PHASE V MONITORING REPORT
AND FIVE YEAR REVIEW
JUNE 2013

FORMER RCA FACILITY
ONE NETWORK DRIVE
BURLINGTON, MASSACHUSETTS
RTN 3-00265

PREPARED FOR

LOCKHEED MARTIN CORPORATION
6801 ROCKLEDGE DRIVE
MAIL DROP DM 315
BETHESDA, MD 20817

PREPARED BY

TETRA TECH
ONE MONARCH DRIVE
SUITE 202
LITTLETON, MASSACHUSETTS 01460
(978) 952-0120

TETRA TECH PROJECT NO. 117-0507550/01.04 JUNE 26, 2013

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1,1-DCA	1,1-dichloroethane
1,1-DCE	1,1-dichloroethene
1,1,1-TCA	1,1,1 trichloroethane
ACEC	area of critical environmental concern
AUL	activity and use limitation
bgs	below ground surface
BWSC	Bureau of Waste Site Clean-up
cis-1,2-DCE	cis-1,2-dichloroethene
CMR	Code of Massachusetts Regulations
COC	contaminant of concern
CSA	comprehensive site assessment
EPA	Environmental Protection Agency
EPC	exposure point concentration
ERL	effects range low
GW	groundwater
HCL	hydrochloric acid
IRA	immediate response action
LCS	laboratory control standard
Lockheed Martin	Lockheed Martin Corporation
LPDE	low density polyethylene
LSP	licensed site professional
MassDEP	Massachusetts Department of Environmental Protection
MCP	Massachusetts Contingency Plan
MNA	monitored natural attenuation
MS	matrix spike
MSD	matrix spike duplicate
MTBE	methyl tert-butyl ether
NAPL	non-aqueous phase liquid
Northbridge	Northbridge Companies

OHM	oil and/or hazardous materials
PARCCS	precision, accuracy, representativeness, comparability, completeness, and sensitivity
PCE	tetrachloroethene
PIP	public involvement plan
ppb	parts per billion
QA/QC	quality assurance/duality control
RAA	remedial action alternative
RAM	release abatement measure
RAO	response action outcome
RAP	remedial action plan
RCA	Recording Company of America
RIP	remedy implementation plan
RL	reporting limit
ROS	remedy operation status
RPD	relative percent difference
RTN	release tracking number
Shaw	Shaw Environmental, Inc.
STL	Severn Trent Laboratories
Sun	Sun Microsystems, Inc.
TCE	trichloroethene
Tetra Tech	Tetra Tech Inc.
THF	tetrahydrofuran
TIC	tentatively identified compound
UCL	upper concentration limit
VOA	volatile organic analysis
VOC	volatile organic compound

EXECUTIVE SUMMARY

On behalf of Lockheed Martin Corporation (Lockheed Martin), Tetra Tech Inc. (Tetra Tech) has prepared the Phase V Remedy Operation Status Report and Five Year Periodic Review for the former Recording Company of America Facility (former RCA Site) located at 1 Network Drive in Burlington, Massachusetts. The purpose of this report is to fulfill the six-month reporting requirement under the Remedy Implementation Plan (RIP), to document the results of the Phase V monitoring program, and to evaluate the Monitored Natural Attenuation (MNA) remedy for groundwater at the former RCA Site for the five-year period of June 2008 to May 2013. As such, this report also completes the Periodic Review opinion for the former RCA Site and fulfills the requirements of 310.CMR40.1051(3) of the Massachusetts Contingency Plan (MCP). The former RCA Site is in Phase V Remedy Operation Status for MNA of a chlorinated volatile organic compound (VOC) plume.

The scope of the monitoring program for this reporting period includes the review and analysis of data from samples collected November 2008 through November 2012 [e.g., surface water and groundwater samples analyzed for VOCs]. The MNA remedy for this site was continued during this period due to the presence of the following VOCs:

- tetrachloroethene (PCE),
- trichloroethene (TCE),
- 1,1-dichloroethene (1,1-DCE),
- 1,1,1-trichloroethane (1,1,1-TCA),
- 1,1-dichloroethane (1,1-DCA), and
- cis-1,2-dichloroethene (cis-1,2-DCE).

Field activities were not performed during this reporting period. Shaw Environmental, Inc. (Shaw) completed surface water and groundwater monitoring activities for the period covering December 1, 2012 through May 31, 2013. A summary of the November 2012 data is as follows:

- No VOCs were detected above laboratory quantitation limits in surface water samples;

- PCE was detected at the MCP Method 1 GW-1 groundwater cleanup standard (5 µg/l) at 1 of the 12 monitoring wells at a concentration of 5 micrograms per liter (µg/l);
- TCE was detected above the MCP Method 1 GW-1 groundwater cleanup standard (5 µg/l) in 6 of 12 monitoring wells at concentrations ranging from 6.1 µg/l to 24 µg/l;
- 1,1-DCE was below the GW-1 groundwater cleanup standard (7 µg/l) or non-detect at the laboratory quantitation limit in 11 of the 12 monitoring wells;
- 1,1,1-TCA concentrations were below the GW-1 groundwater cleanup standard (200 µg/l) or non-detect at the laboratory quantitation limit in all of the 12 monitoring wells;
- 1,1-DCA was below the GW-1 groundwater cleanup standard (70 µg/l) or non-detect at the laboratory quantitation limit in all of the 12 monitoring wells; and
- cis-1,2-DCE was below the GW-1 groundwater cleanup standard (70 µg/l) or non-detect at the laboratory quantitation limit in all of the 12 monitoring wells;

As part of the Temporary Review of the selected remedy a five year recalculation of the estimated natural attenuation rates was conducted and a statistical evaluation of recent groundwater concentration trends was completed using the Mann-Kendall Trend Test for Small Sample Sizes ("Trend Test"). The Trend Test for small sample sizes is described in "Guidance for Data Quality Assessment, Practical Methods for Data Analysis" (USEPA, 2000). The Trend Test was done for the three most prevalent compounds at the former RCA Site, 1,1-DCE, PCE, and TCE, using data collected from 2004 through 2012. These evaluations show the following:

- Decreasing VOC concentrations at the former RCA Site indicate that natural attenuation is occurring;
- Natural attenuation parameter data indicate that conditions continue to be favorable for MNA;
- The results of the re-calculation of the natural attenuation rates indicate that the estimated time to achieve cleanup criteria for all four wells with a downward trend is within approximately three to five years;
- Four of the twelve monitoring wells have a statistically significant downward trend in 1,1-DCE concentrations;
- Two of the twelve monitoring wells have a statistically significant downward trend in PCE concentrations; and
- Three of the twelve monitoring wells have a statistically significant downward trend in TCE concentrations.

Based on these data and the analyses conducted, natural attenuation of the VOCs present in groundwater appears to be continuing at a reasonable rate, and annual monitoring of the groundwater remains adequate. It is expected that, for the locations currently being monitored, the estimated dates for achieving the cleanup criteria are from 2013 to 2015. Therefore it is estimated that cleanup criteria will be achieved for all wells by 2016 or within the next three years. This compares favorably with previous timeframes estimated to achieve cleanup criteria. Although the projected clean-up goals have been estimated to be achieved by 2016, there is uncertainty in meeting all goals in the projected time frame for wells that do not show a downward trend.

1 INTRODUCTION

This Phase V Monitoring Report has been prepared by Tetra Tech Inc. (Tetra Tech) for Lockheed Martin Corporation (Lockheed Martin), the former owner of the property located at 1 Network Drive in Burlington, Massachusetts. This report documents the monitoring activities that have been conducted in accordance with the Phase IV Remedy Implementation Plan (RIP) for the former RCA Site dated December 10, 1998 (and as subsequently modified). The former RCA Site is in Phase V Remedy Operation Status (ROS) for monitored natural attenuation (MNA) of a chlorinated volatile organic compound (VOC) plume.

This report fulfills the status report requirement for the period of December 1, 2012 through May 31, 2013. This report also completes the Periodic Review opinion for the former RCA Site and fulfills the requirements of 310.CMR40.1051(3) of the Massachusetts Contingency Plan (MCP). Therefore, the purpose of this report is not only to present data collected during the previous monitoring period, June 1, 2012 through November 30, 2012, but also to document the results of the Phase V Monitoring Program and evaluate the MNA remedy at the former RCA Site for the period of November 2008 to November 2013. The remainder of this section provides a historical background on the former RCA Site, report objective, and report outline.

1.1 BACKGROUND

The property located at 1 Network Drive, defined as the former RCA site is approximately 158 acres, with approximately 140 acres in the Town of Burlington and the remainder in the Town of Bedford (see Figure 1-1). The former RCA site is bounded to the north by Vine Brook, to the east by Middlesex Turnpike and to the west by U.S. Route 3. The property is a former industrial facility that included two large buildings (which were demolished in 1996) and several smaller buildings (which were demolished in 1996 and 1997) where industrial activities (primarily manufacturing and testing of military electronics equipment) occurred between 1958 and 1994. Undeveloped wooded land and wetlands surround these areas. In addition, the following three brooks are located on the property: Vine Brook which flows along the northeastern portion of the property from

southeast to northwest; Central Brook which is a tributary to Vine Brook located in the central portion of the property, and West Brook which is a tributary to Vine Brook located in the western portion of the property. The property is partially located within the Zone II of a water supply well in the Town of Bedford.

All of the buildings at the former RCA Site (excluding the Baxter House, which was a former farmhouse) were removed from the property by LMC in 1996 and 1997. Sun Microsystems, Inc. (Sun) subsequently purchased the property in August 1997 and redeveloped the property as a corporate office complex for their east coast regional headquarters. This complex was purchased by the Nordblom Company in 2007 who currently leases space to other corporate enterprises. Figure 1-2 shows the new office buildings as well as the new four-lane Network Drive (formerly Kent Road).

A Phase I Site Investigation Report was prepared by Geraghty & Miller, Inc. in August 1995. The Massachusetts Department of Environmental Protection (MassDEP) approved a Tier IB permit for the former RCA Site on December 11, 1995 (release tracking number 3-0265, and permit number 102258).

A Phase II Comprehensive Site Assessment (CSA) was conducted by EMCON between October 1996 and June 1997, which identified various areas at the former RCA Site with impacted soil, groundwater, surface water, and sediment. Alternatives for addressing the areas of impacted groundwater and sediment at the former RCA Site were identified and evaluated in the Phase III Remedial Action Plan (RAP), which was prepared by EMCON in December 1997. The risk characterization for human health indicated that a condition of No Significant Risk for the foreseeable future did not exist for: 1) soils in limited areas of the Hazardous Waste Storage Area and in the basement of the Baxter House; and 2) groundwater impacted by chlorinated VOCs originating from the former TCE tanks/RCA Building 2 area (now the general location of Building 5, as shown on Figure 1-2) and extending downgradient to Vine Brook in both the deep overburden and bedrock aquifers. In addition, the risk characterization for the environment indicated that a condition of No Significant Risk did not exist for sediment in Central Brook and associated wetlands. As a result of these evaluations, soil removal was performed at specific areas during the summer of 1997 as part of a Release

Abatement Measure (RAM). Specific areas of removal included soil located within the former Hazardous Waste Storage Area and sediment associated with the portion of Central Brook located south of Network Drive (formerly Kent Road). In 1998, the former RCA Site was designated as a Public Involvement Plan (PIP) Site. Further, additional remedial activities were completed in October 2000, which addressed the impacted soil and groundwater in the vicinity of the Baxter House.

For sediment, the Comprehensive Remedial Action alternative that was initially selected was the No Action Alternative, as a Temporary Solution. It was determined that although no substantial hazards currently existed at the former RCA Site the potential for future migration of impacted sediment to Vine Brook could result in a Substantial Hazard to the environment. Therefore, the remedial goal of the Temporary Solution for sediment was to minimize the potential for impacted sediment to migrate and accumulate to significant levels at new locations. However, to achieve a permanent solution for the sediment, a Phase IV Addendum was prepared in 2002 to further address the remediation of sediments in the Central Brook (Shaw 2002). Subsequently, additional comprehensive response actions were conducted in Central Brook during the Fall of 2002, as discussed below.

For groundwater, the Natural Attenuation Alternative was selected as a Temporary Solution. A Substantial Hazard to human health did not exist at this site in 1997. The remedial goal of a Temporary Solution for groundwater is to minimize the potential for a Substantial Hazard to occur in the future. To further this approach, a Phase IV Remedy Implementation Plan (RIP) was prepared in 1998 (EMCON 1998). The key elements of the RIP were: 1) the preparation of monitoring plans to minimize the potential for a Substantial Hazard to exist in the future; 2) contingency plans that would be implemented should conditions be identified that could pose a Substantial Hazard; 3) a predator study plan to gather information to provide direct evidence of whether impacted sediment poses a Significant Risk to the environment; and 4) a plan to redesignate the aquifer so that the GW-1 category will no longer be applicable.

Based on Phase V monitoring data, a condition of Substantial Hazard has not existed and does not exist. The conclusions of the predator study were that while various life stages of amphibians were observed, in general the study area was not a good habitat for the predators of interest (amphibians and aquatic birds) due to its physical characteristics. The survey indicated that the area is unlikely to represent an important breeding or feeding habitat for aquatic birds, since they prefer areas with dense wetland vegetation, which were not found at this Site.

Trigger levels for metals in surface water and sediment and VOCs in surface water were established in the Phase IV RIP. The basis for these trigger levels were ambient water quality criteria for metals, drinking water standards for VOCs, and Effects Range Low[1] (ERL) benchmarks for sediment. As documented in the previous June 2001 Phase V Monitoring Report, a review of trigger levels was warranted for metals in surface water and sediment. Trigger levels for metals in surface water were adjusted as indicated in the June 2001 Phase V Monitoring Report.

The Phase V Addendum, submitted in August 2001, presented a modification to the sediment sampling program and provided a rationale for this modification. The change in sampling protocol and analysis was intended to decrease the number of false-positive trigger exceedances, and to better detect the potential migration of metals from Central Brook to Vine Brook.

A partial Response Action Outcome (RAO) statement was filed on January 22, 2002 for the former RCA Site. The only areas/media not included in the partial RAO were: 1) a chlorinated VOC groundwater plume originating at what is now the location of Building No. 5, and heading approximately north toward Vine Brook (Figure 1-2), and 2) surface water and sediments in the Central Brook and associated wetlands area.

A Phase III RAP and a Phase IV RIP Addendum were prepared in July 2002. The Phase III RAP identified and evaluated two remedial action alternatives (RAAs) in addition to the five previously screened technologies in the 1997 Phase III RAP. These additional RAAs (S-6 and S-7) addressed the sediment in Central Brook and/or associated

wetlands based on findings from the Phase III Investigation and Treatability Study. The detailed evaluation and comparison of sediment alternatives resulted in the selection of the Focused Excavation Alternative (S-6) via vacuum excavation as the Permanent Solution for the sediment in Central Brook and/or associated wetlands.

A Phase IV RIP Addendum prepared in July 2002 presented detailed plans relating to the implementation of sediment removal by vacuum dredging and off-site disposal. The Phase IV RIP Addendum focused solely on addressing impacted sediments and outlined the implementation of the remedial alternative selected in the Phase III RAP Addendum.

The Phase IV comprehensive response actions associated with remediating sediments in Central Brook were successfully completed between September and December 2002. Since remediation is complete, Phase V monitoring activities associated with monitoring metal concentrations in Central Brook and Vine Brook sediments and surface water were no longer needed. A significant amount of source material was removed and a condition of No Significant Risk has been achieved, as documented in the partial RAO for Central Brook and associated wetlands submitted in April 2003. A Phase IV Completion Statement, partial RAO, Phase V Monitoring Report, and Remedy Operation Status (ROS) Submittal were also prepared and submitted in April 2003. Phase V Monitoring Reports have been submitted to the MassDEP since June 2003 in accordance with the six-month reporting requirements of 310 CMR 40.0893(2)(e). ROS activities (consisting of annual groundwater and surface water sampling and analysis) continue at the former RCA Site.

In 2008, a five year re-calculation of the estimated natural attenuation rates was performed by Shaw Environmental Inc. (Shaw June, 2008). The results of the 2008 re-calculation of the natural attenuation rates indicated that the estimated time to achieve cleanup criteria for all monitoring wells was within eight years.

In 2012, the Northbridge Companies (Northbridge), an affiliate of the Nordblom Company, began development on the east side of Network Drive. Development to date includes an assisted living facility and there are plans for an early childhood education

facility on a portion of the property. The development is in the vicinity of the well-defined chlorinated VOC groundwater plume associated with the former RCA Site. Shaw conducted assessment activities and evaluations of the proposed development under the MCP, which were reported in the June 2011 Phase V Monitoring Report (Shaw, June 2011). The early assessment conducted by Shaw evaluated suitability for an assisted living facility and retail/restaurant space (the original proposal for land development). For this evaluation, Shaw reviewed existing groundwater data and conducted additional sampling from four temporary water table screened wells installed in the area of the proposed development (one in each of the two planned retail areas and two in the planned assisted living facility as shown in Figure 1-2). This data was utilized to evaluate the potential for the VOCs in groundwater to impact the air within the planned buildings at the Northbridge development. The results of the 2011 vapor intrusion assessment activities and evaluations of the Northbridge development as presented by Shaw were as follows:

- Volatilization of the VOCs from groundwater and site soils is not expected to be a concern for indoor air of future building;
- The proposed development is not expected to affect current or future remedial activities at the former RCA Site and will not exacerbate site conditions or cause contaminants to migrate beyond the currently defined site boundaries; and
- Shaw concluded that the proposed development plans did not require a RAM plan for the proposed construction activities.

1.2 OBJECTIVE

The objective of the Phase V Monitoring Report is to document the monitoring activities that are conducted at the former RCA Site in accordance with the various plans described in the 1998 RIP, the 2001 Phase V Addendum, and the 2003 Phase V Monitoring Report and ROS Statement. In addition, the monitoring reports will evaluate the monitoring data with respect to identifying conditions that might pose a Substantial Hazard, and if appropriate, evaluate the need for contingency actions. Given that the selected remedial alternative does not include a remedial system, the monitoring report does not include any items pertaining to operation or inspection.

1.3 LIST OF CONTACTS

This section identifies the potentially responsible party, Licensed Site Professional (LSP)-of-record, owner, and operator for the subject response action.

Potentially Responsible Party and Former Owner/Operator

Lockheed Martin Corporation
2940 University Parkway
Sarasota, FL 34243

Contact: Mr. Robert S. Phillips
Phone: (817) 495-0251
Position: Project Lead, Environmental Remediation

Licensed Site Professional (LSP)

Tetra Tech, Inc.
250 Andover Street, Suite 200
Wilmington, MA 01887

Contact: Mr. Stephen Parker (License Number: 9867)
Phone: (978) 474-8400
Position: Licensed Site Professional

1.4 REPORT ORGANIZATION

Tetra Tech has organized this monitoring report to follow the requirements specified in 310 CMR 40.0892, as described below:

- Section 2.0: Provides a description of the type and frequency of monitoring/field activities conducted;
- Section 3.0: Presents the results of sampling analysis conducted as part of the monitoring, an evaluation of MNA performance, a re-calculation of the natural attenuation rates, and a schedule;
- Section 4.0: Provides a Method I Risk Characterization, description of conditions or problems noted during the monitoring period which are or may be affecting the performance of the remedial action, and any measures taken to correct those conditions;
- Section 5.0: Provides a description of significant modifications being made to the monitoring program (if any are warranted);

- Section 6.0: Provides the LSP Opinion regarding this report;
- Section 7.0: Provides a list of references; and
- Section 8.0: Provides the limitations regarding this report.

2 MONITORING ACTIVITIES

This section describes the sampling activities that were conducted in accordance with the detailed monitoring plan presented in the RIP (dated December 10, 1998), as modified by the Phase V Addendum (dated August 28, 2001), and the Phase V Monitoring Report and ROS Statement (dated April 28, 2003). All of the monitoring locations are identified on Figure 1-2.

In accordance with the 1998 RIP, surface water sampling for VOCs is to be conducted quarterly for one year and annually thereafter. An annual sampling round was conducted during the previous monitoring period during the month of November 2012.

In accordance with the 1998 RIP, surface water sampling for metals is to be conducted quarterly for two years and annually thereafter. However, due to the completion of Phase IV comprehensive response actions performed in the fall of 2002, surface water sampling for metals is no longer warranted, and was therefore removed from the sampling program in April 2003 (Shaw, 2003).

In accordance with the 1998 RIP, sediment sampling is to be conducted quarterly for one year and annually thereafter. However, due to the completion of Phase IV comprehensive response actions performed in the fall of 2002, sediment sampling for metals is no longer warranted, and was therefore removed from the sampling program in April 2003 (see Phase V Monitoring Report and ROS Statement; April 28, 2003).

In accordance with the 1998 RIP and a private agreement between Lockheed Martin and the current property owner, groundwater sampling is to be conducted quarterly for two years, and conducted annually thereafter. An annual sampling round was conducted during the previous monitoring period during the month of November 2012. Future groundwater sampling and analysis for VOCs will continue to be conducted on an annual basis during the month of November until cleanup objectives are achieved. At that point, three additional quarterly sampling rounds will be conducted to confirm cleanup objectives have been met over four consecutive seasons, as required by MassDEP.

2.1 SURFACE WATER

Surface water in Vine Brook was sampled by Shaw for VOCs on November 12, 2012 to monitor the effects of potentially impacted groundwater discharging to Vine Brook. Samples were collected from locations CVB-5, CVB-7, CVB-8, and CVB-9 (Figure 1-2). Grab samples were collected by lowering a clean (upside-down) 950 milliliter (mL) amber glass laboratory sample jar to mid-depth of the brook (where possible – approximately 1 to 2 feet below the surface of the water) along the bank of the brook, inverting the jar to collect the sample, and then transferring it to an hydrochloric acid (HCl)-preserved volatile organic analysis (VOA) vial. These samples (along with one trip blank and one duplicate sample) were sent to TestAmerica in Westfield, Massachusetts for analysis of VOCs using the MassDEP Method 8260 CAM Protocols.

During this sampling period the brook surface water elevation was gauged from the surveyed gauging point on the Network Drive Bridge. The surface water elevation measurements are summarized in Table 2-1.

2.2 ANNUAL GROUNDWATER SAMPLING

To quantify rates of natural attenuation, to monitor long-term trends in VOC concentrations, and to detect any changed conditions that may affect the performance of the selected remedial action alternative (monitored natural attenuation), Shaw conducted annual groundwater sampling on November 8 and 9, 2012. The following twelve monitoring wells were sampled during this sampling event: 3G-11, 3G-12, EMW-3R, 3H-1S, 3H-1D, EMW-1D, EMW-2D, A-1D, EMW-7, EMW-10D, EMW-10R, and EMW-11R. Each of these wells was sampled by Shaw personnel primarily in accordance with procedures outlined in Low-Flow Groundwater Sampling Procedures, United States Environmental Protection Agency (July 1996) as modified in the discussion below. An inline flow-thru cell (YSI model 6820 multi-parameter water quality monitoring system) was used to provide measurements of field parameters such as oxidation-reduction potential and dissolved oxygen.

For each well, the tubing intake was located at the midpoint of the saturated screen interval. Groundwater was purged with a surface-mounted peristaltic pump and low density polyethylene (LDPE) tubing at a rate approximately 200 milliliters per minute (mL/min) until stabilization of field chemistry measurements: conductivity (3% variation); pH (0.1 standard unit variation); temperature (3% variation); oxidation reduction potential (10 millivolt variation); dissolved oxygen (3% variation); and turbidity (visual observation of low turbidity) or after approximately 30 minutes. Once these parameters stabilized, the samples were collected directly from the pump discharge tubing before the flow-thru cell. The VOC sample bottles were filled by disconnecting the low density polyethylene (LDPE) tubing from the pump to fill the sample bottles. The VOC vials were checked to make sure no headspace or air bubbles remained.

Past sampling has shown that for bedrock monitoring wells EMW-3R, EMW-10R, and EMW-11R, pumping at the lowest pump setting will cause the entire water column in the well to be evacuated. Therefore, each well was purged dry approximately 24 hours prior to sampling using an inertial pumping system. After the well recharged, typically within 24 hours, the field chemistry parameters were measured and a direct sample was collected without further purging using the inertial pumping system.

Dedicated tubing was used at each sampling location. Groundwater from each of the wells was evaluated in the field for the following parameters using direct reading instruments: temperature, pH, specific conductivity, dissolved oxygen, and oxidation-reduction potential. All samples were also submitted to TestAmerica for VOC analysis using the MassDEP Method 8260 CAM Protocols. In addition, groundwater samples from three representative wells (3G-12, EMW-2D, and EMW-1D) were analyzed for the following natural attenuation parameters: nitrate (EPA method 300.0), sulfate (EPA Method 300.0), methane (Method AM20GAX), total organic carbon (EPA Method 415.1), and a field measurement of ferrous iron using HACH Model IR-18C reagent test kit. For quality assurance/quality control purposes, one trip blank sample and one field duplicate sample were also submitted along with the groundwater samples.

During this sampling period, the water level in each well was measured to the nearest 0.01 foot using a decontaminated electronic water level meter. Groundwater levels were also measured at these five additional wells onsite to help evaluate groundwater flow patterns: 3H-3, 3H-5, EMW-12R, 3H-2, and A-1. Groundwater elevations measured during the 2012 event are summarized in Table 2-1 with historic groundwater elevations. The November 2011 groundwater table contour elevation map is presented in Figure 2-1.

3 EVALUATION OF WATER QUALITY CONCENTRATION TRENDS AND INTERPRETATION

This section provides an evaluation of the concentration trends and distribution of the three main Site groundwater contaminants, 1,1-DCE, TCE, and PCE. Sections 3.1 through 3.3 provide a summary of the most recent concentration data. Section 3.4 provides a statistical evaluation of long-term groundwater concentration trends for 1,1-DCE, TCE, and PCE. Section 3.5 provides a discussion of the recent monitored natural attenuation changes and changes in the spatial distribution and the statistically significant concentration trends.

3.1 QUALITY ASSURANCE/QUALITY CONTROL

In accordance with MassDEP's Analytical Data Enhancement Program (Quality Assurance and Quality Control Guidelines for Sampling, Data Evaluation and Reporting Activities for the MCP) quality control samples were collected at the frequency required for presumptive certainty and all Precision, Accuracy, Representativeness, Comparability, Completeness, and Sensitivity (PARCCS) criteria were met. The laboratory used MassDEP methods (except for natural attenuation parameters), and the laboratory completed and certified the MassDEP MCP Analytical Method Report Certification Forms. Responses to questions A through F on the forms were answered in the affirmative (where applicable). Responses to questions H and I on the forms were answered either in the affirmative or all negative responses were addressed in the associated laboratory narrative. Therefore, the data set meets the requirements for "presumptive approval" in accordance with the MassDEP Policy WSC-02-320 - The Compendium of Quality Assurance and Quality Control Requirements and Performance Standards for Selected Analytical Methods Used in Support of Response Actions for the MCP and may be used to support associated LSP opinions.

The analytical data from the November 2012 sampling event were electronically entered into the GIS/Key database and tabulated and validated by Shaw. Validation included a review of all laboratory and field quality control samples including a check of: sample log-in and custody; preservation; analytical holding times; surrogate recoveries;

detected results for method and trip blank samples; calculated relative percent differences (comparing field and laboratory primary and duplicate samples); laboratory control standard (LCS) recoveries; and miscellaneous observations. In addition, detection limits were reviewed for appropriateness for this project and analytical data were compared to historic data for consistency. Based on the validation of the Phase V sampling data, the data are considered usable for this MNA evaluation.

The data used in this report meet the intended purpose under the MCP, which is to monitor the progress of groundwater plume remediation, to evaluate MNA at the former RCA Site, and to evaluate potential vapor intrusion at the former RCA Site. The laboratory analytical data sheets for the groundwater and surface water samples collected by Shaw in November 2012 are provided in Appendix A.

3.2 SURFACE WATER

The annual surface water sampling for VOCs was completed in November 2012. Field chemistry parameters that were measured during surface water collection for VOCs in November 2012 were included in the December 2012 monitoring report. Analytical results that were not available for the December 2012 monitoring report are presented in Table 3-1. Table 3-1 also presents historic VOC data for surface water samples. As shown in this table, no VOCs were detected in surface water samples collected in November 2012. Due to the multiple rounds of non-detected VOC concentrations in surface water, no statistical analysis has been performed on this data.

3.3 GROUNDWATER

Analytical results for VOCs in groundwater samples collected during the November 2012 sampling event are summarized in Table 3-2. Analytical results for natural attenuation parameters for groundwater samples collected during the November 2012 sampling event are summarized in Table 3-4. Field chemistry parameters, which were measured during the collection of groundwater samples in November 2012, are also included in Table 3-4. A groundwater elevation map and inferred flow direction for the November 2012 sampling event is presented on Figure 2-1.

The November 2012 1,1-DCE, PCE, and TCE concentrations in unconsolidated deposits and shallow bedrock groundwater are shown on Figures 3-1 through 3-3. 1,1-DCE was below the GW-1 groundwater cleanup standard (7 µg/l) or non-detect at the laboratory quantitation limit for 11of the 12 monitoring wells. 1,1-DCE was detected at a concentration of 11 ug/L at well 3G-11. PCE was detected at the MCP Method 1 GW-1 groundwater cleanup standard (5 µg/l) at only one of 12 monitoring wells at location EMW-1D. Unconsolidated deposit and shallow bedrock groundwater PCE concentrations ranged from non-detect to 5 µg/l. TCE was detected at six monitoring wells above the MCP Method 1 GW-1 groundwater cleanup standard (5 µg/l) at locations 3G-11, EMW-11R, EMW-1D, EMW-2D, EMW-3R, and MWA-1D. Unconsolidated deposit and shallow bedrock groundwater TCE concentrations ranged from non-detect to 24 µg/l. Table 3-2 summarizes the reported concentrations of these principal VOCs detected in the November 2012 samples and also includes historic concentration data.

Graphical depictions of the groundwater plume areas and cross sections for each of these primary VOCs are represented in Figures 3-1 through 3-6. Note that Figures 3-1 through 3-6 present reported concentrations during four discrete monitoring events (1998, 2001, 2007, and 2012) to demonstrate the overall progress of MNA since 1998, when comprehensive sampling began. By comparing the mapped plumes over time, it is clear that natural attenuation is continuing for the subject VOCs in groundwater at the former RCA Site.

3.4 MANN KENDALL ANALYSIS

A statistical evaluation of recent groundwater concentration trends was done using the Mann-Kendall Trend Test for Small Sample Sizes (“Trend Test”). The Trend Test for small sample sizes is described in “Guidance for Data Quality Assessment, Practical Methods for Data Analysis” (USEPA, 2000). The Trend Test was done for the three most prevalent compounds at the former RCA Site, 1,1-DCE, PCE, and TCE, using data collected from 2004 through 2012.

The trend test was used to identify, for the time period between 2004 and 2012, whether there is a statistically significant increasing concentration trend or decreasing

concentration trend at a 95 percent confidence level. The trend in concentration is determined by ordering the data temporally and computing all differences between measurements and earlier measurements for a particular compound detected in samples from a well. The number of positive differences minus the number of negative differences is the statistic "S". The statistic is used in conjunction with the total number of data points to determine if there is a statistically significant increasing trend, decreasing trend, or no statistically significant trend in the data set. The trend test evaluation requires that samples be collected at regularly-spaced time intervals, with no duplicate samples included and no missed sampling events. To comply with the requirements of the trend test, the analysis could only be done on wells that have been sampled annually since 2004 with two or fewer non-detect results. Wells that have not been sampled annually since 2004 or had more than two non-detect results could not be evaluated using the trend test method. A concentration of one half the detection limit for the relevant compound was assumed for all non-detect results. For wells where a duplicate sample was collected, the average of the two reported concentrations was used.

Table 3-3 summarizes the results of the trend test. For the 12 wells in which the data were sufficient to perform the statistical analysis, the table indicates whether there has been a statistically significant trend in the 1,1-DCE, PCE, and TCE concentration between November 2004 and November 2012. Table 3-3 indicates, with "<=MCL (#)", locations from which concentrations from all samples collected over the nine-year time period were less than the MCL of "#" and, with "ND", locations for which not all sample results were less than or equal to the MCL but the reported concentrations from two or more years were less than detection limits. For wells in which a trend was identified, the range of concentration change is indicated, with the first number indicating the concentration detected in 2004 and the second number indicating the concentration detected in 2012.

In addition to the trend test, graphs showing the temporal change in 1,1-DCE, PCE, and TCE concentrations in groundwater for all locations currently sampled are included as Appendix B.

The trend analysis and evaluation presented in Table 3-3 generally show a statistically significant decreasing trend (at the 95% confidence level) or stable conditions in all wells and for all compounds of interest with a few exceptions:

- The statistical analysis for TCE and 1,1-DCE in well 3G-11 indicates a non-stable condition. This result was influenced by the 1,1-DCE concentration of 11 ug/L detected in November 2012 and the TCE concentration of 6.1 ug/L detected in November 2012. The 2012 concentrations show a slight up-tick; however, provided that future concentrations are low, it is expected that there will be a statistically significant stable condition with no observable trend or a downward trend.
- The statistical analysis for TCE and PCE in well EMW-1D indicates a non-stable condition; however, provided that future concentrations are low, it is expected that there will be a statistically significant stable condition with no observable trend or a downward trend.
- The statistical analysis for TCE in wells EMW-11R and EMW-3R indicates a non-stable condition; however, provided that future concentrations are low, it is expected that there will be a statistically significant stable condition with no observable trend or a downward trend.

3.5 MONITORED NATURAL ATTENUATION

Groundwater samples from three representative wells (3G-12, EMW-1D, and EMW-2D) were analyzed for the following natural attenuation parameters: nitrate (EPA method 300.0), sulfate (EPA Method 300.0), methane (Microseep's Method AM20GAX), and total organic carbon (EPA Method 415.1). These data along with field chemistry parameters (oxygen, oxygen reduction potential, pH, ferrous iron, and temperature) are presented in Table 3-4. Wells EMW-1D, EMW-2D, and 3G-12 are located in the core of the plume; EMW-1D is most upgradient and 3G-12 is most downgradient of these three wells.

3.5.1 EVALUATION AND RE-CALCULATION OF NATURAL ATTENUATION RATES

Every five years following the ROS submittal in 2003, natural attenuation rates will be re-calculated and compared to previous estimates to confirm natural attenuation is proceeding at the planned rate. Therefore, natural attenuation rates were re-calculated as discussed below.

In 2001, IT Corporation prepared a report titled "Evaluation of Monitored Natural Attenuation" for the former RCA Site (IT Corporation 2001). This report evaluated data collected from May 1998 through February 2001, as well as a laboratory microcosm study. The evaluation report concluded that: based on primary (decreasing VOC concentrations), secondary (geochemical data), and tertiary (laboratory treatability testing) lines of data, natural attenuation is occurring. First-order attenuation rate constants were calculated for the 1998-2001 timeframe.

During this current natural attenuation evaluation, only those data collected between 1998 and November 2012 were used to determine the attenuation rates and compare them to the previous evaluation. (Note: this is a different time period than was used to calculate the Mann-Kendall trend analysis discussed above, which uses the nine most recent annual sampling events ranging from November 2004 to November 2012.) The natural attenuation evaluation did not consider concentration data for duplicate samples and for samples that were non-detect at the laboratory quantitation limit the value of the quantitation limit was used.

As part of the natural attenuation evaluation, the results of the Mann-Kendall analyses were used. Mann-Kendall trend analyses for overburden monitoring wells MWA-1D, 3G-11, 3G-12, EMW-1D, EMW-2D, and bedrock monitoring wells EMW-3R and EMW-11R were evaluated. These wells generally represent the centerline of the groundwater plume. Results of the trend analyses identified statistically significant decreasing trends (95% confidence level) are occurring for all monitoring wells with the exception of:

- 3G-11 (TCE and 1,1-DCE);
- EMW-1D (PCE and TCE);
- EMW-3R (TCE only); and
- EMW-11R (TCE only).

Although statistically significant decreasing trends were not identified in monitoring wells 3G-11 (TCE and 1,1-DCE), EMW-1D (PCE and TCE), EMW-3R (TCE only) and EMW-11R (TCE only), during the time period used in this evaluation

(2004 to 2012), the contaminant concentrations present are within approximately 20 ppb of the cleanup criteria, or have actually achieved the cleanup criteria.

First order attenuation rate constants were calculated (based on a regression analysis of the data presented in Table 3-5) for those locations and constituents showing a Mann-Kendall significant decreasing trend. In addition, dates in which cleanup criteria would be achieved were estimated. Attenuation rate constants ranged from 0.11/year for TCE in MWA-1D to 0.26/year for 1,1-DCE in 3G-12. These compound and location specific attenuation rates are similar to those previously calculated for the former RCA Site. Attenuation rates were calculated for nine different location/ constituent combinations. However, it was noted that seven of the nine location/ constituent combinations had already reached the cleanup criteria. Therefore, only two attenuation rates were used to estimate the year in which cleanup criteria will be met. Attenuation rates and cleanup criteria date projections, as well as dates when the cleanup criteria were met are shown in Table 3-6.

As indicated in Table 3-6, it is expected that, for the locations being monitored, the estimated dates for achieving the cleanup criteria are from 2013 to 2015. Assuming that current clean-up criteria remain unchanged, it is estimated that cleanup criteria will be achieved for all wells by 2016 or within the next three years. This compares favorably with previous timeframes estimated to achieve cleanup criteria. Although the projected clean-up goals have been estimated to be achieved by 2016, there is uncertainty in meeting all goals in the projected time frame for wells that do not show a downward trend.

3.5.2 MNA PERFORMANCE

According to the *OSWER Directive 9200.4-17P – Use of Monitored Natural Attenuation at Superfund, RCRA Corrective Action, and Underground Storage Tank Sites – April, 21, 1999*, MNA monitoring plans should be designed to accomplish several objectives. This section documents that those objectives have been met and provides the associated rationale:

3.5.2.1 DEMONSTRATION THAT MNA IS OCCURRING AS EXPECTED

As discussed above, contaminant concentration trends were evaluated using the Mann-Kendall statistical trend analysis. The results of this analysis indicate that the concentrations of the evaluated compounds are either decreasing or stable (with the exception discussed above). Every five years following the ROS submittal in 2003, natural attenuation rates will be re-calculated and compared to previous estimates to confirm natural attenuation is proceeding at the planned rate. Therefore, natural attenuation rates were re-calculated as discussed above in 2013. It is now estimated that all wells for which attenuation rates could be calculated will achieve cleanup standards within the next three years, which is well within the timeframe first estimated for this program.

3.5.2.2 CHANGED CONDITIONS ADVERSELY AFFECTING MNA HAVE NOT BEEN DETECTED

There are no new monitoring data that would indicate that new environmental conditions or new releases of contaminants, which could reduce MNA efficiency, have occurred. Natural attenuation parameter data, as presented in Table 3-4, indicate that: 1) low dissolved oxygen (generally less than 2 mg/l) and low oxidation reduction potential (generally less than +100 mV) exist at two of three well locations, conditions which are needed to support anaerobic degradation of chlorinated compounds; 2) low nitrate concentrations provide evidence that support denitrification within the aquifer; 3) although not especially low, sulfate concentrations are slightly lower than levels previously reported and provide evidence that sulfate reduction is occurring within the aquifer; 4) methane levels above 0.5 mg/L in two out of three wells sampled provide evidence of methanogenesis in these areas of the plume; 5) ferrous iron was detected in wells EMW-1D, EMW-2D, and 3G-12 at 0.4 mg/L, 1.4 mg/L, and 0.2 mg/L, respectively, providing evidence of anaerobic degradation in this area of the plume, and 6) total organic carbon levels are low, which may be limiting reductive dechlorination.

3.5.2.3 NO TOXIC TRANSFORMATION PRODUCTS

Monitoring data indicate that no potential toxic and/or mobile transformation products are being created as part of the natural attenuation process that could pose a substantial hazard. Although transformation products are being generated (e.g., 1,1-

DCE), they do not pose a substantial hazard since surface water trigger levels established in the Phase IV RIP have not been exceeded (VOCs in surface water were below laboratory detection limits).

3.5.2.4 VERIFICATION THAT PLUME IS NOT EXPANDING

The contour maps and cross-sections (see Figures 3-1 through 3-6) demonstrate that the plume is not expanding and is apparently shrinking.

3.5.2.5 VERIFICATION OF NO DOWNGRADIENT UNACCEPTABLE IMPACT

As described above, surface water monitoring data confirms that no substantial hazard exists.

3.5.2.6 DEMONSTRATION OF EFFECTIVE INSTITUTIONAL CONTROLS

There are no institutional controls at the former RCA Site. Concerns that would be associated with institutional controls would include the use of site groundwater as a drinking water source and vapor intrusion into buildings constructed on the former RCA Site. With regard to groundwater use as a drinking source, Bedford Well #3 remains inactive and no wells have been installed for drinking water use at or near the former RCA Site. With regard to vapor intrusion, an evaluation of the potential for vapor intrusion into buildings over the VOC plume was conducted by Shaw and reported in the June 2011 Phase V Monitoring Report (Shaw, June 2011). It was concluded that the volatilization of the VOCs from the groundwater plume and site soils is not expected to be a concern for indoor air of future buildings. However, the risk characterization assumes that no residential dwellings exist in the vicinity of the chlorinated VOC plume and that Bedford Well #3 remains inactive until cleanup standards are met. These assumptions still hold true.

3.5.2.7 VERIFICATION OF ATTAINMENT OF REMEDIAL OBJECTIVES

Remedial objectives have not been met. After annual monitoring demonstrates that cleanup standards have been met, one additional full year of quarterly monitoring will be performed. The purpose of the quarterly monitoring is to demonstrate attainment of remedial objectives over four seasons in accordance with MassDEP policy.

3.6 FUTURE SAMPLING

Past and proposed annual sampling events are summarized in Table 3-7 and are discussed below. This table also shows historic sampling round dates. Due to the completion of sediment remediation activities conducted in the fall of 2002 at the Central Brook area as part of Phase IV comprehensive response actions, metals in sediments and surface water were eliminated from the sampling program in April 2003. Surface water and groundwater sampling for VOCs is currently being conducted annually and the next annual sampling round is scheduled to occur in November 2013. Due to multiple years of data of non-detects of chemicals of concern for the former RCA Site, it can be concluded that the clean-up objectives for surface water have been achieved. Therefore, Tetra Tech and Lockheed Martin recommended that the surface water sampling efforts be phased out of the monitoring program. To do so, additional quarterly surface water sampling rounds will be conducted to confirm cleanup objectives continue to be met over four consecutive seasons. If concentrations remain below clean-up objectives for these rounds, surface water sampling will be discontinued. Accordingly, surface water samples are proposed to be collected in August 2013, November 2013 (during the planned November event), February 2014, and May 2014.

4 SUBSTANTIAL HAZARD EVALUATION AND CONDITIONS/PROBLEMS AFFECTING REMEDIAL ACTION

The purpose of the evaluation of the temporary solution is to determine if the implemented remedy remains effective under the current site conditions and to assess the feasibility of achieving a permanent solution.

4.1 SUBSTANTIAL HAZARD EVALUATION

As defined by 310 CMR 40.0956(1)(a), the purpose of the substantial hazard evaluation is to determine if the current site and surrounding area conditions and the Temporary Solution achieve a condition of No Substantial Hazard. To determine that the Temporary Solution continues to achieve a condition of No Substantial Hazard, a Method I Risk Characterization is used to characterize the risk of harm to health, public welfare and the environment posed by the former RCA Site groundwater. Soil was remediated as part of the Phase IV comprehensive response actions associated with remediating sediments in Central Brook which were successfully completed between September and December 2002. Since remediation is complete, a condition of No Significant Risk has been achieved. As documented in the partial RAO for Central Brook and associated wetlands submitted in April 2003. Soil is not considered in the substantial hazard evaluation. More specifically this section includes:

- The determination of the applicable Method 1 Groundwater Categories for the Property;
- Comparison of Exposure Point Concentrations (EPCs) to Method 1 Standards
- Comparison of individual groundwater analytical results to Method 1 Standards;
- Evaluation of hot spots;
- Comparison of groundwater analytical results to Upper Concentration Limits (UCLs);
- An evaluation of background concentrations;
- A characterization of risk;

- An evaluation of the need for an Activity and Use Limitation (AUL); and
- A summary of the risk characterization for the Property.

The critical step in the Method 1 Risk Characterization is the direct comparison of concentrations of oil and /or hazardous materials (OHM) EPCs in groundwater to the applicable Method 1 Standards as outlined in the MCP. A site is eligible for a finding of No Significant Risk of harm to human health and the environment if no EPC is greater than the applicable Method 1 groundwater standards.

4.1.1 GROUNDWATER CATEGORIZATION

The MassDEP has developed specific groundwater categories for use in the risk characterization, which describe the potential for exposure to oil and/or hazardous materials. These categories are used to determine the applicable standards and the need for additional response actions. The MCP groundwater categories are considered general indicators of exposure potential in this Method 1 risk assessment. Groundwater at the former RCA Site is categorized by potential exposure points for all current and reasonably foreseeable site activities as described in 310 CMR 40.0926.

4.1.1.1 APPLICABLE MCP GROUNDWATER CATEGORIES

The MassDEP has categorized groundwater into three categories based on the potential for different types of exposure to OHM: GW-1, GW-2, and GW-3. The groundwater categories, as outlined in the MCP in section 40.932, are as follows:

- Groundwater category GW-1 is defined as groundwater located within a current or potential drinking water source area or aquifer protection area.
- Groundwater category GW-2 is defined as groundwater located within 30-feet of a planned building or structure at an average annual depth of 15 feet or less.
- Groundwater category GW-3 applies to all groundwater within the Commonwealth of Massachusetts that has the potential to discharge to surface water bodies.

Based on a visual reconnaissance of the Property and surrounding area and the MassDEP Bureau of Waste Site Cleanup Site Scoring Map (Appendix C) no active public or private potable water supply sources are known to exist within the immediate area of the former RCA Site. However there is an inactive public water supply source, Bedford

Supply Well #3, in the area immediately west of the former RCA Site, which has been shut down since the RIP was completed in 1998. There is no Surface Water Supply Zone A or any other Areas of Critical Environmental Concern (ACECs) in the areas immediately surrounding the former RCA Site. Therefore, the groundwater at the former RCA Site meets the criteria for groundwater category GW-1. The groundwater table at the Property, in the vicinity of the disposal site and within 30-feet of the existing buildings, has been measured during 2012 at depths ranging from approximately 1 to 19 feet below ground surface (bgs). Therefore, the groundwater at the former RCA Site does meet the criteria for groundwater category GW-2, as well as groundwater category GW-3, which is applicable to all groundwater.

4.1.2 COMPARISON OF GROUNDWATER QUALITY ANALYTICAL RESULTS TO METHOD 1 STANDARDS

Groundwater samples are collected on an annual basis, as described in Section 3 of the report. Groundwater samples were collected using low-flow sampling techniques and samples were sent to a Massachusetts certified laboratory, under chain-of-custody protocol, for VOC analysis. The data were checked for completeness and the quality control sampling results were reviewed. Concentrations of VOCs in groundwater at the former RCA Site compared to MCP Method 1 Groundwater Standards and UCLs are presented in Table 3-2. Laboratory analytical reports for groundwater are included in Appendix A.

4.1.3 POTENTIAL HUMAN RECEPTORS AND EXPOSURE PATHWAYS

Potential human receptors for the COCs in groundwater include those interacting with the groundwater either through deep excavation or other means, as well as those who could come into contact with COCs that are present in groundwater delivered via vapor intrusion into buildings.

Since there is no known use of groundwater within the affected portions of the former RCA Site as identified elsewhere in this report, there is no completed human exposure pathway for direct contact with the groundwater COCs identified in the RIP and RIP addendum. Incidental contact with groundwater by construction workers operating

within the water table is considered to be insignificant at the concentrations measured. The potential for exposure to groundwater COCs through vapor intrusion into buildings was evaluated by Shaw (Shaw2011), due to the planned construction of new buildings on the east side of Network Drive (Figure 1-2).

Exposure Point Concentrations (EPCs) were developed to provide a conservative estimation of the concentration of OHM to which a human receptor may come in contact. EPCs were identified as individual concentrations, for groundwater. For results reported at non-detectable concentrations, the EPC is developed using one-half the detection limit. For samples with a duplicate result, the higher concentration of the two duplicate results was used in calculating the EPCs.

4.1.4 EVALUATION OF HOT SPOTS

According to the MCP 310 CMR 40.0006, a Hot Spot is a discrete area where the concentrations of OHM or the thickness of Non-Aqueous Phase Liquid (NAPL) are substantially higher than those concentrations present in the surrounding area. A Hot Spot is determined by the concentration and thickness of OHM and the spatial pattern of contamination. Discrete areas are defined as areas where the average concentration within the area is greater than 10 to 100 times the average concentration in the surrounding area. There are no Hot Spots, as defined in 310 CMR 40.0006, at this disposal site.

4.1.5 COMPARISON OF GROUNDWATER VOC CONCENTRATIONS TO MCP UCLS

A comparison of the Upper Concentration Limits (UCLs), as defined in 310 CMR 40.0996, to the concentrations of OHM in groundwater was performed to assist in characterizing the risk of harm to public welfare and the environment under future conditions. The 2012 groundwater VOC concentrations in the disposal site samples were all below the UCLs, as shown in Table 3-2.

4.1.6 BACKGROUND EVALUATION

As defined in the MCP, 310 CMR 40.006, background concentrations of OHMs are levels of OHMs that would exist in the absence of the disposal site that are either:

- ubiquitous and consistently present in the environment at and in the vicinity of

the disposal site of concern and attributable to geologic or ecological conditions, or atmospheric deposition of industrial process or engine emissions;

- attributable to coal-ash or wood-ash associated with fill material;
- releases to groundwater from a public water supply system; or
- petroleum residues that are incidental to the normal operation of motor vehicles.

For the purposes of this assessment, all VOC constituents detected above the laboratory reporting limits (RLs) are not considered attributable to background conditions and are carried forward in the risk evaluation.

4.1.7 HUMAN HEALTH RISK CHARACTERIZATION

Based on the data available and the information presented to date, the potential migration pathways for exposure to the residual contamination at the former RCA Site are limited to the groundwater in the shallow and deep bedrock. There are no surface water bodies or catch basins known or suspected to be impacted by the residual contamination, as demonstrated by the non-detect results of the samples collected in Vine Brook located downgradient of the former RCA Site. There are no uncontained materials evident that exhibit the characteristics of corrosivity, reactivity, or flammability as described in 310 CMR 40.0347.

Due to the potential for new use of the property on the east side of Network Drive (refer to Section 4.2 and Figure 2-1) Shaw conducted a focused groundwater risk assessment and evaluations of the proposed development under the MCP (Shaw, June 2011). They concluded that all detected concentrations in the groundwater within the unconsolidated deposits and shallow bedrock at the former RCA Site were below Method 1 GW-2, which are protective of potential indoor air exposures.

Results of the assessment were as follows:

- No visual, olfactory, or PID headspace evidence of soil contamination was observed;
- No VOCs were detected in any groundwater samples above applicable GW-2 standards; and

- No chlorinated VOCs were detected in any groundwater samples collected in the temporary wells installed in the footprint of the proposed buildings.

Based on this assessment, Shaw concluded that the volatilization of the VOCs from the groundwater plume is not expected to be a concern for indoor air of future buildings (Shaw, June 2011).

The Method 1 risk characterization for groundwater was conducted for potential receptors described in Section 4.1.3 above, and found that with the exception of TCE and 1,1, DCE, the concentrations of COCs in groundwater were below GW1 criteria. Although there is no current use of groundwater at the site, TCE and 1, 1 DCE concentrations above GW1 criteria should continue to be monitored in accordance with the RIP and RIP Addendum. All detected concentrations in the groundwater within the unconsolidated deposits and shallow bedrock at the former RCA Site were below Method 1 GW-2, which are protective of potential indoor air exposures.

4.1.8 RISK OF SAFETY AND PUBLIC WELFARE

Risk to public welfare include any conditions that may result in the existence of nuisance conditions, loss of property value, or the unilateral restriction of the use of other people's property, and other social costs due to degradation of public and private resources, both physical and intangible. For a threat to exist, these conditions must preclude the full use of the resources at the former RCA Site under existing conditions or conditions about to occur. The presence of a risk to public welfare was not found at the Property.

Threats to public safety include physical conditions and chemical agents that may cause bodily harm or injury as opposed to illness. There are no pits, rusted or corroded drums, open lagoons, or stockpiles at the disposal site. No threats of fire or explosions are known to be present as a result of the remaining low concentrations at the disposal site. Therefore, a condition of No Significant Risk to Public Safety has been achieved for the Disposal Site.

4.2 CHANGES IN SITE USE

The 1998 RIP identified two possible future use changes at or in the vicinity of the former RCA Site that could potentially require implementation of contingency actions to prevent a Substantial Hazard as a result of impacted groundwater. These two possible changes were identified as: 1) a change in property use that would include residential buildings with basements, and 2) reactivation of Bedford Supply Well #3 or the development of a new supply well in the vicinity of the impacted groundwater.

With regard to item 1, a residential building (assisted living facility) has been developed on the east side of Network Drive, and additional buildings are being considered for construction in this vicinity. This new construction is in the vicinity of the VOC plume, downgradient of the source area. The assisted living facility has been constructed by "Northbridge", a subsidiary of the Nordblom Company. The assisted living facility is outside, but close to the current VOC plume boundary identified in Section 3 of this report, and reportedly does not have a basement. The additional space is in planning stages and is being evaluated for retail space and an early childhood education facility, and similarly, basements are not proposed. Shaw evaluated the proposed development plans (Shaw, June 2011) and provided the following:

- To evaluate groundwater quality in the former undeveloped area of the former RCA Site, where Northbridge will build, Shaw conducted a focused groundwater assessment in this area. Based on this assessment, the volatilization of the VOCs from the groundwater plume and site soils is not expected to be a concern for indoor air of future buildings.
- No adverse impacts to the remediation of the VOC plume are anticipated from the development. Shaw has evaluated the development, including the effect of the proposed stormwater basin design, and the conclusion is that the plume will remain within the area subject to ROS and discharge to the same general area along Vine Brook. Other construction activities are expected to have little or no impact on the VOC plume.
- If existing wells are damaged or destroyed, they will be replaced with new wells placed in similar locations and with well screens at similar depths.

Based on the above, Shaw provided an opinion on the need for vapor intrusion mitigation requirements for the new construction based on the data from a set of temporary groundwater monitoring points installed to evaluate shallow groundwater in the areas proposed for development. Based on the non-detectable levels of site-related VOCs, no vapor mitigation measures were deemed warranted at the assisted living or planned retail establishments. However, when the development plans changed to include an early childhood education facility, Lockheed Martin, in an abundance of caution, recommended the installation of a vapor barrier and passive subslab vapor mitigation system at that facility.

It is anticipated that the proposed development will not affect current or future remedial activities at the former RCA Site and will not exacerbate site conditions or cause contaminants to migrate beyond the currently defined site boundaries.

With regard to Bedford Supply Well #3, this well has not been reactivated and no new supply wells have been developed in the vicinity of the VOC plume.

4.3 SUMMARY AND CONCLUSIONS

A Method 1 Risk Characterization was performed to characterize the risk to human health, public, welfare, safety, and the environment at the disposal site in accordance with 310 CMR 40.0970, 40.0960, and 40.0994. A Method 1 risk assessment was selected for the former RCA Site since OHM impacts are limited to groundwater, pursuant to 310 CMR 40.0942(2) and 40.0970.

A condition of No Significant Risk of harm to health, safety, public welfare and the environment has been achieved at the disposal site. Concentrations of VOCs in the unconsolidated media do not exceed the applicable Method 1 GW1, GW2, or GW3 Standards. Groundwater concentrations that do exceed the Method 1 GW1 are being remediated by natural attenuation processes and are discharged to Vine Brook. The decrease in 2012 groundwater concentrations from historic groundwater concentrations supports the effectiveness of natural attenuation of the contaminated groundwater.

Furthermore, if surface water concentrations of VOCs were greater than the trigger levels established in the Phase IV RIP, then contingency actions would be initiated as described in Section 5.4.1 in the Phase V ROS submittal. Surface water trigger levels were not exceeded in 2012 and have been non-detect for the past five years with the exception of trace levels of toluene, all below the MCP GW-1 groundwater standard of 30 µg/L. In addition, if groundwater concentrations were an order of magnitude greater than historic data or a statistically significant upward trend were to emerge, then contingency actions would also be initiated as described in Section 5.4.2 in the Phase V ROS submittal. There were no anomalous spikes in groundwater concentrations (i.e., an order of magnitude greater than historic data), nor were there any statistically significant upward trends in groundwater data in 2012 that warrant contingency actions.

5 MODIFICATIONS TO MONITORING PROGRAM

As shown in Table 3-1, there has been more than five consecutive years of non-detects of chemicals of concern at all surface water samples collected at the former RCA Site, with the exception of trace levels of toluene (a compound not believed to be present based on former RCA operations), all below the MCP GW-1 groundwater standard of 30 µg/L. Annual surface water sampling was biased towards the time of year that was likely to have the highest concentrations and there is no potential for risk. Due to multiple years of data reports representing chemicals of concern not present above detection limit for the former RCA Site, Tetra Tech and Lockheed Martin recommended that the surface water sampling be discontinued from the monitoring program. Three additional quarterly surface water sampling rounds will be conducted to confirm cleanup objectives continue to be met over four consecutive seasons, as required by MassDEP. Surface water sample collection is proposed in August 2013, November 2013, February 2014, and May 2014.

No other modifications to the Phase V Monitoring Plan have been incorporated during the reporting period. A copy of the Comprehensive Response Action Transmittal Form (BWSC-108) is included in Appendix D.

6 LSP OPINION

The Phase V monitoring activities described in this report have been conducted in accordance with the Phase IV RIP for the former RCA Site dated December 10, 1998 and a Phase IV RIP Addendum prepared in July 2002.

7 REFERENCES

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United States Environmental Protection Agency 1996, *Low-Flow Groundwater Sampling Procedures*.

[1]Effects Range Low (ERL) sediment benchmarks from Long, et al. (1995) based on marine/estuarine spiked sediment toxicity studies. The ERL values represent 10th percentile concentrations at which effects were observed[1]

8 LIMITATIONS

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report was prepared on behalf of our client to fulfill the requirements of the MCP pursuant to 310 CMR 40.0000.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the purposes, locations, time frames, and project parameters indicated in this report. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, nor the use of segregated portions of this report.

