity, total (as CaCO3)	**48**	5	mg/L	1	APA		1101312	7/5/11		SM2320B
Chemical Oxygen Demand (COD)	< 25	25	mg/L	1	APA		1101343	7/7/11		E410.4
Chloride	**17**	0.5	mg/L	1	JLZ		1101260	6/24/11	19:03	E300.0A
Cyanide, total	< 0.02	0.02	mg/L	1	APA		1101293	6/30/11		SM4500CN-E
Nitrate-N	< 0.1	0.1	mg/L	1	JLZ		1101260	6/24/11	19:03	E300.0A
Sulfate	**38**	0.5	mg/L	1	JLZ		1101260	6/24/11	19:03	E300.0A
Total Dissolved Solids (TDS)	**170**	20	mg/L	1	APA		1101284	6/29/11		SM2540C

Sample#: 21858-011
Sample ID: MW-10D
Matrix: Water
Sampled: 6/23/11 15:10

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Alkalinity, total (as CaCO3)	**70**	5	mg/L	1	APA		1101312	7/5/11		SM2320B
Chemical Oxygen Demand (COD)	< 25	25	mg/L	1	APA		1101343	7/7/11		E410.4
Chloride	**13**	0.5	mg/L	1	JLZ		1101260	6/24/11	19:38	E300.0A
Cyanide, total	< 0.02	0.02	mg/L	1	APA		1101293	6/30/11		SM4500CN-E
Nitrate-N	< 0.1	0.1	mg/L	1	JLZ		1101260	6/24/11	19:38	E300.0A
Sulfate	**33**	0.5	mg/L	1	JLZ		1101260	6/24/11	19:38	E300.0A
Total Dissolved Solids (TDS)	**170**	20	mg/L	1	APA		1101284	6/29/11		SM2540C

Sample#: 21858-012
Sample ID: DUP-4
Matrix: Water
Sampled: 6/23/11

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Cyanide, total	< 0.02	0.02	mg/L	1	APA		1101324	7/6/11		SM4500CN-E

Sample#: 21858-015
Sample ID: MW-17S
Matrix: Water
Sampled: 6/24/11 9:55

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Alkalinity, total (as CaCO3)	**12**	5	mg/L	1	APA		1101326	7/5/11		SM2320B
Chemical Oxygen Demand (COD)	< 25	25	mg/L	1	APA		1101343	7/7/11		E410.4
Chloride	**4.5**	0.5	mg/L	1	JLZ		1101260	6/24/11	19:50	E300.0A
Cyanide, total	< 0.02	0.02	mg/L	1	APA		1101324	7/6/11		SM4500CN-E
Nitrate-N	< 0.1	0.1	mg/L	1	JLZ		1101260	6/24/11	19:50	E300.0A
Sulfate	**12**	0.5	mg/L	1	JLZ		1101260	6/24/11	19:50	E300.0A
Total Dissolved Solids (TDS)	**67**	20	mg/L	1	APA		1101284	6/29/11		SM2540C

Quality Control Report

124 Heritage Avenue Unit 10
Portsmouth, NH 03801
www.absoluteresourceassociates.com

MassDEP Analytical Protocol Certification Form

Laboratory Name: **Absolute Resource Associates** Project #: 0522 83058

Project Location: Massachusetts RTN:

This Form provides certifications for the following data set: **21858**

Matrices: Groundwater/Surface Water ☑ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☑	MassDEP VPH CAM IV A ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☐	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☐	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9014 Total Cyanide/PAC CAM VIA ☑	6860 Perchlorate CAM VIII B ☐	

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	Yes☑ No☐
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	Yes☑ No☐
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	Yes☑ No☐
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	Yes☑ No☐
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modifications(s)? (Refer to the individual methods for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	Yes☐ No☐ Yes☐ No☐
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	Yes☑ No☐

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	Yes☑ No*☐

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	Yes☑ No*☐
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes☐ No*☑

* All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: (for) **Position: Lab Director**

Printed Name: Susan C. Sylvester **Date: 7/18/11**

Sample Integrity Table

Parameter	Method	Matrix	Minimum Volume	Recommended Container(s)	Required Preservation	Holding Time
Volatile Organics	EPA 8260	Aqueous	40mL	2 x 40mL VOA Vials with Teflon lined septa	Cool to ≤6°C 1:1 HCl to pH <2	14 Days
Volatile Organics	EPA 8260	Solid	40mL	1 x 40mL VOA Vial with 10mLs Methanol and 1 unpreserved container for percent moisture	Cool to ≤6°C Methanol	14 Days
Semivolatile Organics	EPA 8270	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	7 Days
Semivolatile Organics	EPA 8270	Solid	20g	4oz Amber Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
Organochlorine Pesticides	EPA 8081	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	7 Days
Organochlorine Pesticides	EPA 8081	Solid	20g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
PCBs	EPA 8082	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	365 Days
PCBs	EPA 8082	Solid	20g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	365 Days
Herbicides (subcontracted)	EPA 8151	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	7 Days
Herbicides (subcontracted)	EPA 8151	Solid	30g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
MA DEP VPH	MADEP VPH	Aqueous	40mL	2 x 40mL VOA Vials with Teflon lined septa	Cool to ≤6°C 1:1 HCl to pH <2	14 Days
MA DEP VPH	MADEP VPH	Solid	40mL	1 x 40mL VOA Vial with 10mLs Methanol and 1 unpreserved container for percent moisture	Cool to ≤6°C Methanol	28 Days
MA DEP EPH	MADEP EPH	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C 1:1 H_2SO_4 to pH <2	14 Days
MA DEP EPH	MADEP EPH	Solid	30g	4oz Amber Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
Total Metals	EPA 6010	Aqueous	100mL	250mL Polyethylene Bottle	1:1 HNO_3 to pH <2	180 Days
Dissolved Metals	EPA 6010	Aqueous	100mL	250mL Polyethylene Bottle	Filter First 1:1 HNO_3 to pH <2	180 Days
Total Metals	EPA 6010	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	180 Days
Total Mercury (may be combined with Total Metals)	EPA 7470	Aqueous	100mL	125mL Polyethylene Bottle	1:1 HNO_3 to pH <2	28 Days
Total Mercury (may be combined with Total Metals)	EPA 7471	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	28 Days
Chromium, Hexavalent	EPA 7196	Aqueous	100mL	125mL Polyethylene Bottle	Cool to ≤6°C (NH4)2SO4 buffer	28 Days
Chromium, Hexavalent (subcontract)	EPA 7196	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	30 Days
Cyanide, Total	EPA 9014	Aqueous	125mL	125mL Polyethylene Bottle	Cool to ≤6°C 1:1 NaOH to pH >8	14 Days
Cyanide, Total	EPA 9014	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days

Absolute Resource Associates
124 Heritage Avenue Unit 10
Portsmouth, NH 03801
www.absoluteresourceassociates.com

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Case Narrative
Lab # 21858

Sample Receiving and Chain of Custody Discrepancies

Samples were received in acceptable condition, at 4 degrees C, on ice, and in accordance with sample handling, preservation and integrity guidelines.
The complete quality control package containing raw data, instrument calibration information, response summaries, etc. has been submitted under separate cover.

Calibration

See the included table for a list of compounds quantitated by quadratic equation.

Method Blank

No exceptions noted.

Surrogate Recoveries

No exceptions noted.

Laboratory Control Sample Results

VOC: The LCS/D1101265 did not meet the acceptance criteria for bromomethane and 2,2-dichloropropane. These compounds are known to be problematic in the method.
VOC: The LCS/D1101285 did not meet the acceptance criteria for bromomethane and 1,4-dioxane. These compounds showed high recoveries. There is no impact to the data as these analytes were not detected in the associated samples.

Matrix Spike/Matrix Spike Duplicate/Duplicate Results

VOC: The MS/D for 21858-003 did not meet the acceptance criteria for bromomethane and 1,4-dioxane. The MS for 21858-003 did not meet the acceptance criteria for trichlorofluoromethane.
Anions: The percent recovery for chloride in the matrix spike (21858-006) was 66%, outside the acceptance criteria of 90-110%. All other batch QC was within acceptance. Matrix interference is suspected.

Other

No other exceptions noted.

MassDEP Analytical Protocol Certification Form Questions A through I

No explanation is needed for Questions A through I answered in the affirmative.
Question I: Metals: The MCP required metals were not requested by the customer. Box I is "No."

