

PHASE II ENVIRONMENTAL SITE ASSESSMENT REPORT

**Former Cote Ford Site
820 Cummins Highway and 30-32 Regis Road
Boston (Mattapan), Massachusetts**

Prepared for:



City of Boston
Department of Neighborhood Development
26 Court Street
Boston, Massachusetts 02109

Prepared by:



TRC Environmental Corporation
650 Suffolk Street
Lowell, Massachusetts 01854
(978) 970-5600

February 2013

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Prepared by:

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EXECUTIVE SUMMARY

This Phase II Environmental Site Assessment (ESA) has been prepared on behalf of the City of Boston, Department of Neighborhood Development (DND) to document current groundwater conditions associated with historical releases of oil and hazardous materials (OHM) to the environment at the property located at 820 Cummins Highway and 30-32 Regis Road in Mattapan, Massachusetts (the Site). The Site as defined in this report is listed by the Massachusetts Department of Environmental Protection (MassDEP) under Release Tracking Numbers (RTN) 3-13055 and 3-13852. RTN 3-13055 was closed on October 24, 1996 by linking it with RTN 3-13852. RTN 3-13852 was closed with a Class A-3 Response Action Outcome (RAO) Statement and Activity and Use Limitation (AUL) submitted on August, 13 1997.

The Phase II ESA is being funded through the Environmental Protection Agency's (EPA) Brownfields Program. TRC understands that DND's objective is to re-evaluate current site conditions to determine if natural attenuation and has resulted in a reduction of contamination to the extent that the AUL could be amended or removed to facilitate re-development of the Site property. Through groundwater sampling it is our goal to determine if groundwater represents a potential significant risk through direct contact or potential vapor intrusion risk.

There were thirteen (13) wells on site with unknown conditions based on the previous reports. TRC was able to locate and identify eleven (11) of the wells to assess their physical condition. Only nine of the 11 wells were found to be viable for sampling. Because of the time elapsed between sampling events (fifteen years), the nine viable wells were redeveloped on December 6, 2012 prior to sampling.

TRC sampled the nine wells approximately two weeks after the redevelopment. Sampling activities were conducted in accordance with the EPA-approved Quality Assurance Project Plan (QAPP) Addendum DND-D for the Site (TRC 2012). The wells were sampled using a low flow sampling technique and analyzed for volatile organic compounds (VOCs) via EPA method 8260, volatile petroleum hydrocarbons (VPH) via MassDEP method and Extractable Petroleum Hydrocarbons (EPH) via MassDEP method. This list of analytes was selected because the main contaminant of concern was petroleum. For the area identified as AUL "Area B" metals was added to the analyte list because there was formerly a waste oil underground storage tank located nearby. Metals were not analyzed during the previous investigations conducted by Rizzo Associates Inc. (Rizzo) between 1996 and 1997.

The concentrations of petroleum contaminants in the groundwater identified by Rizzo in 1996 and 1997 were found at significantly lower concentrations during TRC's investigation in 2012. This decrease in petroleum concentrations may be attributed to natural degradation of petroleum compounds over the last fifteen years and/or horizontal migration and dilution.

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1.0 INTRODUCTION

1.1 Objective

TRC Environmental Corporation (TRC) performed a Phase II Environmental Site Assessment (ESA) for the Former Cote Ford Site located at 820 Cummins Highway and 30-32 Regis Road, in the Mattapan Neighborhood of Boston, Massachusetts (the "Site"). This Phase II ESA was performed for The City of Boston's Department of Neighborhood Development (DND) under Boston's Petroleum Brownfield's Assessment Grant Program funded by the United States Environmental Protection Agency (EPA).

This Phase II ESA was performed to evaluate the following *Recognized Environmental Condition* (REC) identified in an American Society for Testing and Materials (ASTM) Phase I ESA completed by Rizzo Associates Inc. (Rizzo) for the Site in October 1996 and to evaluate current groundwater conditions subsequent to the Response Action Outcome Statement (RAO) completed by Rizzo in August 1997.

This Phase II ESA was also performed to evaluate the current site conditions to determine if natural attenuation has resulted in a reduction of contamination to the extent that the AUL could be amended and/or removed to facilitate redevelopment of the Site property. Through groundwater sampling it is our goal to determine if groundwater represents a potential significant risk through direct contact or potential vapor intrusion risk.

1.2 Site Location and Description

The property located at 820 Cummins Highway is occupied by a two story reinforced concrete building, built in 1950, with an attached one story asphalt-topped reinforced concrete garage added in 1968. The buildings were originally used for the display, sale, and repair of automobiles. The 30-32 Regis Road portion of the Site is occupied by a one-story building renovated to its current configuration in 1954. The property has historically been used as an auto body shop and vehicle repair facility. The remaining acreage is surfaced with asphalt and was formerly used for parking new and used vehicles for the above-mentioned operations. The Site has been connected to municipal water and sewer service since its construction.

The Site is currently owned by the City of Boston through tax-title taking from the JAM Realty Trust with the 820 Cummins Highway transaction occurring on April 6, 2011 and the 30-32 Regis Road transaction occurring on March 28, 2011. The Site is currently vacant and unoccupied.

A Site Location Map identifying the general Site vicinity is provided in Figure 1. A Site Plan illustrating the general features and layout of the Site and surrounding vicinity is provided as Figure 2.

1.3 Surrounding Area Description

The surrounding areas are served by municipal water and sewer. The estimated residential population within one-half mile of the Site is 17,431 persons, and the land surrounding the Site is predominantly residential and commercial. No institutions, as defined in the Massachusetts Contingency Plan (MCP), were identified within 500 feet of the Site.

No known private drinking water wells are located within 500 feet of the Disposal Site. According to the Massachusetts Geographic Information Systems (MassGIS) *MassDEP Priority Resource Map*, provided as Figure 3, no Areas of Critical Environmental Concern, Threatened or Endangered Species Habitats are within 500 feet of the Disposal Site. There is a portion of a Protected Open Space (Woodhaven Park) that is inside the 500 feet radius. This park is located north of the site and is upgradient of the groundwater flow.

1.4 Geologic and Hydrologic Conditions

The physical setting of the Site was analyzed using available USGS topographic and geologic maps of the Site and surrounding area. The Site is located at an elevation of about 20 meters (approximately 65 feet) above the National Geodetic Vertical Datum (NGVD). Local topography in the area of the Site slopes down to the southeast. Groundwater flow from the Site and surrounding properties is expected to follow the Site topography and flow southeast toward the Neponset River.

Based on the observations by Rizzo Associates during the installation of soil borings, subsurface material in the area of the Site appears to comprise up to five feet of miscellaneous fills, which consist of loose sand and gravels mixed with traces of silt, clay, and brick which is underlain by 3 to 12 feet of silty sands that overlies the bedrock. Auger refusal was encountered at depths between 7 and 17 feet (Rizzo, 1996) and is interpreted to be due to bedrock. The bedrock in the vicinity of the Site is the Roxbury Conglomerate which has minor sandstone and siltstone subunits.

According to the MassGIS *MassDEP Priority Resource Map*, provided as Figure 3, the Site is not located within designated groundwater protection areas, interim wellhead protection areas, a productive or potentially productive aquifer, or a non-potential drinking water source area. The Neponset River (1,200 feet to the southeast) is the nearest wetland and potential fish habitat.

Groundwater elevations at Site monitoring wells ranged from approximately 2.8 to 6.48 feet below ground surface on December 19 to 20, 2012. Groundwater measurements and elevations are presented on Table 1. A Site map depicting soil boring and monitoring well locations is provided as Figure 2.

1.5 Release Tracking Numbers

A historical release of oil and petroleum constituents was identified by Rizzo at the property during the removal of three underground storage tanks (USTs) on October 17 and 18, 1995. Soil

staining, petroleum odors, and elevated photoionization detector (PID) responses were observed throughout the extent of the UST excavation at depths of about 3 to 6 feet below ground surface. The MassDEP was notified of the release on October 18, 1995, and assigned RTN 3-13055 to JAM Realty Trust. This release area was adjacent to the building located at 820 Cummins Highway.

A separate release was reported to the MassDEP by Rizzo on behalf of the JAM Realty Trust on June 4, 1996 based on a total petroleum hydrocarbons (TPH) detection of 7,200 mg/kg in a soil sample obtained from the area east of the 30-32 Regis Road building. MassDEP assigned RTN 3-13852 to this condition and JAM Realty Trust was named the Potentially Responsible Party. The Site has been delineated to include both of these release areas.

RTN 3-13852 was closed on October 24, 1996 by linking it to RTN 3-13055. RTN 3-13055 was closed with a Class A-3 Response Action Outcome (RAO) Statement and Activity and Use Limitation (AUL) submitted on August, 13 1997

2.0 SITE HISTORY

2.1 Historic Site Use

City of Boston Assessor's Office records and Sanborn Map Company fire insurance maps were reviewed to document the history of the Site and surrounding properties.

The earliest record of the Site found during this investigation was a 1908 Sanborn Map Company fire insurance map that indicates the 820 Cummins Highway, then Oakland Street, was undeveloped and the Mattapan Express depot existed at what is currently 32 Regis Road. A few scattered residences were located in the vicinity of the Site, with the surrounding parcels undeveloped. The property at 820 Cummins Highway remained undeveloped until the current Site building was constructed in 1950. Automobiles were displayed on the first floor and automobile repair work was performed in the basement. A basement addition with open deck parking was added in 1968. The 30-32 Regis Road property remained an automobile garage from 1908 until it was last occupied in 1993. Many of the residences that presently abut the Site were built between 1930 and 1950.

2.2 Previous Environmental Site Investigations

2.2.1 Briggs Site Assessment Report - December 1986

Briggs conducted a limited site investigation in December, 1986 and prepared a report entitled *MGL 21E Site Assessment Report*. As part of their investigation, Briggs installed three soil borings and completed them as groundwater monitoring wells. Water and soil samples taken from the observation wells and borings were tested for volatile organic compounds (VOCs), oil and grease concentrations, and Resource Conservation and Recovery Act (RCRA) 8 metals. A groundwater sample collected from monitoring well OW-3, which was installed adjacent to a 4,000-gallon UST on the 30-32 Regis Road property, had detections of benzene, ethylbenzene, and toluene.

As a result of this investigation, the 4,000-gallon gasoline UST was removed from the 30-32 Regis Road property along with approximately 80 cubic yards of petroleum-contaminated soil (Briggs, 1986).

2.2.2 UST Removal – October 1995

Under contract to JAM Realty Trust, Redwing Environmental Technologies, Inc. of Framingham, Massachusetts conducted the excavation and removal of three USTs on October 17 and 18, 1995 at the 820 Cummins Highway parcel. Rizzo was on-site to screen soil samples and to assist JAM Realty Trust in observation of UST removal operations.

A 1,000-gallon gasoline UST, a 5,000-gallon waste oil UST, and a 2,000-gallon fuel oil UST were located in a semi-paved and overgrown shrub area between the two-story garage and Massachusetts Bay Transit Authority railroad tracks. During the excavation, soils were screened

for VOCs using a PID. Soil samples collected at various locations within the UST excavation were headspace screened.

Following removal of the USTs, excavation of additional petroleum-contaminated soils was conducted as part of an Immediate Response Action (IRA) that was orally approved by the MassDEP on October 18, 1996. The lower limits of the excavation were at an average depth of about six to seven feet below ground surface. Approximately 200 cubic yards of petroleum-contaminated soils were sent off-site for disposal.

Following removal of the USTs and the additional excavation of petroleum-contaminated soil as part of the IRA, seven confirmatory composite soil samples were collected from the completed excavation on October 18 and 24, 1995. In addition, two confirmatory groundwater samples were collected from the completed excavation on October 18 and 24, 1995. An IRA Completion Statement was submitted to the MassDEP by Rizzo on December 22, 1995 (Rizzo, 1995).

2.2.3 Rizzo Associates Inc. – Phase I ESA – 1996

Rizzo performed a limited subsurface investigation of the Site in January 1996. The limited subsurface investigation consisted of the advancement of 14 soil borings and the completion of seven of those borings as monitoring wells. Based on PID screening results, six soil samples were selected for analysis for TPH by Gas Chromatograph/Flame Ionization Detector (GC/FID) and for VOCs by EPA Method 8260. The seven new groundwater monitoring wells and the existing groundwater monitoring wells on the property were surveyed, and a total of nine wells were sampled. Groundwater samples were analyzed for TPH by GC/FID and for VOCs by EPA Method 8260. These soil and groundwater analytical results were included in the Phase I Report, and are included in Table 3.

Rizzo also performed a subsurface investigation in July 1996. A total of seven additional soil borings (B-13 through B-18) were advanced in the area around the former 4,000 gallon gasoline tank on the Regis St parcel to further characterize soil conditions in this area of the Site. Soil samples were obtained in each boring at depths of grade to two feet and four to six feet below the ground surface using a split spoon sampler. Soil samples were screened for petroleum hydrocarbon contamination using the jar headspace method and a PID according to Rizzo standard procedures. Based on the screening results, selected soil samples were analyzed at a state-certified laboratory by the VPH/EPH method for petroleum hydrocarbons.

Two monitoring wells, RIZ-5, inside the 820 Cummins Highway building, and MW-6, a newly discovered well on the 30-32 Regis Road parcel adjacent to the former gasoline underground storage tank, were sampled on July 25, 1996. Groundwater samples from RIZ-5 and MW-6 were analyzed at the laboratory by the VPH/EPH method for petroleum hydrocarbons. The boring and monitoring well locations are shown on Figure 2. These groundwater analytical results were provided in the Phase I Report, and are included in Table 3 (Rizzo, 1996a).

2.2.4 Rizzo Associates Inc. – Release Abatement Measure Plan– 1996

On December 30, 1996, the Release Abatement Measure (RAM) plan was submitted to the MassDEP for the 30-32 Regis Street parcel. The activities covered by this plan were to remove petroleum contaminated soil and transport it off site to an approved asphalt batching facility. The excavation was to go to a maximum depth of two to three feet below surface. The excavation was to remain open until confirmatory samples were below MCP S-1/GW-2 standards (Rizzo, 1996b).

2.2.5 Rizzo Associates Inc. – Release Abatement Measure Completion Report – 1997

On January 6, 1997, the Release Abatement Measure (RAM) was initiated at the Site with the excavation of surficial soils in the vicinity of previous soil borings near the former 4,000 gallon gasoline UST and adjacent to the building. After removing the first two feet of soil, a previously unidentified UST was uncovered adjacent to the southwest corner of the building located at 30-32 Regis Street.

Soil excavation was temporarily suspended to assess the UST and determine further action. On January 21, 1997, RAM excavation was resumed with soil excavation down to a depth of approximately four feet around the UST, and removal and disposal of the UST. Upon removal, the UST was inspected and found to have several quarter-sized holes along the bottom. No evidence of free product was observed in the excavation.

Soil to a depth of two to four feet below the ground surface was removed from the RAM excavation area and stockpiled on-site in accordance with the RAM Plan. The excavated soil and the sidewalls of the excavation showed evidence of considerable amounts of ash, bricks, glass and wood. These observed characteristics are consistent with those of man-made fills in an urban setting with a history of industrial activity, such as the subject Site. Once soil excavation was completed, confirmatory soil samples were obtained from the sidewalls and bottom of the excavation. These samples were analyzed for EPH via MassDEP method and for VOCs by EPA Method 8260 (Rizzo, 1997a).

2.2.6 Rizzo Associates Inc. – Method 3 Risk Characterization – 1997

Rizzo conducted a Human Health and Environmental Risk Characterization (Method 3) in accordance with the MCP 310 CMR 40.0000 for the Site using all the data collected during the Phase I and RAM activities. A condition of "significant risk to human health" was found to exist for this Site based on the Hazard Index (HI)s and ELCR for the Construction/Utility Worker.

A condition of no significant risk of harm to public welfare or the environment exists for the Site since no compounds exceed Upper Concentration Limits. However, based on the risk to a Construction/Utility Worker, an Activity and Use Limitation (AUL) was necessary to notify interested parties of the condition and to achieve a condition of no significant risk to human health (Rizzo, 1997b).

2.2.7 *Rizzo Associates Inc. – Licensed Site Professional Option for the Activity and Use Limitation – 1997*

With the completion of the IRA, RAM, Phase I, Risk Assessment, and the removal of the USTs, Rizzo determined that a Permanent Solution had been achieved for the specific historical petroleum releases. Rizzo concluded that no additional activities were required to further address the petroleum release. However, an AUL was required to maintain a condition of no significant risk to human health at the Site for the residual petroleum contamination at the Site. A Class A-3 RAO Statement was submitted to the DEP for the release sites.

AUL was recorded for three dissect areas of the Site. The AUL is to prevent the exposure of children under 15 years of age to the surficial contaminated soil and to restrict the Construction/Utility Worker from trenching to the groundwater and inhaling the hydrocarbon vapors from the exposed groundwater (Rizzo, 1997b).

2.3 Compliance History

In 2002 the site AUL was audited by the MassDEP. As a result of the audit, Rizzo prepared a Method 3 Risk Characterization to support amendments to the restrictions listed in the AUL. Rizzo reported that results of the risk characterization indicated that restrictions on activities and uses of the three designated AUL areas were still required to achieve and maintain a condition of No Significant Risk. In general, activities and uses of the AUL Areas that resulted in exposures of children and adults to identified subsurface contaminated soil located approximately four feet below the ground surface or excavation to groundwater and resultant exposure of construction workers to petroleum hydrocarbon vapors emanating from the groundwater must be restricted (Rizzo, 2002).

Another audit was performed by the MassDEP on June 6, 2008. The site was found to be in compliance at that time with the current AUL. No further action was required.

3.0 SITE INVESTIGATION

The following sections summarize activities performed as part of TRC's Phase II ESA. A Site Plan depicting pertinent Site features is provided as Figure 2.

3.1 Groundwater Monitoring Well Inspection, Development and Sampling

TRC performed a monitoring well inspection with the property owner representative on December 3, 2012. During the site walk, monitoring wells RIZ-4 and MW-3 could not be located. Monitoring well MW-4 was found with no road box cover and the well casing was open below grade. Monitoring well MW-1 found to be damaged, apparently from a sidewalk installation or replacement. The MW-1 well casing was bent and unable to pass a submersible pump.

Nine of the thirteen existing monitoring wells were located and re-developed on December 6, 2012 using a submersible pump to remove fine particles from around the sand pack and well screen. Monitoring wells were gauged then purged dry three times. Water quality measurements were not collected due to the low volume of water in the wells. After development, monitoring wells were allowed to stabilize for a period of two weeks before samples were collected.

TRC collected groundwater samples from the nine monitoring wells (MW-2, MW-5, MW-6, RIZ-1, RIZ-2, RIZ-3, RIZ-5, RIZ-6, and MW-18") on December 19 and 20, 2012. All groundwater samples were analyzed for VOCs, VPH and EPH by Con-Test Analytical of East Longmeadow, Massachusetts. Samples MW-2, RIZ-2, RIZ-3, and MW-18" were also analyzed for Total MCP metals. With the exception of sample RIZ-5 and RIZ-6, samples were obtained using low-flow sampling techniques with adjustable purge rate submersible pumps. Groundwater sampling for RIZ-5 and RIZ-6 utilized a peristaltic pump in accordance with EPA Region 1 Low Stress (Low Flow) guidelines due to the low water level in the wells. This deviation from the EPA-approved QAPP Addendum DND-D for the Site (TRC, 2012) does not adversely affect the overall project objectives.

Groundwater was then purged through a flow through cell where water quality parameters were recorded using an YSI© 600XL water quality meter. Parameters recorded included temperature, conductivity, pH, dissolved oxygen (DO), and oxygen reduction potential (ORP). A separate LaMotte 2020© turbidity meter was used for turbidity measurements. Groundwater samples were collected after the water quality parameters stabilized as set forth in the EPA-approved QAPP Addendum DND-D.

3.2 Groundwater Elevation Survey and Separate Phase Hydrocarbon Measurement

Groundwater level measurements were collected from the nine viable wells (MW-2, MW-5, MW-6, RIZ-1, RIZ-2, RIZ-3, RIZ-5, RIZ-6, and MW-18") on December 19 and 20, 2012, prior to the start of groundwater sampling activities. The monitoring wells were screened for non-aqueous phase liquid (NAPL) using an oil/water interface probe. NAPL was not detected during this gauging round.

Groundwater depths ranged from approximately 2.8 to 6.48 feet below ground surface. A summary of monitoring well integrity and relative groundwater elevation data for on-Site monitoring wells is provided on Table 1.

Reference point elevations for the monitoring wells at the Site were not provided in previous environmental reports and a survey of well elevations was beyond the scope of TRC's Phase II assessment. Therefore, TRC was unable to calculate groundwater elevations and flow direction using the December 2012 water level measurements. Historical groundwater elevation data presented in the Phase I report by Rizzo (1996a) shows a south west flow for the groundwater direction on the site.

3.3 Applicable Groundwater Reporting and Cleanup Categories

To evaluate potential cleanup needs and/or the suitability of amending or removing the AUL, groundwater results were compared to MCP Method 1 GW-2 and GW-3 cleanup standards. The following section provides rationale for determining applicable categories for comparing contaminant concentrations to appropriate numerical standards based on current and reasonably foreseeable future Site activities and uses.

Groundwater Criteria

Cleanup – The applicable groundwater classification for the Site is MCP categories GW-2 and GW-3 as explained below.

Groundwater is categorized based upon the current and/or future use as a drinking water source (GW-1), its potential to act as a source of volatile material to indoor air (GW-2), and the potential to discharge material to surface water (GW-3). The MCP describes six criteria used for determining if Site ground water is categorized as GW-1. These criteria include the following table.

GW-1 Selection Criteria	Applicable (Yes or No)
The groundwater is within a Zone II	NO
The groundwater is within an Interim Wellhead Protection Area	NO
The groundwater is within a Potentially Productive Aquifer	NO
The groundwater is within Zone A of a Class A Surface Water Body	NO
The groundwater is located greater than 500 feet from a public water system distribution pipeline*	NO
The groundwater is located within 500 feet of a private water supply well that was in use at the time of notification pursuant to 310 CMR 40.0300 and was installed in conformance with an applicable laws, by-laws, or regulations	NO
Notes: Information Source - <i>Massachusetts Geographic Information Systems (MassGIS) MassDEP Priority Resource Map.</i>	

The groundwater at the Site does not meet any of the above criteria, and is therefore not categorized as GW-1.

The MCP indicates that groundwater is categorized as GW-2 when it is located within 30 feet of an occupied building or structure and the average annual depth to groundwater in the area is fifteen feet or less. During investigation activities, average depth to groundwater across the Site ranged from approximately 2.8 to 6.48 feet below grade. Also, monitoring well MW-6 is located less than 30 feet occupied residential building located at 26 Regis Street (adjoining property to the south). Therefore, based on the requirements of the MCP, groundwater would be classified as GW-2.

Finally, in accordance with 310 CMR 40.0932(2) of the MCP, all groundwater within the Commonwealth is classified as GW-3.

4.0 ANALYTICAL RESULTS

A summary of the groundwater samples collected and the analyses performed are provided in Table 2. A summary of the laboratory groundwater analytical results are provided in Table 3. Copies of ground water collection logs are provided in Appendix A. Copies of the associated laboratory analytical reports are provided in Appendix B.

4.1 Groundwater Analytical Results

Laboratory analytical results of groundwater samples collected from the Site were compared to MCP RCGW-2 standards and Method 1 GW-2 / GW-3 cleanup standards. VOCs, VPH, EPH, and metals compounds were not detected above GW-2 or GW-3 standards in monitoring wells sampled on December 19 and 20, 2012. The 30 micrograms per liter (ug/L) concentration of trichloroethene detected in well RIZ-2 was equal to the GW-2 standard.

4.2 Data Usability Assessment

The data associated with groundwater samples collected on December 19 and 20, 2012 were reviewed. In general, data are usable for MCP decisions based on a review of accuracy, precision, and sensitivity of the data. Although there were select quality control (QC) nonconformances, the data are valid as reported and may be used for decision-making purposes with the following caution.

- Potential uncertainty exists for naphthalene, acetone, bromomethane, 2-butanone, and 1,4-dioxane in all groundwater samples due to LCS/LCS Duplicate variability. In general, the overall data usability and decision-making process were not affected since the nondetect results for these analytes were significantly below the project action levels in all affected samples.
- Potential high bias exists for acetone, diethyl ether and trichlorofluoromethane in all groundwater samples due to high recoveries in the LCS Duplicate. In general, the overall data usability and decision-making process were not affected since these compounds were not detected in the associated samples.

Details on the data usability assessment are provided in Appendix C.

5.0 CONCLUSIONS

The following conclusions are based on TRC's Phase II ESA:

- **Groundwater Flow Direction and Depth** – Groundwater flow beneath the Site is estimated to be towards the south-southeast (based on historical sampling data (Rizzo 1996a)). Groundwater depths at the Site ranged from 2.8 to 6.48 feet below grade. NAPL was not detected in any of the monitoring wells installed at the Site.
- **Groundwater Analytical Results** – Concentrations of analyzed constituents were not detected above MCP GW-2 or GW-3 Standards.

It should be noted that the concentrations of petroleum contaminants and TCE in the groundwater identified by Rizzo in 1996 and 1997 were found at significantly lower concentrations during TRC's investigation in 2012. This decrease in petroleum constituents and TCE concentrations may be attributed to natural degradation over the last fifteen years and/or horizontal migration and dilution

6.0 LIMITATIONS

1. TRC's study was performed in accordance with generally accepted practices of other consultants undertaking similar studies at the same time and in the same geographical area, and TRC observed that degree of care and skill was generally exercised by other consultants under similar circumstances and conditions. TRC's findings and conclusions must be considered not as scientific certainties, but rather as professional opinion concerning the significance of the limited data gathered during the course of the study. No other warranty, express or implied, is made. Specifically, TRC does not and cannot represent that the subject property contains no hazardous material, oil, or other latent condition beyond that observed by TRC during its study. Additionally, TRC makes no warranty that any response action or recommended action will achieve all of its objectives or that the findings of this study will be upheld by a MassDEP audit.
2. This study and report have been prepared on behalf of and for the exclusive use of the **Owner and the Client**, solely for use in a Phase II ESA for the commercial properties located at 820 Cummins Highway and 30-32 Regis Road in Mattapan, Massachusetts (subject property). This submittal and the findings contained herein shall not, in whole or in part, be disseminated or conveyed to any other party, nor used by any other party in whole or in part, without the prior written consent of TRC or the Client.
3. The observations described in this report were made under the conditions stated therein. The conclusions presented in the report were based solely upon the services described therein, and not on scientific tasks or procedures beyond the scope of described services or the time and budgetary constraints imposed by Client. The work described in this report was carried out in accordance with the Terms and Conditions referenced in our proposal to the Client.
4. In the event that the Client or others authorized to use this report obtain information on environmental or hazardous waste issues at the subject property not contained in this report, such information shall be brought to TRC's attention forthwith. TRC will evaluate such information and, on the basis of this evaluation, may modify the conclusions stated in this report.
5. The purpose of this report was to re-evaluate and update the current environmental conditions for the site based on the groundwater for the subject property. No specific attempt was made to check on the compliance of present or past owners or operators of the Site with federal, state, or local laws and regulations, environmental or otherwise.

7.0 REFERENCES

- MassDEP, 2002d. Characterizing Risks Posed by petroleum Contaminated Sites: Implementations of the MADEP VPH/EPH Approach. Final Policy #WSC-02-411. Bureau of Waste Site Cleanup. October 31, 2002.
- Massachusetts Department of Environmental Protection (MassDEP), *Massachusetts Contingency Plan*, 310 CMR 40.0000, effective date, June 26, 2009.
- Rizzo and Associates, Inc., *Immediate Response Action Completion Statement, 820 Cummins Highway and 30-32 Regis Road, Mattapan, Massachusetts* dated December 22, 1995.
- Rizzo and Associates, Inc., *Phase I Report and Tier Classification Submittal, 820 Cummins Highway and 30-32 Regis Road, Mattapan, Massachusetts* dated October 22, 1996.
- Rizzo and Associates, Inc., *Release Abatement Measure Plan, 30-32 Regis Road, Mattapan, Massachusetts* dated December 30, 1996.
- Rizzo and Associates, Inc., *Release Abatement Measure Completion Report, 820 Cummins Highway and 30-32 Regis Road, Mattapan, Massachusetts* dated May 6, 1997.
- Rizzo and Associates, Inc., *Human Health and Environmental Risk Characterization, 820 Cummins Highway and 30-32 Regis Road, Mattapan, Massachusetts* dated August 6, 1997.
- Rizzo and Associates, Inc., *Response Action Outcome Statement, 820 Cummins Highway and 30-32 Regis Road, Mattapan, Massachusetts* dated August 13, 1997.
- Rizzo and Associates, Inc., *Amended Licensed Site Professional Opinion for Activity and Use Limitation, 820 Cummins Highway and 30-32 Regis Road, Mattapan, Massachusetts* dated May 31, 2002.
- TRC Environmental Corporation, *Brownfields Quality Assurance Project Plan, Addendum DND-D for Former Cote Ford Site at 820 Cummins Highway and 30-32 Regis Road, Mattapan, Massachusetts*, dated November 29, 2012.