TABLES

Table 2-1
Groundwater Elevations
Former RCA Facility
Burlington, Massachusetts
November 2012

Water Level Monitoring Location	Elevation of Measuring Point (feet)	Date Measured	Depth to Water from Measuring Point (feet)	Groundwater Elevation (feet)
3H-1S	125.71 (top of PVC riser)	05/12/98	7.25	118.46
		08/14/98	9.05	116.66
		11/18/98	9.66	116.05
		02/18/99	9.07	116.64
		05/12/99	9.63	116.08
		05/02/00	8.62	117.09
		06/14/00	8.99	116.72
		08/17/00	9.55	116.16
		11/15/00	9.47	116.24
		02/12/01	9.10	116.61
		11/12/01	14.67	111.04
		11/19/02	7.90	117.81
		11/10/03	8.74	116.97
		11/30/04	8.07	117.64
		11/01/05	8.01	117.70
		11/06/06	8.82	116.89
		11/08/07	8.45	117.26
		11/04/08	8.50	117.21
		06/25/10	7.98	117.73
		11/10/09	7.97	117.74
		11/10/10	7.45	118.26
		11/04/11	7.63	118.08
		11/08/12	8.45	117.26
3H-1D	125.76 (top of PVC riser)	05/12/98	7.23	118.53
		08/20/98	9.01	116.75
		11/18/98	9.73	116.03
		02/18/99	8.67	117.09
		05/12/99	9.66	116.10
		05/02/00	8.68	117.08
		06/14/00	9.04	116.72
		08/17/00	9.61	116.15
		11/15/00	9.82	115.94
		02/12/01	9.15	116.61
		11/12/01	14.43	111.33
		11/19/02	7.94	117.82
		11/10/03	8.84	116.92
		11/30/04	8.11	117.65
		11/01/05	8.07	117.69
		11/06/06	8.89	116.87
		11/08/07	8.51	117.25
		11/04/08	8.56	117.20
		11/10/09	8.01	117.75
		06/25/10	8.05	117.71
		11/10/10	7.52	118.24
		11/04/11	7.79	117.97
		11/12/12	8.38	117.38

Table 2-1
Groundwater Elevations
Former RCA Facility
Burlington, Massachusetts
November 2012

Water Level Monitoring Location	Elevation of Measuring Point (feet)	Date Measured	Depth to Water from Measuring Point (feet)	Groundwater Elevation (feet)
3G-11	120.03 (top of protective casing)	05/13/98	1.80	118.23
		11/19/98	3.70	116.33
		02/18/99	5.62	114.41
		05/12/99	3.71	116.32
		05/02/00	2.68	117.35
		06/14/00	3.15	116.88
		08/17/00	3.75	116.28
		11/15/00	3.61	116.42
		02/12/01	3.28	116.75
		11/12/01	4.36	115.67
		11/19/02	2.02	118.01
		11/10/03	2.79	117.24
		11/30/04	2.15	117.88
		11/01/05	2.14	117.89
		11/06/06	2.95	117.08
		11/08/07	2.65	117.38
		11/04/08	2.64	117.39
		11/10/09	2.06	117.97
		06/25/10	2.14	117.89
		11/10/10	1.61	118.42
		11/04/11	1.87	118.16
		11/09/12	2.47	117.56
3G-12	120.81 (top of protective casing)	05/13/98	3.55	117.26
		08/20/98	4.26	116.55
		11/19/98	4.74	116.07
		02/18/99	4.22	116.59
		05/12/99	4.70	116.11
		05/02/00	3.73	117.08
		06/14/00	4.09	116.72
		08/17/00	4.69	116.12
		11/15/00	3.97	116.84
		02/12/01	4.21	116.60
		11/12/01	5.39	115.42
		11/19/02	3.00	117.81
		11/10/03	3.79	117.02
		11/30/04	3.18	117.63
		11/01/05	3.12	117.69
		11/06/06	3.95	116.86
		11/08/07	3.61	117.20
		11/04/08	3.62	117.19
		11/10/09	3.06	117.75
		06/25/10	3.09	117.72
		11/10/10	2.57	118.24
		11/04/11	2.82	117.99
		11/09/12	0.85	119.96

Table 2-1
Groundwater Elevations
Former RCA Facility
Burlington, Massachusetts
November 2012

Water Level Monitoring Location	Elevation of Measuring Point (feet)	Date Measured	Depth to Water from Measuring Point (feet)	Groundwater Elevation (feet)
A-1D	134.04 (top of PVC riser)	05/13/98	14.25	119.79
		08/20/98	16.15	117.89
		11/19/98	16.66	117.38
		02/19/99	15.66	118.38
		05/12/99	16.45	117.59
		05/02/00	14.84	119.20
		06/14/00	15.80	118.24
		08/17/00	15.82	118.22
		11/15/00	15.89	118.15
		02/12/01	16.09	117.95
		11/12/01	17.29	116.75
		11/19/02	14.70	119.34
	134.32 [2]	11/10/03	14.50	119.82
	134.32	11/30/04	14.34	119.98
		11/01/05	13.51	120.81
		11/06/06	14.97	119.35
		11/08/07	14.94	119.38
		11/04/08	14.66	119.66
		11/10/09	14.16	120.16
		06/25/10	14.29	120.03
		11/10/10	13.80	120.52
		11/04/11	13.45	120.87
		11/08/12	14.29	120.03
EMW-1D	134.61 (top of PVC riser) [1]	05/12/98	11.55	123.06
		08/18/98	12.36	122.25
		11/18/98	13.53	121.08
		05/12/99	13.00	121.61
		06/14/00	11.79	122.82
		08/17/00	13.06	121.55
		11/22/00	11.87	122.74
		02/12/01	11.84	122.77
		11/12/01	13.05	121.56
		11/19/02	11.12	123.49
		11/10/03	11.23	123.38
		11/30/04	11.25	123.36
		11/01/05	9.81	124.80
		11/06/06	11.45	123.16
		11/08/07	11.97	122.64
		11/04/08	11.27	123.34
		11/10/09	10.95	123.66
		06/25/10	11.07	123.54
		11/10/10	10.88	123.73
		11/04/11	12.87	121.74
		11/09/12	11.20	123.41

Table 2-1
Groundwater Elevations
Former RCA Facility
Burlington, Massachusetts
November 2012

Water Level Monitoring Location	Elevation of Measuring Point (feet)	Date Measured	Depth to Water from Measuring Point (feet)	Groundwater Elevation (feet)
EMW-2D	128.30 (top of PVC riser)	05/13/98	9.50	118.80
		08/20/98	11.20	117.10
		11/18/99	11.68	116.62
		02/18/99	11.12	117.18
		05/12/99	11.58	116.72
		06/14/00	10.88	117.42
		08/17/00	11.68	116.62
		11/22/00	11.41	116.89
		02/12/01	11.29	117.01
		11/12/01	12.32	115.98
		11/19/02	9.84	118.46
		11/10/03	10.70	117.60
		11/30/04	10.17	118.13
		11/01/05	9.95	118.35
		11/06/06	10.91	117.39
		11/08/07	10.76	117.54
		11/04/08	10.68	117.62
		11/10/09	10.14	118.16
		06/25/10	10.22	118.08
		11/10/10	9.67	118.63
		11/04/11	12.91	115.39
		11/16/11	10.15	118.15
		11/09/12	10.65	117.65
EMW-3R	126.48 (top of PVC riser)	08/20/98	9.82	116.66
		11/18/98	10.28	116.20
		02/18/99	9.73	116.75
		05/12/99	10.28	116.20
		05/02/00	9.17	117.31
		08/17/00	9.49	116.99
		11/15/00	9.45	117.03
		02/12/01	9.69	116.79
		11/12/01	10.91	115.57
		11/19/02	8.45	118.03
		11/10/03	9.28	117.20
		11/30/04	8.66	117.82
		11/01/05	8.57	117.91
		11/06/06	9.40	117.08
		11/08/07	9.14	117.34
		11/04/08	9.11	117.37
		11/10/09	8.55	117.93
		06/25/10	8.65	117.83
		11/10/10	8.09	118.39
		11/04/11	8.28	118.20
		11/09/12	5.95	120.53

Table 2-1
Groundwater Elevations
Former RCA Facility
Burlington, Massachusetts
November 2012

Water Level Monitoring Location	Elevation of Measuring Point (feet)	Date Measured	Depth to Water from Measuring Point (feet)	Groundwater Elevation (feet)
EMW-7	135.35 (top of PVC riser) [1]	05/12/98	13.85	121.50
		08/18/98	13.91	121.44
		11/18/98	14.91	120.44
		02/17/99	14.16	121.19
		05/12/99	14.40	120.95
		05/02/00	12.51	122.84
		06/14/00	12.96	122.39
		08/17/00	11.82	123.53
		11/15/00	13.31	122.04
		11/12/01	14.95	120.40
		11/19/02	13.24	122.11
		11/10/03	12.36	122.99
		11/30/04	12.58	122.77
		11/01/05	11.16	124.19
		11/06/06	12.60	122.75
		11/08/07	13.35	122.00
		11/04/08	12.38	122.97
		11/10/09	11.92	123.43
		06/25/10	12.03	123.32
		11/10/10	12.21	123.14
		11/04/11	11.03	124.32
		11/08/12	12.30	123.05
EMW-10D	137.51 (top of PVC riser) [1]	05/11/98	10.61	126.90
		08/18/98	11.76	125.75
		11/18/98	13.28	124.23
		02/17/99	12.06	125.45
		05/12/99	12.57	124.94
		05/02/00	12.57	124.94
		06/14/00	11.00	126.51
		08/17/00	12.42	125.09
		11/15/00	12.83	124.68
		02/12/01	13.06	124.45
		11/12/01	14.20	123.31
		11/19/02	12.06	125.45
		11/10/03	12.12	125.39
		11/30/04	12.38	125.13
		11/01/05	10.23	127.28
		11/06/06	12.33	125.18
		11/08/07	12.95	124.56
		11/04/08	12.03	125.48
		11/10/09	11.61	125.90
		06/25/10	NM	Road Box Damaged
		11/10/10	12.10	125.41
		11/04/11	10.66	126.85
		11/09/12	12.03	125.48

Table 2-1
Groundwater Elevations
Former RCA Facility
Burlington, Massachusetts
November 2012

Water Level Monitoring Location	Elevation of Measuring Point (feet)	Date Measured	Depth to Water from Measuring Point (feet)	Groundwater Elevation (feet)
EMW-10R	137.43	05/11/98	10.91	126.52
	(top of PVC riser) [1]	08/18/98	17.43	120.00
		11/18/98	12.85	124.58
		02/17/99	11.85	125.58
		05/12/00	13.14	124.29
		06/14/00	10.74	126.69
		08/17/00	12.66	124.77
		11/15/00	12.90	124.53
		02/12/01	13.06	124.37
		11/12/01	13.64	123.79
		11/19/02	11.82	125.61
		11/10/03	14.19	123.24
	(see note below) [4]	11/30/04	30.20	107.23
		11/01/05	10.22	127.21
		11/06/06	0.48	135.36
		11/08/07	0.28	135.56
		11/04/08	0.16	135.68
		11/10/09	0.15	135.69
		06/25/10	0.50	135.34
		11/10/10	0.00	135.84
		11/04/11	0.18	135.66
		11/08/12	0.70	135.14
EMW-11R	133.69	05/12/98	14.86	118.83
	(top of PVC riser)	08/19/98	14.88	118.81
		11/18/98	15.42	118.27
		02/17/98	14.42	119.27
		05/12/99	15.22	118.47
		05/02/00	13.64	120.05
		06/14/00	14.16	119.53
		08/17/00	15.40	118.29
		11/15/00	14.65	119.04
		02/12/01	14.21	119.48
		11/12/01	16.06	117.63
	133.02 [2]	11/20/02	14.71	118.31
	137.23 [3]	11/10/03	17.25	119.98
		11/30/04	17.12	120.11
		11/01/05	16.29	120.94
		11/06/06	17.54	119.69
		11/08/07	17.84	119.39
		11/04/08	17.41	119.82
		11/10/09	16.90	120.33
		06/25/10	17.12	120.11
		11/10/10	17.69	119.54
		11/04/11	13.19	124.04
		11/08/12	17.30	119.93

Table 2-1
Groundwater Elevations
Former RCA Facility
Burlington, Massachusetts
November 2012

Water Level Monitoring Location	Elevation of Measuring Point (feet)	Date Measured	Depth to Water from Measuring Point (feet)	Groundwater Elevation (feet)
A-1	135.34	11/18/98	9.99	125.35
	(top of PVC riser) [1]	05/02/00	7.18	128.16
		02/15/01	13.29	122.05
		11/12/01	15.52	119.82
	136.92 [2]	11/19/02	17.66	119.26
	136.17 [3]	11/10/03	19.5	116.67
		11/30/04	19.54	116.63
		11/01/05	18.39	117.78
		11/06/06	19.83	116.34
		11/08/07	20.07	116.10
		11/04/08	19.72	116.45
		11/10/09	19.19	116.98
		06/25/10	19.33	116.84
		11/10/10	18.89	117.28
		11/04/11	18.35	117.82
		11/12/12	19.42	116.75
EMW-12R	125.31	11/10/03	6.91	118.40
		11/30/04	6.58	118.73
		11/01/05	6.21	119.10
		11/06/06	7.15	118.16
		11/08/07	7.45	117.86
		11/04/08	7.1	118.21
		11/10/09	6.65	118.66
		06/25/10	6.74	118.57
		11/10/10	6.3	119.01
		11/04/11	6.15	119.16
		11/12/12	6.78	118.53
3H-2	123.07	11/10/03	6.99	116.08
	(top of protective casing)	11/22/04	6.78	116.29
		11/01/05	6.33	116.74
		11/06/06	7.05	116.02
		11/08/07	6.58	116.49
		11/04/08	6.75	116.32
		11/10/09	6.81	116.26
		11/10/10	5.6	117.47
		11/04/11	5.96	117.11
		11/12/12	6.64	116.43

Table 2-1
Groundwater Elevations
Former RCA Facility
Burlington, Massachusetts
November 2012

Water Level Monitoring Location	Elevation of Measuring Point (feet)	Date Measured	Depth to Water from Measuring Point (feet)	Groundwater Elevation (feet)
3H-3	126.23 (top of protective casing)	08/17/00	8.97	117.26
		11/15/00	8.17	118.06
		02/12/01	8.58	117.65
		11/12/01	9.35	116.88
		11/19/02	7.34	118.89
		11/10/03	8.18	118.05
		11/30/04	7.61	118.62
		11/01/05	7.46	118.77
		11/06/06	8.12	118.11
		11/08/07	7.69	118.54
		11/04/08	7.93	118.30
		11/10/09	7.38	118.85
		11/10/10	6.85	119.38
		11/04/11	7.14	119.09
		11/12/12	7.82	118.41
3H-5	119.26 (top of protective casing)	02/12/01	5.00	114.26
		11/12/01	4.41	114.85
		11/19/02	2.38	116.88
		11/10/03	3.13	116.13
		11/30/04	2.45	116.81
		11/01/05	2.57	116.69
		11/06/06	3.35	115.91
		11/08/07	3.01	116.25
		11/04/08	3.10	116.16
		11/10/09	2.51	116.75
		06/25/10	2.55	116.71
		11/10/10	2.07	117.19
		11/04/11	2.31	116.95
		11/12/12	2.82	116.44
Network Drive Bridge	121.96 (Chisel mark on bridge)	11/04/08	5.20	116.76
		11/10/09	4.45	117.51
		06/25/10	4.55	117.41
		11/23/10	4.40	117.56
		12/05/11	5.20	116.76
		11/12/12	5.18	116.78

Notes:

(1) = well raised during Sun Construction, 1997 - 1998

(2) = well raised/lowered during Sun Construction, Summer 2002

(3) = well raised/lowered during Sun Construction, Fall 2002

(4) = Well EMW-10R did not recover fully from sampling event

Table 3-1
Summary of Surface Water Sampling Results for Volatile Organic Compounds
Phase V Monitoring Report and ROS Statement
Former RCA Facility
Burlington, Massachusetts

Sample Location Identifier		Date Sampled	1,1,1-Trichloroethane	1,1-Dichloroethene	Benzene	cis-1,2-Dichloroethene	m-Dichlorobenzene	Methyl-tert-butyl-ether	p-Dichlorobenzene	Tetrachloroethene	Toluene	Trichloroethene	Xylenes (Total)
Phase IV Trigger Levels			**NE**	**3.5**	**NE**	**35**	**NE**	**NE**	**NE**	**2.5**	**NE**	**2.5**	**NE**
CVB-02		11/12/2012	≤1	≤1	≤1	≤1	≤1	≤1	≤1	≤1	≤1	≤1	≤2
CVB-05		11/12/2001	<1	**0.4 J**	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		11/21/2002	<1	<1	<1	<1	<1	**0.58 J**	<1	<1	<1	≤1	≤2
		11/10/2003	<1	<1	<1	<1	<1	NS	<1	<1	<1	≤1	≤2
		11/9/2004	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		11/3/2005	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		11/6/2006	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	≤1.0	≤2
		11/12/2007	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		11/4/2008	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		11/10/2009	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		11/15/2010	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		11/4/2011	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		11/12/2012	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2
CVB-07		3/26/1999	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		6/19/1999	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		8/24/1999	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		11/18/1999	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		11/22/2000	**2**	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		11/12/2001	<1	**0.9 J**	**0.3 J**	<1	**0.7 J**	**0.4 J**	**0.4 J**	<1	<1	≤1	≤2
	Duplicate	11/12/2001	<1	**0.96 J**	**0.3 J**	<1	<1	**0.5 J**	<1	<1	<1	≤1	≤2
		11/21/2002	<1	<1	<1	<1	<1	**0.54 J**	<1	<1	<1	≤1	≤2
	Duplicate	11/21/2002	<1	<1	<1	<1	<1	**0.57 J**	<1	<1	<1	≤1	≤2
		11/10/2003	<1	<1	<1	<1	<1	NS	<1	<1	<1	≤1	≤2
	Duplicate	11/10/2003	<1	<1	<1	<1	<1	NS	<1	<1	<1	≤1	≤2
		11/9/2004	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
	Duplicate	11/9/2004	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		11/3/2005	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
	Duplicate	11/3/2005	<1	**0.54 J**	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		11/6/2006	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	≤1.0	≤2
	Duplicate	11/6/2006	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	≤1.0	≤2
		11/12/2007	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
	Duplicate	11/12/2007	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		11/4/2008	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
	Duplicate	11/4/2008	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		11/10/2009	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
	Duplicate	11/10/2009	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		11/15/2010	<1	<1	<1	<1	<1	<1	<1	<1	**2.4**	≤1	**2.1**
	Duplicate	11/15/2010	<1	<1	<1	<1	<1	<1	<1	<1	**2.2**	≤1	≤2
		11/4/2011	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
	Duplicate	11/4/2011	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		11/12/2012	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2
CVB-08		3/26/1999	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		6/19/1999	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		8/24/1999	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		11/18/1999	<1	**2**	<1	<1	<1	<1	<1	**2**	<1	**1**	≤2
		11/22/2000	**2**	<1	<1	<1	<1	<1	<1	**2**	<1	**1**	≤2
	Duplicate	11/22/2000	<1	<1	<1	<1	<1	<1	<1	**2**	<1	**1**	≤2
		11/12/2001	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		11/21/2002	<1	<1	<1	**0.23 J**	<1	**0.63 J**	<1	**0.15 J**	<1	≤1	≤2
		11/10/2003	<1	<1	<1	<1	<1	NS	<1	<1	<1	≤1	≤2
		11/9/2004	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		11/3/2005	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		11/6/2006	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	≤1.0	≤2
		11/12/2007	<5	<5	<5	<5	<5	<5	<5	<5	<5	≤5	≤2
		11/4/2008	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		11/10/2009	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		11/15/2010	<1	<1	<1	<1	<1	<1	<1	<1	**2.3**	≤1	≤2
		11/4/2011	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		11/12/2012	≤1	≤1	≤1	≤1	≤1	≤1	≤1	≤1	≤1	≤1	≤2
		3/26/1999	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		6/19/1999	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		8/24/1999	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		11/18/1999	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		11/22/2000	**2**	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		11/12/2001	<1	**0.4 J**	**0.2 J**	<1	<1	**0.4 J**	<1	<1	<1	≤1	≤2

Table 3-1
Summary of Surface Water Sampling Results for Volatile Organic Compounds
Phase V Monitoring Report and ROS Statement
Former RCA Facility
Burlington, Massachusetts

Sample Location Identifier		Date Sampled	1,1,1-Trichloroethane	1,1-Dichloroethene	Benzene	cis-1,2-Dichloroethene	m-Dichlorobenzene	Methyl-tert-butyl-ether	p-Dichlorobenzene	Tetrachloroethene	Toluene	Trichloroethene	Xylenes (Total)
Phase IV Trigger Levels			**NE**	**3.5**	**NE**	**35**	**NE**	**NE**	**NE**	**2.5**	**NE**	**2.5**	**NE**
CVB-09		11/21/2002	<1	<1	<1	<1	<1	**0.6 J**	<1	<1	**0.16 J**	≤1	≤2
		11/10/2003	<1	<1	<1	<1	<1	NA	<1	<1	<1	≤1	≤2
		11/9/2004	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		11/3/2005	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		11/6/2006	<1.0	<1.0	<1.0	<1.0	<1.0	**1.7**	<1.0	<1.0	<1.0	≤1.0	≤2
		11/12/2007	<5	<5	<5	<5	<5	<5	<5	<5	<5	≤5	≤2
		11/4/2008	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		11/10/2009	<1	<1	<1	<1	<1	<1	<1	<1	**1.1**	≤1	≤2
		11/15/2010	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		11/4/2011	<1	<1	<1	<1	<1	<1	<1	<1	<1	≤1	≤2
		11/12/2012	≤1	≤1	≤1	≤1	≤1	≤1	≤1	≤1	≤1	≤1	≤2

Notes:
J = Estimated concentration, according to data validation protocol.
NE = Not established, Phase IV Trigger Levels not established or available.
Total xylenes refelects both m & p isomers
Bold denotes detected concentrations
NA = Not analyzed for
< Less than method detection limit. Concentration reported is the detection limit.
Concentrations in ug/L

Table 3-2
Summary of Groundwater Sampling Results for VOCs
Phase V Monitoring Report and ROS Statement
Former RCA Facility
Burlington, Massachusetts

Monitoring Well Number	Sample Type	Date Sampled	Benzene	Chloroform	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Ethylbenzene	Methylene chloride	Methyl tert- butyl ether	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Trichlorofluoromethane	Xylene (total)	Vinyl chloride	1,2-Dichloroethane	Chlorobenzene	Dichlorodifluoromethane	Chloromethane	Total VOCs
GW-1 Criteria			**5**	**70**	**70**	**70**	**7**	**700**	**5**	**70**	**5**	**1,000**	**200**	**5**	**5**	**NE**	**10,000**	**2**	**5**	**100**	**NE**	**NE**	**NE**
GW-2 Criteria			**2,000**	**50**	**1,000**	**100**	**80**	**20,000**	**10,000**	**50,000**	**50**	**50,000**	**4,000**	**900**	**30**	**NE**	**9,000**	**2**	**5**	**200**	**NE**	**NE**	**NE**
GW-3 Criteria			**10,000**	**20,000**	**20,000**	**50,000**	**30,000**	**5,000**	**50,000**	**50,000**	**30,000**	**40,000**	**20,000**	**50,000**	**5,000**	**NE**	**5,000**	**50,000**	**20,000**	**1,000**	**NE**	**NE**	**NE**
UCL Criteria			**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	**50,000**	**NE**	**100,000**	**100,000**	**100,000**	**10,000**	**NE**	**NE**	**NE**
3G-11		8/25/1994	ND	ND	29	3.5	**31**	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	NA	NA	63.5
		11/30/1994	ND	ND	25	3.4	**23**	ND	ND	ND	ND	ND	ND	ND	**8.8**	NA	ND	ND	ND	ND	NA	NA	60.2
		11/14/1996	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	<1	<3	<1	NA	NA	<1	<1	0
		5/13/1998	<0.2	<0.3	20	3	**18**	<0.2	<0.4	<0.3	<0.4	<0.2	<0.4	<0.5	**10**	<0.3	<0.3	<0.3	<0.5	<0.3	<0.3	<0.4	51
		8/20/1998	<2.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1	<5	0
		11/19/1998	<1	<1	21	3	**18**	1	<1	<1	<1	<1	<1	<1	**10**	<1	12	<1	<1	<1	<1	<1	65
		2/18/1999	<1	<1	13	1	**13**	<1	<1	<1	<1	<1	<1	<1	4	<1	<3	<1	<1	<1	<1	<1	31
		5/13/1999	<1	<1	19	2	**20**	<1	<1	<1	<1	<1	<1	<1	**9**	<1	<3	<1	<1	<1	<1	<1	50
		6/15/2000	<1	<1	19	3	**17**	<1	<1	<1	<1	<1	<1	<1	**6**	<1	<3	<1	<1	<1	<1	<1	45
		8/17/2000	<1	<1	22	3	**23**	<1	3	<1	<1	<1	<1	<1	**11**	<1	<3	<1	<1	<1	<1	<1	62
		11/14/2000	<1	<1	34	5	**36**	<1	<5	<1	<1	<1	<1	<1	**16**	<1	<3	<1	<1	<1	<1	<1	91
		2/13/2001	<1	<1	25	4	**25**	<1	<1	<1	<1	<1	<1	<1	**13**	<1	<3	<1	<1	<1	<5	<1	67
		11/14/2001	<1	<1	19	3	**24**	<1	<1	<1	<1	<1	<1	<1	**9.9**	12	<3	<1	<1	<1	<5	<1	67.9
		11/20/2002	<1	<1	16	2.7	**20**	<1	<5	<1	0.26 J	<1	<1	<1	**8.3**	6.5	<3	<1	<1	<1	<5	<1	53.8 J
		11/3/2003	<1	<1	17	3	**18**	<1	<1	NA	<1	<1	<1	<1	**8**	NA	<2	<1	<1	<1	40	<1	86
		11/22/2004	<1.0	<1.0	16J	2J	**19**	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	**7.4J**	<1.0	<1.0	<1.0	<1.0	<1.0	12	<2.0	31
		11/2/2005	<1.0	<1.0	15	2.5	**19**	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	**8.2**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	45
		11/6/2006	<1.0	<1.0	15	2.8	**20**	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	**7.8**	<1.0	<3.0	<1.0	<1.0	<1.0	<1.0	<2.0	46
		11/9/2007	<1	<1	14	2.8	**15**	<1	<2	<1	<1	<1	<1	<1	**7.2**	<1	<3	<0.5	<1	<1	<1	<2	39
		11/7/2008	<1	<1	6	1.1	**7.8**	<1	<2	<1	<1	<1	<1	<1	2.7	<1	<2	<0.5*	<1	<1	<1	<2	18*
		11/11/2009	<1	<1	5.5	<1	**7.1**	<1	<2	<1	<1	<1	<1	<1	2.4	<1	<2	<0.5	<1	<1	2.9	<2	17.9
		6/25/2010	<1	<1	5.6	<1	**7.5**	<1	<2	<1	<1	<1	<1	<1	2.3	<1	<2	<0.5	<1	<1	<1	<2	15
	Duplicate	6/25/2010	<1	<1	5.5	1J	**7.5**	<1	<2	<1	<1	<1	<1	<1	2.3	<1	<2	<0.5	<1	<1	<1	<2	16.3 J
		11/12/2010	<1	<1	8.2	1.7	**9.7**	<1	<2	<1	<1	<1	<1	<1	4.2	<1	<2	<0.5	<1	<1	<1*	<2	23.8*
		11/17/2011	<1	<1	6.8	1.4	**9**	<1	<2	<1	<1	<1	<1	<1	3.2	<1	<2	<0.5	<1	<1	<1	<2	20.4
		11/9/2012	<1	<1	8.5	2.1	**11**	<1	<1	<1	<1	<1	<1	<1	**6.1**	<1	<2	<0.5	<1	<1	<1*	<2	27.7
3G-12		8/25/1994	ND	ND	46	3.7	**220**	ND	2.9	ND	**5.9**	ND	36	**5.6**	**20**	ND	ND	ND	ND	ND	NA	NA	340.1
		12/1/1994	ND	ND	65	8.1	**240**	ND	ND	ND	**11**	ND	55	**7.6**	**55**	ND	ND	ND	ND	ND	NA	NA	441.7
		11/13/1996	<1	<1	18	<1	**72**	<1	<5	<1	**6**	<1	14	<1	**56**	<1	<3	<1	NA	NA	<1	<1	166
		5/13/1998	<0.2	<0.3	24	5	**110**	<0.2	<0.4	<0.3	**12**	<0.2	20	<0.5	**44**	<0.3	<0.3	<0.3	<0.5	<0.3	<0.3	<0.4	215
		8/20/1998	<2.0	<1.0	9.6	5.5	**44**	<2.0	<1.0	<1.0	**11**	<2.0	9.5	<2.0	**33**	1.4	<1.0	<2.0	<1.0	<2.0	<1	<5	114
		11/19/1998	<1	<1	45	5	**170**	<1	<1	<1	**10**	<1	45	4	**38**	<1	<3	<1	<1	<1	<1	<1	317
		2/18/1999	<1	<1	41	5	**54**	<1	<1	<1	**11**	<1	36	<1	**46**	<1	<3	<1	<1	<1	<1	<1	193
		5/13/1999	<1	<1	45	10	**170**	<1	<1	<1	**17**	<1	52	<1	**69**	<1	<3	<1	<1	<1	<1	<1	363
		6/16/2000	<1	<1	22	12	**79**	<1	<1	<1	**16**	<1	25	<1	**63**	<1	<3	1	<1	<1	<1	<1	218
		8/17/2000	<1	<1	27	9	**130**	<1	<1	1	**15**	<1	64	1	**61**	<1	<3	**2**	<1	<1	<1	<1	310
		11/13/2000	<1	<1	31	8	**93**	<1	<5	<1	**15**	<1	61	<1	**48**	<1	<3	<1	<1	<1	<1	<1	256
		2/13/2001	<1	<1	25	14	**76**	<1	<1	<1	**24**	<1	41	<1	**46**	<1	<3	**2**	<1	<1	<5	<1	228
		11/14/2001	<1	<1	9.5	4.5	**31 J**	<1	<1	<1	**6.2**	<1	15	<1	**19**	1.6 J	<3	<1	<1	<1	<5	<1	86.8 J
		11/20/2002	<1	0.13 J	15	3.2	**49 J**	<1	<5	1.6	4.9	<1	29	0.41 J	**17**	0.83 J	<3	<1	<1	<1	<5	<1	121.1 J
	Duplicate	11/20/2002	<1	0.12 J	14	3.1	**49 J**	<1	<5	1.6	4.9	0.21 J	28	0.41 J	**17**	0.74 J	<3	<1	0.26 J	<1	<5	<1	119.3 J
		11/4/2003	<1	<1	3	10	**8**	<1	<1	NA	**11**	<1	1	<1	**10**	NA	<2	1	<1	<1	<1	1	45
		11/23/2004	<1.0	<1.0	7J	4.1J	**29**	<1.0	<2.0	5.8	**6.7J**	<1.0	5.4	<1.0	**20J**	<1.0	<1.0	0.63J	<1.0	<1.0	<1.0	<2.0	79 J
		11/2/2005	<1.0	<1.0	4.2	2.5	**15**	<1.0	<2.0	1.2	4.8	<1.0	2.7	<1.0	**13**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	43.4
		11/7/2006	<1.0	<1.0	4.8	7.2	**15**	<1.0	<2.0	1.1	**12**	<1.0	1.3	<1.0	**21**	<1.0	<3.0	<1.0	<1.0	<1.0	<1.0	<2.0	62.4
		11/8/2007	<1	<1	2.5	1.1	**14**	<1	<2	<1	2	<1	2.1	<1	**7**	<1	<3	<0.5	<1	<1	<1	<2	28.7
		11/5/2008	<1	<1	1.5	2.1	5.9	<1	<2	<1	**5**	<1	<1	<1	**7**	<1	<2	<0.5	<1	<1	<1	<2	21.5
		11/12/2009	<1	<1	1.3	1	4.5	<1	<2	<1	2.5	<1	<1	<1	4.8	<1	<2	<0.5	<1	<1	<1	<2	14.1
		11/11/2010	<1	<1	1.7	1.2	6.5	<1	<2	<1	1.8	<1	<1	<1	**6.4**	<1	<2	<0.5	<1	<1	<1	<2	17.6
		11/16/2011	<1	<1	1.1	1.8	4.1	<1	<2	<1	3.7	<1	<1	<1	**6**	<1	<2	<0.5	<1	<1	<1	<2	16.7
		11/9/2012	<1	<1	<1	<1	2.1	<1	<1	<1	1.9	<1	<1	<1	4.2	<1	<2	<0.5	<1	<1	<1	<2	8.2
EMW-10D		5/6/1997	<1	<1	<1	3	<1	<1	<5	<1	1	<1	<1	<1	3	<1	<3	<1	NA	NA	<1	<1	7
		5/11/1998	<1	<1	<1	10	1	<1	<5	<1	**18**	<1	<1	<1	**55**	<1	<3	<1	<1	<1	<1	<1	84
		8/18/1998	<2.0	<1.0	<1.0	6.3	<1.0	<2.0	<1.0	<1.0	**9.7**	<2.0	1	<2.0	**36**	<1.0	<1.0	<2.0	<1.0	<2.0	<1	<5	53
		11/18/1998	<1	<1	<1	<1	<1	3	<1	<1	3	4	<1	<1	**7**	<1	29	<1	<1	<1	<1	<1	46
		2/17/1999	<1	<1	<1	2	<1	<1	<1	<1	**6**	<1	<1	<1	**23**	<1	<3	<1	<1	<1	<1	<1	31
		5/12/1999	<1	<1	1	2	<1	<1	<1	<1	2	<1	<1	<1	**6**	<1	<3	<1	<1	<1	<1	<1	11
		5/3/2000	<1 J	<1 J	<1 J	4 J	<1 J	<1 J	<1 J	<1 J	**7 J**	<1 J	2 J	<1 J	**22 J**	<1 J	<3 J	<1 J	<1 J	<1 J	<1	<1	35
		6/15/2000	<1	<1	<1	2	<1	<1	<1	<1	2	<1	<1	<1	4	<1	<3	<1	<1	<1	<1	<1	8
		8/17/2000	<1	<1	1	5	2	<1	<1	<1	**7**	<1	3	<1	**25**	<1	<3	<1	<1	<1	<1	<1	43
		11/13/2000	<1	<1	<1	6	1	<1	<5	<1	**9**	<1	2	<1	**31**	<1	<3	<1	<1	<1	<1	<1	49
		2/12/2001	<1	<1	<1	<1	<1	<1	<1	<1	2	<1	<1	<1	**7**	<1	<3	<1	<1	<1	<5	<1	9
		11/14/2001	<1	<1	0.87 J	3.1	1.2	<1	<1	<1	4.3	<1	1.9	<1	**17**	1.2 J	<3	<1	<1	<1	<5	<1	29.6 J
	Duplicate	11/14/2001	<1	<1	0.9 J	3.2	1	<1	<1	<1	4.4	<1	1.9	<1	**17**	1.2 J	<3	<1	<1	<1	<5	<1	29.6 J
		11/20/2002	<1	0.21 J	0.33 J	2.4	1.1	<1	<5	14	4.1	<1	5.6	<1	**13**	0.57 J	<3	<1	<1	<1	<5	<1	41.3 J
		11/3/2003	<1	<1	<1	2	1	<1	<1	NA	4	<1	6	<1	**11**	NA	<2	<1	<1	<1	<1	20	44
		11/23/2004	<1.0	<1.0	<1.0	0.98J	1.6	<1.0	<2.0	11	2.5J	<1.0	4.4	<1.0	**7.6J**	<1.0	<1.0	<1.0	<1.0	<1.0	2.2	<2.0	30 J
		11/1/2005	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	1	4	<1.0	<1.0	<1.0	0.73 J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	5
		11/7/2006	<1.0	<1.0	<1.0	1.6	<1.0	<1.0	<2.0	2.5	2.8	<1.0	3.6	<1.0	**7.6**	<1.0	<3.0	<1.0	<1.0	<1.0	<1.0	<2.0	18.1
		11/9/2007	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	1.8	<1	<3	<0.5	<1	<1	<1	<2	1.8
		11/7/2008	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<2	<0.5*	<1	<1	<1	<2	0
		11/11/2009	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<2	<0.5	<1	<1	<1	<2	0
		11/10/2010	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<2	<0.5	<1	<1	<1	<2	0
		11/15/2011	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<2	<0.5	<1	<1	<1*	<2	0
		11/9/2012	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2.8	<1	<2	<0.5	<1	<1	<1	<2	2.8
		5/6/1997	<1	5	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	3	<1	<3	<1	NA	NA	<1	<1	8
		5/12/1998	**5**	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	2	<1	<3	<1	<1	<1	<1	<5	7
		8/19/1998	<2.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	**5.1**	<1.0	<1.0	<2.0	<1.0	<2.0	<1	<1	5.1
		11/20/1998	2	<1	<1	1	<1	<1	<1	<1	2	<1	<1	<1	**10**	<1	<3	<1	<1	<1	<1	<1	15
		2/17/1999	3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1	<1	<3	<1	<1	<1	<1	<1	4
		5/13/1999	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	4	<1	<3	<1	<1	<1	<1	<1	4
		5/3/2000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	3	<1	<3	<1	<1	<1	<1	<1	3

Table 3-2
Summary of Groundwater Sampling Results for VOCs
Phase V Monitoring Report and ROS Statement
Former RCA Facility
Burlington, Massachusetts

Monitoring Well Number	Sample Type	Date Sampled	Benzene	Chloroform	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Ethylbenzene	Methylene chloride	Methyl tert- butyl ether	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Trichlorofluoro methane	Xylene (total)	Vinyl chloride	1,2-Dichloroethane	Chlorobenzene	Dichlorodifluoro methane	Chloromethane	Total VOCs
GW-1 Criteria			**5**	**70**	**70**	**70**	**7**	**700**	**5**	**70**	**5**	**1,000**	**200**	**5**	**5**	**NE**	**10,000**	**2**	**5**	**100**	**NE**	**NE**	**NE**
GW-2 Criteria			**2,000**	**50**	**1,000**	**100**	**80**	**20,000**	**10,000**	**50,000**	**50**	**50,000**	**4,000**	**900**	**30**	**NE**	**9,000**	**2**	**5**	**200**	**NE**	**NE**	**NE**
GW-3 Criteria			**10,000**	**20,000**	**20,000**	**50,000**	**30,000**	**5,000**	**50,000**	**50,000**	**30,000**	**40,000**	**20,000**	**50,000**	**5,000**	**NE**	**5,000**	**50,000**	**20,000**	**1,000**	**NE**	**NE**	**NE**
UCL Criteria			**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	**50,000**	**NE**	**100,000**	**100,000**	**100,000**	**10,000**	**NE**	**NE**	**NE**
EMW-10R		6/16/2000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1	<1	<3	<1	<1	<1	<1	<1	1
		8/17/2000	<1	<1	<1	<1	1	<1	<1	<1	<1	<1	2	<1	**5**	<1	<3	<1	<1	<1	<1	<1	8
		11/14/2000	<1	<1	<1	<1	<1	<1	<5	<1	2	<1	6	<1	**9**	<1	<3	<1	<1	<1	<1	<1	17
		2/13/2001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2	<1	4	<1	<3	<1	<1	<1	<5	<1	6
		11/15/2001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.6	<5	<3	<1	<1	<1	<5	<1	1.6
		11/21/2002	<1	<1	<1	0.31 J	0.33 J	<1	<5	0.88 J	0.18 J	<1	1.3	<1	2.3	<5	<3	<1	<1	<1	<5	<1	5.3
		11/4/2003	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	1	NA	<2	<1	<1	<1	<1	<1	1
		11/23/2004	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.70J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	0.70 J
		11/2/2005	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	0
		11/7/2006	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<1.0	<2.0	0
		11/9/2007	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<3	<0.5	<1	<1	<1	<2	0
		11/5/2008	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<2	<0.5	<1	<1	<1	<2	0
		11/12/2009	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<2	<0.5	<1	<1	<1	<2	ND
		11/11/2010	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<2	<0.5	<1	<1	<1*	<2	ND
		11/15/2011	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<2	<0.5	<1	<1	<1*	<2	0
		11/8/2012	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.1	<1	<2	<0.5	<1	<1	<1	<2	1.1
EMW-11D		5/6/1997	<1	<1	11	4	**51**	<1	<5	<1	**10**	<1	9	<1	**31**	<1	<3	<1	NA	NA	<1	<1	116
		5/12/1998	<0.2	<0.3	18	9	**82**	<0.2	<0.4	<0.3	**18**	<0.2	55	<0.5	**56**	<0.3	<0.3	<0.3	<0.5	<0.3	<0.3	<0.4	238
		8/19/1998	<2.0	<1.0	8.2	4.2	**37**	<2.0	<1.0	<1.0	**6.7**	<2.0	27	<2.0	**24**	<1.0	<1.0	<2.0	<1.0	<2.0	<1	<5	107.1
		11/19/1998	<1	<1	8	4	**33**	2	<1	<1	**7**	3	26	<1	**27**	<1	27	<1	<1	<1	<1	<1	137
		2/17/1999	<1	<1	6	3	**30**	<1	<1	<1	**6**	<1	21	<1	**23**	<1	<3	<1	<1	<1	<1	<1	89
		5/12/1999	<1	<1	7	4	**29**	<1	<1	<1	**6**	<1	31	<1	**23**	<1	<3	<1	<1	<1	<1	<1	100
EMW-11R		5/6/1997	<1	<1	10	9	**43**	<1	<5	<1	**12**	<1	5	<1	**39**	<1	<3	<1	NA	NA	<1	<1	118
		5/13/1998	<1	<1	22	28	**53**	<1	<5	<1	**23**	<1	10	<1	**77**	<1	<3	<1	<1	<1	<1	<1	213
		8/20/1998	<2.0	<1.0	11	14	**27**	<2.0	<1.0	<1.0	**15**	<2.0	4.6	<2.0	**40**	<1.0	<1.0	<2.0	<1.0	<2.0	<1	<5	111.6
		11/19/1998	<1	<1	13	16	**28**	<1	<1	<1	**20**	<1	6	<1	**50**	<1	<3	<1	<1	<1	<1	<1	133
		2/17/1999	1	<1	9	9	**13**	<1	<1	<1	4	<1	2	<1	**22**	<1	<3	<1	<1	<1	<1	<1	60
		5/12/1999	<1	<1	12	14	**23**	<1	<1	<1	**12**	<1	10	<1	**40**	<1	<3	<1	<1	<1	<1	<1	111
		6/16/2000	<1	<1	11	15	**17**	<1	<1	<1	**6**	<1	3	<1	**29**	<1	<3	<1	<1	<1	<1	<1	81
		8/17/2000	<1	<1	14	17	**29**	<1	<1	<1	**8**	<1	5	<1	**39**	<1	<3	<1	<1	<1	<1	<1	112
		11/14/2000	<1	<1	20	26	**45**	<1	<5	<1	**21**	<1	10	<1	**68**	<1	<3	<1	<1	<1	<1	<1	190
		2/13/2001	<1	<1	14	18	**32**	<1	<1	<1	**18**	<1	7	<1	**53**	<1	<3	<1	<1	<1	<5	<1	142
		11/15/2001	0.56 J	<1	7	9.6	**13**	<1	<1	<1	3.3	<1	2	<1	**23**	<5	<3	<1	<1	<1	<5	<1	58.5 J
		11/21/2002	0.36 J	<1	7.7	11	**15**	<1	<5	<1	**5.4**	1.3	1.7	<1	**23**	<5	<3	<1	<1	<1	<5	<1	65.5 J
		11/4/2003	<1	<1	1	2	1	<1	<1	NA	<1	<1	<1	<1	1	NA	<2	<1	<1	<1	<1	<1	5
		11/23/2004	<1.0	<1.0	4.4J	4.3J	5.6	<1.0	<2.0	<1.0	0.64J	<1.0	<1.0	<1.0	**7.6J**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	22.5 J
		11/2/2005	<1.0	<1.0	3.3	3.8	1.7	<1.0	<2.0	0.71 J	0.52 J	<1.0	<1.0	<1.0	4.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	13
		11/7/2006	<1.0	<1.0	5.5	7.5	6	<1.0	<2.0	<1.0	1.8	<1.0	<1.0	<1.0	**11**	<1.0	<3.0	<1.0	<1.0	<1.0	<1.0	<2.0	31.8
		11/9/2007	<1	<1	3.8	5	4.1	<1	<2	1.2	1.7	<1	<1	<1	**9.7**	<1	<3	<0.5	<1	<1	<1	<2	25.5
		11/5/2008	<1	<1	4.5	6.1	5.6	<1	<2	1.5	2.3	<1	<1	<1	**9.9**	<1	<2	<0.5	<1	<1	<1	<2	29.9
		11/11/2009	<1	<1	4.8	6.2	6.1	<1	<2	1.3	2.1	<1	<1	<1	**9.6**	<1	<2	<0.5	<1	<1	<1	<2	30.1
		11/11/2010	<1	<1	4	5.6	4.3	<1	<2	1.3	1.9	<1	<1	<1	**8.5**	<1	<2	<0.5	<1	<1	<1	<2	25.6
		11/15/2011	<1	<1	3.2	5.5	3.4	<1	<2	1.3	2.1	<1	<1	<1	**7.2**	<1	<2	<0.5	<1	<1	<1*	<2	22.7
		11/8/2012	<1	<1	2.5	4.4	2.6	<1	<1	1.1	1.7	<1	<1	<1	**7.5**	<1	<2	<0.5	<1	<1	<1	<2	19.8
EMW-1D		11/13/1996	<1	<1	14	<1	**94**	<1	<5	<1	**12**	<1	<1	<1	**62**	<1	<3	1	NA	NA	<1	<1	183
		5/12/1998	<0.2	<0.3	23	33	**120**	<0.2	<0.4	<0.3	**30**	<0.2	3	<0.5	**160**	<0.3	5	**3**	<0.5	<0.3	<0.3	<0.4	377
		8/18/1998	<2.0	<1.0	12	22	**61**	<2.0	<1.0	<1.0	**22**	<2.0	1.1	<2.0	**92**	<1.0	<1.0	**2.2**	<1.0	<2.0	<1	<5	212.3
		11/20/1998	<1	<1	5	9	**20**	<1	<1	4	**11**	<1	<1	<1	**46**	<1	7	**2**	<1	<1	<1	<1	104
		5/13/1999	<1	<1	6	9	**22**	<1	<1	2	**10**	<1	**210**	<1	**39**	<1	<3	<1	<1	<1	<1	<1	298
		6/16/2000	<1	<1	5	19	**22**	<1	<1	<1	**16**	<1	34	<1	**69**	<1	<3	**2**	<1	<1	<1	<1	167
		8/17/2000	<1	<1	3	2	<1	<1	<1	<1	4	<1	7	<1	1	<1	<3	<1	<1	<1	<1	<1	17
		11/13/2000	<1	<1	5	2	**12**	<1	<5	3	3	<1	72	<1	**9**	<1	<3	<1	<1	<1	<1	<1	106
		2/12/2001	<1	<1	3	1	**8**	<1	<1	3	2	<1	53	<1	**6**	<1	<3	<1	<1	<1	<5	<1	76
		11/15/2001	<1	<1	2.9	0.52 J	4.6	<1	<1	0.96 J	1.1	<1	22	<1	2.6	1.3 J	<3	<1	<1	<1	<5	<1	36 J
		11/20/2002	0.14 J	<1	5.8	20	**31**	<1	<5	0.72 J	**19**	<1	13	<1	**73 J**	0.64 J	<3	**2**	<1	0.44 J	<5	<1	165.7 J
		1/23/2003	<1.0	<1.0	2.5	3.1	**7.8**	<1.0	<5.0	<1.0	**5.1**	<1.0	24	<1.0	**17**	<1.0	<3.0	<1.0	<1.0	<1.0	<5	<1	59.5
	Duplicate	1/23/2003	<1.0	<1.0	2.8	3.4	**11**	<1.0	<5.0	<1.0	4.9	<1.0	24	<1.0	**18**	<1.0	<3.0	<1.0	<1.0	<1.0	<5	<1	64.1
		11/4/2003	<1	<1	3	11	**16**	<1	<1	NA	**12**	<1	17	<1	**44**	NA	<2	1	<1	<1	<1	<1	104
		11/23/2004	<1.0	<1.0	2.8J	2.6J	6.3	<1.0	<2.0	<1.0	4.4J	<1.0	7.6	<1.0	**18J**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	13.9
		11/2/2005	<1.0	<1.0	3.5	5.9	**7**	<1.0	<2.0	<1.0	**7.4**	<1.0	<1.0	3.3	**30**	<1.0	<1.0	0.57 J	<1.0	<1.0	<1.0	<2.0	57.1
		11/7/2006	<1.0	<1.0	3.3	3.9	5.2	<1.0	<2.0	<1.0	4.6	<1.0	2.4	<1.0	**17**	<1.0	<3.0	<1.0	<1.0	<1.0	<1.0	<2.0	36.4
		11/8/2007	<1	<1	2.1	2.9	3.6	<1	<2	<1	3.1	<1	<1	<1	**13**	<1	<3	<0.5	<1	<1	<1	<2	24.7
		11/5/2008	<1	<1	2.2	3	4.6	<1	<2	<1	3.5	<1	<1	<1	**15**	<1	<2	<0.5	<1	<1	<1	<2	28.3
		11/12/2009	<1	<1	2.3	4.5	5.2	<1	<2	<1	**5.2**	<1	<1	<1	**23**	<1	<2	0.55	<1	<1	<1	<2	40.75
		6/25/2010	<1	<1	1.9	3.4J	4.8	<1	<2	<1	3.5	<1	<1	<1	**18**	<1	<2	<0.5	<1	<1	<1	<2	31.6 J
		11/11/2010	<1	<1	1.4	3.5	3.2	<1	<2	<1	3.5	<1	<1	<1	**17**	<1	<2	<0.5	<1	<1	<1	<2	28.6
		11/16/2011	<1	<1	<1	2.7	2.5	<1	<2	<1	2.8	<1	<1	<1	**13**	<1	<2	<0.5	<1	<1	<1	<2	21
		11/9/2012	<1	<1	1.1	4.4	2.5	<1	<1	<1	5	<1	<1	<1	**24**	<1	<2	<0.5	<1	<1	<1	<2	37
		11/13/1996	<1	<1	14	<1	**51**	<1	**13**	<1	**12**	<1	<1	<1	**72**	<1	<3	<1	NA	NA	<1	<1	162
		5/13/1998	<0.2	<0.3	13	11	**40**	<0.2	<0.4	<0.3	**17**	<0.2	2	<0.5	**64**	<0.3	<0.3	<0.3	<0.5	<0.3	<0.3	<0.4	147
		8/20/1998	<2.0	<1.0	7	6.2	**23**	<2.0	<1.0	<1.0	**9.2**	<2.0	<1.0	<2.0	**38**	<1.0	<1.0	<2.0	<1.0	<2.0	<1	<5	83.4
		11/19/1998	<1	<1	7	6	**24**	<1	<1	<1	**10**	<1	<1	<1	**42**	<1	7	<1	<1	<1	<1	<1	96
		2/18/1999	<1	<1	6	4	**19**	<1	<1	<1	**7**	<1	<1	<1	**37**	<1	<3	<1	<1	<1	<1	<1	73
		5/13/1999	<1	<1	7	5	**8**	<1	<1	<1	**8**	<1	<1	<1	**32**	<1	<3	<1	<1	<1	<1	<1	60
		6/15/2000	<1	<1	7	5	**20**	<1	<1	<1	**6**	<1	<1	<1	**23**	<1	<3	<1	<1	<1	<1	<1	61
		8/17/2000	<1	<1	8	7	**24**	<1	<1	<1	**10**	<1	2	<1	**39**	<1	<3	<1	<1	<1	<1	<1	90
		11/13/2000	<1	<1	9	8	**32**	<1	<5	<1	**13**	<1	2	<1	**52**	<1	<3	<1	<1	<1	<1	<1	116
		2/13/2001	<1	<1	7	6	**24**	<1	<1	<1	**11**	<1	1	<1	**41**	<1	<3	<1	<1	<1	<5	<1	90
		11/14/2001	<1	<1	5.1	5	**20**	<1	<1	<1	**7.8**	<1	<1	<1	**33**	0.4 J	<3	<1	<1	<1	<5	<1	71.3 J
		11/20/2002	<1 J	<1 J	3.8 J	4.4 J	**14 J**	<1 J	<5 J	<1 J	**6.2 J**	<1 J	<1 J	<1 J	**26 J**	0.45 J	<3 J	<1 J	<1 J	<1 J	<5	<1	54.9 J
		11/4/2003	<1	<1	3	4	**15**	<1	<1	NA	**7**	<1	<1	<1	**23**	NA	<2	<1	<1	<1	<1	<1	52
	Duplicate	11/4/2003	<1	<1	3	4	**14**	<1	<1	NA	**7**	<1	<1	<1	**23**	NA	<2	<1	<1	<1	<1	<1	51

Table 3-2
Summary of Groundwater Sampling Results for VOCs
Phase V Monitoring Report and ROS Statement
Former RCA Facility
Burlington, Massachusetts

Monitoring Well Number	Sample Type	Date Sampled	Benzene	Chloroform	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Ethylbenzene	Methylene chloride	Methyl tert- butyl ether	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Trichlorofluoromethane	Xylene (total)	Vinyl chloride	1,2-Dichloroethane	Chlorobenzene	Dichlorodifluoromethane	Chloromethane	Total VOCs
GW-1 Criteria			**5**	**70**	**70**	**70**	**7**	**700**	**5**	**70**	**5**	**1,000**	**200**	**5**	**5**	**NE**	**10,000**	**2**	**5**	**100**	**NE**	**NE**	**NE**
GW-2 Criteria			**2,000**	**50**	**1,000**	**100**	**80**	**20,000**	**10,000**	**50,000**	**50**	**50,000**	**4,000**	**900**	**30**	**NE**	**9,000**	**2**	**5**	**200**	**NE**	**NE**	**NE**
GW-3 Criteria			**10,000**	**20,000**	**20,000**	**50,000**	**30,000**	**5,000**	**50,000**	**50,000**	**30,000**	**40,000**	**20,000**	**50,000**	**5,000**	**NE**	**5,000**	**50,000**	**20,000**	**1,000**	**NE**	**NE**	**NE**
UCL Criteria			**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	**50,000**	**NE**	**100,000**	**100,000**	**100,000**	**10,000**	**NE**	**NE**	**NE**
EMW-2D		11/23/2004	<1.0	<1.0	4.3J	3.7J	**17**	<1.0	<2.0	0.74J	**6.3J**	<1.0	<1.0	<1.0	**29J**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	112 J
	Duplicate	11/23/2004	<1.0	<1.0	3J	2.5J	**12**	<1.0	<2.0	0.50J	4.2J	<1.0	<1.0	<1.0	**19J**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	41 J
		11/2/2005	<1.0	<1.0	2.6	2.9	**11**	<1.0	<2.0	1.3	**5.3**	<1.0	<1.0	<1.0	**19**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	42.1
	Duplicate	11/1/2005	<1.0	<1.0	2.6	2.8	**10**	<1.0	<2.0	1.4	**5.3**	<1.0	<1.0	<1.0	**19**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	41.1
		11/7/2006	<1.0	<1.0	2.1	2.8	**8.3**	<1.0	<2.0	1.9	4.4	<1.0	<1.0	<1.0	**15**	<1.0	<3.0	<1.0	<1.0	<1.0	<1.0	<2.0	34.5
	Duplicate	11/7/2006	<1.0	<1.0	2.1	2.7	**8.3**	<1.0	<2.0	1.8	4.4	<1.0	<1.0	<1.0	**15**	<1.0	<3.0	<1.0	<1.0	<1.0	<1.0	<2.0	34.3
		11/8/2007	<1	<1	1.3	1.8	5.5	<1	<2	2.3	2.6	<1	<1	<1	**9.3**	<1	<3	<0.5	<1	<1	<1	<2	22.8
	Duplicate	11/8/2007	<1	<1	1.5	1.9	6.1	<1	<2	1.9	2.6	<1	<1	<1	**9.4**	<1	<3	<0.5	<1	<1	<1	<2	23.4
		11/5/2008	<1	<1	1.3	1.8	6.7	<1	<2	1.8	3	<1	<1	<1	**11**	<1	<2	<0.5	<1	<1	<1	<2	25.6
	Duplicate	11/5/2008	<1	<1	1.3	1.8	6.7	<1	<2	1.9	3.1	<1	<1	<1	**11**	<1	<2	<0.5	<1	<1	<1	<2	25.8
		11/12/2009	<1	<1	1.1	1.6	5.7	<1	<2	1.2	2.6	<1	<1	<1	**9.7**	<1	<2	<0.5	<1	<1	<1	<2	21.9
	Duplicate	11/12/2009	<1	<1	1	1.5	6.6	<1	<2	1.2	2.7	<1	<1	<1	**9.9**	<1	<2	<0.5	<1	<1	<1	<2	22.9
		11/11/2010	<1	<1	<1	1.8	5.3	<1	<2	<1	2.4	<1	<1	<1	**10**	<1	<2	<0.5	<1	<1	<1	<2	19.5
	Duplicate	11/11/2010	<1	<1	1	1.8	5.5	<1	<2	<1	2.6	<1	<1	<1	**10**	<1	<2	<0.5	<1	<1	<1	<2	20.9
		11/16/2011	<1	<1	<1	1.7	4.4	<1	<2	<1	2.2	<1	<1	<1	**9.7**	<1	<2	<0.5	<1	<1	<1	<2	18
	Duplicate	11/16/2011	<1	<1	<1	1.7	4.8	<1	<2	<1	2.4	<1	<1	<1	**9.8**	<1	<2	<0.5	<1	<1	<1	<2	18.7
		11/9/2012	<1	<1	<1	1.4	3	<1	<1	<1	2.4	<1	<1	<1	**9.8**	<1	<2	<0.5	<1	<1	<1	<2	16.6
	Duplicate	11/9/2012	<1	<1	<1	1.6	2.9	<1	<1	<1	2.4	<1	<1	<1	**9.6**	<1	<2	<0.5	<1	<1	<1*	<2	16.5
EMW-3R		5/13/1998	<0.2	<0.3	6	18	**21**	<0.2	<0.4	<0.3	**14**	<0.2	6	<0.5	**63**	<0.3	<0.3	<0.3	<0.5	<0.3	<0.3	<0.4	128
		8/20/1998	<2.0	<1.0	3.5	9.8	**12**	<2.0	<1.0	<1.0	**14**	<2.0	3.4	<2.0	**42**	<1.0	<1.0	<2.0	<1.0	<2.0	<1	<5	84.7
		11/19/1998	<1	<1	4	10	**12**	<1	<1	<1	**15**	<1	3	<1	**44**	<1	<3	<1	<1	<1	<1	<1	88
		2/18/1999	<1	<1	2	7	**9**	<1	<1	<1	**10**	<1	2	<1	**39**	<1	<3	<1	<1	<1	<1	<1	69
		5/13/1999	1	<1	4	10	**11**	<1	<1	<1	**7**	<1	2	<1	**33**	<1	<3	<1	<1	<1	<1	<1	68
		6/16/2000	<1	<1	4	10	**10**	<1	<1	<1	**7**	<1	2	<1	**28**	<1	<3	<1	<1	<1	<1	<1	61
		8/17/2000	<1	<1	5	11	**14**	<1	<1	<1	**11**	<1	4	<1	**39**	<1	<3	<1	<1	<1	<1	<1	84
		11/14/2000	1	<1	6	15	**17**	<1	<5	<1	4	<1	5	<1	**42**	<1	<3	<1	<1	<1	<1	<1	90
		2/13/2001	<1	<1	4	10	**11**	<1	<1	<1	3	<1	3	<1	**30**	<1	<3	<1	<1	<1	<5	<1	61
		11/15/2001	<1	<1	2.6	6.1	6.2	<1	<1	<1	1.8	<1	1.5	<1	**23**	<5	<3	<1	<1	<1	<5	<1	41.2
		11/21/2002	<1	<1	2.7	5.6	4.7	<1	<5	<1	2.5	<1	0.34 J	<1	**22**	0.39 J	<3	<1	<1	<1	<5	<1	38.2 J
		11/4/2003	<1	<1	2	6	6	<1	<1	NA	3	<1	<1	<1	**20**	NA	<2	<1	<1	<1	<1	<1	37
		11/23/2004	<1.0	<1.0	2.2J	3.4J	4.4	<1.0	<2.0	<1.0	2.4J	<1.0	1	<1.0	**18J**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	5
		11/2/2005	<1.0	<1.0	2	3.3	3.7	<1.0	<2.0	<1.0	3.7	<1.0	0.91	<1.0	**19**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	32.6
		11/7/2006	<1.0	<1.0	1.9	3.4	2.6	<1.0	<2.0	<1.0	3.3	<1.0	<1.0	<1.0	**16**	<1.0	<3.0	<1.0	<1.0	<1.0	<1.0	<2.0	27.2
		11/9/2007	<1	<1	1.3	2.7	2.1	<1	<2	<1	2.9	<1	<1	<1	**13**	<1	<3	<0.5	<1	<1	<1	<2	22
		11/5/2008	<1	<1	1.4	2.4	2.3	<1	<2	<1	3.8	<1	<1	<1	**13**	<1	<2	<0.5	<1	<1	<1	<2	22.9
		11/11/2009	<1	<1	1.6	3	2.7	<1	<2	<1	4.5	<1	<1	<1	**14**	<1	<2	<0.5	<1	<1	<1	<2	25.8
		6/25/2010	<1	<1	1.3	2.8J	2.4	<1	<2	<1	3	<1	<1	<1	**12**	<1	<2	<0.5	<1	<1	<1	<2	21.5 J
		11/11/2010	<1	<1	1.2	3	2.1	<1	<2	<1	3.5	<1	<1	<1	**12**	<1	<2	<0.5	<1	<1	<1	<2	21.8
		11/16/2011	<1	<1	1.4	4.5	3.3	<1	<2	<1	4	<1	<1	<1	**13**	<1	<2	<0.5	<1	<1	<1	<2	26.2
		11/9/2012	<1	<1	1.2	3.7	2.3	<1	<1	<1	4.6	<1	<1	<1	**15**	<1	<2	<0.5	<1	<1	<1	<2	26.8
EMW-7		11/13/1996	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	\	<1	<3	<1	NA	NA	<1	<1	0
		5/12/1998	<0.2	<0.3	<0.5	<0.4	3	<0.2	<0.4	<0.3	4	<0.2	<0.4	<0.5	3	<0.3	<0.3	<0.3	<0.5	<0.3	<0.3	<0.4	10
		8/18/1998	<2.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	1.9	<2.0	1.5	<2.0	1.6	<1.0	<1.0	<2.0	<1.0	<2.0	<1	<5	5
		11/20/1998	<1	<1	<1	<1	<1	<1	<1	<1	4	<1	5	<1	3	<1	9	<1	<1	<1	<1	<1	21
		2/17/1999	<1	<1	2	1	<1	<1	<1	<1	**5**	<1	11	<1	2	<1	<3	<1	<1	<1	<1	<1	21
		5/13/1999	<1	<1	2	2	2	<1	<1	<1	4	<1	19	<1	3	<1	<3	<1	<1	<1	<1	<1	32
		5/3/2000	<1	<1	1	1	<1	<1	<1	<1	3	<1	3	<1	2	<1	<3	<1	<1	<1	<1	<1	10
		6/16/2000	<1	<1	2	3	<1	<1	<1	<1	**5**	<1	7	<1	<1	<1	<3	<1	<1	<1	<1	<1	17
		8/17/2000	<1	<1	6	5	**15**	<1	<1	9	**5**	<1	66	<1	**21**	<1	<3	1	<1	<1	<1	<1	128
		11/13/2000	<1	<1	7	7	<1	<1	<5	<1	**11**	<1	10	<1	**5**	<1	<3	<1	<1	<1	<1	<1	40
		11/15/2001	<1	<1	4.2	4.3	<1	<1	<1	0.59 J	**6.3**	<1	3.1	<1	2.3	3.7 J	<3	0.3 J	<1	<1	<5	<1	24.8 J
		11/20/2002	<1	<1	1.3	2.2	0.37 J	<1	<5	2.1	1.5	<1	0.58 J	<1	1.9	1.5 J	<3	<1	<1	<1	<5	<1	11.5 J
		11/3/2003	<1	<1	2	2	<1	<1	<1	NA	**8**	<1	<1	<1	1	NA	<2	<1	<1	<1	<1	4	17
		11/23/2004	<1.0	<1.0	0.88J	0.60J	<1.0	<1.0	<2.0	1.2	4.6J	<1.0	<1.0	<1.0	0.91J	<1.0	<1.0	<1.0	<1.0	<1.0	0.54J	<2.0	9J
		11/2/2005	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	1	4	<1.0	<1.0	<1.0	0.73 J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	5
		11/7/2006	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	3.9	<1.0	<1.0	<1.0	1.2	<1.0	<3.0	<1.0	<1.0	<1.0	<1.0	<2.0	5.1
		11/9/2007	<1	<1	<1	<1	<1	<1	<2	<1	2.4	<1	<1	<1	<1	<1	<3	<0.5	<1	<1	<1	<2	2.4
		11/7/2008	<1	<1	<1	<1	<1	<1	<2	<1	2.2	<1	<1	<1	<1	<1	<2	<0.5	<1	<1	<1	<2	2.2
		11/11/2009	<1	<1	<1	<1	<1	<1	<2	<1	1.7	<1	<1	<1	<1	<1	<2	<0.5	<1	<1	<1	<2	1.7
		11/12/2010	<1	<1	<1	<1	<1	<1	<2	<1	1.9	<1	<1	<1	<1	<1	<2	<0.5	<1	<1	<1	<2	1.9
		11/15/2011	<1	<1	<1	<1	<1	<1	<2	<1	1.5	<1	<1	<1	<1	<1	<2	<0.5	<1	<1	<1	<2	1.5
		11/8/2012	<1	<1	<1	<1	<1	<1	<1	<1	1.5	<1	<1	<1	1.3	<1	<2	<0.5	<1	<1	<1	<2	2.8
MW-OA-1		11/29/1994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND
		8/19/1998	<2.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	NA	<5	0
MW3H-1D		11/29/1994	ND	4.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	4.2
		11/12/1996	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	<1	<3	<1	NA	NA	<1	<1	0
		5/12/1998	<0.2	<0.3	<0.5	<0.4	2	<0.2	<0.4	<0.3	1	<0.2	<0.4	<0.5	4	<0.3	<0.3	<0.3	<0.5	<0.3	<0.3	<0.4	7
		8/20/1998	<2.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1	<5	0
		11/19/1998	<1	<1	<1	<1	2	1	<1	<1	<1	<1	<1	<1	1	<1	11	<1	<1	<1	<1	<1	15
		2/19/1999	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1	0
		5/13/1999	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1	0
		6/16/2000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1	0
		8/17/2000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1	0
		11/13/2000	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1	0
		2/12/2001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<3	<1	<1	<1	<5	<1	0
		11/14/2001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<3	<1	<1	<1	<5	<1	0
		11/20/2002	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	0.32 J	<5	<3	<1	<1	<1	<5	<1	0.32 J
		11/4/2003	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1	NA	<2	<1	<1	<1	<1	<1	ND
		11/23/2004	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	0
		11/2/2005	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	0
		11/7/2006	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<1.0	<2.0	0
		11/9/2007	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<3	<0.5	<1	<1	<1	<2	0

Table 3-2
Summary of Groundwater Sampling Results for VOCs
Phase V Monitoring Report and ROS Statement
Former RCA Facility
Burlington, Massachusetts

Monitoring Well Number	Sample Type	Date Sampled	Benzene	Chloroform	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Ethylbenzene	Methylene chloride	Methyl tert- butyl ether	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Trichlorofluoro methane	Xylene (total)	Vinyl chloride	1,2-Dichloroethane	Chlorobenzene	Dichlorodifluoro methane	Chloromethane	Total VOCs
GW-1 Criteria			**5**	**70**	**70**	**70**	**7**	**700**	**5**	**70**	**5**	**1,000**	**200**	**5**	**5**	**NE**	**10,000**	**2**	**5**	**100**	**NE**	**NE**	**NE**
GW-2 Criteria			**2,000**	**50**	**1,000**	**100**	**80**	**20,000**	**10,000**	**50,000**	**50**	**50,000**	**4,000**	**900**	**30**	**NE**	**9,000**	**2**	**5**	**200**	**NE**	**NE**	**NE**
GW-3 Criteria			**10,000**	**20,000**	**20,000**	**50,000**	**30,000**	**5,000**	**50,000**	**50,000**	**30,000**	**40,000**	**20,000**	**50,000**	**5,000**	**NE**	**5,000**	**50,000**	**20,000**	**1,000**	**NE**	**NE**	**NE**
UCL Criteria			**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	**50,000**	**NE**	**100,000**	**100,000**	**100,000**	**10,000**	**NE**	**NE**	**NE**
		11/7/2008	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<2	0
		11/11/2009	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<2	0
		11/12/2010	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<2	0
		11/14/2011	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<2	0
		11/8/2012	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<2	0
MW3H-1S		11/29/1994	ND	ND	5.4	3.1	**22**	ND	ND	ND	3.7	ND	ND	ND	**19**	NA	ND	ND	NA	NA	NA	NA	53.2
		11/12/1996	<1	<1	<1	<1	5	<1	<5	<1	1	<1	<1	<1	**5**	<1	<3	<1	NA	NA	<1	<1	11
		5/12/1998	<0.2	<0.3	<0.5	<0.4	3	<0.2	<0.4	<0.3	1	<0.2	<0.4	<0.5	**8**	<0.3	<0.3	<0.3	<0.5	<0.3	<0.3	<0.4	12
		8/19/1998	<2.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1	<5	0
		11/19/1998	<1	<1	<1	<1	<1	1	<1	<1	<1	1	<1	<1	<1	<1	12	<1	<1	<1	<1	<1	14
		2/18/1999	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1	0
		5/12/1999	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1	0
		6/16/2000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1	0
		8/17/2000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1	0
		11/13/2000	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1	0
		2/12/2001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<5	0
		11/14/2001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<3	<1	<1	<1	<1	<5	0
		11/20/2002	<1	<1	<1	<1	0.23 J	<1	<5	<1	0.14 J	<1	<1	<1	0.29 J	0.3 J	<3	<1	<1	<1	<1	<5	<1	0.96 J
		11/4/2003	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1	NA	<2	<1	<1	<1	<1	<1	ND
		11/23/2004	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	0
		11/2/2005	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	0
		11/7/2006	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<1.0	<2.0	0
		11/9/2007	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<3	<0.5	<1	<1	<1	<2	0
		11/7/2008	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<2	<0.5	<1	<1	<1	<2	0
		11/11/2009	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<2	<0.5	<1	<1	<1	<2	0
		11/12/2010	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<2	<0.5	<1	<1	<1	<2	0
		11/14/2011	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<2	<0.5	<1	<1	<1	<2	0
		11/8/2012	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2	<0.5	<1	<1	<1	<2	0
MW3H-3		8/23/1994	ND	ND	ND	ND	ND	ND	**12**	ND	ND	2.4	ND	ND	ND	ND	2.8	ND	NA	NA	NA	NA	17.2
		12/1/1994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND
		11/14/1996	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	<1	<3	<1	NA	NA	<1	<1	0
		5/3/2000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1	0
		8/17/2000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1	0
MWA-1D		11/29/1994	ND	2.4	16	7.6	**82**	ND	ND	ND	**17**	ND	27	ND	**64**	NA	ND	ND	NA	NA	NA	NA	216
		11/12/1996	<1	<1	11	<1	**76**	<1	<5	<1	**19**	<1	13	<1	**68**	<1	<3	<1	NA	NA	<1	<1	187
		5/13/1998	<0.2	<0.3	17	11	**73**	<0.2	<0.4	<0.3	**24**	<0.2	26	<0.5	**66**	<0.3	<0.3	<0.3	<0.5	<0.3	<0.3	<0.4	217
		8/19/1998	<2.0	<1.0	9.4	6.2	**42**	<2.0	<1.0	<1.0	**12**	<2.0	17	<2.0	**39**	<1.0	<1.0	<2.0	<1.0	<2.0	<1	<5	125.6
		11/20/1998	<1	<1	10	6	**41**	<1	<1	<1	**14**	<1	22	<1	**41**	<1	8	<1	<1	<1	<1	<1	142
		2/17/1999	<1	<1	8	4	**28**	<1	<1	<1	**9**	<1	17	<1	**33**	<1	<3	<1	<1	<1	<1	<1	99
		5/12/1999	<1	<1	9	6	**36**	<1	<1	<1	**9**	<1	30	<1	**36**	<1	<3	<1	<1	<1	<1	<1	126
		6/16/2000	<1	<1	6	5	**24**	<1	<1	<1	**9**	<1	17	<1	**26**	<1	<3	<1	<1	<1	<1	<1	87
		8/17/2000	<1	<1	3	2	4	<1	<1	<1	2	<1	3	<1	4	<1	<3	<1	<1	<1	<1	<1	18
		11/13/2000	<1	<1	9	6	**37**	<1	<5	<1	**11**	<1	21	<1	**35**	<1	<3	<1	<1	<1	<1	<1	119
		2/13/2001	<1	<1	7	5	**29**	<1	<1	<1	**11**	<1	17	<1	**34**	<1	<3	<1	<1	<1	<1	<5	103
		11/14/2001	<1	<1	4.7	3.6	**24**	<1	<1	<1	**6.2**	<1	8.9	<1	**24**	0.4 J	<3	<1	<1	<1	<1	<5	71.8 J
		11/20/2002	<1	0.11 J	3.7	3.4	**21**	<1	<5	0.59 J	**5.8**	<1	6	<1	**20**	0.6 J	<3	<1	<1	<1	<1	<5	61.2 J
		11/3/2003	<1	<1	3	3	**20**	<1	<1	NA	**6**	<1	3	<1	**17**	NA	<2	<1	<1	<1	<1	<1	3	55
		11/23/2004	<1.0	<1.0	2.5J	2.1J	**16**	<1.0	<2.0	7.9	3.7J	<1.0	2.6	<1.0	**15J**	<1.0	<1.0	<1.0	<1.0	<1.0	1	<2.0	27.5
		11/1/2005	<1.0	<1.0	2.1	2.5	**13**	<1.0	<2.0	7.5	4.6	<1.0	1.9	<1.0	**14**	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<2.0	45.6
		11/6/2006	<1.0	<1.0	1.7	2.4	**11**	<1.0	<2.0	3.7	4.2	<1.0	1.5	<1.0	**13**	<1.0	<3.0	<1.0	<1.0	<1.0	<1.0	<2.0	37.5
		11/8/2007	<1	<1	1.4	2.1	**9**	<1	<2	2.4	3.1	<1	<1	<1	**10**	<1	<3	<0.5	<1	<1	<1	<2	28
		11/5/2008	<1	<1	<1	1.7	**8**	<1	<2	1.4	3	<1	<1	<1	**9.2**	<1	<2	<0.5	<1	<1	<1	<2	23.3
		11/12/2009	<1	<1	<1	1.5	**7.6**	<1	<2	<1	2.8	<1	<1	<1	**8.7**	<1	<2	<0.5	<1	<1	<1	<2	20.6
		11/10/2010	<1	<1	<1	1.7	6.3	<1	<2	<1	2.7	<1	<1	<1	**8.8**	<1	<2	<0.5	<1	<1	<1	<2	19.5
		11/15/2011	<1	<1	<1	1.5	5.3	<1	<2	<1	2.6	<1	<1	<1	**8.4**	<1	<2	<0.5	<1	<1	<1*	<2	17.8
		11/8/2012	<1	<1	<1	1.4	2.8	<1	<1	<1	2.9	<1	<1	<1	**7.7**	<1	<2	<0.5	<1	<1	<1	<2	14.8

Notes:
< Less than method detection limit. Concentration reported is the detection limit.
J = Estimated concentration, according to data validation protocol.
* = LCS or LCSD did not meet QC criteria not met.