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Quantitation by Quadratic Equation
Lab # 21858

Quantitation of the following compounds was based on a quadratic equation

dichlorodifluoromethane
Bromomethane
t-butanol (TBA)
tetrahydrofuran (THF)
4-methyl-2-pentanone (MIBK)
2-Hexanone
cis-1,3-dichloropropene
trans-1,3-Dichloropropene
Bromoform

- QC Report -

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits	RPD	RPD Limit
SW5030B8260B	BLK1101265	dichlorodifluoromethane		<	2	ug/L					
		chloromethane		<	2	ug/L					
		vinyl chloride		<	2	ug/L					
		bromomethane		<	2	ug/L					
		chloroethane		<	2	ug/L					
		trichlorofluoromethane		<	2	ug/L					
		diethyl ether		<	10	ug/L					
		acetone		<	50	ug/L					
		1,1-dichloroethene		<	1	ug/L					
		methylene chloride		<	5	ug/L					
		carbon disulfide		<	2	ug/L					
		methyl t-butyl ether (MTBE)		<	2	ug/L					
		trans-1,2-dichloroethene		<	2	ug/L					
		isopropyl ether (DIPE)		<	2	ug/L					
		ethyl t-butyl ether (ETBE)		<	2	ug/L					
		1,1-dichloroethane		<	2	ug/L					
		t-butanol (TBA)		<	30	ug/L					
		2-butanone (MEK)		<	10	ug/L					
		2,2-dichloropropane		<	2	ug/L					
		cis-1,2-dichloroethene		<	2	ug/L					
		chloroform		<	2	ug/L					
		bromochloromethane		<	2	ug/L					
		tetrahydrofuran (THF)		<	10	ug/L					
		1,1,1-trichloroethane		<	2	ug/L					
		1,1-dichloropropene		<	2	ug/L					
		t-amyl-methyl ether (TAME)		<	2	ug/L					
		carbon tetrachloride		<	2	ug/L					
		1,2-dichloroethane		<	2	ug/L					
		benzene		<	2	ug/L					
		trichloroethene		<	2	ug/L					
		1,2-dichloropropane		<	2	ug/L					
		bromodichloromethane		<	0.6	ug/L					
		1,4-dioxane		<	50	ug/L					
		dibromomethane		<	2	ug/L					
		4-methyl-2-pentanone (MIBK)		<	10	ug/L					
		cis-1,3-dichloropropene		<	2	ug/L					
		toluene		<	2	ug/L					
		trans-1,3-dichloropropene		<	2	ug/L					
		2-hexanone		<	10	ug/L					
		1,1,2-trichloroethane		<	2	ug/L					
		1,3-dichloropropane		<	2	ug/L					
		tetrachloroethene		<	2	ug/L					
		dibromochloromethane		<	2	ug/L					
		1,2-dibromoethane (EDB)		<	2	ug/L					
		chlorobenzene		<	2	ug/L					
		1,1,1,2-tetrachloroethane		<	2	ug/L					
		ethylbenzene		<	2	ug/L					
		m&p-xylenes		<	2	ug/L					
		o-xylene		<	2	ug/L					
		styrene		<	2	ug/L					

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Method	QC ID	Parameter	Associated Sample		Result	Units Amt Added	%R	Limits		RPD	RPD Limit
SW5030B8260B	BLK1101265	bromoform		<	2	ug/L					
		isopropylbenzene		<	2	ug/L					
		1,1,2,2-tetrachloroethane		<	2	ug/L					
		1,2,3-trichloropropane		<	2	ug/L					
		n-propylbenzene		<	2	ug/L					
		bromobenzene		<	2	ug/L					
		1,3,5-trimethylbenzene		<	2	ug/L					
		2-chlorotoluene		<	2	ug/L					
		4-chlorotoluene		<	2	ug/L					
		tert-butylbenzene		<	2	ug/L					
		1,2,4-trimethylbenzene		<	2	ug/L					
		sec-butylbenzene		<	2	ug/L					
		1,3-dichlorobenzene		<	2	ug/L					
		4-isopropyltoluene		<	2	ug/L					
		1,4-dichlorobenzene		<	2	ug/L					
		1,2-dichlorobenzene		<	2	ug/L					
		n-butylbenzene		<	2	ug/L					
		1,2-dibromo-3-chloropropane		<	2	ug/L					
		1,2,4-trichlorobenzene		<	2	ug/L					
		hexachlorobutadiene		<	0.5	ug/L					
		naphthalene		<	5	ug/L					
		1,2,3-trichlorobenzene		<	2	ug/L					
		dibromofluoromethane SUR			97	%		78	114		
		toluene-D8 SUR			96	%		88	110		
		4-bromofluorobenzene SUR			98	%		86	115		

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5030B8260B	LCS1101265	dichlorodifluoromethane			14	ug/L	20	71		70	130		
		chloromethane			19	ug/L	20	97		70	130		
		vinyl chloride			20	ug/L	20	98		70	130		
		bromomethane			10	ug/L	20	51	*	70	130		
		chloroethane			20	ug/L	20	99		70	130		
		trichlorofluoromethane			18	ug/L	20	91		70	130		
		diethyl ether			19	ug/L	20	95		70	130		
		acetone		<	50	ug/L	20	107					
		1,1-dichloroethene			17	ug/L	20	83		70	130		
		methylene chloride			19	ug/L	20	93		70	130		
		carbon disulfide			16	ug/L	20	82		70	130		
		methyl t-butyl ether (MTBE)			19	ug/L	20	97		70	130		
		trans-1,2-dichloroethene			18	ug/L	20	90		70	130		
		isopropyl ether (DIPE)			18	ug/L	20	91		70	130		
		ethyl t-butyl ether (ETBE)			19	ug/L	20	94		70	130		
		1,1-dichloroethane			19	ug/L	20	93		70	130		
		t-butanol (TBA)			99	ug/L	100	99		70	130		
		2-butanone (MEK)			18	ug/L	20	90		70	130		
		2,2-dichloropropane			9	ug/L	20	44	*	70	130		
		cis-1,2-dichloroethene			18	ug/L	20	91		70	130		
		chloroform			18	ug/L	20	92		70	130		
		bromochloromethane			19	ug/L	20	95		70	130		
		tetrahydrofuran (THF)			20	ug/L	20	101		70	130		
		1,1,1-trichloroethane			18	ug/L	20	89		70	130		
		1,1-dichloropropene			19	ug/L	20	94		70	130		
		t-amyl-methyl ether (TAME)			19	ug/L	20	95		70	130		
		carbon tetrachloride			18	ug/L	20	91		70	130		
		1,2-dichloroethane			20	ug/L	20	100		70	130		
		benzene			18	ug/L	20	92		70	130		
		trichloroethene			17	ug/L	20	87		70	130		
		1,2-dichloropropane			19	ug/L	20	97		70	130		
		bromodichloromethane			19	ug/L	20	93		70	130		
		1,4-dioxane		<	50	ug/L	40	82		70	130		
		dibromomethane			19	ug/L	20	96		70	130		
		4-methyl-2-pentanone (MIBK)			19	ug/L	20	94		70	130		
		cis-1,3-dichloropropene			15	ug/L	20	75		70	130		
		toluene			19	ug/L	20	93		70	130		
		trans-1,3-dichloropropene			15	ug/L	20	74		70	130		
		2-hexanone			18	ug/L	20	90		70	130		
		1,1,2-trichloroethane			19	ug/L	20	95		70	130		
		1,3-dichloropropane			21	ug/L	20	107		70	130		
		tetrachloroethene			19	ug/L	20	93		70	130		
		dibromochloromethane			20	ug/L	20	101		70	130		
		1,2-dibromoethane (EDB)			21	ug/L	20	106		70	130		
		chlorobenzene			20	ug/L	20	102		70	130		
		1,1,1,2-tetrachloroethane			20	ug/L	20	101		70	130		
		ethylbenzene			19	ug/L	20	94		70	130		
		m&p-xylenes			39	ug/L	40	98		70	130		
		o-xylene			21	ug/L	20	103		70	130		
		styrene			20	ug/L	20	102		70	130		
		bromoform			17	ug/L	20	85		70	130		