TABLES

**Table 1: Monitoring Well Groundwater Elevations
820 Cummins Highway and 30-32 Regis Road – Mattapan, MA**

Well ID	Historical 1996		Development 12-6-12		Sampling 12-19/20-12		Well Integrity	
	DTW (ft.)	DTB (ft.)	DTW (ft.)	DTB (ft.)	DTW (ft.)	DTB (ft.)	Road Box	Well Plug
18" Well	UNK	10	~6.5	~7.2	5.75	~7.2	No	No
MW-1	UNK	-	<i>dry</i>	14	<i>dry</i>	14	Yes	No
MW-2	UNK	-	5.05	10.25	2.8	10.25	Yes	No
MW-3	UNK	-	-	-	-	-	-	-
MW-4	UNK	-	9.21	9.56	9.21	9.56	No	No
MW-5	UNK	-	8.54	15.25	5.83	15.25	Yes	No
MW-6	UNK	-	9.05	14.35	6.48	14.35	Yes	No
RIZ-1	4	12.5	9.04	11.8	6.48	11.8	Yes	No
RIZ-2	2.66	7.5	4.75	7.31	2.81	7.31	Yes	Yes
RIZ-3	3.22	7.75	7.2	7.7	3.99	7.7	Yes	Yes
RIZ-4	3.5	7	-	-	-	-	-	-
RIZ-5	4.5	9.5	6.57	9.2	5.54	9.2	Yes	No
RIZ-6	4.5	9.25	6.4	7.25	5.45	7.25	Yes	No

DTW = Depth To Water

DTB = Well Depth

Table 2: Groundwater Sampling Program			
820 Cummins Highway and 30-32 Regis Road – Mattapan, MA			
Location	Description	Analyses	Rationale / Notes ¹
Groundwater Samples			
MW-18", MW-2, MW-5, MW-6, RIZ-1, RIZ-2, RIZ-3, RIZ-5, RIZ-6	Existing monitoring well location	VOCs, VPH, EPH	<ul style="list-style-type: none"> ▪ Assess potential gasoline or fuel oil release. Do not anticipate other contaminants based on previous investigations and past documented site uses.
AUL Area B, (MW-18" MW-2, RIZ-2, and RIZ-3) ³	Existing monitoring well location	MCP Metals ²	<ul style="list-style-type: none"> ▪ Assess potential gasoline and fuel oil release. Oil, waste oil and gasoline were all stored here. Do not anticipate other contaminants based on previous investigations and past documented site uses.

Notes:

EPH – Extractable Petroleum Hydrocarbons, VPH – Volatile Petroleum Hydrocarbons, VOCs – Volatile Organic Compounds, MCP Metals – Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc, Mercury

¹ - Rationale for sampling and analysis is based on the information provided to TRC from multiple Rizzo reports filed with the MassDEP and downloaded from the EDEP site.

² – Groundwater samples were submitted for total and dissolved metals. Only the total metals analysis was initially authorized. Dissolved metals samples will be held pending the results of the total metals analysis.

³ – If wells RIZ-4 and 18" Well cannot be located, wells MW-2 and RIZ-5 will instead be sampled. RIZ-3 sample will be for background metals associated with this site.

Table 2: Groundwater Sampling Program			
820 Cummins Highway and 30-32 Regis Road – Mattapan, MA			
Location	Description	Analyses	Rationale / Notes ¹
Groundwater Samples			
MW-18", MW-2, MW-5, MW-6, RIZ-1, RIZ-2, RIZ-3, RIZ-5, RIZ-6	Existing monitoring well location	VOCs, VPH, EPH	<ul style="list-style-type: none"> ▪ Assess potential gasoline or fuel oil release. Do not anticipate other contaminants based on previous investigations and past documented site uses.
AUL Area B, (MW-18" MW-2, RIZ-2, and RIZ-3) ³	Existing monitoring well location	MCP Metals ²	<ul style="list-style-type: none"> ▪ Assess potential gasoline and fuel oil release. Oil, waste oil and gasoline were all stored here. Do not anticipate other contaminants based on previous investigations and past documented site uses.

Notes:

EPH – Extractable Petroleum Hydrocarbons, VPH – Volatile Petroleum Hydrocarbons, VOCs – Volatile Organic Compounds, MCP Metals – Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc, Mercury

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³ - If wells RIZ-4 and 18" Well cannot be located, wells MW-2 and RIZ-5 will instead be sampled. RIZ-3 sample will be for background metals associated with this site.

Table 3: 1995, 1996, 1997 and 2012 Groundwater Data
Former Cote Ford Site
820 Cummins Highway and 30-32 Regis Road
Mattapan, Massachusetts

Analysis	Analyte	Sample ID:		MW-2		MW-5		MW-6			RIZ-1		RIZ-2	
		Sample Date:		1/29/1996	12/19/2012	1/29/1996	12/20/2012	7/25/1996	2/7/1997	12/20/2012	1/29/1996	12/20/2012	1/29/1996	12/19/2012
		GW-2	GW-3											
VOCs (ug/L)	Acetone	50,000	50,000	5 U	10 U	100 U	10 U	NA	50 U	20 U	NA	10 U	5 U	10 U
	tert-Amyl Methyl Ether (TAME)	NS	NS	NA	0.50 U	NA	0.50 U	NA	NA	1.0 U	NA	0.50 U	NA	0.50 U
	Benzene	2,000	10,000	2 JB	1.0 U	44 J	1.0 U	NA	5.0 U	3.5	NA	1.0 U	5 U	1.0 U
	Bromobenzene	NS	NS	NA	1.0 U	NA	1.0 U	NA	5.0 U	2.0 U	NA	1.0 U	NA	1.0 U
	Bromochloromethane	NS	NS	NA	1.0 U	NA	1.0 U	NA	5.0 U	2.0 U	NA	1.0 U	NA	1.0 U
	Bromodichloromethane	6	50,000	5 U	1.0 U	100 U	1.0 U	NA	5.0 U	2.0 U	NA	1.0 U	5 U	1.0 U
	Bromoform	700	50,000	5 U	1.0 U	100 U	1.0 U	NA	5.0 U	2.0 U	NA	1.0 U	5 U	1.0 U
	Bromomethane	7	800	5 U	2.0 U	100 U	2.0 U	NA	10 U	4.0 U	NA	2.0 U	5 U	2.0 U
	2-Butanone	50,000	50,000	5 U	10 U	100 U	10 U	NA	23 U	20 U	NA	10 U	5 U	10 U
	n-Butylbenzene	7,000 ⁽¹⁾	50,000 ⁽¹⁾	NA	1.0 U	NA	1.0 U	NA	140	2.4	NA	1.0 U	NA	1.0 U
	sec-Butylbenzene	7,000 ⁽¹⁾	50,000 ⁽¹⁾	NA	1.0 U	NA	1.0 U	NA	39	2.0 U	NA	1.0 U	NA	1.0 U
	tert-Butylbenzene	7,000 ⁽¹⁾	50,000 ⁽¹⁾	NA	1.0 U	NA	1.0 U	NA	5.0 U	2.0 U	NA	1.0 U	NA	1.0 U
	tert-Butyl Ethyl Ether (TBEE)	NS	NS	NA	0.50 U	NA	0.50 U	NA	NA	1.0 U	NA	0.50 U	NA	0.50 U
	Carbon disulfide	NS	NS	5 U	5.0 U	100 U	5.0 U	NA	50 U	10 U	NA	5.0 U	5 U	5.0 U
	Carbon tetrachloride	2	5,000	5 U	1.0 U	100 U	1.0 U	NA	5.0 U	2.0 U	NA	1.0 U	5 U	1.0 U
	Chlorobenzene	200	1,000	5 U	1.0 U	100 U	1.0 U	NA	18 U	2.0 U	NA	1.0 U	5 U	1.0 U
	Dibromochloromethane	20	50,000	5 U	0.50 U	100 U	0.50 U	NA	5.0 U	1.0 U	NA	0.50 U	5 U	0.50 U
	Chloroethane	NS	NS	5 U	2.0 U	100 U	2.0 U	NA	10 U	4.0 U	NA	2.0 U	5 U	2.0 U
	Chloroform	50	20,000	5 U	2.0 U	100 U	2.0 U	NA	7.5 U	4.0 U	NA	2.0 U	5 U	2.0 U
	Chloromethane	NS	NS	5 U	2.0 U	100 U	2.0 U	NA	50 U	4.0 U	NA	2.0 U	5 U	2.0 U
	o-Chlorotoluene	NS	NS	NA	1.0 U	NA	1.0 U	NA	5.0 U	2.0 U	NA	1.0 U	NA	1.0 U
	p-Chlorotoluene	NS	NS	NA	1.0 U	NA	1.0 U	NA	5.0 U	2.0 U	NA	1.0 U	NA	1.0 U
	1,2-Dibromo-3-chloropropane	NS	NS	NA	2.0 U	NA	2.0 U	NA	5.0 U	4.0 U	NA	2.0 U	NA	2.0 U
	1,2-Dibromoethane	2	50,000	NA	0.50 U	NA	0.50 U	NA	5.0 U	1.0 U	NA	0.50 U	NA	0.50 U
	Dibromomethane	NS	NS	NA	1.0 U	NA	1.0 U	NA	50 U	2.0 U	NA	1.0 U	NA	1.0 U
	1,2-Dichlorobenzene	2,000	2,000	NA	1.0 U	NA	1.0 U	NA	50 U	2.0 U	NA	1.0 U	NA	1.0 U
	1,3-Dichlorobenzene	2,000	50,000	NA	1.0 U	NA	1.0 U	NA	50 U	2.0 U	NA	1.0 U	NA	1.0 U
	1,4-Dichlorobenzene	200	8,000	NA	1.0 U	NA	1.0 U	NA	50 U	2.0 U	NA	1.0 U	NA	1.0 U
	Dichlorodifluoromethane	NS	NS	NA	2.0 U	NA	2.0 U	NA	50 U	4.0 U	NA	2.0 U	NA	2.0 U
	1,1-Dichloroethane	1,000	20,000	5 U	1.0 U	100 U	1.0 U	NA	7.5 U	2.0 U	NA	1.0 U	5 U	1.0 U
	1,2-Dichloroethane	5	20,000	5 U	1.0 U	100 U	1.0 U	NA	7.5 U	2.0 U	NA	1.0 U	5 U	1.0 U
	1,1-Dichloroethene	80	30,000	5 U	1.0 U	100 U	1.0 U	NA	5.0 U	2.0 U	NA	1.0 U	5 U	1.0 U
	cis-1,2-Dichloroethene	100	50,000	5 U	1.0 U	100 U	1.0 U	NA	5.0 U	2.0 U	NA	1.0 U	32	1.7
	trans-1,2-Dichloroethene	90	50,000	5 U	1.0 U	100 U	1.0 U	NA	7.5 U	2.0 U	NA	1.0 U	5 U	1.0 U
	1,2-Dichloropropane	3	50,000	5 U	1.0 U	100 U	1.0 U	NA	18 U	2.0 U	NA	1.0 U	5 U	1.0 U
	1,3-Dichloropropane	NS	NS	NA	0.50 U	NA	0.50 U	NA	5.0 U	1.0 U	NA	0.50 U	NA	0.50 U
	2,2-Dichloropropane	NS	NS	NA	1.0 U	NA	1.0 U	NA	5.0 U	2.0 U	NA	1.0 U	NA	1.0 U
	1,1-Dichloropropene	NS	NS	NA	0.50 U	NA	0.50 U	NA	NA	1.0 U	NA	0.50 U	NA	0.50 U
	cis-1,3-Dichloropropene	10 ⁽²⁾	200 ⁽²⁾	0.5 U	0.40 U	10.0 U	0.40 U	NA	5.0 U	0.80 U	NA	0.40 U	0.5 U	0.40 U
	trans-1,3-Dichloropropene	10 ⁽²⁾	200 ⁽²⁾	0.5 U	0.40 U	10.0 U	0.40 U	NA	7.5 U	0.80 U	NA	0.40 U	0.5 U	0.40 U
	Ethyl ether	NS	NS	NA	2.0 U	NA	2.0 U	NA	130 U	4.0 U	NA	2.0 U	NA	2.0 U
Diisopropyl Ether (DIPE)	NS	NS	NA	0.50 U	NA	0.50 U	NA	NA	1.0 U	NA	0.50 U	NA	0.50 U	
1,4-Dioxane	6,000	50,000	NA	100 U	NA	100 U	NA	NA	200 U	NA	100 U	NA	100 U	
Ethylbenzene	20,000	5,000	5 U	1.0 U	700	1.0 U	NA	380	280	NA	8.5	5 U	1.0 U	
Hexachlorobutadiene	1	3,000	NA	0.50 U	NA	0.50 U	NA	5.0 U	1.0 U	NA	0.50 U	NA	0.50 U	
2-Hexanone	NS	NS	5 U	10 U	100 U	10 U	NA	50 U	20 U	NA	10 U	5 U	10 U	
Isopropylbenzene	7,000 ⁽¹⁾	50,000 ⁽¹⁾	NA	1.0 U	NA	1.0 U	NA	74	19	NA	1.0 U	NA	1.0 U	
p-Isopropyltoluene	7,000 ⁽¹⁾	50,000 ⁽¹⁾	NA	1.0 U	NA	1.0 U	NA	55	2.0 U	NA	1.0 U	NA	1.0 U	
Methyl tert butyl ether	50,000	50,000	5 U	1.0 U	100 U	1.0 U	NA	50 U	2.0 U	NA	1.0 U	5 U	1.0 U	
Methylene chloride	10,000	50,000	5 U	5.0 U	60 JB	5.0 U	NA	25 U	10 U	NA	5.0 U	5 U	5.0 U	
4-Methyl-2-pentanone	50,000	50,000	5 U	10 U	100 U	10 U	NA	50 U	20 U	NA	10 U	5 U	10 U	
Naphthalene	1,000	20,000	NA	2.0 U	NA	2.0 U	NA	5.0 U	45	NA	2.0 U	NA	2.0 U	
n-Propylbenzene	7,000 ⁽¹⁾	50,000 ⁽¹⁾	NA	1.0 U	NA	1.0 U	NA	170	26	NA	1.0 U	NA	1.0 U	

Table 3: 1995, 1996, 1997 and 2012 Groundwater Data
Former Cote Ford Site
820 Cummins Highway and 30-32 Regis Road
Mattapan, Massachusetts

Analysis	Analyte	Sample ID:		MW-2		MW-5		MW-6			RIZ-1		RIZ-2	
		Sample Date:		1/29/1996	12/19/2012	1/29/1996	12/20/2012	7/25/1996	2/7/1997	12/20/2012	1/29/1996	12/20/2012	1/29/1996	12/19/2012
		GW-2	GW-3											
VOCs (ug/L) (cont'd)	Styrene	100	6,000	5 U	1.0 U	100 U	1.0 U	NA	5.0 U	2.0 U	NA	1.0 U	5 U	1.0 U
	1,1,1,2-Tetrachloroethane	10	50,000	NA	1.0 U	NA	1.0 U	NA	5.0 U	2.0 U	NA	1.0 U	NA	1.0 U
	1,1,2,2-Tetrachloroethane	9	50,000	2 U	0.50 U	40 U	0.50 U	NA	5.0 U	1.0 U	NA	0.50 U	2 U	0.50 U
	Tetrachloroethene	50	30,000	5 J	1.0 U	100 U	1.0 U	NA	7.5 U	2.0 U	NA	1.0 U	24	3.1
	Tetrahydrofuran	NS	NS	NA	2.0 U	NA	2.0 U	NA	NA	4.0 U	NA	2.0 U	NA	2.0 U
	Toluene	50,000	40,000	5 U	1.0 U	150	1.0 U	NA	7.5 U	20	NA	2.7	5 U	1.0 U
	1,2,3-Trichlorobenzene	NS	NS	NA	2.0 U	NA	2.0 U	NA	5.0 U	4.0 U	NA	2.0 U	NA	2.0 U
	1,2,4-Trichlorobenzene	2,000	50,000	NA	1.0 U	NA	1.0 U	NA	5.0 U	2.0 U	NA	1.0 U	NA	1.0 U
	1,1,1-Trichloroethane	4,000	20,000	5 U	1.0 U	100 U	1.0 U	NA	5.0 U	2.0 U	NA	1.0 U	5 U	1.0 U
	1,1,2-Trichloroethane	900	50,000	5 U	1.0 U	100 U	1.0 U	NA	7.5 U	2.0 U	NA	1.0 U	5 U	1.0 U
	Trichloroethene	30	5,000	7	1.0 U	100 U	1.0 U	NA	5.0 U	2.0 U	NA	1.0 U	150	30
	Trichlorofluoromethane	NS	NS	5 U	2.0 U	100 U	2.0 U	NA	25 U	4.0 U	NA	2.0 U	5 U	2.0 U
	1,2,3-Trichloropropane	NS	NS	NA	2.0 U	NA	2.0 U	NA	50 U	4.0 U	NA	2.0 U	NA	2.0 U
	1,2,4-Trimethylbenzene	7,000 ⁽¹⁾	50,000 ⁽¹⁾	NA	1.0 U	NA	1.0 U	NA	880	190	NA	7.0	NA	1.0 U
	1,3,5-Trimethylbenzene	7,000 ⁽¹⁾	50,000 ⁽¹⁾	NA	1.0 U	NA	1.0 U	NA	330	21	NA	1.3	NA	1.0 U
	Vinyl chloride	2	50,000	2 U	2.0 U	40 U	2.0 U	NA	10 U	4.0 U	NA	2.0 U	2 U	2.0 U
	m+p Xylene	9,000	5,000	NA	2.0 U	NA	2.0 U	NA	NA	290	NA	4.0	NA	2.0 U
	o-Xylene	9,000	5,000	NA	1.0 U	NA	1.0 U	NA	NA	16	NA	8.2	NA	1.0 U
	Acrolein	NS	NS	NA	NA	NA	NA	NA	130 U	NA	NA	NA	NA	NA
	Acrylonitrile	NS	NS	NA	NA	NA	NA	NA	50 U	NA	NA	NA	NA	NA
	Vinyl Acetate	NS	NS	5 U	NA	100 U	NA	NA	50 U	NA	NA	NA	5 U	NA
	1,4-Dichlorobutane	NS	NS	NA	NA	NA	NA	NA	50 U	NA	NA	NA	NA	NA
	trans-1,4-Dichloro-2-butene	NS	NS	NA	NA	NA	NA	NA	5.0 U	NA	NA	NA	NA	NA
2-Chloroethylvinyl ether	NS	NS	5 U	NA	100 U	NA	NA	50 U	NA	NA	NA	5 U	NA	
Xylenes	9,000	5,000	5 U	NA	4,100	NA	NA	500	NA	NA	NA	NA	4 J	NA
Iodomethane	NS	NS	NA	NA	NA	NA	NA	50 U	NA	NA	NA	NA	NA	NA
Ethyl methacrylate	NS	NS	NA	NA	NA	NA	NA	50 U	NA	NA	NA	NA	NA	NA
VPH (ug/L)	C5-C8 Aliphatics	3,000	50,000	NA	100 U	NA	100 U	710	NA	2,900	NA	190	NA	100 U
	C9-C12 Aliphatics	5,000	50,000	NA	100 U	NA	100 U	2,100	NA	710	NA	110	NA	100 U
	C9-C10 Aromatics	7,000	50,000	NA	100 U	NA	100 U	390	NA	780	NA	100 U	NA	100 U
	Benzene	2,000	10,000	NA	1.0 U	NA	1.0 U	6.80	NA	4.0	NA	1.0 U	NA	1.0 U
	Ethylbenzene	20,000	5,000	NA	1.0 U	NA	1.0 U	120	NA	300	NA	6.9	NA	1.0 U
	Methyl tert butyl ether	50,000	50,000	NA	1.0 U	NA	1.0 U	2.00 U	NA	2.0 U	NA	1.0 U	NA	1.0 U
	Naphthalene	1,000	20,000	NA	5.0 U	NA	5.0 U	2.00 U	NA	44	NA	5.0 U	NA	5.0 U
	Toluene	50,000	40,000	NA	1.0 U	NA	1.0 U	5.00	NA	20	NA	1.9	NA	1.0 U
	p/m-Xylene	9,000	5,000	NA	2.0 U	NA	2.0 U	85.0	NA	330	NA	3.7	NA	2.0 U
	o-Xylene	9,000	5,000	NA	1.0 U	NA	1.0 U	6.40	NA	21	NA	7.3	NA	1.0 U
	1,2,4-Trimethylbenzene	7,000 ⁽¹⁾	50,000 ⁽¹⁾	NA	NA	NA	NA	88.0	NA	NA	NA	NA	NA	NA

**Table 3: 1995, 1996, 1997 and 2012 Groundwater Data
Former Cote Ford Site
820 Cummins Highway and 30-32 Regis Road
Mattapan, Massachusetts**

Analysis	Analyte	Sample ID:		MW-2		MW-5		MW-6			RIZ-1		RIZ-2	
		Sample Date:		1/29/1996	12/19/2012	1/29/1996	12/20/2012	7/25/1996	2/7/1997	12/20/2012	1/29/1996	12/20/2012	1/29/1996	12/19/2012
		GW-2	GW-3											
EPH (ug/L)	C9-C18 Aliphatics	5,000	50,000	NA	100 U	NA	100 U	2,900	13,000	110 U	NA	100 U	NA	100 U
	C19-C36 Aliphatics	NS	50,000	NA	100 U	NA	100 U	220	5,100	110 U	NA	100 U	NA	100 U
	C11-C22 Aromatics*	50,000	5,000	NA	100 U	NA	100 U	560	2,300	180	NA	100 U	NA	100 U
	Acenaphthene	NS	6,000	NA	2.0 U	NA	2.0 U	20.0 U	28.0	2.1 U	NA	2.0 U	NA	2.0 U
	Acenaphthylene	10,000	40	NA	2.0 U	NA	2.0 U	20.0 U	25.0	2.1 U	NA	2.0 U	NA	2.0 U
	Anthracene	NS	30	NA	2.0 U	NA	2.0 U	20.0 U	20.0 U	2.1 U	NA	2.0 U	NA	2.0 U
	Benzo(a)anthracene	NS	1,000	NA	2.0 U	NA	2.0 U	20.0 U	20.0 U	2.1 U	NA	2.0 U	NA	2.0 U
	Benzo(a)pyrene	NS	500	NA	2.0 U	NA	2.0 U	50.0 U	50.0 U	2.1 U	NA	2.0 U	NA	2.0 U
	Benzo(b)fluoranthene	NS	400	NA	2.0 U	NA	2.0 U	50.0 U	50.0 U	2.1 U	NA	2.0 U	NA	2.0 U
	Benzo(ghi)perylene	NS	20	NA	2.0 U	NA	2.0 U	50.0 U	50.0 U	2.1 U	NA	2.0 U	NA	2.0 U
	Benzo(k)fluoranthene	NS	100	NA	2.0 U	NA	2.0 U	50.0 U	50.0 U	2.1 U	NA	2.0 U	NA	2.0 U
	Chrysene	NS	70	NA	2.0 U	NA	2.0 U	50.0 U	50.0 U	2.1 U	NA	2.0 U	NA	2.0 U
	Dibenzo(a,h)anthracene	NS	40	NA	2.0 U	NA	2.0 U	50.0 U	50.0 U	2.1 U	NA	2.0 U	NA	2.0 U
	Fluoranthene	NS	200	NA	2.0 U	NA	2.0 U	50.0 U	50.0 U	2.1 U	NA	2.0 U	NA	2.0 U
	Fluorene	NS	40	NA	2.0 U	NA	2.0 U	50.0 U	50.0 U	2.1 U	NA	2.0 U	NA	2.0 U
	Indeno(1,2,3-cd)Pyrene	NS	100	NA	2.0 U	NA	2.0 U	50.0 U	50.0 U	2.1 U	NA	2.0 U	NA	2.0 U
	2-Methylnaphthalene	2,000	20,000	NA	2.0 U	NA	2.0 U	50.0 U	190	22	NA	2.0 U	NA	2.0 U
	Naphthalene	1,000	20,000	NA	2.0 U	NA	2.0 U	50.0 U	93.0	35	NA	2.0 U	NA	2.0 U
Phenanthrene	NS	10,000	NA	2.0 U	NA	2.0 U	50.0 U	50.0 U	2.1 U	NA	2.0 U	NA	2.0 U	
Pyrene	NS	20	NA	2.0 U	NA	2.0 U	50.0 U	50.0 U	2.1 U	NA	2.0 U	NA	2.0 U	
Metals, total (ug/L)	Antimony	NS	8,000	NA	1.0 U	NA	NA	NA	NA	NA	NA	NA	NA	1.0 U
	Arsenic	NS	900	NA	0.76	NA	NA	NA	NA	NA	NA	NA	NA	0.63
	Barium	NS	50,000	NA	18	NA	NA	NA	NA	NA	NA	NA	NA	12
	Beryllium	NS	200	NA	0.40 U	NA	NA	NA	NA	NA	NA	NA	NA	0.40 U
	Cadmium	NS	4	NA	0.50 U	NA	NA	NA	NA	NA	NA	NA	NA	0.50 U
	Chromium	NS	300	NA	1.0 U	NA	NA	NA	NA	NA	NA	NA	NA	1.4
	Lead	NS	10	NA	1.0 U	NA	NA	NA	NA	NA	NA	NA	NA	1.0 U
	Mercury	NS	20	NA	0.10 U	NA	NA	NA	NA	NA	NA	NA	NA	0.10 U
	Nickel	NS	200	NA	5.0 U	NA	NA	NA	NA	NA	NA	NA	NA	5.0 U
	Selenium	NS	100	NA	5.0 U	NA	NA	NA	NA	NA	NA	NA	NA	5.0 U
	Silver	NS	7	NA	0.50 U	NA	NA	NA	NA	NA	NA	NA	NA	0.50 U
	Thallium	NS	3,000	NA	0.20 U	NA	NA	NA	NA	NA	NA	NA	NA	0.20 U
	Vanadium	NS	4,000	NA	5.0 U	NA	NA	NA	NA	NA	NA	NA	NA	5.0 U
Zinc	NS	900	NA	160	NA	NA	NA	NA	NA	NA	NA	NA	10 U	
Total Petroleum Hydrocarbons (ug/L)	TPH	5,000	5,000	30 U	NA	NA	NA	NA	NA	NA	5,100	NA	500	NA

Notes:

ug/L - micrograms per liter.

B - Compound detected in associated method blank

J - Estimated value.

NA - Sample not analyzed for the listed analyte.

NS - No MassDEP standards exist for this analyte.

U - Compound was not detected at specified quantitation limit.

Values in **Bold** indicate the compound was detected.

Values shown in Bold and shaded type exceed one or more of the listed MassDEP Method 1 standards.

VOCs - Volatile Organic Compounds.

VPH - Volatile Petroleum Hydrocarbons.

EPH - Extractable Petroleum Hydrocarbons.

(1) - MassDEP Method 1 GW-1 standard for C9-C10 aromatic hydrocarbons used.

(2) - MassDEP Method 1 GW-1 standard for 1,3-Dichloropropene used.

* - Reported as C10-C12 Aromatics in 1996 samples per earlier version of EPH Method.