NA = Not analyzed for
ND = Not detected in the sample
NE = MCP Method 1 GW-1 Standard not established

Bold denotes concentration above MCP Method 1 GW-1 Standard
Concentrations in ug/L

Table 3-3. Statistically Significant Concentration Trends Based on Mann-Kendall Trend Test for Small Sample Size

Location	1,1-DCE Trend	1,1-DCE 2004/2012	PCE Trend	PCE 2004/2012	TCE Trend	TCE 2004/2012
Former RCA Facility						
3G-11	NONE	NA	<=MCL (5)	NA	NONE	NA
3G-12	**DOWNWARD**	29/2.1	**DOWNWARD**	6.7/1.9	**DOWNWARD**	20/4.2
EMW-10D	<=MCL (7)	NA	<=MCL (5)	NA	ND	NA
EMW-10R	<=MCL (7)	NA	<=MCL (5)	NA	<=MCL (5)	NA
EMW-11R	<=MCL (7)	NA	<=MCL (5)	NA	NONE	NA
EMW-1D	**DOWNWARD**	6.3/2.5	NONE	NA	NONE	NA
EMW-2D	**DOWNWARD**	17/2.9	**DOWNWARD**	5.3/2.4	**DOWNWARD**	29/9.8
EMW-3R	<=MCL (7)	NA	<=MCL (5)	NA	NONE	NA
EMW-7	<=MCL (7)	NA	<=MCL (5)	NA	<=MCL (5)	NA
MW3H-1D	<=MCL (7)	NA	<=MCL (5)	NA	<=MCL (5)	NA
MW3H-1S	<=MCL (7)	NA	<=MCL (5)	NA	<=MCL (5)	NA
MWA-1D	**DOWNWARD**	16/2.8	<=MCL (5)	NA	**DOWNWARD**	15J/7.7

Notes:

NA - Not applicable.

<=MCL (7) - Concentrations from all samples collected over the nine year time period were less than or equal to the Maximum Contaminat Level (value of MCL and concentrations in µg/L)

ND - Not all sample results were less than or equal to MCL. Trend analysis could not be completed because two or more results were not detected.

J - Sample result is estimated.

Table 3-4
Summary of Natural Attenuation Parameters
Phase V Monitoring Report and ROS Statement
Former RCA Facility
Burlington, Massachusetts

Well Identifier	EMW-10D	EMW-10D	EMW-10D	EMW-10D	EMW-10D	EMW-10D	EMW-10D	EMW-1D	EMW-1D	EMW-1D (DUP)	EMW-1D
Date Sampled	8/18/1998	5/3/2000	11/23/2004	11/1/2005	11/7/2006	11/15/2011	11/9/2012	8/18/1998	5/5/2000	5/5/2000	11/4/2003
Parameter											
Oxygen (field) (mg/L)	1.881	0.35	0.73	0.32	0.69	4.58	1.38	2.411	5.48	5.48	0.53
Methane (ug/L)	<2	23	-	-	-	-	-	210	9.5	11	2.4 J
Nitrate (as Nitrogen) (mg/L)	0.7	6.16	-	-	-	-	-	4.6	<0.2	<0.2	<0.05
Oxygen Reduction Potential (field) (mV)	114.9	198.5	178	214	-128	223.4	169.8	-124	117	117	58
pH (field) (Standard Units)	6.3	6.35	6.37	5.94	6.81	5.78	6.33	6.08	6.41	6.41	6.25
Sulfate (as SO4) (mg/L)	30	16.8	-	-	-	-	-	80	3.25	2.82	37.4
Temperature (field) (°C)	22.4	15.3	12.73	16.52	12.53	14.34	13.26	19.6	17.84	17.84	13.47
Total Organic Carbon (mg/L)	<1	1.27	-	-	-	-	-	2.5	1.51	1.54	2.1
Ferrous Iron (field) (mg/L)	-	-	-	-	-	-	-	-	-	-	-

Table 3-4
Summary of Natural Attenuation Parameters
Phase V Monitoring Report and ROS Statement
Former RCA Facility
Burlington, Massachusetts

Well Identifier	EMW-1D	EMW-1D	EMW-1D	EMW-1D	EMW-1D	EMW-1D	EMW-1D	EMW-1D	EMW-1D	EMW-11D	EMW-11D (Dup)	EMW-11D
Date Sampled	11/23/2004	11/2/2005	11/7/2006	11/8/2007	11/5/2008	11/12/2009	11/11/2010	11/16/2011	11/9/2012	8/19/1998	8/19/1998	5/5/2000
Parameter												
Oxygen (field) (mg/L)	1.6	1.23	0.61	0.15	0.55	0.65	0.45	0.54	0.37	3.191	-	1.19
Methane (ug/L)	73	50	58	35	25	26	18	15	11	<2	<2	0.8
Nitrate (as Nitrogen) (mg/L)	<0.05	<0.05	<.050	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	1.3	-	1.24
Oxygen Reduction Potential (field) (mV)	99	132	-149	1.3	28	48.1	74	47.9	64.4	(-18.9)	-	149.6
pH (field) (Standard Units)	6	6.47	6.45	6.73	6.54	6.51	6.58	6.54	6.71	6.4	-	6.52
Sulfate (as SO4) (mg/L)	44	35	36	33	34	31	36	30	25	39	-	21.9
Temperature (field) (°C)	13.45	14.82	14.35	13.75	15.83	11.91	14.37	13.82	13.67	14.4	-	13.29
Total Organic Carbon (mg/L)	1.6	2.1	2.4	2.2	1.6	1.3	2.3	2.5	1.6	<1	<1	<1
Ferrous Iron (field) (mg/L)	-	-	-	1.5	0.9	0.2	0.7	-	0.4			

Table 3-4
Summary of Natural Attenuation Parameters
Phase V Monitoring Report and ROS Statement
Former RCA Facility
Burlington, Massachusetts

Well Identifier	MWA-1D	MWA-1D	MWA-1D	MWA-1D	MWA-1D	MWA-1D	MWA-1D	EMW-2D	EMW-2D	EMW-2D (DUP)	EMW-2D	EMW-2D (DUP)
Date Sampled	8/19/1998	5/4/2000	11/22/2004	11/1/2005	11/6/2006	11/15/2011	11/8/2012	8/20/1998	5/4/2000	5/4/2000	11/4/2003	11/4/2003
Parameter												
Oxygen (field) (mg/L)	8.2	0.8	0.4	0.36	0.6	0.48	3.7	2.9	0.31	0.31	0.31	0.31
Methane (ug/L)	<2	<0.5	-	-	-	-	-	<2	0.82	0.89	5.3 J	3.8 J
Nitrate (as Nitrogen) (mg/L)	0	0.96	-	-	-	-	-	4.8	<0.2	<0.2	0.068	0.068
Oxygen Reduction Potential (field) (mV)	(-0.2)	171.1	136	184	-117	174.1	127.9	30.8	49.7	49.7	-14	-14
pH (field) (Standard Units)	6.33	6.59	6.48	6.31	6.36	6.37	6.55	7.26	7.37	7.37	7.22	7.22
Sulfate (as SO4) (mg/L)	0	24.4				-	-	80	26.9	26.8	41.4	41.6
Temperature (field) (°C)	15.3	15.7	14.98	16.95	16.43	13.96	13.6	13.3	14.17	14.17	12.38	12.38
Total Organic Carbon (mg/L)	<1	<1	-	-	-	-	-	<1	<1	<1	1.3	1.1
Ferrous Iron (field) (mg/L)	-	-	-	-	-	-	-	-	-	-	-	-

Table 3-4
Summary of Natural Attenuation Parameters
Phase V Monitoring Report and ROS Statement
Former RCA Facility
Burlington, Massachusetts

Well Identifier	EMW-2D	EMW-2D (DUP)	EMW-2D	EMW-2D	EMW-2D	EMW-2D (DUP)	EMW-2D	EMW-2D (DUP)	EMW-2D	EMW-2D (DUP)	EMW-2D	EMW-2D (DUP)
Date Sampled	**11/23/2004**	**11/23/2004**	**11/2/2005**	**11/1/2005**	**11/7/2006**	**11/7/2006**	**11/8/2007**	**11/8/2007**	**11/5/2008**	**11/5/2008**	**11/12/2009**	**11/12/2009**
Parameter												
Oxygen (field) (mg/L)	0.57	0.57	0.46	-	1.14	1.14	0.49	-	0.35	-	0.63	-
Methane (ug/L)	4	3.5	7.2	4.2	3.5	2.3	1.7	1.8	2.5	5.4	2.9	3.3
Nitrate (as Nitrogen) (mg/L)	<0.05	0.084	<0.05	<0.05	<0.050	<0.050	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Oxygen Reduction Potential (field) (mV)	-19	-19	21	-	-145	-145	38	-	-34	-	-32	-
pH (field) (Standard Units)	6.93	6.93	7.2	-	7.04	7.04	7.01	-	7.14	-	7.09	-
Sulfate (as SO4) (mg/L)	41	42	44	44	43	43	42	42	44	44	41	41
Temperature (field) (°C)	14	14	13.51	-	13.27	13.27	13.39	-	13.69	-	10.58	-
Total Organic Carbon (mg/L)	<1.0	<1.0	1.4	1.4	1.6	1.8	1.9	1.7	1.5	1.4	1.6	1.4
Ferrous Iron (field) (mg/L)	-	-	-	-	-	-	0.2	-	0.1	-	0.5	-

Table 3-4
Summary of Natural Attenuation Parameters
Phase V Monitoring Report and ROS Statement
Former RCA Facility
Burlington, Massachusetts

Well Identifier	EMW-2D	EMW-2D (DUP)	EMW-2D	EMW-2D (DUP)	EMW-2D	EMW-2D (DUP)	3G-12	3G-12	3G-12	3G-12	3G-12	3G-12
Date Sampled	11/11/2010	11/11/2010	11/16/2011	11/16/2011	11/9/2012	11/9/2012	8/20/1998	5/4/2000	11/4/2003	11/23/2004	11/2/2005	11/7/2006
Parameter												
Oxygen (field) (mg/L)	0.31	-	0.49	-	0.38	-	5.3	2.43	0.29	0.9	0.46	0.36
Methane (ug/L)	3.2	3.1	3	2.8	7.4	2.2	<2	0.86	8.5 J	3.1	2.8	18
Nitrate (as Nitrogen) (mg/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	17	0.93	2.05	1.2	1.7	0.32
Oxygen Reduction Potential (field) (mV)	-0.4	-	-39	-	-55	-	27.9	135.2	163	78	133	242.9
pH (field) (Standard Units)	7.09	-	7.09	-	7.17	-	6.4	6.5	6.29	6.07	6.29	6.4
Sulfate (as SO4) (mg/L)	46	46	40	40	33	33	80	23.2	68.9	48	56	46
Temperature (field) (°C)	13.15	-	12.44	-	13.86	-	12.6	11.19	11.95	11.51	12.55	12.26
Total Organic Carbon (mg/L)	1.1	1.2	2.5	2.2	2.3	1.8	1.2	<1.0	3.6	1.3	2.6	3.5
Ferrous Iron (field) (mg/L)	0.1	-	-	-	1.4	-	-	-	-	-	-	-

Table 3-4
Summary of Natural Attenuation Parameters
Phase V Monitoring Report and ROS Statement
Former RCA Facility
Burlington, Massachusetts

Well Identifier	3G-12	3G-12	3G-12	3G-12	3G-12	3G-12
Date Sampled	11/8/2007	11/5/2008	11/12/2009	11/11/2010	11/16/2011	11/9/2012
Parameter						
Oxygen (field) (mg/L)	1.95	0.41	0.88	1.18	0.64	0.33
Methane (ug/L)	0.048J	6.7	0.34	0.85	18	5.8
Nitrate (as Nitrogen) (mg/L)	0.89	0.76	0.76	1.2	0.7	1.5
Oxygen Reduction Potential (field) (mV)	167	188	87.4	136	11.57	125.2
pH (field) (Standard Units)	6.49	6.38	6.53	6.39	6.4	6.57
Sulfate (as SO4) (mg/L)	32	43	30	40	34	29
Temperature (field) (°C)	12.01	13.14	9.87	11.39	11.51	12.02
Total Organic Carbon (mg/L)	2.1	2.9	3	1.8	3.1	2.3
Ferrous Iron (field) (mg/L)	0	0	0	0	-	0.2

Note:

J = Concentration estimated base on data validation.

< Less than method detection limit. Concentration reported is the detection limit.

mg/L = milligrams per liter or parts per billion (ppm).

ug/L = micrograms per liter or parts per billion (ppb). mV = millivolts

°C = Degrees Celsius

[1] Dissolved oxygen concentrations from November 1998 due to equipment failure in August 1998.

Table 3-5
Summary of VOC Data Used for Natural Attenuation Calculations
May 1998 - November 2012
Former RCA Facility
Burlington, Massachusetts

Monitoring Well Number	Date	1,1-DCE	PCE	TCE
3G-11	5/13/1998	18	1	10
	8/20/1998	1	1	1
	11/19/1998	18	1	10
	2/18/1999	13	1	4
	5/13/1999	20	1	9
	6/15/2000	17	1	6
	8/17/2000	23	1	11
	11/14/2000	36	1	16
	2/13/2001	25	1	13
	11/14/2001	24	1	9.9
	11/20/2002	20	0.26	8.3
	11/3/2003	18	1	8
	11/22/2004	19	1	7.4
	11/2/2005	19	1	8.2
	11/7/2006	20	1	7.8
	11/9/2007	15	1	7.2
	11/7/2008	7.8	1	2.7
	11/11/2009	7.1	1	2.4
	6/25/2010	7.5	1	2.3
	11/12/2010	9.7	1	4.2
	11/17/2011	9	1	3.2
	11/9/2012	11	1	6.1
3G-12	5/13/1998	110	12	44
	8/20/1998	44	11	33
	11/19/1998	170	10	38
	2/18/1999	54	11	46
	5/13/1999	170	17	69
	6/16/2000	79	16	63
	8/17/2000	130	15	61
	11/13/2000	93	15	48
	2/13/2001	76	24	46
	11/14/2001	31	6.2	19
	11/20/2002	49	4.9	17
	11/4/2003	8	11	10
	11/23/2004	29	6.7	20
	11/2/2005	15	4.8	13
	11/7/2006	15	12	21

Table 3-5
Summary of VOC Data Used for Natural Attenuation Calculations
May 1998 - November 2012
Former RCA Facility
Burlington, Massachusetts

3G-12	11/8/2007	14	2	7
	11/5/2008	5.9	5	7
	11/12/2009	4.5	2.5	4.8
	11/11/2010	6.5	1.8	6.4
	11/16/2011	4.1	3.7	6
	11/9/2012	2.1	1.9	4.2
EMW-10D	5/11/1998	1	18	55
	8/18/1998	1	9.7	36
	11/18/1998	1	3	7
	2/17/1999	1	6	23
	5/12/1999	1	2	6
	5/3/2000	1	7	22
	6/15/2000	1	2	4
	8/17/2000	2	7	25
	11/13/2000	1	9	31
	2/12/2001	1	2	7
	11/14/2001	1.2	4.3	17
	11/20/2002	1.1	4.1	13
	11/3/2003	1	4	11
	11/23/2004	1.6	2.5	7.6
	11/1/2005	1	4	0.73
	11/7/2006	1	2.8	7.6
	11/9/2007	1	1	1.8
	11/7/2008	1	1	1
	11/11/2009	1	1	1
	11/10/2010	1	1	1
	11/15/2011	1	1	1
	11/9/2012	1	1	2.8
EMW-10R	5/13/1998	1	1	2
	8/20/1998	1	1	5.1
	11/19/1998	1	2	10
	2/18/1999	1	1	1
	5/13/1999	1	1	4
	6/16/2000	1	1	1
	8/17/2000	1	1	5
	11/13/2000	1	2	9
	5/3/2000	1	1	3
	2/13/2001	1	1	4
	11/15/2001	1	1	1.6
	11/21/2002	0.33	0.18	2.3

Table 3-5
Summary of VOC Data Used for Natural Attenuation Calculations
May 1998 - November 2012
Former RCA Facility
Burlington, Massachusetts

EMW-10R	11/4/2003	1	1	1
	11/22/2004	1	1	0.7
	11/2/2005	1	1	1
	11/7/2006	1	1	1
	11/9/2007	1	1	1
	11/5/2008	1	1	1
	11/12/2008	1	1	1
	11/11/2010	1	1	1
	11/15/2011	1	1	1
	11/8/2012	1	1	1.1
EMW-1D	5/12/1998	120	30	160
	8/18/1998	61	22	92
	11/20/1998	20	11	46
	5/13/1999	22	10	39
	6/16/2000	22	16	69
	8/17/2000	1	4	1
	11/13/2000	12	3	9
	2/12/2001	8	2	6
	11/15/2001	4.6	1.1	2.6
	11/20/2002	31	19	73
	1/23/2003	7.8	5.1	17
	11/4/2003	16	12	44
	11/23/2004	6.3	4.4	18
	11/2/2005	7	7.4	30
	11/7/2006	5.2	4.6	17
	11/8/2007	3.6	3.1	13
	11/5/2008	4.6	3.5	15
	11/12/2009	5.2	5.2	23
	6/25/2010	4.8	3.5	18
	11/11/2010	3.2	3.5	17
	11/16/2011	2.5	2.8	13
	11/9/2012	2.5	5	24
EMW-2D	5/13/1998	40	17	64
	8/20/1998	23	9.2	38
	11/19/1998	24	10	42
	2/18/1999	19	7	37
	5/13/1999	8	8	32
	6/15/2000	20	6	23
	8/17/2000	24	10	39
	11/13/2000	32	13	52

Table 3-5
Summary of VOC Data Used for Natural Attenuation Calculations
May 1998 - November 2012
Former RCA Facility
Burlington, Massachusetts

EMW-2D	2/13/2001	24	11	41
	11/14/2001	20	7.8	33
	11/21/2002	14	6.2	26
	11/4/2003	15	7	23
	11/23/2004	17	6.3	29
	11/2/2005	11	5.3	19
	11/7/2006	8.3	4.4	15
	11/8/2007	5.5	2.6	9.3
	11/5/2008	6.7	3	11
	11/12/2009	5.7	2.6	9.7
	11/11/2010	5.3	2.4	10
	11/16/2011	4.4	2.2	9.7
	11/9/2012	3	2.4	9.8
EMW-3R	5/13/1998	21	14	63
	8/20/1998	12	14	42
	11/19/1998	12	15	44
	2/18/1999	9	10	39
	5/13/1999	11	7	33
	6/16/2000	10	7	28
	8/17/2000	14	11	39
	11/14/2000	17	4	42
	2/13/2001	11	3	30
	11/15/2001	6.2	1.8	23
	11/21/2002	4.7	2.5	22
	11/4/2003	6	3	20
	11/23/2004	4.4	2.4	18
	11/2/2005	3.7	3.7	19
	11/7/2006	2.6	3.3	16
	11/9/2007	2.1	2.9	13
	11/5/2008	2.3	3.8	13
	11/11/2009	2.7	4.5	14
	6/25/2010	2.4	3	12
	11/11/2010	2.1	3.5	12
	11/16/2011	3.3	4	13
	11/9/2012	2.3	4.6	15
EMW-7	5/12/1998	3	4	3
	8/18/1998	1	1.9	1.6
	11/20/1998	1	4	3
	2/17/1999	1	5	2
	5/13/1999	2	4	3

Table 3-5
Summary of VOC Data Used for Natural Attenuation Calculations
May 1998 - November 2012
Former RCA Facility
Burlington, Massachusetts

EMW-7	5/3/2000	1	3	2
	6/16/2000	1	5	1
	8/17/2000	15	5	21
	11/13/2000	1	11	5
	11/15/2001	1	6.3	2.3
	11/20/2002	0.37	1.5	1.9
	11/3/2003	1	8	1
	11/23/2004	1	4.6	0.91
	11/1/2005	1	4	0.73
	11/7/2006	1	3.9	1.2
	11/9/2007	1	2.4	1
	11/7/2008	1	2.2	1
	11/11/2009	1	1.7	1
	11/12/2010	1	1.9	1
	11/15/2011	1	1.5	1
	11/8/2012	1	1.5	1.3
EMW-11R	5/13/1998	53	23	77
	8/20/1998	27	15	40
	11/19/1998	28	20	50
	2/17/1999	13	4	22
	5/12/1999	23	12	40
	6/16/2000	17	6	29
	8/17/2000	29	8	39
	11/14/2000	45	21	68
	2/13/2001	32	18	53
	11/15/2001	13	3.3	23
	11/21/2002	15	5.4	23
	11/4/2003	1	1	1
	11/23/2004	5.6	0.64	7.6
	11/2/2005	1.7	0.52	4.2
	11/7/2006	6	1.8	11
	11/9/2007	4.1	1.7	9.7
	11/5/2008	5.6	2.3	9.9
	11/11/2009	6.1	2.1	9.6
	11/11/2010	4.3	1.9	8.5
	11/15/2011	3.4	2.1	7.2
	11/8/2012	2.6	1.7	7.5
MW3H-1D	5/13/1998	2	1	4
	8/20/1998	1	1	1
	11/19/1998	2	1	1

Table 3-5
Summary of VOC Data Used for Natural Attenuation Calculations
May 1998 - November 2012
Former RCA Facility
Burlington, Massachusetts

MW3H-1D	2/18/1999	1	1	1
	5/13/1999	1	1	1
	6/16/2000	1	1	1
	8/17/2000	1	1	1
	11/13/2000	1	1	1
	2/12/2001	1	1	1
	11/14/2001	1	1	1
	11/20/2002	1	1	0.32
	11/4/2003	1	1	1
	11/23/2004	1	1	1
	11/2/2005	1	1	1
	11/7/2006	1	1	1
	11/9/2007	1	1	1
	11/7/2008	1	1	1
	11/11/2009	1	1	1
	11/12/2010	1	1	1
	11/14/2011	1	1	1
	11/8/2012	1	1	1
MW3H-1S	5/13/1998	3	1	8
	8/20/1998	1	1	1
	11/19/1998	1	1	1
	2/18/1999	1	1	1
	5/13/1999	1	1	1
	6/16/2000	1	1	1
	8/17/2000	1	1	1
	11/13/2000	1	1	1
	2/12/2001	1	1	1
	11/14/2001	1	1	1
	11/20/2002	0.23	0.14	0.29
	11/4/2003	1	1	1
	11/23/2004	1	1	1
	11/2/2005	1	1	1
	11/7/2006	1	1	1
	11/9/2007	1	1	1
	11/7/2008	1	1	1
	11/11/2009	1	1	1
	11/12/2010	1	1	1
	11/14/2011	1	1	1
	11/8/2012	1	1	1
MWA-1D	5/13/1998	73	24	66

Table 3-5
Summary of VOC Data Used for Natural Attenuation Calculations
May 1998 - November 2012
Former RCA Facility
Burlington, Massachusetts

MWA-1D	8/19/1998	42	12	39
	11/20/1998	41	14	41
	2/17/1999	28	9	33
	5/12/1999	36	9	36
	6/16/2000	24	9	26
	8/17/2000	4	2	4
	11/13/2000	37	11	35
	2/13/2001	29	11	34
	11/14/2001	24	6.2	24
	11/20/2002	21	5.8	20
	11/3/2003	20	6	17
	11/23/2004	16	3.7	15
	11/2/2005	13	4.6	14
	11/7/2006	11	4.2	13
	11/8/2007	9	3.1	10
	11/5/2008	8	3	9.2
	11/12/2009	7.6	2.8	8.7
	11/10/2010	6.3	2.7	8.8
	11/15/2011	5.3	2.6	8.4
	11/8/2012	2.8	2.9	7.7

Notes:
All non-detects are represented by the reporting limit
All concenterations reported in µg/L

Table 3-6
Estimate of Natural Attenuation Rates
Phase V Monitoring Report and ROS Statement
Former RCA Facility
Burlington, Massachusetts

Monitoring Location	Contaminant	Decreasing Trend[a] 2004-2012 data	First Order Attenuation Rate Constant (year^{-1}) 1994-2012 data	Date at which Cleanup Criteria Achieved
OVERBURDEN WELLS				
MWA-1D	PCE	*Below GW-1 Criterion*	NC	NC
	TCE	Yes	0.11	2015
	1,1-DCE	Yes	0.15	achieved since 2010
3G-11	PCE	*Below GW-1 Criterion*	NC	NC
	TCE	No trend[b]	NC	NC
	1,1-DCE	No trend[b]	NC	NC
3G-12	PCE	*Yes*	0.14	achieved since 2007
	TCE	Yes	0.18	achieved in 2012
	1,1-DCE	Yes	0.26	achieved since 2008
EMW-1D	PCE	*No trend*[e]	NC	NC
	TCE	No trend[c]	NC	NC
	1,1-DCE	*Yes*	0.16	achieved since 2004
EMW-2D	PCE	*Yes*	0.12	achieved since 2006
	TCE	Yes	0.12	2015
	1,1-DCE	Yes	0.14	achieved since 2007
BEDROCK WELLS				
EMW-3R	PCE	*Below GW-1 Criterion*	NC	NC
	TCE	No trend[d]	NC	2013
	1,1-DCE	*Below GW-1 Criterion*	NC	NC
EMW-11R	PCE	*Below GW-1 Criterion*	NC	NC
	TCE	No trend[b]	NC	NC
	1,1-DCE	*Below GW-1 Criterion*	NC	NC

NOTES:

[a] Based on a Mann-Kendall trend analysis with a 95% confidence level.

[b] Current groundwater contaminant concentrations are within approximately 4 (g/L of the GW-1 standard.

[c] Current groundwater results show concentration within 20 (g/L of the GW-1 standard. NC= not calculated

[d] Current groundwater results show concentrations within 10 ut/L of the GW-1 standard..

[e] current groundwater results at or below the GW-1 standard since 2010

Table 3-7
Monitoring Schedule
Phase V Monitoring Report and ROS Statement
Former RCA Facility
Burlington, Massachusetts

Media/Analyses	May-98	Aug-98	Nov-98	Feb/ Mar-99	May/ Jun-99	Aug-99	Oct/ Nov-99	Feb-00	May/ Jun-00	Aug/ Sep-00	Nov-00	Feb-13	May-01	Aug-01	Nov-01	Feb-02	May-02	Aug-02
Surface Water/Metals				1	2		3	4	5	6	7	8				9		
Surface Water/VOCs				1	2	3	4				5				6			
Sediment/Metals				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Groundwater/VOCs	1	2	3	4	5				6	7	8	9			10			

Notes

X = Future Sampling Event

= Round

F = Final Sampling Event for Media/Analyses

Table 3-7
Monitoring Schedule
Phase V Monitoring Report and ROS Statement
Former RCA Facility
Burlington, Massachusetts

Media/Analyses	Nov-02	Feb-03	Nov-03	Nov-04	Nov-05	Nov-06	Nov-07	Nov-08	Nov-09	Nov-10	Nov-11	Nov-12	Aug-13	Nov-13	Feb-14	May-14
Surface Water/Metals		F														
Surface Water/VOCs	7		8	9	10	11	12	13	14	15	16	17	X	X	X	X
Sediment/Metals	16	F														
Groundwater/VOCs	11		12	13	14	15	16	17	18	19	20	21		X		

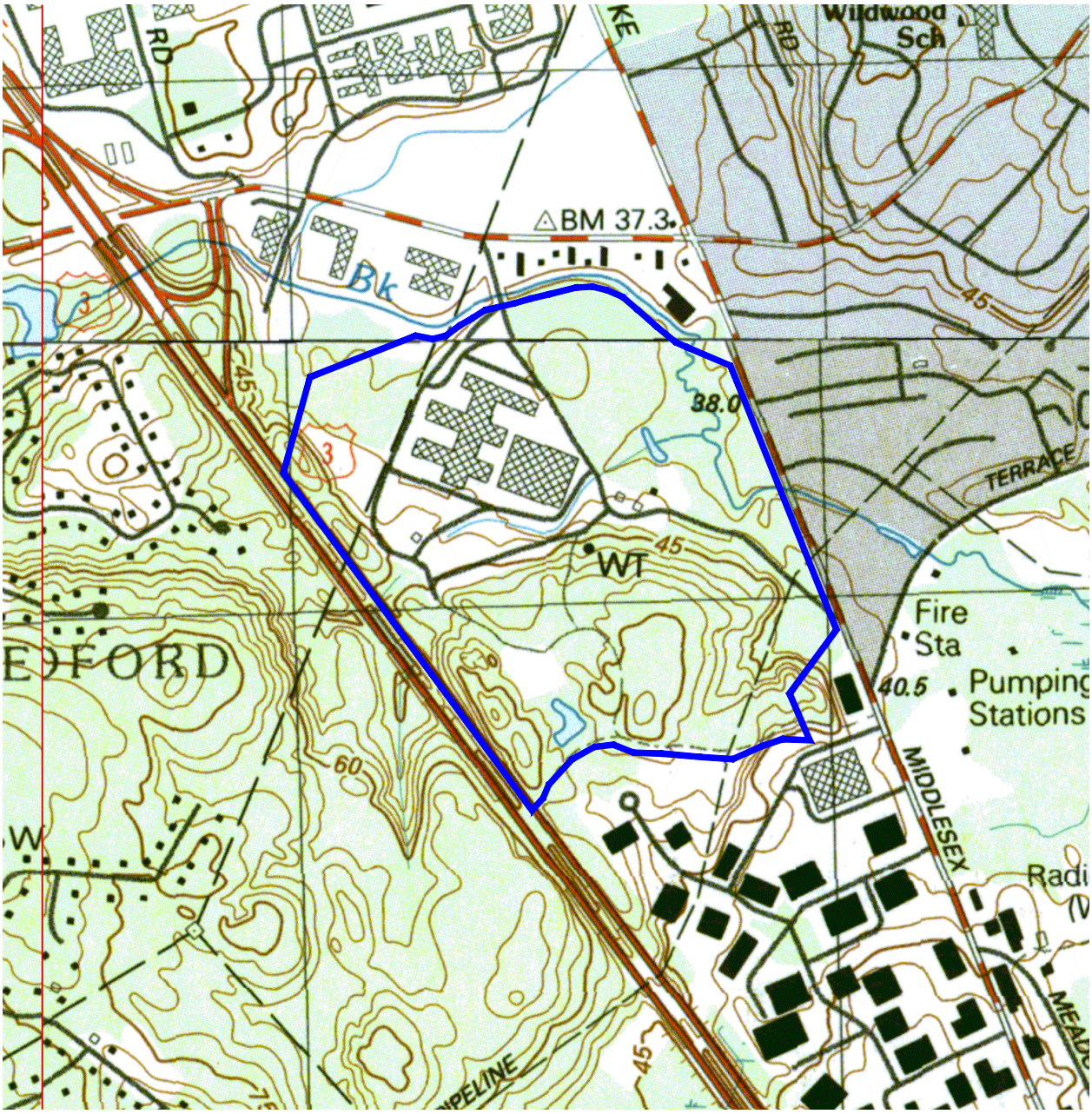
Notes

X = Future Sampling Event

= Round

F = Final Sampling Event fo

FIGURES



0 1000 2000

SCALE IN FEET

N

NOTE:

BUILDINGS SHOWN WITHIN SITE BOUNDARY ARE NO LONGER PRESENT. REFER TO FIGURE 1-2 FOR CURRENT LAYOUT OF OF BUILDINGS AT THE SITE.

QUADRANGLE LOCATION

SITE COORDINATES:
N=3,006,538 FT
E=728,159 FT
MA STATE PLANE NAD 83 FEET

LEGEND

SITE LOCATION

SOURCE: OFFICE OF GEOGRAPHIC AND ENVIRONMENTAL INFORMATION (MASSGIS), COMMONWEALTH OF MASSACHUSETTS EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS. NAD83 DATUM, MASSACHUSETTS STATE PLANE MAINLAND ZONE COORDINATE SYSTEM.

TITLE: **SITE LOCATION MAP**

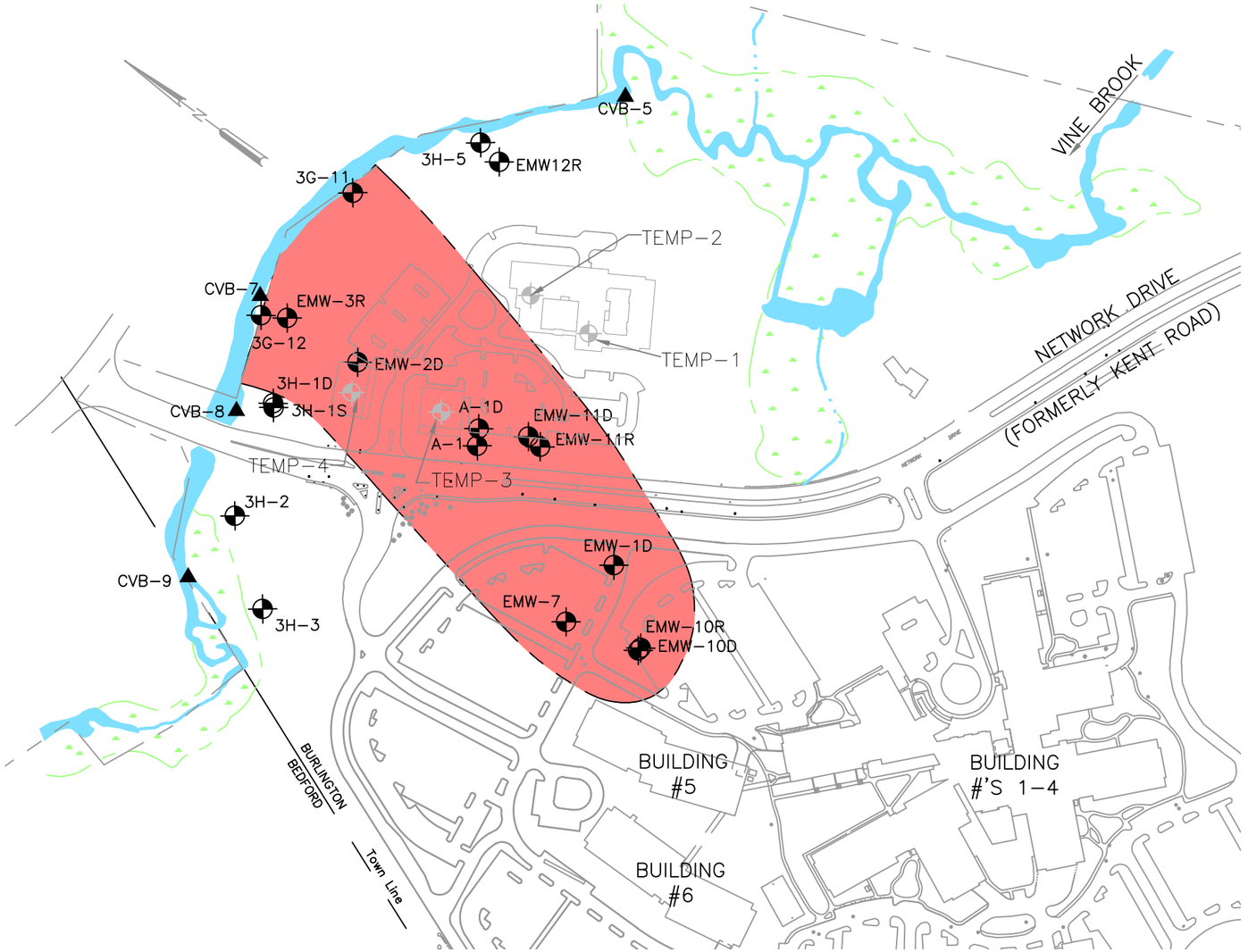
LOCATION: **Former RCA Facility**
One Network Drive. Burlington, Massachusetts

TETRA TECH

APPROVED	GD
DRAFTED	RMK
PROJECT#	117-0507550
DATE	May 2013

FIGURE 1-1

G:\LOCKHEAD\2013\04-13_PHASE-5\LOCUS.DWG



LEGEND

- PROPERTY LINE
- BUILDING
- PAVED ROAD
- LIMITS OF SWAMP
- BODY OF WATER/STREAM
- EMW–1D — MONITORING WELL AND IDENTIFIER
- CVB–1 — SURFACE WATER SAMPLING LOCATION AND IDENTIFIER
- EMW–1D — TEMPORARY WELL AND IDENTIFIER
- CHLORINATED VOC PLUME/ GROUNDWATER (AREA/ MEDIA SUBJECT TO ROS)

0 300 600

SCALE IN FEET

NOTE:

BASE MAP SOURCES: VANASSE HANGEN BRUSTIN, INC., MAP, DRAWING #C–3, SHEET 3 OF 11 PROJECT #06830, 1/18/00, AND EMCON DRAWING #1, PROJECT #86075–001.000, 1/10/97.

TITLE: **SITE PLAN WITH PHASE V SAMPLING LOCATIONS**

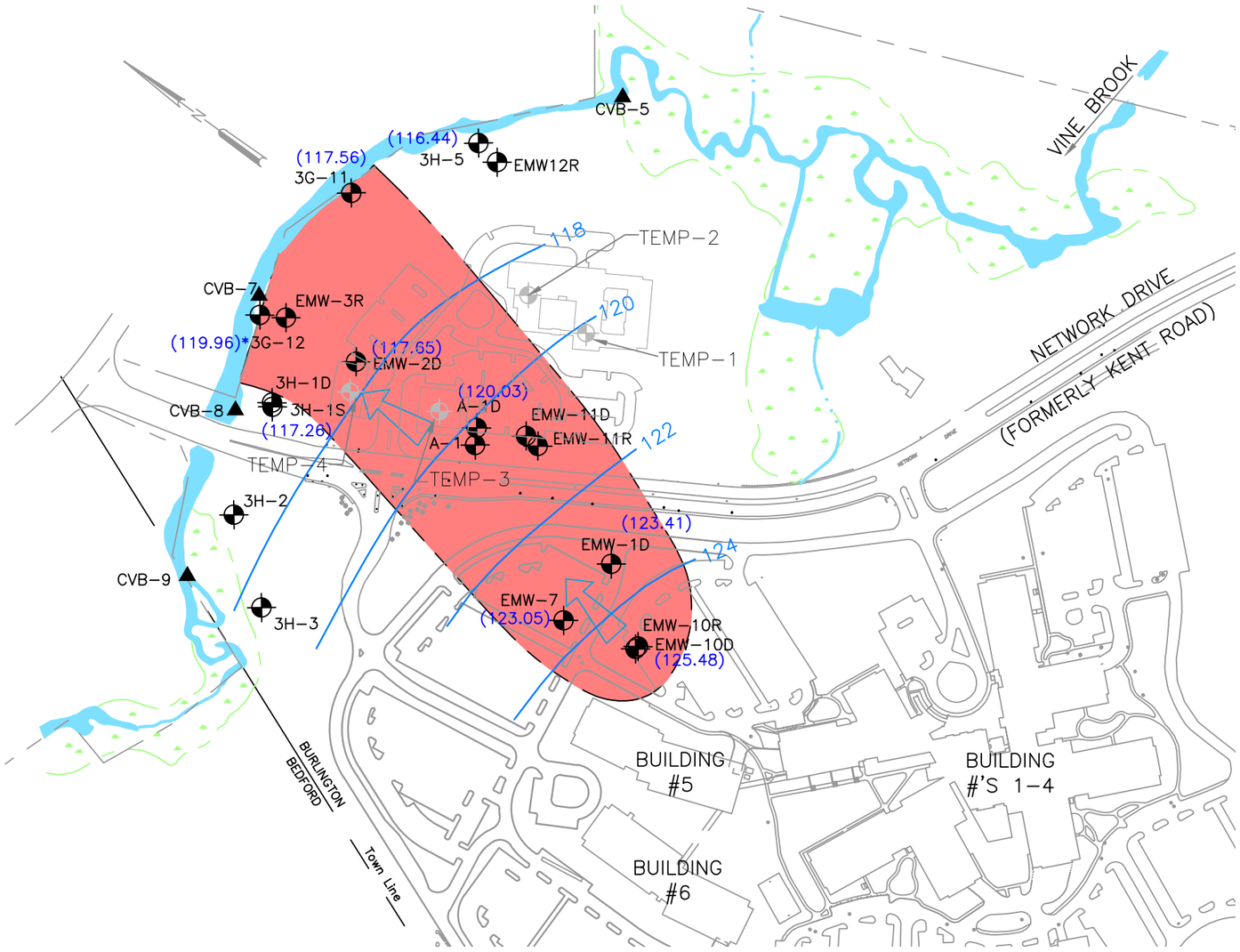
LOCATION: **Former RCA Facility**
One Network Drive, Burlington, Massachusetts

TETRA TECH

APPROVED	GD
DRAFTED	RMK
PROJECT#	117–0507550
DATE	MAY 2013

FIGURE **1-2**

G:\LOCKHEAD\2013\04–13_PHASE–5\FIG–1–2.DWG



LEGEND

- PROPERTY LINE
- BUILDING
- PAVED ROAD
- LIMITS OF SWAMP
- BODY OF WATER/STREAM
- EMW–1D — MONITORING WELL AND IDENTIFIER
- CVB–1 — SURFACE WATER SAMPLING LOCATION AND IDENTIFIER
- EMW–1D — TEMPORARY WELL AND IDENTIFIER
- CHLORINATED VOC PLUME/ GROUNDWATER (AREA/ MEDIA SUBJECT TO ROS)
- 124 — WATER TABLE CONTOUR (FT)
- (127.28) — GROUNDWATER ELEVATION (FT)
- GROUNDWATER FLOW
- (127.28)* — NOT USED IN CONTOURING

0 300 600

SCALE IN FEET

NOTE:

BASE MAP SOURCES: VANASSE HANGEN BRUSTIN, INC., MAP, DRAWING #C–3, SHEET 3 OF 11 PROJECT #06830, 1/18/00, AND EMCON DRAWING #1, PROJECT #86075–001.000, 1/10/97.

TITLE: **WATER TABLE GROUNDWATER ELEVATION MAP NOVEMBER 2012**

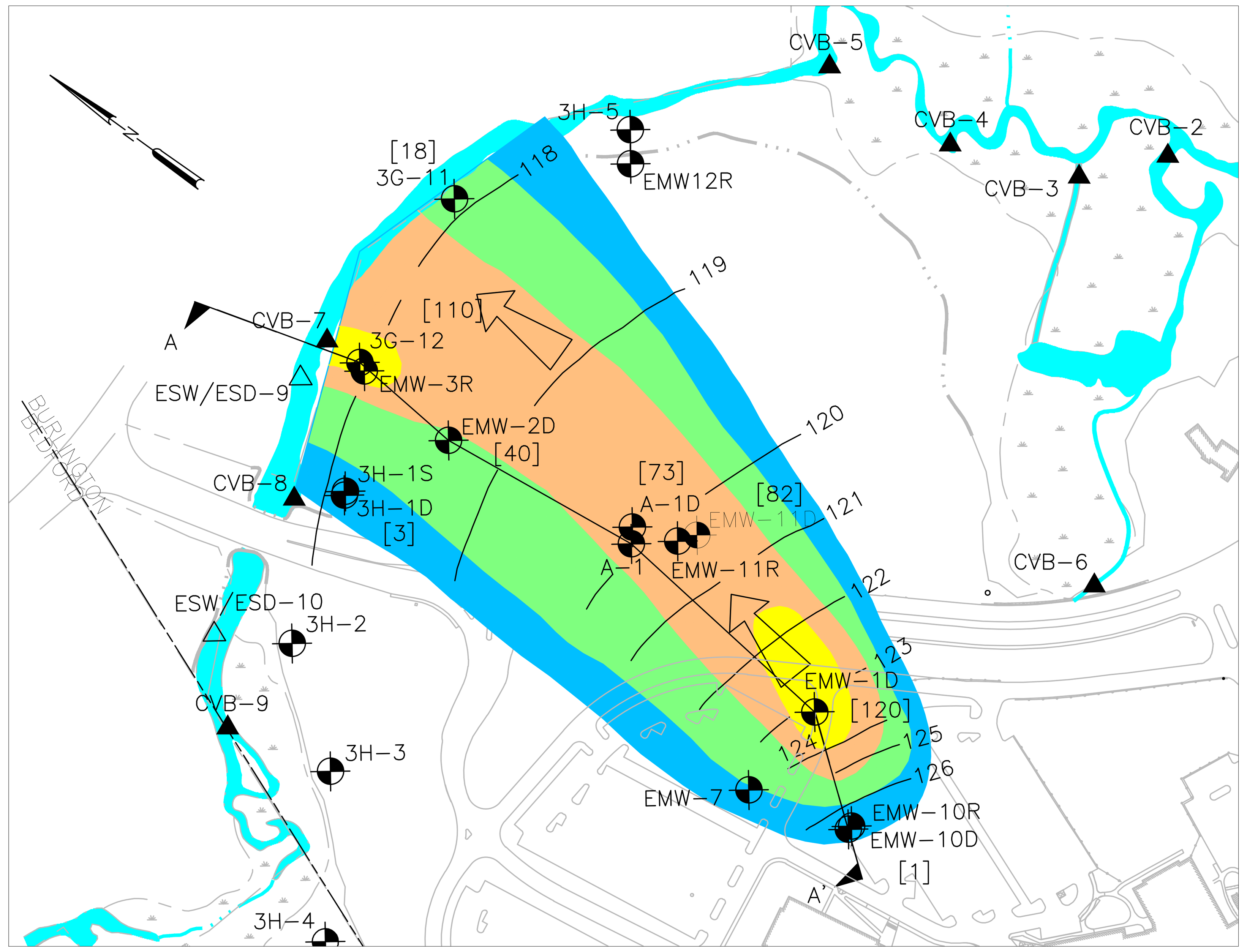
LOCATION: **Former RCA Facility One Network Drive, Burlington, Massachusetts**

TETRA TECH

APPROVED	GD
DRAFTED	RMK
PROJECT#	117–0507550
DATE	MAY 2013

FIGURE **2-1**

G:\LOCKHEAD\2013\04–13_PHASE–5\FIG–1–2.DWG



1,1-DCE MAY 1998

1,1-DCE LEGEND

[2] ug/L

0-6 ug/L

7-49 ug/L

50-99 ug/L

>100 ug/L

1,1-DCE FEB 2001

1,1-DCE LEGEND

[2] ug/L

0-6 ug/L

7-49 ug/L

50-99 ug/L

>100 ug/L

1,1-DCE NOV 2007

1,1-DCE LEGEND

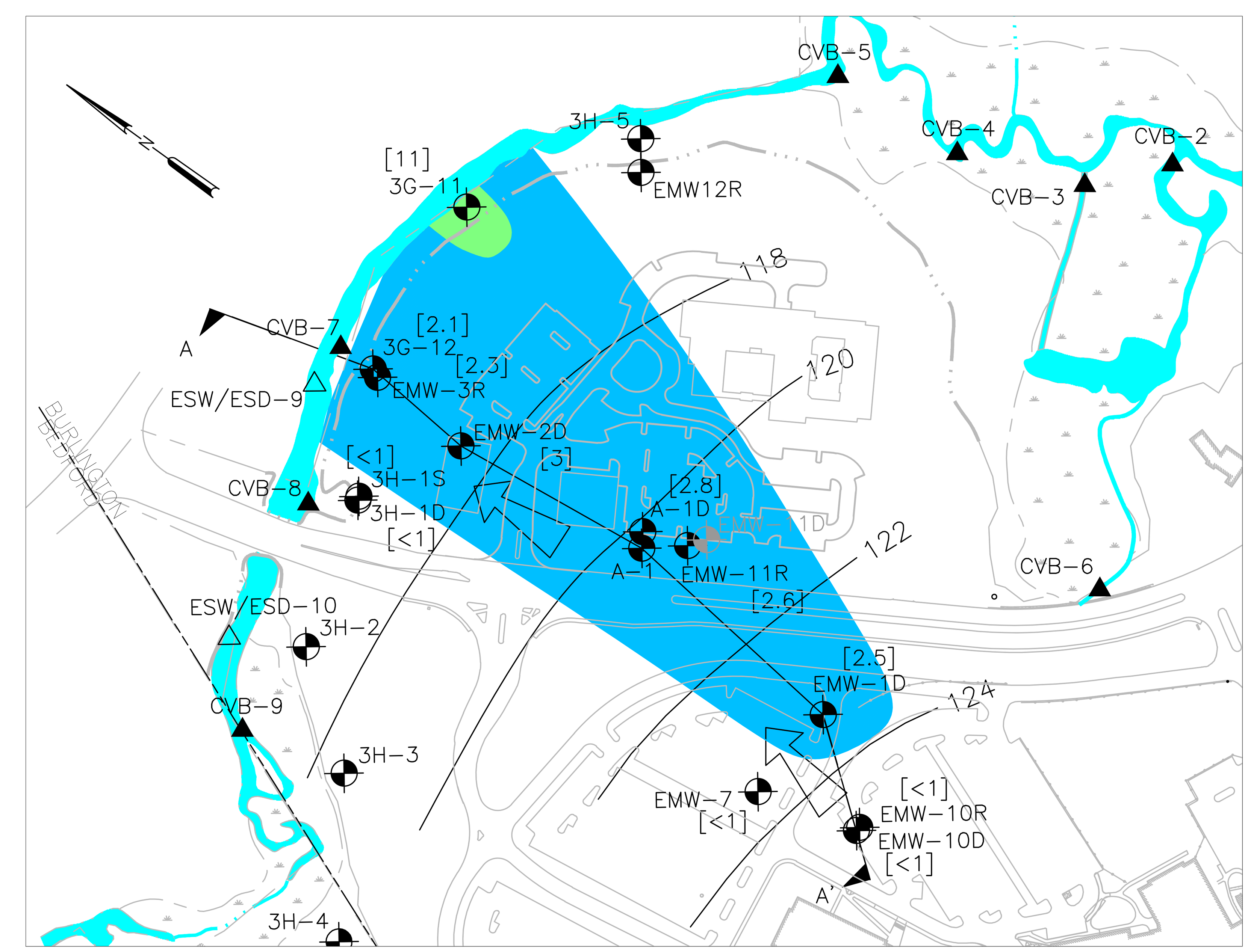
[2] ug/L

0-6 ug/L

7-49 ug/L

50-99 ug/L

>100 ug/L



1,1-DCE NOV 2012

1,1-DCE LEGEND

[2] ug/L

0-6 ug/L

7-49 ug/L

50-99 ug/L

>100 ug/L

NOTE:

1. MONITORING WELL EMW-11D WAS DAMAGED DURING CONSTRUCTION IN 2000 AND PROPERLY ABANDONED IN 2001.

2. MCL FOR 1,1-DCE = 7 ug/L

LEGEND

Symbol	Description
A — A'	LOCATION OF CROSS-SECTIONS SHOWN IN FIGURE 3-2
(arrow)	GROUNDWATER FLOW DIRECTION
(119.34)	WATER TABLE ELEVATION (FT)
(line)	WATER TABLE ELEVATION CONTOUR

NOT TO SCALE

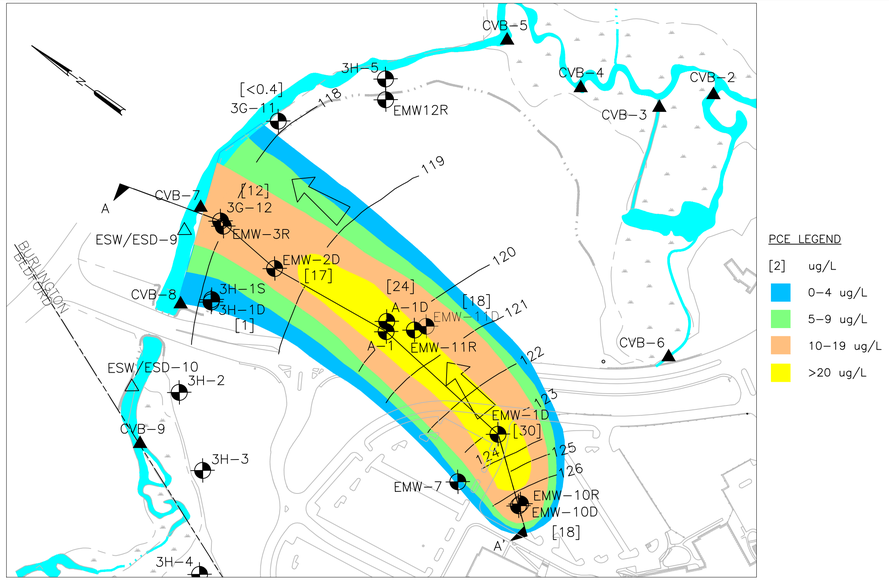
NOTE:
BASE MAP AND ALL DATA FOR 1998, 2001 AND 2007 PREPARED BY SHAW EVIRONMENTAL, INC.