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030B8260B	LCS1101265	isopropylbenzene		17	ug/L	20	86	70	130		
		1,1,2,2-tetrachloroethane		22	ug/L	20	112	70	130		
		1,2,3-trichloropropane		21	ug/L	20	107	70	130		
		n-propylbenzene		19	ug/L	20	93	70	130		
		bromobenzene		21	ug/L	20	105	70	130		
		1,3,5-trimethylbenzene		18	ug/L	20	90	70	130		
		2-chlorotoluene		21	ug/L	20	106	70	130		
		4-chlorotoluene		19	ug/L	20	97	70	130		
		tert-butylbenzene		18	ug/L	20	90	70	130		
		1,2,4-trimethylbenzene		19	ug/L	20	93	70	130		
		sec-butylbenzene		17	ug/L	20	85	70	130		
		1,3-dichlorobenzene		19	ug/L	20	93	70	130		
		4-isopropyltoluene		17	ug/L	20	85	70	130		
		1,4-dichlorobenzene		19	ug/L	20	96	70	130		
		1,2-dichlorobenzene		19	ug/L	20	97	70	130		
		n-butylbenzene		16	ug/L	20	81	70	130		
		1,2-dibromo-3-chloropropane		23	ug/L	20	113	70	130		
		1,2,4-trichlorobenzene		16	ug/L	20	82	70	130		
		hexachlorobutadiene		17	ug/L	20	87	70	130		
		naphthalene		19	ug/L	20	97	70	130		
		1,2,3-trichlorobenzene		17	ug/L	20	84	70	130		
		dibromofluoromethane SUR		98	%			78	114		
		toluene-D8 SUR		100	%			88	110		
		4-bromofluorobenzene SUR		97	%			86	115		

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5030B8260B	LCSD1101265	dichlorodifluoromethane			15	ug/L	20	74		70	130	4	20
		chloromethane			20	ug/L	20	99		70	130	2	20
		vinyl chloride			20	ug/L	20	99		70	130	1	20
		bromomethane			12	ug/L	20	58	*	70	130	13	20
		chloroethane			20	ug/L	20	101		70	130	1	20
		trichlorofluoromethane			19	ug/L	20	95		70	130	4	20
		diethyl ether			19	ug/L	20	95		70	130	1	20
		acetone		<	50	ug/L	20	103				4	20
		1,1-dichloroethene			16	ug/L	20	82		70	130	1	20
		methylene chloride			19	ug/L	20	93		70	130	0	20
		carbon disulfide			17	ug/L	20	83		70	130	1	20
		methyl t-butyl ether (MTBE)			20	ug/L	20	99		70	130	2	20
		trans-1,2-dichloroethene			18	ug/L	20	92		70	130	1	20
		isopropyl ether (DIPE)			19	ug/L	20	93		70	130	2	20
		ethyl t-butyl ether (ETBE)			19	ug/L	20	94		70	130	1	20
		1,1-dichloroethane			19	ug/L	20	93		70	130	1	20
		t-butanol (TBA)			100	ug/L	100	101		70	130	2	20
		2-butanone (MEK)			18	ug/L	20	91		70	130	2	20
		2,2-dichloropropane			9	ug/L	20	44	*	70	130	1	20
		cis-1,2-dichloroethene			19	ug/L	20	93		70	130	3	20
		chloroform			19	ug/L	20	94		70	130	2	20
		bromochloromethane			20	ug/L	20	98		70	130	3	20
		tetrahydrofuran (THF)			20	ug/L	20	101		70	130	0	20
		1,1,1-trichloroethane			18	ug/L	20	88		70	130	0	20
		1,1-dichloropropene			19	ug/L	20	95		70	130	1	20
		t-amyl-methyl ether (TAME)			19	ug/L	20	96		70	130	1	20
		carbon tetrachloride			18	ug/L	20	91		70	130	0	20
		1,2-dichloroethane			20	ug/L	20	100		70	130	0	20
		benzene			19	ug/L	20	93		70	130	1	20
		trichloroethene			17	ug/L	20	87		70	130	0	20
		1,2-dichloropropane			20	ug/L	20	99		70	130	2	20
		bromodichloromethane			19	ug/L	20	95		70	130	2	20
		1,4-dioxane		<	50	ug/L	40	92		70	130	12	20
		dibromomethane			20	ug/L	20	98		70	130	2	20
		4-methyl-2-pentanone (MIBK)			19	ug/L	20	93		70	130	1	20
		cis-1,3-dichloropropene			16	ug/L	20	78		70	130	4	20
		toluene			19	ug/L	20	93		70	130	0	20
		trans-1,3-dichloropropene			15	ug/L	20	76		70	130	4	20
		2-hexanone			18	ug/L	20	91		70	130	1	20
		1,1,2-trichloroethane			19	ug/L	20	95		70	130	1	20
		1,3-dichloropropane			21	ug/L	20	103		70	130	4	20
		tetrachloroethene			18	ug/L	20	90		70	130	4	20
		dibromochloromethane			20	ug/L	20	99		70	130	2	20
		1,2-dibromoethane (EDB)			21	ug/L	20	103		70	130	3	20
		chlorobenzene			20	ug/L	20	99		70	130	3	20
		1,1,1,2-tetrachloroethane			20	ug/L	20	99		70	130	2	20
		ethylbenzene			18	ug/L	20	90		70	130	4	20
		m&p-xylenes			38	ug/L	40	95		70	130	3	20
		o-xylene			20	ug/L	20	98		70	130	4	20
		styrene			20	ug/L	20	100		70	130	3	20
		bromoform			17	ug/L	20	83		70	130	2	20

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030B8260B	LCSD1101265	isopropylbenzene		17	ug/L	20	83	70	130	3	20
		1,1,2,2-tetrachloroethane		23	ug/L	20	113	70	130	2	20
		1,2,3-trichloropropane		21	ug/L	20	106	70	130	1	20
		n-propylbenzene		19	ug/L	20	94	70	130	1	20
		bromobenzene		21	ug/L	20	105	70	130	0	20
		1,3,5-trimethylbenzene		18	ug/L	20	91	70	130	1	20
		2-chlorotoluene		22	ug/L	20	109	70	130	3	20
		4-chlorotoluene		19	ug/L	20	95	70	130	1	20
		tert-butylbenzene		18	ug/L	20	92	70	130	2	20
		1,2,4-trimethylbenzene		19	ug/L	20	94	70	130	1	20
		sec-butylbenzene		17	ug/L	20	85	70	130	0	20
		1,3-dichlorobenzene		19	ug/L	20	95	70	130	1	20
		4-isopropyltoluene		17	ug/L	20	86	70	130	1	20
		1,4-dichlorobenzene		19	ug/L	20	97	70	130	2	20
		1,2-dichlorobenzene		20	ug/L	20	99	70	130	2	20
		n-butylbenzene		16	ug/L	20	82	70	130	1	20
		1,2-dibromo-3-chloropropane		22	ug/L	20	111	70	130	2	20
		1,2,4-trichlorobenzene		17	ug/L	20	84	70	130	2	20
		hexachlorobutadiene		17	ug/L	20	87	70	130	0	20
		naphthalene		20	ug/L	20	101	70	130	4	20
		1,2,3-trichlorobenzene		17	ug/L	20	85	70	130	1	20
		dibromofluoromethane SUR		99	%			78	114		
		toluene-D8 SUR		100	%			88	110		
		4-bromofluorobenzene SUR		94	%			86	115		