Table 3: 1995, 1996, 1997 and 2012 Groundwater Data
Former Cote Ford Site
820 Cummins Highway and 30-32 Regis Road
Mattapan, Massachusetts

Analysis	Analyte	Sample ID:		RIZ-3		RIZ-4	RIZ-5			RIZ-6				WELL-18		
		Sample Date:		1/29/1996	12/19/2012	1/29/1996	1/29/1996	7/25/1996	12/19/2012	1/29/1996	2/7/1997	5/2/97	12/19/2012	1/29/1996	12/19/2012	12/19/2012
		GW-2	GW-3													Field Dup
VOCs (ug/L)	Acetone	50,000	50,000	5 U	10 U	5 U	5 U	NA	10 U	5 U	10 U	NA	10 U	5 U	10 U	10 U
	tert-Amyl Methyl Ether (TAME)	NS	NS	NA	0.50 U	NA	NA	NA	0.50 U	NA	NA	NA	0.50 U	NA	0.50 U	0.50 U
	Benzene	2,000	10,000	1 JB	1.0 U	5 U	5 U	NA	1.0 U	1 JB	1.0 U	NA	1.0 U	1 JB	1.0 U	1.0 U
	Bromobenzene	NS	NS	NA	1.0 U	NA	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	1.0 U
	Bromochloromethane	NS	NS	NA	1.0 U	NA	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	1.0 U
	Bromodichloromethane	6	50,000	5 U	1.0 U	5 U	5 U	NA	1.0 U	5 U	1.0 U	NA	1.0 U	5 U	1.0 U	1.0 U
	Bromoform	700	50,000	5 U	1.0 U	5 U	5 U	NA	1.0 U	5 U	1.0 U	NA	1.0 U	5 U	1.0 U	1.0 U
	Bromomethane	7	800	5 U	2.0 U	5 U	5 U	NA	2.0 U	5 U	2.0 U	NA	2.0 U	5 U	2.0 U	2.0 U
	2-Butanone	50,000	50,000	5 U	10 U	5 U	5 U	NA	10 U	5 U	4.5 U	NA	10 U	5 U	10 U	10 U
	n-Butylbenzene	7,000 ⁽¹⁾	50,000 ⁽¹⁾	NA	1.0 U	NA	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	1.0 U
	sec-Butylbenzene	7,000 ⁽¹⁾	50,000 ⁽¹⁾	NA	1.0 U	NA	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	1.0 U
	tert-Butylbenzene	7,000 ⁽¹⁾	50,000 ⁽¹⁾	NA	1.0 U	NA	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	1.0 U
	tert-Butyl Ethyl Ether (TBEE)	NS	NS	NA	0.50 U	NA	NA	NA	0.50 U	NA	NA	NA	0.50 U	NA	0.50 U	0.50 U
	Carbon disulfide	NS	NS	5 U	5.0 U	5 U	5 U	NA	5.0 U	5 U	10 U	NA	5.0 U	5 U	5.0 U	5.0 U
	Carbon tetrachloride	2	5,000	5 U	1.0 U	5 U	5 U	NA	1.0 U	5 U	1.0 U	NA	1.0 U	5 U	1.0 U	1.0 U
	Chlorobenzene	200	1,000	5 U	1.0 U	5 U	5 U	NA	1.0 U	5 U	3.5 U	NA	1.0 U	5 U	1.0 U	1.0 U
	Dibromochloromethane	20	50,000	5 U	0.50 U	5 U	5 U	NA	0.50 U	5 U	1.0 U	NA	0.50 U	5 U	0.50 U	0.50 U
	Chloroethane	NS	NS	5 U	2.0 U	5 U	5 U	NA	2.0 U	5 U	2.0 U	NA	2.0 U	5 U	2.0 U	2.0 U
	Chloroform	50	20,000	5 U	2.0 U	5 U	5 U	NA	2.0 U	5 U	1.5 U	NA	2.0 U	5 U	2.0 U	2.0 U
	Chloromethane	NS	NS	5 U	2.0 U	5 U	5 U	NA	2.0 U	5 U	10 U	NA	2.0 U	5 U	2.0 U	2.0 U
	o-Chlorotoluene	NS	NS	NA	1.0 U	NA	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	1.0 U
	p-Chlorotoluene	NS	NS	NA	1.0 U	NA	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	1.0 U
	1,2-Dibromo-3-chloropropane	NS	NS	NA	2.0 U	NA	NA	NA	2.0 U	NA	1.0 U	NA	2.0 U	NA	2.0 U	2.0 U
	1,2-Dibromoethane	2	50,000	NA	0.50 U	NA	NA	NA	0.50 U	NA	1.0 U	NA	0.50 U	NA	0.50 U	0.50 U
	Dibromomethane	NS	NS	NA	1.0 U	NA	NA	NA	1.0 U	NA	10 U	NA	1.0 U	NA	1.0 U	1.0 U
	1,2-Dichlorobenzene	2,000	2,000	NA	1.0 U	NA	NA	NA	1.0 U	NA	10 U	NA	1.0 U	NA	1.0 U	1.0 U
	1,3-Dichlorobenzene	2,000	50,000	NA	1.0 U	NA	NA	NA	1.0 U	NA	10 U	NA	1.0 U	NA	1.0 U	1.0 U
	1,4-Dichlorobenzene	200	8,000	NA	1.0 U	NA	NA	NA	1.0 U	NA	10 U	NA	1.0 U	NA	1.0 U	1.0 U
	Dichlorodifluoromethane	NS	NS	NA	2.0 U	NA	NA	NA	2.0 U	NA	10 U	NA	2.0 U	NA	2.0 U	2.0 U
	1,1-Dichloroethane	1,000	20,000	5 U	1.0 U	5 U	5 U	NA	1.0 U	5 U	1.5 U	NA	1.0 U	5 U	1.0 U	1.0 U
	1,2-Dichloroethane	5	20,000	5 U	1.0 U	5 U	5 U	NA	1.0 U	5 U	1.5 U	NA	1.0 U	5 U	1.0 U	1.0 U
	1,1-Dichloroethene	80	30,000	5 U	1.0 U	5 U	5 U	NA	1.0 U	5 U	1.0 U	NA	1.0 U	5 U	1.0 U	1.0 U
	cis-1,2-Dichloroethene	100	50,000	5 U	1.0 U	5 U	5 U	NA	1.0 U	5 U	1.0 U	NA	1.0 U	5 U	1.0 U	1.0 U
	trans-1,2-Dichloroethene	90	50,000	5 U	1.0 U	5 U	5 U	NA	1.0 U	5 U	1.5 U	NA	1.0 U	5 U	1.0 U	1.0 U
	1,2-Dichloropropane	3	50,000	5 U	1.0 U	5 U	5 U	NA	1.0 U	5 U	3.5 U	NA	1.0 U	5 U	1.0 U	1.0 U
	1,3-Dichloropropane	NS	NS	NA	0.50 U	NA	NA	NA	0.50 U	NA	1.0 U	NA	0.50 U	NA	0.50 U	0.50 U
	2,2-Dichloropropane	NS	NS	NA	1.0 U	NA	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	1.0 U
	1,1-Dichloropropene	NS	NS	NA	0.50 U	NA	NA	NA	0.50 U	NA	NA	NA	0.50 U	NA	0.50 U	0.50 U
	cis-1,3-Dichloropropene	10 ⁽²⁾	200 ⁽²⁾	0.5 U	0.40 U	0.5 U	0.5 U	NA	0.40 U	0.5 U	1.0 U	NA	0.40 U	0.5 U	0.40 U	0.40 U
	trans-1,3-Dichloropropene	10 ⁽²⁾	200 ⁽²⁾	0.5 U	0.40 U	0.5 U	0.5 U	NA	0.40 U	0.5 U	1.5 U	NA	0.40 U	0.5 U	0.40 U	0.40 U
	Ethyl ether	NS	NS	NA	2.0 U	NA	NA	NA	2.0 U	NA	25 U	NA	2.0 U	NA	2.0 U	2.0 U
	Diisopropyl Ether (DIPE)	NS	NS	NA	0.50 U	NA	NA	NA	0.50 U	NA	NA	NA	0.50 U	NA	0.50 U	0.50 U
	1,4-Dioxane	6,000	50,000	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	100 U	NA	100 U	100 U
	Ethylbenzene	20,000	5,000	5 U	1.0 U	3 J	5 U	NA	1.0 U	5 U	1.0 U	NA	1.0 U	5 U	1.0 U	1.0 U
	Hexachlorobutadiene	1	3,000	NA	0.50 U	NA	NA	NA	0.50 U	NA	1.0 U	NA	0.50 U	NA	0.50 U	0.50 U
	2-Hexanone	NS	NS	5 U	10 U	5 U	5 U	NA	10 U	5 U	10 U	NA	10 U	5 U	10 U	10 U
	Isopropylbenzene	7,000 ⁽¹⁾	50,000 ⁽¹⁾	NA	1.0 U	NA	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	1.0 U
	p-Isopropyltoluene	7,000 ⁽¹⁾	50,000 ⁽¹⁾	NA	1.0 U	NA	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	1.0 U
	Methyl tert butyl ether	50,000	50,000	5 U	1.0 U	6	1 J	NA	1.0 U	5 U	10 U	NA	1.0 U	5 U	1.0 U	1.0 U
	Methylene chloride	10,000	50,000	5 U	5.0 U	5 U	5 U	NA	5.0 U	5 U	5.0 U	NA	5.0 U	5 U	5.0 U	5.0 U
	4-Methyl-2-pentanone	50,000	50,000	5 U	10 U	5 U	5 U	NA	10 U	5 U	10 U	NA	10 U	5 U	10 U	10 U
	Naphthalene	1,000	20,000	NA	2.0 U	NA	NA	NA	2.0 U	NA	1.0 U	NA	2.0 U	NA	2.0 U	2.0 U
	n-Propylbenzene	7,000 ⁽¹⁾	50,000 ⁽¹⁾	NA	1.0 U	NA	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	1.0 U

Table 3: 1995, 1996, 1997 and 2012 Groundwater Data
Former Cote Ford Site
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Mattapan, Massachusetts

Analysis	Analyte	Sample ID:		RIZ-3		RIZ-4	RIZ-5			RIZ-6				WELL-18		
		Sample Date:		1/29/1996	12/19/2012	1/29/1996	1/29/1996	7/25/1996	12/19/2012	1/29/1996	2/7/1997	5/2/97	12/19/2012	1/29/1996	12/19/2012	12/19/2012
		GW-2	GW-3													Field Dup
VOCs (ug/L) (cont'd)	Styrene	100	6,000	5 U	1.0 U	5 U	5 U	NA	1.0 U	5 U	1.0 U	NA	1.0 U	5 U	1.0 U	1.0 U
	1,1,1,2-Tetrachloroethane	10	50,000	NA	1.0 U	NA	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	1.0 U
	1,1,2,2-Tetrachloroethane	9	50,000	2 U	0.50 U	2 U	2 U	NA	0.50 U	2 U	1.0 U	NA	0.50 U	2 U	0.50 U	0.50 U
	Tetrachloroethene	50	30,000	5 U	1.0 U	5 U	5 U	NA	1.0 U	5 U	1.5 U	NA	1.0 U	5 U	1.0 U	1.0 U
	Tetrahydrofuran	NS	NS	NA	2.0 U	NA	NA	NA	2.0 U	NA	NA	NA	2.0 U	NA	2.0 U	2.0 U
	Toluene	50,000	40,000	5 U	1.0 U	1 J	2 J	NA	1.0 U	5 U	1.5 U	NA	1.0 U	5 U	1.0 U	1.0 U
	1,2,3-Trichlorobenzene	NS	NS	NA	2.0 U	NA	NA	NA	2.0 U	NA	1.0 U	NA	2.0 U	NA	2.0 U	2.0 U
	1,2,4-Trichlorobenzene	2,000	50,000	NA	1.0 U	NA	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	1.0 U
	1,1,1-Trichloroethane	4,000	20,000	5 U	1.0 U	5 U	5 U	NA	1.0 U	5 U	1.0 U	NA	1.0 U	5 U	1.0 U	1.0 U
	1,1,2-Trichloroethane	900	50,000	5 U	1.0 U	5 U	5 U	NA	1.0 U	5 U	1.5 U	NA	1.0 U	5 U	1.0 U	1.0 U
	Trichloroethene	30	5,000	5 U	1.0 U	5 U	5 U	NA	1.0 U	5 U	1.0 U	NA	1.0 U	5 U	1.0 U	1.0 U
	Trichlorofluoromethane	NS	NS	5 U	2.0 U	5 U	5 U	NA	2.0 U	5 U	5.0 U	NA	2.0 U	5 U	2.0 U	2.0 U
	1,2,3-Trichloropropane	NS	NS	NA	2.0 U	NA	NA	NA	2.0 U	NA	10 U	NA	2.0 U	NA	2.0 U	2.0 U
	1,2,4-Trimethylbenzene	7,000 ⁽¹⁾	50,000 ⁽¹⁾	NA	1.0 U	NA	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	1.0 U
	1,3,5-Trimethylbenzene	7,000 ⁽¹⁾	50,000 ⁽¹⁾	NA	1.0 U	NA	NA	NA	1.0 U	NA	1.0 U	NA	1.0 U	NA	1.0 U	1.0 U
	Vinyl chloride	2	50,000	2 U	2.0 U	2 U	2 U	NA	2.0 U	2 U	2.0 U	NA	2.0 U	2 U	2.0 U	2.0 U
	m+p Xylene	9,000	5,000	NA	2.0 U	NA	NA	NA	2.0 U	NA	NA	NA	2.0 U	NA	2.0 U	2.0 U
	o-Xylene	9,000	5,000	NA	1.0 U	NA	NA	NA	1.0 U	NA	NA	NA	1.0 U	NA	1.0 U	1.0 U
	Acrolein	NS	NS	NA	NA	NA	NA	NA	NA	NA	25 U	NA	NA	NA	NA	NA
	Acrylonitrile	NS	NS	NA	NA	NA	NA	NA	NA	NA	10 U	NA	NA	NA	NA	NA
	Vinyl Acetate	NS	NS	5 U	NA	5 U	5 U	NA	NA	5 U	10 U	NA	NA	5 U	NA	NA
	1,4-Dichlorobutane	NS	NS	NA	NA	NA	NA	NA	NA	NA	10 U	NA	NA	NA	NA	NA
	trans-1,4-Dichloro-2-butene	NS	NS	NA	NA	NA	NA	NA	NA	NA	1.0 U	NA	NA	NA	NA	NA
	2-Chloroethylvinyl ether	NS	NS	5 U	NA	5 U	5 U	NA	NA	5 U	10 U	NA	NA	5 U	NA	NA
Xylenes	9,000	5,000	5 U	NA	31	5 U	NA	NA	5 U	1.0 U	NA	NA	1 J	NA	NA	
Iodomethane	NS	NS	NA	NA	NA	NA	NA	NA	NA	10 U	NA	NA	NA	NA	NA	
Ethyl methacrylate	NS	NS	NA	NA	NA	NA	NA	NA	NA	10 U	NA	NA	NA	NA	NA	
VPH (ug/L)	C5-C8 Aliphatics	3,000	50,000	NA	100 U	NA	NA	2.00 U	100 U	NA	NA	NA	100 U	NA	100 U	100 U
	C9-C12 Aliphatics	5,000	50,000	NA	100 U	NA	NA	69.0	100 U	NA	NA	NA	100 U	NA	100 U	100 U
	C9-C10 Aromatics	7,000	50,000	NA	100 U	NA	NA	15.0	100 U	NA	NA	NA	100 U	NA	100 U	100 U
	Benzene	2,000	10,000	NA	1.0 U	NA	NA	2.80	1.0 U	NA	NA	NA	1.0 U	NA	1.0 U	1.0 U
	Ethylbenzene	20,000	5,000	NA	1.0 U	NA	NA	3.60	1.0 U	NA	NA	NA	1.0 U	NA	1.0 U	1.0 U
	Methyl tert butyl ether	50,000	50,000	NA	1.0 U	NA	NA	2.00 U	1.0 U	NA	NA	NA	1.0 U	NA	1.0 U	1.0 U
	Naphthalene	1,000	20,000	NA	5.0 U	NA	NA	2.00 U	5.0 U	NA	NA	NA	5.0 U	NA	5.0 U	5.0 U
	Toluene	50,000	40,000	NA	1.0 U	NA	NA	2.00 U	1.0 U	NA	NA	NA	1.0 U	NA	1.0 U	1.0 U
	p/m-Xylene	9,000	5,000	NA	2.0 U	NA	NA	2.00 U	2.0 U	NA	NA	NA	2.0 U	NA	2.0 U	2.0 U
	o-Xylene	9,000	5,000	NA	1.0 U	NA	NA	2.00 U	1.0 U	NA	NA	NA	1.0 U	NA	1.0 U	1.0 U
	1,2,4-Trimethylbenzene	7,000 ⁽¹⁾	50,000 ⁽¹⁾	NA	NA	NA	NA	2.00 U	NA	NA	NA	NA	NA	NA	NA	NA

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Analysis	Analyte	Sample ID:		RIZ-3		RIZ-4	RIZ-5			RIZ-6				WELL-18		
		Sample Date:		1/29/1996	12/19/2012	1/29/1996	1/29/1996	7/25/1996	12/19/2012	1/29/1996	2/7/1997	5/2/97	12/19/2012	1/29/1996	12/19/2012	12/19/2012
		GW-2	GW-3												Field Dup	
EPH (ug/L)	C9-C18 Aliphatics	5,000	50,000	NA	110 U	NA	NA	27.0	110 U	NA	42,000	384	250	NA	100 U	100 U
	C19-C36 Aliphatics	NS	50,000	NA	110 U	NA	NA	20.0 U	110 U	NA	320,000	4,970	1,700	NA	100 U	100 U
	C11-C22 Aromatics*	50,000	5,000	NA	110 U	NA	NA	20.0 U	110 U	NA	91,000	1,940	870	NA	100 U	100 U
	Acenaphthene	NS	6,000	NA	2.2 U	NA	NA	20.0 U	2.2 U	NA	20.0 U	NA	2.0 U	NA	2.0 U	2.0 U
	Acenaphthylene	10,000	40	NA	2.2 U	NA	NA	20.0 U	2.2 U	NA	20.0 U	NA	2.0 U	NA	2.0 U	2.0 U
	Anthracene	NS	30	NA	2.2 U	NA	NA	20.0 U	2.2 U	NA	33.6	NA	2.0 U	NA	2.0 U	2.0 U
	Benzo(a)anthracene	NS	1,000	NA	2.2 U	NA	NA	20.0 U	2.2 U	NA	130	NA	2.0 U	NA	2.0 U	2.0 U
	Benzo(a)pyrene	NS	500	NA	2.2 U	NA	NA	50.0 U	2.2 U	NA	53.0	NA	2.0 U	NA	2.0 U	2.0 U
	Benzo(b)fluoranthene	NS	400	NA	2.2 U	NA	NA	50.0 U	2.2 U	NA	50.0 U	NA	2.0 U	NA	2.0 U	2.0 U
	Benzo(ghi)perylene	NS	20	NA	2.2 U	NA	NA	50.0 U	2.2 U	NA	50.0 U	NA	2.0 U	NA	2.0 U	2.0 U
	Benzo(k)fluoranthene	NS	100	NA	2.2 U	NA	NA	50.0 U	2.2 U	NA	50.0 U	NA	2.0 U	NA	2.0 U	2.0 U
	Chrysene	NS	70	NA	2.2 U	NA	NA	50.0 U	2.2 U	NA	220	NA	2.0 U	NA	2.0 U	2.0 U
	Dibenzo(a,h)anthracene	NS	40	NA	2.2 U	NA	NA	50.0 U	2.2 U	NA	50.0 U	NA	2.0 U	NA	2.0 U	2.0 U
	Fluoranthene	NS	200	NA	2.2 U	NA	NA	50.0 U	2.2 U	NA	460	NA	2.0 U	NA	2.0 U	2.0 U
	Fluorene	NS	40	NA	2.2 U	NA	NA	50.0 U	2.2 U	NA	50.0 U	NA	2.0 U	NA	2.0 U	2.0 U
	Indeno(1,2,3-cd)Pyrene	NS	100	NA	2.2 U	NA	NA	50.0 U	2.2 U	NA	50.0 U	NA	2.0 U	NA	2.0 U	2.0 U
	2-Methylnaphthalene	2,000	20,000	NA	2.2 U	NA	NA	50.0 U	2.2 U	NA	50.0 U	NA	2.0 U	NA	2.0 U	2.0 U
	Naphthalene	1,000	20,000	NA	2.2 U	NA	NA	50.0 U	2.2 U	NA	50.0 U	NA	2.0 U	NA	2.0 U	2.0 U
Phenanthrene	NS	10,000	NA	2.2 U	NA	NA	50.0 U	2.2 U	NA	50.0 U	NA	2.0 U	NA	2.0 U	2.0 U	
Pyrene	NS	20	NA	2.2 U	NA	NA	50.0 U	2.2 U	NA	480	NA	2.0 U	NA	2.0 U	2.0 U	
Metals, total (ug/L)	Antimony	NS	8,000	NA	1.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.0 U	1.0 U
	Arsenic	NS	900	NA	0.82	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.53	0.73
	Barium	NS	50,000	NA	14	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U
	Beryllium	NS	200	NA	0.40 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.40 U	0.40 U
	Cadmium	NS	4	NA	0.50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.50 U	0.50 U
	Chromium	NS	300	NA	1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.0 U	1.0 U
	Lead	NS	10	NA	1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.0 U	1.0 U
	Mercury	NS	20	NA	0.10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.10 U	0.10 U
	Nickel	NS	200	NA	5.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.0 U	5.0 U
	Selenium	NS	100	NA	5.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.0 U	5.0 U
	Silver	NS	7	NA	0.50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.50 U	0.50 U
	Thallium	NS	3,000	NA	0.20 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.20 U	0.20 U
	Vanadium	NS	4,000	NA	5.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.0 U	5.0 U
	Zinc	NS	900	NA	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	32	33
Total Petroleum Hydrocarbons (ug/L)	TPH	5,000	5,000	300 U	NA	400	2,900	NA	NA	66,000	NA	NA	NA	200	NA	NA

Notes:

ug/L - micrograms per liter.

B - Compound detected in associated method blank

J - Estimated value.

NA - Sample not analyzed for the listed analyte.

NS - No MassDEP standards exist for this analyte.

U - Compound was not detected at specified quantitation limit.

Values in **Bold** indicate the compound was detected.

Values shown in Bold and shaded type exceed one or more of the listed MassDEP Method 1 standards.

VOCs - Volatile Organic Compounds.

VPH - Volatile Petroleum Hydrocarbons.

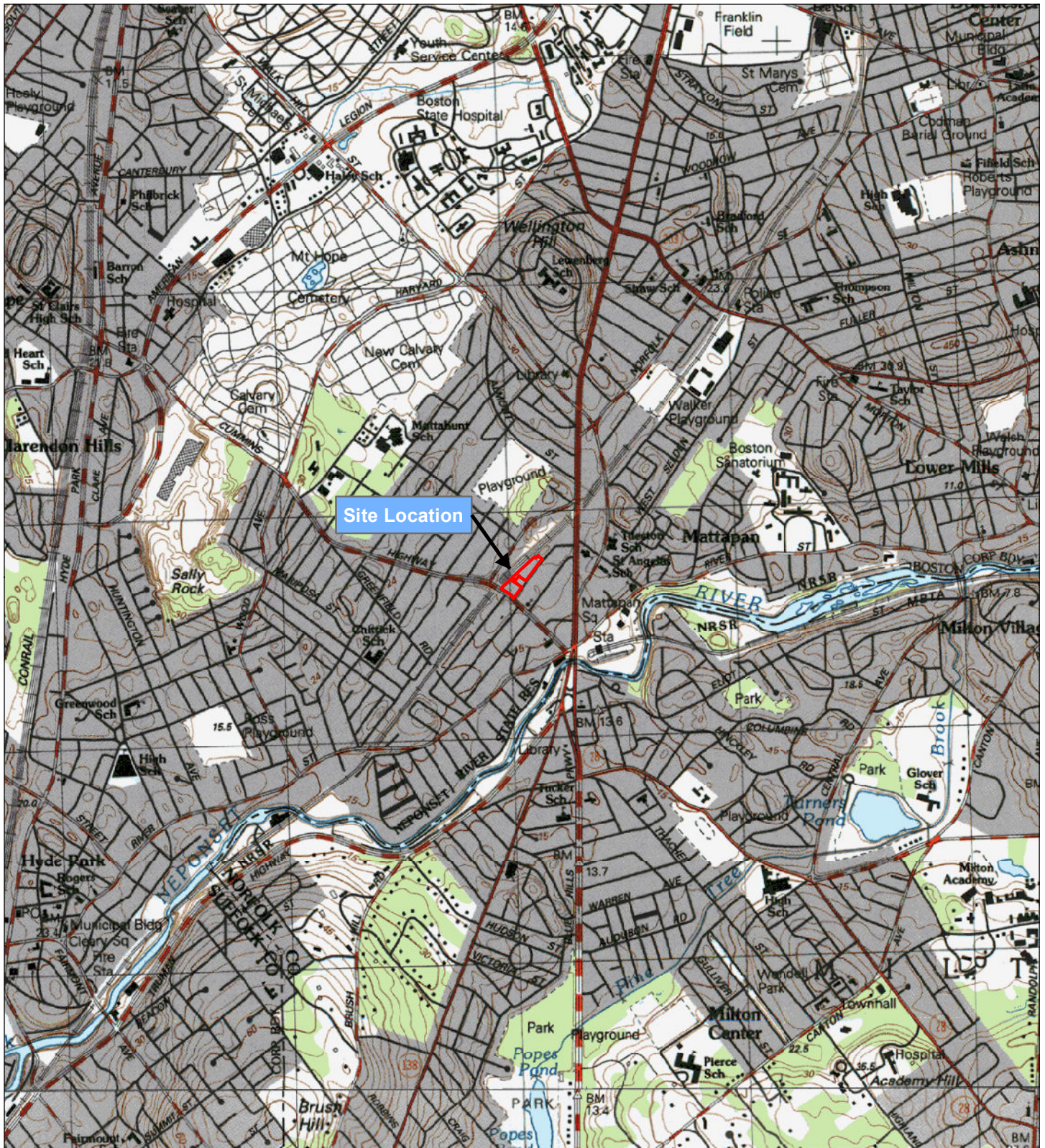
EPH - Extractable Petroleum Hydrocarbons.


(1) - MassDEP Method 1 GW-1 standard for C9-C10 aromatic hydrocarbons used.

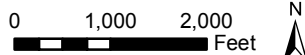
(2) - MassDEP Method 1 GW-1 standard for 1,3-Dichloropropene used.

* - Reported as C10-C12 Aromatics in 1996 samples per earlier version of EPH Method.

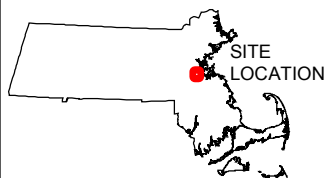
FIGURES



 Approximate Site Boundary



MASSACHUSETTS



Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
978-970-5600

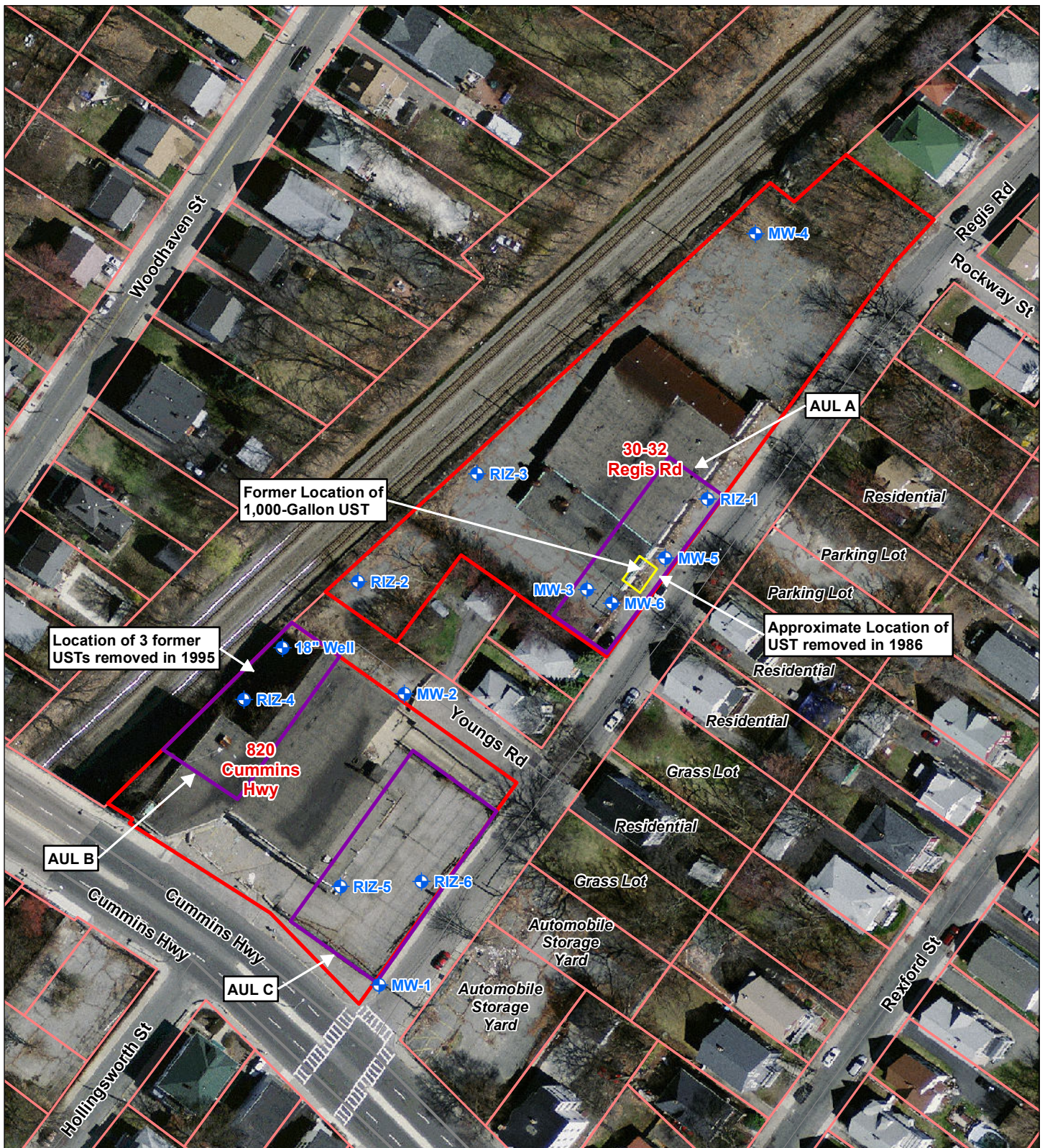
SITE LOCATION MAP

**FORMER COTE FORD SITE
820 CUMMINS HIGHWAY
AND 30-32 REGIS ROAD
MATTAPAN, MA**

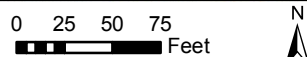
FIGURE 1

JANUARY 2013

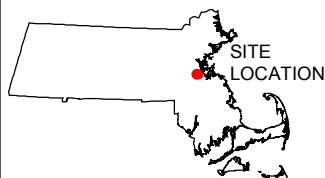
Basemap: USGS 7.5 Minute Topographic Quadrangles:
Boston South and Norwood



- Approximate Site Boundary
- Area of RAM Excavation
- + Existing Monitoring Well
- Parcel Boundary
- Approximate AUL Boundaries



MASSACHUSETTS



Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
978-970-5600

SITE PLAN

**FORMER COTE FORD SITE
820 CUMMINS HIGHWAY
AND 30-32 REGIS ROAD
MATTAPAN, MA**

FIGURE 2

JANUARY 2013

Orthophotography: MassGIS/USGS, 2009

APPENDIX A

GROUNDWATER SAMPLING LOGS



Low-flow Groundwater Field Data Record

Project: Cote Ford Project No.: 178226 Date/Time: 12/19/12 0915 Sheet 1 of 1

TRC Personnel: Zack Richards Well ID: MW18" Well 206 12/19/12

WELL INTEGRITY

Protect. Casing Secure YES NO
Concrete Collar Intact YES NO
PVC Stick-up Intact (SS) YES NO
Well Cap Present YES NO
Security Lock Present YES NO

Sampling Equipment: YSI 556, LaMotte, MPI5, Solinst WLM
Flow-thru Cell Volume: 475 ml

PID SCREENING MEAS.