TITLE: **1,1-DCE PLUME MAPS**

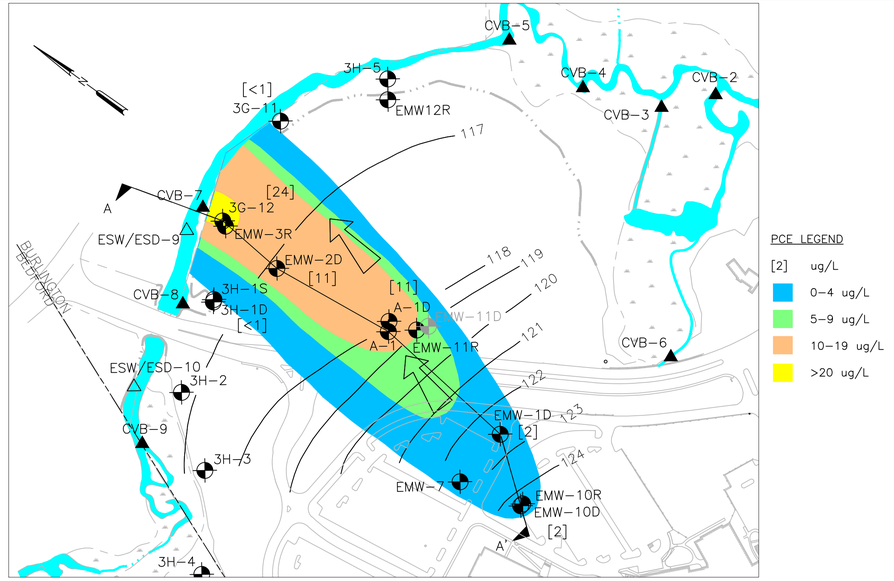
LOCATION: **Former RCA Facility**
One Network Drive, Burlington, Massachusetts

TETRA TECH

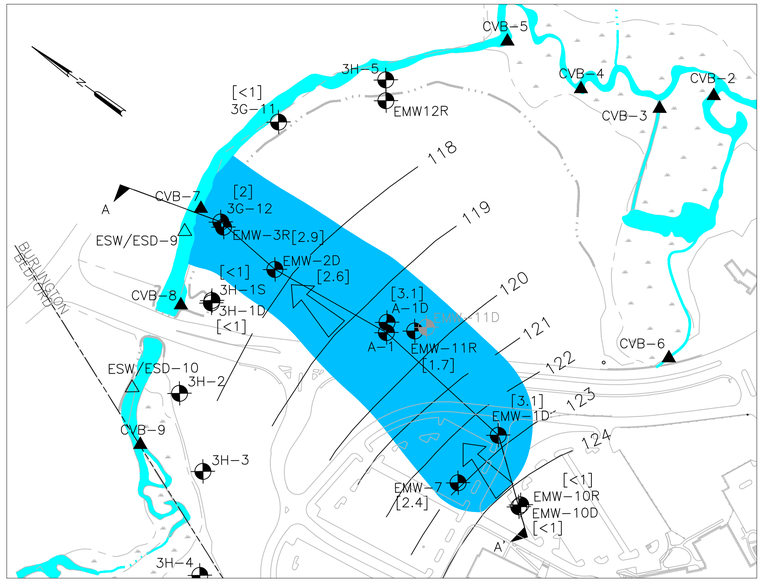
APPROVED	GD	FIGURE
DRAFTED	RMK	
PROJECT#	117-0507550	3-1
DATE	MAY 2013	



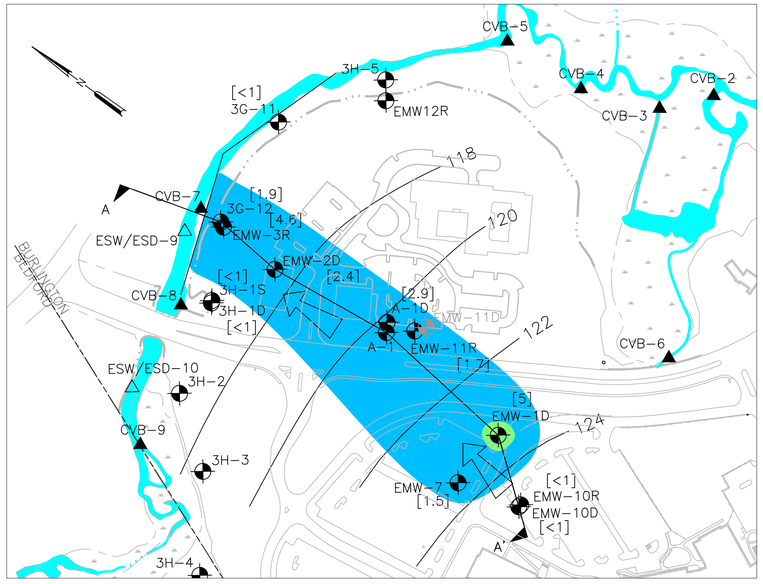
PCE MAY 1998



PCE FEB 2001



PCE NOV 2007



PCE NOV 2012

NOTE:

1. MONITORING WELL EMW-11D WAS DAMAGED DURING CONSTRUCTION IN 2000 AND PROPERLY ABANDONED IN 2001.
2. MCL FOR PCE = 5 ug/L

LEGEND

A — A' LOCATION OF CROSS-SECTIONS SHOWN IN FIGURE 3-2

GROUNDWATER FLOW DIRECTION

(119.34) WATER TABLE ELEVATION (FT)

WATER TABLE ELEVATION CONTOUR

NOT TO SCALE

NOTE:
BASE MAP AND ALL DATA FOR 1998, 2001 AND 2007 PREPARED BY SHAW EVIRONMENTAL, INC.

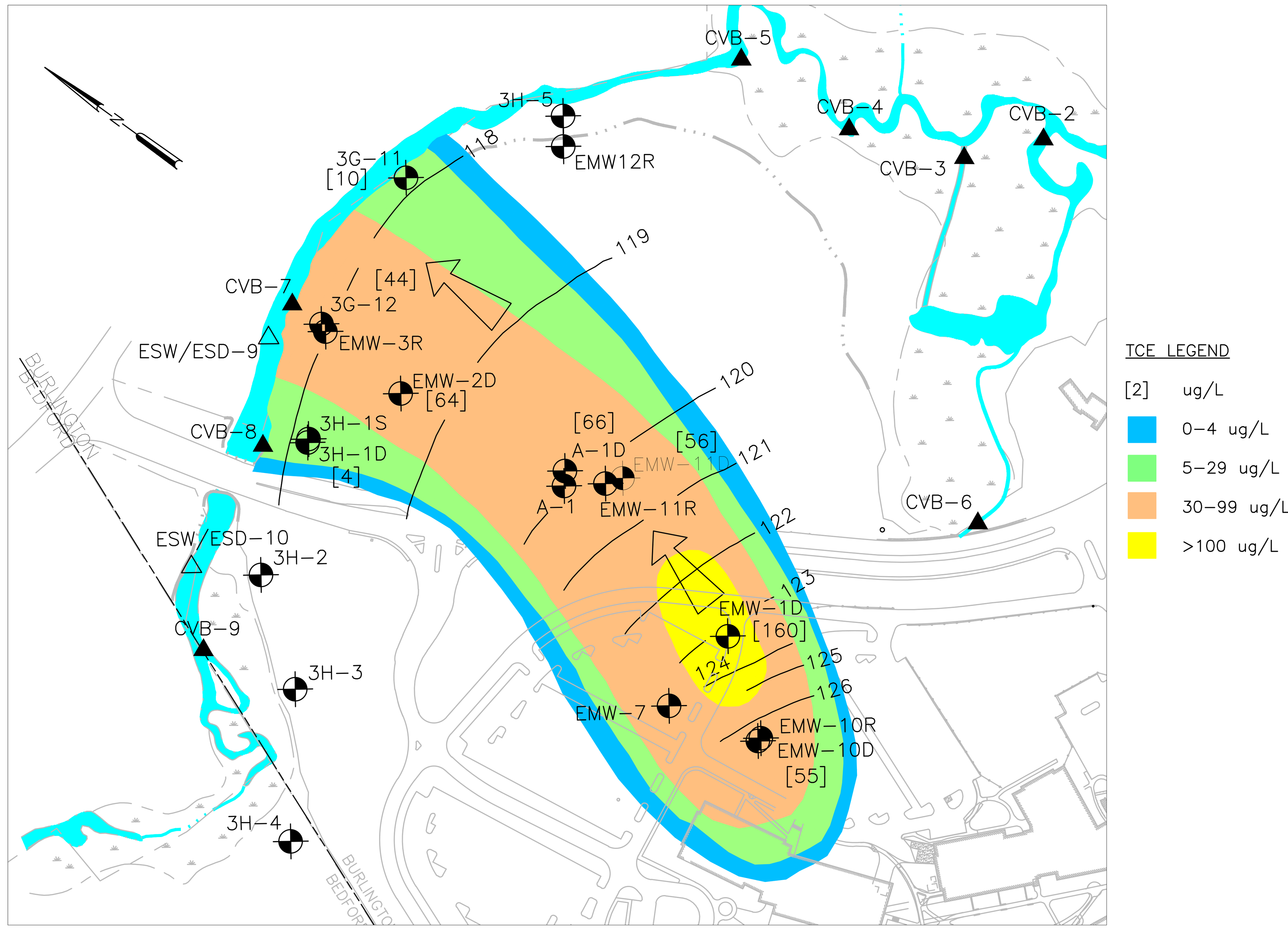
TITLE: **PCE PLUME MAPS**

LOCATION: **Former RCA Facility**
One Network Drive, Burlington, Massachusetts

TETRA TECH

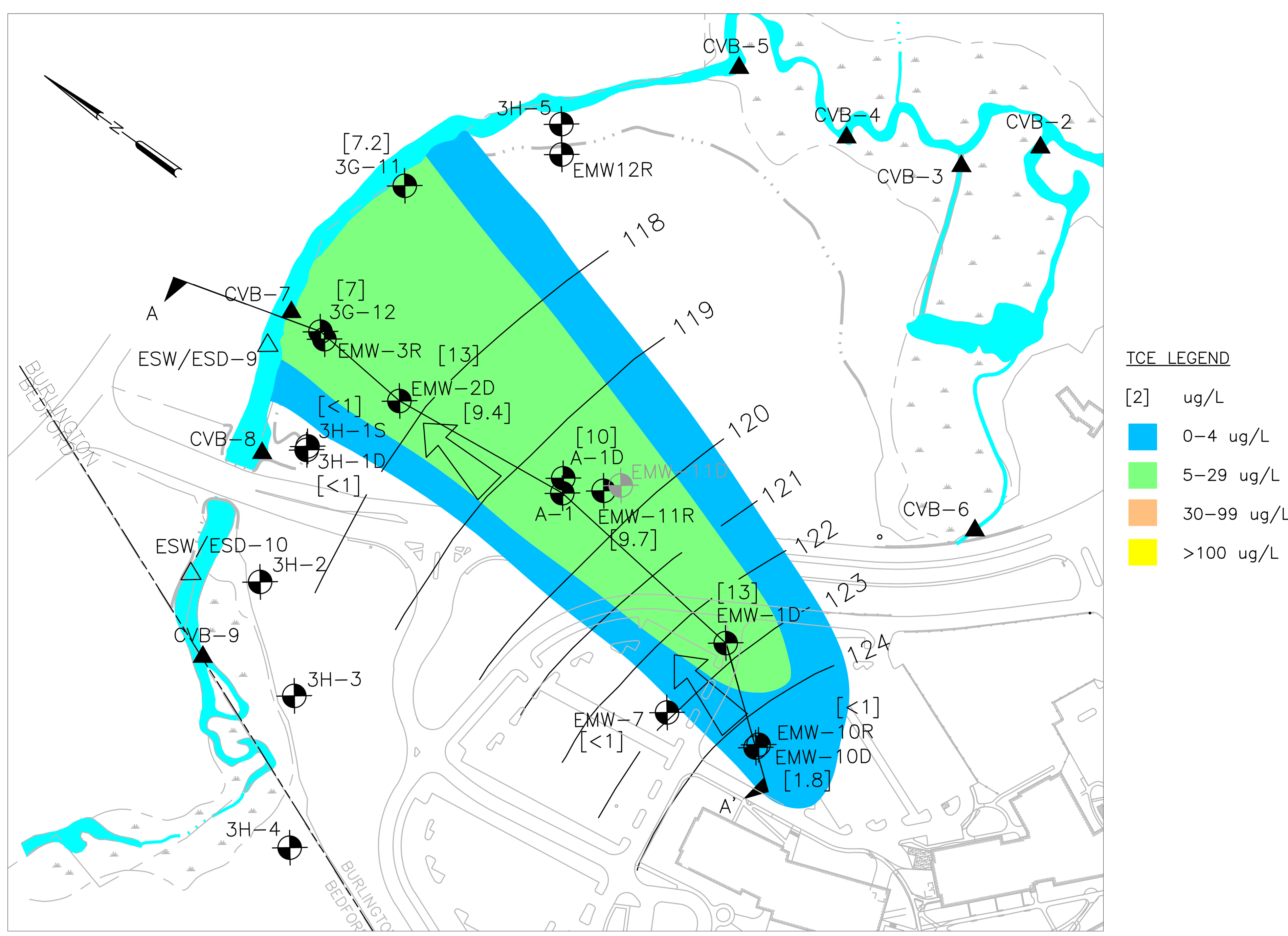
APPROVED	GD
DRAFTED	RMK
PROJECT#	117-0507550
DATE	MAY 2013

FIGURE **3-2**

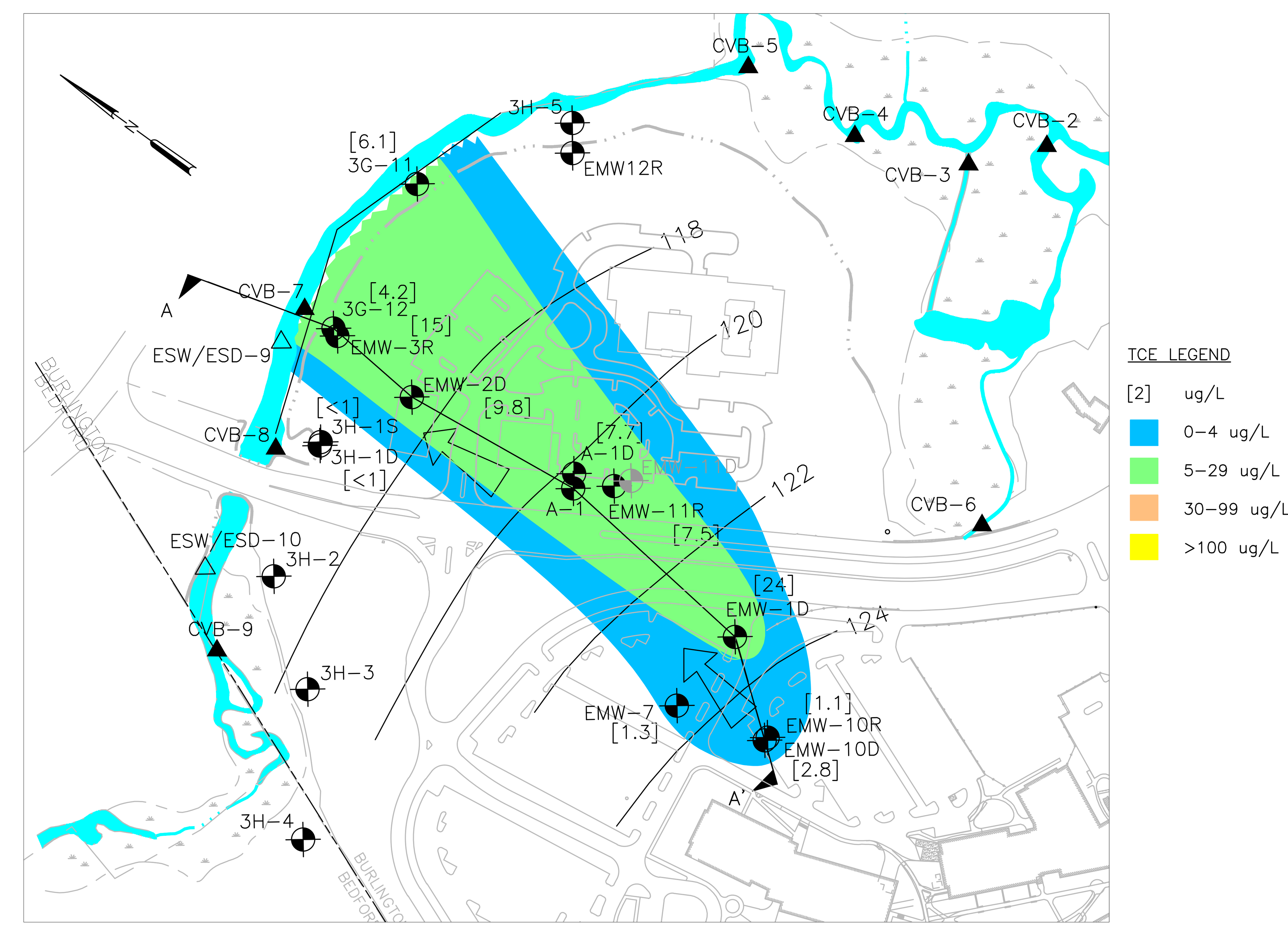


TCE MAY 1998

TCE FEB 2001



TCE NOV 2007



TCE NOV 2012

NOT TO SCALE

LEGEND

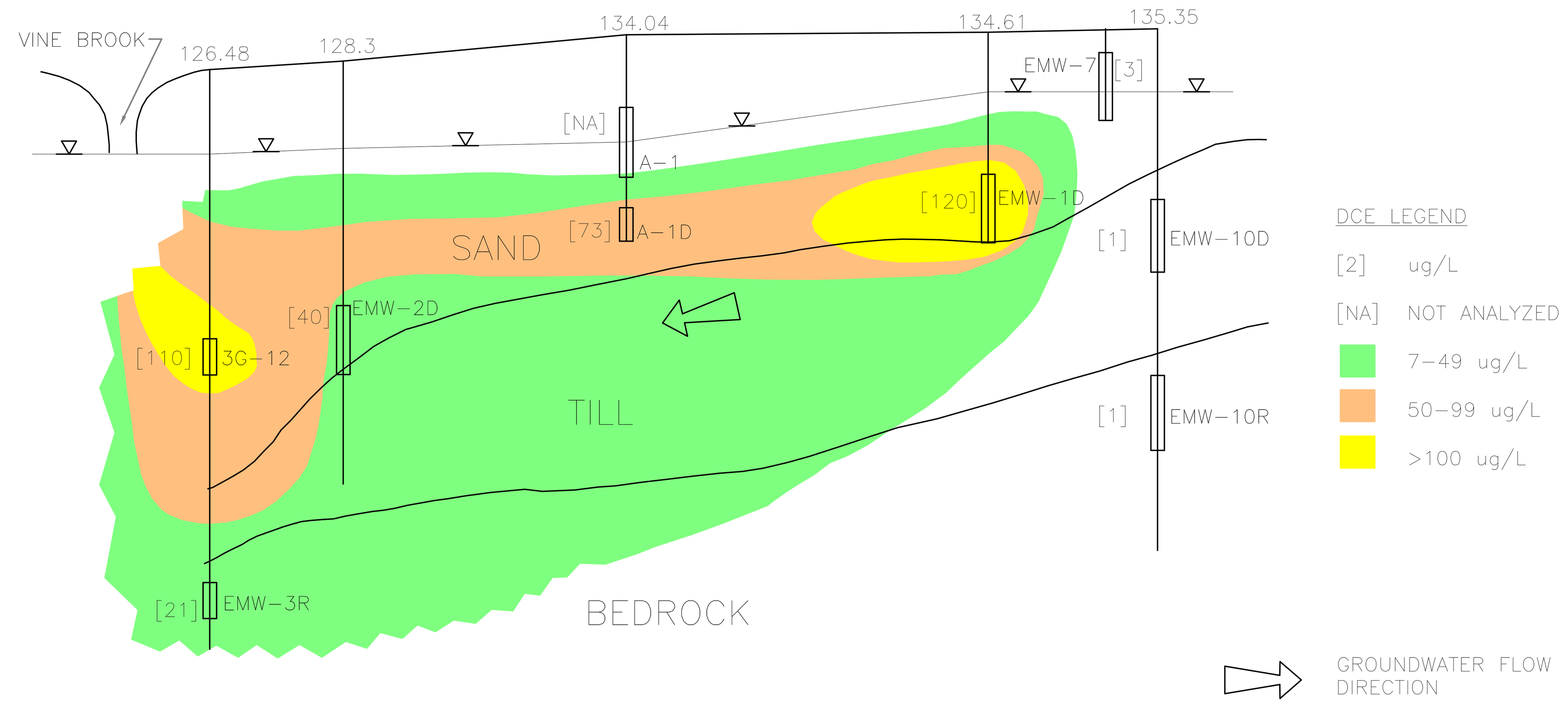
A ——— A'	LOCATION OF CROSS-SECTIONS SHOWN IN FIGURE 3-2
⇨	GROUNDWATER FLOW DIRECTION
(119.34)	WATER TABLE ELEVATION (FT)
———	WATER TABLE ELEVATION CONTOUR

NOTE:

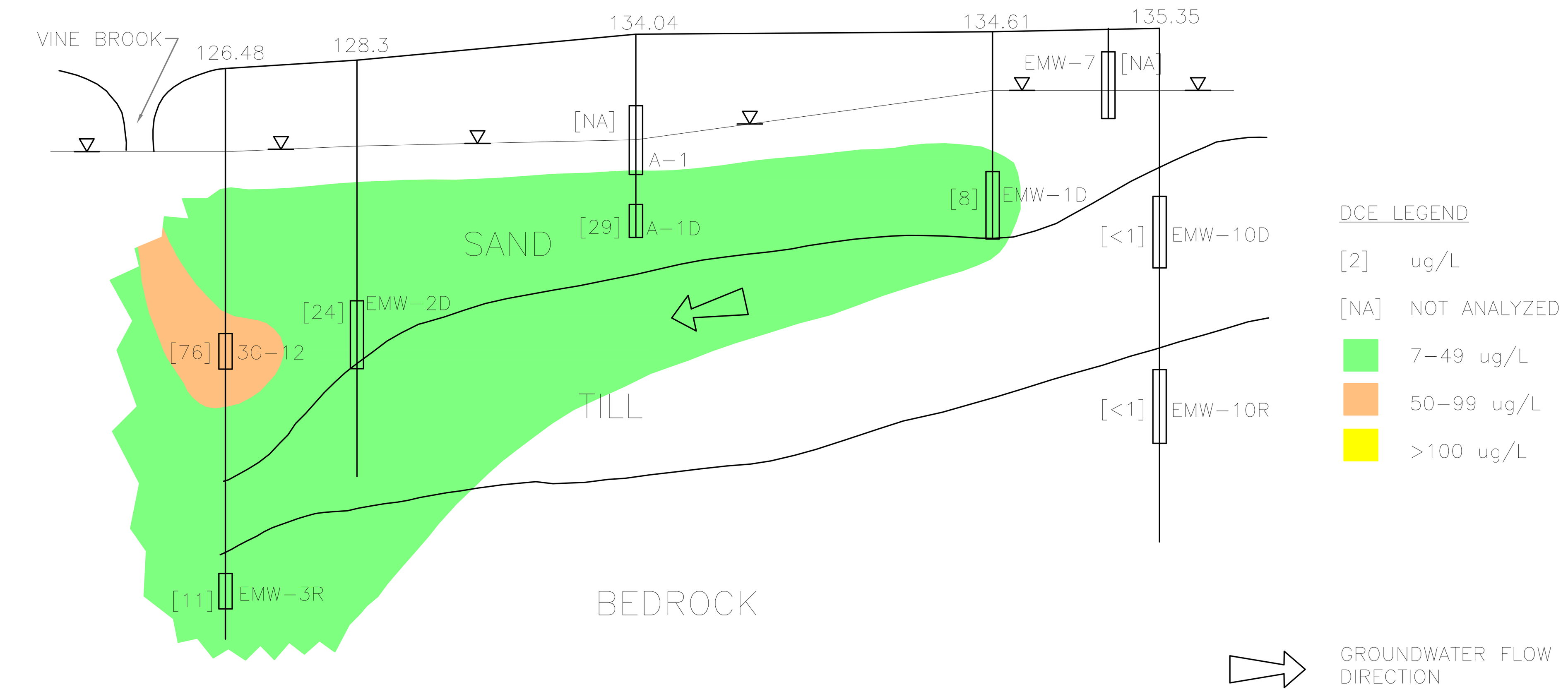
1. MONITORING WELL EMW-11D WAS DAMAGED DURING CONSTRUCTION IN 2000 AND PROPERLY ABANDONED IN 2001.
2. MCL FOR TCE = 5 ug/L

NOTE:
BASE MAP AND ALL DATA FOR 1998, 2001 AND 2007 PREPARED BY SHAW EVIRONMENTAL, INC.

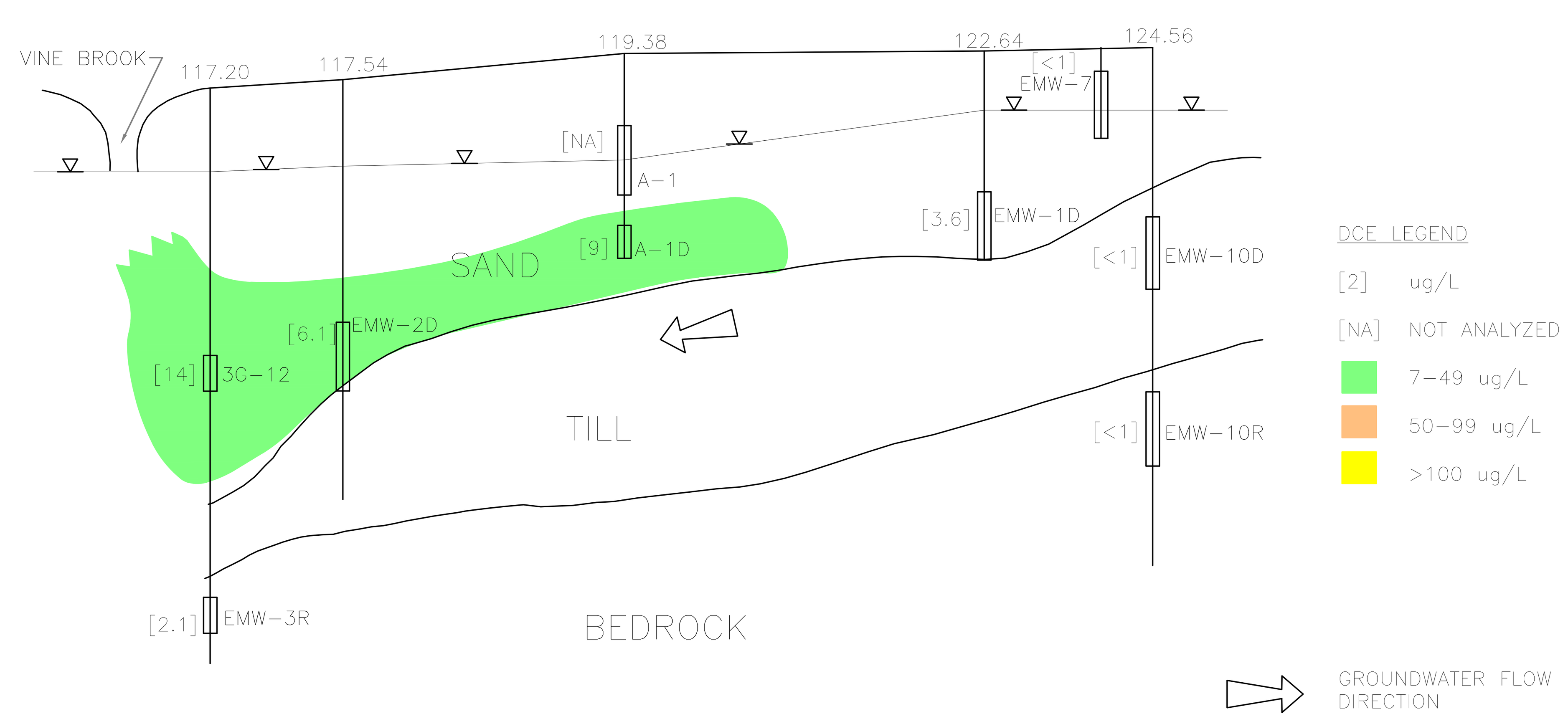
TITLE:	TCE PLUME MAPS
LOCATION:	Former RCA Facility One Network Drive, Burlington, Massachusetts
TETRA TECH	APPROVED GD; DRAFTED RMK; PROJECT# 117-0507550; DATE MAY 2013
FIGURE	3-3



1,1-DCE MAY 1998

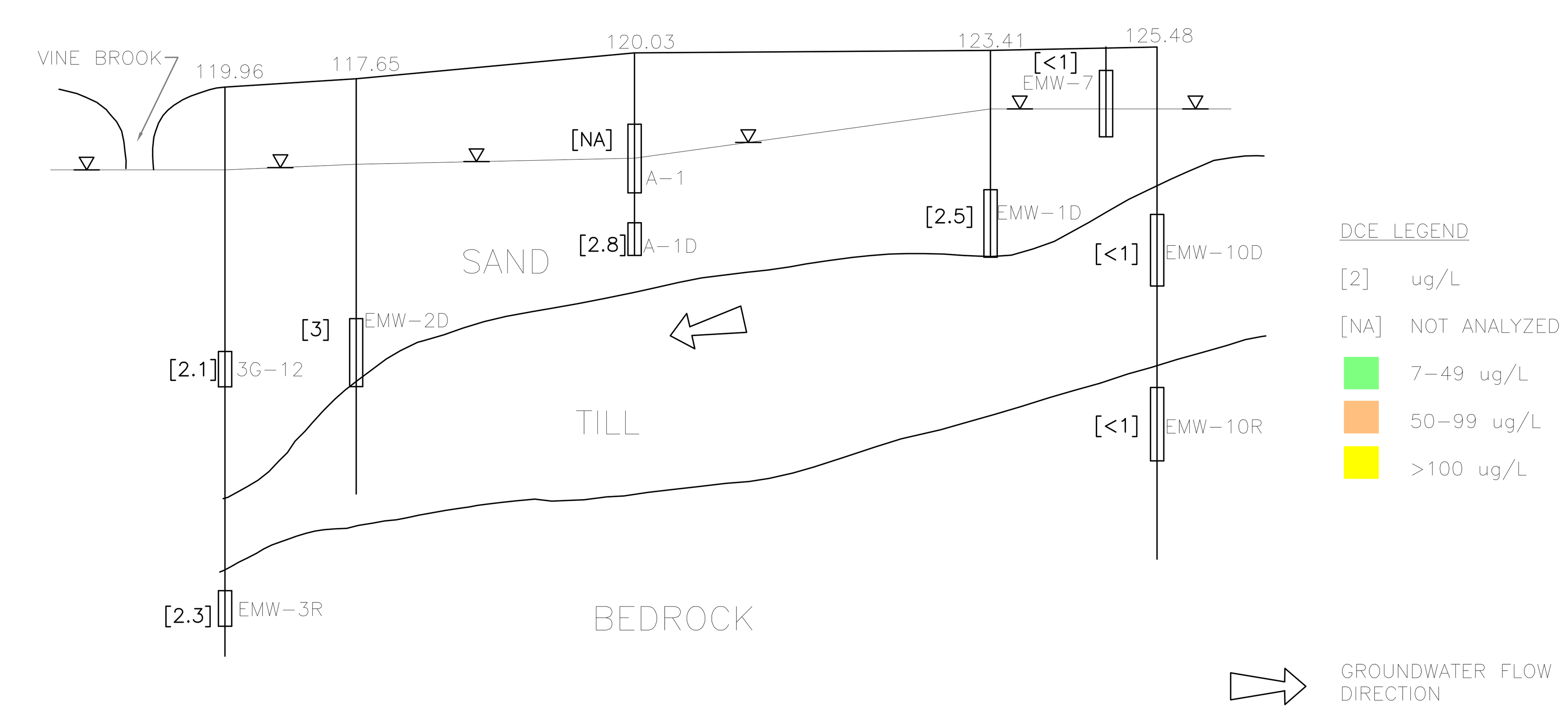


1,1-DCE FEB 2001



1,1-DCE NOV 2007

NOTE:
1. MCL FOR 1,1-DCE = 7 ug/L



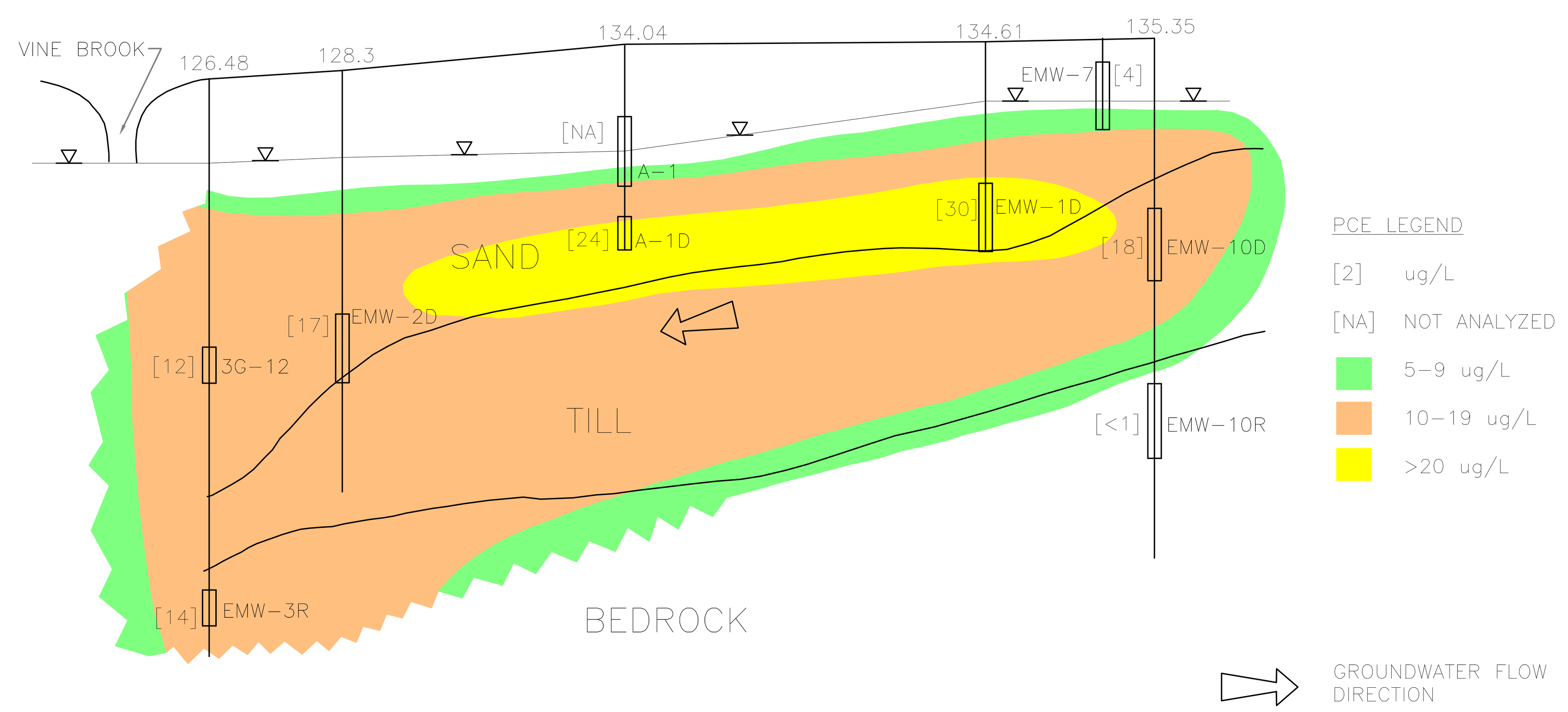
1,1-DCE NOV 2012

0 200 400
HORIZONTAL SCALE IN FEET

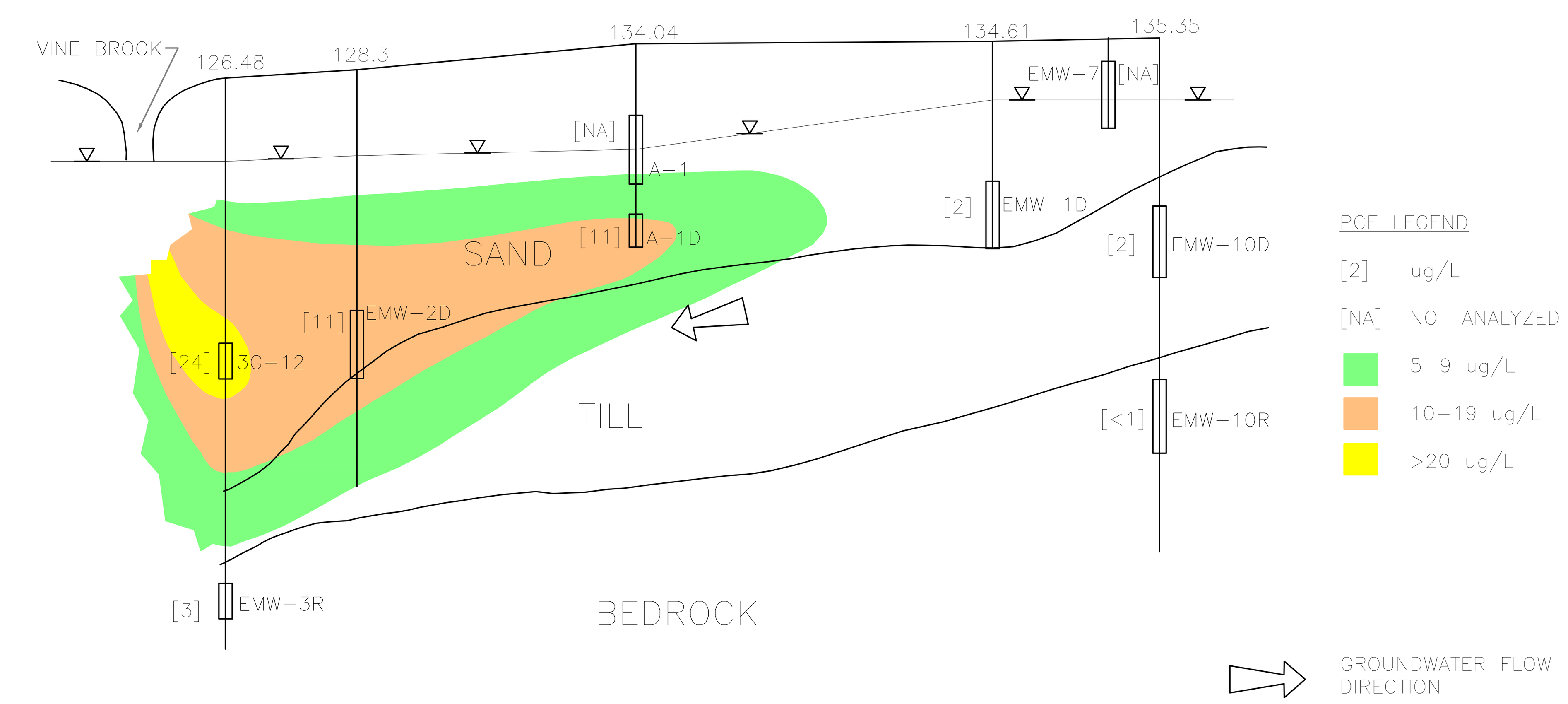
0 20 40
VERTICAL SCALE IN FEET

NOTE:
BASE CROSS SECTION AND ALL DATA FOR 1998, 2001 AND 2007 PREPARED BY SHAW EVIRONMENTAL, INC.

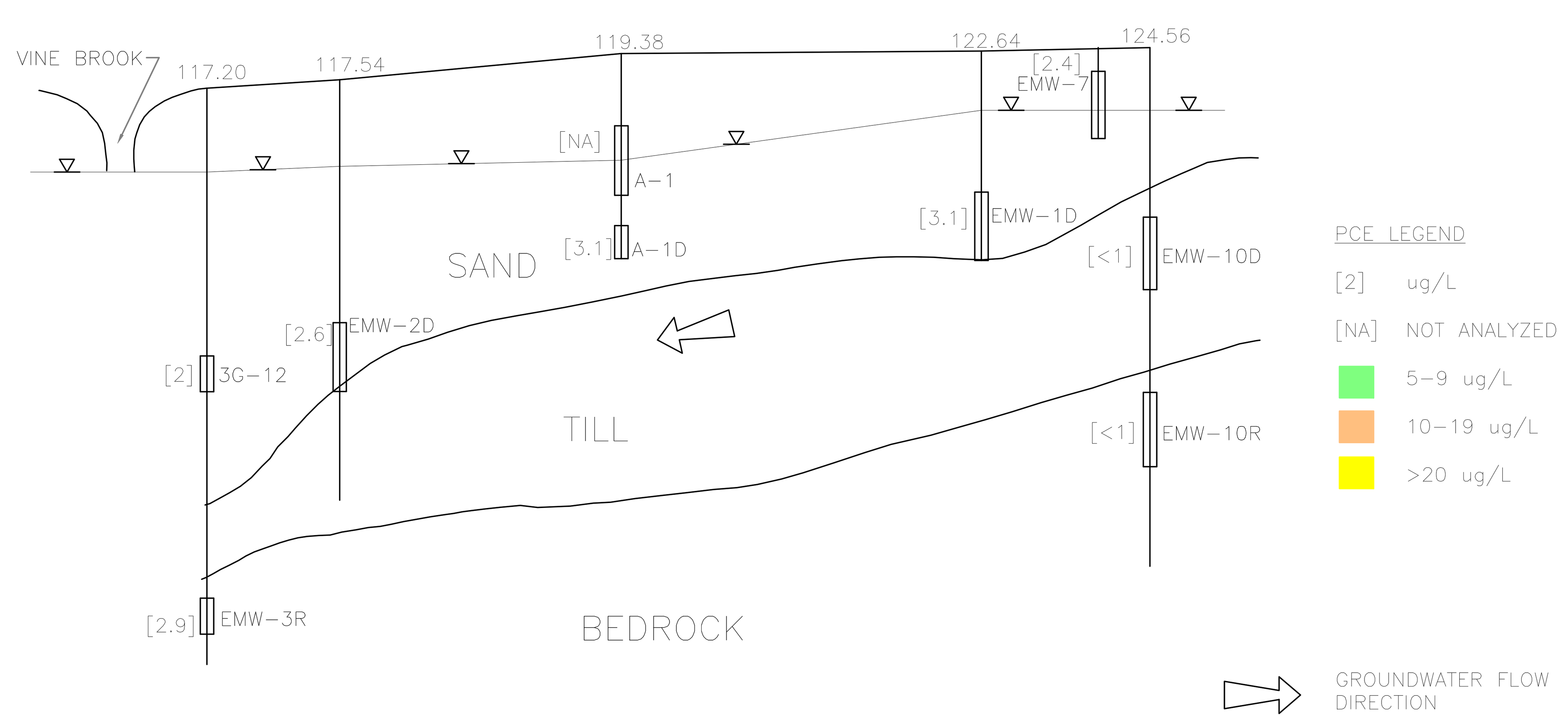
TITLE:	1,1-DCE PLUME CROSS SECTION
LOCATION:	Former RCA Facility One Network Drive, Burlington, Massachusetts
TETRA TECH	APPROVED: GD DRAFTED: RMK PROJECT#: 117-0507550 DATE: MAY 2013
FIGURE	3-4



PCE MAY 1998



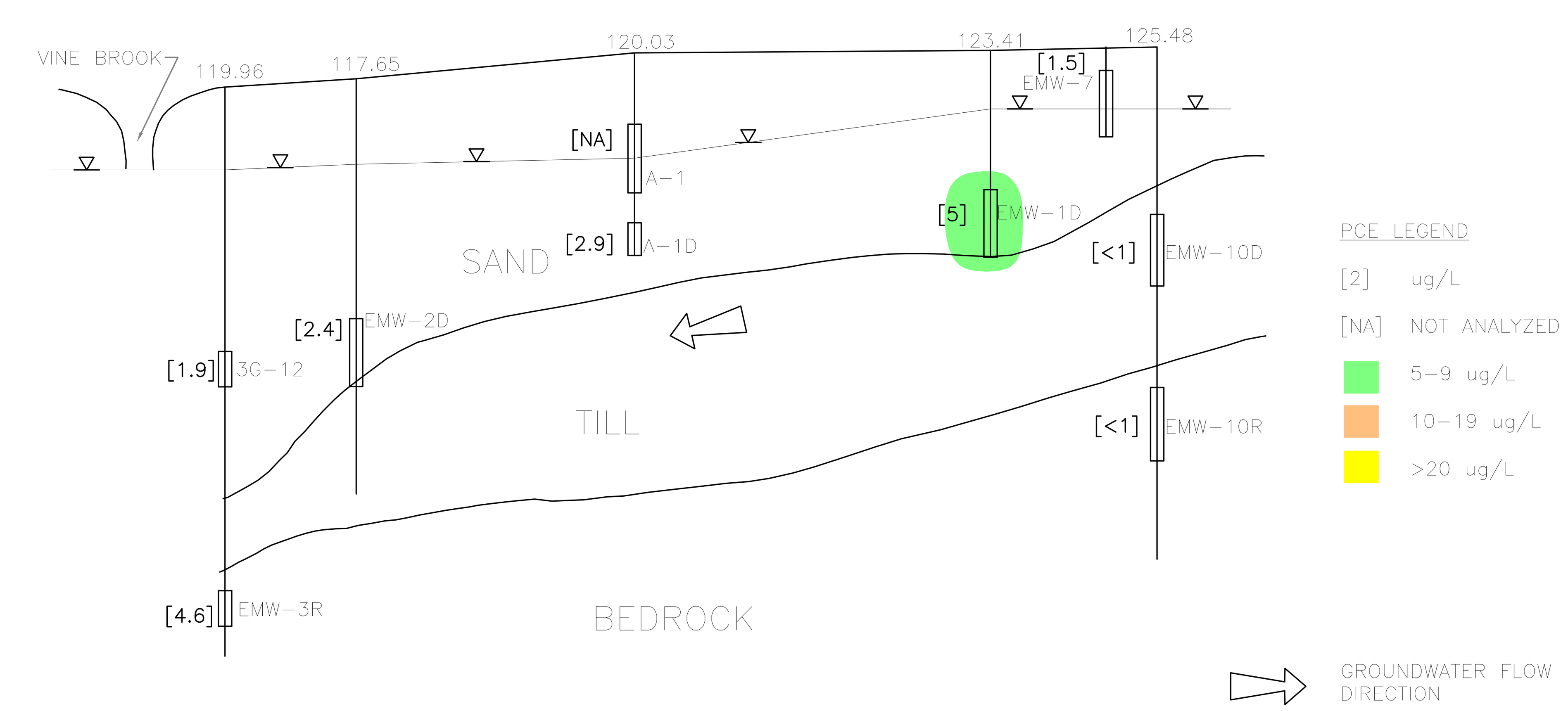
PCE FEB 2001



PCE NOV 2007

NOTE:

1. MCL FOR PCE = 5 ug/L



PCE NOV 2012

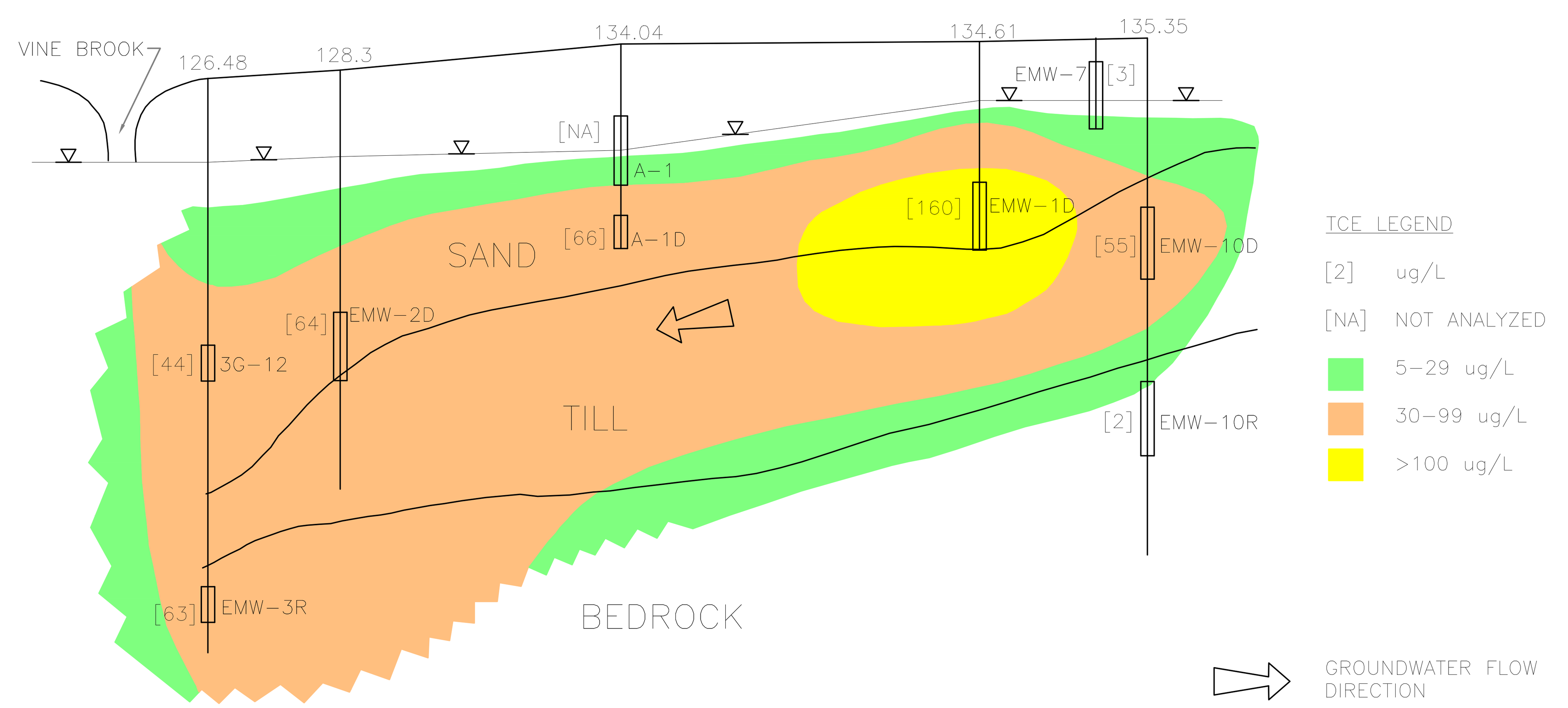
0 200 400
HORIZONTAL SCALE IN FEET

0 20 40
VERTICAL SCALE IN FEET

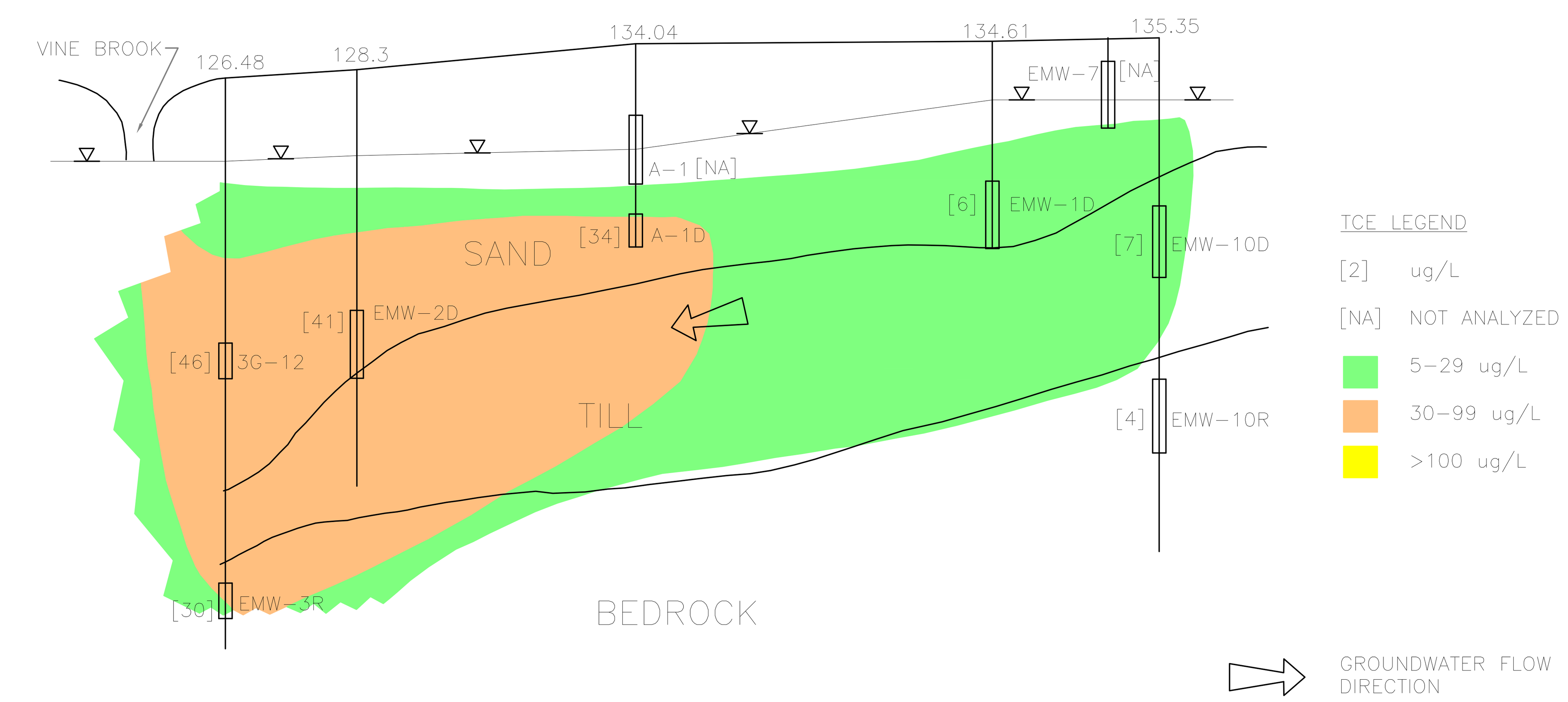
NOTE:
BASE CROSS SECTION AND ALL DATA FOR 1998, 2001 AND 2007 PREPARED BY SHAW EVIRONMENTAL, INC.

TITLE:	PCE PLUME CROSS SECTION
LOCATION:	Former RCA Facility One Network Drive, Burlington, Massachusetts
APPROVED	GD
DRAFTED	RMK
PROJECT#	117-0507550
DATE	MAY 2013
FIGURE	3-5

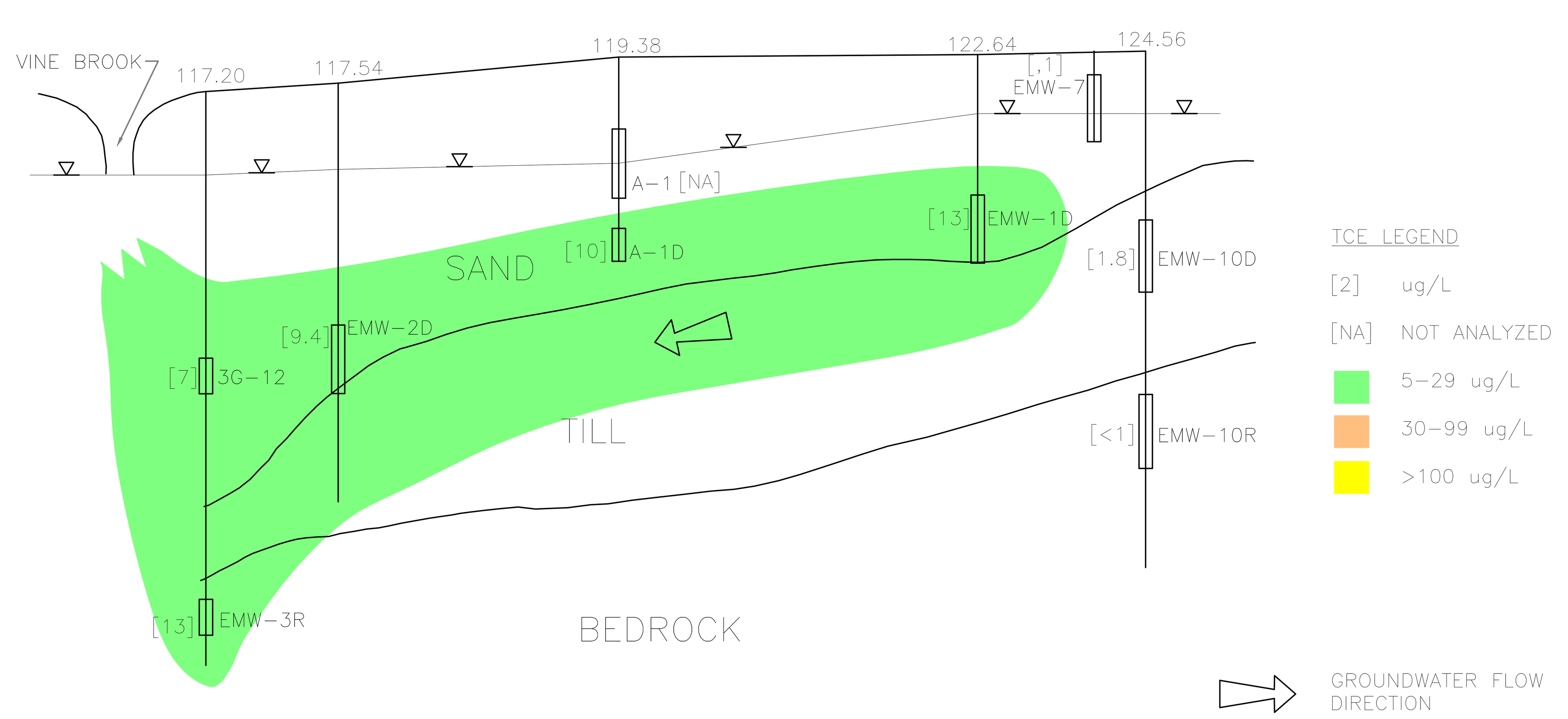
TETRA TECH



TCE MAY 1998



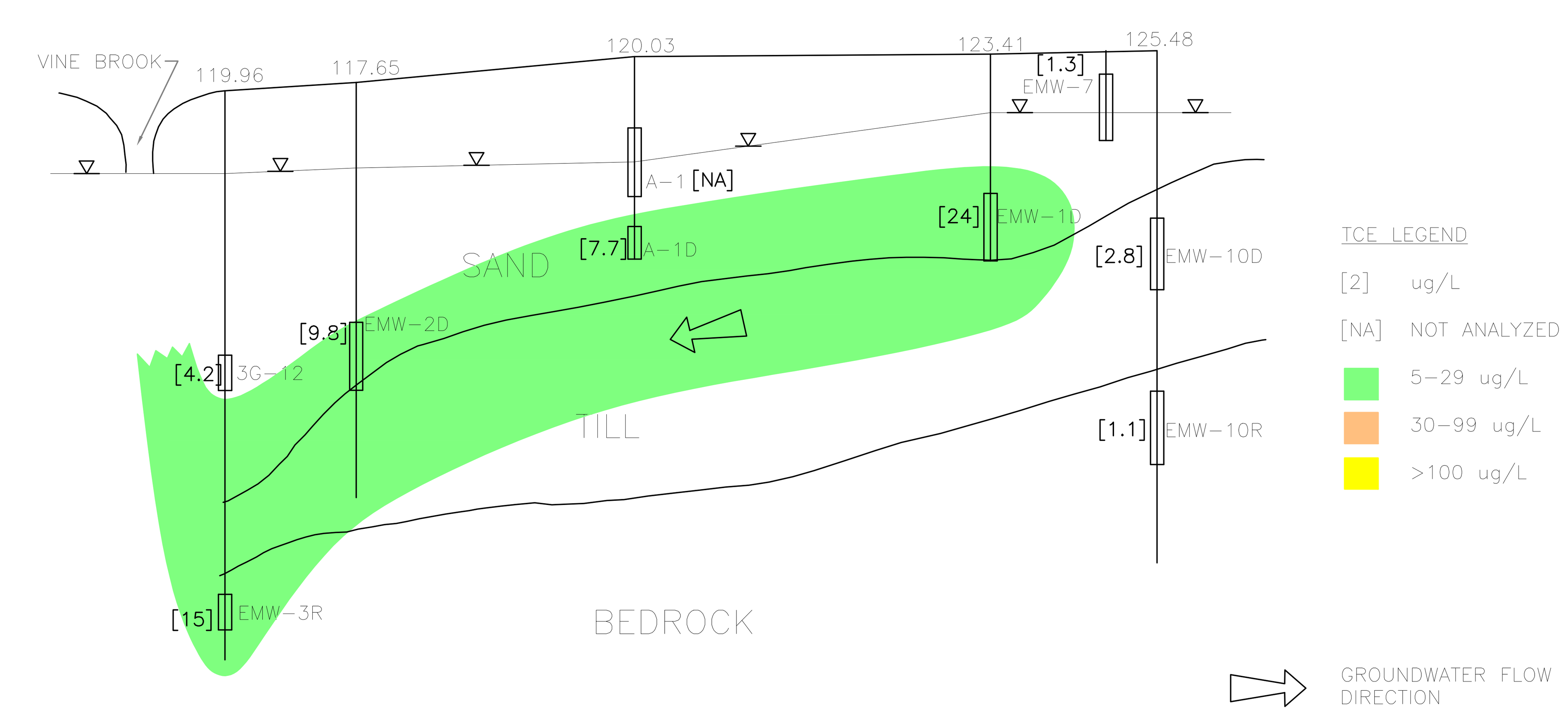
TCE FEB 2001



TCE NOV 2007

NOTE:

1. MCL FOR TCE = 5 ug/L



TCE NOV 2012

0 200 400
HORIZONTAL SCALE IN FEET

0 20 40
VERTICAL SCALE IN FEET

NOTE:
BASE CROSS SECTION AND ALL DATA FOR 1998, 2001 AND 2007 PREPARED BY SHAW EVIRONMENTAL, INC.

TITLE: **TCE PLUME CROSS SECTION**

LOCATION: **Former RCA Facility**
One Network Drive, Burlington, Massachusetts

TETRA TECH

APPROVED	GD	FIGURE
DRAFTED	RMK	
PROJECT#	117-0507550	3-6
DATE	MAY 2013	

APPENDIX A

NOVEMBER 2012 LABORATORY ANALYTICAL RESULTS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-28222-1
Client Project/Site: LMC Burlington 147274
Revision: 1

For:
Shaw Environmental & Infrastructure, Inc
150 Royall Street
Canton, Massachusetts 02021

Attn: Edward Van Doren

Authorized for release by:
12/6/2012 10:58:47 AM
Joe Chimi
Report Production Representative
joe.chimi@testamericainc.com

Designee for

Janine Johnson
Project Manager I
janine.johnson@testamericainc.com

Table of Contents

Client: Shaw Environmental & Infrastructure, Inc
Project/Site: LMC Burlington 147274

TestAmerica Job ID: 480-28222-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDA	Minimum detectable activity
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 480-28222-1

Laboratory: TestAmerica Buffalo

Narrative

Report was revised on 12/06/2012 to add additional information under the Receipt heading and to provide the pH value in the Volatiles section. This final report replaces the final report generated on 11/27/2012.

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received at TestAmerica Buffalo on 11/10/2012; the samples arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt were 3.1, 3.5 and 3.8 C. The samples were received at TestAmerica Burlington on 11/10/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.5 C. The samples were received at Microseeps on 11/13/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.4 C.

TestAmerica's Reporting Limits (RLs) for this report may not always meet client specified method reporting limits due to various reasons such as methodology, dilutions, matrix or moisture content (soils). TestAmerica's pivot table EDD documents which compound(s) exceed certain regulatory standards. If not included with your deliverables, please contact your Project Manager about the availability of this EDD for your report.

1,4-DIOXANE (SIM)

Samples EMW-7 (480-28222-1), EMW-11R (480-28222-2), 3H-1D (480-28222-3), EMW-1D (480-28222-4), EMW-10R (480-28222-5), A-1D (480-28222-6), 3H-1S (480-28222-7), EMW-10D (480-28222-8), 3G-12 (480-28222-9), EMW-3R (480-28222-10), EMW-2D (480-28222-11), EMW-2D DUP (480-28222-12) and 3G-11 (480-28222-13) were analyzed for 1,4-Dioxane (SIM) in accordance with EPA 522 MOD. The samples were prepared and analyzed on 11/12/2012.