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5030B8260B	MS1101265	dichlorodifluoromethane	21858-003		23	ug/L	20	117		70	130		
		chloromethane	21858-003		22	ug/L	20	111		70	130		
		vinyl chloride	21858-003		22	ug/L	20	112		70	130		
		bromomethane	21858-003		43	ug/L	20	213	*	70	130		
		chloroethane	21858-003		27	ug/L	20	129		70	130		
		trichlorofluoromethane	21858-003		26	ug/L	20	132	*	70	130		
		diethyl ether	21858-003		25	ug/L	20	117		70	130		
		acetone	21858-003	<	50	ug/L	20	93					
		1,1-dichloroethene	21858-003		22	ug/L	20	109		70	130		
		methylene chloride	21858-003		23	ug/L	20	116		70	130		
		carbon disulfide	21858-003		20	ug/L	20	96		70	130		
		methyl t-butyl ether (MTBE)	21858-003		23	ug/L	20	113		70	130		
		trans-1,2-dichloroethene	21858-003		23	ug/L	20	115		70	130		
		isopropyl ether (DIPE)	21858-003		23	ug/L	20	116		70	130		
		ethyl t-butyl ether (ETBE)	21858-003		23	ug/L	20	112		70	130		
		1,1-dichloroethane	21858-003		22	ug/L	20	110		70	130		
		t-butanol (TBA)	21858-003		130	ug/L	100	128		70	130		
		2-butanone (MEK)	21858-003		19	ug/L	20	97		70	130		
		2,2-dichloropropane	21858-003		25	ug/L	20	123		70	130		
		cis-1,2-dichloroethene	21858-003		25	ug/L	20	123		70	130		
		chloroform	21858-003		25	ug/L	20	125		70	130		
		bromochloromethane	21858-003		25	ug/L	20	126		70	130		
		tetrahydrofuran (THF)	21858-003		25	ug/L	20	120		70	130		
		1,1,1-trichloroethane	21858-003		23	ug/L	20	117		70	130		
		1,1-dichloropropene	21858-003		24	ug/L	20	122		70	130		
		t-amyl-methyl ether (TAME)	21858-003		22	ug/L	20	112		70	130		
		carbon tetrachloride	21858-003		22	ug/L	20	108		70	130		
		1,2-dichloroethane	21858-003		24	ug/L	20	120		70	130		
		benzene	21858-003		24	ug/L	20	121		70	130		
		trichloroethene	21858-003		22	ug/L	20	112		70	130		
		1,2-dichloropropane	21858-003		20	ug/L	20	101		70	130		
		bromodichloromethane	21858-003		21	ug/L	20	107		70	130		
		1,4-dioxane	21858-003		60	ug/L	40	150	*	70	130		
		dibromomethane	21858-003		20	ug/L	20	101		70	130		
		4-methyl-2-pentanone (MIBK)	21858-003		19	ug/L	20	95		70	130		
		cis-1,3-dichloropropene	21858-003		21	ug/L	20	106		70	130		
		toluene	21858-003		23	ug/L	20	114		70	130		
		trans-1,3-dichloropropene	21858-003		21	ug/L	20	104		70	130		
		2-hexanone	21858-003		17	ug/L	20	87		70	130		
		1,1,2-trichloroethane	21858-003		20	ug/L	20	98		70	130		
		1,3-dichloropropane	21858-003		20	ug/L	20	101		70	130		
		tetrachloroethene	21858-003		24	ug/L	20	120		70	130		
		dibromochloromethane	21858-003		18	ug/L	20	91		70	130		
		1,2-dibromoethane (EDB)	21858-003		19	ug/L	20	97		70	130		
		chlorobenzene	21858-003		21	ug/L	20	105		70	130		
		1,1,1,2-tetrachloroethane	21858-003		19	ug/L	20	97		70	130		
		ethylbenzene	21858-003		23	ug/L	20	116		70	130		
		m&p-xylenes	21858-003		47	ug/L	40	117		70	130		
		o-xylene	21858-003		23	ug/L	20	113		70	130		
		styrene	21858-003		20	ug/L	20	99		70	130		
		bromoform	21858-003		17	ug/L	20	85		70	130		

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030B8260B	MS1101265	isopropylbenzene	21858-003	22	ug/L	20	110	70	130		
		1,1,2,2-tetrachloroethane	21858-003	23	ug/L	20	115	70	130		
		1,2,3-trichloropropane	21858-003	20	ug/L	20	99	70	130		
		n-propylbenzene	21858-003	24	ug/L	20	122	70	130		
		bromobenzene	21858-003	22	ug/L	20	109	70	130		
		1,3,5-trimethylbenzene	21858-003	23	ug/L	20	116	70	130		
		2-chlorotoluene	21858-003	23	ug/L	20	116	70	130		
		4-chlorotoluene	21858-003	24	ug/L	20	118	70	130		
		tert-butylbenzene	21858-003	24	ug/L	20	119	70	130		
		1,2,4-trimethylbenzene	21858-003	24	ug/L	20	119	70	130		
		sec-butylbenzene	21858-003	25	ug/L	20	124	70	130		
		1,3-dichlorobenzene	21858-003	23	ug/L	20	114	70	130		
		4-isopropyltoluene	21858-003	24	ug/L	20	120	70	130		
		1,4-dichlorobenzene	21858-003	21	ug/L	20	107	70	130		
		1,2-dichlorobenzene	21858-003	24	ug/L	20	118	70	130		
		n-butylbenzene	21858-003	25	ug/L	20	127	70	130		
		1,2-dibromo-3-chloropropane	21858-003	18	ug/L	20	91	70	130		
		1,2,4-trichlorobenzene	21858-003	20	ug/L	20	99	70	130		
		hexachlorobutadiene	21858-003	24	ug/L	20	119	70	130		
		naphthalene	21858-003	17	ug/L	20	85	70	130		
		1,2,3-trichlorobenzene	21858-003	22	ug/L	20	108	70	130		
		dibromofluoromethane SUR	21858-003	108	%			78	114		
		toluene-D8 SUR	21858-003	103	%			88	110		
		4-bromofluorobenzene SUR	21858-003	103	%			86	115		

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5030B8260B	MSD1101265	dichlorodifluoromethane	21858-003		23	ug/L	20	117		70	130	0	20
		chloromethane	21858-003		22	ug/L	20	108		70	130	2	20
		vinyl chloride	21858-003		22	ug/L	20	112		70	130	0	20
		bromomethane	21858-003		43	ug/L	20	215	*	70	130	1	20
		chloroethane	21858-003		26	ug/L	20	127		70	130	1	20
		trichlorofluoromethane	21858-003		26	ug/L	20	129		70	130	2	20
		diethyl ether	21858-003		25	ug/L	20	116		70	130	1	20
		acetone	21858-003	<	50	ug/L	20	91				2	20
		1,1-dichloroethene	21858-003		21	ug/L	20	107		70	130	2	20
		methylene chloride	21858-003		23	ug/L	20	114		70	130	2	20
		carbon disulfide	21858-003		19	ug/L	20	94		70	130	2	20
		methyl t-butyl ether (MTBE)	21858-003		22	ug/L	20	110		70	130	2	20
		trans-1,2-dichloroethene	21858-003		22	ug/L	20	112		70	130	2	20
		isopropyl ether (DIPE)	21858-003		23	ug/L	20	113		70	130	2	20
		ethyl t-butyl ether (ETBE)	21858-003		22	ug/L	20	110		70	130	2	20
		1,1-dichloroethane	21858-003		21	ug/L	20	107		70	130	2	20
		t-butanol (TBA)	21858-003		130	ug/L	100	125		70	130	3	20
		2-butanone (MEK)	21858-003		19	ug/L	20	95		70	130	2	20
		2,2-dichloropropane	21858-003		24	ug/L	20	118		70	130	4	20
		cis-1,2-dichloroethene	21858-003		24	ug/L	20	122		70	130	1	20
		chloroform	21858-003		24	ug/L	20	121		70	130	3	20
		bromochloromethane	21858-003		25	ug/L	20	124		70	130	1	20
		tetrahydrofuran (THF)	21858-003		25	ug/L	20	120		70	130	0	20
		1,1,1-trichloroethane	21858-003		23	ug/L	20	116		70	130	1	20
		1,1-dichloropropene	21858-003		24	ug/L	20	119		70	130	3	20
		t-amyl-methyl ether (TAME)	21858-003		23	ug/L	20	113		70	130	1	20
		carbon tetrachloride	21858-003		22	ug/L	20	108		70	130	0	20
		1,2-dichloroethane	21858-003		24	ug/L	20	119		70	130	1	20
		benzene	21858-003		24	ug/L	20	119		70	130	2	20
		trichloroethene	21858-003		22	ug/L	20	110		70	130	1	20
		1,2-dichloropropane	21858-003		20	ug/L	20	100		70	130	1	20
		bromodichloromethane	21858-003		21	ug/L	20	107		70	130	0	20
		1,4-dioxane	21858-003		54	ug/L	40	136	*	70	130	10	20
		dibromomethane	21858-003		19	ug/L	20	97		70	130	4	20
		4-methyl-2-pentanone (MIBK)	21858-003		19	ug/L	20	94		70	130	1	20
		cis-1,3-dichloropropene	21858-003		21	ug/L	20	104		70	130	2	20
		toluene	21858-003		22	ug/L	20	111		70	130	2	20
		trans-1,3-dichloropropene	21858-003		20	ug/L	20	101		70	130	3	20
		2-hexanone	21858-003		18	ug/L	20	90		70	130	4	20
		1,1,2-trichloroethane	21858-003		19	ug/L	20	96		70	130	2	20
		1,3-dichloropropane	21858-003		21	ug/L	20	103		70	130	2	20
		tetrachloroethene	21858-003		24	ug/L	20	120		70	130	1	20
		dibromochloromethane	21858-003		19	ug/L	20	93		70	130	2	20
		1,2-dibromoethane (EDB)	21858-003		19	ug/L	20	96		70	130	1	20
		chlorobenzene	21858-003		21	ug/L	20	105		70	130	1	20
		1,1,1,2-tetrachloroethane	21858-003		20	ug/L	20	100		70	130	3	20
		ethylbenzene	21858-003		24	ug/L	20	119		70	130	2	20
		m&p-xylenes	21858-003		47	ug/L	40	118		70	130	1	20
		o-xylene	21858-003		23	ug/L	20	116		70	130	3	20
		styrene	21858-003		20	ug/L	20	102		70	130	2	20
		bromoform	21858-003		18	ug/L	20	88		70	130	3	20