Table with 2 columns: Parameter, Value. Background: NA, Well Mouth: NA

Protective Casing Stick-up (from ground) 3 1/2 ft.
Riser Stick-up (from ground) ~3 ft.

Well Depth ~7.2 ft. top of riser top of casing measured historical

Water Depth 5.75 ft. LNAPL/DNAPL Depth = 0
LOW FLOW DATA Thickness = 0

WELL DIAMETER 2 inch 4 inch 6 inch
Other: 18"

Depth of pump intake: 6.9'
Static water level after pump put into well 5.75'
Initial purge Rate/ Water Level (100-400 ml/min): 200 ml/min
Adjusted purge Rates/time/WL (record changes)
Flow rate at time of sampling: 200 ml/min
Volume of water purged: ~5 L

WELL MATERIAL PVC SS

FIELD WATER QUALITY MEASUREMENTS (record at appropriate intervals)

Table with 7 columns: Time, Temp. (C), Conduct. (umhos/cm), DO (mg/l), pH (Std. Units), Eh/ORP (millivolts), Turbidity (NTU), Flow (ml/min), Depth To Water (ft)

Table for Stabilization Criteria with 7 columns: Time, Temp. (C), Conduct. (umhos/cm), DO (mg/l), pH (Std. Units), Eh/ORP (millivolts), Turbidity (NTU), Flow (ml/min), Depth To Water (ft)

Pump Type: Peristaltic Pump, Submersible Pump, Bladder Pump, Other:
Purge: X, Sample: X

Table with 7 columns: Analytical Parameter, Filtered (Y/N), Preservation, Volume, Time Collected, QC, Sample #



Low-flow Groundwater Field Data Record

Project: Coke Ford Project No.: 178226 Date/Time: 12/19/12 1310 Sheet 1 of 1

TRC Personnel: Zack Richards Well ID: MW-2

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Concrete Collar Intact	<input checked="" type="checkbox"/>	<input type="checkbox"/>
PVC Stick-up Intact	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Well Cap Present	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Security Lock Present	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Sampling Equipment: YSI 556, LaMotte, MP15, Solinst W/M

Flow-thru Cell Volume: 475 mL

PID SCREENING MEAS.

Background	<u>NA</u>
Well Mouth	<u>NA</u>

Protective Casing Stick-up (from ground) Flush ft.

Riser Stick-up (from ground) _____ ft.

WELL DIAMETER 2 inch
 4 inch
 6 inch

WELL MATERIAL

PVC SS

Well Depth 10.25 ft. top of riser measured
 top of casing historical

Water Depth 2.80 ft. LNAPL/DNAPL Depth = ∅
 Thickness = ∅

LOW FLOW DATA

Depth of pump intake: 6.5'
 Static water level after pump put into well 2.60'

Initial purge Rate/ Water Level (100-400 ml/min): 100 ml/min

Adjusted purge Rates/time/WL(record changes)

Flow rate at time of sampling: 100 ml/min

Volume of water purged: ~4 L

FIELD WATER QUALITY MEASUREMENTS (record at appropriate intervals)

Time	1325	1332	1337	1342	1347	1352	1357	1402	1405
Temp. (C)	<u>Begin</u>	<u>10.10</u>	<u>10.13</u>	<u>10.01</u>	<u>9.85</u>	<u>9.71</u>	<u>9.63</u>	<u>9.60</u>	<u>Sample</u>
Conduct. (µmhos/cm)	<u>Rising</u>	<u>346</u>	<u>340</u>	<u>338</u>	<u>338</u>	<u>339</u>	<u>338</u>	<u>338</u>	<u>Collect</u>
DO (mg/l)	<u>Rising</u>	<u>9.36</u>	<u>9.33</u>	<u>9.33</u>	<u>9.35</u>	<u>9.36</u>	<u>9.38</u>	<u>9.43</u>	
pH (Std. Units)	<u>Up 1st</u>	<u>6.68</u>	<u>6.67</u>	<u>6.66</u>	<u>6.66</u>	<u>6.65</u>	<u>6.65</u>	<u>6.66</u>	
Eh/ORP (millivolts)		<u>195.3</u>	<u>209.2</u>	<u>219.8</u>	<u>226.3</u>	<u>232.9</u>	<u>236.9</u>	<u>239.4</u>	
Turbidity (NTU)		<u>44.6</u>	<u>39.8</u>	<u>34.9</u>	<u>35.6</u>	<u>32.8</u>	<u>33.7</u>	<u>33.4</u>	
Flow (ml/min)	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	
Depth To Water (ft)	<u>2.60</u>	<u>2.93</u>	<u>3.06</u>	<u>3.23</u>	<u>3.42</u>	<u>3.53</u>	<u>3.57</u>	<u>3.69</u>	

Time									
Temp. (C)									
Conduct. (µmhos/cm)									
DO (mg/l)									
pH (Std. Units)									
Eh/ORP (millivolts)									
Turbidity (NTU)									
Flow (ml/min)									
Depth To Water (ft)									

Stabilization Criteria* (3 consecutive readings)

- Temperature: +/- 3 %
- Conduct. (µmhos/cm): +/- 3 %
- DO (mg/l): +/- 10 % (for values >0.5 mg/L)
- pH (Std. Units): +/- 0.1 SU
- Eh/ORP (millivolts): +/- 10 mV
- Turbidity (NTU): +/- 10 % (for values >5.0 NTUs)
- Drawdown: < 0.3 ft (can be greater as long as water level stabilizes above well screen)

Pump Type	Purge	Sample	Comments:
Peristaltic Pump	<input type="checkbox"/>	<input type="checkbox"/>	
Submersible Pump	<input type="checkbox"/>	<input type="checkbox"/>	
Bladder Pump	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Other:	<input type="checkbox"/>	<input type="checkbox"/>	

Analytical Parameter	Filtered (Y/N)	Preservation	Volume	Time Collected	QC	Sample #
VOCs	<u>N</u>	<u>HCl</u>	<u>(3) 40 mL</u>	<u>1405</u>		<u>MW-2</u>
VPIH	<u>N</u>	<u>↓</u>	<u>(3) 40 mL</u>	<u>1405</u>		<u>↓</u>
EPH	<u>N</u>	<u>↓</u>	<u>(2) 1 L</u>	<u>1405</u>		<u>↓</u>
Total Metals	<u>N/Y</u>	<u>HNO₃</u>	<u>(2) 250 mL</u>	<u>1405</u>		<u>↓</u>

* From USEPA Region 1 Low-Stress (Low-Flow) SOP, January 19, 2010 (EQASOP-GW-001).

Signed: Zack Richards

Rev: October 2012

(and 0.350 ml)



Low-flow Groundwater Field Data Record

Project: Cote Ford Project No.: 178226 Date/Time: 12/20/12 0900 Sheet 1 of 1

TRC Personnel: Zack Richards Well ID: MW-5

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Concrete Collar Intact	<input checked="" type="checkbox"/>	<input type="checkbox"/>
PVC Stick-up Intact	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Well Cap Present	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Security Lock Present	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Sampling Equipment: YSI 556, LaMotte, NP15, Solinst WLM
Flow-thru Cell Volume: 475 ml

PID SCREENING MEAS.

Background	<u>NA</u>
Well Mouth	<u>NA</u>

Protective Casing Stick-up Flush ft. (from ground)

Riser Stick-up (from ground) _____ ft.

WELL DIAMETER 2 inch
 4 inch
 6 inch

WELL MATERIAL

PVC SS

Well Depth 15.25 ft. top of riser measured top of casing historical

Water Depth 5.83 ft. LNAPL/DNAPL Depth = φ
Thickness = φ

LOW FLOW DATA
Depth of pump intake: 10.5'
Static water level after pump put into well: 5.70'

Initial purge Rate/ Water Level (100-400 ml/min): 100 ml/min

Adjusted purge Rates/time/WL (record changes): 50 ml/min @ 0926

Flow rate at time of sampling: 50 ml/min

Volume of water purged: ~5.3 L

FIELD WATER QUALITY MEASUREMENTS (record at appropriate intervals)

Time	0905	0910	0915	0920	0925	0930	0940	0950	1000	1010
Temp. (C)		11.42	11.90	12.24	12.12	12.07	12.04	12.15	12.26	12.33
Conduct. (µmhos/cm)		1926	1928	1948	2005	2034	2045	2054	2057	2059
DO (mg/l)		6.92	6.58 6.70	6.70	6.69	6.69	6.59	6.62	6.53	6.57
pH (Std. Units)		6.31	6.38	6.35	6.34	6.34	6.34	6.34	6.33	6.33
Eh/ORP (millivolts)		235.0	238.7	236.2	232.1	229.5	225.8	225.7	228.0	231.1
Turbidity (NTU)		39.2	36.4	33.7	28.0	21.2	19.1	16.1	8.40	5.61
Flow (ml/min)	100				→ 50					→
Depth To Water (ft)	5.70	5.90	6.02	6.12	6.22	6.28	6.39	6.46	6.54	6.65

Time	1020	1030	1035							
Temp. (C)	12.39	12.41	Sample							
Conduct. (µmhos/cm)	2054	2048	Collected							
DO (mg/l)	6.58	6.60								
pH (Std. Units)	6.33	6.35								
Eh/ORP (millivolts)	235.2	230.8								
Turbidity (NTU)	6.01	5.50								
Flow (ml/min)	50	50								
Depth To Water (ft)	6.73	6.80								

Stabilization Criteria* (3 consecutive readings)

- Temperature: +/- 3 %
- Conduct. (µmhos/cm): +/- 3 %
- DO (mg/l): +/- 10 % (for values >0.5 mg/L)
- pH (Std. Units): +/- 0.1 SU
- Eh/ORP (millivolts): +/- 10 mV
- Turbidity (NTU): +/- 10 % (for values >5.0 NTUs)
- Drawdown: < 0.3 ft (can be greater as long as water level stabilizes above well screen)

Pump Type

Purge Sample Comments: _____
 Peristaltic Pump
 Submersible Pump
 Bladder Pump
 Other: _____

Analytical Parameter	Filtered (Y/N)	Preservation	Volume	Time Collected	QC	Sample #
VOCs	N	HCl	(3) 40 mL	1035		MW-5
VPH	N	HCl	(3) 40 mL	1035		↓
EPH	N	HCl	(2) 1 L	1035		↓

* From USEPA Region 1 Low-Stress (Low-Flow) SOP, January 19, 2010 (EQASOP-GW-001).

Signed: _____



Low-flow Groundwater Field Data Record

Project: COTE FORD Project No.: 178226 Date/Time: 12/20/12 Sheet 1 of 1

TRC Personnel: D. Gill / E. Richards Well ID: MW-6

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Concrete Collar Intact	<input checked="" type="checkbox"/>	<input type="checkbox"/>
PVC Stick-up Intact	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Well Cap Present	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Security Lock Present	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Sampling Equipment: YSI 556, LaMotte, MP15, Solinst WLM
Flow-thru Cell Volume: 475 mL

PID SCREENING MEAS.

Background	<u>0</u>
Well Mouth	<u>0</u>

Protective Casing Stick-up 0 ft. (from ground)

Riser Stick-up 0 ft. (from ground)

WELL DIAMETER 2 inch
 4 inch
 6 inch

WELL MATERIAL

PVC SS

Well Depth 14.26 ft. top of riser measured
 top of casing historical

Water Depth 6.48 ft. LNAPL/DNAPL Depth = 0
Thickness = 0

LOW FLOW DATA
Depth of pump intake: 10
Static water level after pump put into well: 6.31

Initial purge Rate/ Water Level (100-400 ml/min): 100
Adjusted purge Rates/time/WL(record changes): 100

Flow rate at time of sampling: 100
Volume of water purged: ~7 L

FIELD WATER QUALITY MEASUREMENTS (record at appropriate intervals)

Time	900	915	920	940	950	955	1000	1005	1010
Temp. (C)	13.10	13.34	13.48	13.53	13.61	13.63	13.68	13.70	S
Conduct. (µmhos/cm)	848	844	835	817	798	789	785	781	A
DO (mg/l)	4.18	3.13	2.88	1.92	4.19	1.62	1.71	1.61	m
pH (Std. Units)	6.53	6.43	6.39	6.37	6.36	6.35	6.35	6.35	P
Eh/ORP (millivolts)	64.0	-22.8	-39.7	-45.0	-52.0	-55.0	-56.0	-56	L
Turbidity (NTU)	50.6	13.7	8.13	6.60	5.1	3.36	2.15	2.41	E
Flow (ml/min)	100	100	100	100	100	100	100	100	
Depth To Water (ft)	7.50	7.80	8.00	8.21	8.27	8.28	8.30	8.31	

Time									
Temp. (C)									
Conduct. (µmhos/cm)									
DO (mg/l)									
pH (Std. Units)									
Eh/ORP (millivolts)									
Turbidity (NTU)									
Flow (ml/min)									
Depth To Water (ft)									

Stabilization Criteria* (3 consecutive readings)

- Temperature: +/- 3 %
- Conduct. (µmhos/cm): +/- 3 %
- DO (mg/l): +/- 10 % (for values >0.5 mg/L)
- pH (Std. Units): +/- 0.1 SU
- Eh/ORP (millivolts): +/- 10 mV
- Turbidity (NTU): +/- 10 % (for values >5.0 NTUs)
- Drawdown: < 0.3 ft (can be greater as long as water level stabilizes above well screen)

Pump Type	Purge	Sample	Comments:
Peristaltic Pump	<input type="checkbox"/>	<input type="checkbox"/>	
Submersible Pump	<input type="checkbox"/>	<input type="checkbox"/>	
Bladder Pump	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Other:	<input type="checkbox"/>	<input type="checkbox"/>	

Analytical Parameter	Filtered (Y/N)	Preservation	Volume	Time Collected	QC	Sample #
VOL	N	HCL	(3) 40ml	1010	N	MW-6
VPH	N	HCL	(3) 40ml	↓		↓
EPH	N	HCL	(2) 12 An	↓		↓



Low-flow Groundwater Field Data Record

Project: COSE FORD Project No.: 178226 Date/Time: 12/20/12 Sheet 1 of 1

TRC Personnel: D. Gice / Z. Richards Well ID: R121

WELL INTEGRITY

Table with columns YES/NO for Protect. Casing Secure, Concrete Collar Intact, PVC Stick-up Intact, Well Cap Present, Security Lock Present.

Sampling Equipment: YSI 556, LaMotte, MP15, Solinst WLM Flow-thru Cell Volume: 475 mL

PID SCREENING MEAS.

Table with columns for Background and Well Mouth.

Protective Casing Stick-up (from ground) 0 ft.

Riser Stick-up (from ground) 0 ft.

WELL DIAMETER [X] 2 inch [] 4 inch [] 6 inch

WELL MATERIAL

[X] PVC [] SS []

Well Depth 11.76 ft. [X] top of riser [] top of casing [X] measured [] historical

Water Depth 6.48 ft. LNAPL/DNAPL Depth = 0 Thickness = 0

LOW FLOW DATA

Depth of pump intake: 10

Static water level after pump put into well 6.31

Initial purge Rate/ Water Level (100-400 ml/min): 100

Adjusted purge Rates/time/WL(record changes) 100

Flow rate at time of sampling: 100

Volume of water purged: 24 gal ~ 5 L

FIELD WATER QUALITY MEASUREMENTS (record at appropriate intervals)

Table with columns for Time (1045, 1105, 1110, 1120, 1125, 1130, 1135) and rows for Temp. (C), Conduct. (µmhos/cm), DO (mg/l), pH (Std. Units), Eh/ORP (millivolts), Turbidity (NTU), Flow (ml/min), Depth To Water (ft).

Table for Stabilization Criteria* (3 consecutive readings) with rows for Temp. (C), Conduct. (µmhos/cm), DO (mg/l), pH (Std. Units), Eh/ORP (millivolts), Turbidity (NTU), Flow (ml/min), Depth To Water (ft).

Table for Pump Type (Peristaltic, Submersible, Bladder, Other) and Purge/Sample status.

Table for Analytical Parameter (VOL, VPH, BPH), Filtered (Y/N), Preservation (HCL), Volume, Time Collected, QC, Sample #.



Low-flow Groundwater Sampling Data Record

Project: COTE FOR Project No.: 178226 Date/Time: 12/19/12 Sheet 1 of 1

Well Identification: R1Z2

TRC Personnel: D. Gill, Z. Richard

WELL INTEGRITY

Table with columns YES/NO for Protect. Casing Secure, Concrete Collar Intact, PVC Stick-up Intact, Well Cap Present, Security Lock Present.

Protective Casing Stick-up (from ground) 0 ft.

Riser Stick-up (from ground) 0 ft.

WELL DIAMETER: 2 inch (checked), 4 inch, 6 inch

WELL MATERIAL: PVC (checked), SS

Well Depth 7.30 ft. [X] top of riser [X] measured top of casing [] historical

Water Depth 2.91 ft. LNAPL/DNAPL Depth = 0 Thickness = 0

LOW FLOW DATA: Depth of pump intake: 50 Static water level after pump put into well

Initial purge Rate/ Water Level (100-400 ml/min): 125

Adjusted purge Rates/time/WL(record changes) 100

Flow rate at time of sampling: 100

Flow Through Cell Volume = 475 ml

PID SCREENING MEAS.

Table with columns Background, Well Mouth, values 0

FIELD WATER QUALITY MEASUREMENTS (record at 3-5 minute intervals)

Table with columns Time, Temp. (C), Conduct. (µmhos/cm), DO (mg/l), pH (Std. Units), Eh (millivolts), Turb. (NTU), Flow (ml/min), Depth To Water (ft) for two sets of measurements.

Pump Type

- Peristaltic Pump
Submersible Pump
Bladder Pump
Other:

Purge [] [X]

Sample [] [X]

Description of Sampling Equipment and Flow Rate:

YSI 556, MPIS Backpack w/ CO2, LaMotte 2020
Solinst WLM, 1.75" Bladder Pump

Table with columns Analytical Parameter, Filtered (Y/N), Preservation, Volume, Time Collected, Sample #, Case #



Low-flow Groundwater Field Data Record

Project: COTE FORD Project No.: 178226 Date/Time: 12/19/12 Sheet 1 of 1

TRC Personnel: D Gill / Z. Richards Well ID: R123

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Concrete Collar Intact	<input checked="" type="checkbox"/>	<input type="checkbox"/>
PVC Stick-up Intact	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Well Cap Present	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Security Lock Present	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Protective Casing Stick-up 0 ft. (from ground)

Well Depth 7.72 ft. top of riser measured top of casing historical

Riser Stick-up 0 ft. (from ground)

Water Depth 3.99 ft. LNAPL/DNAPL Depth = 0

Sampling Equipment: YSI 556 LaMotte, MP15 Solinst WLM
Flow-thru Cell Volume: 475 mL

WELL DIAMETER 2 inch 4 inch 6 inch
Other: _____

LOW FLOW DATA

Depth of pump intake: 6.00
Static water level after pump put into well 4.390

Initial purge Rate/ Water Level (100-400 ml/min): 125

Adjusted purge Rates/time/WL(record changes) 100

PID SCREENING MEAS.

Background	<u>0</u>
Well Mouth	<u>0</u>

WELL MATERIAL

PVC SS

Flow rate at time of sampling: 100

Volume of water purged: ~4.5 L

FIELD WATER QUALITY MEASUREMENTS (record at appropriate intervals)

Time	1300	1315	1325	1330	1335	1340	1345		
Temp. (C)	<u>10.81</u>	<u>11.10</u>	<u>11.08</u>	<u>11.17</u>	<u>11.20</u>	<u>11.20</u>	<u>SAMPLE</u>		
Conduct. (µmhos/cm)	<u>167</u>	<u>175</u>	<u>179</u>	<u>184</u>	<u>184</u>	<u>186</u>			
DO (mg/l)	<u>8.79</u>	<u>8.47</u>	<u>8.56</u>	<u>8.41</u>	<u>8.40</u>	<u>8.43</u>			
pH (Std. Units)	<u>6.21</u>	<u>6.01</u>	<u>6.06</u>	<u>6.22</u>	<u>6.21</u>	<u>6.21</u>			
Eh/ORP (millivolts)	<u>279.4</u>	<u>304.2</u>	<u>302.1</u>	<u>297.7</u>	<u>300.5</u>	<u>301.1</u>			
Turbidity (NTU)	<u>24.1</u>	<u>11.7</u>	<u>6.81</u>	<u>3.85</u>	<u>4.11</u>	<u>3.84</u>			
Flow (ml/min)	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>			
Depth To Water (ft)	<u>4.50</u>	<u>4.70</u>	<u>4.75</u>	<u>4.80</u>	<u>4.81</u>	<u>4.80</u>			

Time									
Temp. (C)									
Conduct. (µmhos/cm)									
DO (mg/l)									
pH (Std. Units)									
Eh/ORP (millivolts)									
Turbidity (NTU)									
Flow (ml/min)									
Depth To Water (ft)									

Stabilization Criteria* (3 consecutive readings)

- Temperature: +/- 3 %
- Conduct. (µmhos/cm): +/- 3 %
- DO (mg/l): +/- 10 % (for values >0.5 mg/L)
- pH (Std. Units): +/- 0.1 SU
- Eh/ORP (millivolts): +/- 10 mV
- Turbidity (NTU): +/- 10 % (for values >5.0 NTUs)
- Drawdown: < 0.3 ft (can be greater as long as water level stabilizes above well screen)

Pump Type: Peristaltic Pump Submersible Pump Bladder Pump Other: _____

Purge: Sample: Comments: _____

Analytical Parameter	Filtered (Y/N)	Preservation	Volume	Time Collected	QC	Sample #
<u>VPH</u>	<u>N</u>	<u>HCL</u>	<u>(3) 40mL</u>	<u>1345</u>	<u>NO</u>	<u>R123</u>
<u>VOL</u>	<u>N</u>	<u>HCL</u>	<u>(3) 40mL</u>			
<u>EPH</u>	<u>N</u>	<u>HCL</u>	<u>(2) 1L</u>			
<u>TOT Metal MIP</u>	<u>N</u>	<u>HNO3</u>	<u>(1) 250 pL</u>			



Low-flow Groundwater Field Data Record

Project: Cote Ford Project No.: 198226 Date/Time: 12/19/12 12:10 Sheet 1 of 1

TRC Personnel: Zack Richards Well ID: R1Z-5

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Concrete Collar Intact	<input checked="" type="checkbox"/>	<input type="checkbox"/>
PVC Stick-up Intact	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Well Cap Present	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Security Lock Present	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Sampling Equipment: YSI 556
LaMotte, Solinst WLM, MMS
 Flow-thru Cell Volume: 475 mL

PID SCREENING MEAS.

Background	<u>NA</u>
Well Mouth	<u>NA</u>

Protective Casing Stick-up Push ft. (from ground)

Riser Stick-up (from ground) _____ ft.

WELL DIAMETER 2 inch
 4 inch
 6 inch
 Other: _____

WELL MATERIAL

PVC SS

Well Depth 9.2 ft. top of riser measured
 top of casing historical

Water Depth 5.54 ft. LNAPL/DNAPL Depth = ∅
 Thickness = ∅

LOW FLOW DATA
 Depth of pump intake: 7.4'
 Static water level after pump put into well 5.53'

Initial purge Rate/ Water Level (100-400 ml/min): 100 ml/min * Slowest flow rate w/out pump turning off
 Adjusted purge Rates/time/WL(record changes)

Flow rate at time of sampling: 100 ml/min

Volume of water purged: ~1.3 L

FIELD WATER QUALITY MEASUREMENTS (record at appropriate intervals)

Time	1216	1222	1227	1229	1300	1448	1450			
Temp. (C)	<u>Begin</u>	<u>12.33</u>	<u>12.55</u>	<u>Shut</u>			<u>62x</u>			
Conduct. (µmhos/cm)	<u>Pumping</u>	<u>734</u>	<u>733</u>	<u>down</u>			<u>tubing</u>			
DO (mg/l)	<u>Filling</u>	<u>7.16</u>	<u>7.18</u>	<u>pump</u>			<u>volume</u>			
pH (Std. Units)	<u>vs YSI</u>	<u>6.62</u>	<u>6.59</u>	<u>to</u>			<u>purged</u>			
Eh/ORP (millivolts)	<u>141.1</u>	<u>156.8</u>	<u>allow</u>				<u>Sample</u>			
Turbidity (NTU)		<u>2.93</u>	<u>recharge</u>				<u>collected</u>			
Flow (ml/min)	<u>100</u>	<u>100</u>	<u>100</u>				<u>100</u>			
Depth To Water (ft)	<u>5.53</u>	<u>6.31</u>	<u>7.05</u>	<u>7.30</u>	<u>7.10</u>	<u>6.50</u>				

Time									
Temp. (C)									
Conduct. (µmhos/cm)									
DO (mg/l)									
pH (Std. Units)									
Eh/ORP (millivolts)									
Turbidity (NTU)									
Flow (ml/min)									
Depth To Water (ft)									

Stabilization Criteria* (3 consecutive readings)

- Temperature: +/- 3 %
- Conduct. (µmhos/cm): +/- 3 %
- DO (mg/l): +/- 10 % (for values >0.5 mg/L)
- pH (Std. Units): +/- 0.1 SU
- Eh/ORP (millivolts): +/- 10 mV
- Turbidity (NTU): +/- 10 % (for values >5.0 NTUs)
- Drawdown: < 0.3 ft (can be greater as long as water level stabilizes above well screen)

Pump Type: Peristaltic Pump Submersible Pump Bladder Pump Other: _____

Purge Sample Comments: Extremely slow recharge - could only drawdown one over course of day - purged 2x tubing volumes before sampling

Analytical Parameter	Filtered (Y/N)	Preservation	Volume	Time Collected	QC	Sample #
<u>VOCs</u>	<u>N</u>	<u>HCl</u>	<u>(3) 40 mL</u>	<u>1450</u>		<u>R1Z-5</u>
<u>VPH</u>	<u>N</u>	<u>↓</u>	<u>(3) 40 mL</u>	<u>↓</u>		<u>↓</u>
<u>EPH</u>	<u>N</u>	<u>↓</u>	<u>(2) 1 L</u>	<u>↓</u>		<u>↓</u>

Signed: [Signature]



Low-flow Groundwater Field Data Record

Project: Cote Ford Project No.: 178226 Date/Time: 12/19/12 1020 Sheet 1 of 1

TRC Personnel: Zack Richards Well ID: R1Z-6

WELL INTEGRITY

Table with columns YES/NO for Protect. Casing Secure, Concrete Collar Intact, PVC Stick-up Intact, Well Cap Present, Security Lock Present.

Sampling Equipment: YSI 556, LaMotte, Solinst WLM, Geopac Flow-thru Cell Volume: 475 mL

PID SCREENING MEAS.

Table with columns Background, Well Mouth and values NA, NA.

Protective Casing Stick-up Flush ft.

Riser Stick-up (from ground) ft.

WELL DIAMETER 2 inch, 4 inch, 6 inch

WELL MATERIAL

PVC, SS checkboxes

Well Depth 8.6 ft. measured top of riser, top of casing

Water Depth 5.45 ft. LNAPL/DNAPL Depth = 0 Thickness = 0

LOW FLOW DATA Depth of pump intake: 7' Static water level after pump put into well

Initial purge Rate/ Water Level (100-400 ml/min): 100 ml/min Adjusted purge Rates/time/WL(record changes)

Flow rate at time of sampling: 100 ml/min

Volume of water purged: ~5.8 L

Slowest flow rate w/ out pump shutting off

FIELD WATER QUALITY MEASUREMENTS (record at appropriate intervals)

Table with columns Time, Temp. (C), Conduct. (µmhos/cm), DO (mg/l), pH (Std. Units), Eh/ORP (millivolts), Turbidity (NTU), Flow (ml/min), Depth To Water (ft) and handwritten data.

Table with columns Time, Temp. (C), Conduct. (µmhos/cm), DO (mg/l), pH (Std. Units), Eh/ORP (millivolts), Turbidity (NTU), Flow (ml/min), Depth To Water (ft) and Stabilization Criteria* (3 consecutive readings).

Table with columns Pump Type, Purge, Sample, Comments and checkboxes for Peristaltic Pump, Submersible Pump, Bladder Pump, Other.

Table with columns Analytical Parameter, Filtered (Y/N), Preservation, Volume, Time Collected, QC, Sample # and handwritten data for VOCs, VPH, EPH.