This analysis was performed at TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403.

No difficulties were encountered during the 1,4-Dioxane (SIM) analyses.

All quality control parameters were within the acceptance limits.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples EMW-7 (480-28222-1), EMW-11R (480-28222-2), 3H-1D (480-28222-3), EMW-1D (480-28222-4), EMW-10R (480-28222-5), A-1D (480-28222-6), 3H-1S (480-28222-7), EMW-10D (480-28222-8), 3G-12 (480-28222-9), EMW-3R (480-28222-10), EMW-2D (480-28222-11), EMW-2D DUP (480-28222-12), 3G-11 (480-28222-13) and Trip Blank (480-28222-14) were analyzed for volatile organic compounds (GC-MS) in accordance with SW846 8260C. The samples were analyzed on 11/14/2012.

The following required QA/QC procedures, which may affect Presumptive Certainty, were not met as per section A of the MADEP MCP analytical method report Certification form: The following sample submitted for volatiles analysis was received with insufficient preservation (pH of 7): EMW-10R (480-28222-5). The pH is checked upon completion of the sample's run through the instrument. Once a sample for volatiles analysis is closed and ready for analysis, it cannot be opened for pH adjustment to prevent loss of volatile contents.

Dichlorodifluoromethane failed the recovery criteria high for LCS 480-90809/4. Refer to the QC report for details.

No other difficulties were encountered during the volatile organic compounds (GC-MS) analyses.

All other quality control parameters were within the acceptance limits.

Job ID: 480-28222-1 (Continued)

Laboratory: TestAmerica Buffalo (Continued)

ANIONS (28 DAY HOLD TIME)

Samples EMW-1D (480-28222-4), 3G-12 (480-28222-9), EMW-2D (480-28222-11) and EMW-2D DUP (480-28222-12) were analyzed for anions (28 day hold time) in accordance with EPA Method 300.0. The samples were analyzed on 11/13/2012.

No difficulties were encountered during the anions analyses.

All quality control parameters were within the acceptance limits.

NITRATE

Samples EMW-1D (480-28222-4), 3G-12 (480-28222-9), EMW-2D (480-28222-11) and EMW-2D DUP (480-28222-12) were analyzed for Nitrate in accordance with EPA Method 353.2. The samples were analyzed on 11/10/2012.

The following sample was received with greater than 50% of holding time expired: EMW-1D (480-28222-4). As such, the laboratory had insufficient time remaining to perform the analysis within holding time.

No difficulties were encountered during the nitrate analyses.

All quality control parameters were within the acceptance limits.

TOTAL ORGANIC CARBON

Samples EMW-1D (480-28222-4), 3G-12 (480-28222-9), EMW-2D (480-28222-11) and EMW-2D DUP (480-28222-12) were analyzed for total organic carbon in accordance with SM 5310D. The samples were analyzed on 11/12/2012.

No difficulties were encountered during the TOC analyses.

All quality control parameters were within the acceptance limits.

METHANE

This analysis was performed at Microseeps, 220 William Pitt Way, Pittsburgh, PA 15238.

Refer to subcontract report for details.

MassDEP Analytical Protocol Certification Form

Laboratory Name: **TestAmerica Buffalo** Project #: **480-28222-1**

Project Location: **LMC Burlington** RTN:

This form provides certifications for the following data set: list Laboratory Sample ID Number(s):

480-28222-(1-4, 6-14)

Matrices: [X] Groundwater/Surface Water [ ] Soil/Sediment [ ] Drinking Water [ ] Air [ ] Other:

CAM Protocols (check all that apply below):

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

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

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding time.	[X] Yes [ ] No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	[X] Yes [ ] No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	[X] Yes [ ] No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	[X] Yes [ ] No
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). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	[ ] Yes [ ] No [ ] Yes [ ] No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	[X] Yes [ ] No

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

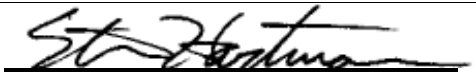
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	[ ] Yes [X] No[1]

***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 WCS-07-350**

H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	[ ] Yes [X] No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s) ?	[X] Yes [ ] No[1]

[1] All negative responses must be addressed in an attached laboratory narrative.

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

Signature:  Position: Laboratory Director-TestAmerica Westfield

Printed Name: Steven C. Hartmann Date: 11/27/12 16:27

This form has been electronically signed and approved

Client Sample ID: EMW-7 — Lab Sample ID: 480-28222-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	1.5		1.0		ug/L	1		8260C	Total/NA
Trichloroethene	1.3		1.0		ug/L	1		8260C	Total/NA

Client Sample ID: EMW-11R — Lab Sample ID: 480-28222-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	2.5		1.0		ug/L	1		8260C	Total/NA
1,1-Dichloroethene	2.6		1.0		ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	4.4		1.0		ug/L	1		8260C	Total/NA
Methyl tert-butyl ether	1.1		1.0		ug/L	1		8260C	Total/NA
Tetrachloroethene	1.7		1.0		ug/L	1		8260C	Total/NA
Trichloroethene	7.5		1.0		ug/L	1		8260C	Total/NA
1,4-Dioxane	0.82		0.20		ug/L	1		522 MOD	Total/NA

Client Sample ID: 3H-1D — Lab Sample ID: 480-28222-3

No Detections

Client Sample ID: EMW-1D — Lab Sample ID: 480-28222-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	1.1		1.0		ug/L	1		8260C	Total/NA
1,1-Dichloroethene	2.5		1.0		ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	4.4		1.0		ug/L	1		8260C	Total/NA
Tetrachloroethene	5.0		1.0		ug/L	1		8260C	Total/NA
Trichloroethene	24		1.0		ug/L	1		8260C	Total/NA
1,4-Dioxane	0.42		0.20		ug/L	1		522 MOD	Total/NA
Sulfate	25		2.0		mg/L	1		300.0	Total/NA
Total Organic Carbon	1.6		1.0		mg/L	1		SM 5310D	Total/NA

Client Sample ID: EMW-10R — Lab Sample ID: 480-28222-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	1.1		1.0		ug/L	1		8260C	Total/NA

Client Sample ID: A-1D — Lab Sample ID: 480-28222-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	2.8		1.0		ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	1.4		1.0		ug/L	1		8260C	Total/NA
Tetrachloroethene	2.9		1.0		ug/L	1		8260C	Total/NA
Trichloroethene	7.7		1.0		ug/L	1		8260C	Total/NA

Client Sample ID: 3H-1S — Lab Sample ID: 480-28222-7

No Detections

Client Sample ID: EMW-10D — Lab Sample ID: 480-28222-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	2.8		1.0		ug/L	1		8260C	Total/NA

Detection Summary

Client: Shaw Environmental & Infrastructure, Inc
Project/Site: LMC Burlington 147274

TestAmerica Job ID: 480-28222-1

Client Sample ID: 3G-12 — Lab Sample ID: 480-28222-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	2.1		1.0		ug/L	1		8260C	Total/NA
Tetrachloroethene	1.9		1.0		ug/L	1		8260C	Total/NA
Trichloroethene	4.2		1.0		ug/L	1		8260C	Total/NA
Sulfate	29		2.0		mg/L	1		300.0	Total/NA
Nitrate as N	1.5		0.050		mg/L	1		353.2	Total/NA
Total Organic Carbon	2.3		1.0		mg/L	1		SM 5310D	Total/NA

Client Sample ID: EMW-3R — Lab Sample ID: 480-28222-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	1.2		1.0		ug/L	1		8260C	Total/NA
1,1-Dichloroethene	2.3		1.0		ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	3.7		1.0		ug/L	1		8260C	Total/NA
Tetrachloroethene	4.6		1.0		ug/L	1		8260C	Total/NA
Trichloroethene	15		1.0		ug/L	1		8260C	Total/NA
1,4-Dioxane	0.45		0.20		ug/L	1		522 MOD	Total/NA

Client Sample ID: EMW-2D — Lab Sample ID: 480-28222-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	3.0		1.0		ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	1.4		1.0		ug/L	1		8260C	Total/NA
Tetrachloroethene	2.4		1.0		ug/L	1		8260C	Total/NA
Trichloroethene	9.8		1.0		ug/L	1		8260C	Total/NA
Sulfate	33		2.0		mg/L	1		300.0	Total/NA
Total Organic Carbon	2.3		1.0		mg/L	1		SM 5310D	Total/NA

Client Sample ID: EMW-2D DUP — Lab Sample ID: 480-28222-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	2.9		1.0		ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	1.6		1.0		ug/L	1		8260C	Total/NA
Tetrachloroethene	2.4		1.0		ug/L	1		8260C	Total/NA
Trichloroethene	9.6		1.0		ug/L	1		8260C	Total/NA
Sulfate	33		2.0		mg/L	1		300.0	Total/NA
Total Organic Carbon	1.8		1.0		mg/L	1		SM 5310D	Total/NA

Client Sample ID: 3G-11 — Lab Sample ID: 480-28222-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	8.5		1.0		ug/L	1		8260C	Total/NA
1,1-Dichloroethene	11		1.0		ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	2.1		1.0		ug/L	1		8260C	Total/NA
Trichloroethene	6.1		1.0		ug/L	1		8260C	Total/NA
1,4-Dioxane	1.7		0.20		ug/L	1		522 MOD	Total/NA

Client Sample ID: Trip Blank — Lab Sample ID: 480-28222-14

No Detections

Client Sample ID: EMW-7
Date Collected: 11/08/12 14:40
Date Received: 11/10/12 09:00

Lab Sample ID: 480-28222-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			11/14/12 05:11	1
1,1,1-Trichloroethane	ND		1.0		ug/L			11/14/12 05:11	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			11/14/12 05:11	1
1,1,2-Trichloroethane	ND		1.0		ug/L			11/14/12 05:11	1
1,1-Dichloroethane	ND		1.0		ug/L			11/14/12 05:11	1
1,1-Dichloroethene	ND		1.0		ug/L			11/14/12 05:11	1
1,1-Dichloropropene	ND		1.0		ug/L			11/14/12 05:11	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			11/14/12 05:11	1
1,2,3-Trichloropropane	ND		1.0		ug/L			11/14/12 05:11	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			11/14/12 05:11	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			11/14/12 05:11	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			11/14/12 05:11	1
1,2-Dichlorobenzene	ND		1.0		ug/L			11/14/12 05:11	1
1,2-Dichloroethane	ND		1.0		ug/L			11/14/12 05:11	1
1,2-Dichloropropane	ND		1.0		ug/L			11/14/12 05:11	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			11/14/12 05:11	1
1,3-Dichlorobenzene	ND		1.0		ug/L			11/14/12 05:11	1
1,3-Dichloropropane	ND		1.0		ug/L			11/14/12 05:11	1
1,4-Dichlorobenzene	ND		1.0		ug/L			11/14/12 05:11	1
1,4-Dioxane	ND		50		ug/L			11/14/12 05:11	1
2,2-Dichloropropane	ND		1.0		ug/L			11/14/12 05:11	1
2-Butanone (MEK)	ND		10		ug/L			11/14/12 05:11	1
2-Chlorotoluene	ND		1.0		ug/L			11/14/12 05:11	1
2-Hexanone	ND		10		ug/L			11/14/12 05:11	1
4-Chlorotoluene	ND		1.0		ug/L			11/14/12 05:11	1
4-Isopropyltoluene	ND		1.0		ug/L			11/14/12 05:11	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			11/14/12 05:11	1
Acetone	ND		50		ug/L			11/14/12 05:11	1
Benzene	ND		1.0		ug/L			11/14/12 05:11	1
Bromobenzene	ND		1.0		ug/L			11/14/12 05:11	1
Bromoform	ND		1.0		ug/L			11/14/12 05:11	1
Bromomethane	ND		2.0		ug/L			11/14/12 05:11	1
Carbon disulfide	ND		10		ug/L			11/14/12 05:11	1
Carbon tetrachloride	ND		1.0		ug/L			11/14/12 05:11	1
Chlorobenzene	ND		1.0		ug/L			11/14/12 05:11	1
Chlorobromomethane	ND		1.0		ug/L			11/14/12 05:11	1
Chlorodibromomethane	ND		0.50		ug/L			11/14/12 05:11	1
Chloroethane	ND		2.0		ug/L			11/14/12 05:11	1
Chloroform	ND		1.0		ug/L			11/14/12 05:11	1
Chloromethane	ND		2.0		ug/L			11/14/12 05:11	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			11/14/12 05:11	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			11/14/12 05:11	1
Dichlorobromomethane	ND		0.50		ug/L			11/14/12 05:11	1
Dichlorodifluoromethane	ND		1.0		ug/L			11/14/12 05:11	1
Ethyl ether	ND		1.0		ug/L			11/14/12 05:11	1
Ethylbenzene	ND		1.0		ug/L			11/14/12 05:11	1
Ethylene Dibromide	ND		1.0		ug/L			11/14/12 05:11	1
Hexachlorobutadiene	ND		0.40		ug/L			11/14/12 05:11	1
Isopropyl ether	ND		10		ug/L			11/14/12 05:11	1

Client Sample ID: EMW-7
Date Collected: 11/08/12 14:40
Date Received: 11/10/12 09:00

Lab Sample ID: 480-28222-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			11/14/12 05:11	1
Methyl tert-butyl ether	ND		1.0		ug/L			11/14/12 05:11	1
Methylene Chloride	ND		1.0		ug/L			11/14/12 05:11	1
m-Xylene & p-Xylene	ND		2.0		ug/L			11/14/12 05:11	1
Naphthalene	ND		5.0		ug/L			11/14/12 05:11	1
n-Butylbenzene	ND		1.0		ug/L			11/14/12 05:11	1
N-Propylbenzene	ND		1.0		ug/L			11/14/12 05:11	1
o-Xylene	ND		1.0		ug/L			11/14/12 05:11	1
sec-Butylbenzene	ND		1.0		ug/L			11/14/12 05:11	1
Styrene	ND		1.0		ug/L			11/14/12 05:11	1
Tert-amyl methyl ether	ND		5.0		ug/L			11/14/12 05:11	1
Tert-butyl ethyl ether	ND		5.0		ug/L			11/14/12 05:11	1
tert-Butylbenzene	ND		1.0		ug/L			11/14/12 05:11	1
Tetrachloroethene	**1.5**		1.0		ug/L			11/14/12 05:11	1
Tetrahydrofuran	ND		10		ug/L			11/14/12 05:11	1
Toluene	ND		1.0		ug/L			11/14/12 05:11	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			11/14/12 05:11	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			11/14/12 05:11	1
Trichloroethene	**1.3**		1.0		ug/L			11/14/12 05:11	1
Trichlorofluoromethane	ND		1.0		ug/L			11/14/12 05:11	1
Vinyl chloride	ND		0.50		ug/L			11/14/12 05:11	1
Dibromomethane	ND		1.0		ug/L			11/14/12 05:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*93*		*70 - 130*		*11/14/12 05:11*	*1*
1,2-Dichloroethane-d4 (Surr)	*85*		*70 - 130*		*11/14/12 05:11*	*1*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*		*11/14/12 05:11*	*1*

Method: 522 MOD - 1,4 Dioxane (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20		ug/L		11/12/12 12:15	11/12/12 20:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*92*		*70 - 130*	*11/12/12 12:15*	*11/12/12 20:23*	*1*

Client Sample ID: EMW-11R
Date Collected: 11/08/12 11:40
Date Received: 11/10/12 09:00

Lab Sample ID: 480-28222-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			11/14/12 05:37	1
1,1,1-Trichloroethane	ND		1.0		ug/L			11/14/12 05:37	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			11/14/12 05:37	1
1,1,2-Trichloroethane	ND		1.0		ug/L			11/14/12 05:37	1
1,1-Dichloroethane	**2.5**		1.0		ug/L			11/14/12 05:37	1
1,1-Dichloroethene	**2.6**		1.0		ug/L			11/14/12 05:37	1
1,1-Dichloropropene	ND		1.0		ug/L			11/14/12 05:37	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			11/14/12 05:37	1
1,2,3-Trichloropropane	ND		1.0		ug/L			11/14/12 05:37	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			11/14/12 05:37	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			11/14/12 05:37	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			11/14/12 05:37	1
1,2-Dichlorobenzene	ND		1.0		ug/L			11/14/12 05:37	1
1,2-Dichloroethane	ND		1.0		ug/L			11/14/12 05:37	1
1,2-Dichloropropane	ND		1.0		ug/L			11/14/12 05:37	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			11/14/12 05:37	1
1,3-Dichlorobenzene	ND		1.0		ug/L			11/14/12 05:37	1
1,3-Dichloropropane	ND		1.0		ug/L			11/14/12 05:37	1
1,4-Dichlorobenzene	ND		1.0		ug/L			11/14/12 05:37	1
1,4-Dioxane	ND		50		ug/L			11/14/12 05:37	1
2,2-Dichloropropane	ND		1.0		ug/L			11/14/12 05:37	1
2-Butanone (MEK)	ND		10		ug/L			11/14/12 05:37	1
2-Chlorotoluene	ND		1.0		ug/L			11/14/12 05:37	1
2-Hexanone	ND		10		ug/L			11/14/12 05:37	1
4-Chlorotoluene	ND		1.0		ug/L			11/14/12 05:37	1
4-Isopropyltoluene	ND		1.0		ug/L			11/14/12 05:37	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			11/14/12 05:37	1
Acetone	ND		50		ug/L			11/14/12 05:37	1
Benzene	ND		1.0		ug/L			11/14/12 05:37	1
Bromobenzene	ND		1.0		ug/L			11/14/12 05:37	1
Bromoform	ND		1.0		ug/L			11/14/12 05:37	1
Bromomethane	ND		2.0		ug/L			11/14/12 05:37	1
Carbon disulfide	ND		10		ug/L			11/14/12 05:37	1
Carbon tetrachloride	ND		1.0		ug/L			11/14/12 05:37	1
Chlorobenzene	ND		1.0		ug/L			11/14/12 05:37	1
Chlorobromomethane	ND		1.0		ug/L			11/14/12 05:37	1
Chlorodibromomethane	ND		0.50		ug/L			11/14/12 05:37	1
Chloroethane	ND		2.0		ug/L			11/14/12 05:37	1
Chloroform	ND		1.0		ug/L			11/14/12 05:37	1
Chloromethane	ND		2.0		ug/L			11/14/12 05:37	1
cis-1,2-Dichloroethene	**4.4**		1.0		ug/L			11/14/12 05:37	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			11/14/12 05:37	1
Dichlorobromomethane	ND		0.50		ug/L			11/14/12 05:37	1
Dichlorodifluoromethane	ND		1.0		ug/L			11/14/12 05:37	1
Ethyl ether	ND		1.0		ug/L			11/14/12 05:37	1
Ethylbenzene	ND		1.0		ug/L			11/14/12 05:37	1
Ethylene Dibromide	ND		1.0		ug/L			11/14/12 05:37	1
Hexachlorobutadiene	ND		0.40		ug/L			11/14/12 05:37	1
Isopropyl ether	ND		10		ug/L			11/14/12 05:37	1

Client Sample ID: EMW-11R
Date Collected: 11/08/12 11:40
Date Received: 11/10/12 09:00

Lab Sample ID: 480-28222-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			11/14/12 05:37	1
Methyl tert-butyl ether	**1.1**		1.0		ug/L			11/14/12 05:37	1
Methylene Chloride	ND		1.0		ug/L			11/14/12 05:37	1
m-Xylene & p-Xylene	ND		2.0		ug/L			11/14/12 05:37	1
Naphthalene	ND		5.0		ug/L			11/14/12 05:37	1
n-Butylbenzene	ND		1.0		ug/L			11/14/12 05:37	1
N-Propylbenzene	ND		1.0		ug/L			11/14/12 05:37	1
o-Xylene	ND		1.0		ug/L			11/14/12 05:37	1
sec-Butylbenzene	ND		1.0		ug/L			11/14/12 05:37	1
Styrene	ND		1.0		ug/L			11/14/12 05:37	1
Tert-amyl methyl ether	ND		5.0		ug/L			11/14/12 05:37	1
Tert-butyl ethyl ether	ND		5.0		ug/L			11/14/12 05:37	1
tert-Butylbenzene	ND		1.0		ug/L			11/14/12 05:37	1
Tetrachloroethene	**1.7**		1.0		ug/L			11/14/12 05:37	1
Tetrahydrofuran	ND		10		ug/L			11/14/12 05:37	1
Toluene	ND		1.0		ug/L			11/14/12 05:37	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			11/14/12 05:37	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			11/14/12 05:37	1
Trichloroethene	**7.5**		1.0		ug/L			11/14/12 05:37	1
Trichlorofluoromethane	ND		1.0		ug/L			11/14/12 05:37	1
Vinyl chloride	ND		0.50		ug/L			11/14/12 05:37	1
Dibromomethane	ND		1.0		ug/L			11/14/12 05:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*94*		*70 - 130*		*11/14/12 05:37*	*1*
1,2-Dichloroethane-d4 (Surr)	*84*		*70 - 130*		*11/14/12 05:37*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*11/14/12 05:37*	*1*

Method: 522 MOD - 1,4 Dioxane (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.82**		0.20		ug/L		11/12/12 12:15	11/12/12 20:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*85*		*70 - 130*	*11/12/12 12:15*	*11/12/12 20:39*	*1*

Client: Shaw Environmental & Infrastructure, Inc
Project/Site: LMC Burlington 147274

TestAmerica Job ID: 480-28222-1

Client Sample ID: 3H-1D
Date Collected: 11/08/12 10:00
Date Received: 11/10/12 09:00

Lab Sample ID: 480-28222-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			11/14/12 06:02	1
1,1,1-Trichloroethane	ND		1.0		ug/L			11/14/12 06:02	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			11/14/12 06:02	1
1,1,2-Trichloroethane	ND		1.0		ug/L			11/14/12 06:02	1
1,1-Dichloroethane	ND		1.0		ug/L			11/14/12 06:02	1
1,1-Dichloroethene	ND		1.0		ug/L			11/14/12 06:02	1
1,1-Dichloropropene	ND		1.0		ug/L			11/14/12 06:02	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			11/14/12 06:02	1
1,2,3-Trichloropropane	ND		1.0		ug/L			11/14/12 06:02	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			11/14/12 06:02	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			11/14/12 06:02	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			11/14/12 06:02	1
1,2-Dichlorobenzene	ND		1.0		ug/L			11/14/12 06:02	1
1,2-Dichloroethane	ND		1.0		ug/L			11/14/12 06:02	1
1,2-Dichloropropane	ND		1.0		ug/L			11/14/12 06:02	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			11/14/12 06:02	1
1,3-Dichlorobenzene	ND		1.0		ug/L			11/14/12 06:02	1
1,3-Dichloropropane	ND		1.0		ug/L			11/14/12 06:02	1
1,4-Dichlorobenzene	ND		1.0		ug/L			11/14/12 06:02	1
1,4-Dioxane	ND		50		ug/L			11/14/12 06:02	1
2,2-Dichloropropane	ND		1.0		ug/L			11/14/12 06:02	1
2-Butanone (MEK)	ND		10		ug/L			11/14/12 06:02	1
2-Chlorotoluene	ND		1.0		ug/L			11/14/12 06:02	1
2-Hexanone	ND		10		ug/L			11/14/12 06:02	1
4-Chlorotoluene	ND		1.0		ug/L			11/14/12 06:02	1
4-Isopropyltoluene	ND		1.0		ug/L			11/14/12 06:02	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			11/14/12 06:02	1
Acetone	ND		50		ug/L			11/14/12 06:02	1
Benzene	ND		1.0		ug/L			11/14/12 06:02	1
Bromobenzene	ND		1.0		ug/L			11/14/12 06:02	1
Bromoform	ND		1.0		ug/L			11/14/12 06:02	1
Bromomethane	ND		2.0		ug/L			11/14/12 06:02	1
Carbon disulfide	ND		10		ug/L			11/14/12 06:02	1
Carbon tetrachloride	ND		1.0		ug/L			11/14/12 06:02	1
Chlorobenzene	ND		1.0		ug/L			11/14/12 06:02	1
Chlorobromomethane	ND		1.0		ug/L			11/14/12 06:02	1
Chlorodibromomethane	ND		0.50		ug/L			11/14/12 06:02	1
Chloroethane	ND		2.0		ug/L			11/14/12 06:02	1
Chloroform	ND		1.0		ug/L			11/14/12 06:02	1
Chloromethane	ND		2.0		ug/L			11/14/12 06:02	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			11/14/12 06:02	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			11/14/12 06:02	1
Dichlorobromomethane	ND		0.50		ug/L			11/14/12 06:02	1
Dichlorodifluoromethane	ND		1.0		ug/L			11/14/12 06:02	1
Ethyl ether	ND		1.0		ug/L			11/14/12 06:02	1
Ethylbenzene	ND		1.0		ug/L			11/14/12 06:02	1
Ethylene Dibromide	ND		1.0		ug/L			11/14/12 06:02	1
Hexachlorobutadiene	ND		0.40		ug/L			11/14/12 06:02	1
Isopropyl ether	ND		10		ug/L			11/14/12 06:02	1

Client Sample ID: 3H-1D
Date Collected: 11/08/12 10:00
Date Received: 11/10/12 09:00

Lab Sample ID: 480-28222-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			11/14/12 06:02	1
Methyl tert-butyl ether	ND		1.0		ug/L			11/14/12 06:02	1
Methylene Chloride	ND		1.0		ug/L			11/14/12 06:02	1
m-Xylene & p-Xylene	ND		2.0		ug/L			11/14/12 06:02	1
Naphthalene	ND		5.0		ug/L			11/14/12 06:02	1
n-Butylbenzene	ND		1.0		ug/L			11/14/12 06:02	1
N-Propylbenzene	ND		1.0		ug/L			11/14/12 06:02	1
o-Xylene	ND		1.0		ug/L			11/14/12 06:02	1
sec-Butylbenzene	ND		1.0		ug/L			11/14/12 06:02	1
Styrene	ND		1.0		ug/L			11/14/12 06:02	1
Tert-amyl methyl ether	ND		5.0		ug/L			11/14/12 06:02	1
Tert-butyl ethyl ether	ND		5.0		ug/L			11/14/12 06:02	1
tert-Butylbenzene	ND		1.0		ug/L			11/14/12 06:02	1
Tetrachloroethene	ND		1.0		ug/L			11/14/12 06:02	1
Tetrahydrofuran	ND		10		ug/L			11/14/12 06:02	1
Toluene	ND		1.0		ug/L			11/14/12 06:02	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			11/14/12 06:02	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			11/14/12 06:02	1
Trichloroethene	ND		1.0		ug/L			11/14/12 06:02	1
Trichlorofluoromethane	ND		1.0		ug/L			11/14/12 06:02	1
Vinyl chloride	ND		0.50		ug/L			11/14/12 06:02	1
Dibromomethane	ND		1.0		ug/L			11/14/12 06:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*93*		*70 - 130*		*11/14/12 06:02*	*1*
1,2-Dichloroethane-d4 (Surr)	*84*		*70 - 130*		*11/14/12 06:02*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*11/14/12 06:02*	*1*

Method: 522 MOD - 1,4 Dioxane (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20		ug/L		11/12/12 12:15	11/12/12 20:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*85*		*70 - 130*	*11/12/12 12:15*	*11/12/12 20:55*	*1*

Client Sample ID: EMW-1D
Date Collected: 11/09/12 09:20
Date Received: 11/10/12 09:00

Lab Sample ID: 480-28222-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			11/14/12 06:27	1
1,1,1-Trichloroethane	ND		1.0		ug/L			11/14/12 06:27	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			11/14/12 06:27	1
1,1,2-Trichloroethane	ND		1.0		ug/L			11/14/12 06:27	1
1,1-Dichloroethane	**1.1**		1.0		ug/L			11/14/12 06:27	1
1,1-Dichloroethene	**2.5**		1.0		ug/L			11/14/12 06:27	1
1,1-Dichloropropene	ND		1.0		ug/L			11/14/12 06:27	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			11/14/12 06:27	1
1,2,3-Trichloropropane	ND		1.0		ug/L			11/14/12 06:27	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			11/14/12 06:27	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			11/14/12 06:27	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			11/14/12 06:27	1
1,2-Dichlorobenzene	ND		1.0		ug/L			11/14/12 06:27	1
1,2-Dichloroethane	ND		1.0		ug/L			11/14/12 06:27	1
1,2-Dichloropropane	ND		1.0		ug/L			11/14/12 06:27	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			11/14/12 06:27	1
1,3-Dichlorobenzene	ND		1.0		ug/L			11/14/12 06:27	1
1,3-Dichloropropane	ND		1.0		ug/L			11/14/12 06:27	1
1,4-Dichlorobenzene	ND		1.0		ug/L			11/14/12 06:27	1
1,4-Dioxane	ND		50		ug/L			11/14/12 06:27	1
2,2-Dichloropropane	ND		1.0		ug/L			11/14/12 06:27	1
2-Butanone (MEK)	ND		10		ug/L			11/14/12 06:27	1
2-Chlorotoluene	ND		1.0		ug/L			11/14/12 06:27	1
2-Hexanone	ND		10		ug/L			11/14/12 06:27	1
4-Chlorotoluene	ND		1.0		ug/L			11/14/12 06:27	1
4-Isopropyltoluene	ND		1.0		ug/L			11/14/12 06:27	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			11/14/12 06:27	1
Acetone	ND		50		ug/L			11/14/12 06:27	1
Benzene	ND		1.0		ug/L			11/14/12 06:27	1
Bromobenzene	ND		1.0		ug/L			11/14/12 06:27	1
Bromoform	ND		1.0		ug/L			11/14/12 06:27	1
Bromomethane	ND		2.0		ug/L			11/14/12 06:27	1
Carbon disulfide	ND		10		ug/L			11/14/12 06:27	1
Carbon tetrachloride	ND		1.0		ug/L			11/14/12 06:27	1
Chlorobenzene	ND		1.0		ug/L			11/14/12 06:27	1
Chlorobromomethane	ND		1.0		ug/L			11/14/12 06:27	1
Chlorodibromomethane	ND		0.50		ug/L			11/14/12 06:27	1
Chloroethane	ND		2.0		ug/L			11/14/12 06:27	1
Chloroform	ND		1.0		ug/L			11/14/12 06:27	1
Chloromethane	ND		2.0		ug/L			11/14/12 06:27	1
cis-1,2-Dichloroethene	**4.4**		1.0		ug/L			11/14/12 06:27	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			11/14/12 06:27	1
Dichlorobromomethane	ND		0.50		ug/L			11/14/12 06:27	1
Dichlorodifluoromethane	ND		1.0		ug/L			11/14/12 06:27	1
Ethyl ether	ND		1.0		ug/L			11/14/12 06:27	1
Ethylbenzene	ND		1.0		ug/L			11/14/12 06:27	1
Ethylene Dibromide	ND		1.0		ug/L			11/14/12 06:27	1
Hexachlorobutadiene	ND		0.40		ug/L			11/14/12 06:27	1
Isopropyl ether	ND		10		ug/L			11/14/12 06:27	1

Client Sample ID: EMW-1D
Date Collected: 11/09/12 09:20
Date Received: 11/10/12 09:00

Lab Sample ID: 480-28222-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			11/14/12 06:27	1
Methyl tert-butyl ether	ND		1.0		ug/L			11/14/12 06:27	1
Methylene Chloride	ND		1.0		ug/L			11/14/12 06:27	1
m-Xylene & p-Xylene	ND		2.0		ug/L			11/14/12 06:27	1
Naphthalene	ND		5.0		ug/L			11/14/12 06:27	1
n-Butylbenzene	ND		1.0		ug/L			11/14/12 06:27	1
N-Propylbenzene	ND		1.0		ug/L			11/14/12 06:27	1
o-Xylene	ND		1.0		ug/L			11/14/12 06:27	1
sec-Butylbenzene	ND		1.0		ug/L			11/14/12 06:27	1
Styrene	ND		1.0		ug/L			11/14/12 06:27	1
Tert-amyl methyl ether	ND		5.0		ug/L			11/14/12 06:27	1
Tert-butyl ethyl ether	ND		5.0		ug/L			11/14/12 06:27	1
tert-Butylbenzene	ND		1.0		ug/L			11/14/12 06:27	1
Tetrachloroethene	**5.0**		1.0		ug/L			11/14/12 06:27	1
Tetrahydrofuran	ND		10		ug/L			11/14/12 06:27	1
Toluene	ND		1.0		ug/L			11/14/12 06:27	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			11/14/12 06:27	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			11/14/12 06:27	1
Trichloroethene	**24**		1.0		ug/L			11/14/12 06:27	1
Trichlorofluoromethane	ND		1.0		ug/L			11/14/12 06:27	1
Vinyl chloride	ND		0.50		ug/L			11/14/12 06:27	1
Dibromomethane	ND		1.0		ug/L			11/14/12 06:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*93*		*70 - 130*		*11/14/12 06:27*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*70 - 130*		*11/14/12 06:27*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*11/14/12 06:27*	*1*

Method: 522 MOD - 1,4 Dioxane (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.42**		0.20		ug/L		11/12/12 12:15	11/12/12 21:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*80*		*70 - 130*	*11/12/12 12:15*	*11/12/12 21:11*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**25**		2.0		mg/L			11/13/12 13:01	1
Nitrate as N	ND		0.050		mg/L			11/10/12 16:13	1
Total Organic Carbon	**1.6**		1.0		mg/L			11/12/12 19:54	1

Client: Shaw Environmental & Infrastructure, Inc
Project/Site: LMC Burlington 147274

TestAmerica Job ID: 480-28222-1

Client Sample ID: EMW-10R
Date Collected: 11/08/12 15:15
Date Received: 11/10/12 09:00

Lab Sample ID: 480-28222-5
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			11/14/12 06:52	1
1,1,1-Trichloroethane	ND		1.0		ug/L			11/14/12 06:52	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			11/14/12 06:52	1
1,1,2-Trichloroethane	ND		1.0		ug/L			11/14/12 06:52	1
1,1-Dichloroethane	ND		1.0		ug/L			11/14/12 06:52	1
1,1-Dichloroethene	ND		1.0		ug/L			11/14/12 06:52	1
1,1-Dichloropropene	ND		1.0		ug/L			11/14/12 06:52	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			11/14/12 06:52	1
1,2,3-Trichloropropane	ND		1.0		ug/L			11/14/12 06:52	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			11/14/12 06:52	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			11/14/12 06:52	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			11/14/12 06:52	1
1,2-Dichlorobenzene	ND		1.0		ug/L			11/14/12 06:52	1
1,2-Dichloroethane	ND		1.0		ug/L			11/14/12 06:52	1
1,2-Dichloropropane	ND		1.0		ug/L			11/14/12 06:52	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			11/14/12 06:52	1
1,3-Dichlorobenzene	ND		1.0		ug/L			11/14/12 06:52	1
1,3-Dichloropropane	ND		1.0		ug/L			11/14/12 06:52	1
1,4-Dichlorobenzene	ND		1.0		ug/L			11/14/12 06:52	1
1,4-Dioxane	ND		50		ug/L			11/14/12 06:52	1
2,2-Dichloropropane	ND		1.0		ug/L			11/14/12 06:52	1
2-Butanone (MEK)	ND		10		ug/L			11/14/12 06:52	1
2-Chlorotoluene	ND		1.0		ug/L			11/14/12 06:52	1
2-Hexanone	ND		10		ug/L			11/14/12 06:52	1
4-Chlorotoluene	ND		1.0		ug/L			11/14/12 06:52	1
4-Isopropyltoluene	ND		1.0		ug/L			11/14/12 06:52	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			11/14/12 06:52	1
Acetone	ND		50		ug/L			11/14/12 06:52	1
Benzene	ND		1.0		ug/L			11/14/12 06:52	1
Bromobenzene	ND		1.0		ug/L			11/14/12 06:52	1
Bromoform	ND		1.0		ug/L			11/14/12 06:52	1
Bromomethane	ND		2.0		ug/L			11/14/12 06:52	1
Carbon disulfide	ND		10		ug/L			11/14/12 06:52	1
Carbon tetrachloride	ND		1.0		ug/L			11/14/12 06:52	1
Chlorobenzene	ND		1.0		ug/L			11/14/12 06:52	1
Chlorobromomethane	ND		1.0		ug/L			11/14/12 06:52	1
Chlorodibromomethane	ND		0.50		ug/L			11/14/12 06:52	1
Chloroethane	ND		2.0		ug/L			11/14/12 06:52	1
Chloroform	ND		1.0		ug/L			11/14/12 06:52	1
Chloromethane	ND		2.0		ug/L			11/14/12 06:52	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			11/14/12 06:52	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			11/14/12 06:52	1
Dichlorobromomethane	ND		0.50		ug/L			11/14/12 06:52	1
Dichlorodifluoromethane	ND		1.0		ug/L			11/14/12 06:52	1
Ethyl ether	ND		1.0		ug/L			11/14/12 06:52	1
Ethylbenzene	ND		1.0		ug/L			11/14/12 06:52	1
Ethylene Dibromide	ND		1.0		ug/L			11/14/12 06:52	1
Hexachlorobutadiene	ND		0.40		ug/L			11/14/12 06:52	1
Isopropyl ether	ND		10		ug/L			11/14/12 06:52	1

Client: Shaw Environmental & Infrastructure, Inc
Project/Site: LMC Burlington 147274

TestAmerica Job ID: 480-28222-1

Client Sample ID: EMW-10R
Date Collected: 11/08/12 15:15
Date Received: 11/10/12 09:00

Lab Sample ID: 480-28222-5
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			11/14/12 06:52	1
Methyl tert-butyl ether	ND		1.0		ug/L			11/14/12 06:52	1
Methylene Chloride	ND		1.0		ug/L			11/14/12 06:52	1
m-Xylene & p-Xylene	ND		2.0		ug/L			11/14/12 06:52	1
Naphthalene	ND		5.0		ug/L			11/14/12 06:52	1
n-Butylbenzene	ND		1.0		ug/L			11/14/12 06:52	1
N-Propylbenzene	ND		1.0		ug/L			11/14/12 06:52	1
o-Xylene	ND		1.0		ug/L			11/14/12 06:52	1
sec-Butylbenzene	ND		1.0		ug/L			11/14/12 06:52	1
Styrene	ND		1.0		ug/L			11/14/12 06:52	1
Tert-amyl methyl ether	ND		5.0		ug/L			11/14/12 06:52	1
Tert-butyl ethyl ether	ND		5.0		ug/L			11/14/12 06:52	1
tert-Butylbenzene	ND		1.0		ug/L			11/14/12 06:52	1
Tetrachloroethene	ND		1.0		ug/L			11/14/12 06:52	1
Tetrahydrofuran	ND		10		ug/L			11/14/12 06:52	1
Toluene	ND		1.0		ug/L			11/14/12 06:52	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			11/14/12 06:52	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			11/14/12 06:52	1
Trichloroethene	**1.1**		1.0		ug/L			11/14/12 06:52	1
Trichlorofluoromethane	ND		1.0		ug/L			11/14/12 06:52	1
Vinyl chloride	ND		0.50		ug/L			11/14/12 06:52	1
Dibromomethane	ND		1.0		ug/L			11/14/12 06:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*93*		*70 - 130*		*11/14/12 06:52*	*1*
1,2-Dichloroethane-d4 (Surr)	*84*		*70 - 130*		*11/14/12 06:52*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*11/14/12 06:52*	*1*

Method: 522 MOD - 1,4 Dioxane (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20		ug/L		11/12/12 12:15	11/12/12 21:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*79*		*70 - 130*	*11/12/12 12:15*	*11/12/12 21:27*	*1*

Client Sample ID: A-1D
Date Collected: 11/08/12 12:45
Date Received: 11/10/12 09:00

Lab Sample ID: 480-28222-6
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			11/14/12 07:18	1
1,1,1-Trichloroethane	ND		1.0		ug/L			11/14/12 07:18	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			11/14/12 07:18	1
1,1,2-Trichloroethane	ND		1.0		ug/L			11/14/12 07:18	1
1,1-Dichloroethane	ND		1.0		ug/L			11/14/12 07:18	1
1,1-Dichloroethene	**2.8**		1.0		ug/L			11/14/12 07:18	1
1,1-Dichloropropene	ND		1.0		ug/L			11/14/12 07:18	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			11/14/12 07:18	1
1,2,3-Trichloropropane	ND		1.0		ug/L			11/14/12 07:18	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			11/14/12 07:18	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			11/14/12 07:18	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			11/14/12 07:18	1
1,2-Dichlorobenzene	ND		1.0		ug/L			11/14/12 07:18	1
1,2-Dichloroethane	ND		1.0		ug/L			11/14/12 07:18	1
1,2-Dichloropropane	ND		1.0		ug/L			11/14/12 07:18	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			11/14/12 07:18	1
1,3-Dichlorobenzene	ND		1.0		ug/L			11/14/12 07:18	1
1,3-Dichloropropane	ND		1.0		ug/L			11/14/12 07:18	1
1,4-Dichlorobenzene	ND		1.0		ug/L			11/14/12 07:18	1
1,4-Dioxane	ND		50		ug/L			11/14/12 07:18	1
2,2-Dichloropropane	ND		1.0		ug/L			11/14/12 07:18	1
2-Butanone (MEK)	ND		10		ug/L			11/14/12 07:18	1
2-Chlorotoluene	ND		1.0		ug/L			11/14/12 07:18	1
2-Hexanone	ND		10		ug/L			11/14/12 07:18	1
4-Chlorotoluene	ND		1.0		ug/L			11/14/12 07:18	1
4-Isopropyltoluene	ND		1.0		ug/L			11/14/12 07:18	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			11/14/12 07:18	1
Acetone	ND		50		ug/L			11/14/12 07:18	1
Benzene	ND		1.0		ug/L			11/14/12 07:18	1
Bromobenzene	ND		1.0		ug/L			11/14/12 07:18	1
Bromoform	ND		1.0		ug/L			11/14/12 07:18	1
Bromomethane	ND		2.0		ug/L			11/14/12 07:18	1
Carbon disulfide	ND		10		ug/L			11/14/12 07:18	1
Carbon tetrachloride	ND		1.0		ug/L			11/14/12 07:18	1
Chlorobenzene	ND		1.0		ug/L			11/14/12 07:18	1
Chlorobromomethane	ND		1.0		ug/L			11/14/12 07:18	1
Chlorodibromomethane	ND		0.50		ug/L			11/14/12 07:18	1
Chloroethane	ND		2.0		ug/L			11/14/12 07:18	1
Chloroform	ND		1.0		ug/L			11/14/12 07:18	1
Chloromethane	ND		2.0		ug/L			11/14/12 07:18	1
cis-1,2-Dichloroethene	**1.4**		1.0		ug/L			11/14/12 07:18	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			11/14/12 07:18	1
Dichlorobromomethane	ND		0.50		ug/L			11/14/12 07:18	1
Dichlorodifluoromethane	ND		1.0		ug/L			11/14/12 07:18	1
Ethyl ether	ND		1.0		ug/L			11/14/12 07:18	1
Ethylbenzene	ND		1.0		ug/L			11/14/12 07:18	1
Ethylene Dibromide	ND		1.0		ug/L			11/14/12 07:18	1
Hexachlorobutadiene	ND		0.40		ug/L			11/14/12 07:18	1
Isopropyl ether	ND		10		ug/L			11/14/12 07:18	1

Client: Shaw Environmental & Infrastructure, Inc
Project/Site: LMC Burlington 147274

TestAmerica Job ID: 480-28222-1

Client Sample ID: A-1D
Date Collected: 11/08/12 12:45
Date Received: 11/10/12 09:00

Lab Sample ID: 480-28222-6
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			11/14/12 07:18	1
Methyl tert-butyl ether	ND		1.0		ug/L			11/14/12 07:18	1
Methylene Chloride	ND		1.0		ug/L			11/14/12 07:18	1
m-Xylene & p-Xylene	ND		2.0		ug/L			11/14/12 07:18	1
Naphthalene	ND		5.0		ug/L			11/14/12 07:18	1
n-Butylbenzene	ND		1.0		ug/L			11/14/12 07:18	1
N-Propylbenzene	ND		1.0		ug/L			11/14/12 07:18	1
o-Xylene	ND		1.0		ug/L			11/14/12 07:18	1
sec-Butylbenzene	ND		1.0		ug/L			11/14/12 07:18	1
Styrene	ND		1.0		ug/L			11/14/12 07:18	1
Tert-amyl methyl ether	ND		5.0		ug/L			11/14/12 07:18	1
Tert-butyl ethyl ether	ND		5.0		ug/L			11/14/12 07:18	1
tert-Butylbenzene	ND		1.0		ug/L			11/14/12 07:18	1
Tetrachloroethene	**2.9**		1.0		ug/L			11/14/12 07:18	1
Tetrahydrofuran	ND		10		ug/L			11/14/12 07:18	1
Toluene	ND		1.0		ug/L			11/14/12 07:18	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			11/14/12 07:18	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			11/14/12 07:18	1
Trichloroethene	**7.7**		1.0		ug/L			11/14/12 07:18	1
Trichlorofluoromethane	ND		1.0		ug/L			11/14/12 07:18	1
Vinyl chloride	ND		0.50		ug/L			11/14/12 07:18	1
Dibromomethane	ND		1.0		ug/L			11/14/12 07:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*93*		*70 - 130*		*11/14/12 07:18*	*1*
1,2-Dichloroethane-d4 (Surr)	*85*		*70 - 130*		*11/14/12 07:18*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*11/14/12 07:18*	*1*

Method: 522 MOD - 1,4 Dioxane (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20		ug/L		11/12/12 12:15	11/12/12 21:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*87*		*70 - 130*	*11/12/12 12:15*	*11/12/12 21:43*	*1*

Client Sample ID: 3H-1S
Date Collected: 11/08/12 10:45
Date Received: 11/10/12 09:00

Lab Sample ID: 480-28222-7
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			11/14/12 07:43	1
1,1,1-Trichloroethane	ND		1.0		ug/L			11/14/12 07:43	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			11/14/12 07:43	1
1,1,2-Trichloroethane	ND		1.0		ug/L			11/14/12 07:43	1
1,1-Dichloroethane	ND		1.0		ug/L			11/14/12 07:43	1
1,1-Dichloroethene	ND		1.0		ug/L			11/14/12 07:43	1
1,1-Dichloropropene	ND		1.0		ug/L			11/14/12 07:43	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			11/14/12 07:43	1
1,2,3-Trichloropropane	ND		1.0		ug/L			11/14/12 07:43	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			11/14/12 07:43	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			11/14/12 07:43	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			11/14/12 07:43	1
1,2-Dichlorobenzene	ND		1.0		ug/L			11/14/12 07:43	1
1,2-Dichloroethane	ND		1.0		ug/L			11/14/12 07:43	1
1,2-Dichloropropane	ND		1.0		ug/L			11/14/12 07:43	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			11/14/12 07:43	1
1,3-Dichlorobenzene	ND		1.0		ug/L			11/14/12 07:43	1
1,3-Dichloropropane	ND		1.0		ug/L			11/14/12 07:43	1
1,4-Dichlorobenzene	ND		1.0		ug/L			11/14/12 07:43	1
1,4-Dioxane	ND		50		ug/L			11/14/12 07:43	1
2,2-Dichloropropane	ND		1.0		ug/L			11/14/12 07:43	1
2-Butanone (MEK)	ND		10		ug/L			11/14/12 07:43	1
2-Chlorotoluene	ND		1.0		ug/L			11/14/12 07:43	1
2-Hexanone	ND		10		ug/L			11/14/12 07:43	1
4-Chlorotoluene	ND		1.0		ug/L			11/14/12 07:43	1
4-Isopropyltoluene	ND		1.0		ug/L			11/14/12 07:43	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			11/14/12 07:43	1
Acetone	ND		50		ug/L			11/14/12 07:43	1
Benzene	ND		1.0		ug/L			11/14/12 07:43	1
Bromobenzene	ND		1.0		ug/L			11/14/12 07:43	1
Bromoform	ND		1.0		ug/L			11/14/12 07:43	1
Bromomethane	ND		2.0		ug/L			11/14/12 07:43	1
Carbon disulfide	ND		10		ug/L			11/14/12 07:43	1
Carbon tetrachloride	ND		1.0		ug/L			11/14/12 07:43	1
Chlorobenzene	ND		1.0		ug/L			11/14/12 07:43	1
Chlorobromomethane	ND		1.0		ug/L			11/14/12 07:43	1
Chlorodibromomethane	ND		0.50		ug/L			11/14/12 07:43	1
Chloroethane	ND		2.0		ug/L			11/14/12 07:43	1
Chloroform	ND		1.0		ug/L			11/14/12 07:43	1
Chloromethane	ND		2.0		ug/L			11/14/12 07:43	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			11/14/12 07:43	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			11/14/12 07:43	1
Dichlorobromomethane	ND		0.50		ug/L			11/14/12 07:43	1
Dichlorodifluoromethane	ND		1.0		ug/L			11/14/12 07:43	1
Ethyl ether	ND		1.0		ug/L			11/14/12 07:43	1
Ethylbenzene	ND		1.0		ug/L			11/14/12 07:43	1
Ethylene Dibromide	ND		1.0		ug/L			11/14/12 07:43	1
Hexachlorobutadiene	ND		0.40		ug/L			11/14/12 07:43	1
Isopropyl ether	ND		10		ug/L			11/14/12 07:43	1

Client: Shaw Environmental & Infrastructure, Inc
Project/Site: LMC Burlington 147274

TestAmerica Job ID: 480-28222-1

Client Sample ID: 3H-1S
Date Collected: 11/08/12 10:45
Date Received: 11/10/12 09:00

Lab Sample ID: 480-28222-7
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			11/14/12 07:43	1
Methyl tert-butyl ether	ND		1.0		ug/L			11/14/12 07:43	1
Methylene Chloride	ND		1.0		ug/L			11/14/12 07:43	1
m-Xylene & p-Xylene	ND		2.0		ug/L			11/14/12 07:43	1
Naphthalene	ND		5.0		ug/L			11/14/12 07:43	1
n-Butylbenzene	ND		1.0		ug/L			11/14/12 07:43	1
N-Propylbenzene	ND		1.0		ug/L			11/14/12 07:43	1
o-Xylene	ND		1.0		ug/L			11/14/12 07:43	1
sec-Butylbenzene	ND		1.0		ug/L			11/14/12 07:43	1
Styrene	ND		1.0		ug/L			11/14/12 07:43	1
Tert-amyl methyl ether	ND		5.0		ug/L			11/14/12 07:43	1
Tert-butyl ethyl ether	ND		5.0		ug/L			11/14/12 07:43	1
tert-Butylbenzene	ND		1.0		ug/L			11/14/12 07:43	1
Tetrachloroethene	ND		1.0		ug/L			11/14/12 07:43	1
Tetrahydrofuran	ND		10		ug/L			11/14/12 07:43	1
Toluene	ND		1.0		ug/L			11/14/12 07:43	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			11/14/12 07:43	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			11/14/12 07:43	1
Trichloroethene	ND		1.0		ug/L			11/14/12 07:43	1
Trichlorofluoromethane	ND		1.0		ug/L			11/14/12 07:43	1
Vinyl chloride	ND		0.50		ug/L			11/14/12 07:43	1
Dibromomethane	ND		1.0		ug/L			11/14/12 07:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*93*		*70 - 130*		*11/14/12 07:43*	*1*
1,2-Dichloroethane-d4 (Surr)	*82*		*70 - 130*		*11/14/12 07:43*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*11/14/12 07:43*	*1*

Method: 522 MOD - 1,4 Dioxane (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20		ug/L		11/12/12 12:15	11/12/12 22:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*85*		*70 - 130*	*11/12/12 12:15*	*11/12/12 22:14*	*1*

Client Sample ID: EMW-10D
Date Collected: 11/09/12 09:30
Date Received: 11/10/12 09:00

Lab Sample ID: 480-28222-8
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			11/14/12 08:08	1
1,1,1-Trichloroethane	ND		1.0		ug/L			11/14/12 08:08	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			11/14/12 08:08	1
1,1,2-Trichloroethane	ND		1.0		ug/L			11/14/12 08:08	1
1,1-Dichloroethane	ND		1.0		ug/L			11/14/12 08:08	1
1,1-Dichloroethene	ND		1.0		ug/L			11/14/12 08:08	1
1,1-Dichloropropene	ND		1.0		ug/L			11/14/12 08:08	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			11/14/12 08:08	1
1,2,3-Trichloropropane	ND		1.0		ug/L			11/14/12 08:08	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			11/14/12 08:08	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			11/14/12 08:08	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			11/14/12 08:08	1
1,2-Dichlorobenzene	ND		1.0		ug/L			11/14/12 08:08	1
1,2-Dichloroethane	ND		1.0		ug/L			11/14/12 08:08	1
1,2-Dichloropropane	ND		1.0		ug/L			11/14/12 08:08	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			11/14/12 08:08	1
1,3-Dichlorobenzene	ND		1.0		ug/L			11/14/12 08:08	1
1,3-Dichloropropane	ND		1.0		ug/L			11/14/12 08:08	1
1,4-Dichlorobenzene	ND		1.0		ug/L			11/14/12 08:08	1
1,4-Dioxane	ND		50		ug/L			11/14/12 08:08	1
2,2-Dichloropropane	ND		1.0		ug/L			11/14/12 08:08	1
2-Butanone (MEK)	ND		10		ug/L			11/14/12 08:08	1
2-Chlorotoluene	ND		1.0		ug/L			11/14/12 08:08	1
2-Hexanone	ND		10		ug/L			11/14/12 08:08	1
4-Chlorotoluene	ND		1.0		ug/L			11/14/12 08:08	1
4-Isopropyltoluene	ND		1.0		ug/L			11/14/12 08:08	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			11/14/12 08:08	1
Acetone	ND		50		ug/L			11/14/12 08:08	1
Benzene	ND		1.0		ug/L			11/14/12 08:08	1
Bromobenzene	ND		1.0		ug/L			11/14/12 08:08	1
Bromoform	ND		1.0		ug/L			11/14/12 08:08	1
Bromomethane	ND		2.0		ug/L			11/14/12 08:08	1
Carbon disulfide	ND		10		ug/L			11/14/12 08:08	1
Carbon tetrachloride	ND		1.0		ug/L			11/14/12 08:08	1
Chlorobenzene	ND		1.0		ug/L			11/14/12 08:08	1
Chlorobromomethane	ND		1.0		ug/L			11/14/12 08:08	1
Chlorodibromomethane	ND		0.50		ug/L			11/14/12 08:08	1
Chloroethane	ND		2.0		ug/L			11/14/12 08:08	1
Chloroform	ND		1.0		ug/L			11/14/12 08:08	1
Chloromethane	ND		2.0		ug/L			11/14/12 08:08	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			11/14/12 08:08	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			11/14/12 08:08	1
Dichlorobromomethane	ND		0.50		ug/L			11/14/12 08:08	1
Dichlorodifluoromethane	ND		1.0		ug/L			11/14/12 08:08	1
Ethyl ether	ND		1.0		ug/L			11/14/12 08:08	1
Ethylbenzene	ND		1.0		ug/L			11/14/12 08:08	1
Ethylene Dibromide	ND		1.0		ug/L			11/14/12 08:08	1
Hexachlorobutadiene	ND		0.40		ug/L			11/14/12 08:08	1
Isopropyl ether	ND		10		ug/L			11/14/12 08:08	1

Client: Shaw Environmental & Infrastructure, Inc
Project/Site: LMC Burlington 147274

TestAmerica Job ID: 480-28222-1

Client Sample ID: EMW-10D
Date Collected: 11/09/12 09:30
Date Received: 11/10/12 09:00

Lab Sample ID: 480-28222-8
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			11/14/12 08:08	1
Methyl tert-butyl ether	ND		1.0		ug/L			11/14/12 08:08	1
Methylene Chloride	ND		1.0		ug/L			11/14/12 08:08	1
m-Xylene & p-Xylene	ND		2.0		ug/L			11/14/12 08:08	1
Naphthalene	ND		5.0		ug/L			11/14/12 08:08	1
n-Butylbenzene	ND		1.0		ug/L			11/14/12 08:08	1
N-Propylbenzene	ND		1.0		ug/L			11/14/12 08:08	1
o-Xylene	ND		1.0		ug/L			11/14/12 08:08	1
sec-Butylbenzene	ND		1.0		ug/L			11/14/12 08:08	1
Styrene	ND		1.0		ug/L			11/14/12 08:08	1
Tert-amyl methyl ether	ND		5.0		ug/L			11/14/12 08:08	1
Tert-butyl ethyl ether	ND		5.0		ug/L			11/14/12 08:08	1
tert-Butylbenzene	ND		1.0		ug/L			11/14/12 08:08	1
Tetrachloroethene	ND		1.0		ug/L			11/14/12 08:08	1
Tetrahydrofuran	ND		10		ug/L			11/14/12 08:08	1
Toluene	ND		1.0		ug/L			11/14/12 08:08	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			11/14/12 08:08	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			11/14/12 08:08	1
Trichloroethene	**2.8**		1.0		ug/L			11/14/12 08:08	1
Trichlorofluoromethane	ND		1.0		ug/L			11/14/12 08:08	1
Vinyl chloride	ND		0.50		ug/L			11/14/12 08:08	1
Dibromomethane	ND		1.0		ug/L			11/14/12 08:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*92*		*70 - 130*		*11/14/12 08:08*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*70 - 130*		*11/14/12 08:08*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*11/14/12 08:08*	*1*

Method: 522 MOD - 1,4 Dioxane (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20		ug/L		11/12/12 12:15	11/12/12 22:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*85*		*70 - 130*	*11/12/12 12:15*	*11/12/12 22:30*	*1*

Client Sample ID: 3G-12
Date Collected: 11/09/12 11:10
Date Received: 11/10/12 09:00

Lab Sample ID: 480-28222-9
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			11/14/12 08:33	1
1,1,1-Trichloroethane	ND		1.0		ug/L			11/14/12 08:33	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			11/14/12 08:33	1
1,1,2-Trichloroethane	ND		1.0		ug/L			11/14/12 08:33	1
1,1-Dichloroethane	ND		1.0		ug/L			11/14/12 08:33	1
1,1-Dichloroethene	**2.1**		1.0		ug/L			11/14/12 08:33	1
1,1-Dichloropropene	ND		1.0		ug/L			11/14/12 08:33	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			11/14/12 08:33	1
1,2,3-Trichloropropane	ND		1.0		ug/L			11/14/12 08:33	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			11/14/12 08:33	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			11/14/12 08:33	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			11/14/12 08:33	1
1,2-Dichlorobenzene	ND		1.0		ug/L			11/14/12 08:33	1
1,2-Dichloroethane	ND		1.0		ug/L			11/14/12 08:33	1
1,2-Dichloropropane	ND		1.0		ug/L			11/14/12 08:33	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			11/14/12 08:33	1
1,3-Dichlorobenzene	ND		1.0		ug/L			11/14/12 08:33	1
1,3-Dichloropropane	ND		1.0		ug/L			11/14/12 08:33	1
1,4-Dichlorobenzene	ND		1.0		ug/L			11/14/12 08:33	1
1,4-Dioxane	ND		50		ug/L			11/14/12 08:33	1
2,2-Dichloropropane	ND		1.0		ug/L			11/14/12 08:33	1
2-Butanone (MEK)	ND		10		ug/L			11/14/12 08:33	1
2-Chlorotoluene	ND		1.0		ug/L			11/14/12 08:33	1
2-Hexanone	ND		10		ug/L			11/14/12 08:33	1
4-Chlorotoluene	ND		1.0		ug/L			11/14/12 08:33	1
4-Isopropyltoluene	ND		1.0		ug/L			11/14/12 08:33	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			11/14/12 08:33	1
Acetone	ND		50		ug/L			11/14/12 08:33	1
Benzene	ND		1.0		ug/L			11/14/12 08:33	1
Bromobenzene	ND		1.0		ug/L			11/14/12 08:33	1
Bromoform	ND		1.0		ug/L			11/14/12 08:33	1
Bromomethane	ND		2.0		ug/L			11/14/12 08:33	1
Carbon disulfide	ND		10		ug/L			11/14/12 08:33	1
Carbon tetrachloride	ND		1.0		ug/L			11/14/12 08:33	1
Chlorobenzene	ND		1.0		ug/L			11/14/12 08:33	1
Chlorobromomethane	ND		1.0		ug/L			11/14/12 08:33	1
Chlorodibromomethane	ND		0.50		ug/L			11/14/12 08:33	1
Chloroethane	ND		2.0		ug/L			11/14/12 08:33	1
Chloroform	ND		1.0		ug/L			11/14/12 08:33	1
Chloromethane	ND		2.0		ug/L			11/14/12 08:33	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			11/14/12 08:33	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			11/14/12 08:33	1
Dichlorobromomethane	ND		0.50		ug/L			11/14/12 08:33	1
Dichlorodifluoromethane	ND		1.0		ug/L			11/14/12 08:33	1
Ethyl ether	ND		1.0		ug/L			11/14/12 08:33	1
Ethylbenzene	ND		1.0		ug/L			11/14/12 08:33	1
Ethylene Dibromide	ND		1.0		ug/L			11/14/12 08:33	1
Hexachlorobutadiene	ND		0.40		ug/L			11/14/12 08:33	1
Isopropyl ether	ND		10		ug/L			11/14/12 08:33	1

Client: Shaw Environmental & Infrastructure, Inc
Project/Site: LMC Burlington 147274

TestAmerica Job ID: 480-28222-1

Client Sample ID: 3G-12
Date Collected: 11/09/12 11:10
Date Received: 11/10/12 09:00

Lab Sample ID: 480-28222-9
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			11/14/12 08:33	1
Methyl tert-butyl ether	ND		1.0		ug/L			11/14/12 08:33	1
Methylene Chloride	ND		1.0		ug/L			11/14/12 08:33	1
m-Xylene & p-Xylene	ND		2.0		ug/L			11/14/12 08:33	1
Naphthalene	ND		5.0		ug/L			11/14/12 08:33	1
n-Butylbenzene	ND		1.0		ug/L			11/14/12 08:33	1
N-Propylbenzene	ND		1.0		ug/L			11/14/12 08:33	1
o-Xylene	ND		1.0		ug/L			11/14/12 08:33	1
sec-Butylbenzene	ND		1.0		ug/L			11/14/12 08:33	1
Styrene	ND		1.0		ug/L			11/14/12 08:33	1
Tert-amyl methyl ether	ND		5.0		ug/L			11/14/12 08:33	1
Tert-butyl ethyl ether	ND		5.0		ug/L			11/14/12 08:33	1
tert-Butylbenzene	ND		1.0		ug/L			11/14/12 08:33	1
Tetrachloroethene	**1.9**		1.0		ug/L			11/14/12 08:33	1
Tetrahydrofuran	ND		10		ug/L			11/14/12 08:33	1
Toluene	ND		1.0		ug/L			11/14/12 08:33	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			11/14/12 08:33	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			11/14/12 08:33	1
Trichloroethene	**4.2**		1.0		ug/L			11/14/12 08:33	1
Trichlorofluoromethane	ND		1.0		ug/L			11/14/12 08:33	1
Vinyl chloride	ND		0.50		ug/L			11/14/12 08:33	1
Dibromomethane	ND		1.0		ug/L			11/14/12 08:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*91*		*70 - 130*		*11/14/12 08:33*	*1*
1,2-Dichloroethane-d4 (Surr)	*81*		*70 - 130*		*11/14/12 08:33*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*11/14/12 08:33*	*1*