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030B8260B	MSD1101265	isopropylbenzene	21858-003	22	ug/L	20	112	70	130	2	20
		1,1,2,2-tetrachloroethane	21858-003	24	ug/L	20	117	70	130	2	20
		1,2,3-trichloropropane	21858-003	21	ug/L	20	102	70	130	3	20
		n-propylbenzene	21858-003	24	ug/L	20	122	70	130	0	20
		bromobenzene	21858-003	22	ug/L	20	109	70	130	1	20
		1,3,5-trimethylbenzene	21858-003	23	ug/L	20	117	70	130	0	20
		2-chlorotoluene	21858-003	23	ug/L	20	117	70	130	1	20
		4-chlorotoluene	21858-003	24	ug/L	20	119	70	130	1	20
		tert-butylbenzene	21858-003	24	ug/L	20	119	70	130	0	20
		1,2,4-trimethylbenzene	21858-003	24	ug/L	20	119	70	130	0	20
		sec-butylbenzene	21858-003	25	ug/L	20	126	70	130	2	20
		1,3-dichlorobenzene	21858-003	23	ug/L	20	116	70	130	1	20
		4-isopropyltoluene	21858-003	24	ug/L	20	121	70	130	1	20
		1,4-dichlorobenzene	21858-003	22	ug/L	20	108	70	130	1	20
		1,2-dichlorobenzene	21858-003	24	ug/L	20	119	70	130	1	20
		n-butylbenzene	21858-003	26	ug/L	20	129	70	130	1	20
		1,2-dibromo-3-chloropropane	21858-003	20	ug/L	20	100	70	130	10	20
		1,2,4-trichlorobenzene	21858-003	21	ug/L	20	103	70	130	4	20
		hexachlorobutadiene	21858-003	25	ug/L	20	124	70	130	4	20
		naphthalene	21858-003	18	ug/L	20	88	70	130	4	20
		1,2,3-trichlorobenzene	21858-003	23	ug/L	20	113	70	130	4	20
		dibromofluoromethane SUR	21858-003	107	%			78	114		
		toluene-D8 SUR	21858-003	98	%			88	110		
		4-bromofluorobenzene SUR	21858-003	104	%			86	115		

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample		Result	Units Amt Added	%R	Limits	RPD	RPD Limit
SW5030B8260B	BLK1101285	dichlorodifluoromethane		<	2	ug/L				
		chloromethane		<	2	ug/L				
		vinyl chloride		<	2	ug/L				
		bromomethane		<	2	ug/L				
		chloroethane		<	2	ug/L				
		trichlorofluoromethane		<	2	ug/L				
		diethyl ether		<	10	ug/L				
		acetone		<	50	ug/L				
		1,1-dichloroethene		<	1	ug/L				
		methylene chloride		<	5	ug/L				
		carbon disulfide		<	2	ug/L				
		methyl t-butyl ether (MTBE)		<	2	ug/L				
		trans-1,2-dichloroethene		<	2	ug/L				
		isopropyl ether (DIPE)		<	2	ug/L				
		ethyl t-butyl ether (ETBE)		<	2	ug/L				
		1,1-dichloroethane		<	2	ug/L				
		t-butanol (TBA)		<	30	ug/L				
		2-butanone (MEK)		<	10	ug/L				
		2,2-dichloropropane		<	2	ug/L				
		cis-1,2-dichloroethene		<	2	ug/L				
		chloroform		<	2	ug/L				
		bromochloromethane		<	2	ug/L				
		tetrahydrofuran (THF)		<	10	ug/L				
		1,1,1-trichloroethane		<	2	ug/L				
		1,1-dichloropropene		<	2	ug/L				
		t-amyl-methyl ether (TAME)		<	2	ug/L				
		carbon tetrachloride		<	2	ug/L				
		1,2-dichloroethane		<	2	ug/L				
		benzene		<	2	ug/L				
		trichloroethene		<	2	ug/L				
		1,2-dichloropropane		<	2	ug/L				
		bromodichloromethane		<	0.6	ug/L				
		1,4-dioxane		<	50	ug/L				
		dibromomethane		<	2	ug/L				
		4-methyl-2-pentanone (MIBK)		<	10	ug/L				
		cis-1,3-dichloropropene		<	2	ug/L				
		toluene		<	2	ug/L				
		trans-1,3-dichloropropene		<	2	ug/L				
		2-hexanone		<	10	ug/L				
		1,1,2-trichloroethane		<	2	ug/L				
		1,3-dichloropropane		<	2	ug/L				
		tetrachloroethene		<	2	ug/L				
		dibromochloromethane		<	2	ug/L				
		1,2-dibromoethane (EDB)		<	2	ug/L				
		chlorobenzene		<	2	ug/L				
		1,1,1,2-tetrachloroethane		<	2	ug/L				
		ethylbenzene		<	2	ug/L				
		m&p-xylenes		<	2	ug/L				
		o-xylene		<	2	ug/L				
		styrene		<	2	ug/L				
		bromoform		<	2	ug/L				

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample		Result	Units Amt Added	%R	Limits		RPD	RPD Limit
SW5030B8260B	BLK1101285	isopropylbenzene		<	2	ug/L					
		1,1,2,2-tetrachloroethane		<	2	ug/L					
		1,2,3-trichloropropane		<	2	ug/L					
		n-propylbenzene		<	2	ug/L					
		bromobenzene		<	2	ug/L					
		1,3,5-trimethylbenzene		<	2	ug/L					
		2-chlorotoluene		<	2	ug/L					
		4-chlorotoluene		<	2	ug/L					
		tert-butylbenzene		<	2	ug/L					
		1,2,4-trimethylbenzene		<	2	ug/L					
		sec-butylbenzene		<	2	ug/L					
		1,3-dichlorobenzene		<	2	ug/L					
		4-isopropyltoluene		<	2	ug/L					
		1,4-dichlorobenzene		<	2	ug/L					
		1,2-dichlorobenzene		<	2	ug/L					
		n-butylbenzene		<	2	ug/L					
		1,2-dibromo-3-chloropropane		<	2	ug/L					
		1,2,4-trichlorobenzene		<	2	ug/L					
		hexachlorobutadiene		<	0.5	ug/L					
		naphthalene		<	5	ug/L					
		1,2,3-trichlorobenzene		<	2	ug/L					
		dibromofluoromethane SUR			102	%		78	114		
		toluene-D8 SUR			97	%		88	110		
		4-bromofluorobenzene SUR			94	%		86	115		