Field Instrument Calibration Log

Date: 12/19/12 Site Name: Cote Ford
 Water Quality Instrument Type / ID: YSI 556 (SN: 11K100358)
 Turbidity Instrument Type / ID: LaMotte 2020.ve (SN: 2285-2612)
 Date of Last Temperature Probe Check: 12/17/12

Dissolved Oxygen (DO)

Time	29.52 inHg Barometric Pressure (mm Hg)	Temperature (° Celsius)	100% Saturation Calibration (On Instrument)	Actual 100% Saturation Calibration (Refer to Attachment A)	Oxygen Solubility at Indicated Pressure (mg/L) (On Instrument)	Actual Oxygen Solubility at Indicated Pressure (mg/L) (Refer to Attachment B)	Zero DO Check (mg/L)	Comments	Initials
12/19 0800	747.5	8.75	98.6	98.6	11.49	11.47	0.43		ZCR
12/20 0800	764.3	4.90	100.3	100.5	12.83	12.82	0.48		

pH

Time	Solution Temperature (° Celsius)	pH 7	pH 4	pH 10	pH 7 Check	Comments	Initials
12/19 0823	9.12	6.97	3.99	9.93	7.02		ZCR
12/20 0830	4.53	7.00	3.99	9.93	7.08		

Specific Conductance

Time	Specific Conductance Reading (umhos/cm3)	Comments	Initials
12/19 0840	1.414		ZCR
12/20 0845	1.412		

Oxidation Reduction Potential (ORP)

Time	Solution Temperature (° Celsius)	ORP Reading (mV) (Refer to Attachment C)	Actual ORP Reading (mV) (On Instrument)	Comments	Initials
12/19 0845	8.25	252.8	252.9		ZCR
12/20 0850	4.65	257.5	257.5		ZCR

Turbidity

Time	Zero Standard	Standard #1 (10 NTUs)	Standard #1 (1 NTUs)	Comments	Initials
12/19 0855	0.00	0.96	9.92		ZCR
12/20 0900	0.00	1.06	10.02		ZCR

Calibration Fluid ID / Expiration Date:

Zero DO: _____ Specific Conductance: 2164 (7/1/13)
 pH 4: 2AH414 (8/1/14) pH 7: 2AH777 (8/1/14) pH 10: 2AH029 (5/31/16)
 ORP: _____
 Zero Turbidity: C54820 (8/1/13) Turbidity Std. #1: C254964 (8/1/13) Turbidity Std. #2: C254965 (8/1/13)

Signed _____

Field Instrument Calibration Log



Date: 12/19/12 Site Name: CUTE FORD
 Water Quality Instrument Type / ID: YSI 556 (SN: 09E100456)
 Turbidity Instrument Type / ID: LaMotte 2020we (SN: 1115-2811)
 Date of Last Temperature Probe Check: 12/17/12

Dissolved Oxygen (DO)

12/19
12/20

Time	Barometric Pressure (mm Hg)	Temperature (° Celsius)	100% Saturation Calibration (On Instrument)	Actual 100% Saturation Calibration (Refer to Attachment A)	Oxygen Solubility at Indicated Pressure (mg/L) (On Instrument)	Actual Oxygen Solubility at Indicated Pressure (mg/L) (Refer to Attachment B)	Zero DO Check (mg/L)	Comments	Initials
0955	750.5	16.25	98.7	98.7	9.69	9.70	0.23		ZUR
0800	764.3	6.42	100.6	100.5	12.38	12.35	0.49		ZUR

pH

12/19
12/20

Time	Solution Temperature (° Celsius)	pH 7	pH 4	pH 10	pH 7 Check	Comments	Initials
1005	17.33	7.00	4.00	9.99	7.08		ZUR
0830	5.23	7.01	3.98	9.99	7.05		ZUR

Specific Conductance

12/19
12/20

Time	Specific Conductance Reading (umhos/cm3)	Comments	Initials
1012	1.415		ZUR
0845	1.413		ZUR

Oxidation Reduction Potential (ORP)

12/19
12/20

Time	Solution Temperature (° Celsius)	ORP Reading (mV) (Refer to Attachment C)	Actual ORP Reading (mV) (On Instrument)	Comments	Initials
1016	17.42	240.8	240.8		ZUR
0850	5.05	257.0	257.0		ZUR

Turbidity

12/19
12/20

Time	Zero Standard	Standard #1 (10 NTUs)	Standard #1 (1 NTUs)	Comments	Initials
1025	0.00	9.96	0.98		ZUR
0900	0.00	9.92	0.96		ZUR

Calibration Fluid ID / Expiration Date:

Zero DO: _____ Specific Conductance: 2164 (7/1/13)
 pH 4: 2AH414 (8/1/14) pH 7: 2AH777 (8/1/14) pH 10: 2AH029
 ORP: _____
 Zero Turbidity: C94820 (8/1/13) Turbidity Std. #1: C254965 (8/1/13) Turbidity Std. #2: C254964 (8/1/13)

Signed: [Signature]

APPENDIX B

LABORATORY ANALYTICAL DATA

December 28, 2012

Dave Gill
TRC Solutions - Lowell
650 Suffolk Street
Lowell, MA 01852

Project Location: Cote Ford
Client Job Number:
Project Number: 178226
Laboratory Work Order Number: 12L0703

Enclosed are results of analyses for samples received by the laboratory on December 20, 2012. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Meghan E. Kelley
Project Manager

TRC Solutions - Lowell
 650 Suffolk Street
 Lowell, MA 01852
 ATTN: Dave Gill

REPORT DATE: 12/28/2012

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 178226

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 12L0703

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Cote Ford

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MW-18in	12L0703-01	Ground Water		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SW-846 6020A SW-846 7470A SW-846 8260C	
RIZ-2	12L0703-02	Ground Water		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SW-846 6020A SW-846 7470A SW-846 8260C	
RIZ-3	12L0703-03	Ground Water		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SW-846 6020A SW-846 7470A SW-846 8260C	
RIZ-5	12L0703-04	Ground Water		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SW-846 8260C	
RIZ-6	12L0703-05	Ground Water		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SW-846 8260C	
MW-2	12L0703-06	Ground Water		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SW-846 6020A SW-846 7470A SW-846 8260C	
MW-6	12L0703-07	Ground Water		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SW-846 8260C	
MW-5	12L0703-08	Ground Water		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SW-846 8260C	
DUP	12L0703-09	Ground Water		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SW-846 6020A SW-846 7470A SW-846 8260C	
RIZ-1	12L0703-10	Ground Water		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SW-846 8260C	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

MADEP-EPH-04-1.1

Qualifications:

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:

n-Decane, n-Nonane
B065208-BS1

SW-846 6020A

Qualifications:

Matrix spike and spike duplicate recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of matrix effects that lead to low bias or non-homogeneous sample aliquot cannot be eliminated.

Analyte & Samples(s) Qualified:

Silver
12L0703-01[MW-18in], B065164-MS1, B065164-MSD1

SW-846 8260C

Qualifications:

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:

1,2-Dibromo-3-chloropropane (DBCP), Bromoform, Diethyl Ether, Trichlorofluoromethane (Freon 11)
B065156-BS1, B065156-BSD1

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.

Analyte & Samples(s) Qualified:

Naphthalene
B065156-BS1

Compound classified by MA CAM as difficult with acceptable recoveries of 40-160%. Recovery does not meet 70-130% criteria but does meet difficult compound criteria.

Analyte & Samples(s) Qualified:

Acetone, Chloromethane, Dichlorodifluoromethane (Freon 12)
B065156-BSD1, B065156-BS1

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.

Analyte & Samples(s) Qualified:

1,4-Dioxane, 2-Butanone (MEK), Acetone, Bromomethane, Naphthalene
12L0703-01[MW-18in], 12L0703-02[RIZ-2], 12L0703-03[RIZ-3], 12L0703-04[RIZ-5], 12L0703-05[RIZ-6], 12L0703-06[MW-2], 12L0703-07[MW-6], 12L0703-08[MW-5], 12L0703-09[DUP], 12L0703-10[RIZ-1], B065156-BLK1, B065156-BS1, B065156-BSD1

Elevated reporting limit due to high concentration of target compounds. MA CAM reporting limit not met.

Analyte & Samples(s) Qualified:

12L0703-07[MW-6]

Elevated reporting limit based on lowest point in calibration.
MA CAM reporting limit not met.

Analyte & Samples(s) Qualified:

Carbon Disulfide, Methylene Chloride

12L0703-01[MW-18in], 12L0703-02[RIZ-2], 12L0703-03[RIZ-3], 12L0703-04[RIZ-5], 12L0703-05[RIZ-6], 12L0703-06[MW-2], 12L0703-08[MW-5], 12L0703-09[DUP], 12L0703-10[RIZ-1]

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

1,2-Dibromo-3-chloropropane (DBCP), Bromoform, Chloromethane

12L0703-01[MW-18in], 12L0703-02[RIZ-2], 12L0703-03[RIZ-3], 12L0703-04[RIZ-5], 12L0703-05[RIZ-6], 12L0703-06[MW-2], 12L0703-07[MW-6], 12L0703-08[MW-5], 12L0703-09[DUP], 12L0703-10[RIZ-1], B065156-BLK1, B065156-BS1, B065156-BSD1

Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.

Analyte & Samples(s) Qualified:

1,4-Dioxane, Tetrahydrofuran

12L0703-01[MW-18in], 12L0703-02[RIZ-2], 12L0703-03[RIZ-3], 12L0703-04[RIZ-5], 12L0703-05[RIZ-6], 12L0703-06[MW-2], 12L0703-07[MW-6], 12L0703-08[MW-5], 12L0703-09[DUP], 12L0703-10[RIZ-1], B065156-BLK1, B065156-BS1, B065156-BSD1

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

2-Butanone (MEK), Bromomethane, Diethyl Ether, Trichlorofluoromethane (Freon 11), Vinyl Chloride

B065156-BS1, B065156-BSD1

MADEP-EPH-04-1.1

SPE cartridge contamination with non-petroleum compounds, if present, is verified by GC/MS in each method blank per extraction batch and excluded from C11-C22 aromatic range fraction in all samples in the batch. No significant modifications were made to the method.

MADEP-VPH-04-1.1

No significant modifications were made to the method. All VPH samples were received preserved properly at pH <2 in the proper containers as specified on the chain-of-custody form unless specified in this narrative.

SW-846 8260C

Laboratory control sample recoveries for required MCP Data Enhancement 8260 compounds were all within limits specified by the method except for "difficult analytes" where recovery control limits of 40-160% are used and/or unless otherwise listed in this narrative. Difficult analytes: MIBK, MEK, acetone, 1,4-dioxane, chloromethane, dichlorodifluoromethane, 2-hexanone, and bromomethane.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Michael A. Erickson
Laboratory Director

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: MW-18in

Sampled: 12/19/2012 10:00

Sample ID: 12L0703-01

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	10	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 2:06	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
Bromodichloromethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
Bromoform	ND	1.0	µg/L	1	V-05	SW-846 8260C	12/21/12	12/24/12 2:06	EEH
Bromomethane	ND	2.0	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 2:06	EEH
2-Butanone (MEK)	ND	10	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 2:06	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
Carbon Disulfide	ND	5.0	µg/L	1	RL-07	SW-846 8260C	12/21/12	12/24/12 2:06	EEH
Carbon Tetrachloride	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
Chloromethane	ND	2.0	µg/L	1	V-05	SW-846 8260C	12/21/12	12/24/12 2:06	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	µg/L	1	V-05	SW-846 8260C	12/21/12	12/24/12 2:06	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
1,1-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
cis-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
trans-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
1,4-Dioxane	ND	100	µg/L	1	R-05, V-16	SW-846 8260C	12/21/12	12/24/12 2:06	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: MW-18in

Sampled: 12/19/2012 10:00

Sample ID: 12L0703-01

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
Methylene Chloride	ND	5.0	µg/L	1	RL-07	SW-846 8260C	12/21/12	12/24/12 2:06	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
Naphthalene	ND	2.0	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 2:06	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
1,1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
Tetrahydrofuran	ND	2.0	µg/L	1	V-16	SW-846 8260C	12/21/12	12/24/12 2:06	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
1,2,3-Trichlorobenzene	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:06	EEH

Surrogates	% Recovery	Recovery Limits	Flag
1,2-Dichloroethane-d4	98.9	70-130	12/24/12 2:06
Toluene-d8	103	70-130	12/24/12 2:06
4-Bromofluorobenzene	98.5	70-130	12/24/12 2:06

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: MW-18in

Sampled: 12/19/2012 10:00

Sample ID: 12L0703-01

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 17:55	SCS
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 17:55	SCS
Unadjusted C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 17:55	SCS
C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 17:55	SCS
Acenaphthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 17:55	SCS
Acenaphthylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 17:55	SCS
Anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 17:55	SCS
Benzo(a)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 17:55	SCS
Benzo(a)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 17:55	SCS
Benzo(b)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 17:55	SCS
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 17:55	SCS
Benzo(k)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 17:55	SCS
Chrysene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 17:55	SCS
Dibenz(a,h)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 17:55	SCS
Fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 17:55	SCS
Fluorene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 17:55	SCS
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 17:55	SCS
2-Methylnaphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 17:55	SCS
Naphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 17:55	SCS
Phenanthrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 17:55	SCS
Pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 17:55	SCS

Surrogates	% Recovery	Recovery Limits	Flag
Chlorooctadecane (COD)	52.6	40-140	12/27/12 17:55
o-Terphenyl (OTP)	64.3	40-140	12/27/12 17:55
2-Bromonaphthalene	73.5	40-140	12/27/12 17:55
2-Fluorobiphenyl	75.4	40-140	12/27/12 17:55

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: MW-18in

Sampled: 12/19/2012 10:00

Sample ID: 12L0703-01

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 17:34	EEH
C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 17:34	EEH
Unadjusted C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 17:34	EEH
C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 17:34	EEH
C9-C10 Aromatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 17:34	EEH
Benzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 17:34	EEH
Ethylbenzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 17:34	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 17:34	EEH
Naphthalene	ND	5.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 17:34	EEH
Toluene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 17:34	EEH
m+p Xylene	ND	2.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 17:34	EEH
o-Xylene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 17:34	EEH
Surrogates		% Recovery		Recovery Limits	Flag				
2,5-Dibromotoluene (FID)		95.1		70-130				12/21/12 17:34	
2,5-Dibromotoluene (PID)		90.1		70-130				12/21/12 17:34	

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: MW-18in

Sampled: 12/19/2012 10:00

Sample ID: 12L0703-01

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:06	AMP
Arsenic	0.53	0.40	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:06	AMP
Barium	ND	10	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:06	AMP
Beryllium	ND	0.40	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:06	AMP
Cadmium	ND	0.50	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:06	AMP
Chromium	ND	1.0	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:06	AMP
Lead	ND	1.0	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:06	AMP
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	12/21/12	12/24/12 12:27	SAJ
Nickel	ND	5.0	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:06	AMP
Selenium	ND	5.0	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:06	AMP
Silver	ND	0.50	µg/L	1	MS-07A	SW-846 6020A	12/21/12	12/24/12 14:06	AMP
Thallium	ND	0.20	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:06	AMP
Vanadium	ND	5.0	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:06	AMP
Zinc	32	10	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:06	AMP

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: RIZ-2

Sampled: 12/19/2012 12:15

Sample ID: 12L0703-02

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	10	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 2:32	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
Bromodichloromethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
Bromoform	ND	1.0	µg/L	1	V-05	SW-846 8260C	12/21/12	12/24/12 2:32	EEH
Bromomethane	ND	2.0	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 2:32	EEH
2-Butanone (MEK)	ND	10	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 2:32	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
Carbon Disulfide	ND	5.0	µg/L	1	RL-07	SW-846 8260C	12/21/12	12/24/12 2:32	EEH
Carbon Tetrachloride	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
Chloromethane	ND	2.0	µg/L	1	V-05	SW-846 8260C	12/21/12	12/24/12 2:32	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	µg/L	1	V-05	SW-846 8260C	12/21/12	12/24/12 2:32	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
cis-1,2-Dichloroethylene	1.7	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
1,1-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
cis-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
trans-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
1,4-Dioxane	ND	100	µg/L	1	R-05, V-16	SW-846 8260C	12/21/12	12/24/12 2:32	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: RIZ-2

Sampled: 12/19/2012 12:15

Sample ID: 12L0703-02

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
Methylene Chloride	ND	5.0	µg/L	1	RL-07	SW-846 8260C	12/21/12	12/24/12 2:32	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
Naphthalene	ND	2.0	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 2:32	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
1,1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
Tetrachloroethylene	3.1	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
Tetrahydrofuran	ND	2.0	µg/L	1	V-16	SW-846 8260C	12/21/12	12/24/12 2:32	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
1,2,3-Trichlorobenzene	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
Trichloroethylene	30	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:32	EEH

Surrogates	% Recovery	Recovery Limits	Flag
1,2-Dichloroethane-d4	104	70-130	12/24/12 2:32
Toluene-d8	101	70-130	12/24/12 2:32
4-Bromofluorobenzene	99.9	70-130	12/24/12 2:32

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: RIZ-2

Sampled: 12/19/2012 12:15

Sample ID: 12L0703-02

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:16	SCS
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:16	SCS
Unadjusted C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:16	SCS
C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:16	SCS
Acenaphthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:16	SCS
Acenaphthylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:16	SCS
Anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:16	SCS
Benzo(a)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:16	SCS
Benzo(a)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:16	SCS
Benzo(b)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:16	SCS
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:16	SCS
Benzo(k)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:16	SCS
Chrysene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:16	SCS
Dibenz(a,h)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:16	SCS
Fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:16	SCS
Fluorene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:16	SCS
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:16	SCS
2-Methylnaphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:16	SCS
Naphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:16	SCS
Phenanthrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:16	SCS
Pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:16	SCS

Surrogates	% Recovery	Recovery Limits	Flag
Chlorooctadecane (COD)	58.1	40-140	
o-Terphenyl (OTP)	77.6	40-140	
2-Bromonaphthalene	78.5	40-140	
2-Fluorobiphenyl	80.7	40-140	

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: RIZ-2

Sampled: 12/19/2012 12:15

Sample ID: 12L0703-02

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 18:10	EEH
C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 18:10	EEH
Unadjusted C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 18:10	EEH
C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 18:10	EEH
C9-C10 Aromatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 18:10	EEH
Benzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 18:10	EEH
Ethylbenzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 18:10	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 18:10	EEH
Naphthalene	ND	5.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 18:10	EEH
Toluene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 18:10	EEH
m+p Xylene	ND	2.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 18:10	EEH
o-Xylene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 18:10	EEH
Surrogates		% Recovery		Recovery Limits	Flag				
2,5-Dibromotoluene (FID)		98.4		70-130				12/21/12 18:10	
2,5-Dibromotoluene (PID)		92.8		70-130				12/21/12 18:10	

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: RIZ-2

Sampled: 12/19/2012 12:15

Sample ID: 12L0703-02

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:10	AMP
Arsenic	0.63	0.40	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:10	AMP
Barium	12	10	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:10	AMP
Beryllium	ND	0.40	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:10	AMP
Cadmium	ND	0.50	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:10	AMP
Chromium	1.4	1.0	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:10	AMP
Lead	ND	1.0	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:10	AMP
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	12/21/12	12/24/12 12:32	SAJ
Nickel	ND	5.0	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:10	AMP
Selenium	ND	5.0	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:10	AMP
Silver	ND	0.50	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:10	AMP
Thallium	ND	0.20	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:10	AMP
Vanadium	ND	5.0	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:10	AMP
Zinc	ND	10	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:10	AMP

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: RIZ-3

Sampled: 12/19/2012 13:45

Sample ID: 12L0703-03

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	10	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 2:58	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
Bromodichloromethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
Bromoform	ND	1.0	µg/L	1	V-05	SW-846 8260C	12/21/12	12/24/12 2:58	EEH
Bromomethane	ND	2.0	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 2:58	EEH
2-Butanone (MEK)	ND	10	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 2:58	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
Carbon Disulfide	ND	5.0	µg/L	1	RL-07	SW-846 8260C	12/21/12	12/24/12 2:58	EEH
Carbon Tetrachloride	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
Chloromethane	ND	2.0	µg/L	1	V-05	SW-846 8260C	12/21/12	12/24/12 2:58	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	µg/L	1	V-05	SW-846 8260C	12/21/12	12/24/12 2:58	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
1,1-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
cis-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
trans-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
1,4-Dioxane	ND	100	µg/L	1	R-05, V-16	SW-846 8260C	12/21/12	12/24/12 2:58	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: RIZ-3

Sampled: 12/19/2012 13:45

Sample ID: 12L0703-03

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
Methylene Chloride	ND	5.0	µg/L	1	RL-07	SW-846 8260C	12/21/12	12/24/12 2:58	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
Naphthalene	ND	2.0	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 2:58	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
Tetrahydrofuran	ND	2.0	µg/L	1	V-16	SW-846 8260C	12/21/12	12/24/12 2:58	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
1,2,3-Trichlorobenzene	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 2:58	EEH

Surrogates	% Recovery	Recovery Limits	Flag
1,2-Dichloroethane-d4	102	70-130	12/24/12 2:58
Toluene-d8	102	70-130	12/24/12 2:58
4-Bromofluorobenzene	98.3	70-130	12/24/12 2:58

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: RIZ-3

Sampled: 12/19/2012 13:45

Sample ID: 12L0703-03

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	110	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:37	SCS
C19-C36 Aliphatics	ND	110	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:37	SCS
Unadjusted C11-C22 Aromatics	ND	110	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:37	SCS
C11-C22 Aromatics	ND	110	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:37	SCS
Acenaphthene	ND	2.2	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:37	SCS
Acenaphthylene	ND	2.2	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:37	SCS
Anthracene	ND	2.2	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:37	SCS
Benzo(a)anthracene	ND	2.2	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:37	SCS
Benzo(a)pyrene	ND	2.2	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:37	SCS
Benzo(b)fluoranthene	ND	2.2	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:37	SCS
Benzo(g,h,i)perylene	ND	2.2	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:37	SCS
Benzo(k)fluoranthene	ND	2.2	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:37	SCS
Chrysene	ND	2.2	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:37	SCS
Dibenz(a,h)anthracene	ND	2.2	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:37	SCS
Fluoranthene	ND	2.2	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:37	SCS
Fluorene	ND	2.2	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:37	SCS
Indeno(1,2,3-cd)pyrene	ND	2.2	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:37	SCS
2-Methylnaphthalene	ND	2.2	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:37	SCS
Naphthalene	ND	2.2	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:37	SCS
Phenanthrene	ND	2.2	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:37	SCS
Pyrene	ND	2.2	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:37	SCS

Surrogates	% Recovery	Recovery Limits	Flag
Chlorooctadecane (COD)	49.0	40-140	12/27/12 18:37
o-Terphenyl (OTP)	71.2	40-140	12/27/12 18:37
2-Bromonaphthalene	78.1	40-140	12/27/12 18:37
2-Fluorobiphenyl	81.0	40-140	12/27/12 18:37

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: RIZ-3

Sampled: 12/19/2012 13:45

Sample ID: 12L0703-03

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 18:46	EEH
C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 18:46	EEH
Unadjusted C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 18:46	EEH
C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 18:46	EEH
C9-C10 Aromatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 18:46	EEH
Benzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 18:46	EEH
Ethylbenzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 18:46	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 18:46	EEH
Naphthalene	ND	5.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 18:46	EEH
Toluene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 18:46	EEH
m+p Xylene	ND	2.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 18:46	EEH
o-Xylene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 18:46	EEH
Surrogates		% Recovery		Recovery Limits	Flag				
2,5-Dibromotoluene (FID)		104		70-130				12/21/12 18:46	
2,5-Dibromotoluene (PID)		100		70-130				12/21/12 18:46	

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: RIZ-3

Sampled: 12/19/2012 13:45

Sample ID: 12L0703-03

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Antimony	ND	1.0	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:26	AMP
Arsenic	0.82	0.40	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:26	AMP
Barium	14	10	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:26	AMP
Beryllium	ND	0.40	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:26	AMP
Cadmium	ND	0.50	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:26	AMP
Chromium	1.0	1.0	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:26	AMP
Lead	1.1	1.0	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:26	AMP
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	12/21/12	12/24/12 12:34	SAJ
Nickel	ND	5.0	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:26	AMP
Selenium	ND	5.0	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:26	AMP
Silver	ND	0.50	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:26	AMP
Thallium	ND	0.20	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:26	AMP
Vanadium	ND	5.0	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:26	AMP
Zinc	ND	10	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:26	AMP

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: RIZ-5

Sampled: 12/19/2012 14:56

Sample ID: 12L0703-04

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	10	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 3:24	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
Bromodichloromethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
Bromoform	ND	1.0	µg/L	1	V-05	SW-846 8260C	12/21/12	12/24/12 3:24	EEH
Bromomethane	ND	2.0	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 3:24	EEH
2-Butanone (MEK)	ND	10	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 3:24	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
Carbon Disulfide	ND	5.0	µg/L	1	RL-07	SW-846 8260C	12/21/12	12/24/12 3:24	EEH
Carbon Tetrachloride	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
Chloromethane	ND	2.0	µg/L	1	V-05	SW-846 8260C	12/21/12	12/24/12 3:24	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	µg/L	1	V-05	SW-846 8260C	12/21/12	12/24/12 3:24	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
1,1-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
cis-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
trans-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
1,4-Dioxane	ND	100	µg/L	1	R-05, V-16	SW-846 8260C	12/21/12	12/24/12 3:24	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: RIZ-5

Sampled: 12/19/2012 14:56

Sample ID: 12L0703-04

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
Methylene Chloride	ND	5.0	µg/L	1	RL-07	SW-846 8260C	12/21/12	12/24/12 3:24	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
Naphthalene	ND	2.0	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 3:24	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
1,1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
Tetrahydrofuran	ND	2.0	µg/L	1	V-16	SW-846 8260C	12/21/12	12/24/12 3:24	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
1,2,3-Trichlorobenzene	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:24	EEH

Surrogates	% Recovery	Recovery Limits	Flag
1,2-Dichloroethane-d4	103	70-130	12/24/12 3:24
Toluene-d8	102	70-130	12/24/12 3:24
4-Bromofluorobenzene	98.4	70-130	12/24/12 3:24

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: RIZ-5

Sampled: 12/19/2012 14:56

Sample ID: 12L0703-04

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	110	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:58	SCS
C19-C36 Aliphatics	ND	110	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:58	SCS
Unadjusted C11-C22 Aromatics	ND	110	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:58	SCS
C11-C22 Aromatics	ND	110	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:58	SCS
Acenaphthene	ND	2.2	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:58	SCS
Acenaphthylene	ND	2.2	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:58	SCS
Anthracene	ND	2.2	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:58	SCS
Benzo(a)anthracene	ND	2.2	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:58	SCS
Benzo(a)pyrene	ND	2.2	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:58	SCS
Benzo(b)fluoranthene	ND	2.2	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:58	SCS
Benzo(g,h,i)perylene	ND	2.2	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:58	SCS
Benzo(k)fluoranthene	ND	2.2	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:58	SCS
Chrysene	ND	2.2	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:58	SCS
Dibenz(a,h)anthracene	ND	2.2	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:58	SCS
Fluoranthene	ND	2.2	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:58	SCS
Fluorene	ND	2.2	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:58	SCS
Indeno(1,2,3-cd)pyrene	ND	2.2	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:58	SCS
2-Methylnaphthalene	ND	2.2	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:58	SCS
Naphthalene	ND	2.2	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:58	SCS
Phenanthrene	ND	2.2	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:58	SCS
Pyrene	ND	2.2	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 18:58	SCS

Surrogates	% Recovery	Recovery Limits	Flag
Chlorooctadecane (COD)	53.8	40-140	12/27/12 18:58
o-Terphenyl (OTP)	64.8	40-140	12/27/12 18:58
2-Bromonaphthalene	74.1	40-140	12/27/12 18:58
2-Fluorobiphenyl	76.3	40-140	12/27/12 18:58

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: RIZ-5

Sampled: 12/19/2012 14:56

Sample ID: 12L0703-04

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 19:23	EEH
C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 19:23	EEH
Unadjusted C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 19:23	EEH
C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 19:23	EEH
C9-C10 Aromatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 19:23	EEH
Benzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 19:23	EEH
Ethylbenzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 19:23	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 19:23	EEH
Naphthalene	ND	5.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 19:23	EEH
Toluene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 19:23	EEH
m+p Xylene	ND	2.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 19:23	EEH
o-Xylene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 19:23	EEH
Surrogates		% Recovery		Recovery Limits	Flag				
2,5-Dibromotoluene (FID)		101		70-130				12/21/12 19:23	
2,5-Dibromotoluene (PID)		93.5		70-130				12/21/12 19:23	

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: RIZ-6

Sampled: 12/19/2012 11:35

Sample ID: 12L0703-05

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	10	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 5:34	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
Bromodichloromethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
Bromoform	ND	1.0	µg/L	1	V-05	SW-846 8260C	12/21/12	12/24/12 5:34	EEH
Bromomethane	ND	2.0	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 5:34	EEH
2-Butanone (MEK)	ND	10	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 5:34	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
Carbon Disulfide	ND	5.0	µg/L	1	RL-07	SW-846 8260C	12/21/12	12/24/12 5:34	EEH
Carbon Tetrachloride	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
Chloromethane	ND	2.0	µg/L	1	V-05	SW-846 8260C	12/21/12	12/24/12 5:34	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	µg/L	1	V-05	SW-846 8260C	12/21/12	12/24/12 5:34	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
1,1-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
cis-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
trans-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
1,4-Dioxane	ND	100	µg/L	1	R-05, V-16	SW-846 8260C	12/21/12	12/24/12 5:34	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: RIZ-6

Sampled: 12/19/2012 11:35

Sample ID: 12L0703-05

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
Methylene Chloride	ND	5.0	µg/L	1	RL-07	SW-846 8260C	12/21/12	12/24/12 5:34	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
Naphthalene	ND	2.0	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 5:34	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
1,1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
Tetrahydrofuran	ND	2.0	µg/L	1	V-16	SW-846 8260C	12/21/12	12/24/12 5:34	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
1,2,3-Trichlorobenzene	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:34	EEH

Surrogates	% Recovery	Recovery Limits	Flag
1,2-Dichloroethane-d4	99.4	70-130	12/24/12 5:34
Toluene-d8	102	70-130	12/24/12 5:34
4-Bromofluorobenzene	97.4	70-130	12/24/12 5:34