Method: 522 MOD - 1,4 Dioxane (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20		ug/L		11/12/12 12:15	11/12/12 22:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*85*		*70 - 130*	*11/12/12 12:15*	*11/12/12 22:46*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**29**		2.0		mg/L			11/13/12 13:39	1
Nitrate as N	**1.5**		0.050		mg/L			11/10/12 17:30	1
Total Organic Carbon	**2.3**		1.0		mg/L			11/12/12 20:13	1

Client Sample ID: EMW-3R
Date Collected: 11/09/12 11:15
Date Received: 11/10/12 09:00

Lab Sample ID: 480-28222-10
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			11/14/12 08:58	1
1,1,1-Trichloroethane	ND		1.0		ug/L			11/14/12 08:58	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			11/14/12 08:58	1
1,1,2-Trichloroethane	ND		1.0		ug/L			11/14/12 08:58	1
1,1-Dichloroethane	**1.2**		1.0		ug/L			11/14/12 08:58	1
1,1-Dichloroethene	**2.3**		1.0		ug/L			11/14/12 08:58	1
1,1-Dichloropropene	ND		1.0		ug/L			11/14/12 08:58	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			11/14/12 08:58	1
1,2,3-Trichloropropane	ND		1.0		ug/L			11/14/12 08:58	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			11/14/12 08:58	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			11/14/12 08:58	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			11/14/12 08:58	1
1,2-Dichlorobenzene	ND		1.0		ug/L			11/14/12 08:58	1
1,2-Dichloroethane	ND		1.0		ug/L			11/14/12 08:58	1
1,2-Dichloropropane	ND		1.0		ug/L			11/14/12 08:58	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			11/14/12 08:58	1
1,3-Dichlorobenzene	ND		1.0		ug/L			11/14/12 08:58	1
1,3-Dichloropropane	ND		1.0		ug/L			11/14/12 08:58	1
1,4-Dichlorobenzene	ND		1.0		ug/L			11/14/12 08:58	1
1,4-Dioxane	ND		50		ug/L			11/14/12 08:58	1
2,2-Dichloropropane	ND		1.0		ug/L			11/14/12 08:58	1
2-Butanone (MEK)	ND		10		ug/L			11/14/12 08:58	1
2-Chlorotoluene	ND		1.0		ug/L			11/14/12 08:58	1
2-Hexanone	ND		10		ug/L			11/14/12 08:58	1
4-Chlorotoluene	ND		1.0		ug/L			11/14/12 08:58	1
4-Isopropyltoluene	ND		1.0		ug/L			11/14/12 08:58	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			11/14/12 08:58	1
Acetone	ND		50		ug/L			11/14/12 08:58	1
Benzene	ND		1.0		ug/L			11/14/12 08:58	1
Bromobenzene	ND		1.0		ug/L			11/14/12 08:58	1
Bromoform	ND		1.0		ug/L			11/14/12 08:58	1
Bromomethane	ND		2.0		ug/L			11/14/12 08:58	1
Carbon disulfide	ND		10		ug/L			11/14/12 08:58	1
Carbon tetrachloride	ND		1.0		ug/L			11/14/12 08:58	1
Chlorobenzene	ND		1.0		ug/L			11/14/12 08:58	1
Chlorobromomethane	ND		1.0		ug/L			11/14/12 08:58	1
Chlorodibromomethane	ND		0.50		ug/L			11/14/12 08:58	1
Chloroethane	ND		2.0		ug/L			11/14/12 08:58	1
Chloroform	ND		1.0		ug/L			11/14/12 08:58	1
Chloromethane	ND		2.0		ug/L			11/14/12 08:58	1
cis-1,2-Dichloroethene	**3.7**		1.0		ug/L			11/14/12 08:58	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			11/14/12 08:58	1
Dichlorobromomethane	ND		0.50		ug/L			11/14/12 08:58	1
Dichlorodifluoromethane	ND		1.0		ug/L			11/14/12 08:58	1
Ethyl ether	ND		1.0		ug/L			11/14/12 08:58	1
Ethylbenzene	ND		1.0		ug/L			11/14/12 08:58	1
Ethylene Dibromide	ND		1.0		ug/L			11/14/12 08:58	1
Hexachlorobutadiene	ND		0.40		ug/L			11/14/12 08:58	1
Isopropyl ether	ND		10		ug/L			11/14/12 08:58	1

Client Sample ID: EMW-3R
Date Collected: 11/09/12 11:15
Date Received: 11/10/12 09:00

Lab Sample ID: 480-28222-10
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			11/14/12 08:58	1
Methyl tert-butyl ether	ND		1.0		ug/L			11/14/12 08:58	1
Methylene Chloride	ND		1.0		ug/L			11/14/12 08:58	1
m-Xylene & p-Xylene	ND		2.0		ug/L			11/14/12 08:58	1
Naphthalene	ND		5.0		ug/L			11/14/12 08:58	1
n-Butylbenzene	ND		1.0		ug/L			11/14/12 08:58	1
N-Propylbenzene	ND		1.0		ug/L			11/14/12 08:58	1
o-Xylene	ND		1.0		ug/L			11/14/12 08:58	1
sec-Butylbenzene	ND		1.0		ug/L			11/14/12 08:58	1
Styrene	ND		1.0		ug/L			11/14/12 08:58	1
Tert-amyl methyl ether	ND		5.0		ug/L			11/14/12 08:58	1
Tert-butyl ethyl ether	ND		5.0		ug/L			11/14/12 08:58	1
tert-Butylbenzene	ND		1.0		ug/L			11/14/12 08:58	1
Tetrachloroethene	**4.6**		1.0		ug/L			11/14/12 08:58	1
Tetrahydrofuran	ND		10		ug/L			11/14/12 08:58	1
Toluene	ND		1.0		ug/L			11/14/12 08:58	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			11/14/12 08:58	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			11/14/12 08:58	1
Trichloroethene	**15**		1.0		ug/L			11/14/12 08:58	1
Trichlorofluoromethane	ND		1.0		ug/L			11/14/12 08:58	1
Vinyl chloride	ND		0.50		ug/L			11/14/12 08:58	1
Dibromomethane	ND		1.0		ug/L			11/14/12 08:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*91*		*70 - 130*		*11/14/12 08:58*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*70 - 130*		*11/14/12 08:58*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*11/14/12 08:58*	*1*

Method: 522 MOD - 1,4 Dioxane (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.45**		0.20		ug/L		11/12/12 12:15	11/12/12 23:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*87*		*70 - 130*	*11/12/12 12:15*	*11/12/12 23:02*	*1*

Client Sample ID: EMW-2D
Date Collected: 11/09/12 13:45
Date Received: 11/10/12 09:00

Lab Sample ID: 480-28222-11
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			11/14/12 09:23	1
1,1,1-Trichloroethane	ND		1.0		ug/L			11/14/12 09:23	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			11/14/12 09:23	1
1,1,2-Trichloroethane	ND		1.0		ug/L			11/14/12 09:23	1
1,1-Dichloroethane	ND		1.0		ug/L			11/14/12 09:23	1
1,1-Dichloroethene	**3.0**		1.0		ug/L			11/14/12 09:23	1
1,1-Dichloropropene	ND		1.0		ug/L			11/14/12 09:23	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			11/14/12 09:23	1
1,2,3-Trichloropropane	ND		1.0		ug/L			11/14/12 09:23	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			11/14/12 09:23	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			11/14/12 09:23	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			11/14/12 09:23	1
1,2-Dichlorobenzene	ND		1.0		ug/L			11/14/12 09:23	1
1,2-Dichloroethane	ND		1.0		ug/L			11/14/12 09:23	1
1,2-Dichloropropane	ND		1.0		ug/L			11/14/12 09:23	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			11/14/12 09:23	1
1,3-Dichlorobenzene	ND		1.0		ug/L			11/14/12 09:23	1
1,3-Dichloropropane	ND		1.0		ug/L			11/14/12 09:23	1
1,4-Dichlorobenzene	ND		1.0		ug/L			11/14/12 09:23	1
1,4-Dioxane	ND		50		ug/L			11/14/12 09:23	1
2,2-Dichloropropane	ND		1.0		ug/L			11/14/12 09:23	1
2-Butanone (MEK)	ND		10		ug/L			11/14/12 09:23	1
2-Chlorotoluene	ND		1.0		ug/L			11/14/12 09:23	1
2-Hexanone	ND		10		ug/L			11/14/12 09:23	1
4-Chlorotoluene	ND		1.0		ug/L			11/14/12 09:23	1
4-Isopropyltoluene	ND		1.0		ug/L			11/14/12 09:23	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			11/14/12 09:23	1
Acetone	ND		50		ug/L			11/14/12 09:23	1
Benzene	ND		1.0		ug/L			11/14/12 09:23	1
Bromobenzene	ND		1.0		ug/L			11/14/12 09:23	1
Bromoform	ND		1.0		ug/L			11/14/12 09:23	1
Bromomethane	ND		2.0		ug/L			11/14/12 09:23	1
Carbon disulfide	ND		10		ug/L			11/14/12 09:23	1
Carbon tetrachloride	ND		1.0		ug/L			11/14/12 09:23	1
Chlorobenzene	ND		1.0		ug/L			11/14/12 09:23	1
Chlorobromomethane	ND		1.0		ug/L			11/14/12 09:23	1
Chlorodibromomethane	ND		0.50		ug/L			11/14/12 09:23	1
Chloroethane	ND		2.0		ug/L			11/14/12 09:23	1
Chloroform	ND		1.0		ug/L			11/14/12 09:23	1
Chloromethane	ND		2.0		ug/L			11/14/12 09:23	1
cis-1,2-Dichloroethene	**1.4**		1.0		ug/L			11/14/12 09:23	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			11/14/12 09:23	1
Dichlorobromomethane	ND		0.50		ug/L			11/14/12 09:23	1
Dichlorodifluoromethane	ND		1.0		ug/L			11/14/12 09:23	1
Ethyl ether	ND		1.0		ug/L			11/14/12 09:23	1
Ethylbenzene	ND		1.0		ug/L			11/14/12 09:23	1
Ethylene Dibromide	ND		1.0		ug/L			11/14/12 09:23	1
Hexachlorobutadiene	ND		0.40		ug/L			11/14/12 09:23	1
Isopropyl ether	ND		10		ug/L			11/14/12 09:23	1

Client Sample ID: EMW-2D
Date Collected: 11/09/12 13:45
Date Received: 11/10/12 09:00

Lab Sample ID: 480-28222-11
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			11/14/12 09:23	1
Methyl tert-butyl ether	ND		1.0		ug/L			11/14/12 09:23	1
Methylene Chloride	ND		1.0		ug/L			11/14/12 09:23	1
m-Xylene & p-Xylene	ND		2.0		ug/L			11/14/12 09:23	1
Naphthalene	ND		5.0		ug/L			11/14/12 09:23	1
n-Butylbenzene	ND		1.0		ug/L			11/14/12 09:23	1
N-Propylbenzene	ND		1.0		ug/L			11/14/12 09:23	1
o-Xylene	ND		1.0		ug/L			11/14/12 09:23	1
sec-Butylbenzene	ND		1.0		ug/L			11/14/12 09:23	1
Styrene	ND		1.0		ug/L			11/14/12 09:23	1
Tert-amyl methyl ether	ND		5.0		ug/L			11/14/12 09:23	1
Tert-butyl ethyl ether	ND		5.0		ug/L			11/14/12 09:23	1
tert-Butylbenzene	ND		1.0		ug/L			11/14/12 09:23	1
Tetrachloroethene	**2.4**		1.0		ug/L			11/14/12 09:23	1
Tetrahydrofuran	ND		10		ug/L			11/14/12 09:23	1
Toluene	ND		1.0		ug/L			11/14/12 09:23	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			11/14/12 09:23	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			11/14/12 09:23	1
Trichloroethene	**9.8**		1.0		ug/L			11/14/12 09:23	1
Trichlorofluoromethane	ND		1.0		ug/L			11/14/12 09:23	1
Vinyl chloride	ND		0.50		ug/L			11/14/12 09:23	1
Dibromomethane	ND		1.0		ug/L			11/14/12 09:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*93*		*70 - 130*		*11/14/12 09:23*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*70 - 130*		*11/14/12 09:23*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*11/14/12 09:23*	*1*

Method: 522 MOD - 1,4 Dioxane (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20		ug/L		11/12/12 12:15	11/12/12 23:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*81*		*70 - 130*	*11/12/12 12:15*	*11/12/12 23:18*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**33**		2.0		mg/L			11/13/12 13:52	1
Nitrate as N	ND		0.050		mg/L			11/10/12 16:20	1
Total Organic Carbon	**2.3**		1.0		mg/L			11/12/12 20:33	1

Client Sample ID: EMW-2D DUP
Date Collected: 11/09/12 13:50
Date Received: 11/10/12 09:00

Lab Sample ID: 480-28222-12
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			11/14/12 14:59	1
1,1,1-Trichloroethane	ND		1.0		ug/L			11/14/12 14:59	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			11/14/12 14:59	1
1,1,2-Trichloroethane	ND		1.0		ug/L			11/14/12 14:59	1
1,1-Dichloroethane	ND		1.0		ug/L			11/14/12 14:59	1
1,1-Dichloroethene	**2.9**		1.0		ug/L			11/14/12 14:59	1
1,1-Dichloropropene	ND		1.0		ug/L			11/14/12 14:59	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			11/14/12 14:59	1
1,2,3-Trichloropropane	ND		1.0		ug/L			11/14/12 14:59	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			11/14/12 14:59	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			11/14/12 14:59	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			11/14/12 14:59	1
1,2-Dichlorobenzene	ND		1.0		ug/L			11/14/12 14:59	1
1,2-Dichloroethane	ND		1.0		ug/L			11/14/12 14:59	1
1,2-Dichloropropane	ND		1.0		ug/L			11/14/12 14:59	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			11/14/12 14:59	1
1,3-Dichlorobenzene	ND		1.0		ug/L			11/14/12 14:59	1
1,3-Dichloropropane	ND		1.0		ug/L			11/14/12 14:59	1
1,4-Dichlorobenzene	ND		1.0		ug/L			11/14/12 14:59	1
1,4-Dioxane	ND		50		ug/L			11/14/12 14:59	1
2,2-Dichloropropane	ND		1.0		ug/L			11/14/12 14:59	1
2-Butanone (MEK)	ND		10		ug/L			11/14/12 14:59	1
2-Chlorotoluene	ND		1.0		ug/L			11/14/12 14:59	1
2-Hexanone	ND		10		ug/L			11/14/12 14:59	1
4-Chlorotoluene	ND		1.0		ug/L			11/14/12 14:59	1
4-Isopropyltoluene	ND		1.0		ug/L			11/14/12 14:59	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			11/14/12 14:59	1
Acetone	ND		50		ug/L			11/14/12 14:59	1
Benzene	ND		1.0		ug/L			11/14/12 14:59	1
Bromobenzene	ND		1.0		ug/L			11/14/12 14:59	1
Bromoform	ND		1.0		ug/L			11/14/12 14:59	1
Bromomethane	ND		2.0		ug/L			11/14/12 14:59	1
Carbon disulfide	ND		10		ug/L			11/14/12 14:59	1
Carbon tetrachloride	ND		1.0		ug/L			11/14/12 14:59	1
Chlorobenzene	ND		1.0		ug/L			11/14/12 14:59	1
Chlorobromomethane	ND		1.0		ug/L			11/14/12 14:59	1
Chlorodibromomethane	ND		0.50		ug/L			11/14/12 14:59	1
Chloroethane	ND		2.0		ug/L			11/14/12 14:59	1
Chloroform	ND		1.0		ug/L			11/14/12 14:59	1
Chloromethane	ND		2.0		ug/L			11/14/12 14:59	1
cis-1,2-Dichloroethene	**1.6**		1.0		ug/L			11/14/12 14:59	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			11/14/12 14:59	1
Dichlorobromomethane	ND		0.50		ug/L			11/14/12 14:59	1
Dichlorodifluoromethane	ND	*	1.0		ug/L			11/14/12 14:59	1
Ethyl ether	ND		1.0		ug/L			11/14/12 14:59	1
Ethylbenzene	ND		1.0		ug/L			11/14/12 14:59	1
Ethylene Dibromide	ND		1.0		ug/L			11/14/12 14:59	1
Hexachlorobutadiene	ND		0.40		ug/L			11/14/12 14:59	1
Isopropyl ether	ND		10		ug/L			11/14/12 14:59	1

Client Sample ID: EMW-2D DUP
Date Collected: 11/09/12 13:50
Date Received: 11/10/12 09:00

Lab Sample ID: 480-28222-12
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			11/14/12 14:59	1
Methyl tert-butyl ether	ND		1.0		ug/L			11/14/12 14:59	1
Methylene Chloride	ND		1.0		ug/L			11/14/12 14:59	1
m-Xylene & p-Xylene	ND		2.0		ug/L			11/14/12 14:59	1
Naphthalene	ND		5.0		ug/L			11/14/12 14:59	1
n-Butylbenzene	ND		1.0		ug/L			11/14/12 14:59	1
N-Propylbenzene	ND		1.0		ug/L			11/14/12 14:59	1
o-Xylene	ND		1.0		ug/L			11/14/12 14:59	1
sec-Butylbenzene	ND		1.0		ug/L			11/14/12 14:59	1
Styrene	ND		1.0		ug/L			11/14/12 14:59	1
Tert-amyl methyl ether	ND		5.0		ug/L			11/14/12 14:59	1
Tert-butyl ethyl ether	ND		5.0		ug/L			11/14/12 14:59	1
tert-Butylbenzene	ND		1.0		ug/L			11/14/12 14:59	1
Tetrachloroethene	**2.4**		1.0		ug/L			11/14/12 14:59	1
Tetrahydrofuran	ND		10		ug/L			11/14/12 14:59	1
Toluene	ND		1.0		ug/L			11/14/12 14:59	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			11/14/12 14:59	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			11/14/12 14:59	1
Trichloroethene	**9.6**		1.0		ug/L			11/14/12 14:59	1
Trichlorofluoromethane	ND		1.0		ug/L			11/14/12 14:59	1
Vinyl chloride	ND		0.50		ug/L			11/14/12 14:59	1
Dibromomethane	ND		1.0		ug/L			11/14/12 14:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*95*		*70 - 130*		*11/14/12 14:59*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*70 - 130*		*11/14/12 14:59*	*1*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*		*11/14/12 14:59*	*1*

Method: 522 MOD - 1,4 Dioxane (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20		ug/L		11/12/12 12:15	11/12/12 23:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*90*		*70 - 130*	*11/12/12 12:15*	*11/12/12 23:34*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**33**		2.0		mg/L			11/13/12 14:04	1
Nitrate as N	ND		0.050		mg/L			11/10/12 16:21	1
Total Organic Carbon	**1.8**		1.0		mg/L			11/12/12 20:53	1

Client Sample ID: 3G-11
Date Collected: 11/09/12 12:45
Date Received: 11/10/12 09:00

Lab Sample ID: 480-28222-13
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			11/14/12 15:24	1
1,1,1-Trichloroethane	ND		1.0		ug/L			11/14/12 15:24	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			11/14/12 15:24	1
1,1,2-Trichloroethane	ND		1.0		ug/L			11/14/12 15:24	1
1,1-Dichloroethane	**8.5**		1.0		ug/L			11/14/12 15:24	1
1,1-Dichloroethene	**11**		1.0		ug/L			11/14/12 15:24	1
1,1-Dichloropropene	ND		1.0		ug/L			11/14/12 15:24	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			11/14/12 15:24	1
1,2,3-Trichloropropane	ND		1.0		ug/L			11/14/12 15:24	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			11/14/12 15:24	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			11/14/12 15:24	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			11/14/12 15:24	1
1,2-Dichlorobenzene	ND		1.0		ug/L			11/14/12 15:24	1
1,2-Dichloroethane	ND		1.0		ug/L			11/14/12 15:24	1
1,2-Dichloropropane	ND		1.0		ug/L			11/14/12 15:24	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			11/14/12 15:24	1
1,3-Dichlorobenzene	ND		1.0		ug/L			11/14/12 15:24	1
1,3-Dichloropropane	ND		1.0		ug/L			11/14/12 15:24	1
1,4-Dichlorobenzene	ND		1.0		ug/L			11/14/12 15:24	1
1,4-Dioxane	ND		50		ug/L			11/14/12 15:24	1
2,2-Dichloropropane	ND		1.0		ug/L			11/14/12 15:24	1
2-Butanone (MEK)	ND		10		ug/L			11/14/12 15:24	1
2-Chlorotoluene	ND		1.0		ug/L			11/14/12 15:24	1
2-Hexanone	ND		10		ug/L			11/14/12 15:24	1
4-Chlorotoluene	ND		1.0		ug/L			11/14/12 15:24	1
4-Isopropyltoluene	ND		1.0		ug/L			11/14/12 15:24	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			11/14/12 15:24	1
Acetone	ND		50		ug/L			11/14/12 15:24	1
Benzene	ND		1.0		ug/L			11/14/12 15:24	1
Bromobenzene	ND		1.0		ug/L			11/14/12 15:24	1
Bromoform	ND		1.0		ug/L			11/14/12 15:24	1
Bromomethane	ND		2.0		ug/L			11/14/12 15:24	1
Carbon disulfide	ND		10		ug/L			11/14/12 15:24	1
Carbon tetrachloride	ND		1.0		ug/L			11/14/12 15:24	1
Chlorobenzene	ND		1.0		ug/L			11/14/12 15:24	1
Chlorobromomethane	ND		1.0		ug/L			11/14/12 15:24	1
Chlorodibromomethane	ND		0.50		ug/L			11/14/12 15:24	1
Chloroethane	ND		2.0		ug/L			11/14/12 15:24	1
Chloroform	ND		1.0		ug/L			11/14/12 15:24	1
Chloromethane	ND		2.0		ug/L			11/14/12 15:24	1
cis-1,2-Dichloroethene	**2.1**		1.0		ug/L			11/14/12 15:24	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			11/14/12 15:24	1
Dichlorobromomethane	ND		0.50		ug/L			11/14/12 15:24	1
Dichlorodifluoromethane	ND	*	1.0		ug/L			11/14/12 15:24	1
Ethyl ether	ND		1.0		ug/L			11/14/12 15:24	1
Ethylbenzene	ND		1.0		ug/L			11/14/12 15:24	1
Ethylene Dibromide	ND		1.0		ug/L			11/14/12 15:24	1
Hexachlorobutadiene	ND		0.40		ug/L			11/14/12 15:24	1
Isopropyl ether	ND		10		ug/L			11/14/12 15:24	1

Client: Shaw Environmental & Infrastructure, Inc
Project/Site: LMC Burlington 147274

TestAmerica Job ID: 480-28222-1

Client Sample ID: 3G-11
Date Collected: 11/09/12 12:45
Date Received: 11/10/12 09:00

Lab Sample ID: 480-28222-13
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			11/14/12 15:24	1
Methyl tert-butyl ether	ND		1.0		ug/L			11/14/12 15:24	1
Methylene Chloride	ND		1.0		ug/L			11/14/12 15:24	1
m-Xylene & p-Xylene	ND		2.0		ug/L			11/14/12 15:24	1
Naphthalene	ND		5.0		ug/L			11/14/12 15:24	1
n-Butylbenzene	ND		1.0		ug/L			11/14/12 15:24	1
N-Propylbenzene	ND		1.0		ug/L			11/14/12 15:24	1
o-Xylene	ND		1.0		ug/L			11/14/12 15:24	1
sec-Butylbenzene	ND		1.0		ug/L			11/14/12 15:24	1
Styrene	ND		1.0		ug/L			11/14/12 15:24	1
Tert-amyl methyl ether	ND		5.0		ug/L			11/14/12 15:24	1
Tert-butyl ethyl ether	ND		5.0		ug/L			11/14/12 15:24	1
tert-Butylbenzene	ND		1.0		ug/L			11/14/12 15:24	1
Tetrachloroethene	ND		1.0		ug/L			11/14/12 15:24	1
Tetrahydrofuran	ND		10		ug/L			11/14/12 15:24	1
Toluene	ND		1.0		ug/L			11/14/12 15:24	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			11/14/12 15:24	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			11/14/12 15:24	1
Trichloroethene	**6.1**		1.0		ug/L			11/14/12 15:24	1
Trichlorofluoromethane	ND		1.0		ug/L			11/14/12 15:24	1
Vinyl chloride	ND		0.50		ug/L			11/14/12 15:24	1
Dibromomethane	ND		1.0		ug/L			11/14/12 15:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*94*		*70 - 130*		*11/14/12 15:24*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*70 - 130*		*11/14/12 15:24*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*11/14/12 15:24*	*1*

Method: 522 MOD - 1,4 Dioxane (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**1.7**		0.20		ug/L		11/12/12 12:15	11/12/12 23:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*84*		*70 - 130*	*11/12/12 12:15*	*11/12/12 23:50*	*1*

Client Sample ID: Trip Blank
Date Collected: 11/08/12 10:00
Date Received: 11/10/12 09:00

Lab Sample ID: 480-28222-14
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			11/14/12 15:49	1
1,1,1-Trichloroethane	ND		1.0		ug/L			11/14/12 15:49	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			11/14/12 15:49	1
1,1,2-Trichloroethane	ND		1.0		ug/L			11/14/12 15:49	1
1,1-Dichloroethane	ND		1.0		ug/L			11/14/12 15:49	1
1,1-Dichloroethene	ND		1.0		ug/L			11/14/12 15:49	1
1,1-Dichloropropene	ND		1.0		ug/L			11/14/12 15:49	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			11/14/12 15:49	1
1,2,3-Trichloropropane	ND		1.0		ug/L			11/14/12 15:49	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			11/14/12 15:49	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			11/14/12 15:49	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			11/14/12 15:49	1
1,2-Dichlorobenzene	ND		1.0		ug/L			11/14/12 15:49	1
1,2-Dichloroethane	ND		1.0		ug/L			11/14/12 15:49	1
1,2-Dichloropropane	ND		1.0		ug/L			11/14/12 15:49	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			11/14/12 15:49	1
1,3-Dichlorobenzene	ND		1.0		ug/L			11/14/12 15:49	1
1,3-Dichloropropane	ND		1.0		ug/L			11/14/12 15:49	1
1,4-Dichlorobenzene	ND		1.0		ug/L			11/14/12 15:49	1
1,4-Dioxane	ND		50		ug/L			11/14/12 15:49	1
2,2-Dichloropropane	ND		1.0		ug/L			11/14/12 15:49	1
2-Butanone (MEK)	ND		10		ug/L			11/14/12 15:49	1
2-Chlorotoluene	ND		1.0		ug/L			11/14/12 15:49	1
2-Hexanone	ND		10		ug/L			11/14/12 15:49	1
4-Chlorotoluene	ND		1.0		ug/L			11/14/12 15:49	1
4-Isopropyltoluene	ND		1.0		ug/L			11/14/12 15:49	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			11/14/12 15:49	1
Acetone	ND		50		ug/L			11/14/12 15:49	1
Benzene	ND		1.0		ug/L			11/14/12 15:49	1
Bromobenzene	ND		1.0		ug/L			11/14/12 15:49	1
Bromoform	ND		1.0		ug/L			11/14/12 15:49	1
Bromomethane	ND		2.0		ug/L			11/14/12 15:49	1
Carbon disulfide	ND		10		ug/L			11/14/12 15:49	1
Carbon tetrachloride	ND		1.0		ug/L			11/14/12 15:49	1
Chlorobenzene	ND		1.0		ug/L			11/14/12 15:49	1
Chlorobromomethane	ND		1.0		ug/L			11/14/12 15:49	1
Chlorodibromomethane	ND		0.50		ug/L			11/14/12 15:49	1
Chloroethane	ND		2.0		ug/L			11/14/12 15:49	1
Chloroform	ND		1.0		ug/L			11/14/12 15:49	1
Chloromethane	ND		2.0		ug/L			11/14/12 15:49	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			11/14/12 15:49	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			11/14/12 15:49	1
Dichlorobromomethane	ND		0.50		ug/L			11/14/12 15:49	1
Dichlorodifluoromethane	ND	*	1.0		ug/L			11/14/12 15:49	1
Ethyl ether	ND		1.0		ug/L			11/14/12 15:49	1
Ethylbenzene	ND		1.0		ug/L			11/14/12 15:49	1
Ethylene Dibromide	ND		1.0		ug/L			11/14/12 15:49	1
Hexachlorobutadiene	ND		0.40		ug/L			11/14/12 15:49	1
Isopropyl ether	ND		10		ug/L			11/14/12 15:49	1

Client: Shaw Environmental & Infrastructure, Inc
Project/Site: LMC Burlington 147274

TestAmerica Job ID: 480-28222-1

Client Sample ID: Trip Blank
Date Collected: 11/08/12 10:00
Date Received: 11/10/12 09:00

Lab Sample ID: 480-28222-14
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			11/14/12 15:49	1
Methyl tert-butyl ether	ND		1.0		ug/L			11/14/12 15:49	1
Methylene Chloride	ND		1.0		ug/L			11/14/12 15:49	1
m-Xylene & p-Xylene	ND		2.0		ug/L			11/14/12 15:49	1
Naphthalene	ND		5.0		ug/L			11/14/12 15:49	1
n-Butylbenzene	ND		1.0		ug/L			11/14/12 15:49	1
N-Propylbenzene	ND		1.0		ug/L			11/14/12 15:49	1
o-Xylene	ND		1.0		ug/L			11/14/12 15:49	1
sec-Butylbenzene	ND		1.0		ug/L			11/14/12 15:49	1
Styrene	ND		1.0		ug/L			11/14/12 15:49	1
Tert-amyl methyl ether	ND		5.0		ug/L			11/14/12 15:49	1
Tert-butyl ethyl ether	ND		5.0		ug/L			11/14/12 15:49	1
tert-Butylbenzene	ND		1.0		ug/L			11/14/12 15:49	1
Tetrachloroethene	ND		1.0		ug/L			11/14/12 15:49	1
Tetrahydrofuran	ND		10		ug/L			11/14/12 15:49	1
Toluene	ND		1.0		ug/L			11/14/12 15:49	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			11/14/12 15:49	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			11/14/12 15:49	1
Trichloroethene	ND		1.0		ug/L			11/14/12 15:49	1
Trichlorofluoromethane	ND		1.0		ug/L			11/14/12 15:49	1
Vinyl chloride	ND		0.50		ug/L			11/14/12 15:49	1
Dibromomethane	ND		1.0		ug/L			11/14/12 15:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*70 - 130*		*11/14/12 15:49*	*1*
1,2-Dichloroethane-d4 (Surr)	*85*		*70 - 130*		*11/14/12 15:49*	*1*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*		*11/14/12 15:49*	*1*

Client: Shaw Environmental & Infrastructure, Inc
Project/Site: LMC Burlington 147274

TestAmerica Job ID: 480-28222-1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		TOL	12DCE	BFB
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
480-28222-1	EMW-7	93	85	99
480-28222-2	EMW-11R	94	84	103
480-28222-3	3H-1D	93	84	101
480-28222-4	EMW-1D	93	83	103
480-28222-5	EMW-10R	93	84	102
480-28222-6	A-1D	93	85	101
480-28222-7	3H-1S	93	82	101
480-28222-8	EMW-10D	92	83	101
480-28222-9	3G-12	91	81	101
480-28222-10	EMW-3R	91	83	101
480-28222-11	EMW-2D	93	83	102
480-28222-12	EMW-2D DUP	95	83	106
480-28222-13	3G-11	94	83	103
480-28222-14	Trip Blank	97	85	108
LCS 480-90700/4	Lab Control Sample	95	86	106
LCS 480-90809/4	Lab Control Sample	96	86	107
LCSD 480-90700/5	Lab Control Sample Dup	95	85	105
LCSD 480-90809/5	Lab Control Sample Dup	93	83	104
MB 480-90700/7	Method Blank	94	83	102
MB 480-90809/7	Method Blank	93	83	103

Surrogate Legend

TOL = Toluene-d8 (Surr)
12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)

Method: 522 MOD - 1,4 Dioxane (GC/MS SIM)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		14DD8
Lab Sample ID	Client Sample ID	(70-130)
480-28222-1	EMW-7	92
480-28222-2	EMW-11R	85
480-28222-3	3H-1D	85
480-28222-4	EMW-1D	80
480-28222-5	EMW-10R	79
480-28222-6	A-1D	87
480-28222-7	3H-1S	85
480-28222-8	EMW-10D	85
480-28222-9	3G-12	85
480-28222-10	EMW-3R	87
480-28222-11	EMW-2D	81
480-28222-12	EMW-2D DUP	90
480-28222-13	3G-11	84
LCS 200-47883/2-A	Lab Control Sample	88
MB 200-47883/1-A	Method Blank	87

Surrogate Legend

14DD8 = 1,4-Dioxane-d8 (Surr)

Method: 8260C - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-90700/7
Matrix: Water
Analysis Batch: 90700

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			11/14/12 01:38	1
1,1,1-Trichloroethane	ND		1.0		ug/L			11/14/12 01:38	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			11/14/12 01:38	1
1,1,2-Trichloroethane	ND		1.0		ug/L			11/14/12 01:38	1
1,1-Dichloroethane	ND		1.0		ug/L			11/14/12 01:38	1
1,1-Dichloroethene	ND		1.0		ug/L			11/14/12 01:38	1
1,1-Dichloropropene	ND		1.0		ug/L			11/14/12 01:38	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			11/14/12 01:38	1
1,2,3-Trichloropropane	ND		1.0		ug/L			11/14/12 01:38	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			11/14/12 01:38	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			11/14/12 01:38	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			11/14/12 01:38	1
1,2-Dichlorobenzene	ND		1.0		ug/L			11/14/12 01:38	1
1,2-Dichloroethane	ND		1.0		ug/L			11/14/12 01:38	1
1,2-Dichloropropane	ND		1.0		ug/L			11/14/12 01:38	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			11/14/12 01:38	1
1,3-Dichlorobenzene	ND		1.0		ug/L			11/14/12 01:38	1
1,3-Dichloropropane	ND		1.0		ug/L			11/14/12 01:38	1
1,4-Dichlorobenzene	ND		1.0		ug/L			11/14/12 01:38	1
1,4-Dioxane	ND		50		ug/L			11/14/12 01:38	1
2,2-Dichloropropane	ND		1.0		ug/L			11/14/12 01:38	1
2-Butanone (MEK)	ND		10		ug/L			11/14/12 01:38	1
2-Chlorotoluene	ND		1.0		ug/L			11/14/12 01:38	1
2-Hexanone	ND		10		ug/L			11/14/12 01:38	1
4-Chlorotoluene	ND		1.0		ug/L			11/14/12 01:38	1
4-Isopropyltoluene	ND		1.0		ug/L			11/14/12 01:38	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			11/14/12 01:38	1
Acetone	ND		50		ug/L			11/14/12 01:38	1
Benzene	ND		1.0		ug/L			11/14/12 01:38	1
Bromobenzene	ND		1.0		ug/L			11/14/12 01:38	1
Bromoform	ND		1.0		ug/L			11/14/12 01:38	1
Bromomethane	ND		2.0		ug/L			11/14/12 01:38	1
Carbon disulfide	ND		10		ug/L			11/14/12 01:38	1
Carbon tetrachloride	ND		1.0		ug/L			11/14/12 01:38	1
Chlorobenzene	ND		1.0		ug/L			11/14/12 01:38	1
Chlorobromomethane	ND		1.0		ug/L			11/14/12 01:38	1
Chlorodibromomethane	ND		0.50		ug/L			11/14/12 01:38	1
Chloroethane	ND		2.0		ug/L			11/14/12 01:38	1
Chloroform	ND		1.0		ug/L			11/14/12 01:38	1
Chloromethane	ND		2.0		ug/L			11/14/12 01:38	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			11/14/12 01:38	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			11/14/12 01:38	1
Dichlorobromomethane	ND		0.50		ug/L			11/14/12 01:38	1
Dichlorodifluoromethane	ND		1.0		ug/L			11/14/12 01:38	1
Ethyl ether	ND		1.0		ug/L			11/14/12 01:38	1
Ethylbenzene	ND		1.0		ug/L			11/14/12 01:38	1
Ethylene Dibromide	ND		1.0		ug/L			11/14/12 01:38	1
Hexachlorobutadiene	ND		0.40		ug/L			11/14/12 01:38	1

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 480-90700/7
Matrix: Water
Analysis Batch: 90700

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropyl ether	ND		10		ug/L			11/14/12 01:38	1
Isopropylbenzene	ND		1.0		ug/L			11/14/12 01:38	1
Methyl tert-butyl ether	ND		1.0		ug/L			11/14/12 01:38	1
Methylene Chloride	ND		1.0		ug/L			11/14/12 01:38	1
m-Xylene & p-Xylene	ND		2.0		ug/L			11/14/12 01:38	1
Naphthalene	ND		5.0		ug/L			11/14/12 01:38	1
n-Butylbenzene	ND		1.0		ug/L			11/14/12 01:38	1
N-Propylbenzene	ND		1.0		ug/L			11/14/12 01:38	1
o-Xylene	ND		1.0		ug/L			11/14/12 01:38	1
sec-Butylbenzene	ND		1.0		ug/L			11/14/12 01:38	1
Styrene	ND		1.0		ug/L			11/14/12 01:38	1
Tert-amyl methyl ether	ND		5.0		ug/L			11/14/12 01:38	1
Tert-butyl ethyl ether	ND		5.0		ug/L			11/14/12 01:38	1
tert-Butylbenzene	ND		1.0		ug/L			11/14/12 01:38	1
Tetrachloroethene	ND		1.0		ug/L			11/14/12 01:38	1
Tetrahydrofuran	ND		10		ug/L			11/14/12 01:38	1
Toluene	ND		1.0		ug/L			11/14/12 01:38	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			11/14/12 01:38	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			11/14/12 01:38	1
Trichloroethene	ND		1.0		ug/L			11/14/12 01:38	1
Trichlorofluoromethane	ND		1.0		ug/L			11/14/12 01:38	1
Vinyl chloride	ND		0.50		ug/L			11/14/12 01:38	1
Dibromomethane	ND		1.0		ug/L			11/14/12 01:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*94*		*70 - 130*		*11/14/12 01:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*70 - 130*		*11/14/12 01:38*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*11/14/12 01:38*	*1*

Lab Sample ID: LCS 480-90700/4
Matrix: Water
Analysis Batch: 90700

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	25.0	26.2		ug/L		105	70 - 130
1,1,1-Trichloroethane	25.0	23.2		ug/L		93	70 - 130
1,1,2,2-Tetrachloroethane	25.0	22.6		ug/L		90	70 - 130
1,1,2-Trichloroethane	25.0	24.9		ug/L		99	70 - 130
1,1-Dichloroethane	25.0	23.3		ug/L		93	70 - 130
1,1-Dichloroethene	25.0	20.4		ug/L		82	70 - 130
1,1-Dichloropropene	25.0	25.4		ug/L		102	70 - 130
1,2,3-Trichlorobenzene	25.0	25.5		ug/L		102	70 - 130
1,2,3-Trichloropropane	25.0	22.2		ug/L		89	70 - 130
1,2,4-Trichlorobenzene	25.0	25.4		ug/L		102	70 - 130
1,2,4-Trimethylbenzene	25.0	21.7		ug/L		87	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	21.2		ug/L		85	70 - 130
1,2-Dichlorobenzene	25.0	22.8		ug/L		91	70 - 130
1,2-Dichloroethane	25.0	21.6		ug/L		86	70 - 130

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-90700/4
Matrix: Water
Analysis Batch: 90700

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	25.0	23.7		ug/L		95	70 - 130
1,3,5-Trimethylbenzene	25.0	22.0		ug/L		88	70 - 130
1,3-Dichlorobenzene	25.0	23.0		ug/L		92	70 - 130
1,3-Dichloropropane	25.0	24.2		ug/L		97	70 - 130
1,4-Dichlorobenzene	25.0	23.3		ug/L		93	70 - 130
1,4-Dioxane	1000	1240		ug/L		124	70 - 130
2,2-Dichloropropane	25.0	22.9		ug/L		92	70 - 130
2-Butanone (MEK)	125	154		ug/L		123	70 - 130
2-Chlorotoluene	25.0	25.0		ug/L		100	70 - 130
2-Hexanone	125	100		ug/L		80	70 - 130
4-Chlorotoluene	25.0	23.0		ug/L		92	70 - 130
4-Isopropyltoluene	25.0	23.1		ug/L		93	70 - 130
4-Methyl-2-pentanone (MIBK)	125	101		ug/L		81	70 - 130
Acetone	125	100		ug/L		80	70 - 130
Benzene	25.0	25.4		ug/L		102	70 - 130
Bromobenzene	25.0	23.1		ug/L		93	70 - 130
Bromoform	25.0	29.8		ug/L		119	70 - 130
Bromomethane	25.0	23.1		ug/L		92	70 - 130
Carbon disulfide	25.0	29.0		ug/L		116	70 - 130
Carbon tetrachloride	25.0	24.2		ug/L		97	70 - 130
Chlorobenzene	25.0	25.3		ug/L		101	70 - 130
Chlorobromomethane	25.0	27.1		ug/L		109	70 - 130
Chlorodibromomethane	25.0	26.6		ug/L		107	70 - 130
Chloroethane	25.0	20.8		ug/L		83	70 - 130
Chloroform	25.0	24.0		ug/L		96	70 - 130
Chloromethane	25.0	18.4		ug/L		73	70 - 130
cis-1,2-Dichloroethene	25.0	25.3		ug/L		101	70 - 130
cis-1,3-Dichloropropene	25.0	24.3		ug/L		97	70 - 130
Dichlorobromomethane	25.0	25.3		ug/L		101	70 - 130
Dichlorodifluoromethane	50.0	53.8		ug/L		108	70 - 130
Ethyl ether	25.0	26.0		ug/L		104	70 - 130
Ethylbenzene	25.0	24.2		ug/L		97	70 - 130
Ethylene Dibromide	25.0	25.3		ug/L		101	70 - 130
Hexachlorobutadiene	25.0	29.6		ug/L		118	70 - 130
Isopropyl ether	25.0	22.9		ug/L		91	70 - 130
Isopropylbenzene	25.0	22.0		ug/L		88	70 - 130
Methyl tert-butyl ether	25.0	23.4		ug/L		93	70 - 130
Methylene Chloride	25.0	24.1		ug/L		97	70 - 130
m-Xylene & p-Xylene	50.0	51.1		ug/L		102	70 - 130
Naphthalene	25.0	22.6		ug/L		91	70 - 130
n-Butylbenzene	25.0	22.0		ug/L		88	70 - 130
N-Propylbenzene	25.0	21.3		ug/L		85	70 - 130
o-Xylene	25.0	24.9		ug/L		100	70 - 130
sec-Butylbenzene	25.0	22.7		ug/L		91	70 - 130
Styrene	25.0	24.6		ug/L		98	70 - 130
Tert-amyl methyl ether	25.0	27.0		ug/L		108	70 - 130
Tert-butyl ethyl ether	25.0	23.8		ug/L		95	70 - 130
tert-Butylbenzene	25.0	23.2		ug/L		93	70 - 130

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-90700/4
Matrix: Water
Analysis Batch: 90700

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Tetrachloroethene	25.0	32.1		ug/L		128	70 - 130
Tetrahydrofuran	125	108		ug/L		86	70 - 130
Toluene	25.0	24.7		ug/L		99	70 - 130
trans-1,2-Dichloroethene	25.0	25.0		ug/L		100	70 - 130
trans-1,3-Dichloropropene	25.0	24.0		ug/L		96	70 - 130
Trichloroethene	25.0	27.2		ug/L		109	70 - 130
Trichlorofluoromethane	25.0	24.9		ug/L		100	70 - 130
Vinyl chloride	25.0	21.1		ug/L		85	70 - 130
Dibromomethane	25.0	25.0		ug/L		100	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*95*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*86*		*70 - 130*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: LCSD 480-90700/5
Matrix: Water
Analysis Batch: 90700

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	25.0	25.4		ug/L		102	70 - 130	3	20
1,1,1-Trichloroethane	25.0	23.5		ug/L		94	70 - 130	1	20
1,1,2,2-Tetrachloroethane	25.0	22.3		ug/L		89	70 - 130	2	20
1,1,2-Trichloroethane	25.0	24.0		ug/L		96	70 - 130	3	20
1,1-Dichloroethane	25.0	22.8		ug/L		91	70 - 130	2	20
1,1-Dichloroethene	25.0	21.8		ug/L		87	70 - 130	7	20
1,1-Dichloropropene	25.0	24.6		ug/L		98	70 - 130	3	20
1,2,3-Trichlorobenzene	25.0	25.7		ug/L		103	70 - 130	1	20
1,2,3-Trichloropropane	25.0	22.5		ug/L		90	70 - 130	1	20
1,2,4-Trichlorobenzene	25.0	25.3		ug/L		101	70 - 130	0	20
1,2,4-Trimethylbenzene	25.0	21.5		ug/L		86	70 - 130	1	20
1,2-Dibromo-3-Chloropropane	25.0	20.5		ug/L		82	70 - 130	4	20
1,2-Dichlorobenzene	25.0	22.8		ug/L		91	70 - 130	0	20
1,2-Dichloroethane	25.0	21.2		ug/L		85	70 - 130	2	20
1,2-Dichloropropane	25.0	23.4		ug/L		94	70 - 130	1	20
1,3,5-Trimethylbenzene	25.0	21.9		ug/L		88	70 - 130	0	20
1,3-Dichlorobenzene	25.0	22.8		ug/L		91	70 - 130	1	20
1,3-Dichloropropane	25.0	23.7		ug/L		95	70 - 130	2	20
1,4-Dichlorobenzene	25.0	22.8		ug/L		91	70 - 130	2	20
1,4-Dioxane	1000	1230		ug/L		123	70 - 130	1	20
2,2-Dichloropropane	25.0	22.1		ug/L		88	70 - 130	4	20
2-Butanone (MEK)	125	153		ug/L		122	70 - 130	0	20
2-Chlorotoluene	25.0	24.9		ug/L		99	70 - 130	1	20
2-Hexanone	125	97.8		ug/L		78	70 - 130	2	20
4-Chlorotoluene	25.0	22.4		ug/L		90	70 - 130	3	20
4-Isopropyltoluene	25.0	22.8		ug/L		91	70 - 130	2	20
4-Methyl-2-pentanone (MIBK)	125	98.7		ug/L		79	70 - 130	2	20
Acetone	125	99.4		ug/L		80	70 - 130	1	20

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 480-90700/5
Matrix: Water
Analysis Batch: 90700

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			25.0	24.7		ug/L		99	70 - 130	3	20
Bromobenzene			25.0	22.8		ug/L		91	70 - 130	1	20
Bromoform			25.0	29.6		ug/L		118	70 - 130	1	20
Bromomethane			25.0	22.1		ug/L		89	70 - 130	4	20
Carbon disulfide			25.0	28.3		ug/L		113	70 - 130	2	20
Carbon tetrachloride			25.0	24.3		ug/L		97	70 - 130	0	20
Chlorobenzene			25.0	24.8		ug/L		99	70 - 130	2	20
Chlorobromomethane			25.0	26.7		ug/L		107	70 - 130	2	20
Chlorodibromomethane			25.0	25.7		ug/L		103	70 - 130	4	20
Chloroethane			25.0	20.7		ug/L		83	70 - 130	1	20
Chloroform			25.0	23.5		ug/L		94	70 - 130	2	20
Chloromethane			25.0	17.6		ug/L		70	70 - 130	4	20
cis-1,2-Dichloroethene			25.0	25.2		ug/L		101	70 - 130	1	20
cis-1,3-Dichloropropene			25.0	24.6		ug/L		99	70 - 130	1	20
Dichlorobromomethane			25.0	24.7		ug/L		99	70 - 130	2	20
Dichlorodifluoromethane			50.0	51.2		ug/L		102	70 - 130	5	20
Ethyl ether			25.0	26.0		ug/L		104	70 - 130	0	20
Ethylbenzene			25.0	23.5		ug/L		94	70 - 130	3	20
Ethylene Dibromide			25.0	24.7		ug/L		99	70 - 130	3	20
Hexachlorobutadiene			25.0	28.6		ug/L		115	70 - 130	3	20
Isopropyl ether			25.0	22.6		ug/L		91	70 - 130	1	20
Isopropylbenzene			25.0	21.5		ug/L		86	70 - 130	2	20
Methyl tert-butyl ether			25.0	23.6		ug/L		94	70 - 130	1	20
Methylene Chloride			25.0	23.4		ug/L		94	70 - 130	3	20
m-Xylene & p-Xylene			50.0	49.1		ug/L		98	70 - 130	4	20
Naphthalene			25.0	23.0		ug/L		92	70 - 130	2	20
n-Butylbenzene			25.0	21.4		ug/L		86	70 - 130	3	20
N-Propylbenzene			25.0	20.9		ug/L		84	70 - 130	2	20
o-Xylene			25.0	24.3		ug/L		97	70 - 130	2	20
sec-Butylbenzene			25.0	22.2		ug/L		89	70 - 130	2	20
Styrene			25.0	23.7		ug/L		95	70 - 130	4	20
Tert-amyl methyl ether			25.0	26.8		ug/L		107	70 - 130	1	20
Tert-butyl ethyl ether			25.0	23.8		ug/L		95	70 - 130	0	20
tert-Butylbenzene			25.0	22.9		ug/L		92	70 - 130	1	20
Tetrachloroethene			25.0	31.6		ug/L		126	70 - 130	2	20
Tetrahydrofuran			125	106		ug/L		85	70 - 130	2	20
Toluene			25.0	23.9		ug/L		96	70 - 130	3	20
trans-1,2-Dichloroethene			25.0	24.7		ug/L		99	70 - 130	1	20
trans-1,3-Dichloropropene			25.0	23.4		ug/L		94	70 - 130	2	20
Trichloroethene			25.0	26.7		ug/L		107	70 - 130	2	20
Trichlorofluoromethane			25.0	24.6		ug/L		99	70 - 130	1	20
Vinyl chloride			25.0	20.6		ug/L		82	70 - 130	3	20
Dibromomethane			25.0	25.2		ug/L		101	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*95*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*85*		*70 - 130*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 480-90809/7
Matrix: Water
Analysis Batch: 90809

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			11/14/12 13:34	1
1,1,1-Trichloroethane	ND		1.0		ug/L			11/14/12 13:34	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			11/14/12 13:34	1
1,1,2-Trichloroethane	ND		1.0		ug/L			11/14/12 13:34	1
1,1-Dichloroethane	ND		1.0		ug/L			11/14/12 13:34	1
1,1-Dichloroethene	ND		1.0		ug/L			11/14/12 13:34	1
1,1-Dichloropropene	ND		1.0		ug/L			11/14/12 13:34	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			11/14/12 13:34	1
1,2,3-Trichloropropane	ND		1.0		ug/L			11/14/12 13:34	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			11/14/12 13:34	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			11/14/12 13:34	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			11/14/12 13:34	1
1,2-Dichlorobenzene	ND		1.0		ug/L			11/14/12 13:34	1
1,2-Dichloroethane	ND		1.0		ug/L			11/14/12 13:34	1
1,2-Dichloropropane	ND		1.0		ug/L			11/14/12 13:34	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			11/14/12 13:34	1
1,3-Dichlorobenzene	ND		1.0		ug/L			11/14/12 13:34	1
1,3-Dichloropropane	ND		1.0		ug/L			11/14/12 13:34	1
1,4-Dichlorobenzene	ND		1.0		ug/L			11/14/12 13:34	1
1,4-Dioxane	ND		50		ug/L			11/14/12 13:34	1
2,2-Dichloropropane	ND		1.0		ug/L			11/14/12 13:34	1
2-Butanone (MEK)	ND		10		ug/L			11/14/12 13:34	1
2-Chlorotoluene	ND		1.0		ug/L			11/14/12 13:34	1
2-Hexanone	ND		10		ug/L			11/14/12 13:34	1
4-Chlorotoluene	ND		1.0		ug/L			11/14/12 13:34	1
4-Isopropyltoluene	ND		1.0		ug/L			11/14/12 13:34	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			11/14/12 13:34	1
Acetone	ND		50		ug/L			11/14/12 13:34	1
Benzene	ND		1.0		ug/L			11/14/12 13:34	1
Bromobenzene	ND		1.0		ug/L			11/14/12 13:34	1
Bromoform	ND		1.0		ug/L			11/14/12 13:34	1
Bromomethane	ND		2.0		ug/L			11/14/12 13:34	1
Carbon disulfide	ND		10		ug/L			11/14/12 13:34	1
Carbon tetrachloride	ND		1.0		ug/L			11/14/12 13:34	1
Chlorobenzene	ND		1.0		ug/L			11/14/12 13:34	1
Chlorobromomethane	ND		1.0		ug/L			11/14/12 13:34	1
Chlorodibromomethane	ND		0.50		ug/L			11/14/12 13:34	1
Chloroethane	ND		2.0		ug/L			11/14/12 13:34	1
Chloroform	ND		1.0		ug/L			11/14/12 13:34	1
Chloromethane	ND		2.0		ug/L			11/14/12 13:34	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			11/14/12 13:34	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			11/14/12 13:34	1
Dichlorobromomethane	ND		0.50		ug/L			11/14/12 13:34	1
Dichlorodifluoromethane	ND		1.0		ug/L			11/14/12 13:34	1
Ethyl ether	ND		1.0		ug/L			11/14/12 13:34	1
Ethylbenzene	ND		1.0		ug/L			11/14/12 13:34	1
Ethylene Dibromide	ND		1.0		ug/L			11/14/12 13:34	1
Hexachlorobutadiene	ND		0.40		ug/L			11/14/12 13:34	1

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 480-90809/7
Matrix: Water
Analysis Batch: 90809

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropyl ether	ND		10		ug/L			11/14/12 13:34	1
Isopropylbenzene	ND		1.0		ug/L			11/14/12 13:34	1
Methyl tert-butyl ether	ND		1.0		ug/L			11/14/12 13:34	1
Methylene Chloride	ND		1.0		ug/L			11/14/12 13:34	1
m-Xylene & p-Xylene	ND		2.0		ug/L			11/14/12 13:34	1
Naphthalene	ND		5.0		ug/L			11/14/12 13:34	1
n-Butylbenzene	ND		1.0		ug/L			11/14/12 13:34	1
N-Propylbenzene	ND		1.0		ug/L			11/14/12 13:34	1
o-Xylene	ND		1.0		ug/L			11/14/12 13:34	1
sec-Butylbenzene	ND		1.0		ug/L			11/14/12 13:34	1
Styrene	ND		1.0		ug/L			11/14/12 13:34	1
Tert-amyl methyl ether	ND		5.0		ug/L			11/14/12 13:34	1
Tert-butyl ethyl ether	ND		5.0		ug/L			11/14/12 13:34	1
tert-Butylbenzene	ND		1.0		ug/L			11/14/12 13:34	1
Tetrachloroethene	ND		1.0		ug/L			11/14/12 13:34	1
Tetrahydrofuran	ND		10		ug/L			11/14/12 13:34	1
Toluene	ND		1.0		ug/L			11/14/12 13:34	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			11/14/12 13:34	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			11/14/12 13:34	1
Trichloroethene	ND		1.0		ug/L			11/14/12 13:34	1
Trichlorofluoromethane	ND		1.0		ug/L			11/14/12 13:34	1
Vinyl chloride	ND		0.50		ug/L			11/14/12 13:34	1
Dibromomethane	ND		1.0		ug/L			11/14/12 13:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*93*		*70 - 130*		*11/14/12 13:34*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*70 - 130*		*11/14/12 13:34*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*11/14/12 13:34*	*1*

Lab Sample ID: LCS 480-90809/4
Matrix: Water
Analysis Batch: 90809

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	25.0	27.1		ug/L		108	70 - 130
1,1,1-Trichloroethane	25.0	25.0		ug/L		100	70 - 130
1,1,2,2-Tetrachloroethane	25.0	23.7		ug/L		95	70 - 130
1,1,2-Trichloroethane	25.0	26.2		ug/L		105	70 - 130
1,1-Dichloroethane	25.0	24.7		ug/L		99	70 - 130
1,1-Dichloroethene	25.0	23.1		ug/L		92	70 - 130
1,1-Dichloropropene	25.0	26.7		ug/L		107	70 - 130
1,2,3-Trichlorobenzene	25.0	26.8		ug/L		107	70 - 130
1,2,3-Trichloropropane	25.0	23.5		ug/L		94	70 - 130
1,2,4-Trichlorobenzene	25.0	26.7		ug/L		107	70 - 130
1,2,4-Trimethylbenzene	25.0	23.0		ug/L		92	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	21.5		ug/L		86	70 - 130
1,2-Dichlorobenzene	25.0	24.0		ug/L		96	70 - 130
1,2-Dichloroethane	25.0	22.8		ug/L		91	70 - 130

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-90809/4
Matrix: Water
Analysis Batch: 90809

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	25.0	25.2		ug/L		101	70 - 130
1,3,5-Trimethylbenzene	25.0	23.2		ug/L		93	70 - 130
1,3-Dichlorobenzene	25.0	24.3		ug/L		97	70 - 130
1,3-Dichloropropane	25.0	25.1		ug/L		100	70 - 130
1,4-Dichlorobenzene	25.0	24.6		ug/L		98	70 - 130
1,4-Dioxane	1000	1270		ug/L		127	70 - 130
2,2-Dichloropropane	25.0	25.1		ug/L		100	70 - 130
2-Butanone (MEK)	125	158		ug/L		127	70 - 130
2-Chlorotoluene	25.0	26.1		ug/L		105	70 - 130
2-Hexanone	125	102		ug/L		82	70 - 130
4-Chlorotoluene	25.0	24.4		ug/L		98	70 - 130
4-Isopropyltoluene	25.0	24.3		ug/L		97	70 - 130
4-Methyl-2-pentanone (MIBK)	125	103		ug/L		82	70 - 130
Acetone	125	105		ug/L		84	70 - 130
Benzene	25.0	27.0		ug/L		108	70 - 130
Bromobenzene	25.0	24.4		ug/L		98	70 - 130
Bromoform	25.0	31.3		ug/L		125	70 - 130
Bromomethane	25.0	26.7		ug/L		107	70 - 130
Carbon disulfide	25.0	20.4		ug/L		81	70 - 130
Carbon tetrachloride	25.0	26.6		ug/L		107	70 - 130
Chlorobenzene	25.0	26.6		ug/L		106	70 - 130
Chlorobromomethane	25.0	28.9		ug/L		115	70 - 130
Chlorodibromomethane	25.0	27.8		ug/L		111	70 - 130
Chloroethane	25.0	23.7		ug/L		95	70 - 130
Chloroform	25.0	25.4		ug/L		102	70 - 130
Chloromethane	25.0	24.4		ug/L		98	70 - 130
cis-1,2-Dichloroethene	25.0	27.4		ug/L		109	70 - 130
cis-1,3-Dichloropropene	25.0	25.5		ug/L		102	70 - 130
Dichlorobromomethane	25.0	26.2		ug/L		105	70 - 130
Dichlorodifluoromethane	50.0	71.6	*	ug/L		143	70 - 130
Ethyl ether	25.0	27.6		ug/L		110	70 - 130
Ethylbenzene	25.0	25.6		ug/L		102	70 - 130
Ethylene Dibromide	25.0	26.3		ug/L		105	70 - 130
Hexachlorobutadiene	25.0	31.4		ug/L		126	70 - 130
Isopropyl ether	25.0	24.0		ug/L		96	70 - 130
Isopropylbenzene	25.0	23.1		ug/L		92	70 - 130
Methyl tert-butyl ether	25.0	24.0		ug/L		96	70 - 130
Methylene Chloride	25.0	26.0		ug/L		104	70 - 130
m-Xylene & p-Xylene	50.0	53.6		ug/L		107	70 - 130
Naphthalene	25.0	23.5		ug/L		94	70 - 130
n-Butylbenzene	25.0	23.0		ug/L		92	70 - 130
N-Propylbenzene	25.0	22.6		ug/L		91	70 - 130
o-Xylene	25.0	26.6		ug/L		106	70 - 130
sec-Butylbenzene	25.0	23.7		ug/L		95	70 - 130
Styrene	25.0	25.7		ug/L		103	70 - 130
Tert-amyl methyl ether	25.0	27.7		ug/L		111	70 - 130
Tert-butyl ethyl ether	25.0	24.2		ug/L		97	70 - 130
tert-Butylbenzene	25.0	24.5		ug/L		98	70 - 130

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-90809/4
Matrix: Water
Analysis Batch: 90809

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Tetrachloroethene	25.0	31.1		ug/L		124	70 - 130
Tetrahydrofuran	125	111		ug/L		89	70 - 130
Toluene	25.0	26.3		ug/L		105	70 - 130
trans-1,2-Dichloroethene	25.0	26.9		ug/L		108	70 - 130
trans-1,3-Dichloropropene	25.0	25.2		ug/L		101	70 - 130
Trichloroethene	25.0	28.1		ug/L		113	70 - 130
Trichlorofluoromethane	25.0	28.1		ug/L		112	70 - 130
Vinyl chloride	25.0	26.0		ug/L		104	70 - 130
Dibromomethane	25.0	26.6		ug/L		107	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*96*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*86*		*70 - 130*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: LCSD 480-90809/5
Matrix: Water
Analysis Batch: 90809

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	25.0	26.0		ug/L		104	70 - 130	4	20
1,1,1-Trichloroethane	25.0	23.6		ug/L		94	70 - 130	6	20
1,1,2,2-Tetrachloroethane	25.0	22.3		ug/L		89	70 - 130	6	20
1,1,2-Trichloroethane	25.0	25.2		ug/L		101	70 - 130	4	20
1,1-Dichloroethane	25.0	23.4		ug/L		94	70 - 130	6	20
1,1-Dichloroethene	25.0	21.7		ug/L		87	70 - 130	6	20
1,1-Dichloropropene	25.0	25.0		ug/L		100	70 - 130	6	20
1,2,3-Trichlorobenzene	25.0	25.6		ug/L		102	70 - 130	4	20
1,2,3-Trichloropropane	25.0	22.8		ug/L		91	70 - 130	3	20
1,2,4-Trichlorobenzene	25.0	25.6		ug/L		102	70 - 130	4	20
1,2,4-Trimethylbenzene	25.0	21.2		ug/L		85	70 - 130	8	20
1,2-Dibromo-3-Chloropropane	25.0	21.1		ug/L		85	70 - 130	2	20
1,2-Dichlorobenzene	25.0	22.7		ug/L		91	70 - 130	5	20
1,2-Dichloroethane	25.0	21.8		ug/L		87	70 - 130	4	20
1,2-Dichloropropane	25.0	23.5		ug/L		94	70 - 130	7	20
1,3,5-Trimethylbenzene	25.0	21.5		ug/L		86	70 - 130	8	20
1,3-Dichlorobenzene	25.0	22.7		ug/L		91	70 - 130	7	20
1,3-Dichloropropane	25.0	24.6		ug/L		98	70 - 130	2	20
1,4-Dichlorobenzene	25.0	23.0		ug/L		92	70 - 130	6	20
1,4-Dioxane	1000	1280		ug/L		128	70 - 130	0	20
2,2-Dichloropropane	25.0	23.6		ug/L		95	70 - 130	6	20
2-Butanone (MEK)	125	157		ug/L		126	70 - 130	1	20
2-Chlorotoluene	25.0	24.7		ug/L		99	70 - 130	6	20
2-Hexanone	125	102		ug/L		81	70 - 130	0	20
4-Chlorotoluene	25.0	22.8		ug/L		91	70 - 130	7	20
4-Isopropyltoluene	25.0	22.4		ug/L		90	70 - 130	8	20
4-Methyl-2-pentanone (MIBK)	125	102		ug/L		81	70 - 130	1	20
Acetone	125	104		ug/L		83	70 - 130	1	20