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5030B8260B	LCS1101285	dichlorodifluoromethane			20	ug/L	20	98		70	130		
		chloromethane			20	ug/L	20	100		70	130		
		vinyl chloride			19	ug/L	20	94		70	130		
		bromomethane			40	ug/L	20	198	*	70	130		
		chloroethane			23	ug/L	20	116		70	130		
		trichlorofluoromethane			22	ug/L	20	108		70	130		
		diethyl ether			22	ug/L	20	109		70	130		
		acetone		<	50	ug/L	20	94					
		1,1-dichloroethene			19	ug/L	20	95		70	130		
		methylene chloride			21	ug/L	20	107		70	130		
		carbon disulfide			17	ug/L	20	86		70	130		
		methyl t-butyl ether (MTBE)			21	ug/L	20	107		70	130		
		trans-1,2-dichloroethene			21	ug/L	20	103		70	130		
		isopropyl ether (DIPE)			21	ug/L	20	107		70	130		
		ethyl t-butyl ether (ETBE)			21	ug/L	20	105		70	130		
		1,1-dichloroethane			20	ug/L	20	98		70	130		
		t-butanol (TBA)			110	ug/L	100	114		70	130		
		2-butanone (MEK)			19	ug/L	20	93		70	130		
		2,2-dichloropropane			21	ug/L	20	106		70	130		
		cis-1,2-dichloroethene			23	ug/L	20	113		70	130		
		chloroform			23	ug/L	20	115		70	130		
		bromochloromethane			23	ug/L	20	114		70	130		
		tetrahydrofuran (THF)			23	ug/L	20	117		70	130		
		1,1,1-trichloroethane			21	ug/L	20	105		70	130		
		1,1-dichloropropene			22	ug/L	20	109		70	130		
		t-amyl-methyl ether (TAME)			21	ug/L	20	107		70	130		
		carbon tetrachloride			20	ug/L	20	98		70	130		
		1,2-dichloroethane			22	ug/L	20	112		70	130		
		benzene			22	ug/L	20	112		70	130		
		trichloroethene			20	ug/L	20	99		70	130		
		1,2-dichloropropane			19	ug/L	20	94		70	130		
		bromodichloromethane			20	ug/L	20	101		70	130		
		1,4-dioxane			59	ug/L	40	148	*	70	130		
		dibromomethane			19	ug/L	20	95		70	130		
		4-methyl-2-pentanone (MIBK)			18	ug/L	20	88		70	130		
		cis-1,3-dichloropropene			20	ug/L	20	98		70	130		
		toluene			21	ug/L	20	105		70	130		
		trans-1,3-dichloropropene			19	ug/L	20	96		70	130		
		2-hexanone			17	ug/L	20	85		70	130		
		1,1,2-trichloroethane			19	ug/L	20	93		70	130		
		1,3-dichloropropane			19	ug/L	20	95		70	130		
		tetrachloroethene			21	ug/L	20	106		70	130		
		dibromochloromethane			17	ug/L	20	86		70	130		
		1,2-dibromoethane (EDB)			18	ug/L	20	89		70	130		
		chlorobenzene			19	ug/L	20	97		70	130		
		1,1,1,2-tetrachloroethane			19	ug/L	20	93		70	130		
		ethylbenzene			22	ug/L	20	108		70	130		
		m&p-xylenes			43	ug/L	40	107		70	130		
		o-xylene			21	ug/L	20	105		70	130		
		styrene			18	ug/L	20	92		70	130		
		bromoform			16	ug/L	20	81		70	130		

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030B8260B	LCS1101285	isopropylbenzene		20	ug/L	20	100	70	130		
		1,1,2,2-tetrachloroethane		22	ug/L	20	108	70	130		
		1,2,3-trichloropropane		19	ug/L	20	97	70	130		
		n-propylbenzene		22	ug/L	20	108	70	130		
		bromobenzene		20	ug/L	20	98	70	130		
		1,3,5-trimethylbenzene		21	ug/L	20	106	70	130		
		2-chlorotoluene		21	ug/L	20	105	70	130		
		4-chlorotoluene		22	ug/L	20	109	70	130		
		tert-butylbenzene		21	ug/L	20	105	70	130		
		1,2,4-trimethylbenzene		21	ug/L	20	107	70	130		
		sec-butylbenzene		22	ug/L	20	110	70	130		
		1,3-dichlorobenzene		21	ug/L	20	105	70	130		
		4-isopropyltoluene		21	ug/L	20	106	70	130		
		1,4-dichlorobenzene		20	ug/L	20	99	70	130		
		1,2-dichlorobenzene		22	ug/L	20	108	70	130		
		n-butylbenzene		23	ug/L	20	113	70	130		
		1,2-dibromo-3-chloropropane		18	ug/L	20	90	70	130		
		1,2,4-trichlorobenzene		19	ug/L	20	94	70	130		
		hexachlorobutadiene		21	ug/L	20	106	70	130		
		naphthalene		16	ug/L	20	82	70	130		
		1,2,3-trichlorobenzene		20	ug/L	20	102	70	130		
		dibromofluoromethane SUR		110	%			78	114		
		toluene-D8 SUR		100	%			88	110		
		4-bromofluorobenzene SUR		102	%			86	115		

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5030B8260B	LCSD1101285	dichlorodifluoromethane			19	ug/L	20	97		70	130	1	20
		chloromethane			20	ug/L	20	101		70	130	1	20
		vinyl chloride			19	ug/L	20	96		70	130	2	20
		bromomethane			45	ug/L	20	227	*	70	130	14	20
		chloroethane			24	ug/L	20	119		70	130	2	20
		trichlorofluoromethane			22	ug/L	20	109		70	130	0	20
		diethyl ether			22	ug/L	20	111		70	130	2	20
		acetone		<	50	ug/L	20	92				3	20
		1,1-dichloroethene			19	ug/L	20	94		70	130	1	20
		methylene chloride			22	ug/L	20	110		70	130	2	20
		carbon disulfide			17	ug/L	20	84		70	130	3	20
		methyl t-butyl ether (MTBE)			21	ug/L	20	107		70	130	1	20
		trans-1,2-dichloroethene			20	ug/L	20	101		70	130	1	20
		isopropyl ether (DIPE)			21	ug/L	20	107		70	130	0	20
		ethyl t-butyl ether (ETBE)			21	ug/L	20	105		70	130	1	20
		1,1-dichloroethane			20	ug/L	20	100		70	130	1	20
		t-butanol (TBA)			120	ug/L	100	115		70	130	1	20
		2-butanone (MEK)			19	ug/L	20	97		70	130	4	20
		2,2-dichloropropane			20	ug/L	20	102		70	130	4	20
		cis-1,2-dichloroethene			23	ug/L	20	114		70	130	1	20
		chloroform			23	ug/L	20	113		70	130	2	20
		bromochloromethane			23	ug/L	20	116		70	130	2	20
		tetrahydrofuran (THF)			23	ug/L	20	113		70	130	4	20
		1,1,1-trichloroethane			20	ug/L	20	102		70	130	3	20
		1,1-dichloropropene			21	ug/L	20	104		70	130	4	20
		t-amyl-methyl ether (TAME)			21	ug/L	20	106		70	130	1	20
		carbon tetrachloride			19	ug/L	20	97		70	130	1	20
		1,2-dichloroethane			22	ug/L	20	111		70	130	1	20
		benzene			22	ug/L	20	109		70	130	3	20
		trichloroethene			20	ug/L	20	99		70	130	0	20
		1,2-dichloropropane			18	ug/L	20	92		70	130	2	20
		bromodichloromethane			20	ug/L	20	101		70	130	0	20
		1,4-dioxane			62	ug/L	40	154	*	70	130	4	20
		dibromomethane			19	ug/L	20	94		70	130	1	20
		4-methyl-2-pentanone (MIBK)			18	ug/L	20	89		70	130	0	20
		cis-1,3-dichloropropene			19	ug/L	20	97		70	130	1	20
		toluene			21	ug/L	20	103		70	130	2	20
		trans-1,3-dichloropropene			19	ug/L	20	96		70	130	0	20
		2-hexanone			17	ug/L	20	83		70	130	2	20
		1,1,2-trichloroethane			18	ug/L	20	92		70	130	1	20
		1,3-dichloropropane			19	ug/L	20	94		70	130	1	20
		tetrachloroethene			20	ug/L	20	102		70	130	4	20
		dibromochloromethane			17	ug/L	20	86		70	130	0	20
		1,2-dibromoethane (EDB)			18	ug/L	20	91		70	130	2	20
		chlorobenzene			19	ug/L	20	95		70	130	2	20
		1,1,1,2-tetrachloroethane			18	ug/L	20	92		70	130	0	20
		ethylbenzene			21	ug/L	20	104		70	130	4	20
		m&p-xylenes			42	ug/L	40	104		70	130	2	20
		o-xylene			20	ug/L	20	102		70	130	3	20
		styrene			18	ug/L	20	90		70	130	2	20
		bromoform			16	ug/L	20	81		70	130	1	20