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: RIZ-6

Sampled: 12/19/2012 11:35

Sample ID: 12L0703-05

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	250	100	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:19	SCS
C19-C36 Aliphatics	1700	100	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:19	SCS
Unadjusted C11-C22 Aromatics	870	100	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:19	SCS
C11-C22 Aromatics	870	100	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:19	SCS
Acenaphthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:19	SCS
Acenaphthylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:19	SCS
Anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:19	SCS
Benzo(a)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:19	SCS
Benzo(a)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:19	SCS
Benzo(b)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:19	SCS
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:19	SCS
Benzo(k)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:19	SCS
Chrysene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:19	SCS
Dibenz(a,h)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:19	SCS
Fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:19	SCS
Fluorene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:19	SCS
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:19	SCS
2-Methylnaphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:19	SCS
Naphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:19	SCS
Phenanthrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:19	SCS
Pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:19	SCS

Surrogates	% Recovery	Recovery Limits	Flag
Chlorooctadecane (COD)	55.1	40-140	12/27/12 19:19
o-Terphenyl (OTP)	79.0	40-140	12/27/12 19:19
2-Bromonaphthalene	81.5	40-140	12/27/12 19:19
2-Fluorobiphenyl	85.1	40-140	12/27/12 19:19

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: RIZ-6

Sampled: 12/19/2012 11:35

Sample ID: 12L0703-05

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 22:24	EEH
C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 22:24	EEH
Unadjusted C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 22:24	EEH
C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 22:24	EEH
C9-C10 Aromatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 22:24	EEH
Benzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 22:24	EEH
Ethylbenzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 22:24	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 22:24	EEH
Naphthalene	ND	5.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 22:24	EEH
Toluene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 22:24	EEH
m+p Xylene	ND	2.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 22:24	EEH
o-Xylene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 22:24	EEH
Surrogates		% Recovery		Recovery Limits	Flag				
2,5-Dibromotoluene (FID)		99.6		70-130				12/21/12 22:24	
2,5-Dibromotoluene (PID)		92.8		70-130				12/21/12 22:24	

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: MW-2

Sampled: 12/19/2012 14:05

Sample ID: 12L0703-06

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	10	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 3:50	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
Bromodichloromethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
Bromoform	ND	1.0	µg/L	1	V-05	SW-846 8260C	12/21/12	12/24/12 3:50	EEH
Bromomethane	ND	2.0	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 3:50	EEH
2-Butanone (MEK)	ND	10	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 3:50	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
Carbon Disulfide	ND	5.0	µg/L	1	RL-07	SW-846 8260C	12/21/12	12/24/12 3:50	EEH
Carbon Tetrachloride	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
Chloromethane	ND	2.0	µg/L	1	V-05	SW-846 8260C	12/21/12	12/24/12 3:50	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	µg/L	1	V-05	SW-846 8260C	12/21/12	12/24/12 3:50	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
1,1-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
cis-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
trans-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
1,4-Dioxane	ND	100	µg/L	1	R-05, V-16	SW-846 8260C	12/21/12	12/24/12 3:50	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: MW-2

Sampled: 12/19/2012 14:05

Sample ID: 12L0703-06

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
Methylene Chloride	ND	5.0	µg/L	1	RL-07	SW-846 8260C	12/21/12	12/24/12 3:50	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
Naphthalene	ND	2.0	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 3:50	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
Tetrahydrofuran	ND	2.0	µg/L	1	V-16	SW-846 8260C	12/21/12	12/24/12 3:50	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
1,2,3-Trichlorobenzene	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 3:50	EEH

Surrogates	% Recovery	Recovery Limits	Flag
1,2-Dichloroethane-d4	103	70-130	12/24/12 3:50
Toluene-d8	102	70-130	12/24/12 3:50
4-Bromofluorobenzene	97.8	70-130	12/24/12 3:50

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: MW-2

Sampled: 12/19/2012 14:05

Sample ID: 12L0703-06

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:40	SCS
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:40	SCS
Unadjusted C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:40	SCS
C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:40	SCS
Acenaphthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:40	SCS
Acenaphthylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:40	SCS
Anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:40	SCS
Benzo(a)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:40	SCS
Benzo(a)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:40	SCS
Benzo(b)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:40	SCS
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:40	SCS
Benzo(k)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:40	SCS
Chrysene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:40	SCS
Dibenz(a,h)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:40	SCS
Fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:40	SCS
Fluorene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:40	SCS
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:40	SCS
2-Methylnaphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:40	SCS
Naphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:40	SCS
Phenanthrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:40	SCS
Pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 19:40	SCS

Surrogates	% Recovery	Recovery Limits	Flag
Chlorooctadecane (COD)	50.9	40-140	12/27/12 19:40
o-Terphenyl (OTP)	69.3	40-140	12/27/12 19:40
2-Bromonaphthalene	79.3	40-140	12/27/12 19:40
2-Fluorobiphenyl	82.6	40-140	12/27/12 19:40

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: MW-2

Sampled: 12/19/2012 14:05

Sample ID: 12L0703-06

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 19:59	EEH
C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 19:59	EEH
Unadjusted C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 19:59	EEH
C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 19:59	EEH
C9-C10 Aromatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 19:59	EEH
Benzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 19:59	EEH
Ethylbenzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 19:59	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 19:59	EEH
Naphthalene	ND	5.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 19:59	EEH
Toluene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 19:59	EEH
m+p Xylene	ND	2.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 19:59	EEH
o-Xylene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 19:59	EEH
Surrogates		% Recovery		Recovery Limits	Flag				
2,5-Dibromotoluene (FID)		92.7		70-130				12/21/12 19:59	
2,5-Dibromotoluene (PID)		90.5		70-130				12/21/12 19:59	



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Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: MW-2

Sampled: 12/19/2012 14:05

Sample ID: 12L0703-06

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Antimony	ND	1.0	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:29	AMP
Arsenic	0.76	0.40	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:29	AMP
Barium	18	10	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:29	AMP
Beryllium	ND	0.40	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:29	AMP
Cadmium	ND	0.50	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:29	AMP
Chromium	ND	1.0	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:29	AMP
Lead	ND	1.0	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:29	AMP
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	12/21/12	12/24/12 12:36	SAJ
Nickel	ND	5.0	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:29	AMP
Selenium	ND	5.0	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:29	AMP
Silver	ND	0.50	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:29	AMP
Thallium	ND	0.20	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:29	AMP
Vanadium	ND	5.0	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:29	AMP
Zinc	160	50	µg/L	5		SW-846 6020A	12/21/12	12/27/12 11:35	KSH

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: MW-6

Sampled: 12/20/2012 10:10

Sample ID: 12L0703-07

Sample Matrix: Ground Water

Sample Flags: RL-05

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	20	µg/L	2	R-05	SW-846 8260C	12/21/12	12/24/12 6:00	EEH
tert-Amyl Methyl Ether (TAME)	ND	1.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
Benzene	3.5	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
Bromobenzene	ND	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
Bromochloromethane	ND	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
Bromodichloromethane	ND	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
Bromoform	ND	2.0	µg/L	2	V-05	SW-846 8260C	12/21/12	12/24/12 6:00	EEH
Bromomethane	ND	4.0	µg/L	2	R-05	SW-846 8260C	12/21/12	12/24/12 6:00	EEH
2-Butanone (MEK)	ND	20	µg/L	2	R-05	SW-846 8260C	12/21/12	12/24/12 6:00	EEH
n-Butylbenzene	2.4	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
sec-Butylbenzene	ND	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
tert-Butylbenzene	ND	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	1.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
Carbon Disulfide	ND	10	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
Carbon Tetrachloride	ND	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
Chlorobenzene	ND	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
Chlorodibromomethane	ND	1.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
Chloroethane	ND	4.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
Chloroform	ND	4.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
Chloromethane	ND	4.0	µg/L	2	V-05	SW-846 8260C	12/21/12	12/24/12 6:00	EEH
2-Chlorotoluene	ND	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
4-Chlorotoluene	ND	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	4.0	µg/L	2	V-05	SW-846 8260C	12/21/12	12/24/12 6:00	EEH
1,2-Dibromoethane (EDB)	ND	1.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
Dibromomethane	ND	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
1,2-Dichlorobenzene	ND	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
1,3-Dichlorobenzene	ND	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
1,4-Dichlorobenzene	ND	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
Dichlorodifluoromethane (Freon 12)	ND	4.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
1,1-Dichloroethane	ND	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
1,2-Dichloroethane	ND	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
1,1-Dichloroethylene	ND	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
cis-1,2-Dichloroethylene	ND	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
trans-1,2-Dichloroethylene	ND	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
1,2-Dichloropropane	ND	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
1,3-Dichloropropane	ND	1.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
2,2-Dichloropropane	ND	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
1,1-Dichloropropene	ND	1.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
cis-1,3-Dichloropropene	ND	0.80	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
trans-1,3-Dichloropropene	ND	0.80	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
Diethyl Ether	ND	4.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
Diisopropyl Ether (DIPE)	ND	1.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
1,4-Dioxane	ND	200	µg/L	2	R-05, V-16	SW-846 8260C	12/21/12	12/24/12 6:00	EEH
Ethylbenzene	280	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: MW-6

Sampled: 12/20/2012 10:10

Sample ID: 12L0703-07

Sample Matrix: Ground Water

Sample Flags: RL-05

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	1.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
2-Hexanone (MBK)	ND	20	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
Isopropylbenzene (Cumene)	19	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
p-Isopropyltoluene (p-Cymene)	ND	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
Methyl tert-Butyl Ether (MTBE)	ND	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
Methylene Chloride	ND	10	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
4-Methyl-2-pentanone (MIBK)	ND	20	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
Naphthalene	45	4.0	µg/L	2	R-05	SW-846 8260C	12/21/12	12/24/12 6:00	EEH
n-Propylbenzene	26	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
Styrene	ND	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
1,1,1,2-Tetrachloroethane	ND	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
1,1,2,2-Tetrachloroethane	ND	1.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
Tetrachloroethylene	ND	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
Tetrahydrofuran	ND	4.0	µg/L	2	V-16	SW-846 8260C	12/21/12	12/24/12 6:00	EEH
Toluene	20	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
1,2,3-Trichlorobenzene	ND	4.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
1,2,4-Trichlorobenzene	ND	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
1,1,1-Trichloroethane	ND	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
1,1,2-Trichloroethane	ND	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
Trichloroethylene	ND	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
Trichlorofluoromethane (Freon 11)	ND	4.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
1,2,3-Trichloropropane	ND	4.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
1,2,4-Trimethylbenzene	190	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
1,3,5-Trimethylbenzene	21	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
Vinyl Chloride	ND	4.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
m+p Xylene	290	4.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH
o-Xylene	16	2.0	µg/L	2		SW-846 8260C	12/21/12	12/24/12 6:00	EEH

Surrogates	% Recovery	Recovery Limits	Flag
1,2-Dichloroethane-d4	103	70-130	12/24/12 6:00
Toluene-d8	103	70-130	12/24/12 6:00
4-Bromofluorobenzene	103	70-130	12/24/12 6:00



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: MW-6

Sampled: 12/20/2012 10:10

Sample ID: 12L0703-07

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	110	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:01	SCS
C19-C36 Aliphatics	ND	110	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:01	SCS
Unadjusted C11-C22 Aromatics	240	110	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:01	SCS
C11-C22 Aromatics	180	110	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:01	SCS
Acenaphthene	ND	2.1	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:01	SCS
Acenaphthylene	ND	2.1	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:01	SCS
Anthracene	ND	2.1	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:01	SCS
Benzo(a)anthracene	ND	2.1	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:01	SCS
Benzo(a)pyrene	ND	2.1	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:01	SCS
Benzo(b)fluoranthene	ND	2.1	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:01	SCS
Benzo(g,h,i)perylene	ND	2.1	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:01	SCS
Benzo(k)fluoranthene	ND	2.1	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:01	SCS
Chrysene	ND	2.1	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:01	SCS
Dibenz(a,h)anthracene	ND	2.1	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:01	SCS
Fluoranthene	ND	2.1	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:01	SCS
Fluorene	ND	2.1	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:01	SCS
Indeno(1,2,3-cd)pyrene	ND	2.1	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:01	SCS
2-Methylnaphthalene	22	2.1	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:01	SCS
Naphthalene	35	2.1	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:01	SCS
Phenanthrene	ND	2.1	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:01	SCS
Pyrene	ND	2.1	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:01	SCS

Surrogates	% Recovery	Recovery Limits	Flag
Chlorooctadecane (COD)	49.4	40-140	
o-Terphenyl (OTP)	68.0	40-140	
2-Bromonaphthalene	79.6	40-140	
2-Fluorobiphenyl	83.8	40-140	

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: MW-6

Sampled: 12/20/2012 10:10

Sample ID: 12L0703-07

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	3000	200	µg/L	2		MADEP-VPH-04-1.1	12/23/12	12/24/12 14:26	EEH
C5-C8 Aliphatics	2900	200	µg/L	2		MADEP-VPH-04-1.1	12/23/12	12/24/12 14:26	EEH
Unadjusted C9-C12 Aliphatics	2100	200	µg/L	2		MADEP-VPH-04-1.1	12/23/12	12/24/12 14:26	EEH
C9-C12 Aliphatics	710	200	µg/L	2		MADEP-VPH-04-1.1	12/23/12	12/24/12 14:26	EEH
C9-C10 Aromatics	780	200	µg/L	2		MADEP-VPH-04-1.1	12/23/12	12/24/12 14:26	EEH
Benzene	4.0	2.0	µg/L	2		MADEP-VPH-04-1.1	12/23/12	12/24/12 14:26	EEH
Ethylbenzene	300	2.0	µg/L	2		MADEP-VPH-04-1.1	12/23/12	12/24/12 14:26	EEH
Methyl tert-Butyl Ether (MTBE)	ND	2.0	µg/L	2		MADEP-VPH-04-1.1	12/23/12	12/24/12 14:26	EEH
Naphthalene	44	10	µg/L	2		MADEP-VPH-04-1.1	12/23/12	12/24/12 14:26	EEH
Toluene	20	2.0	µg/L	2		MADEP-VPH-04-1.1	12/23/12	12/24/12 14:26	EEH
m+p Xylene	330	4.0	µg/L	2		MADEP-VPH-04-1.1	12/23/12	12/24/12 14:26	EEH
o-Xylene	21	2.0	µg/L	2		MADEP-VPH-04-1.1	12/23/12	12/24/12 14:26	EEH
Surrogates		% Recovery		Recovery Limits	Flag				
2,5-Dibromotoluene (FID)		103		70-130				12/24/12 14:26	
2,5-Dibromotoluene (PID)		102		70-130				12/24/12 14:26	

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: MW-5

Sampled: 12/20/2012 10:35

Sample ID: 12L0703-08

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	10	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 4:16	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
Bromodichloromethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
Bromoform	ND	1.0	µg/L	1	V-05	SW-846 8260C	12/21/12	12/24/12 4:16	EEH
Bromomethane	ND	2.0	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 4:16	EEH
2-Butanone (MEK)	ND	10	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 4:16	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
Carbon Disulfide	ND	5.0	µg/L	1	RL-07	SW-846 8260C	12/21/12	12/24/12 4:16	EEH
Carbon Tetrachloride	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
Chloromethane	ND	2.0	µg/L	1	V-05	SW-846 8260C	12/21/12	12/24/12 4:16	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	µg/L	1	V-05	SW-846 8260C	12/21/12	12/24/12 4:16	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
1,1-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
cis-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
trans-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
1,4-Dioxane	ND	100	µg/L	1	R-05, V-16	SW-846 8260C	12/21/12	12/24/12 4:16	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: MW-5

Sampled: 12/20/2012 10:35

Sample ID: 12L0703-08

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
Methylene Chloride	ND	5.0	µg/L	1	RL-07	SW-846 8260C	12/21/12	12/24/12 4:16	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
Naphthalene	ND	2.0	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 4:16	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
1,1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
Tetrahydrofuran	ND	2.0	µg/L	1	V-16	SW-846 8260C	12/21/12	12/24/12 4:16	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
1,2,3-Trichlorobenzene	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:16	EEH

Surrogates	% Recovery	Recovery Limits	Flag
1,2-Dichloroethane-d4	100	70-130	12/24/12 4:16
Toluene-d8	102	70-130	12/24/12 4:16
4-Bromofluorobenzene	96.9	70-130	12/24/12 4:16

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: MW-5

Sampled: 12/20/2012 10:35

Sample ID: 12L0703-08

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:22	SCS
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:22	SCS
Unadjusted C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:22	SCS
C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:22	SCS
Acenaphthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:22	SCS
Acenaphthylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:22	SCS
Anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:22	SCS
Benzo(a)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:22	SCS
Benzo(a)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:22	SCS
Benzo(b)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:22	SCS
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:22	SCS
Benzo(k)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:22	SCS
Chrysene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:22	SCS
Dibenz(a,h)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:22	SCS
Fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:22	SCS
Fluorene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:22	SCS
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:22	SCS
2-Methylnaphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:22	SCS
Naphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:22	SCS
Phenanthrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:22	SCS
Pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:22	SCS

Surrogates	% Recovery	Recovery Limits	Flag
Chlorooctadecane (COD)	45.4	40-140	12/27/12 20:22
o-Terphenyl (OTP)	71.2	40-140	12/27/12 20:22
2-Bromonaphthalene	80.1	40-140	12/27/12 20:22
2-Fluorobiphenyl	82.4	40-140	12/27/12 20:22

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: MW-5

Sampled: 12/20/2012 10:35

Sample ID: 12L0703-08

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 20:35	EEH
C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 20:35	EEH
Unadjusted C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 20:35	EEH
C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 20:35	EEH
C9-C10 Aromatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 20:35	EEH
Benzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 20:35	EEH
Ethylbenzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 20:35	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 20:35	EEH
Naphthalene	ND	5.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 20:35	EEH
Toluene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 20:35	EEH
m+p Xylene	ND	2.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 20:35	EEH
o-Xylene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 20:35	EEH
Surrogates		% Recovery		Recovery Limits	Flag				
2,5-Dibromotoluene (FID)		102		70-130				12/21/12 20:35	
2,5-Dibromotoluene (PID)		101		70-130				12/21/12 20:35	

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: DUP

Sampled: 12/19/2012 11:00

Sample ID: 12L0703-09

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	10	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 4:42	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
Bromodichloromethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
Bromoform	ND	1.0	µg/L	1	V-05	SW-846 8260C	12/21/12	12/24/12 4:42	EEH
Bromomethane	ND	2.0	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 4:42	EEH
2-Butanone (MEK)	ND	10	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 4:42	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
Carbon Disulfide	ND	5.0	µg/L	1	RL-07	SW-846 8260C	12/21/12	12/24/12 4:42	EEH
Carbon Tetrachloride	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
Chloromethane	ND	2.0	µg/L	1	V-05	SW-846 8260C	12/21/12	12/24/12 4:42	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	µg/L	1	V-05	SW-846 8260C	12/21/12	12/24/12 4:42	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
1,1-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
cis-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
trans-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
1,4-Dioxane	ND	100	µg/L	1	V-16, R-05	SW-846 8260C	12/21/12	12/24/12 4:42	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: DUP

Sampled: 12/19/2012 11:00

Sample ID: 12L0703-09

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
Methylene Chloride	ND	5.0	µg/L	1	RL-07	SW-846 8260C	12/21/12	12/24/12 4:42	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
Naphthalene	ND	2.0	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 4:42	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
1,1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
Tetrahydrofuran	ND	2.0	µg/L	1	V-16	SW-846 8260C	12/21/12	12/24/12 4:42	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
1,2,3-Trichlorobenzene	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 4:42	EEH

Surrogates	% Recovery	Recovery Limits	Flag
1,2-Dichloroethane-d4	104	70-130	12/24/12 4:42
Toluene-d8	102	70-130	12/24/12 4:42
4-Bromofluorobenzene	98.7	70-130	12/24/12 4:42

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: DUP

Sampled: 12/19/2012 11:00

Sample ID: 12L0703-09

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:43	SCS
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:43	SCS
Unadjusted C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:43	SCS
C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:43	SCS
Acenaphthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:43	SCS
Acenaphthylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:43	SCS
Anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:43	SCS
Benzo(a)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:43	SCS
Benzo(a)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:43	SCS
Benzo(b)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:43	SCS
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:43	SCS
Benzo(k)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:43	SCS
Chrysene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:43	SCS
Dibenz(a,h)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:43	SCS
Fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:43	SCS
Fluorene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:43	SCS
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:43	SCS
2-Methylnaphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:43	SCS
Naphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:43	SCS
Phenanthrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:43	SCS
Pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 20:43	SCS

Surrogates	% Recovery	Recovery Limits	Flag
Chlorooctadecane (COD)	55.7	40-140	12/27/12 20:43
o-Terphenyl (OTP)	73.3	40-140	12/27/12 20:43
2-Bromonaphthalene	77.4	40-140	12/27/12 20:43
2-Fluorobiphenyl	81.0	40-140	12/27/12 20:43

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: DUP

Sampled: 12/19/2012 11:00

Sample ID: 12L0703-09

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 21:11	EEH
C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 21:11	EEH
Unadjusted C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 21:11	EEH
C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 21:11	EEH
C9-C10 Aromatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 21:11	EEH
Benzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 21:11	EEH
Ethylbenzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 21:11	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 21:11	EEH
Naphthalene	ND	5.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 21:11	EEH
Toluene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 21:11	EEH
m+p Xylene	ND	2.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 21:11	EEH
o-Xylene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 21:11	EEH
Surrogates		% Recovery		Recovery Limits	Flag				
2,5-Dibromotoluene (FID)		97.0		70-130				12/21/12 21:11	
2,5-Dibromotoluene (PID)		94.5		70-130				12/21/12 21:11	

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: DUP

Sampled: 12/19/2012 11:00

Sample ID: 12L0703-09

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Antimony	ND	1.0	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:33	AMP
Arsenic	0.73	0.40	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:33	AMP
Barium	ND	10	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:33	AMP
Beryllium	ND	0.40	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:33	AMP
Cadmium	ND	0.50	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:33	AMP
Chromium	ND	1.0	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:33	AMP
Lead	ND	1.0	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:33	AMP
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	12/21/12	12/24/12 12:37	SAJ
Nickel	ND	5.0	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:33	AMP
Selenium	ND	5.0	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:33	AMP
Silver	ND	0.50	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:33	AMP
Thallium	ND	0.20	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:33	AMP
Vanadium	ND	5.0	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:33	AMP
Zinc	33	10	µg/L	1		SW-846 6020A	12/21/12	12/24/12 14:33	AMP

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: RIZ-1

Sampled: 12/20/2012 11:35

Sample ID: 12L0703-10

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	10	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 5:08	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
Bromodichloromethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
Bromoform	ND	1.0	µg/L	1	V-05	SW-846 8260C	12/21/12	12/24/12 5:08	EEH
Bromomethane	ND	2.0	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 5:08	EEH
2-Butanone (MEK)	ND	10	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 5:08	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
Carbon Disulfide	ND	5.0	µg/L	1	RL-07	SW-846 8260C	12/21/12	12/24/12 5:08	EEH
Carbon Tetrachloride	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
Chloromethane	ND	2.0	µg/L	1	V-05	SW-846 8260C	12/21/12	12/24/12 5:08	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	µg/L	1	V-05	SW-846 8260C	12/21/12	12/24/12 5:08	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
1,1-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
cis-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
trans-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
1,4-Dioxane	ND	100	µg/L	1	R-05, V-16	SW-846 8260C	12/21/12	12/24/12 5:08	EEH
Ethylbenzene	8.5	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: RIZ-1

Sampled: 12/20/2012 11:35

Sample ID: 12L0703-10

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
Methylene Chloride	ND	5.0	µg/L	1	RL-07	SW-846 8260C	12/21/12	12/24/12 5:08	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
Naphthalene	ND	2.0	µg/L	1	R-05	SW-846 8260C	12/21/12	12/24/12 5:08	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
Tetrahydrofuran	ND	2.0	µg/L	1	V-16	SW-846 8260C	12/21/12	12/24/12 5:08	EEH
Toluene	2.7	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
1,2,3-Trichlorobenzene	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
1,2,4-Trimethylbenzene	7.0	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
1,3,5-Trimethylbenzene	1.3	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
m+p Xylene	4.0	2.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH
o-Xylene	8.2	1.0	µg/L	1		SW-846 8260C	12/21/12	12/24/12 5:08	EEH

Surrogates	% Recovery	Recovery Limits	Flag
1,2-Dichloroethane-d4	101	70-130	12/24/12 5:08
Toluene-d8	101	70-130	12/24/12 5:08
4-Bromofluorobenzene	101	70-130	12/24/12 5:08

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: RIZ-1

Sampled: 12/20/2012 11:35

Sample ID: 12L0703-10

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 21:04	SCS
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 21:04	SCS
Unadjusted C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 21:04	SCS
C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 21:04	SCS
Acenaphthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 21:04	SCS
Acenaphthylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 21:04	SCS
Anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 21:04	SCS
Benzo(a)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 21:04	SCS
Benzo(a)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 21:04	SCS
Benzo(b)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 21:04	SCS
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 21:04	SCS
Benzo(k)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 21:04	SCS
Chrysene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 21:04	SCS
Dibenz(a,h)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 21:04	SCS
Fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 21:04	SCS
Fluorene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 21:04	SCS
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 21:04	SCS
2-Methylnaphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 21:04	SCS
Naphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 21:04	SCS
Phenanthrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 21:04	SCS
Pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	12/24/12	12/27/12 21:04	SCS

Surrogates	% Recovery	Recovery Limits	Flag
Chlorooctadecane (COD)	58.3	40-140	12/27/12 21:04
o-Terphenyl (OTP)	79.8	40-140	12/27/12 21:04
2-Bromonaphthalene	85.6	40-140	12/27/12 21:04
2-Fluorobiphenyl	88.6	40-140	12/27/12 21:04

Project Location: Cote Ford

Sample Description:

Work Order: 12L0703

Date Received: 12/20/2012

Field Sample #: RIZ-1

Sampled: 12/20/2012 11:35

Sample ID: 12L0703-10

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	190	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 21:47	EEH
C5-C8 Aliphatics	190	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 21:47	EEH
Unadjusted C9-C12 Aliphatics	130	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 21:47	EEH
C9-C12 Aliphatics	110	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 21:47	EEH
C9-C10 Aromatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 21:47	EEH
Benzene	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 21:47	EEH
Ethylbenzene	6.9	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 21:47	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 21:47	EEH
Naphthalene	ND	5.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 21:47	EEH
Toluene	1.9	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 21:47	EEH
m+p Xylene	3.7	2.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 21:47	EEH
o-Xylene	7.3	1.0	µg/L	1		MADEP-VPH-04-1.1	12/21/12	12/21/12 21:47	EEH
Surrogates		% Recovery		Recovery Limits	Flag				
2,5-Dibromotoluene (FID)		107		70-130				12/21/12 21:47	
2,5-Dibromotoluene (PID)		103		70-130				12/21/12 21:47	

Sample Extraction Data

Prep Method: SW-846 3510C-MADEP-EPH-04-1.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
12L0703-01 [MW-18in]	B065208	1000	2.00	12/24/12
12L0703-02 [RIZ-2]	B065208	1000	2.00	12/24/12
12L0703-03 [RIZ-3]	B065208	890	2.00	12/24/12
12L0703-04 [RIZ-5]	B065208	920	2.00	12/24/12
12L0703-05 [RIZ-6]	B065208	1000	2.00	12/24/12
12L0703-06 [MW-2]	B065208	1000	2.00	12/24/12
12L0703-07 [MW-6]	B065208	950	2.00	12/24/12
12L0703-08 [MW-5]	B065208	1000	2.00	12/24/12
12L0703-09 [DUP]	B065208	1000	2.00	12/24/12
12L0703-10 [RIZ-1]	B065208	1000	2.00	12/24/12

Prep Method: MA VPH-MADEP-VPH-04-1.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
12L0703-01 [MW-18in]	B065118	5	5.00	12/21/12
12L0703-02 [RIZ-2]	B065118	5	5.00	12/21/12
12L0703-03 [RIZ-3]	B065118	5	5.00	12/21/12
12L0703-04 [RIZ-5]	B065118	5	5.00	12/21/12
12L0703-05 [RIZ-6]	B065118	5	5.00	12/21/12
12L0703-06 [MW-2]	B065118	5	5.00	12/21/12
12L0703-08 [MW-5]	B065118	5	5.00	12/21/12
12L0703-09 [DUP]	B065118	5	5.00	12/21/12
12L0703-10 [RIZ-1]	B065118	5	5.00	12/21/12

Prep Method: MA VPH-MADEP-VPH-04-1.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
12L0703-07 [MW-6]	B065207	2.5	5.00	12/23/12

Prep Method: SW-846 3005A-SW-846 6020A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
12L0703-01 [MW-18in]	B065164	50.0	50.0	12/21/12
12L0703-02 [RIZ-2]	B065164	50.0	50.0	12/21/12
12L0703-03 [RIZ-3]	B065164	50.0	50.0	12/21/12
12L0703-06 [MW-2]	B065164	50.0	50.0	12/21/12
12L0703-09 [DUP]	B065164	50.0	50.0	12/21/12

Prep Method: SW-846 7470A Prep-SW-846 7470A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
12L0703-01 [MW-18in]	B065165	6.00	6.00	12/21/12
12L0703-02 [RIZ-2]	B065165	6.00	6.00	12/21/12
12L0703-03 [RIZ-3]	B065165	6.00	6.00	12/21/12
12L0703-06 [MW-2]	B065165	6.00	6.00	12/21/12
12L0703-09 [DUP]	B065165	6.00	6.00	12/21/12