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 480-90809/5
Matrix: Water
Analysis Batch: 90809

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			25.0	25.5		ug/L		102	70 - 130	6	20
Bromobenzene			25.0	23.0		ug/L		92	70 - 130	6	20
Bromoform			25.0	30.3		ug/L		121	70 - 130	3	20
Bromomethane			25.0	25.3		ug/L		101	70 - 130	5	20
Carbon disulfide			25.0	19.5		ug/L		78	70 - 130	4	20
Carbon tetrachloride			25.0	24.3		ug/L		97	70 - 130	9	20
Chlorobenzene			25.0	25.5		ug/L		102	70 - 130	4	20
Chlorobromomethane			25.0	27.7		ug/L		111	70 - 130	4	20
Chlorodibromomethane			25.0	27.2		ug/L		109	70 - 130	2	20
Chloroethane			25.0	22.3		ug/L		89	70 - 130	6	20
Chloroform			25.0	23.8		ug/L		95	70 - 130	6	20
Chloromethane			25.0	22.3		ug/L		89	70 - 130	9	20
cis-1,2-Dichloroethene			25.0	26.0		ug/L		104	70 - 130	5	20
cis-1,3-Dichloropropene			25.0	24.9		ug/L		100	70 - 130	3	20
Dichlorobromomethane			25.0	25.2		ug/L		101	70 - 130	4	20
Dichlorodifluoromethane			50.0	64.1		ug/L		128	70 - 130	11	20
Ethyl ether			25.0	26.5		ug/L		106	70 - 130	4	20
Ethylbenzene			25.0	24.2		ug/L		97	70 - 130	6	20
Ethylene Dibromide			25.0	25.9		ug/L		103	70 - 130	2	20
Hexachlorobutadiene			25.0	29.3		ug/L		117	70 - 130	7	20
Isopropyl ether			25.0	22.9		ug/L		92	70 - 130	5	20
Isopropylbenzene			25.0	21.4		ug/L		86	70 - 130	7	20
Methyl tert-butyl ether			25.0	23.8		ug/L		95	70 - 130	1	20
Methylene Chloride			25.0	25.3		ug/L		101	70 - 130	3	20
m-Xylene & p-Xylene			50.0	50.6		ug/L		101	70 - 130	6	20
Naphthalene			25.0	23.0		ug/L		92	70 - 130	2	20
n-Butylbenzene			25.0	21.3		ug/L		85	70 - 130	8	20
N-Propylbenzene			25.0	20.8		ug/L		83	70 - 130	9	20
o-Xylene			25.0	25.4		ug/L		102	70 - 130	5	20
sec-Butylbenzene			25.0	21.8		ug/L		87	70 - 130	8	20
Styrene			25.0	24.6		ug/L		98	70 - 130	4	20
Tert-amyl methyl ether			25.0	27.0		ug/L		108	70 - 130	2	20
Tert-butyl ethyl ether			25.0	23.6		ug/L		95	70 - 130	2	20
tert-Butylbenzene			25.0	22.6		ug/L		90	70 - 130	8	20
Tetrachloroethene			25.0	29.3		ug/L		117	70 - 130	6	20
Tetrahydrofuran			125	110		ug/L		88	70 - 130	1	20
Toluene			25.0	24.9		ug/L		99	70 - 130	6	20
trans-1,2-Dichloroethene			25.0	25.5		ug/L		102	70 - 130	5	20
trans-1,3-Dichloropropene			25.0	24.1		ug/L		96	70 - 130	4	20
Trichloroethene			25.0	26.5		ug/L		106	70 - 130	6	20
Trichlorofluoromethane			25.0	26.0		ug/L		104	70 - 130	8	20
Vinyl chloride			25.0	24.4		ug/L		98	70 - 130	6	20
Dibromomethane			25.0	25.6		ug/L		102	70 - 130	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*93*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*83*		*70 - 130*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*

Method: 522 MOD - 1,4 Dioxane (GC/MS SIM)

Lab Sample ID: MB 200-47883/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 47891 — **Prep Batch: 47883**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20		ug/L		11/12/12 12:15	11/12/12 19:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*87*		*70 - 130*	*11/12/12 12:15*	*11/12/12 19:50*	*1*

Lab Sample ID: LCS 200-47883/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 47891 — **Prep Batch: 47883**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	2.00	1.78		ug/L		89	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*88*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-90393/76 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 90393

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		2.0		mg/L			11/13/12 11:21	1

Lab Sample ID: LCS 480-90393/75 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 90393

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	20.0	20.2		mg/L		101	90 - 110

Method: SM 5310D - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-90538/27 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 90538

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0		mg/L			11/13/12 02:25	1

Lab Sample ID: MB 480-90538/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 90538

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0		mg/L			11/12/12 18:36	1

Method: SM 5310D - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: LCS 480-90538/28
Matrix: Water
Analysis Batch: 90538

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	56.6		mg/L		94	90 - 110

Lab Sample ID: LCS 480-90538/4
Matrix: Water
Analysis Batch: 90538

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	59.6		mg/L		99	90 - 110

GC/MS VOA

Analysis Batch: 90700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-28222-1	EMW-7	Total/NA	Water	8260C	
480-28222-2	EMW-11R	Total/NA	Water	8260C	
480-28222-3	3H-1D	Total/NA	Water	8260C	
480-28222-4	EMW-1D	Total/NA	Water	8260C	
480-28222-5	EMW-10R	Total/NA	Water	8260C	
480-28222-6	A-1D	Total/NA	Water	8260C	
480-28222-7	3H-1S	Total/NA	Water	8260C	
480-28222-8	EMW-10D	Total/NA	Water	8260C	
480-28222-9	3G-12	Total/NA	Water	8260C	
480-28222-10	EMW-3R	Total/NA	Water	8260C	
480-28222-11	EMW-2D	Total/NA	Water	8260C	
LCS 480-90700/4	Lab Control Sample	Total/NA	Water	8260C	
LCSD 480-90700/5	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 480-90700/7	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 90809

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-28222-12	EMW-2D DUP	Total/NA	Water	8260C	
480-28222-13	3G-11	Total/NA	Water	8260C	
480-28222-14	Trip Blank	Total/NA	Water	8260C	
LCS 480-90809/4	Lab Control Sample	Total/NA	Water	8260C	
LCSD 480-90809/5	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 480-90809/7	Method Blank	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 47883

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-28222-1	EMW-7	Total/NA	Water	3535A	
480-28222-2	EMW-11R	Total/NA	Water	3535A	
480-28222-3	3H-1D	Total/NA	Water	3535A	
480-28222-4	EMW-1D	Total/NA	Water	3535A	
480-28222-5	EMW-10R	Total/NA	Water	3535A	
480-28222-6	A-1D	Total/NA	Water	3535A	
480-28222-7	3H-1S	Total/NA	Water	3535A	
480-28222-8	EMW-10D	Total/NA	Water	3535A	
480-28222-9	3G-12	Total/NA	Water	3535A	
480-28222-10	EMW-3R	Total/NA	Water	3535A	
480-28222-11	EMW-2D	Total/NA	Water	3535A	
480-28222-12	EMW-2D DUP	Total/NA	Water	3535A	
480-28222-13	3G-11	Total/NA	Water	3535A	
LCS 200-47883/2-A	Lab Control Sample	Total/NA	Water	3535A	
MB 200-47883/1-A	Method Blank	Total/NA	Water	3535A	

Analysis Batch: 47891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-28222-1	EMW-7	Total/NA	Water	522 MOD	47883
480-28222-2	EMW-11R	Total/NA	Water	522 MOD	47883
480-28222-3	3H-1D	Total/NA	Water	522 MOD	47883
480-28222-4	EMW-1D	Total/NA	Water	522 MOD	47883

GC/MS Semi VOA (Continued)

Analysis Batch: 47891 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-28222-5	EMW-10R	Total/NA	Water	522 MOD	47883
480-28222-6	A-1D	Total/NA	Water	522 MOD	47883
480-28222-7	3H-1S	Total/NA	Water	522 MOD	47883
480-28222-8	EMW-10D	Total/NA	Water	522 MOD	47883
480-28222-9	3G-12	Total/NA	Water	522 MOD	47883
480-28222-10	EMW-3R	Total/NA	Water	522 MOD	47883
480-28222-11	EMW-2D	Total/NA	Water	522 MOD	47883
480-28222-12	EMW-2D DUP	Total/NA	Water	522 MOD	47883
480-28222-13	3G-11	Total/NA	Water	522 MOD	47883
LCS 200-47883/2-A	Lab Control Sample	Total/NA	Water	522 MOD	47883
MB 200-47883/1-A	Method Blank	Total/NA	Water	522 MOD	47883

General Chemistry

Analysis Batch: 90212

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-28222-4	EMW-1D	Total/NA	Water	353.2	
480-28222-9	3G-12	Total/NA	Water	353.2	
480-28222-11	EMW-2D	Total/NA	Water	353.2	
480-28222-12	EMW-2D DUP	Total/NA	Water	353.2	

Analysis Batch: 90393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-28222-4	EMW-1D	Total/NA	Water	300.0	
480-28222-9	3G-12	Total/NA	Water	300.0	
480-28222-11	EMW-2D	Total/NA	Water	300.0	
480-28222-12	EMW-2D DUP	Total/NA	Water	300.0	
LCS 480-90393/75	Lab Control Sample	Total/NA	Water	300.0	
MB 480-90393/76	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 90538

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-28222-4	EMW-1D	Total/NA	Water	SM 5310D	
480-28222-9	3G-12	Total/NA	Water	SM 5310D	
480-28222-11	EMW-2D	Total/NA	Water	SM 5310D	
480-28222-12	EMW-2D DUP	Total/NA	Water	SM 5310D	
LCS 480-90538/28	Lab Control Sample	Total/NA	Water	SM 5310D	
LCS 480-90538/4	Lab Control Sample	Total/NA	Water	SM 5310D	
MB 480-90538/27	Method Blank	Total/NA	Water	SM 5310D	
MB 480-90538/3	Method Blank	Total/NA	Water	SM 5310D	

Client Sample ID: EMW-7

Lab Sample ID: 480-28222-1

Date Collected: 11/08/12 14:40

Matrix: Water

Date Received: 11/10/12 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	90700	11/14/12 05:11	LH	TAL BUF
Total/NA	Prep	3535A			47883	11/12/12 12:15	CGC	TAL BUR
Total/NA	Analysis	522 MOD		1	47891	11/12/12 20:23	JE	TAL BUR

Client Sample ID: EMW-11R

Lab Sample ID: 480-28222-2

Date Collected: 11/08/12 11:40

Matrix: Water

Date Received: 11/10/12 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	90700	11/14/12 05:37	LH	TAL BUF
Total/NA	Prep	3535A			47883	11/12/12 12:15	CGC	TAL BUR
Total/NA	Analysis	522 MOD		1	47891	11/12/12 20:39	JE	TAL BUR

Client Sample ID: 3H-1D

Lab Sample ID: 480-28222-3

Date Collected: 11/08/12 10:00

Matrix: Water

Date Received: 11/10/12 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	90700	11/14/12 06:02	LH	TAL BUF
Total/NA	Prep	3535A			47883	11/12/12 12:15	CGC	TAL BUR
Total/NA	Analysis	522 MOD		1	47891	11/12/12 20:55	JE	TAL BUR

Client Sample ID: EMW-1D

Lab Sample ID: 480-28222-4

Date Collected: 11/09/12 09:20

Matrix: Water

Date Received: 11/10/12 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	90700	11/14/12 06:27	LH	TAL BUF
Total/NA	Prep	3535A			47883	11/12/12 12:15	CGC	TAL BUR
Total/NA	Analysis	522 MOD		1	47891	11/12/12 21:11	JE	TAL BUR
Total/NA	Analysis	353.2		1	90212	11/10/12 16:13	KS	TAL BUF
Total/NA	Analysis	300.0		1	90393	11/13/12 13:01	KAC	TAL BUF
Total/NA	Analysis	SM 5310D		1	90538	11/12/12 19:54	KC	TAL BUF

Client Sample ID: EMW-10R

Lab Sample ID: 480-28222-5

Date Collected: 11/08/12 15:15

Matrix: Water

Date Received: 11/10/12 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	90700	11/14/12 06:52	LH	TAL BUF
Total/NA	Prep	3535A			47883	11/12/12 12:15	CGC	TAL BUR
Total/NA	Analysis	522 MOD		1	47891	11/12/12 21:27	JE	TAL BUR

Client Sample ID: A-1D

Lab Sample ID: 480-28222-6

Date Collected: 11/08/12 12:45

Matrix: Water

Date Received: 11/10/12 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	90700	11/14/12 07:18	LH	TAL BUF
Total/NA	Prep	3535A			47883	11/12/12 12:15	CGC	TAL BUR
Total/NA	Analysis	522 MOD		1	47891	11/12/12 21:43	JE	TAL BUR

Client Sample ID: 3H-1S

Lab Sample ID: 480-28222-7

Date Collected: 11/08/12 10:45

Matrix: Water

Date Received: 11/10/12 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	90700	11/14/12 07:43	LH	TAL BUF
Total/NA	Prep	3535A			47883	11/12/12 12:15	CGC	TAL BUR
Total/NA	Analysis	522 MOD		1	47891	11/12/12 22:14	JE	TAL BUR

Client Sample ID: EMW-10D

Lab Sample ID: 480-28222-8

Date Collected: 11/09/12 09:30

Matrix: Water

Date Received: 11/10/12 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	90700	11/14/12 08:08	LH	TAL BUF
Total/NA	Prep	3535A			47883	11/12/12 12:15	CGC	TAL BUR
Total/NA	Analysis	522 MOD		1	47891	11/12/12 22:30	JE	TAL BUR

Client Sample ID: 3G-12

Lab Sample ID: 480-28222-9

Date Collected: 11/09/12 11:10

Matrix: Water

Date Received: 11/10/12 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	90700	11/14/12 08:33	LH	TAL BUF
Total/NA	Prep	3535A			47883	11/12/12 12:15	CGC	TAL BUR
Total/NA	Analysis	522 MOD		1	47891	11/12/12 22:46	JE	TAL BUR
Total/NA	Analysis	353.2		1	90212	11/10/12 17:30	KS	TAL BUF
Total/NA	Analysis	300.0		1	90393	11/13/12 13:39	KAC	TAL BUF
Total/NA	Analysis	SM 5310D		1	90538	11/12/12 20:13	KC	TAL BUF

Client Sample ID: EMW-3R

Lab Sample ID: 480-28222-10

Date Collected: 11/09/12 11:15

Matrix: Water

Date Received: 11/10/12 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	90700	11/14/12 08:58	LH	TAL BUF
Total/NA	Prep	3535A			47883	11/12/12 12:15	CGC	TAL BUR
Total/NA	Analysis	522 MOD		1	47891	11/12/12 23:02	JE	TAL BUR

Client Sample ID: EMW-2D

Lab Sample ID: 480-28222-11

Date Collected: 11/09/12 13:45

Matrix: Water

Date Received: 11/10/12 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	90700	11/14/12 09:23	LH	TAL BUF
Total/NA	Prep	3535A			47883	11/12/12 12:15	CGC	TAL BUR
Total/NA	Analysis	522 MOD		1	47891	11/12/12 23:18	JE	TAL BUR
Total/NA	Analysis	353.2		1	90212	11/10/12 16:20	KS	TAL BUF
Total/NA	Analysis	300.0		1	90393	11/13/12 13:52	KAC	TAL BUF
Total/NA	Analysis	SM 5310D		1	90538	11/12/12 20:33	KC	TAL BUF

Client Sample ID: EMW-2D DUP

Lab Sample ID: 480-28222-12

Date Collected: 11/09/12 13:50

Matrix: Water

Date Received: 11/10/12 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	90809	11/14/12 14:59	RL	TAL BUF
Total/NA	Prep	3535A			47883	11/12/12 12:15	CGC	TAL BUR
Total/NA	Analysis	522 MOD		1	47891	11/12/12 23:34	JE	TAL BUR
Total/NA	Analysis	353.2		1	90212	11/10/12 16:21	KS	TAL BUF
Total/NA	Analysis	300.0		1	90393	11/13/12 14:04	KAC	TAL BUF
Total/NA	Analysis	SM 5310D		1	90538	11/12/12 20:53	KC	TAL BUF

Client Sample ID: 3G-11

Lab Sample ID: 480-28222-13

Date Collected: 11/09/12 12:45

Matrix: Water

Date Received: 11/10/12 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	90809	11/14/12 15:24	RL	TAL BUF
Total/NA	Prep	3535A			47883	11/12/12 12:15	CGC	TAL BUR
Total/NA	Analysis	522 MOD		1	47891	11/12/12 23:50	JE	TAL BUR

Client Sample ID: Trip Blank

Lab Sample ID: 480-28222-14

Date Collected: 11/08/12 10:00

Matrix: Water

Date Received: 11/10/12 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	90809	11/14/12 15:49	RL	TAL BUF

Laboratory References:

SC0015 = Microseeps, 220 William Pitt Way, Pittsburgh, PA 15238, TEL (412)826-5245

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Certification Summary

Client: Shaw Environmental & Infrastructure, Inc
Project/Site: LMC Burlington 147274

TestAmerica Job ID: 480-28222-1

Laboratory: TestAmerica Buffalo

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-13
California	NELAC	9	1169CA	09-30-13
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAC	4	E87672	06-30-13
Georgia	State Program	4	N/A	03-31-13
Georgia	State Program	4	956	06-30-13
Georgia	State Program	4	956	06-30-13
Illinois	NELAC	5	200003	09-30-13
Iowa	State Program	7	374	03-01-13
Kansas	NELAC	7	E-10187	01-31-13
Kentucky	State Program	4	90029	12-31-12
Kentucky (UST)	State Program	4	30	04-01-13
Louisiana	NELAC	6	02031	06-30-13
Maine	State Program	1	NY00044	12-04-12
Maryland	State Program	3	294	03-31-13
Massachusetts	State Program	1	M-NY044	06-30-13
Michigan	State Program	5	9937	04-01-13
Minnesota	NELAC	5	036-999-337	12-31-12
New Hampshire	NELAC	1	2973	09-11-13
New Hampshire	NELAC	1	2337	11-17-13
New Jersey	NELAC	2	NY455	06-30-13
New York	NELAC	2	10026	03-31-13
North Dakota	State Program	8	R-176	03-31-13
Oklahoma	State Program	6	9421	08-31-13
Oregon	NELAC	10	NY200003	06-09-13
Pennsylvania	NELAC	3	68-00281	07-31-13
Rhode Island	State Program	1	LAO00328	12-31-13
Tennessee	State Program	4	TN02970	04-01-13
Texas	NELAC	6	T104704412-11-2	07-31-13
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAC	3	460185	09-14-13
Washington	State Program	10	C784	02-10-13
West Virginia DEP	State Program	3	252	09-30-13
Wisconsin	State Program	5	998310390	08-31-13

Laboratory: TestAmerica Burlington

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Connecticut	State Program	1	PH-0751	09-30-13
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-24-13
Florida	NELAC	4	E87467	06-30-13
L-A-B	DoD ELAP		L2336	10-26-13
Louisiana	NELAC	6	176292	06-30-13
Maine	State Program	1	VT00008	04-17-13
Minnesota	NELAC	5	050-999-436	12-31-12
New Hampshire	NELAC	1	200610	12-18-12
New Jersey	NELAC	2	VT972	06-30-13
New York	NELAC	2	10391	04-01-13
Pennsylvania	NELAC	3	68-00489	04-30-13
Rhode Island	State Program	1	LAO00298	12-30-12
USDA	Federal		P330-11-00093	02-17-14

Certification Summary

Client: Shaw Environmental & Infrastructure, Inc
Project/Site: LMC Burlington 147274

TestAmerica Job ID: 480-28222-1

Laboratory: TestAmerica Burlington (Continued)

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Vermont	State Program	1	VT-4000	12-31-12
Virginia	NELAC	3	460209	12-14-12

Method Summary

Client: Shaw Environmental & Infrastructure, Inc
Project/Site: LMC Burlington 147274

TestAmerica Job ID: 480-28222-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds (GC/MS)	MA DEP	TAL BUF
522 MOD	1,4 Dioxane (GC/MS SIM)	EPA	TAL BUR
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
353.2	Nitrate	EPA	TAL BUF
SM 5310D	Organic Carbon, Total (TOC)	SM	TAL BUF
Local Method	General Sub Contract Method	NONE	SC0015

Protocol References:

EPA = US Environmental Protection Agency

MA DEP = Massachusetts Department Of Environmental Protection

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

NONE = NONE

SM = "Standard Methods For The Examination Of Water And Wastewater",

Laboratory References:

SC0015 = Microseeps, 220 William Pitt Way, Pittsburgh, PA 15238, TEL (412)826-5245

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Sample Summary

Client: Shaw Environmental & Infrastructure, Inc
Project/Site: LMC Burlington 147274

TestAmerica Job ID: 480-28222-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-28222-1	EMW-7	Water	11/08/12 14:40	11/10/12 09:00
480-28222-2	EMW-11R	Water	11/08/12 11:40	11/10/12 09:00
480-28222-3	3H-1D	Water	11/08/12 10:00	11/10/12 09:00
480-28222-4	EMW-1D	Water	11/09/12 09:20	11/10/12 09:00
480-28222-5	EMW-10R	Water	11/08/12 15:15	11/10/12 09:00
480-28222-6	A-1D	Water	11/08/12 12:45	11/10/12 09:00
480-28222-7	3H-1S	Water	11/08/12 10:45	11/10/12 09:00
480-28222-8	EMW-10D	Water	11/09/12 09:30	11/10/12 09:00
480-28222-9	3G-12	Water	11/09/12 11:10	11/10/12 09:00
480-28222-10	EMW-3R	Water	11/09/12 11:15	11/10/12 09:00
480-28222-11	EMW-2D	Water	11/09/12 13:45	11/10/12 09:00
480-28222-12	EMW-2D DUP	Water	11/09/12 13:50	11/10/12 09:00
480-28222-13	3G-11	Water	11/09/12 12:45	11/10/12 09:00
480-28222-14	Trip Blank	Water	11/08/12 10:00	11/10/12 09:00

SUBCONTRACTED DATA

Microseeps, Inc
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

November 27, 2012

Janine Johnson
Test America
10 Hazelwood Drive
Buffalo, NY 14228

RE: **480-28222**

Microseeps Workorder: 7298

Dear Janine Johnson:

Enclosed are the analytical results for sample(s) received by the laboratory on Tuesday, November 13, 2012. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Julianne Rugh 11/27/2012
jrugh@microseeps com

Customer Service Representative

Enclosures

As a valued client we would appreciate your comments on our service
Please email info@microseeps com

Total Number of Pages 18

CERTIFICATE OF ANALYSIS

3004 1 0 0

Microseeps, Inc
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

LABORATORY ACCREDITATIONS & CERTIFICATIONS

Accreditor:	Pennsylvania Department of Environmental Protection, Bureau of Laboratories
Accreditation ID:	02-00538
Scope:	NELAP Non-Potable Water and Solid & Hazardous Waste
Accreditor:	NELAP: State of Florida, Department of Health, Bureau of Laboratories
Accreditation ID:	E87832
Scope:	Clean Water Act (CWA) Resource Conservation and Recovery Act (RCRA)
Accreditor:	South Carolina Department of Health and Environmental Control, Office of Environmental Laboratory Certification
Accreditation ID:	89009003
Scope:	Clean Water Act (CWA); Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: State of Louisiana, Department of Environmental Quality
Accreditation ID:	04104
Scope:	Solid and Chemical Materials; Non-Potable Water
Accreditor:	NELAP: New Jersey, Department of Environmental Protection
Accreditation ID:	PA026
Scope:	Non-Potable Water; Solid and Chemical Materials
Accreditor:	NELAP: New York, Department of Health Wadsworth Center
Accreditation ID:	11815
Scope:	Non-Potable Water; Solid and Hazardous Waste
Accreditor:	State of Connecticut, Department of Public Health, Division of Environmental Health
Accreditation ID:	PH-0263
Scope:	Clean Water Act (CWA) Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: Texas, Commission on Environmental Quality
Accreditation ID:	T104704453-09-TX
Scope:	Non-Potable Water
Accreditor:	State of New Hampshire
Accreditation ID:	299409
Scope:	Non-potable water
Accreditor:	State of Georgia
Accreditation ID:	Chapter 391-3-26
Scope:	As per the Georgia EPD Rules and Regulations for Commercial Laboratories, Microseeps is accredited by the Pennsylvania Department of Environmental Protection Bureau of Laboratories under the National Environmental Laboratory Approval Program (NELAC).

Microseeps. Inc
220 William Pitt Way
Pittsburgh. PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

SAMPLE SUMMARY

Workorder: 7298 480-28222

Lab ID	Sample ID	Matrix	Date Collected	Date Received
72980001	EMW-1D(480-28222-4)	Water	11/9/2012 09:20	11/13/2012 11:00
72980002	3G-12(480-28222-9)	Water	11/9/2012 11:10	11/13/2012 11:00
72980003	EMW-2D(480-28222-11)	Water	11/9/2012 13:45	11/13/2012 11:00
72980004	EMW-2D DUP(480-28222-12)	Water	11/9/2012 13:50	11/13/2012 11:00

Microseeps, Inc
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

PROJECT SUMMARY

Workorder: 7298 480-28222

Workorder Comments

This report is being re-issued following corrections made to the collection date for sample 72980001; 11/27/2012

Sample Comments

Lab ID: 72980003 **Sample ID:** EMW-2D(480-28222-11) **Sample Type:** N

Sample was re-analyzed on 11/23/2012 to confirm concentration accuracy of the reported analytes. The methane concentration from this analysis was 2 4 ug/L. Both results have been provided for consideration

Lab ID: 72980004 **Sample ID:** EMW-2D **Sample Type:** N

Sample was re-analyzed on 11/23/2012 to confirm concentration accuracy of the reported analytes. The methane concentration from this analysis was 2 4 ug/L. Both results have been provided for consideration

Microseeps, Inc
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

ANALYTICAL RESULTS

Workorder: 7298 480-28222

Lab ID: **72980001** Date Received: 11/13/2012 11:00 Matrix: Water

Sample ID: **EMW-1D(480-28222-4)** Date Collected: 11/9/2012 09:20

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
RISK - MICR										
Analysis Desc: AM20GAX			Analytical Method: AM20GAX							
Methane	**11**	ug/l	0 10	0 018	1			11/21/2012 18:42	BW	

Microseeps, Inc
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

ANALYTICAL RESULTS

Workorder: 7298 480-28222

Lab ID: 72980002 Date Received: 11/13/2012 11:00 Matrix: Water

Sample ID: 3G-12(480-28222-9) Date Collected: 11/9/2012 11:10

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
RISK - MICR										
Analysis Desc: AM20GAX			Analytical Method: AM20GAX							
Methane	5.8	ug/l	0.10	0.018	1			11/21/2012 18:55	BW	

3004 1 0 0

Microseeps, Inc
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

ANALYTICAL RESULTS

Workorder: 7298 480-28222

Lab ID: 72980003 Date Received: 11/13/2012 11:00 Matrix: Water

Sample ID: EMW-2D(480-28222-11) Date Collected: 11/9/2012 13:45

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
RISK - MICR										
Analysis Desc: AM20GAX			Analytical Method: AM20GAX							
Methane	7.4	ug/l	0.10	0.018	1			11/21/2012 19:09	BW	

3004 1 0 0

Microseeps, Inc
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

ANALYTICAL RESULTS

Workorder: 7298 480-28222

Lab ID: **72980004** Date Received: 11/13/2012 11:00 Matrix: Water

Sample ID: **EMW-2D DUP(480-28222-12)** Date Collected: 11/9/2012 13:50

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
RISK - MICR										
Analysis Desc: AM20GAX			Analytical Method: AM20GAX							
Methane	2.2	ug/l	0.10	0.018	1			11/21/2012 19:21	BW	

3004 1 0 0

Microseeps, Inc
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

ANALYTICAL RESULTS QUALIFIERS

Workorder: 7298 480-28222

PARAMETER QUALIFIERS

MDL	Method Detection Limit Can be used synonymously with LOD; Limit Of Detection
PQL	Practical Quanitation Limit Can be used synonymously with LOQ; Limit Of Quantitation
ND	Not detected at or above reporting limit
DF	Dilution Factor
S	Surrogate
RPD	Relative Percent Difference
% Rec	Percent Recovery
U	Indicates the compound was analyzed for, but not detected at or above the noted concentration
J	Estimated concentration greater than the set method detection limit (MDL) and less than the set reporting limit (PQL)

Microseeps, Inc
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

QUALITY CONTROL DATA

Workorder: 7298 480-28222

QC Batch: DISG/2606 Analysis Method: AM20GAX

QC Batch Method: AM20GAX

Associated Lab Samples: 72980001, 72980002, 72980003, 72980004

METHOD BLANK: 16049

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
RISK				
Methane	ug/l	0 10 U	0 10	

LABORATORY CONTROL SAMPLE & LCSD: 16050 16051

Parameter	Units	Spike Conc	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
RISK										
Methane	ug/l	820	790	800	96	97	80-120	1	20	

3004 1 0 0

Microseeps, Inc
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 7298 480-28222

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
72980001	EMW-1D(480-28222-4)			AM20GAX	DISG/2606
72980002	3G-12(480-28222-9)			AM20GAX	DISG/2606
72980003	EMW-2D(480-28222-11)			AM20GAX	DISG/2606
72980004	EMW-2D DUP(480-28222-12)			AM20GAX	DISG/2606

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

7298

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Johnson, Janne E	Carrier Tracking No(s):	COC No: 480-6844.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: janne.johnson@testamericainc.com		Page: Page 1 of 1
Company: Microseeps				Job #: 480-28222-1 Revision 1
Address: 220 William Pitt Way,	Due Date Requested: 11/16/2012			
City: Pittsburgh	TAT Requested (days): 11/27/12 ASAP			
State, Zip: PA, 15238				
Phone: 412-826-5245(Tel)	PO #:			
Email:	WO #:			
Project Name: LMC Burlington 147274	Project #: 48006808			
Site:	SSOW#:			

Analysis Requested: Field Filtered Sample (Yes or No); Perform MS/MSD (Yes or No); SUBCONTRACT Methane by AM20GAX

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA
M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - ph 4-5; Z - other (specify)
Other:

	Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample	Perform MS/MSD	SUBCONTRACT	Total Number of containers	Special Instructions/Note:
				Preservation Code:						
1	EMW-1D (480-28222-1)	~~11/8/12~~ 11/9/12	09:20 Eastern		Water			X	2	
2	3G-12 (480-28222-9)	11/9/12	11:10 Eastern		Water			X	2	
3	EMW-2D (480-28222-11)	11/9/12	13:45 Eastern		Water			X	2	
4	EMW-2D DUP (480-28222-12)	11/9/12	13:50 Eastern		Water			X	2	

ES 11/12/12

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:		Time:	Method of Shipment:	
Relinquished by: [signature]	Date/Time: 11/12/12 1630	Company: TAL	Received by: [signature]	Date/Time: 11.13.12 1100	Company: MS
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

7298

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Johnson, Janine E	Carrier Tracking No(s):	COC No: 480-6844.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: janine.johnson@testamericainc.com		Page: Page 1 of 1
Company: Microseeps		Analysis Requested		Job #: 480-28222-1
Address: 220 William Pitt Way,	Due Date Requested: 11/16/2012			Preservation Codes:
City: Pittsburgh	TAT Requested (days):			A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2SO3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - ph 4-5 L - EDA Z - other (specify)
State, Zip: PA, 15238				
Phone: 412-826-5245(Tel)	PO #:			
Email:	WO #:			Other:
Project Name: LMC Burlington 147274	Project #: 48006808			
Site:	SSOW#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Wwater, Ssolid, Owaste/oil, BTBTissue, AAir)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUBCONTRACT	Methane by AMX520	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
1 EMW-1D (480-28222-4)	11/8/12	09:20 Eastern		Water			X		2	
2 3G-12 (480-28222-9)	11/9/12	11:10 Eastern		Water			X		2	
3 EMW-2D (480-28222-11)	11/9/12	13:45 Eastern		Water			X		2	
4 EMW-2D DUP (480-28222-12)	11/9/12	13:50 Eastern		Water			X		2	

11/12/12

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	11/12/12 1630	TAL		11.13.12 1100	MS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

12/6/2012

7298

Julianne Rugh

From: Julianne Rugh
Sent: Friday, November 16, 2012 8:40 AM
To: 'janine.johnson@testamericainc.com'
Subject: RE: 480-28222-1

Hi Janine,

As I have yet to hear back to you regarding your preferences for this report and I needed to release this project for login, I set you up with our basic profile.

At this point you will receive a level II report and no EDD.

I can change these settings if you would wish.

Thank you!

Juli (Sproull) Rugh

Please note my name change from Sproull to Rugh. Emails to jsproull or jrugh will both be delivered.

Microseeps Inc. will be closed on Thursday November 22nd in honor of Thanksgiving. We will be open on Friday the 23rd with limited staff and we will not be accepting short holds.

Microseeps, Inc.
220 William Pitt Way
Pittsburgh PA 15238
412-826-4481 (Direct Dial)
412-826-5245 (Phone)
412-826-3433 (Fax)

From: Julianne Rugh
Sent: Wednesday, November 14, 2012 1:22 PM
To: 'janine.johnson@testamericainc.com'
Subject: 480-28222-1

Hi Janine,

We received your samples for the above project and I do not have a profile set up for this work yet. Could you please answer the questions below?

7298

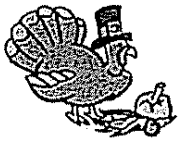
1. What type of data package would you like? (please see the attached spreadsheet)
2. Do you need an EDD? If so we can provide an excel free of charge or any other type of EDD is an additional 5% per sample. If it is an EDD that we have never created before there will be a one time fee that is determined by the time and difficulty of creation (price is quoted before creation).

Thank you!

Juli (Sproull) Rugh

Please note my name change from Sproull to Rugh. Emails to jsproull or jrugh will both be delivered.

Microseeps Inc. will be closed on Thursday November 22nd in honor of Thanksgiving. We will be open on Friday the 23rd with limited staff and we will not be accepting short holds.



Microseeps, Inc.
220 William Pitt Way
Pittsburgh PA 15238
412-826-4481 (Direct Dial)
412-826-5245 (Phone)
412-826-3433 (Fax)

Mark Mikesell

From: Julianne Rugh
Sent: Tuesday, November 27, 2012 8:48 AM
To: Mark Mikesell
Subject: FW: 480-28222
Attachments: REVISED COC 7298 pdf

Importance: High

Hi Mark,

Can you please revise the report for our work order 7298? They had the sampling id's wrong on their end.

Thank you!

Done.
MB.
11/27/12

Juli (Sproull) Rugh

Please note my name change from Sproull to Rugh. Emails to jsproull or jrugh will both be delivered.

Microseeps, Inc.
220 William Pitt Way
Pittsburgh PA 15238
412-826-4481 (Direct Dial)
412-826-5245 (Phone)
412-826-3433 (Fax)

From: Johnson, Janine [mailto:Janine.Johnson@testamericainc.com]
Sent: Monday, November 26, 2012 3:23 PM
To: Julianne Rugh
Subject: RE: 480-28222
Importance: High

Hello,

Attached is the revised COC needed for the revision of 7298. Please provide as soon as possible.

Thank You,

TestAmerica will be closed for business on Tuesday 12/25/2012 and Tuesday 1/1/2013. In order to maintain sample integrity and holding times please avoid shipment of samples to our location on the day preceding these holidays. If you have any questions or concerns, please contact your Project Manager.

JANINE JOHNSON

Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

53 Southampton Road
Westfield, MA 01085
Tel 413-572-4000x109 | Fax 413-572-3707
www.testamericainc.com

Please let us know if we met your expectations by rating the service you received from TestAmerica on this project by visiting our website at: Project Feedback

Announcing TotalAccess 4.0 — Online access to your data. New homepage with easier access to your data, multiple search criteria including sampling date and much more! Contact your Account Executive or Project Manager today to arrange for a live demonstration!

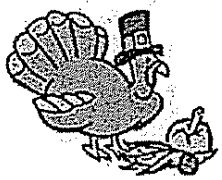
From: Julianne Rugh [mailto:jrugh@microseeps.com]
Sent: Monday, November 26, 2012 2:41 PM
To: Johnson, Janine
Subject: 480-28222

Please see the attached data and invoice.

Juli (Sproull)Rugh

Please note my name change from Sproull to Rugh. Emails to jsproull or jrugh will both be delivered.

Microseeps Inc. will be closed on Thursday November 22nd in honor of Thanksgiving. We will be open on Friday the 23rd with limited staff and we will not be accepting short holds.



Microseeps, Inc.
220 William Pitt Way
Pittsburgh PA 15238
412-826-4481 (Direct Dial)
412-826-5245 (Phone)
412-826-3433 (Fax)

Cooler Receipt Form

Client Name: TA Buffalo Project: 480-28222 Lab Work Order: 7298

A. Shipping/Container Information (circle appropriate response)

Courier: (FedEx) UPS USPS Client Other:_____ Air bill Present: (Yes) No

Tracking Number: 4258 8386 2805

Custody Seal on Cooler/Box Present: Yes (No) Seals Intact: Yes No

Cooler/Box Packing Material: Bubble Wrap Absorbent Foam Other:_____

Type of Ice: (Wet) Blue None Ice Intact: (Yes) Melted

Cooler Temperature: 1.4°C Radiation Screened: Yes (No) Chain of Custody Present: (Yes) No

Comments:_____

B. Laboratory Assignment/Log-in (check appropriate response)

	YES	NO	N/A	Comment Reference non-Conformance
Chain of Custody properly filled out	✓			
Chain of Custody relinquished	✓			
Sampler Name & Signature on COC		✓		
Containers intact	✓			
Were samples in separate bags	✓			
Sample container labels match COC Sample name/date and time collected	✓			
Sufficient volume provided	✓			
Microseeps containers used	✓			
Are containers properly preserved for the requested testing? (as labeled)	✓			
If an unknown preservation state, were containers checked? Exception: VOA's coliform			✓	
Was volume for dissolved testing field filtered, as noted on the COC? Was volume received in a preserved container?			✓	

Comments:_____

Cooler contents examined/received by: HG Date: 11.13.12

Project Manager Review: JR Date: 11-19-12

Login Sample Receipt Checklist

Client: Shaw Environmental & Infrastructure, Inc

Job Number: 480-28222-1

Login Number: 28222

List Source: TestAmerica Buffalo

List Number: 1

Creator: Robitaille, Zach L

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	3.5, 3.1 and 3.8
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	SHAW
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Shaw Environmental & Infrastructure, Inc

Job Number: 480-28222-1

Login Number: 28222
List Number: 1
Creator: Gagne, Eric

List Source: TestAmerica Burlington
List Creation: 11/12/12 11:27 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	No NUMBERS
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.5ºC IR GUN ID 181. CF +0.3
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica Westfield
Westfield Executive Park 53 Southampton Road
Westfield, MA 01085
Phone (413) 572-4000 Fax (413) 572-3707

Boston Service Center
240 Bear Hill Rd. Suite 104
Waltham, MA 02451
Phone (781) 466-8900 Fax (781) 466-8901

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Austin Maynard	Lab PM:	Carrier Tracking No(s):	COC No: 21600
Client Contact: Ed VanDoren	Phone: 774-551-6197	E-Mail:		Page:
Company: Shaw Environmental, Inc.				Job #:
Address: 150 Royall Street	Due Date Requested:			
City: Canton	TAT Requested (days): Standard			
State, Zip: MA 02021	Quote #:			
Phone: 617-589-4030	PO #:			
Email: Edward.Vandoren@shawgrp.com	WO #:			
Project Name/number: LMC Burlington / 147274	SSOW#:			
Site:				

Analysis Requested

Preservation Codes: A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; H - Ascorbic Acid; I - Ice; J - DI Water; M - Hexane; N - None; P - Na2O4S; Q - Na2SO3; R - Na2S2SO3; S - H2SO4; Z - other (specify)

Regulatory programs: MCP ☐ GW1/S1 ☐; RCP ☐ CT RSR ☐; DEP Form ☐ EDD Required ☑ GISKey

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample	Perform MS/MSD	EPA 8260B (VOC)	EPA 300.0 Nitrate + Sulfate	Method AM20GAX (Methane)	EPA 9060 (Total Organic Carbon)	EPA 522 - Mod (1,4-Dioxane)	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	A	B	C	H	M		
EMW-7	11-8-12	14:40	G	W	N	N	3				2	5	[redacted] 1,4-Dioxane needs reporting level to meet GW-1 standards ~~for drining water for~~ CVB-5 through CVB-9 only. MCP presumptive ~~certainty required.~~ 2 - Na_3PO_4
EMW-11R	11-8-12	11:40			N	N	3				2	5	
3H-1D	11-8-12	10:00			N	N	3				2	5	
EMW-1D	11-9-12	09:20			N	N	3	2	2	1	2	10	
EMW-10R	11-8-12	3:15			N	N	3				2	5	
A-1D	11-8-12	12:45			N	N	3				2	5	
3H-1S	11-8-12	10:45			N	N	3				2	5	
EMW-10D	11-9-12	9:30			N	N	3				2	5	
36-12	11-9-12	11:10			N	N	3	2	2	1	2	10	
EMW-3R	11-9-12	11:15	↓	↓	N	N	3				2	5	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Austin Maynard	11-9-12 14:20	Shaw		11/9/12 1420	TAL
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
	11/9/12 1630	TAL		11/10/12 0900	TA BURL
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: ∆ Yes ∆ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

#2 3@3.1, 3.5, 3.8

TAL-8245-360 1111

TestAmerica Westfield
Westfield Executive Park 53 Southampton Road
Westfield, MA 01085
Phone (413) 572-4000 Fax (413) 572-3707

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Austin Maynard	Lab PM:	Carrier Tracking No(s):
Client Contact: Ed VanDoren	Phone: 774-551-6197	E-Mail:	COC No: 017406
Company: Shaw Environmental, Inc.			Page:
Address: 150 Royall Street	Due Date Requested:		Job #:
City: Canton	TAT Requested (days): Standard		
State, Zip: MA 02021	Quote #:		
Phone: 617-589-4030	PO #:		
Email: Edward.Vandoren@shawgrp.com	WO #:		
Project Name/number: LMC Burlington / 147274	SSOW#:		
Site:			

Analysis Requested

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; H - Ascorbic Acid; I - Ice; J - DI Water; M - Hexane; N - None; P - Na2O4S; Q - Na2SO3; R - Na2S2SO3; S - H2SO4; Z - other (specify)

Regulatory programs: MCP ☐ GW1/S1 ☐; RCP ☐ CT RSR ☐; DEP Form ☐ EDD Required ☑ GISKey format

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wasteoil, BT=Tissue, A=Air)	EPA 8260B (VOC)	EPA 300.0 Nitrate & Sulfate	Method AM20GAX (Methane)	EPA 9060 (Total Organic Carbon)	EPA 537_MOD (1,4-Dioxane)	Total Number of containers	Special Instructions/Note:
EMW-2D	11-9-12	13:45	G	W	3	2	2	1	2	10	1,4-Dioxane must meet
EMW-2D Dup	11-9-12	13:50			3	2	2	1	2	10	GW-1 standards for
36-11	11-9-12	12:45			3			X	2	5	drinking water for RL,
Trip Blank	Provided by Lab										for CVB-05 through
											CVB-09 only.
											MCP presumptive
											certainty required.
											2-Na3PO4

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Relinquished by: Austin Maynard	Date/Time: 11-9-12 14:20	Company: Shaw	Received by:	Date/Time: 11/9/12 1420	Company: TAL		
Relinquished by	Date/Time: 11/9/12 1630	Company	Received by:	Date/Time	Company		
Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company		

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

TAL-8245-360 0310

#2 3@ 3.1, 3.5, 3.6

TestAmerica Westfield
Westfield Executive Park 53 Southampton Road
Westfield, MA 01085
Phone (413) 572-4000 Fax (413) 572-3707

Boston Service Center
240 Bear Hill Rd. Suite 104
Waltham, MA 02451
Phone (781) 466-6900 Fax (781) 466-6901

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Austin Maynard	Lab PM:	Carrier Tracking No(s):	COC No: 21600
Client Contact: Ed VanDoren	Phone: 774-551-6197	E-Mail:		Page:
Company: Shaw Environmental, Inc.				Job #:
Address: 150 Royall Street	Due Date Requested:			
City: Canton	TAT Requested (days): Standard			
State, Zip: MA 02021	Quote #:			
Phone: 617-589-4030	PO #:			
Email: Edward.Vandoren@shawgrp.com	WO #:			
Project Name/number: LMC Burlington / 147274	SSOW#:			
Site:				

Analysis Requested

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; H - Ascorbic Acid; I - Ice; J - DI Water; M - Hexane; N - None; P - Na2O4S; Q - Na2SO3; R - Na2S2SO3; S - H2SO4; Z - other (specify)

Regulatory programs: MCP ☐ GW1/S1 ☐ RCP ☐ CT RSR ☐ DEP Form ☐ EDD Required ☑ GISKey

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Sampler's Initials	Field Filtered Sample?	Perform MS/MSD?	EPA 8260B (VOC)	EPA 300.0 Nitrate + Sulfate	Method AM20GAX (Methane)	EPA 9060 (Total Organic Carbon)	EPA 522 - Mod (1,4-Dioxane)	Total Number of containers	Special Instructions/Note:
			Preservation Code:					A	I	Z	A	A		
EMW-7	11-8-12	14:40	G	W	AM	N	N	3				2	5	[redacted] 1,4-Dioxane needs
EMW-11R	11-8-12	11:40			AM	N	N	3				2	5	reporting level to
3H-1D	11-8-12	10:00			AM	N	N	3				2	5	meet GW-1 standards
EMW-1D	11-9-12	09:20			AM	N	N	3	2	2	1	2	10	~~for drining water for~~ CVB-5 through CVB-9
EMW-10R	11-8-12	3:15			JL	N	N	3				2	5	only.
A-1D	11-8-12	12:45			JL	N	N	3				2	5	MCP presumptive
3H-1S	11-8-12	10:45			JL	N	N	3				2	5	~~certainty required.~~
EMW-10D	11-9-12	9:30			JL	N	N	3				2	5	2-Na_3PO_4
3G-12	11-9-12	11:10			AM	N	N	3	2	2	1	2	10	
EMW-3R	11-9-12	13:15	✓	✓	JL	N	N	3				2	5	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Austin Maynard	11-9-12 14:20	Shaw		11/9/12 1420	TAL
Relinquished by	Date/Time:	Company	Received by:	Date/Time:	Company
				11/10/12 1000	TAL BOS
Relinquished by	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

TAL-8245-360 1111

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12/6/2012

TestAmerica Westfield
Westfield Executive Park 53 Southampton Road
Westfield, MA 01085
Phone (413) 572-4000 Fax (413) 572-3707

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information
Client Contact: Ed VanDoren
Company: Shaw Environmental, Inc.
Address: 150 Royall Street
City: Canton
State, Zip: MA 02021
Phone: 617-589-4030
Email: Edward.Vandoren@shawgrp.com
Project Name/number: LMC Burlington / 147274
Site:

Sampler: Austin Maynard
Phone: 774-551-6197
Lab PM:
E-Mail:
Carrier Tracking No(s):

COC No: 017406
Page:
Job #:

Due Date Requested:
TAT Requested (days): Standard
Quote #:
PO #:
WO #:
SSOW#:

Analysis Requested

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; H - Ascorbic Acid; I - Ice; J - DI Water; M - Hexane; N - None; P - Na2O4S; Q - Na2SO3; R - Na2S2SO3; S - H2SO4; Z - other (specify)

Regulatory programs: MCP ☐ GW1/S1 ☐ RCP ☐ CT RSR ☐ DEP Form ☐ EDD Required ☑ GISKey format

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Sampler's Initials	Field Filtered Sample?	Perform MS/MSD?	EPA 8260B (VOC)	EPA 300.0 (Nitrate & Sulfate)	Method AM20GAX (Methane)	EPA 9060 (Total Organic Carbon)	EPA 537_Mod (1,4-Dioxane)	Total Number of containers	Special Instructions/Note:
			Preservation Code:					A	I	Z	A	A		
EMW-2D	11-9-12	13:45	G	W				3	2	2	1	2	10	1,4-Dioxane must meet
EMW-2D DUP	11-9-12	13:50						3	2	2	1	2	10	GW-1 standards for
36-11	11-9-12	12:45						3			X	2	5	drinking water for RL,
Trip Blank	Provided By Lab													for CVB-05 through
														CVB-09 only.
														MCP presumptive
														certainty required.
														2-Na3PO4

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Austin Maynard	11-9-12 14:20	Shaw		11/9/12 1420	TAL
				11/10/12 1000	TAL

Custody Seals Intact: △ Yes △ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks:

TAL-8245-360 0310

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-28470-1
Client Project/Site: 147274

For:
Shaw Environmental & Infrastructure, Inc
150 Royall Street
Canton, Massachusetts 02021

Attn: Edward Van Doren

Authorized for release by:
11/19/2012 2:05:03 PM
Chris Reynolds
QA Manager
chris.reynolds@testamericainc.com

Designee for

Janine Johnson
Project Manager I
janine.johnson@testamericainc.com

Table of Contents

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDA	Minimum detectable activity
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: Shaw Environmental & Infrastructure, Inc
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TestAmerica Job ID: 480-28470-1

Job ID: 480-28470-1

Laboratory: TestAmerica Buffalo

Narrative

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 11/14/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.9 C.

Note: All samples that require thermal preservation are considered acceptable if the arrival temperature is within the method's specified temperature range or for general analysis, ranging from 6°C to just above the freezing temperature of water. Samples that are hand delivered, immediately following collection, may not meet these criteria; however, they will be considered acceptable according to NELAC and State standards, if there is evidence that the chilling process has begun, such as stored and transported to the laboratory on ice.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples CVB-9 (480-28470-1), CVB-8 (480-28470-2), CVB-7 (480-28470-3), CVB-2 (480-28470-4), CVB-5 (480-28470-5) and TRIP BLANK (480-28470-6) were analyzed for volatile organic compounds (GC-MS) in accordance with SW846 8260C. The samples were analyzed on 11/15/2012.

The continuing calibration verification (CCV) for hexachlorobutadiene and trichloroethene associated with batch 91082 recovered above the MCP upper control limit. MCP protocol allows for 20% of the target compounds to be outside of the limits as long as recoveries are not over 30%.

The continuing calibration verification (CCV) for 1,4-dioxane associated with batch 91082 recovered above the MCP upper control limit. MCP protocol allows for 20% of the target compounds to be outside of the limits as long as recoveries are not over 30%.

No other difficulties were encountered during the volatile organic compounds (GC-MS) analyses.

MassDEP Analytical Protocol Certification Form

Laboratory Name: **TestAmerica Buffalo** Project #: **480-28470-1**

Project Location: **LMC Burlington** RTN:

This form provides certifications for the following data set: list Laboratory Sample ID Number(s):

480-27470-1 [1-5]

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

CAM Protocols (check all that apply below):

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

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

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

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

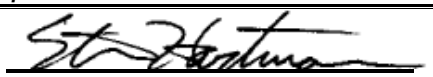
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☒ No[1]

***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 WCS-07-350**

H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	☐ Yes ☒ No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s) ?	☒ Yes ☐ No[1]

[1] All negative responses must be addressed in an attached laboratory narrative.

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

Signature:  Position: Laboratory Director-TestAmerica Westfield

Printed Name: Steven C. Hartmann Date: 11/19/12 14:02

This form has been electronically signed and approved

Detection Summary

Client: Shaw Environmental & Infrastructure, Inc
Project/Site: 147274

TestAmerica Job ID: 480-28470-1

Client Sample ID: CVB-9 — **Lab Sample ID: 480-28470-1**

No Detections

Client Sample ID: CVB-8 — **Lab Sample ID: 480-28470-2**

No Detections

Client Sample ID: CVB-7 — **Lab Sample ID: 480-28470-3**

No Detections

Client Sample ID: CVB-2 — **Lab Sample ID: 480-28470-4**

No Detections

Client Sample ID: CVB-5 — **Lab Sample ID: 480-28470-5**

No Detections

Client Sample ID: TRIP BLANK — **Lab Sample ID: 480-28470-6**

No Detections

Client: Shaw Environmental & Infrastructure, Inc
Project/Site: 147274

TestAmerica Job ID: 480-28470-1

Client Sample ID: CVB-9
Date Collected: 11/12/12 10:30
Date Received: 11/14/12 08:00

Lab Sample ID: 480-28470-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			11/15/12 18:38	1
1,1,1-Trichloroethane	ND		1.0		ug/L			11/15/12 18:38	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			11/15/12 18:38	1
1,1,2-Trichloroethane	ND		1.0		ug/L			11/15/12 18:38	1
1,1-Dichloroethane	ND		1.0		ug/L			11/15/12 18:38	1
1,1-Dichloroethene	ND		1.0		ug/L			11/15/12 18:38	1
1,1-Dichloropropene	ND		1.0		ug/L			11/15/12 18:38	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			11/15/12 18:38	1
1,2,3-Trichloropropane	ND		1.0		ug/L			11/15/12 18:38	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			11/15/12 18:38	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			11/15/12 18:38	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			11/15/12 18:38	1
1,2-Dichlorobenzene	ND		1.0		ug/L			11/15/12 18:38	1
1,2-Dichloroethane	ND		1.0		ug/L			11/15/12 18:38	1
1,2-Dichloropropane	ND		1.0		ug/L			11/15/12 18:38	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			11/15/12 18:38	1
1,3-Dichlorobenzene	ND		1.0		ug/L			11/15/12 18:38	1
1,3-Dichloropropane	ND		1.0		ug/L			11/15/12 18:38	1
1,4-Dichlorobenzene	ND		1.0		ug/L			11/15/12 18:38	1
1,4-Dioxane	ND		50		ug/L			11/15/12 18:38	1
2,2-Dichloropropane	ND		1.0		ug/L			11/15/12 18:38	1
2-Butanone (MEK)	ND		10		ug/L			11/15/12 18:38	1
2-Chlorotoluene	ND		1.0		ug/L			11/15/12 18:38	1
2-Hexanone	ND		10		ug/L			11/15/12 18:38	1
4-Chlorotoluene	ND		1.0		ug/L			11/15/12 18:38	1
4-Isopropyltoluene	ND		1.0		ug/L			11/15/12 18:38	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			11/15/12 18:38	1
Acetone	ND		50		ug/L			11/15/12 18:38	1
Benzene	ND		1.0		ug/L			11/15/12 18:38	1
Bromobenzene	ND		1.0		ug/L			11/15/12 18:38	1
Bromoform	ND		1.0		ug/L			11/15/12 18:38	1
Bromomethane	ND		2.0		ug/L			11/15/12 18:38	1
Carbon disulfide	ND		10		ug/L			11/15/12 18:38	1
Carbon tetrachloride	ND		1.0		ug/L			11/15/12 18:38	1
Chlorobenzene	ND		1.0		ug/L			11/15/12 18:38	1
Chlorobromomethane	ND		1.0		ug/L			11/15/12 18:38	1
Chlorodibromomethane	ND		0.50		ug/L			11/15/12 18:38	1
Chloroethane	ND		2.0		ug/L			11/15/12 18:38	1
Chloroform	ND		1.0		ug/L			11/15/12 18:38	1
Chloromethane	ND		2.0		ug/L			11/15/12 18:38	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			11/15/12 18:38	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			11/15/12 18:38	1
Dichlorobromomethane	ND		0.50		ug/L			11/15/12 18:38	1
Dichlorodifluoromethane	ND		1.0		ug/L			11/15/12 18:38	1
Ethyl ether	ND		1.0		ug/L			11/15/12 18:38	1
Ethylbenzene	ND		1.0		ug/L			11/15/12 18:38	1
Ethylene Dibromide	ND		1.0		ug/L			11/15/12 18:38	1
Hexachlorobutadiene	ND		0.40		ug/L			11/15/12 18:38	1
Isopropyl ether	ND		10		ug/L			11/15/12 18:38	1

Client Sample ID: CVB-9 — **Lab Sample ID: 480-28470-1**
Date Collected: 11/12/12 10:30 — **Matrix: Water**
Date Received: 11/14/12 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			11/15/12 18:38	1
Methyl tert-butyl ether	ND		1.0		ug/L			11/15/12 18:38	1
Methylene Chloride	ND		1.0		ug/L			11/15/12 18:38	1
m-Xylene & p-Xylene	ND		2.0		ug/L			11/15/12 18:38	1
Naphthalene	ND		5.0		ug/L			11/15/12 18:38	1
n-Butylbenzene	ND		1.0		ug/L			11/15/12 18:38	1
N-Propylbenzene	ND		1.0		ug/L			11/15/12 18:38	1
o-Xylene	ND		1.0		ug/L			11/15/12 18:38	1
sec-Butylbenzene	ND		1.0		ug/L			11/15/12 18:38	1
Styrene	ND		1.0		ug/L			11/15/12 18:38	1
Tert-amyl methyl ether	ND		5.0		ug/L			11/15/12 18:38	1
Tert-butyl ethyl ether	ND		5.0		ug/L			11/15/12 18:38	1
tert-Butylbenzene	ND		1.0		ug/L			11/15/12 18:38	1
Tetrachloroethene	ND		1.0		ug/L			11/15/12 18:38	1
Tetrahydrofuran	ND		10		ug/L			11/15/12 18:38	1
Toluene	ND		1.0		ug/L			11/15/12 18:38	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			11/15/12 18:38	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			11/15/12 18:38	1
Trichloroethene	ND		1.0		ug/L			11/15/12 18:38	1
Trichlorofluoromethane	ND		1.0		ug/L			11/15/12 18:38	1
Vinyl chloride	ND		0.50		ug/L			11/15/12 18:38	1
Dibromomethane	ND		1.0		ug/L			11/15/12 18:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*92*		*70 - 130*		*11/15/12 18:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*87*		*70 - 130*		*11/15/12 18:38*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*11/15/12 18:38*	*1*

Client Sample ID: CVB-8 — **Lab Sample ID: 480-28470-2**
Date Collected: 11/12/12 11:00 — **Matrix: Water**
Date Received: 11/14/12 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			11/15/12 19:03	1
1,1,1-Trichloroethane	ND		1.0		ug/L			11/15/12 19:03	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			11/15/12 19:03	1
1,1,2-Trichloroethane	ND		1.0		ug/L			11/15/12 19:03	1
1,1-Dichloroethane	ND		1.0		ug/L			11/15/12 19:03	1
1,1-Dichloroethene	ND		1.0		ug/L			11/15/12 19:03	1
1,1-Dichloropropene	ND		1.0		ug/L			11/15/12 19:03	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			11/15/12 19:03	1
1,2,3-Trichloropropane	ND		1.0		ug/L			11/15/12 19:03	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			11/15/12 19:03	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			11/15/12 19:03	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			11/15/12 19:03	1
1,2-Dichlorobenzene	ND		1.0		ug/L			11/15/12 19:03	1
1,2-Dichloroethane	ND		1.0		ug/L			11/15/12 19:03	1
1,2-Dichloropropane	ND		1.0		ug/L			11/15/12 19:03	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			11/15/12 19:03	1

Client: Shaw Environmental & Infrastructure, Inc
Project/Site: 147274

TestAmerica Job ID: 480-28470-1

Client Sample ID: CVB-8
Date Collected: 11/12/12 11:00
Date Received: 11/14/12 08:00

Lab Sample ID: 480-28470-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0		ug/L			11/15/12 19:03	1
1,3-Dichloropropane	ND		1.0		ug/L			11/15/12 19:03	1
1,4-Dichlorobenzene	ND		1.0		ug/L			11/15/12 19:03	1
1,4-Dioxane	ND		50		ug/L			11/15/12 19:03	1
2,2-Dichloropropane	ND		1.0		ug/L			11/15/12 19:03	1
2-Butanone (MEK)	ND		10		ug/L			11/15/12 19:03	1
2-Chlorotoluene	ND		1.0		ug/L			11/15/12 19:03	1
2-Hexanone	ND		10		ug/L			11/15/12 19:03	1
4-Chlorotoluene	ND		1.0		ug/L			11/15/12 19:03	1
4-Isopropyltoluene	ND		1.0		ug/L			11/15/12 19:03	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			11/15/12 19:03	1
Acetone	ND		50		ug/L			11/15/12 19:03	1
Benzene	ND		1.0		ug/L			11/15/12 19:03	1
Bromobenzene	ND		1.0		ug/L			11/15/12 19:03	1
Bromoform	ND		1.0		ug/L			11/15/12 19:03	1
Bromomethane	ND		2.0		ug/L			11/15/12 19:03	1
Carbon disulfide	ND		10		ug/L			11/15/12 19:03	1
Carbon tetrachloride	ND		1.0		ug/L			11/15/12 19:03	1
Chlorobenzene	ND		1.0		ug/L			11/15/12 19:03	1
Chlorobromomethane	ND		1.0		ug/L			11/15/12 19:03	1
Chlorodibromomethane	ND		0.50		ug/L			11/15/12 19:03	1
Chloroethane	ND		2.0		ug/L			11/15/12 19:03	1
Chloroform	ND		1.0		ug/L			11/15/12 19:03	1
Chloromethane	ND		2.0		ug/L			11/15/12 19:03	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			11/15/12 19:03	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			11/15/12 19:03	1
Dichlorobromomethane	ND		0.50		ug/L			11/15/12 19:03	1
Dichlorodifluoromethane	ND		1.0		ug/L			11/15/12 19:03	1
Ethyl ether	ND		1.0		ug/L			11/15/12 19:03	1
Ethylbenzene	ND		1.0		ug/L			11/15/12 19:03	1
Ethylene Dibromide	ND		1.0		ug/L			11/15/12 19:03	1
Hexachlorobutadiene	ND		0.40		ug/L			11/15/12 19:03	1
Isopropyl ether	ND		10		ug/L			11/15/12 19:03	1
Isopropylbenzene	ND		1.0		ug/L			11/15/12 19:03	1
Methyl tert-butyl ether	ND		1.0		ug/L			11/15/12 19:03	1
Methylene Chloride	ND		1.0		ug/L			11/15/12 19:03	1
m-Xylene & p-Xylene	ND		2.0		ug/L			11/15/12 19:03	1
Naphthalene	ND		5.0		ug/L			11/15/12 19:03	1
n-Butylbenzene	ND		1.0		ug/L			11/15/12 19:03	1
N-Propylbenzene	ND		1.0		ug/L			11/15/12 19:03	1
o-Xylene	ND		1.0		ug/L			11/15/12 19:03	1
sec-Butylbenzene	ND		1.0		ug/L			11/15/12 19:03	1
Styrene	ND		1.0		ug/L			11/15/12 19:03	1
Tert-amyl methyl ether	ND		5.0		ug/L			11/15/12 19:03	1
Tert-butyl ethyl ether	ND		5.0		ug/L			11/15/12 19:03	1
tert-Butylbenzene	ND		1.0		ug/L			11/15/12 19:03	1
Tetrachloroethene	ND		1.0		ug/L			11/15/12 19:03	1
Tetrahydrofuran	ND		10		ug/L			11/15/12 19:03	1
Toluene	ND		1.0		ug/L			11/15/12 19:03	1