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030B8260B	LCSD1101285	isopropylbenzene		19	ug/L	20	96	70	130	5	20
		1,1,2,2-tetrachloroethane		22	ug/L	20	111	70	130	2	20
		1,2,3-trichloropropane		19	ug/L	20	94	70	130	3	20
		n-propylbenzene		22	ug/L	20	108	70	130	0	20
		bromobenzene		20	ug/L	20	99	70	130	1	20
		1,3,5-trimethylbenzene		21	ug/L	20	106	70	130	0	20
		2-chlorotoluene		21	ug/L	20	105	70	130	0	20
		4-chlorotoluene		22	ug/L	20	108	70	130	1	20
		tert-butylbenzene		22	ug/L	20	110	70	130	5	20
		1,2,4-trimethylbenzene		21	ug/L	20	107	70	130	0	20
		sec-butylbenzene		22	ug/L	20	108	70	130	1	20
		1,3-dichlorobenzene		21	ug/L	20	105	70	130	0	20
		4-isopropyltoluene		21	ug/L	20	106	70	130	1	20
		1,4-dichlorobenzene		20	ug/L	20	98	70	130	0	20
		1,2-dichlorobenzene		22	ug/L	20	109	70	130	1	20
		n-butylbenzene		22	ug/L	20	111	70	130	1	20
		1,2-dibromo-3-chloropropane		18	ug/L	20	92	70	130	2	20
		1,2,4-trichlorobenzene		18	ug/L	20	91	70	130	3	20
		hexachlorobutadiene		21	ug/L	20	103	70	130	3	20
		naphthalene		16	ug/L	20	81	70	130	0	20
		1,2,3-trichlorobenzene		20	ug/L	20	102	70	130	0	20
		dibromofluoromethane SUR		108	%			78	114		
		toluene-D8 SUR		102	%			88	110		
		4-bromofluorobenzene SUR		103	%			86	115		

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
E200.7	BLK4300	Calcium		<	0.5	mg/L						
E200.7	LCS4300	Calcium			0.5	mg/L	0.5	100	85	115		
		Magnesium			0.5	mg/L	0.5	109	85	115		
E200.7	LCSD4300	Calcium			0.5	mg/L	0.5	101	85	115	1	20
		Magnesium			0.6	mg/L	0.5	110	85	115	1	20
SW3005A6010C	BLK1101333	Silver		<	0.005	mg/L						
		Arsenic		<	0.008	mg/L						
		Barium		<	0.05	mg/L						
		Calcium		<	0.5	mg/L						
		Cadmium		<	0.004	mg/L						
		Chromium		<	0.05	mg/L						
		Copper		<	0.05	mg/L						
		Iron		<	0.05	mg/L						
		Manganese		<	0.03	mg/L						
		Sodium		<	0.5	mg/L						
		Lead		<	0.01	mg/L						
		Selenium		<	0.05	mg/L						
		Zinc		<	0.05	mg/L						
SW3005A6010C	LCS1101333	Silver			0.26	mg/L	0.25	103	80	120		
		Arsenic			0.48	mg/L	0.5	97	80	120		
		Barium			0.50	mg/L	0.5	100	80	120		
		Calcium			0.5	mg/L	0.5	102	80	120		
		Cadmium			0.49	mg/L	0.5	98	80	120		
		Chromium			0.49	mg/L	0.5	97	80	120		
		Copper			0.49	mg/L	0.5	99	80	120		
		Iron			0.48	mg/L	0.5	97	80	120		
		Manganese			0.48	mg/L	0.5	97	80	120		
		Sodium			4.8	mg/L	5	95	80	120		
		Lead			0.49	mg/L	0.5	97	80	120		
		Selenium			0.49	mg/L	0.5	97	80	120		
		Zinc			0.49	mg/L	0.5	99	80	120		
SW7470A	BLK4286	Mercury		<	0.0002	mg/L						
SW7470A	LCS4286	Mercury			0.0022	mg/L	0.002	108	80	120		
SW7470A	LCSD4286	Mercury			0.0021	mg/L	0.002	105	80	120	3	20
SW7470A	MS4286	Mercury	21858-003		0.0021	mg/L	0.002	103	75	125		
SW7470A	MSD4286	Mercury	21858-003		0.0020	mg/L	0.002	101	75	125	2	20

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
E300.0A	BLK1101260	Chloride		<	0.5	mg/L							
		Nitrate-N		<	0.1	mg/L							
		Sulfate		<	0.5	mg/L							
E300.0A	DUP1101260	Chloride	21858-006		34	mg/L						0	10
		Nitrate-N	21858-006	<	0.1	mg/L							10
		Sulfate	21858-006		6.9	mg/L						0	10
E300.0A	LCS1101260	Chloride			97	mg/L	100	97		90	110		
		Nitrate-N			9.2	mg/L	10	92		90	110		
		Sulfate			97	mg/L	100	97		90	110		
E300.0A	MS1101260	Chloride	21858-006		45	mg/L	16	66	*	90	110		
		Nitrate-N	21858-006		1.6	mg/L	1.66	96		90	110		
		Sulfate	21858-006		24	mg/L	16	100		90	110		
E300.0A	BLK1101323	Chloride		<	0.5	mg/L							
E300.0A	LCS1101323	Chloride			96	mg/L	100	96		90	110		
E300.0A	BLK1101355	Chloride		<	0.5	mg/L							
E300.0A	LCS1101355	Chloride			96	mg/L	100	96		90	110		
E410.4	DUP1101343	Chemical Oxygen Demand	21845-010	<	5	mg/L							25
E410.4	LCS1101343	Chemical Oxygen Demand			500	mg/L	500	101		75	125		
E410.4	MS1101343	Chemical Oxygen Demand	21845-010		520	mg/L	500	104		75	125		
E410.4	MSD1101343	Chemical Oxygen Demand	21845-010		520	mg/L	500	103		75	125	1	20
E410.4	PB1101343	Chemical Oxygen Demand		<	5	mg/L					5		
SM2320B	LCS1101312	Alkalinity, total (as CaCO3)			25	mg/L	25	100		80	120		
SM2320B	PB1101312	Alkalinity, total (as CaCO3)		<	5	mg/L					5		
SM2320B	LCS1101326	Alkalinity, total (as CaCO3)			25	mg/L	25	100		80	120		
SM2320B	PB1101326	Alkalinity, total (as CaCO3)		<	5	mg/L					5		

Absolute Resource associates

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SM2540C	DUP1101267	Total Dissolved Solids (TDS)	21845-001		170	mg/L					1	20
SM2540C	DUP1101267	Total Dissolved Solids (TDS)	21845-011		140	mg/L					1	20
SM2540C	LCS1101267	Total Dissolved Solids (TDS)			11.0	mg/L	10.6	104	75	125		
SM2540C	PB1101267	Total Dissolved Solids (TDS)		<	10	mg/L				10		
SM2540C	DUP1101284	Total Dissolved Solids (TDS)	21858-008		690	mg/L					1	20
SM2540C	LCS1101284	Total Dissolved Solids (TDS)			10.0	mg/L	10.6	94	75	125		
SM2540C	PB1101284	Total Dissolved Solids (TDS)		<	10	mg/L				10		
SM4500CN-E	DUP1101293	Cyanide, total	21858-003	<	0.01	mg/L						20
SM4500CN-E	LCS1101293	Cyanide, total			0.10	mg/L	0.1	100	75	125		
SM4500CN-E	LCSD1101293	Cyanide, total			0.52	mg/L	0.5	104	75	125		20
SM4500CN-E	MS1101293	Cyanide, total	21845-010		0.48	mg/L	0.5	96	75	125		
SM4500CN-E	MS1101293	Cyanide, total	21858-003		0.52	mg/L	0.5	105	75	125		
SM4500CN-E	MSD1101293	Cyanide, total	21845-010		0.47	mg/L	0.5	95	75	125	2	20
SM4500CN-E	MSD1101293	Cyanide, total	21858-003		0.52	mg/L	0.5	105	75	125	0	20
SM4500CN-E	PB1101293	Cyanide, total		<	0.01	mg/L						
SM4500CN-E	LCS1101324	Cyanide, total			0.11	mg/L	0.1	109	75	125		
SM4500CN-E	LCSD1101324	Cyanide, total			0.54	mg/L	0.5	107	75	125		20
SM4500CN-E	PB1101324	Cyanide, total		<	0.01	mg/L						