Sample Extraction Data

Prep Method: SW-846 5030B-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
12L0703-01 [MW-18in]	B065156	5	5.00	12/21/12
12L0703-02 [RIZ-2]	B065156	5	5.00	12/21/12
12L0703-03 [RIZ-3]	B065156	5	5.00	12/21/12
12L0703-04 [RIZ-5]	B065156	5	5.00	12/21/12
12L0703-05 [RIZ-6]	B065156	5	5.00	12/21/12
12L0703-06 [MW-2]	B065156	5	5.00	12/21/12
12L0703-07 [MW-6]	B065156	2.5	5.00	12/21/12
12L0703-08 [MW-5]	B065156	5	5.00	12/21/12
12L0703-09 [DUP]	B065156	5	5.00	12/21/12
12L0703-10 [RIZ-1]	B065156	5	5.00	12/21/12

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B065156 - SW-846 5030B

Blank (B065156-BLK1)

Prepared: 12/21/12 Analyzed: 12/23/12

Acetone	ND	10	µg/L							R-05
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L							
Benzene	ND	1.0	µg/L							
Bromobenzene	ND	1.0	µg/L							
Bromochloromethane	ND	1.0	µg/L							
Bromodichloromethane	ND	1.0	µg/L							
Bromoform	ND	1.0	µg/L							V-05
Bromomethane	ND	2.0	µg/L							R-05
2-Butanone (MEK)	ND	10	µg/L							R-05
n-Butylbenzene	ND	1.0	µg/L							
sec-Butylbenzene	ND	1.0	µg/L							
tert-Butylbenzene	ND	1.0	µg/L							
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L							
Carbon Disulfide	ND	5.0	µg/L							
Carbon Tetrachloride	ND	1.0	µg/L							
Chlorobenzene	ND	1.0	µg/L							
Chlorodibromomethane	ND	0.50	µg/L							
Chloroethane	ND	2.0	µg/L							
Chloroform	ND	2.0	µg/L							
Chloromethane	ND	2.0	µg/L							V-05
2-Chlorotoluene	ND	1.0	µg/L							
4-Chlorotoluene	ND	1.0	µg/L							
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	µg/L							V-05
1,2-Dibromoethane (EDB)	ND	0.50	µg/L							
Dibromomethane	ND	1.0	µg/L							
1,2-Dichlorobenzene	ND	1.0	µg/L							
1,3-Dichlorobenzene	ND	1.0	µg/L							
1,4-Dichlorobenzene	ND	1.0	µg/L							
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L							
1,1-Dichloroethane	ND	1.0	µg/L							
1,2-Dichloroethane	ND	1.0	µg/L							
1,1-Dichloroethylene	ND	1.0	µg/L							
cis-1,2-Dichloroethylene	ND	1.0	µg/L							
trans-1,2-Dichloroethylene	ND	1.0	µg/L							
1,2-Dichloropropane	ND	1.0	µg/L							
1,3-Dichloropropane	ND	0.50	µg/L							
2,2-Dichloropropane	ND	1.0	µg/L							
1,1-Dichloropropene	ND	0.50	µg/L							
cis-1,3-Dichloropropene	ND	0.40	µg/L							
trans-1,3-Dichloropropene	ND	0.40	µg/L							
Diethyl Ether	ND	2.0	µg/L							
Diisopropyl Ether (DIPE)	ND	0.50	µg/L							
1,4-Dioxane	ND	100	µg/L							R-05, V-16
Ethylbenzene	ND	1.0	µg/L							
Hexachlorobutadiene	ND	0.50	µg/L							
2-Hexanone (MBK)	ND	10	µg/L							
Isopropylbenzene (Cumene)	ND	1.0	µg/L							
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							
Methylene Chloride	ND	5.0	µg/L							
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L							
Naphthalene	ND	2.0	µg/L							R-05

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B065156 - SW-846 5030B

Blank (B065156-BLK1)

Prepared: 12/21/12 Analyzed: 12/23/12

n-Propylbenzene	ND	1.0	µg/L							
Styrene	ND	1.0	µg/L							
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L							
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L							
Tetrachloroethylene	ND	1.0	µg/L							
Tetrahydrofuran	ND	2.0	µg/L							V-16
Toluene	ND	1.0	µg/L							
1,2,3-Trichlorobenzene	ND	2.0	µg/L							
1,2,4-Trichlorobenzene	ND	1.0	µg/L							
1,1,1-Trichloroethane	ND	1.0	µg/L							
1,1,2-Trichloroethane	ND	1.0	µg/L							
Trichloroethylene	ND	1.0	µg/L							
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L							
1,2,3-Trichloropropane	ND	2.0	µg/L							
1,2,4-Trimethylbenzene	ND	1.0	µg/L							
1,3,5-Trimethylbenzene	ND	1.0	µg/L							
Vinyl Chloride	ND	2.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	1.0	µg/L							
Surrogate: 1,2-Dichloroethane-d4	25.5		µg/L	25.0		102	70-130			
Surrogate: Toluene-d8	25.4		µg/L	25.0		102	70-130			
Surrogate: 4-Bromofluorobenzene	24.5		µg/L	25.0		98.0	70-130			

LCS (B065156-BS1)

Prepared: 12/21/12 Analyzed: 12/23/12

Acetone	116	10	µg/L	100		116	40-160			R-05 †
tert-Amyl Methyl Ether (TAME)	9.51	0.50	µg/L	10.0		95.1	70-130			
Benzene	10.7	1.0	µg/L	10.0		107	70-130			
Bromobenzene	9.35	1.0	µg/L	10.0		93.5	70-130			
Bromochloromethane	9.45	1.0	µg/L	10.0		94.5	70-130			
Bromodichloromethane	8.57	1.0	µg/L	10.0		85.7	70-130			
Bromoform	6.67	1.0	µg/L	10.0		66.7 *	70-130			L-07, V-05
Bromomethane	9.55	2.0	µg/L	10.0		95.5	40-160			R-05, V-20 †
2-Butanone (MEK)	90.9	10	µg/L	100		90.9	40-160			R-05, V-20 †
n-Butylbenzene	9.40	1.0	µg/L	10.0		94.0	70-130			
sec-Butylbenzene	10.0	1.0	µg/L	10.0		100	70-130			
tert-Butylbenzene	9.86	1.0	µg/L	10.0		98.6	70-130			
tert-Butyl Ethyl Ether (TBEE)	9.40	0.50	µg/L	10.0		94.0	70-130			
Carbon Disulfide	9.61	5.0	µg/L	10.0		96.1	70-130			
Carbon Tetrachloride	10.2	1.0	µg/L	10.0		102	70-130			
Chlorobenzene	10.2	1.0	µg/L	10.0		102	70-130			
Chlorodibromomethane	8.12	0.50	µg/L	10.0		81.2	70-130			
Chloroethane	12.0	2.0	µg/L	10.0		120	70-130			
Chloroform	11.2	2.0	µg/L	10.0		112	70-130			
Chloromethane	4.36	2.0	µg/L	10.0		43.6	40-160			L-14, V-05 †
2-Chlorotoluene	9.81	1.0	µg/L	10.0		98.1	70-130			
4-Chlorotoluene	9.55	1.0	µg/L	10.0		95.5	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	6.67	2.0	µg/L	10.0		66.7 *	70-130			L-07, V-05
1,2-Dibromoethane (EDB)	9.22	0.50	µg/L	10.0		92.2	70-130			
Dibromomethane	9.41	1.0	µg/L	10.0		94.1	70-130			
1,2-Dichlorobenzene	8.82	1.0	µg/L	10.0		88.2	70-130			
1,3-Dichlorobenzene	9.35	1.0	µg/L	10.0		93.5	70-130			
1,4-Dichlorobenzene	9.93	1.0	µg/L	10.0		99.3	70-130			

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B065156 - SW-846 5030B										
LCS (B065156-BS1)										
					Prepared: 12/21/12 Analyzed: 12/23/12					
Dichlorodifluoromethane (Freon 12)	4.76	2.0	µg/L	10.0		47.6	40-160			L-14 †
1,1-Dichloroethane	10.6	1.0	µg/L	10.0		106	70-130			
1,2-Dichloroethane	9.50	1.0	µg/L	10.0		95.0	70-130			
1,1-Dichloroethylene	10.0	1.0	µg/L	10.0		100	70-130			
cis-1,2-Dichloroethylene	9.84	1.0	µg/L	10.0		98.4	70-130			
trans-1,2-Dichloroethylene	10.3	1.0	µg/L	10.0		103	70-130			
1,2-Dichloropropane	9.21	1.0	µg/L	10.0		92.1	70-130			
1,3-Dichloropropane	9.55	0.50	µg/L	10.0		95.5	70-130			
2,2-Dichloropropane	8.91	1.0	µg/L	10.0		89.1	70-130			
1,1-Dichloropropene	11.4	0.50	µg/L	10.0		114	70-130			
cis-1,3-Dichloropropene	8.25	0.40	µg/L	10.0		82.5	70-130			
trans-1,3-Dichloropropene	8.05	0.40	µg/L	10.0		80.5	70-130			
Diethyl Ether	11.8	2.0	µg/L	10.0		118	70-130			V-20
Diisopropyl Ether (DIPE)	10.3	0.50	µg/L	10.0		103	70-130			
1,4-Dioxane	98.7	100	µg/L	100		98.7	40-160			R-05, V-16 †
Ethylbenzene	10.3	1.0	µg/L	10.0		103	70-130			
Hexachlorobutadiene	8.52	0.50	µg/L	10.0		85.2	70-130			
2-Hexanone (MBK)	75.4	10	µg/L	100		75.4	40-160			†
Isopropylbenzene (Cumene)	10.0	1.0	µg/L	10.0		100	70-130			
p-Isopropyltoluene (p-Cymene)	9.95	1.0	µg/L	10.0		99.5	70-130			
Methyl tert-Butyl Ether (MTBE)	10.3	1.0	µg/L	10.0		103	70-130			
Methylene Chloride	11.4	5.0	µg/L	10.0		114	70-130			
4-Methyl-2-pentanone (MIBK)	76.9	10	µg/L	100		76.9	40-160			†
Naphthalene	6.63	2.0	µg/L	10.0		66.3 *	70-130			L-07A, R-05
n-Propylbenzene	9.93	1.0	µg/L	10.0		99.3	70-130			
Styrene	9.49	1.0	µg/L	10.0		94.9	70-130			
1,1,1,2-Tetrachloroethane	8.31	1.0	µg/L	10.0		83.1	70-130			
1,1,2,2-Tetrachloroethane	8.23	0.50	µg/L	10.0		82.3	70-130			
Tetrachloroethylene	11.1	1.0	µg/L	10.0		111	70-130			
Tetrahydrofuran	12.2	2.0	µg/L	10.0		122	70-130			V-16
Toluene	10.8	1.0	µg/L	10.0		108	70-130			
1,2,3-Trichlorobenzene	7.24	2.0	µg/L	10.0		72.4	70-130			
1,2,4-Trichlorobenzene	8.04	1.0	µg/L	10.0		80.4	70-130			
1,1,1-Trichloroethane	10.6	1.0	µg/L	10.0		106	70-130			
1,1,2-Trichloroethane	9.15	1.0	µg/L	10.0		91.5	70-130			
Trichloroethylene	10.3	1.0	µg/L	10.0		103	70-130			
Trichlorofluoromethane (Freon 11)	12.6	2.0	µg/L	10.0		126	70-130			V-20
1,2,3-Trichloropropane	8.27	2.0	µg/L	10.0		82.7	70-130			
1,2,4-Trimethylbenzene	9.34	1.0	µg/L	10.0		93.4	70-130			
1,3,5-Trimethylbenzene	9.75	1.0	µg/L	10.0		97.5	70-130			
Vinyl Chloride	10.7	2.0	µg/L	10.0		107	70-130			V-20
m+p Xylene	20.5	2.0	µg/L	20.0		103	70-130			
o-Xylene	10.0	1.0	µg/L	10.0		100	70-130			
Surrogate: 1,2-Dichloroethane-d4	24.7		µg/L	25.0		98.8	70-130			
Surrogate: Toluene-d8	25.3		µg/L	25.0		101	70-130			
Surrogate: 4-Bromofluorobenzene	25.0		µg/L	25.0		99.8	70-130			

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B065156 - SW-846 5030B										
LCS Dup (B065156-BSD1)										
					Prepared: 12/21/12 Analyzed: 12/23/12					
Acetone	150	10	µg/L	100	150	150	40-160	25.2 *	20	L-14, R-05 †
tert-Amyl Methyl Ether (TAME)	10.4	0.50	µg/L	10.0	10.4	104	70-130	9.04	20	
Benzene	10.5	1.0	µg/L	10.0	10.5	105	70-130	2.36	20	
Bromobenzene	9.17	1.0	µg/L	10.0	91.7	91.7	70-130	1.94	20	
Bromochloromethane	9.63	1.0	µg/L	10.0	96.3	96.3	70-130	1.89	20	
Bromodichloromethane	8.78	1.0	µg/L	10.0	87.8	87.8	70-130	2.42	20	
Bromoform	7.13	1.0	µg/L	10.0	71.3	71.3	70-130	6.67	20	V-05
Bromomethane	11.8	2.0	µg/L	10.0	118	118	40-160	21.5 *	20	R-05, V-20 †
2-Butanone (MEK)	117	10	µg/L	100	117	117	40-160	25.0 *	20	R-05, V-20 †
n-Butylbenzene	8.97	1.0	µg/L	10.0	89.7	89.7	70-130	4.68	20	
sec-Butylbenzene	9.29	1.0	µg/L	10.0	92.9	92.9	70-130	7.36	20	
tert-Butylbenzene	9.15	1.0	µg/L	10.0	91.5	91.5	70-130	7.47	20	
tert-Butyl Ethyl Ether (TBEE)	10.2	0.50	µg/L	10.0	102	102	70-130	7.87	20	
Carbon Disulfide	9.25	5.0	µg/L	10.0	92.5	92.5	70-130	3.82	20	
Carbon Tetrachloride	9.78	1.0	µg/L	10.0	97.8	97.8	70-130	4.40	20	
Chlorobenzene	9.89	1.0	µg/L	10.0	98.9	98.9	70-130	3.18	20	
Chlorodibromomethane	8.29	0.50	µg/L	10.0	82.9	82.9	70-130	2.07	20	
Chloroethane	12.2	2.0	µg/L	10.0	122	122	70-130	0.991	20	
Chloroform	11.0	2.0	µg/L	10.0	110	110	70-130	1.26	20	
Chloromethane	4.53	2.0	µg/L	10.0	45.3	45.3	40-160	3.82	20	L-14, V-05 †
2-Chlorotoluene	9.38	1.0	µg/L	10.0	93.8	93.8	70-130	4.48	20	
4-Chlorotoluene	9.19	1.0	µg/L	10.0	91.9	91.9	70-130	3.84	20	
1,2-Dibromo-3-chloropropane (DBCP)	7.21	2.0	µg/L	10.0	72.1	72.1	70-130	7.78	20	V-05
1,2-Dibromoethane (EDB)	10.0	0.50	µg/L	10.0	100	100	70-130	8.12	20	
Dibromomethane	9.57	1.0	µg/L	10.0	95.7	95.7	70-130	1.69	20	
1,2-Dichlorobenzene	8.80	1.0	µg/L	10.0	88.0	88.0	70-130	0.227	20	
1,3-Dichlorobenzene	8.81	1.0	µg/L	10.0	88.1	88.1	70-130	5.95	20	
1,4-Dichlorobenzene	9.25	1.0	µg/L	10.0	92.5	92.5	70-130	7.09	20	
Dichlorodifluoromethane (Freon 12)	4.79	2.0	µg/L	10.0	47.9	47.9	40-160	0.628	20	L-14 †
1,1-Dichloroethane	10.5	1.0	µg/L	10.0	105	105	70-130	1.23	20	
1,2-Dichloroethane	9.73	1.0	µg/L	10.0	97.3	97.3	70-130	2.39	20	
1,1-Dichloroethylene	9.72	1.0	µg/L	10.0	97.2	97.2	70-130	3.04	20	
cis-1,2-Dichloroethylene	9.77	1.0	µg/L	10.0	97.7	97.7	70-130	0.714	20	
trans-1,2-Dichloroethylene	10.3	1.0	µg/L	10.0	103	103	70-130	0.00	20	
1,2-Dichloropropane	8.87	1.0	µg/L	10.0	88.7	88.7	70-130	3.76	20	
1,3-Dichloropropane	10.0	0.50	µg/L	10.0	100	100	70-130	4.60	20	
2,2-Dichloropropane	8.93	1.0	µg/L	10.0	89.3	89.3	70-130	0.224	20	
1,1-Dichloropropene	10.9	0.50	µg/L	10.0	109	109	70-130	4.13	20	
cis-1,3-Dichloropropene	8.09	0.40	µg/L	10.0	80.9	80.9	70-130	1.96	20	
trans-1,3-Dichloropropene	8.23	0.40	µg/L	10.0	82.3	82.3	70-130	2.21	20	
Diethyl Ether	13.3	2.0	µg/L	10.0	133	133 *	70-130	11.5	20	L-07, V-20
Diisopropyl Ether (DIPE)	10.4	0.50	µg/L	10.0	104	104	70-130	0.581	20	
1,4-Dioxane	126	100	µg/L	100	126	126	40-160	24.3 *	20	R-05, V-16 †
Ethylbenzene	9.78	1.0	µg/L	10.0	97.8	97.8	70-130	5.08	20	
Hexachlorobutadiene	8.26	0.50	µg/L	10.0	82.6	82.6	70-130	3.10	20	
2-Hexanone (MBK)	90.1	10	µg/L	100	90.1	90.1	40-160	17.8	20	†
Isopropylbenzene (Cumene)	9.74	1.0	µg/L	10.0	97.4	97.4	70-130	3.03	20	
p-Isopropyltoluene (p-Cymene)	9.46	1.0	µg/L	10.0	94.6	94.6	70-130	5.05	20	
Methyl tert-Butyl Ether (MTBE)	11.4	1.0	µg/L	10.0	114	114	70-130	10.4	20	
Methylene Chloride	11.1	5.0	µg/L	10.0	111	111	70-130	2.22	20	
4-Methyl-2-pentanone (MIBK)	92.9	10	µg/L	100	92.9	92.9	40-160	18.8	20	†
Naphthalene	8.32	2.0	µg/L	10.0	83.2	83.2	70-130	22.6 *	20	R-05

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B065156 - SW-846 5030B										
LCS Dup (B065156-BSD1)										
					Prepared: 12/21/12 Analyzed: 12/23/12					
n-Propylbenzene	9.56	1.0	µg/L	10.0		95.6	70-130	3.80	20	
Styrene	9.06	1.0	µg/L	10.0		90.6	70-130	4.64	20	
1,1,1,2-Tetrachloroethane	8.37	1.0	µg/L	10.0		83.7	70-130	0.719	20	
1,1,2,2-Tetrachloroethane	9.29	0.50	µg/L	10.0		92.9	70-130	12.1	20	
Tetrachloroethylene	10.5	1.0	µg/L	10.0		105	70-130	5.48	20	
Tetrahydrofuran	12.9	2.0	µg/L	10.0		129	70-130	5.33	20	V-16
Toluene	10.4	1.0	µg/L	10.0		104	70-130	3.59	20	
1,2,3-Trichlorobenzene	8.67	2.0	µg/L	10.0		86.7	70-130	18.0	20	
1,2,4-Trichlorobenzene	8.63	1.0	µg/L	10.0		86.3	70-130	7.08	20	
1,1,1-Trichloroethane	9.88	1.0	µg/L	10.0		98.8	70-130	6.94	20	
1,1,2-Trichloroethane	9.77	1.0	µg/L	10.0		97.7	70-130	6.55	20	
Trichloroethylene	9.70	1.0	µg/L	10.0		97.0	70-130	6.29	20	
Trichlorofluoromethane (Freon 11)	13.2	2.0	µg/L	10.0		132 *	70-130	4.56	20	L-07, V-20
1,2,3-Trichloropropane	9.38	2.0	µg/L	10.0		93.8	70-130	12.6	20	
1,2,4-Trimethylbenzene	8.83	1.0	µg/L	10.0		88.3	70-130	5.61	20	
1,3,5-Trimethylbenzene	9.43	1.0	µg/L	10.0		94.3	70-130	3.34	20	
Vinyl Chloride	10.2	2.0	µg/L	10.0		102	70-130	4.79	20	V-20
m+p Xylene	19.8	2.0	µg/L	20.0		99.0	70-130	3.72	20	
o-Xylene	9.78	1.0	µg/L	10.0		97.8	70-130	2.72	20	
Surrogate: 1,2-Dichloroethane-d4	25.7		µg/L	25.0		103	70-130			
Surrogate: Toluene-d8	25.7		µg/L	25.0		103	70-130			
Surrogate: 4-Bromofluorobenzene	25.4		µg/L	25.0		102	70-130			

QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B065208 - SW-846 3510C

Blank (B065208-BLK1)

Prepared: 12/24/12 Analyzed: 12/28/12

C9-C18 Aliphatics	ND	100	µg/L							
C19-C36 Aliphatics	ND	100	µg/L							
Unadjusted C11-C22 Aromatics	ND	100	µg/L							
C11-C22 Aromatics	ND	100	µg/L							
Acenaphthene	ND	2.0	µg/L							
Acenaphthylene	ND	2.0	µg/L							
Anthracene	ND	2.0	µg/L							
Benzo(a)anthracene	ND	2.0	µg/L							
Benzo(a)pyrene	ND	2.0	µg/L							
Benzo(b)fluoranthene	ND	2.0	µg/L							
Benzo(g,h,i)perylene	ND	2.0	µg/L							
Benzo(k)fluoranthene	ND	2.0	µg/L							
Chrysene	ND	2.0	µg/L							
Dibenz(a,h)anthracene	ND	2.0	µg/L							
Fluoranthene	ND	2.0	µg/L							
Fluorene	ND	2.0	µg/L							
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L							
2-Methylnaphthalene	ND	2.0	µg/L							
Naphthalene	ND	2.0	µg/L							
Phenanthrene	ND	2.0	µg/L							
Pyrene	ND	2.0	µg/L							
n-Decane	ND	2.0	µg/L							
n-Docosane	ND	2.0	µg/L							
n-Dodecane	ND	2.0	µg/L							
n-Eicosane	ND	2.0	µg/L							
n-Hexacosane	ND	2.0	µg/L							
n-Hexadecane	ND	2.0	µg/L							
n-Hexatriacontane	ND	2.0	µg/L							
n-Nonadecane	ND	2.0	µg/L							
n-Nonane	ND	2.0	µg/L							
n-Octacosane	ND	2.0	µg/L							
n-Octadecane	ND	2.0	µg/L							
n-Tetracosane	ND	2.0	µg/L							
n-Tetradecane	ND	2.0	µg/L							
n-Triacontane	ND	2.0	µg/L							
Naphthalene-aliphatic fraction	ND	2.0	µg/L							
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L							
Surrogate: Chlorooctadecane (COD)	58.0		µg/L	99.8		58.1	40-140			
Surrogate: o-Terphenyl (OTP)	72.1		µg/L	100		72.1	40-140			
Surrogate: 2-Bromonaphthalene	78.0		µg/L	100		78.0	40-140			
Surrogate: 2-Fluorobiphenyl	80.0		µg/L	100		80.0	40-140			

LCS (B065208-BS1)

Prepared: 12/24/12 Analyzed: 12/27/12

Acenaphthene	74.6	2.0	µg/L	100		74.6	40-140			
Acenaphthylene	73.3	2.0	µg/L	100		73.3	40-140			
Anthracene	82.2	2.0	µg/L	100		82.2	40-140			
Benzo(a)anthracene	85.8	2.0	µg/L	100		85.8	40-140			
Benzo(a)pyrene	82.2	2.0	µg/L	100		82.2	40-140			
Benzo(b)fluoranthene	85.2	2.0	µg/L	100		85.2	40-140			
Benzo(g,h,i)perylene	86.7	2.0	µg/L	100		86.7	40-140			
Benzo(k)fluoranthene	83.6	2.0	µg/L	100		83.6	40-140			
Chrysene	80.6	2.0	µg/L	100		80.6	40-140			

QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B065208 - SW-846 3510C

LCS (B065208-BS1)

Prepared: 12/24/12 Analyzed: 12/27/12

Dibenz(a,h)anthracene	86.3	2.0	µg/L	100		86.3	40-140			
Fluoranthene	83.9	2.0	µg/L	100		83.9	40-140			
Fluorene	80.1	2.0	µg/L	100		80.1	40-140			
Indeno(1,2,3-cd)pyrene	87.9	2.0	µg/L	100		87.9	40-140			
2-Methylnaphthalene	67.7	2.0	µg/L	100		67.7	40-140			
Naphthalene	59.1	2.0	µg/L	100		59.1	40-140			
Phenanthrene	82.8	2.0	µg/L	100		82.8	40-140			
Pyrene	82.2	2.0	µg/L	100		82.2	40-140			
n-Decane	38.8	2.0	µg/L	100		38.8	* 40-140			L-07
n-Docosane	79.9	2.0	µg/L	100		79.9	40-140			
n-Dodecane	53.8	2.0	µg/L	100		53.8	40-140			
n-Eicosane	78.4	2.0	µg/L	100		78.4	40-140			
n-Hexacosane	81.4	2.0	µg/L	100		81.4	40-140			
n-Hexadecane	72.6	2.0	µg/L	100		72.6	40-140			
n-Hexatriacontane	44.7	2.0	µg/L	100		44.7	40-140			
n-Nonadecane	78.3	2.0	µg/L	100		78.3	40-140			
n-Nonane	28.6	2.0	µg/L	100		28.6	* 30-140			L-07
n-Octacosane	79.1	2.0	µg/L	100		79.1	40-140			
n-Octadecane	76.8	2.0	µg/L	100		76.8	40-140			
n-Tetracosane	80.8	2.0	µg/L	100		80.8	40-140			
n-Tetradecane	65.3	2.0	µg/L	100		65.3	40-140			
n-Triacontane	80.7	2.0	µg/L	100		80.7	40-140			
Naphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
Surrogate: Chlorooctadecane (COD)	57.4		µg/L	99.8		57.5	40-140			
Surrogate: o-Terphenyl (OTP)	79.4		µg/L	100		79.4	40-140			
Surrogate: 2-Bromonaphthalene	82.6		µg/L	100		82.6	40-140			
Surrogate: 2-Fluorobiphenyl	84.0		µg/L	100		84.0	40-140			

LCS Dup (B065208-BS1)

Prepared: 12/24/12 Analyzed: 12/27/12

Acenaphthene	71.8	2.0	µg/L	100		71.8	40-140	3.86	25	
Acenaphthylene	70.8	2.0	µg/L	100		70.8	40-140	3.50	25	
Anthracene	77.8	2.0	µg/L	100		77.8	40-140	5.43	25	
Benzo(a)anthracene	81.0	2.0	µg/L	100		81.0	40-140	5.73	25	
Benzo(a)pyrene	77.5	2.0	µg/L	100		77.5	40-140	5.81	25	
Benzo(b)fluoranthene	80.2	2.0	µg/L	100		80.2	40-140	6.05	25	
Benzo(g,h,i)perylene	81.6	2.0	µg/L	100		81.6	40-140	5.99	25	
Benzo(k)fluoranthene	79.1	2.0	µg/L	100		79.1	40-140	5.48	25	
Chrysene	76.1	2.0	µg/L	100		76.1	40-140	5.73	25	
Dibenz(a,h)anthracene	81.7	2.0	µg/L	100		81.7	40-140	5.58	25	
Fluoranthene	79.4	2.0	µg/L	100		79.4	40-140	5.48	25	
Fluorene	76.7	2.0	µg/L	100		76.7	40-140	4.39	25	
Indeno(1,2,3-cd)pyrene	83.1	2.0	µg/L	100		83.1	40-140	5.60	25	
2-Methylnaphthalene	65.7	2.0	µg/L	100		65.7	40-140	3.03	25	
Naphthalene	57.8	2.0	µg/L	100		57.8	40-140	2.10	25	
Phenanthrene	78.5	2.0	µg/L	100		78.5	40-140	5.26	25	
Pyrene	77.6	2.0	µg/L	100		77.6	40-140	5.69	25	
n-Decane	42.6	2.0	µg/L	100		42.6	40-140	9.32	25	
n-Docosane	84.5	2.0	µg/L	100		84.5	40-140	5.60	25	
n-Dodecane	57.7	2.0	µg/L	100		57.7	40-140	7.04	25	
n-Eicosane	82.6	2.0	µg/L	100		82.6	40-140	5.20	25	
n-Hexacosane	86.3	2.0	µg/L	100		86.3	40-140	5.88	25	

QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B065208 - SW-846 3510C

LCS Dup (B065208-BSD1)

Prepared: 12/24/12 Analyzed: 12/27/12

n-Hexadecane	76.9	2.0	µg/L	100		76.9	40-140	5.75	25	
n-Hexatriacontane	45.6	2.0	µg/L	100		45.6	40-140	1.98	25	
n-Nonadecane	82.5	2.0	µg/L	100		82.5	40-140	5.22	25	
n-Nonane	31.7	2.0	µg/L	100		31.7	30-140	10.3	25	
n-Octacosane	83.8	2.0	µg/L	100		83.8	40-140	5.75	25	
n-Octadecane	80.4	2.0	µg/L	100		80.4	40-140	4.69	25	
n-Tetracosane	85.5	2.0	µg/L	100		85.5	40-140	5.60	25	
n-Tetradecane	69.6	2.0	µg/L	100		69.6	40-140	6.35	25	
n-Triacontane	85.2	2.0	µg/L	100		85.2	40-140	5.32	25	
Naphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
Surrogate: Chlorooctadecane (COD)	58.1		µg/L	99.8		58.2	40-140			
Surrogate: o-Terphenyl (OTP)	74.6		µg/L	100		74.6	40-140			
Surrogate: 2-Bromonaphthalene	76.2		µg/L	100		76.2	40-140			
Surrogate: 2-Fluorobiphenyl	78.5		µg/L	100		78.5	40-140			

QUALITY CONTROL

Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B065118 - MA VPH										
Blank (B065118-BLK1)										
Prepared & Analyzed: 12/21/12										
Unadjusted C5-C8 Aliphatics	ND	100	µg/L							
C5-C8 Aliphatics	ND	100	µg/L							
Unadjusted C9-C12 Aliphatics	ND	100	µg/L							
C9-C12 Aliphatics	ND	100	µg/L							
C9-C10 Aromatics	ND	100	µg/L							
Benzene	ND	1.0	µg/L							
Ethylbenzene	ND	1.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							
Naphthalene	ND	5.0	µg/L							
Toluene	ND	1.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	1.0	µg/L							
Surrogate: 2,5-Dibromotoluene (FID)	37.4		µg/L	40.0		93.6	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	35.0		µg/L	40.0		87.6	70-130			
LCS (B065118-BS1)										
Prepared & Analyzed: 12/21/12										
Benzene	82.5	1.0	µg/L	100		82.5	70-130			
Butylcyclohexane	87.9	1.0	µg/L	100		87.9	70-130			
Decane	96.9	1.0	µg/L	100		96.9	70-130			
Ethylbenzene	81.9	1.0	µg/L	100		81.9	70-130			
Methyl tert-Butyl Ether (MTBE)	88.0	1.0	µg/L	100		88.0	70-130			
2-Methylpentane	79.5	1.0	µg/L	100		79.5	70-130			
Naphthalene	93.4	5.0	µg/L	100		93.4	70-130			
Nonane	89.1	1.0	µg/L	100		89.1	30-130			
Pentane	81.7	1.0	µg/L	100		81.7	70-130			
Toluene	83.5	1.0	µg/L	100		83.5	70-130			
1,2,4-Trimethylbenzene	77.1	1.0	µg/L	100		77.1	70-130			
2,2,4-Trimethylpentane	84.5	1.0	µg/L	100		84.5	70-130			
m+p Xylene	164	2.0	µg/L	200		81.8	70-130			
o-Xylene	82.6	1.0	µg/L	100		82.6	70-130			
Surrogate: 2,5-Dibromotoluene (FID)	41.5		µg/L	40.0		104	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	41.0		µg/L	40.0		102	70-130			
LCS Dup (B065118-BSD1)										
Prepared & Analyzed: 12/21/12										
Benzene	83.9	1.0	µg/L	100		83.9	70-130	1.61	25	
Butylcyclohexane	94.2	1.0	µg/L	100		94.2	70-130	6.92	25	
Decane	105	1.0	µg/L	100		105	70-130	7.91	25	
Ethylbenzene	83.3	1.0	µg/L	100		83.3	70-130	1.72	25	
Methyl tert-Butyl Ether (MTBE)	89.6	1.0	µg/L	100		89.6	70-130	1.75	25	
2-Methylpentane	82.1	1.0	µg/L	100		82.1	70-130	3.18	25	
Naphthalene	89.0	5.0	µg/L	100		89.0	70-130	4.84	25	
Nonane	97.7	1.0	µg/L	100		97.7	30-130	9.24	25	
Pentane	83.1	1.0	µg/L	100		83.1	70-130	1.73	25	
Toluene	84.8	1.0	µg/L	100		84.8	70-130	1.58	25	
1,2,4-Trimethylbenzene	78.2	1.0	µg/L	100		78.2	70-130	1.35	25	
2,2,4-Trimethylpentane	89.1	1.0	µg/L	100		89.1	70-130	5.33	25	
m+p Xylene	167	2.0	µg/L	200		83.3	70-130	1.88	25	
o-Xylene	84.1	1.0	µg/L	100		84.1	70-130	1.81	25	
Surrogate: 2,5-Dibromotoluene (FID)	32.2		µg/L	40.0		80.4	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	32.7		µg/L	40.0		81.7	70-130			

QUALITY CONTROL

Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B065207 - MA VPH										
Blank (B065207-BLK1)										
Prepared: 12/23/12 Analyzed: 12/24/12										
Unadjusted C5-C8 Aliphatics	ND	100	µg/L							
C5-C8 Aliphatics	ND	100	µg/L							
Unadjusted C9-C12 Aliphatics	ND	100	µg/L							
C9-C12 Aliphatics	ND	100	µg/L							
C9-C10 Aromatics	ND	100	µg/L							
Benzene	ND	1.0	µg/L							
Ethylbenzene	ND	1.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							
Naphthalene	ND	5.0	µg/L							
Toluene	ND	1.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	1.0	µg/L							
Surrogate: 2,5-Dibromotoluene (FID)	44.1		µg/L	40.0		110	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	43.9		µg/L	40.0		110	70-130			
LCS (B065207-BS1)										
Prepared: 12/23/12 Analyzed: 12/24/12										
Benzene	82.0	1.0	µg/L	100		82.0	70-130			
Butylcyclohexane	82.9	1.0	µg/L	100		82.9	70-130			
Decane	92.5	1.0	µg/L	100		92.5	70-130			
Ethylbenzene	81.6	1.0	µg/L	100		81.6	70-130			
Methyl tert-Butyl Ether (MTBE)	87.2	1.0	µg/L	100		87.2	70-130			
2-Methylpentane	74.7	1.0	µg/L	100		74.7	70-130			
Naphthalene	88.6	5.0	µg/L	100		88.6	70-130			
Nonane	84.8	1.0	µg/L	100		84.8	30-130			
Pentane	74.9	1.0	µg/L	100		74.9	70-130			
Toluene	83.1	1.0	µg/L	100		83.1	70-130			
1,2,4-Trimethylbenzene	77.8	1.0	µg/L	100		77.8	70-130			
2,2,4-Trimethylpentane	79.0	1.0	µg/L	100		79.0	70-130			
m+p Xylene	163	2.0	µg/L	200		81.6	70-130			
o-Xylene	83.6	1.0	µg/L	100		83.6	70-130			
Surrogate: 2,5-Dibromotoluene (FID)	39.1		µg/L	40.0		97.8	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	40.2		µg/L	40.0		100	70-130			
LCS Dup (B065207-BSD1)										
Prepared: 12/23/12 Analyzed: 12/24/12										
Benzene	86.6	1.0	µg/L	100		86.6	70-130	5.47	25	
Butylcyclohexane	88.5	1.0	µg/L	100		88.5	70-130	6.53	25	
Decane	99.3	1.0	µg/L	100		99.3	70-130	7.13	25	
Ethylbenzene	86.4	1.0	µg/L	100		86.4	70-130	5.77	25	
Methyl tert-Butyl Ether (MTBE)	89.5	1.0	µg/L	100		89.5	70-130	2.59	25	
2-Methylpentane	80.1	1.0	µg/L	100		80.1	70-130	6.94	25	
Naphthalene	91.5	5.0	µg/L	100		91.5	70-130	3.18	25	
Nonane	89.7	1.0	µg/L	100		89.7	30-130	5.67	25	
Pentane	81.2	1.0	µg/L	100		81.2	70-130	8.13	25	
Toluene	87.7	1.0	µg/L	100		87.7	70-130	5.43	25	
1,2,4-Trimethylbenzene	81.8	1.0	µg/L	100		81.8	70-130	4.97	25	
2,2,4-Trimethylpentane	83.9	1.0	µg/L	100		83.9	70-130	5.99	25	
m+p Xylene	172	2.0	µg/L	200		86.2	70-130	5.53	25	
o-Xylene	87.8	1.0	µg/L	100		87.8	70-130	4.94	25	
Surrogate: 2,5-Dibromotoluene (FID)	40.6		µg/L	40.0		102	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	41.1		µg/L	40.0		103	70-130			

QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B065164 - SW-846 3005A

Blank (B065164-BLK1)

Prepared: 12/21/12 Analyzed: 12/24/12

Antimony	ND	1.0	µg/L							
Arsenic	ND	0.40	µg/L							
Barium	ND	10	µg/L							
Beryllium	ND	0.40	µg/L							
Cadmium	ND	0.50	µg/L							
Chromium	ND	1.0	µg/L							
Lead	ND	1.0	µg/L							
Nickel	ND	5.0	µg/L							
Selenium	ND	5.0	µg/L							
Silver	ND	0.50	µg/L							
Thallium	ND	0.20	µg/L							
Vanadium	ND	5.0	µg/L							
Zinc	ND	10	µg/L							

LCS (B065164-BS1)

Prepared: 12/21/12 Analyzed: 12/24/12

Antimony	251	5.0	µg/L	250		101	80-120			
Arsenic	262	2.0	µg/L	250		105	80-120			
Barium	261	50	µg/L	250		104	80-120			
Beryllium	247	2.0	µg/L	250		98.9	80-120			
Cadmium	269	2.5	µg/L	250		107	80-120			
Chromium	263	5.0	µg/L	250		105	80-120			
Lead	271	5.0	µg/L	250		109	80-120			
Nickel	260	25	µg/L	250		104	80-120			
Selenium	265	25	µg/L	250		106	80-120			
Silver	300	2.5	µg/L	250		120	80-120			
Thallium	253	1.0	µg/L	250		101	80-120			
Vanadium	270	25	µg/L	250		108	80-120			
Zinc	265	50	µg/L	250		106	80-120			

LCS Dup (B065164-BSD1)

Prepared: 12/21/12 Analyzed: 12/24/12

Antimony	258	5.0	µg/L	250		103	80-120	2.78	20	
Arsenic	263	2.0	µg/L	250		105	80-120	0.552	20	
Barium	262	50	µg/L	250		105	80-120	0.471	20	
Beryllium	251	2.0	µg/L	250		101	80-120	1.64	20	
Cadmium	270	2.5	µg/L	250		108	80-120	0.317	20	
Chromium	264	5.0	µg/L	250		105	80-120	0.121	20	
Lead	274	5.0	µg/L	250		110	80-120	0.996	20	
Nickel	259	25	µg/L	250		104	80-120	0.297	20	
Selenium	267	25	µg/L	250		107	80-120	0.455	20	
Silver	288	2.5	µg/L	250		115	80-120	4.26	20	
Thallium	258	1.0	µg/L	250		103	80-120	1.94	20	
Vanadium	272	25	µg/L	250		109	80-120	0.526	20	
Zinc	269	50	µg/L	250		107	80-120	1.21	20	

QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B065164 - SW-846 3005A

Duplicate (B065164-DUP1)

Source: 12L0703-01

Prepared: 12/21/12 Analyzed: 12/24/12

Antimony	ND	1.0	µg/L		ND			NC	20	
Arsenic	0.641	0.40	µg/L		0.532			18.6	20	
Barium	ND	10	µg/L		ND			NC	20	
Beryllium	ND	0.40	µg/L		ND			NC	20	
Cadmium	ND	0.50	µg/L		ND			NC	20	
Chromium	ND	1.0	µg/L		ND			NC	20	
Lead	ND	1.0	µg/L		ND			NC	20	
Nickel	ND	5.0	µg/L		ND			NC	20	
Selenium	ND	5.0	µg/L		ND			NC	20	
Silver	ND	0.50	µg/L		ND			NC	20	
Thallium	ND	0.20	µg/L		ND			NC	20	
Vanadium	ND	5.0	µg/L		ND			NC	20	
Zinc	30.4	10	µg/L		32.0			4.86	20	

Matrix Spike (B065164-MS1)

Source: 12L0703-01

Prepared: 12/21/12 Analyzed: 12/24/12

Antimony	259	5.0	µg/L	250	0.452	103	75-125			
Arsenic	260	2.0	µg/L	250	0.532	104	75-125			
Barium	267	50	µg/L	250	5.83	104	75-125			
Beryllium	251	2.0	µg/L	250	ND	101	75-125			
Cadmium	267	2.5	µg/L	250	ND	107	75-125			
Chromium	267	5.0	µg/L	250	0.804	106	75-125			
Lead	273	5.0	µg/L	250	0.285	109	75-125			
Nickel	262	25	µg/L	250	0.924	104	75-125			
Selenium	255	25	µg/L	250	ND	102	75-125			
Silver	158	2.5	µg/L	250	ND	63.3 *	75-125			MS-07A
Thallium	255	1.0	µg/L	250	ND	102	75-125			
Vanadium	276	25	µg/L	250	ND	110	75-125			
Zinc	295	50	µg/L	250	32.0	105	75-125			

Matrix Spike Dup (B065164-MSD1)

Source: 12L0703-01

Prepared: 12/21/12 Analyzed: 12/24/12

Antimony	259	5.0	µg/L	250	0.452	103	75-125	0.103	20	
Arsenic	267	2.0	µg/L	250	0.532	107	75-125	2.41	20	
Barium	267	50	µg/L	250	5.83	105	75-125	0.158	20	
Beryllium	257	2.0	µg/L	250	ND	103	75-125	2.29	20	
Cadmium	269	2.5	µg/L	250	ND	108	75-125	1.01	20	
Chromium	270	5.0	µg/L	250	0.804	108	75-125	1.02	20	
Lead	276	5.0	µg/L	250	0.285	110	75-125	0.986	20	
Nickel	267	25	µg/L	250	0.924	106	75-125	1.92	20	
Selenium	265	25	µg/L	250	ND	106	75-125	3.90	20	
Silver	167	2.5	µg/L	250	ND	66.6 *	75-125	5.17	20	MS-07A
Thallium	258	1.0	µg/L	250	ND	103	75-125	1.27	20	
Vanadium	280	25	µg/L	250	ND	112	75-125	1.46	20	
Zinc	299	50	µg/L	250	32.0	107	75-125	1.45	20	

QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B065165 - SW-846 7470A Prep										
Blank (B065165-BLK1)				Prepared: 12/21/12 Analyzed: 12/24/12						
Mercury	ND	0.00010	mg/L							
LCS (B065165-BS1)				Prepared: 12/21/12 Analyzed: 12/24/12						
Mercury	0.00176	0.00010	mg/L	0.00200		88.0	80-120			
LCS Dup (B065165-BSD1)				Prepared: 12/21/12 Analyzed: 12/24/12						
Mercury	0.00164	0.00010	mg/L	0.00200		82.0	80-120	7.04	20	
Duplicate (B065165-DUP1)				Source: 12L0703-01			Prepared: 12/21/12 Analyzed: 12/24/12			
Mercury	ND	0.00010	mg/L		ND			NC	20	
Matrix Spike (B065165-MS1)				Source: 12L0703-01			Prepared: 12/21/12 Analyzed: 12/24/12			
Mercury	0.00165	0.00010	mg/L	0.00200	ND	82.4	75-125			
Matrix Spike Dup (B065165-MSD1)				Source: 12L0703-01			Prepared: 12/21/12 Analyzed: 12/24/12			
Mercury	0.00164	0.00010	mg/L	0.00200	ND	81.9	75-125	0.549	20	

FLAG/QUALIFIER SUMMARY

- * QC result is outside of established limits.
 - † Wide recovery limits established for difficult compound.
 - ‡ Wide RPD limits established for difficult compound.
 - # Data exceeded client recommended or regulatory level
- Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
- L-07 Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
 - L-07A Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.
 - L-14 Compound classified by MA CAM as difficult with acceptable recoveries of 40-160%. Recovery does not meet 70-130% criteria but does meet difficult compound criteria.
 - MS-07A Matrix spike and spike duplicate recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of matrix effects that lead to low bias or non-homogeneous sample aliquot cannot be eliminated.
 - R-05 Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
 - RL-05 Elevated reporting limit due to high concentration of target compounds. MA CAM reporting limit not met.
 - RL-07 Elevated reporting limit based on lowest point in calibration. MA CAM reporting limit not met.
 - V-05 Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.
 - V-16 Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
 - V-20 Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
MADEP-EPH-04-1.1 in Water	
C9-C18 Aliphatics	CT,NC,WA,ME,NH-P
C19-C36 Aliphatics	CT,NC,WA,ME,NH-P
Unadjusted C11-C22 Aromatics	CT,NC,WA,ME,NH-P
C11-C22 Aromatics	CT,NC,WA,ME,NH-P
Acenaphthene	CT,NC,WA,ME,NH-P
Acenaphthylene	CT,NC,WA,ME,NH-P
Anthracene	CT,NC,WA,ME,NH-P
Benzo(a)anthracene	CT,NC,WA,ME,NH-P
Benzo(a)pyrene	CT,NC,WA,ME,NH-P
Benzo(b)fluoranthene	CT,NC,WA,ME,NH-P
Benzo(g,h,i)perylene	CT,NC,WA,ME,NH-P
Benzo(k)fluoranthene	CT,NC,WA,ME,NH-P
Chrysene	CT,NC,WA,ME,NH-P
Dibenz(a,h)anthracene	CT,NC,WA,ME,NH-P
Fluoranthene	CT,NC,WA,ME,NH-P
Fluorene	CT,NC,WA,ME
Indeno(1,2,3-cd)pyrene	CT,NC,WA,ME,NH-P
2-Methylnaphthalene	CT,NC,WA,ME
Naphthalene	CT,NC,WA,ME,NH-P
Phenanthrene	CT,NC,WA,ME,NH-P
Pyrene	CT,NC,WA,ME,NH-P
MADEP-VPH-04-1.1 in Water	
Unadjusted C5-C8 Aliphatics	CT,NC,WA,ME,NH-P
C5-C8 Aliphatics	CT,NC,WA,ME,NH-P
Unadjusted C9-C12 Aliphatics	CT,NC,WA,ME,NH-P
C9-C12 Aliphatics	CT,NC,WA,ME,NH-P
C9-C10 Aromatics	CT,NC,WA,ME,NH-P
Benzene	CT,NC,WA,ME,NH-P
Ethylbenzene	CT,NC,WA,ME,NH-P
Methyl tert-Butyl Ether (MTBE)	CT,NC,WA,ME,NH-P
Naphthalene	CT,NC,WA,ME,NH-P
Toluene	CT,NC,WA,ME,NH-P
m+p Xylene	CT,NC,WA,ME,NH-P
o-Xylene	CT,NC,WA,ME,NH-P
SW-846 6020A in Water	
Antimony	CT,NH,NY,RI,NC,ME,VA
Arsenic	CT,NH,NY,RI,NC,ME,VA
Barium	CT,NH,NY,RI,NC,ME,VA
Beryllium	CT,NH,NY,RI,NC,ME,VA
Cadmium	CT,NH,NY,RI,NC,ME,VA
Chromium	CT,NH,NY,RI,NC,ME,VA
Lead	CT,NH,NY,RI,NC,ME,VA
Nickel	CT,NH,NY,RI,NC,ME,VA
Selenium	CT,NH,NY,RI,NC,ME,VA
Silver	CT,NH,NY,RI,NC,ME,VA
Thallium	CT,NH,NY,RI,NC,ME,VA

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 6020A in Water</i>	
Vanadium	CT,NC,NH,NY,RI,ME,VA
Zinc	CT,NH,NY,RI,NC,ME,VA
<i>SW-846 7470A in Water</i>	
Mercury	CT,NH,NY,RI,NC,ME,VA
<i>SW-846 8260C in Water</i>	
Acetone	CT,NH,NY,ME
tert-Amyl Methyl Ether (TAME)	NH,NY,ME
Benzene	CT,NH,NY,ME,RI
Bromobenzene	ME
Bromochloromethane	NH,NY,ME
Bromodichloromethane	CT,NH,NY,ME,RI
Bromoform	CT,NH,NY,ME,RI
Bromomethane	CT,NH,NY,ME,RI
2-Butanone (MEK)	CT,NH,NY,ME
n-Butylbenzene	NY,ME
sec-Butylbenzene	NY,ME
tert-Butylbenzene	NY,ME
tert-Butyl Ethyl Ether (TBEE)	NH,NY,ME
Carbon Disulfide	CT,NH,NY,ME
Carbon Tetrachloride	CT,NH,NY,ME,RI
Chlorobenzene	CT,NH,NY,ME,RI
Chlorodibromomethane	CT,NH,NY,ME,RI
Chloroethane	CT,NH,NY,ME,RI
Chloroform	CT,NH,NY,ME,RI
Chloromethane	CT,NH,NY,ME,RI
2-Chlorotoluene	NY,ME
4-Chlorotoluene	NY,ME
Dibromomethane	NH,NY,ME
1,2-Dichlorobenzene	CT,NY,ME,RI
1,3-Dichlorobenzene	CT,NH,NY,ME,RI
1,4-Dichlorobenzene	CT,NH,NY,ME,RI
Dichlorodifluoromethane (Freon 12)	NH,NY,ME,RI
1,1-Dichloroethane	CT,NH,NY,ME,RI
1,2-Dichloroethane	CT,NH,NY,ME,RI
1,1-Dichloroethylene	CT,NH,NY,ME,RI
cis-1,2-Dichloroethylene	NY,ME
trans-1,2-Dichloroethylene	CT,NH,NY,ME,RI
1,2-Dichloropropane	CT,NH,NY,ME,RI
1,3-Dichloropropane	NY,ME
2,2-Dichloropropane	NH,NY,ME
1,1-Dichloropropene	NH,NY,ME
cis-1,3-Dichloropropene	CT,NH,NY,ME,RI
trans-1,3-Dichloropropene	CT,NH,NY,ME,RI
Diisopropyl Ether (DIPE)	NH,NY,ME
Ethylbenzene	CT,NH,NY,ME,RI
Hexachlorobutadiene	CT,NH,NY,ME

CERTIFICATIONS

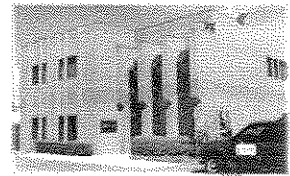
Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260C in Water</i>	
2-Hexanone (MBK)	CT,NH,NY,ME
Isopropylbenzene (Cumene)	NY,ME
p-Isopropyltoluene (p-Cymene)	CT,NH,NY,ME
Methyl tert-Butyl Ether (MTBE)	CT,NH,NY,ME
Methylene Chloride	CT,NH,NY,ME,RI
4-Methyl-2-pentanone (MIBK)	CT,NH,NY,ME
Naphthalene	NH,NY,ME
n-Propylbenzene	CT,NH,NY,ME
Styrene	CT,NH,NY,ME
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME
1,1,2,2-Tetrachloroethane	CT,NH,NY,ME,RI
Tetrachloroethylene	CT,NH,NY,ME,RI
Toluene	CT,NH,NY,ME,RI
1,2,3-Trichlorobenzene	NH,NY,ME
1,2,4-Trichlorobenzene	CT,NH,NY,ME
1,1,1-Trichloroethane	CT,NH,NY,ME,RI
1,1,2-Trichloroethane	CT,NH,NY,ME,RI
Trichloroethylene	CT,NH,NY,ME,RI
Trichlorofluoromethane (Freon 11)	CT,NH,NY,ME,RI
1,2,3-Trichloropropane	NH,NY,ME
1,2,4-Trimethylbenzene	NY,ME
1,3,5-Trimethylbenzene	NY,ME
Vinyl Chloride	CT,NH,NY,ME,RI
m+p Xylene	CT,NH,NY,ME,RI
o-Xylene	CT,NH,NY,ME,RI

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2014
MA	Massachusetts DEP	M-MA100	06/30/2013
CT	Connecticut Department of Public Health	PH-0567	09/30/2013
NY	New York State Department of Health	10899 NELAP	04/1/2013
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2013
RI	Rhode Island Department of Health	LAO00112	12/30/2012
NC	North Carolina Div. of Water Quality	652	12/31/2012
NJ	New Jersey DEP	MA007 NELAP	06/30/2013
FL	Florida Department of Health	E871027 NELAP	06/30/2013
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2013
WA	State of Washington Department of Ecology	C2065	02/23/2013
ME	State of Maine	2011028	06/9/2013
VA	Commonwealth of Virginia	460217	12/14/2013
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2012

39 Spruce St.
 East Longmeadow, MA. 01028
 P: 413-525-2332
 F: 413-525-6405
 www.contestlabs.com



Sample Receipt Checklist

CLIENT NAME: TRC RECEIVED BY: KKM DATE: 12/20/12

- 1) Was the chain(s) of custody relinquished and signed? Yes No No CoC Included
 2) Does the chain agree with the samples? Yes No
 If not, explain:
 3) Are all the samples in good condition? Yes No
 If not, explain:

4) How were the samples received:

On Ice Direct from Sampling Ambient In Cooler(s)

Were the samples received in Temperature Compliance of (2-6°C)? Yes No N/A

Temperature °C by Temp blank _____ Temperature °C by Temp gun 4.1

5) Are there Dissolved samples for the lab to filter? Yes No

Who was notified _____ Date _____ Time _____

6) Are there any RUSH or SHORT HOLDING TIME samples? Yes No

Who was notified _____ Date _____ Time _____

7) Location where samples are stored:

19

Permission to subcontract samples? Yes No
 (Walk-in clients only) if not already approved
 Client Signature: _____

8) Do all samples have the proper Acid pH: Yes No N/A

9) Do all samples have the proper Base pH: Yes No N/A

10) Was the PC notified of any discrepancies with the CoC vs the samples: Yes No N/A

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber	<u>18</u>	8 oz amber/clear jar	
500 mL Amber		4 oz amber/clear jar	
250 mL Amber (8oz amber)		2 oz amber/clear jar	
1 Liter Plastic		Air Cassette	
500 mL Plastic		Hg/Hopcalite Tube	
250 mL plastic	<u>12</u>	Plastic Bag / Ziploc	
40 mL Vial - type listed below	<u>60</u>	PM 2.5 / PM 10	
Colisure / bacteria bottle		PUF Cartridge	
Dissolved Oxygen bottle		SOC Kit	
Encore		TO-17 Tubes	
Flashpoint bottle		Non-ConTest Container	
Perchlorate Kit		Other glass jar	
Other		Other	

Laboratory Comments:

40 mL vials: # HCl 60 # Methanol _____
 # Bisulfate _____ # DI Water _____
 # Thiosulfate _____ Unpreserved _____

Time and Date Frozen:

Doc# 277

Rev. 3 May 2012

MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory Project #: 12L0703
 Project Location: Cote Ford RTN: _____

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]
12L0703-01 thru 12L0703-10

Matrices: Water

CAM Protocol (check all that below)

8260 VOC CAM II A (X)	7470/7471 Hg CAM IIIB (X)	MassDEP VPH CAM IV A (X)	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 A (X)	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 (X)	8082 PCB CAM V A ()	9014 Total Cyanide/PAC CAM VI A ()	6860 Perchlorate CAM VIII B ()	

Affirmative response to Questions A through F is 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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
E a	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No ¹
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)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹

A response to questions G, H and I below is required for "Presumptive Certainty" status


G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No ¹
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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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No ¹
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹

¹ All Negative responses must be addressed in an attached Environmental Laboratory case 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:  Position: Laboratory Director
 Printed Name: Michael A. Erickson Date: 12/28/12

APPENDIX C

DATA USABILITY ASSESSMENT

Data Usability Assessment

**Former Cote Ford Site
 Mattapan, MA
 Prepared: January 2, 2013**

A. Overall Summary

The data associated with groundwater samples collected on December 19 and 20, 2012 were reviewed. In general, data are usable for MCP decisions based on a review of accuracy, precision, and sensitivity of the data. Although there were select quality control (QC) nonconformances, the data are valid as reported and may be used for decision-making purposes with no cautions or limitations.

Groundwater Samples Included in the Data Usability Assessment: MW-18", RIZ-1, RIZ-2, RIZ-3, RIZ-5, RIZ-6, MW-2, MW-5, MW-6

Field Duplicates: MW-18" (VOCs, VPH, EPH, total metals)

MS/MSDs: MW-18" (total metals)

Groundwater Analyses Performed: VOCs, VPH, EPH, total metals

B. Sensitivity Evaluation

Sensitivity was acceptable for all analyses of groundwater samples (i.e., quantitation limits [QLs] for all nondetect results were below the applicable Method 1 GW-2 and GW-3 groundwater standards) with the exception of vinyl chloride in sample MW-6. The nondetect result for vinyl chloride (4 ug/L) was above the GW-2 standard (2 ug/L) but below the GW-3 standard in sample MW-6.

C. Evaluation of Accuracy and Precision

There were no biases or uncertainty associated with the VPH and EPH analyses of groundwater samples. Biases and uncertainty associated with the VOC and total metals analyses of the groundwater samples are discussed below.

C-1. Low-Biased Results

Potential low bias exists for select results due to various QC nonconformances. In general, the overall data usability and decision-making process were not affected by these QC nonconformances, as shown in the table below.

Samples Affected	Analytes Affected	Reason for Low Bias	Reason Data Usability or Decision-making Process Not Affected
All groundwater samples	Bromoform, chloromethane, 1,2-dibromo-3-chloropropane, dichlorodifluoromethane, naphthalene	Low recoveries in LCS and/or LCS Duplicate	Nondetect results for bromoform and naphthalene significantly below project action levels in affected samples. No project action levels exist for the remaining VOCs.

Samples Affected	Analytes Affected	Reason for Low Bias	Reason Data Usability or Decision-making Process Not Affected
All groundwater samples	Silver	Low recoveries in MS/MSD	Nondetect results for silver significantly below project action levels in affected samples.

C-2. High-Biased Results

Potential high bias exists for acetone, diethyl ether and trichlorofluoromethane in all groundwater samples due to high recoveries in the LCS Duplicate. In general, the overall data usability and decision-making process were not affected since these compounds were not detected in the associated samples.

C-3. Potential Uncertainty

Potential uncertainty exists for naphthalene, acetone, bromomethane, 2-butanone, and 1,4-dioxane in all groundwater samples due to LCS/LCS Duplicate variability. In general, the overall data usability and decision-making process were not affected since the nondetect results for these analytes were significantly below the project action levels in all affected samples.