Absolute Resource associates

Absolute Resource associates
124 Heritage Avenue #10
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

21858

Company Name: CDM
Company Address: 50 HAMPSHIRE ST CAMBRIDGE MA
Report To: NATHAN JONES
Phone #: (617) 452-6563
Invoice To: NATHAN JONES

Project Name: HAVERHILL LF
Project #: 0522-93058
Project Location: NH (MA) ME VT ___ Other
Protocol: (RCRA) MCP SDWA NHDES NPDES OTHER
Reporting Limits: QAPP EPA DW (GW-1) Other GW-3 S-1
Quote #_____ ☐ NH GREE/ODD Fund Pricing
PO # _____

ANALYSIS REQUEST

☑ VOC 8260 ☐ VOC 8260 NHDES ☐ VOC 8260 MADEP
☐ VOC 624 ☐ VOC BTEX ☐ MtBE, only ☐ VOC 8021VT
☐ VPH MADEP ☐ MEGRO ☐ GRO 8015
☐ VOC 524.2 ☐ VOC 524.2 NH List ☐ Gases-List:
☐ TPH ☐ DRO 8015 ☐ MEDRO ☐ EPH MADEP ☐ TPH Fingerprint
☐ 8270PAH ☐ 8270ABN ☐ 625 ☐ EDB 504.1
☐ 8082 PCB ☐ 8081 Pesticides ☐ 608 Pest/PCB
☐ O&G 1664 ☐ Mineral O&G SM5520F
☐ pH ☐ BOD ☐ Conductivity ☐ Turbidity
☐ TSS ☑ TDS ☐ TS ☐ TVS ☑ Alkalinity
☐ RCRA Metals ☐ Priority Pollutant Metals ☐ TAL Metals
☐ Total Metals-list:
☑ Dissolved Metals-list:
☐ Ammonia ☑ COD ☐ TKN ☐ TN ☐ TON
☐ T-Phosphorus ☐ Phenols ☐ Bacteria P/A ☐ Bacteria MPN
☑ Cyanide ☐ Sulfide ☐ Nitrate + Nitrite ☐ Ortho P
☑ Nitrate ☐ Nitrite ☑ Chloride ☑ Sulfate ☐ Bromide ☐ Fluoride
☐ Corrosivity ☐ Reactive CN ☐ Reactive S- ☐ Ignitibility/FP
☐ TCLP Metals ☐ TCLP VOC ☐ TCLP SVOC ☐ TCLP Pesticide
Subcontract: ☐ TOC ☐ Grain Size ☐ TCLP Herbicides
Total Hardness
Grab (G) or Composite (C)

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	SOLID	OTHER	Preservation Method: HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER (Specify)	Sampling: DATE	TIME	SAMPLER	VOC 8260	Dissolved Metals	Ammonia	Cyanide	Nitrate	Chloride	Total Hardness	Grab (G)
21858-01	MW-15SR	8	X			X	X	X	X			6/23/11	1025	MD	X	X	X	X	X	X		G
02	MW-15M	8											1020									
03	MW-15D	14											1030									
-16 04	MW-17S	9											1150								X	
-17 05	MW-17D	9											1203								X	
-18 06	MW-18S	9											1240								X	
-19 07	MW-18D	9											1250								X	
08	ERT-4	8											1311									

TAT REQUESTED
Priority (24 hr)* ☐
Expedited (48 hr)* ☐
Standard (10 Business Days) ☑
*Date Needed _____

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS MS/MSD-3 Collected AT MW-15D - Metals, CN, VOC per receipt 6/24

REPORTING INSTRUCTIONS ☑ PDF (e-mail address) JONESNE@CDM.COM
☐ HARD COPY REQUIRED ☑ FAX (FAX#) _____ ☐ OTHER (specify) _____

RECEIVED ON ICE ☑ YES ☐ NO
TEMPERATURE 7.4 °C

CUSTODY RECORD
QSD-01 Revision 12/23/10

Relinquished by Sampler:	Date	Time	Received by:	Date	Time
[signature]	6-24-11	1030	[signature]	6/24/11	10:30
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by Laboratory: Way Bill#:	Date	Time

Absolute Resource associates
124 Heritage Avenue #10
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

21858

Company Name: CDM

Company Address: 50 Hampshire St Cambridge MA 02139

Report To: Nathan Jones

Phone #: 617-452-6563

Invoice To: Nathan Jones

Project Name: Haverhill LF

Project #: 0522-83058

Project Location: NH (MA) ME VT Other

Protocol: RCRA SDWA NPDES MCP NHDES OTHER

Reporting Limits: QAPP (GW-1) S-1 EPA DW Other GW-3

Quote #_____ ☐ NH GREE/ODD Fund Pricing

PO # _____

ANALYSIS REQUEST

☑ VOC 8260 ☐ VOC 8260 NHDES ☐ VOC 8260 MADEP ☐ VOC 624 ☐ VOC BTEX ☐ MtBE, only ☐ VOC 8021VT ☐ VPH MADEP ☐ MEGRO ☐ GRO 8015 ☐ VOC 524.2 ☐ VOC 524.2 NH List ☐ Gases-List: ☐ TPH ☐ DRO 8015 ☐ MEDRO ☐ EPH MADEP ☐ TPH Fingerprint ☐ 8270PAH ☐ 8270ABN ☐ 625 ☐ EDB 504.1 ☐ 8082 PCB ☐ 8081 Pesticides ☐ 608 Pest/PCB ☐ O&G 1664 ☐ Mineral O&G SM5520F ☐ pH ☐ BOD ☐ Conductivity ☐ Turbidity ☐ TSS ☑ TDS ☐ TS ☐ TVS ☐ Alkalinity ☐ RCRA Metals ☐ Priority Pollutant Metals ☐ TAL Metals ☐ Total Metals-list: ☑ Dissolved Metals-list: RCRA 8 + Cu, Zn, Cd, Mg, Fe, Mn, Al, Ni ☑ Ammonia ☑ COD ☐ TKN ☐ TN ☐ TOM ☐ T-Phosphorus ☐ Phenols ☐ Bacteria P/A ☐ Bacteria MPN ☑ Cyanide ☐ Sulfide ☐ Nitrate + Nitrite ☐ Ortho P ☑ Nitrate ☐ Nitrite ☑ Chloride ☐ Sulfate ☐ Bromide ☐ Fluoride ☐ Corrosivity ☐ Reactive CN ☐ Reactive S- ☐ Ignitibility/FP ☐ TCLP Metals ☐ TCLP VOC ☐ TCLP SVOC ☐ TCLP Pesticide Subcontract: ☐ TOC ☐ Grain Size ☐ TCLP Herbicides Dissolved Metals RCRA 8 + Cu, Zn, Cd, Mg, Fe, Mn, Al, Ni

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	SOLID	OTHER	Preservation Method: HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER (Specify)	Sampling: DATE	TIME	SAMPLER	VOC 8260	Dissolved Metals	Grab (G) or Composite (C)
09	MW-10S	8	X			X	X	X	X			6/23/11	1520	MD/B	X	X	
10	MW-10M	8	↓			↓	↓	↓	↓			↓	1525	↓	↓	X	
11	MW-10D	8	↓			↓	↓	↓	↓			↓	1510	↓	↓	X	
12	DUP4	4	↓			↓	X					↓	—	↓	↓	X	X
13	EB-4	3	↓			↓	X					↓	1550	↓	↓	X	X
14	TB-2	1	↓			↓	↓	↓	↓			6-14-11	-	↓	↓	↓	↓
15	MW-17S	8	↓			↓	X	X	X			6-24-11	9:55	↓	↓	X	↓

TAT REQUESTED
Priority (24 hr)* ☐
Expedited (48 hr)* ☐
Standard (10 Business Days) ☑
*Date Needed _____

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS

REPORTING INSTRUCTIONS ☑ PDF (e-mail address) Jones.NE@CDM.com
☐ HARD COPY REQUIRED ☑ FAX (FAX#) _____ ☐ OTHER (specify) _____

RECEIVED ON ICE ☑ YES ☐ NO
TEMPERATURE 14 °C

CUSTODY RECORD
QSD-01 Revision 12/23/10

Relinquished by Sampler:	Date	Time	Received by:	Date	Time
[signature]	6-24-11	1030	[signature]	6/24/11	10:30
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by Laboratory: Way Bill#:	Date	Time