Client Sample ID: CVB-8
Date Collected: 11/12/12 11:00
Date Received: 11/14/12 08:00

Lab Sample ID: 480-28470-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		1.0		ug/L			11/15/12 19:03	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			11/15/12 19:03	1
Trichloroethene	ND		1.0		ug/L			11/15/12 19:03	1
Trichlorofluoromethane	ND		1.0		ug/L			11/15/12 19:03	1
Vinyl chloride	ND		0.50		ug/L			11/15/12 19:03	1
Dibromomethane	ND		1.0		ug/L			11/15/12 19:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*93*		*70 - 130*		*11/15/12 19:03*	*1*
1,2-Dichloroethane-d4 (Surr)	*85*		*70 - 130*		*11/15/12 19:03*	*1*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*		*11/15/12 19:03*	*1*

Client Sample ID: CVB-7
Date Collected: 11/12/12 11:15
Date Received: 11/14/12 08:00

Lab Sample ID: 480-28470-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			11/15/12 19:28	1
1,1,1-Trichloroethane	ND		1.0		ug/L			11/15/12 19:28	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			11/15/12 19:28	1
1,1,2-Trichloroethane	ND		1.0		ug/L			11/15/12 19:28	1
1,1-Dichloroethane	ND		1.0		ug/L			11/15/12 19:28	1
1,1-Dichloroethene	ND		1.0		ug/L			11/15/12 19:28	1
1,1-Dichloropropene	ND		1.0		ug/L			11/15/12 19:28	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			11/15/12 19:28	1
1,2,3-Trichloropropane	ND		1.0		ug/L			11/15/12 19:28	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			11/15/12 19:28	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			11/15/12 19:28	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			11/15/12 19:28	1
1,2-Dichlorobenzene	ND		1.0		ug/L			11/15/12 19:28	1
1,2-Dichloroethane	ND		1.0		ug/L			11/15/12 19:28	1
1,2-Dichloropropane	ND		1.0		ug/L			11/15/12 19:28	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			11/15/12 19:28	1
1,3-Dichlorobenzene	ND		1.0		ug/L			11/15/12 19:28	1
1,3-Dichloropropane	ND		1.0		ug/L			11/15/12 19:28	1
1,4-Dichlorobenzene	ND		1.0		ug/L			11/15/12 19:28	1
1,4-Dioxane	ND		50		ug/L			11/15/12 19:28	1
2,2-Dichloropropane	ND		1.0		ug/L			11/15/12 19:28	1
2-Butanone (MEK)	ND		10		ug/L			11/15/12 19:28	1
2-Chlorotoluene	ND		1.0		ug/L			11/15/12 19:28	1
2-Hexanone	ND		10		ug/L			11/15/12 19:28	1
4-Chlorotoluene	ND		1.0		ug/L			11/15/12 19:28	1
4-Isopropyltoluene	ND		1.0		ug/L			11/15/12 19:28	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			11/15/12 19:28	1
Acetone	ND		50		ug/L			11/15/12 19:28	1
Benzene	ND		1.0		ug/L			11/15/12 19:28	1
Bromobenzene	ND		1.0		ug/L			11/15/12 19:28	1
Bromoform	ND		1.0		ug/L			11/15/12 19:28	1
Bromomethane	ND		2.0		ug/L			11/15/12 19:28	1

Client: Shaw Environmental & Infrastructure, Inc
Project/Site: 147274

TestAmerica Job ID: 480-28470-1

Client Sample ID: CVB-7
Date Collected: 11/12/12 11:15
Date Received: 11/14/12 08:00

Lab Sample ID: 480-28470-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		10		ug/L			11/15/12 19:28	1
Carbon tetrachloride	ND		1.0		ug/L			11/15/12 19:28	1
Chlorobenzene	ND		1.0		ug/L			11/15/12 19:28	1
Chlorobromomethane	ND		1.0		ug/L			11/15/12 19:28	1
Chlorodibromomethane	ND		0.50		ug/L			11/15/12 19:28	1
Chloroethane	ND		2.0		ug/L			11/15/12 19:28	1
Chloroform	ND		1.0		ug/L			11/15/12 19:28	1
Chloromethane	ND		2.0		ug/L			11/15/12 19:28	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			11/15/12 19:28	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			11/15/12 19:28	1
Dichlorobromomethane	ND		0.50		ug/L			11/15/12 19:28	1
Dichlorodifluoromethane	ND		1.0		ug/L			11/15/12 19:28	1
Ethyl ether	ND		1.0		ug/L			11/15/12 19:28	1
Ethylbenzene	ND		1.0		ug/L			11/15/12 19:28	1
Ethylene Dibromide	ND		1.0		ug/L			11/15/12 19:28	1
Hexachlorobutadiene	ND		0.40		ug/L			11/15/12 19:28	1
Isopropyl ether	ND		10		ug/L			11/15/12 19:28	1
Isopropylbenzene	ND		1.0		ug/L			11/15/12 19:28	1
Methyl tert-butyl ether	ND		1.0		ug/L			11/15/12 19:28	1
Methylene Chloride	ND		1.0		ug/L			11/15/12 19:28	1
m-Xylene & p-Xylene	ND		2.0		ug/L			11/15/12 19:28	1
Naphthalene	ND		5.0		ug/L			11/15/12 19:28	1
n-Butylbenzene	ND		1.0		ug/L			11/15/12 19:28	1
N-Propylbenzene	ND		1.0		ug/L			11/15/12 19:28	1
o-Xylene	ND		1.0		ug/L			11/15/12 19:28	1
sec-Butylbenzene	ND		1.0		ug/L			11/15/12 19:28	1
Styrene	ND		1.0		ug/L			11/15/12 19:28	1
Tert-amyl methyl ether	ND		5.0		ug/L			11/15/12 19:28	1
Tert-butyl ethyl ether	ND		5.0		ug/L			11/15/12 19:28	1
tert-Butylbenzene	ND		1.0		ug/L			11/15/12 19:28	1
Tetrachloroethene	ND		1.0		ug/L			11/15/12 19:28	1
Tetrahydrofuran	ND		10		ug/L			11/15/12 19:28	1
Toluene	ND		1.0		ug/L			11/15/12 19:28	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			11/15/12 19:28	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			11/15/12 19:28	1
Trichloroethene	ND		1.0		ug/L			11/15/12 19:28	1
Trichlorofluoromethane	ND		1.0		ug/L			11/15/12 19:28	1
Vinyl chloride	ND		0.50		ug/L			11/15/12 19:28	1
Dibromomethane	ND		1.0		ug/L			11/15/12 19:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*91*		*70 - 130*		*11/15/12 19:28*	*1*
1,2-Dichloroethane-d4 (Surr)	*84*		*70 - 130*		*11/15/12 19:28*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*11/15/12 19:28*	*1*

Client: Shaw Environmental & Infrastructure, Inc
Project/Site: 147274

TestAmerica Job ID: 480-28470-1

Client Sample ID: CVB-2
Date Collected: 11/12/12 11:30
Date Received: 11/14/12 08:00

Lab Sample ID: 480-28470-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			11/15/12 19:53	1
1,1,1-Trichloroethane	ND		1.0		ug/L			11/15/12 19:53	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			11/15/12 19:53	1
1,1,2-Trichloroethane	ND		1.0		ug/L			11/15/12 19:53	1
1,1-Dichloroethane	ND		1.0		ug/L			11/15/12 19:53	1
1,1-Dichloroethene	ND		1.0		ug/L			11/15/12 19:53	1
1,1-Dichloropropene	ND		1.0		ug/L			11/15/12 19:53	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			11/15/12 19:53	1
1,2,3-Trichloropropane	ND		1.0		ug/L			11/15/12 19:53	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			11/15/12 19:53	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			11/15/12 19:53	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			11/15/12 19:53	1
1,2-Dichlorobenzene	ND		1.0		ug/L			11/15/12 19:53	1
1,2-Dichloroethane	ND		1.0		ug/L			11/15/12 19:53	1
1,2-Dichloropropane	ND		1.0		ug/L			11/15/12 19:53	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			11/15/12 19:53	1
1,3-Dichlorobenzene	ND		1.0		ug/L			11/15/12 19:53	1
1,3-Dichloropropane	ND		1.0		ug/L			11/15/12 19:53	1
1,4-Dichlorobenzene	ND		1.0		ug/L			11/15/12 19:53	1
1,4-Dioxane	ND		50		ug/L			11/15/12 19:53	1
2,2-Dichloropropane	ND		1.0		ug/L			11/15/12 19:53	1
2-Butanone (MEK)	ND		10		ug/L			11/15/12 19:53	1
2-Chlorotoluene	ND		1.0		ug/L			11/15/12 19:53	1
2-Hexanone	ND		10		ug/L			11/15/12 19:53	1
4-Chlorotoluene	ND		1.0		ug/L			11/15/12 19:53	1
4-Isopropyltoluene	ND		1.0		ug/L			11/15/12 19:53	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			11/15/12 19:53	1
Acetone	ND		50		ug/L			11/15/12 19:53	1
Benzene	ND		1.0		ug/L			11/15/12 19:53	1
Bromobenzene	ND		1.0		ug/L			11/15/12 19:53	1
Bromoform	ND		1.0		ug/L			11/15/12 19:53	1
Bromomethane	ND		2.0		ug/L			11/15/12 19:53	1
Carbon disulfide	ND		10		ug/L			11/15/12 19:53	1
Carbon tetrachloride	ND		1.0		ug/L			11/15/12 19:53	1
Chlorobenzene	ND		1.0		ug/L			11/15/12 19:53	1
Chlorobromomethane	ND		1.0		ug/L			11/15/12 19:53	1
Chlorodibromomethane	ND		0.50		ug/L			11/15/12 19:53	1
Chloroethane	ND		2.0		ug/L			11/15/12 19:53	1
Chloroform	ND		1.0		ug/L			11/15/12 19:53	1
Chloromethane	ND		2.0		ug/L			11/15/12 19:53	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			11/15/12 19:53	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			11/15/12 19:53	1
Dichlorobromomethane	ND		0.50		ug/L			11/15/12 19:53	1
Dichlorodifluoromethane	ND		1.0		ug/L			11/15/12 19:53	1
Ethyl ether	ND		1.0		ug/L			11/15/12 19:53	1
Ethylbenzene	ND		1.0		ug/L			11/15/12 19:53	1
Ethylene Dibromide	ND		1.0		ug/L			11/15/12 19:53	1
Hexachlorobutadiene	ND		0.40		ug/L			11/15/12 19:53	1
Isopropyl ether	ND		10		ug/L			11/15/12 19:53	1

Client Sample ID: CVB-2

Lab Sample ID: 480-28470-4

Date Collected: 11/12/12 11:30

Matrix: Water

Date Received: 11/14/12 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			11/15/12 19:53	1
Methyl tert-butyl ether	ND		1.0		ug/L			11/15/12 19:53	1
Methylene Chloride	ND		1.0		ug/L			11/15/12 19:53	1
m-Xylene & p-Xylene	ND		2.0		ug/L			11/15/12 19:53	1
Naphthalene	ND		5.0		ug/L			11/15/12 19:53	1
n-Butylbenzene	ND		1.0		ug/L			11/15/12 19:53	1
N-Propylbenzene	ND		1.0		ug/L			11/15/12 19:53	1
o-Xylene	ND		1.0		ug/L			11/15/12 19:53	1
sec-Butylbenzene	ND		1.0		ug/L			11/15/12 19:53	1
Styrene	ND		1.0		ug/L			11/15/12 19:53	1
Tert-amyl methyl ether	ND		5.0		ug/L			11/15/12 19:53	1
Tert-butyl ethyl ether	ND		5.0		ug/L			11/15/12 19:53	1
tert-Butylbenzene	ND		1.0		ug/L			11/15/12 19:53	1
Tetrachloroethene	ND		1.0		ug/L			11/15/12 19:53	1
Tetrahydrofuran	ND		10		ug/L			11/15/12 19:53	1
Toluene	ND		1.0		ug/L			11/15/12 19:53	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			11/15/12 19:53	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			11/15/12 19:53	1
Trichloroethene	ND		1.0		ug/L			11/15/12 19:53	1
Trichlorofluoromethane	ND		1.0		ug/L			11/15/12 19:53	1
Vinyl chloride	ND		0.50		ug/L			11/15/12 19:53	1
Dibromomethane	ND		1.0		ug/L			11/15/12 19:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*90*		*70 - 130*		*11/15/12 19:53*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*70 - 130*		*11/15/12 19:53*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*11/15/12 19:53*	*1*

Client Sample ID: CVB-5

Lab Sample ID: 480-28470-5

Date Collected: 11/12/12 11:45

Matrix: Water

Date Received: 11/14/12 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			11/15/12 20:18	1
1,1,1-Trichloroethane	ND		1.0		ug/L			11/15/12 20:18	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			11/15/12 20:18	1
1,1,2-Trichloroethane	ND		1.0		ug/L			11/15/12 20:18	1
1,1-Dichloroethane	ND		1.0		ug/L			11/15/12 20:18	1
1,1-Dichloroethene	ND		1.0		ug/L			11/15/12 20:18	1
1,1-Dichloropropene	ND		1.0		ug/L			11/15/12 20:18	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			11/15/12 20:18	1
1,2,3-Trichloropropane	ND		1.0		ug/L			11/15/12 20:18	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			11/15/12 20:18	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			11/15/12 20:18	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			11/15/12 20:18	1
1,2-Dichlorobenzene	ND		1.0		ug/L			11/15/12 20:18	1
1,2-Dichloroethane	ND		1.0		ug/L			11/15/12 20:18	1
1,2-Dichloropropane	ND		1.0		ug/L			11/15/12 20:18	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			11/15/12 20:18	1

Client: Shaw Environmental & Infrastructure, Inc
Project/Site: 147274

TestAmerica Job ID: 480-28470-1

Client Sample ID: CVB-5
Date Collected: 11/12/12 11:45
Date Received: 11/14/12 08:00

Lab Sample ID: 480-28470-5
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0		ug/L			11/15/12 20:18	1
1,3-Dichloropropane	ND		1.0		ug/L			11/15/12 20:18	1
1,4-Dichlorobenzene	ND		1.0		ug/L			11/15/12 20:18	1
1,4-Dioxane	ND		50		ug/L			11/15/12 20:18	1
2,2-Dichloropropane	ND		1.0		ug/L			11/15/12 20:18	1
2-Butanone (MEK)	ND		10		ug/L			11/15/12 20:18	1
2-Chlorotoluene	ND		1.0		ug/L			11/15/12 20:18	1
2-Hexanone	ND		10		ug/L			11/15/12 20:18	1
4-Chlorotoluene	ND		1.0		ug/L			11/15/12 20:18	1
4-Isopropyltoluene	ND		1.0		ug/L			11/15/12 20:18	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			11/15/12 20:18	1
Acetone	ND		50		ug/L			11/15/12 20:18	1
Benzene	ND		1.0		ug/L			11/15/12 20:18	1
Bromobenzene	ND		1.0		ug/L			11/15/12 20:18	1
Bromoform	ND		1.0		ug/L			11/15/12 20:18	1
Bromomethane	ND		2.0		ug/L			11/15/12 20:18	1
Carbon disulfide	ND		10		ug/L			11/15/12 20:18	1
Carbon tetrachloride	ND		1.0		ug/L			11/15/12 20:18	1
Chlorobenzene	ND		1.0		ug/L			11/15/12 20:18	1
Chlorobromomethane	ND		1.0		ug/L			11/15/12 20:18	1
Chlorodibromomethane	ND		0.50		ug/L			11/15/12 20:18	1
Chloroethane	ND		2.0		ug/L			11/15/12 20:18	1
Chloroform	ND		1.0		ug/L			11/15/12 20:18	1
Chloromethane	ND		2.0		ug/L			11/15/12 20:18	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			11/15/12 20:18	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			11/15/12 20:18	1
Dichlorobromomethane	ND		0.50		ug/L			11/15/12 20:18	1
Dichlorodifluoromethane	ND		1.0		ug/L			11/15/12 20:18	1
Ethyl ether	ND		1.0		ug/L			11/15/12 20:18	1
Ethylbenzene	ND		1.0		ug/L			11/15/12 20:18	1
Ethylene Dibromide	ND		1.0		ug/L			11/15/12 20:18	1
Hexachlorobutadiene	ND		0.40		ug/L			11/15/12 20:18	1
Isopropyl ether	ND		10		ug/L			11/15/12 20:18	1
Isopropylbenzene	ND		1.0		ug/L			11/15/12 20:18	1
Methyl tert-butyl ether	ND		1.0		ug/L			11/15/12 20:18	1
Methylene Chloride	ND		1.0		ug/L			11/15/12 20:18	1
m-Xylene & p-Xylene	ND		2.0		ug/L			11/15/12 20:18	1
Naphthalene	ND		5.0		ug/L			11/15/12 20:18	1
n-Butylbenzene	ND		1.0		ug/L			11/15/12 20:18	1
N-Propylbenzene	ND		1.0		ug/L			11/15/12 20:18	1
o-Xylene	ND		1.0		ug/L			11/15/12 20:18	1
sec-Butylbenzene	ND		1.0		ug/L			11/15/12 20:18	1
Styrene	ND		1.0		ug/L			11/15/12 20:18	1
Tert-amyl methyl ether	ND		5.0		ug/L			11/15/12 20:18	1
Tert-butyl ethyl ether	ND		5.0		ug/L			11/15/12 20:18	1
tert-Butylbenzene	ND		1.0		ug/L			11/15/12 20:18	1
Tetrachloroethene	ND		1.0		ug/L			11/15/12 20:18	1
Tetrahydrofuran	ND		10		ug/L			11/15/12 20:18	1
Toluene	ND		1.0		ug/L			11/15/12 20:18	1

Client Sample ID: CVB-5

Lab Sample ID: 480-28470-5

Date Collected: 11/12/12 11:45

Matrix: Water

Date Received: 11/14/12 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		1.0		ug/L			11/15/12 20:18	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			11/15/12 20:18	1
Trichloroethene	ND		1.0		ug/L			11/15/12 20:18	1
Trichlorofluoromethane	ND		1.0		ug/L			11/15/12 20:18	1
Vinyl chloride	ND		0.50		ug/L			11/15/12 20:18	1
Dibromomethane	ND		1.0		ug/L			11/15/12 20:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*93*		*70 - 130*		*11/15/12 20:18*	*1*
1,2-Dichloroethane-d4 (Surr)	*85*		*70 - 130*		*11/15/12 20:18*	*1*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*		*11/15/12 20:18*	*1*

Client Sample ID: TRIP BLANK

Lab Sample ID: 480-28470-6

Date Collected: 11/12/12 10:30

Matrix: Water

Date Received: 11/14/12 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			11/15/12 20:43	1
1,1,1-Trichloroethane	ND		1.0		ug/L			11/15/12 20:43	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			11/15/12 20:43	1
1,1,2-Trichloroethane	ND		1.0		ug/L			11/15/12 20:43	1
1,1-Dichloroethane	ND		1.0		ug/L			11/15/12 20:43	1
1,1-Dichloroethene	ND		1.0		ug/L			11/15/12 20:43	1
1,1-Dichloropropene	ND		1.0		ug/L			11/15/12 20:43	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			11/15/12 20:43	1
1,2,3-Trichloropropane	ND		1.0		ug/L			11/15/12 20:43	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			11/15/12 20:43	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			11/15/12 20:43	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			11/15/12 20:43	1
1,2-Dichlorobenzene	ND		1.0		ug/L			11/15/12 20:43	1
1,2-Dichloroethane	ND		1.0		ug/L			11/15/12 20:43	1
1,2-Dichloropropane	ND		1.0		ug/L			11/15/12 20:43	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			11/15/12 20:43	1
1,3-Dichlorobenzene	ND		1.0		ug/L			11/15/12 20:43	1
1,3-Dichloropropane	ND		1.0		ug/L			11/15/12 20:43	1
1,4-Dichlorobenzene	ND		1.0		ug/L			11/15/12 20:43	1
1,4-Dioxane	ND		50		ug/L			11/15/12 20:43	1
2,2-Dichloropropane	ND		1.0		ug/L			11/15/12 20:43	1
2-Butanone (MEK)	ND		10		ug/L			11/15/12 20:43	1
2-Chlorotoluene	ND		1.0		ug/L			11/15/12 20:43	1
2-Hexanone	ND		10		ug/L			11/15/12 20:43	1
4-Chlorotoluene	ND		1.0		ug/L			11/15/12 20:43	1
4-Isopropyltoluene	ND		1.0		ug/L			11/15/12 20:43	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			11/15/12 20:43	1
Acetone	ND		50		ug/L			11/15/12 20:43	1
Benzene	ND		1.0		ug/L			11/15/12 20:43	1
Bromobenzene	ND		1.0		ug/L			11/15/12 20:43	1
Bromoform	ND		1.0		ug/L			11/15/12 20:43	1
Bromomethane	ND		2.0		ug/L			11/15/12 20:43	1

Client: Shaw Environmental & Infrastructure, Inc
Project/Site: 147274

TestAmerica Job ID: 480-28470-1

Client Sample ID: TRIP BLANK
Date Collected: 11/12/12 10:30
Date Received: 11/14/12 08:00

Lab Sample ID: 480-28470-6
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		10		ug/L			11/15/12 20:43	1
Carbon tetrachloride	ND		1.0		ug/L			11/15/12 20:43	1
Chlorobenzene	ND		1.0		ug/L			11/15/12 20:43	1
Chlorobromomethane	ND		1.0		ug/L			11/15/12 20:43	1
Chlorodibromomethane	ND		0.50		ug/L			11/15/12 20:43	1
Chloroethane	ND		2.0		ug/L			11/15/12 20:43	1
Chloroform	ND		1.0		ug/L			11/15/12 20:43	1
Chloromethane	ND		2.0		ug/L			11/15/12 20:43	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			11/15/12 20:43	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			11/15/12 20:43	1
Dichlorobromomethane	ND		0.50		ug/L			11/15/12 20:43	1
Dichlorodifluoromethane	ND		1.0		ug/L			11/15/12 20:43	1
Ethyl ether	ND		1.0		ug/L			11/15/12 20:43	1
Ethylbenzene	ND		1.0		ug/L			11/15/12 20:43	1
Ethylene Dibromide	ND		1.0		ug/L			11/15/12 20:43	1
Hexachlorobutadiene	ND		0.40		ug/L			11/15/12 20:43	1
Isopropyl ether	ND		10		ug/L			11/15/12 20:43	1
Isopropylbenzene	ND		1.0		ug/L			11/15/12 20:43	1
Methyl tert-butyl ether	ND		1.0		ug/L			11/15/12 20:43	1
Methylene Chloride	ND		1.0		ug/L			11/15/12 20:43	1
m-Xylene & p-Xylene	ND		2.0		ug/L			11/15/12 20:43	1
Naphthalene	ND		5.0		ug/L			11/15/12 20:43	1
n-Butylbenzene	ND		1.0		ug/L			11/15/12 20:43	1
N-Propylbenzene	ND		1.0		ug/L			11/15/12 20:43	1
o-Xylene	ND		1.0		ug/L			11/15/12 20:43	1
sec-Butylbenzene	ND		1.0		ug/L			11/15/12 20:43	1
Styrene	ND		1.0		ug/L			11/15/12 20:43	1
Tert-amyl methyl ether	ND		5.0		ug/L			11/15/12 20:43	1
Tert-butyl ethyl ether	ND		5.0		ug/L			11/15/12 20:43	1
tert-Butylbenzene	ND		1.0		ug/L			11/15/12 20:43	1
Tetrachloroethene	ND		1.0		ug/L			11/15/12 20:43	1
Tetrahydrofuran	ND		10		ug/L			11/15/12 20:43	1
Toluene	ND		1.0		ug/L			11/15/12 20:43	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			11/15/12 20:43	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			11/15/12 20:43	1
Trichloroethene	ND		1.0		ug/L			11/15/12 20:43	1
Trichlorofluoromethane	ND		1.0		ug/L			11/15/12 20:43	1
Vinyl chloride	ND		0.50		ug/L			11/15/12 20:43	1
Dibromomethane	ND		1.0		ug/L			11/15/12 20:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*94*		*70 - 130*		*11/15/12 20:43*	*1*
1,2-Dichloroethane-d4 (Surr)	*85*		*70 - 130*		*11/15/12 20:43*	*1*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*		*11/15/12 20:43*	*1*

Surrogate Summary

Client: Shaw Environmental & Infrastructure, Inc
Project/Site: 147274

TestAmerica Job ID: 480-28470-1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		TOL	12DCE	BFB
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
480-28470-1	CVB-9	92	87	102
480-28470-2	CVB-8	93	85	104
480-28470-3	CVB-7	91	84	100
480-28470-4	CVB-2	90	83	101
480-28470-5	CVB-5	93	85	104
480-28470-6	TRIP BLANK	94	85	104
LCS 480-91082/4	Lab Control Sample	93	84	106
LCSD 480-91082/5	Lab Control Sample Dup	93	84	104
MB 480-91082/7	Method Blank	94	86	107

Surrogate Legend

TOL = Toluene-d8 (Surr)

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

Client: Shaw Environmental & Infrastructure, Inc
Project/Site: 147274

TestAmerica Job ID: 480-28470-1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-91082/7
Matrix: Water
Analysis Batch: 91082

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			11/15/12 13:44	1
1,1,1-Trichloroethane	ND		1.0		ug/L			11/15/12 13:44	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			11/15/12 13:44	1
1,1,2-Trichloroethane	ND		1.0		ug/L			11/15/12 13:44	1
1,1-Dichloroethane	ND		1.0		ug/L			11/15/12 13:44	1
1,1-Dichloroethene	ND		1.0		ug/L			11/15/12 13:44	1
1,1-Dichloropropene	ND		1.0		ug/L			11/15/12 13:44	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			11/15/12 13:44	1
1,2,3-Trichloropropane	ND		1.0		ug/L			11/15/12 13:44	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			11/15/12 13:44	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			11/15/12 13:44	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			11/15/12 13:44	1
1,2-Dichlorobenzene	ND		1.0		ug/L			11/15/12 13:44	1
1,2-Dichloroethane	ND		1.0		ug/L			11/15/12 13:44	1
1,2-Dichloropropane	ND		1.0		ug/L			11/15/12 13:44	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			11/15/12 13:44	1
1,3-Dichlorobenzene	ND		1.0		ug/L			11/15/12 13:44	1
1,3-Dichloropropane	ND		1.0		ug/L			11/15/12 13:44	1
1,4-Dichlorobenzene	ND		1.0		ug/L			11/15/12 13:44	1
1,4-Dioxane	ND		50		ug/L			11/15/12 13:44	1
2,2-Dichloropropane	ND		1.0		ug/L			11/15/12 13:44	1
2-Butanone (MEK)	ND		10		ug/L			11/15/12 13:44	1
2-Chlorotoluene	ND		1.0		ug/L			11/15/12 13:44	1
2-Hexanone	ND		10		ug/L			11/15/12 13:44	1
4-Chlorotoluene	ND		1.0		ug/L			11/15/12 13:44	1
4-Isopropyltoluene	ND		1.0		ug/L			11/15/12 13:44	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			11/15/12 13:44	1
Acetone	ND		50		ug/L			11/15/12 13:44	1
Benzene	ND		1.0		ug/L			11/15/12 13:44	1
Bromobenzene	ND		1.0		ug/L			11/15/12 13:44	1
Bromoform	ND		1.0		ug/L			11/15/12 13:44	1
Bromomethane	ND		2.0		ug/L			11/15/12 13:44	1
Carbon disulfide	ND		10		ug/L			11/15/12 13:44	1
Carbon tetrachloride	ND		1.0		ug/L			11/15/12 13:44	1
Chlorobenzene	ND		1.0		ug/L			11/15/12 13:44	1
Chlorobromomethane	ND		1.0		ug/L			11/15/12 13:44	1
Chlorodibromomethane	ND		0.50		ug/L			11/15/12 13:44	1
Chloroethane	ND		2.0		ug/L			11/15/12 13:44	1
Chloroform	ND		1.0		ug/L			11/15/12 13:44	1
Chloromethane	ND		2.0		ug/L			11/15/12 13:44	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			11/15/12 13:44	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			11/15/12 13:44	1
Dichlorobromomethane	ND		0.50		ug/L			11/15/12 13:44	1
Dichlorodifluoromethane	ND		1.0		ug/L			11/15/12 13:44	1
Ethyl ether	ND		1.0		ug/L			11/15/12 13:44	1
Ethylbenzene	ND		1.0		ug/L			11/15/12 13:44	1
Ethylene Dibromide	ND		1.0		ug/L			11/15/12 13:44	1
Hexachlorobutadiene	ND		0.40		ug/L			11/15/12 13:44	1

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 480-91082/7
Matrix: Water
Analysis Batch: 91082

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropyl ether	ND		10		ug/L			11/15/12 13:44	1
Isopropylbenzene	ND		1.0		ug/L			11/15/12 13:44	1
Methyl tert-butyl ether	ND		1.0		ug/L			11/15/12 13:44	1
Methylene Chloride	ND		1.0		ug/L			11/15/12 13:44	1
m-Xylene & p-Xylene	ND		2.0		ug/L			11/15/12 13:44	1
Naphthalene	ND		5.0		ug/L			11/15/12 13:44	1
n-Butylbenzene	ND		1.0		ug/L			11/15/12 13:44	1
N-Propylbenzene	ND		1.0		ug/L			11/15/12 13:44	1
o-Xylene	ND		1.0		ug/L			11/15/12 13:44	1
sec-Butylbenzene	ND		1.0		ug/L			11/15/12 13:44	1
Styrene	ND		1.0		ug/L			11/15/12 13:44	1
Tert-amyl methyl ether	ND		5.0		ug/L			11/15/12 13:44	1
Tert-butyl ethyl ether	ND		5.0		ug/L			11/15/12 13:44	1
tert-Butylbenzene	ND		1.0		ug/L			11/15/12 13:44	1
Tetrachloroethene	ND		1.0		ug/L			11/15/12 13:44	1
Tetrahydrofuran	ND		10		ug/L			11/15/12 13:44	1
Toluene	ND		1.0		ug/L			11/15/12 13:44	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			11/15/12 13:44	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			11/15/12 13:44	1
Trichloroethene	ND		1.0		ug/L			11/15/12 13:44	1
Trichlorofluoromethane	ND		1.0		ug/L			11/15/12 13:44	1
Vinyl chloride	ND		0.50		ug/L			11/15/12 13:44	1
Dibromomethane	ND		1.0		ug/L			11/15/12 13:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*94*		*70 - 130*		*11/15/12 13:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*70 - 130*		*11/15/12 13:44*	*1*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*		*11/15/12 13:44*	*1*

Lab Sample ID: LCS 480-91082/4
Matrix: Water
Analysis Batch: 91082

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	25.0	24.7		ug/L		99	70 - 130
1,1,1-Trichloroethane	25.0	23.1		ug/L		92	70 - 130
1,1,2,2-Tetrachloroethane	25.0	21.0		ug/L		84	70 - 130
1,1,2-Trichloroethane	25.0	23.5		ug/L		94	70 - 130
1,1-Dichloroethane	25.0	22.7		ug/L		91	70 - 130
1,1-Dichloroethene	25.0	21.7		ug/L		87	70 - 130
1,1-Dichloropropene	25.0	24.6		ug/L		98	70 - 130
1,2,3-Trichlorobenzene	25.0	24.1		ug/L		97	70 - 130
1,2,3-Trichloropropane	25.0	20.8		ug/L		83	70 - 130
1,2,4-Trichlorobenzene	25.0	23.7		ug/L		95	70 - 130
1,2,4-Trimethylbenzene	25.0	20.5		ug/L		82	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	19.5		ug/L		78	70 - 130
1,2-Dichlorobenzene	25.0	21.7		ug/L		87	70 - 130
1,2-Dichloroethane	25.0	20.8		ug/L		83	70 - 130

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-91082/4
Matrix: Water
Analysis Batch: 91082

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	25.0	22.9		ug/L		92	70 - 130
1,3,5-Trimethylbenzene	25.0	20.4		ug/L		82	70 - 130
1,3-Dichlorobenzene	25.0	21.6		ug/L		86	70 - 130
1,3-Dichloropropane	25.0	23.1		ug/L		92	70 - 130
1,4-Dichlorobenzene	25.0	22.0		ug/L		88	70 - 130
1,4-Dioxane	1000	1150		ug/L		115	70 - 130
2,2-Dichloropropane	25.0	23.4		ug/L		94	70 - 130
2-Butanone (MEK)	125	157		ug/L		126	70 - 130
2-Chlorotoluene	25.0	23.7		ug/L		95	70 - 130
2-Hexanone	125	103		ug/L		83	70 - 130
4-Chlorotoluene	25.0	21.9		ug/L		88	70 - 130
4-Isopropyltoluene	25.0	21.5		ug/L		86	70 - 130
4-Methyl-2-pentanone (MIBK)	125	104		ug/L		84	70 - 130
Acetone	125	109		ug/L		87	70 - 130
Benzene	25.0	24.8		ug/L		99	70 - 130
Bromobenzene	25.0	21.8		ug/L		87	70 - 130
Bromoform	25.0	27.6		ug/L		110	70 - 130
Bromomethane	25.0	23.8		ug/L		95	70 - 130
Carbon disulfide	25.0	21.2		ug/L		85	70 - 130
Carbon tetrachloride	25.0	24.1		ug/L		96	70 - 130
Chlorobenzene	25.0	24.1		ug/L		97	70 - 130
Chlorobromomethane	25.0	26.6		ug/L		106	70 - 130
Chlorodibromomethane	25.0	25.1		ug/L		101	70 - 130
Chloroethane	25.0	21.4		ug/L		86	70 - 130
Chloroform	25.0	23.1		ug/L		92	70 - 130
Chloromethane	25.0	21.2		ug/L		85	70 - 130
cis-1,2-Dichloroethene	25.0	25.1		ug/L		100	70 - 130
cis-1,3-Dichloropropene	25.0	23.4		ug/L		94	70 - 130
Dichlorobromomethane	25.0	23.9		ug/L		96	70 - 130
Dichlorodifluoromethane	50.0	55.5		ug/L		111	70 - 130
Ethyl ether	25.0	25.8		ug/L		103	70 - 130
Ethylbenzene	25.0	23.1		ug/L		92	70 - 130
Ethylene Dibromide	25.0	24.0		ug/L		96	70 - 130
Hexachlorobutadiene	25.0	28.0		ug/L		112	70 - 130
Isopropyl ether	25.0	22.7		ug/L		91	70 - 130
Isopropylbenzene	25.0	20.4		ug/L		82	70 - 130
Methyl tert-butyl ether	25.0	25.0		ug/L		100	70 - 130
Methylene Chloride	25.0	24.0		ug/L		96	70 - 130
m-Xylene & p-Xylene	50.0	48.5		ug/L		97	70 - 130
Naphthalene	25.0	21.3		ug/L		85	70 - 130
n-Butylbenzene	25.0	20.7		ug/L		83	70 - 130
N-Propylbenzene	25.0	20.1		ug/L		80	70 - 130
o-Xylene	25.0	23.9		ug/L		96	70 - 130
sec-Butylbenzene	25.0	21.2		ug/L		85	70 - 130
Styrene	25.0	23.4		ug/L		94	70 - 130
Tert-amyl methyl ether	25.0	28.6		ug/L		114	70 - 130
Tert-butyl ethyl ether	25.0	25.0		ug/L		100	70 - 130
tert-Butylbenzene	25.0	21.9		ug/L		87	70 - 130

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-91082/4
Matrix: Water
Analysis Batch: 91082

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Tetrachloroethene			25.0	28.1		ug/L		112	70 - 130		
Tetrahydrofuran			125	115		ug/L		92	70 - 130		
Toluene			25.0	23.6		ug/L		94	70 - 130		
trans-1,2-Dichloroethene			25.0	25.0		ug/L		100	70 - 130		
trans-1,3-Dichloropropene			25.0	22.8		ug/L		91	70 - 130		
Trichloroethene			25.0	26.2		ug/L		105	70 - 130		
Trichlorofluoromethane			25.0	24.8		ug/L		99	70 - 130		
Vinyl chloride			25.0	23.3		ug/L		93	70 - 130		
Dibromomethane			25.0	24.2		ug/L		97	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*93*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*84*		*70 - 130*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: LCSD 480-91082/5
Matrix: Water
Analysis Batch: 91082

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane			25.0	23.7		ug/L		95	70 - 130	4	20
1,1,1-Trichloroethane			25.0	22.2		ug/L		89	70 - 130	4	20
1,1,2,2-Tetrachloroethane			25.0	21.2		ug/L		85	70 - 130	1	20
1,1,2-Trichloroethane			25.0	23.0		ug/L		92	70 - 130	2	20
1,1-Dichloroethane			25.0	22.0		ug/L		88	70 - 130	3	20
1,1-Dichloroethene			25.0	20.8		ug/L		83	70 - 130	4	20
1,1-Dichloropropene			25.0	23.4		ug/L		94	70 - 130	5	20
1,2,3-Trichlorobenzene			25.0	23.8		ug/L		95	70 - 130	1	20
1,2,3-Trichloropropane			25.0	21.2		ug/L		85	70 - 130	2	20
1,2,4-Trichlorobenzene			25.0	23.5		ug/L		94	70 - 130	1	20
1,2,4-Trimethylbenzene			25.0	19.9		ug/L		80	70 - 130	3	20
1,2-Dibromo-3-Chloropropane			25.0	19.3		ug/L		77	70 - 130	1	20
1,2-Dichlorobenzene			25.0	21.1		ug/L		85	70 - 130	2	20
1,2-Dichloroethane			25.0	20.5		ug/L		82	70 - 130	2	20
1,2-Dichloropropane			25.0	22.1		ug/L		88	70 - 130	4	20
1,3,5-Trimethylbenzene			25.0	20.0		ug/L		80	70 - 130	2	20
1,3-Dichlorobenzene			25.0	21.2		ug/L		85	70 - 130	2	20
1,3-Dichloropropane			25.0	22.3		ug/L		89	70 - 130	3	20
1,4-Dichlorobenzene			25.0	21.5		ug/L		86	70 - 130	3	20
1,4-Dioxane			1000	1160		ug/L		116	70 - 130	1	20
2,2-Dichloropropane			25.0	21.9		ug/L		88	70 - 130	6	20
2-Butanone (MEK)			125	158		ug/L		127	70 - 130	1	20
2-Chlorotoluene			25.0	23.0		ug/L		92	70 - 130	3	20
2-Hexanone			125	102		ug/L		82	70 - 130	1	20
4-Chlorotoluene			25.0	21.4		ug/L		86	70 - 130	2	20
4-Isopropyltoluene			25.0	20.8		ug/L		83	70 - 130	4	20
4-Methyl-2-pentanone (MIBK)			125	102		ug/L		82	70 - 130	2	20
Acetone			125	107		ug/L		85	70 - 130	2	20

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 480-91082/5
Matrix: Water
Analysis Batch: 91082

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	25.0	23.8		ug/L		95	70 - 130	4	20
Bromobenzene	25.0	21.4		ug/L		86	70 - 130	2	20
Bromoform	25.0	27.2		ug/L		109	70 - 130	1	20
Bromomethane	25.0	23.1		ug/L		92	70 - 130	3	20
Carbon disulfide	25.0	20.0		ug/L		80	70 - 130	6	20
Carbon tetrachloride	25.0	22.9		ug/L		91	70 - 130	5	20
Chlorobenzene	25.0	23.2		ug/L		93	70 - 130	4	20
Chlorobromomethane	25.0	26.2		ug/L		105	70 - 130	1	20
Chlorodibromomethane	25.0	24.3		ug/L		97	70 - 130	3	20
Chloroethane	25.0	20.4		ug/L		82	70 - 130	5	20
Chloroform	25.0	22.6		ug/L		90	70 - 130	2	20
Chloromethane	25.0	20.0		ug/L		80	70 - 130	6	20
cis-1,2-Dichloroethene	25.0	24.0		ug/L		96	70 - 130	4	20
cis-1,3-Dichloropropene	25.0	23.4		ug/L		93	70 - 130	0	20
Dichlorobromomethane	25.0	23.6		ug/L		94	70 - 130	1	20
Dichlorodifluoromethane	50.0	53.8		ug/L		108	70 - 130	3	20
Ethyl ether	25.0	25.9		ug/L		103	70 - 130	0	20
Ethylbenzene	25.0	22.1		ug/L		88	70 - 130	4	20
Ethylene Dibromide	25.0	23.5		ug/L		94	70 - 130	2	20
Hexachlorobutadiene	25.0	26.5		ug/L		106	70 - 130	6	20
Isopropyl ether	25.0	22.2		ug/L		89	70 - 130	3	20
Isopropylbenzene	25.0	19.9		ug/L		80	70 - 130	2	20
Methyl tert-butyl ether	25.0	24.7		ug/L		99	70 - 130	1	20
Methylene Chloride	25.0	23.7		ug/L		95	70 - 130	1	20
m-Xylene & p-Xylene	50.0	46.1		ug/L		92	70 - 130	5	20
Naphthalene	25.0	21.0		ug/L		84	70 - 130	1	20
n-Butylbenzene	25.0	19.9		ug/L		80	70 - 130	4	20
N-Propylbenzene	25.0	19.4		ug/L		78	70 - 130	4	20
o-Xylene	25.0	23.0		ug/L		92	70 - 130	4	20
sec-Butylbenzene	25.0	20.4		ug/L		82	70 - 130	4	20
Styrene	25.0	22.4		ug/L		89	70 - 130	5	20
Tert-amyl methyl ether	25.0	28.4		ug/L		114	70 - 130	1	20
Tert-butyl ethyl ether	25.0	24.9		ug/L		100	70 - 130	0	20
tert-Butylbenzene	25.0	21.1		ug/L		85	70 - 130	3	20
Tetrachloroethene	25.0	26.8		ug/L		107	70 - 130	5	20
Tetrahydrofuran	125	113		ug/L		91	70 - 130	1	20
Toluene	25.0	22.8		ug/L		91	70 - 130	4	20
trans-1,2-Dichloroethene	25.0	23.7		ug/L		95	70 - 130	6	20
trans-1,3-Dichloropropene	25.0	21.9		ug/L		88	70 - 130	4	20
Trichloroethene	25.0	25.5		ug/L		102	70 - 130	3	20
Trichlorofluoromethane	25.0	24.3		ug/L		97	70 - 130	2	20
Vinyl chloride	25.0	21.8		ug/L		87	70 - 130	7	20
Dibromomethane	25.0	24.6		ug/L		98	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*93*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*84*		*70 - 130*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*

QC Association Summary

Client: Shaw Environmental & Infrastructure, Inc
Project/Site: 147274

TestAmerica Job ID: 480-28470-1

GC/MS VOA

Analysis Batch: 91082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-28470-1	CVB-9	Total/NA	Water	8260C	
480-28470-2	CVB-8	Total/NA	Water	8260C	
480-28470-3	CVB-7	Total/NA	Water	8260C	
480-28470-4	CVB-2	Total/NA	Water	8260C	
480-28470-5	CVB-5	Total/NA	Water	8260C	
480-28470-6	TRIP BLANK	Total/NA	Water	8260C	
LCS 480-91082/4	Lab Control Sample	Total/NA	Water	8260C	
LCSD 480-91082/5	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 480-91082/7	Method Blank	Total/NA	Water	8260C	

Lab Chronicle

Client: Shaw Environmental & Infrastructure, Inc
Project/Site: 147274

TestAmerica Job ID: 480-28470-1

Client Sample ID: CVB-9

Lab Sample ID: 480-28470-1

Date Collected: 11/12/12 10:30

Matrix: Water

Date Received: 11/14/12 08:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	91082	11/15/12 18:38	LH	TAL BUF

Client Sample ID: CVB-8

Lab Sample ID: 480-28470-2

Date Collected: 11/12/12 11:00

Matrix: Water

Date Received: 11/14/12 08:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	91082	11/15/12 19:03	LH	TAL BUF

Client Sample ID: CVB-7

Lab Sample ID: 480-28470-3

Date Collected: 11/12/12 11:15

Matrix: Water

Date Received: 11/14/12 08:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	91082	11/15/12 19:28	LH	TAL BUF

Client Sample ID: CVB-2

Lab Sample ID: 480-28470-4

Date Collected: 11/12/12 11:30

Matrix: Water

Date Received: 11/14/12 08:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	91082	11/15/12 19:53	LH	TAL BUF

Client Sample ID: CVB-5

Lab Sample ID: 480-28470-5

Date Collected: 11/12/12 11:45

Matrix: Water

Date Received: 11/14/12 08:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	91082	11/15/12 20:18	LH	TAL BUF

Client Sample ID: TRIP BLANK

Lab Sample ID: 480-28470-6

Date Collected: 11/12/12 10:30

Matrix: Water

Date Received: 11/14/12 08:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	91082	11/15/12 20:43	LH	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Certification Summary

Client: Shaw Environmental & Infrastructure, Inc
Project/Site: 147274

TestAmerica Job ID: 480-28470-1

Laboratory: TestAmerica Buffalo

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-13
California	NELAC	9	1169CA	09-30-13
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAC	4	E87672	06-30-13
Georgia	State Program	4	N/A	03-31-13
Georgia	State Program	4	956	06-30-13
Georgia	State Program	4	956	06-30-13
Illinois	NELAC	5	200003	09-30-13
Iowa	State Program	7	374	03-01-13
Kansas	NELAC	7	E-10187	01-31-13
Kentucky	State Program	4	90029	12-31-12
Kentucky (UST)	State Program	4	30	04-01-13
Louisiana	NELAC	6	02031	06-30-13
Maine	State Program	1	NY00044	12-04-12
Maryland	State Program	3	294	03-31-13
Massachusetts	State Program	1	M-NY044	06-30-13
Michigan	State Program	5	9937	04-01-13
Minnesota	NELAC	5	036-999-337	12-31-12
New Hampshire	NELAC	1	2973	09-11-13
New Hampshire	NELAC	1	2337	11-17-13
New Jersey	NELAC	2	NY455	06-30-13
New York	NELAC	2	10026	03-31-13
North Dakota	State Program	8	R-176	03-31-13
Oklahoma	State Program	6	9421	08-31-13
Oregon	NELAC	10	NY200003	06-09-13
Pennsylvania	NELAC	3	68-00281	07-31-13
Rhode Island	State Program	1	LAO00328	12-31-13
Tennessee	State Program	4	TN02970	04-01-13
Texas	NELAC	6	T104704412-11-2	07-31-13
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAC	3	460185	09-14-13
Washington	State Program	10	C784	02-10-13
West Virginia DEP	State Program	3	252	09-30-13
Wisconsin	State Program	5	998310390	08-31-13

Method Summary

Client: Shaw Environmental & Infrastructure, Inc
Project/Site: 147274

TestAmerica Job ID: 480-28470-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds (GC/MS)	MA DEP	TAL BUF

Protocol References:

MA DEP = Massachusetts Department Of Environmental Protection

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: Shaw Environmental & Infrastructure, Inc
Project/Site: 147274

TestAmerica Job ID: 480-28470-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-28470-1	CVB-9	Water	11/12/12 10:30	11/14/12 08:00
480-28470-2	CVB-8	Water	11/12/12 11:00	11/14/12 08:00
480-28470-3	CVB-7	Water	11/12/12 11:15	11/14/12 08:00
480-28470-4	CVB-2	Water	11/12/12 11:30	11/14/12 08:00
480-28470-5	CVB-5	Water	11/12/12 11:45	11/14/12 08:00
480-28470-6	TRIP BLANK	Water	11/12/12 10:30	11/14/12 08:00

Login Sample Receipt Checklist

Client: Shaw Environmental & Infrastructure, Inc

Job Number: 480-28470-1

Login Number: 28470

List Source: TestAmerica Buffalo

List Number: 1

Creator: Robitaille, Zach L

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	SHAW
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

TestAmerica Westfield
Westfield Executive Park 53 Southampton Road
Westfield, MA 01085
Phone (413) 572-4000 Fax (413) 572-3707

Boston Service Center
240 Bear Hill Rd. Suite 104
Waltham, MA 02451
Phone (781) 466-6900 Fax (781) 466-6901

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Lafond / Van Doren	Lab PM:	Carrier Tracking No(s):
Client Contact: Ed Van Doren	Phone: 617-589-4030	E-Mail: edward.vandoren@shawgrp.com	COC No: 22046
Company: Shaw E+I			Page: 1 of 1
Address: 150 Royall St.	Due Date Requested:	**Analysis Requested**	Job #:
City: Canton	TAT Requested (days): Std 7-10 days		
State, Zip: MA 02021	Quote #:		
Phone: 617-589-4030	PO #:		
Email: edward.vandoren@shawgrp.com	WO #:		
Project Name/number: 147274	SSOW#:		
Site: LMC Barrington			

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; H - Ascorbic Acid; I - Ice; J - DI Water; M - Hexane; N - None; P - Na2O4S; Q - Na2SO3; R - Na2S2SO3; S - H2SO4; Z - other (specify)

Regulatory programs: MCP [X] GW1/S1 [ ] RCP [ ] CT RSR [ ] DEP Form [X] EDD Required [X]

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Preservation Code	Field Filtered Sample	Perform MS/MSD	8260 B - VOCs (GC/MS)	Total Number of containers	Special Instructions/Note:
CVB-9	11/12/12	10:30 AM	G	W		N	N	3		MCP Presumptive Certainty
CVB-8	11/12/12	11:1[illegible] AM	G	W		N	N	3		
CVB-7	11/12/12	11:[illegible] AM	G	W		N	N	3		
CVB-2	11/12/12	11:30 AM	G	W		N	N	3		
CVB-5	11/12/12	11:[illegible] AM	G	W		N	N	3		

Possible Hazard Identification
[ ] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown [ ] Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
[ ] Return To Client [X] Disposal By Lab [ ] Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

	Date/Time	Company	Received by	Date/Time	Company
Relinquished by: Edward P. Van Doren	11-13-12 /	Shaw		11/13/12 1:20	TAL
Relinquished by:	11/13/12 1532	TAL		11/14/12 0900	TAL Buffalo
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

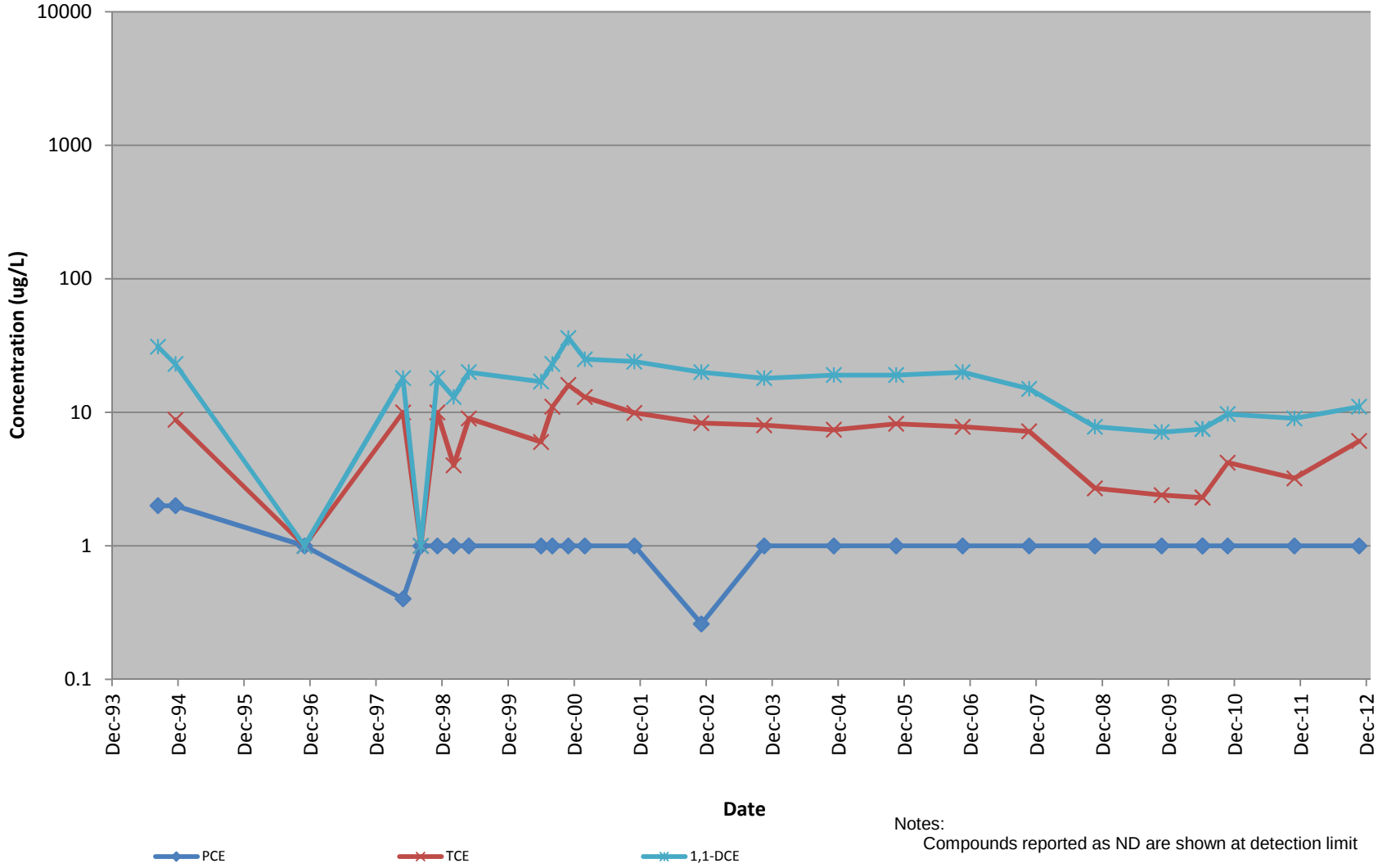
TAL-8245-360 1111

1.9 #2

APPENDIX B

CONCENTRATION VERSUS TIME GRAPHS

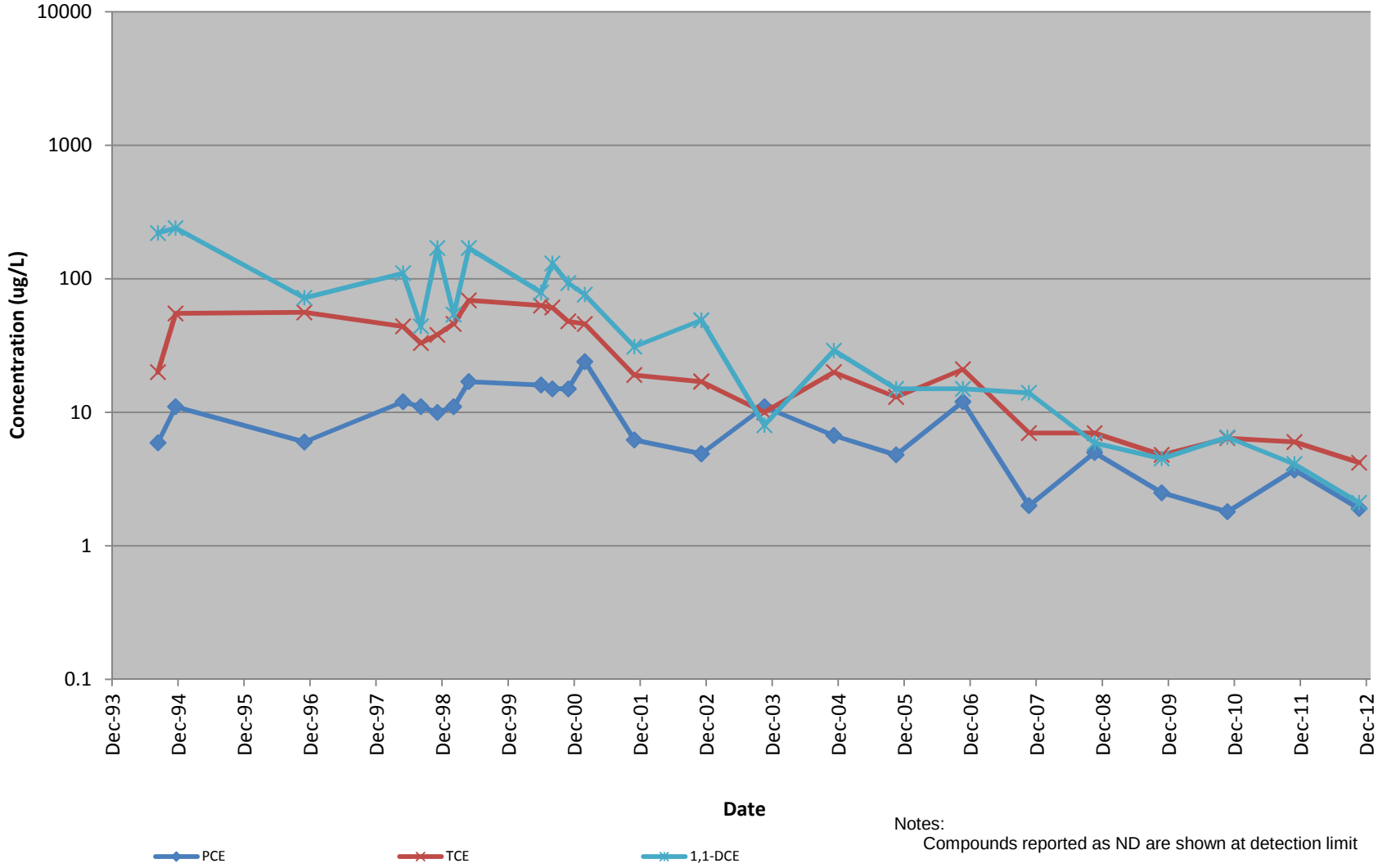
3G-11 Concentration vs Time Plot



Notes:
Compounds reported as ND are shown at detection limit

M:\DOCs\Lockheed\Burlington\2013\2013_JunePhaseVStatusReport\Time_Conc_Plots\TimeConcPlots_BurlingtonWells_2013_PCE_TCE_DCE\3G-11

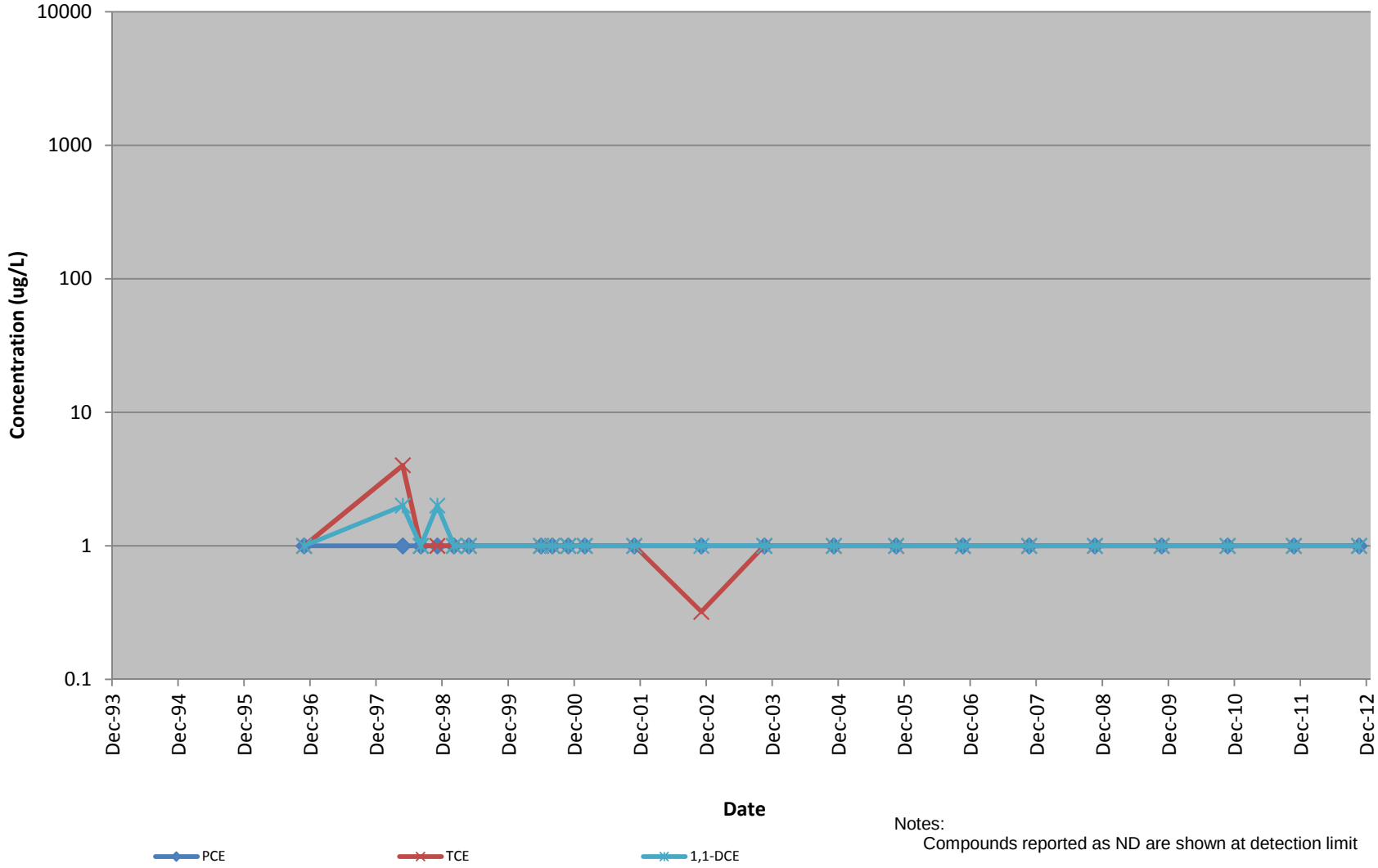
3G-12 Concentration vs Time Plot



Notes:
Compounds reported as ND are shown at detection limit

M:\DOCs\Lockheed\Burlington\2013\2013_JunePhaseVStatusReport\Time_Conc_Plots\TimeConcPlots_BurlingtonWells_2013_PCE_TCE_DCE\3G-12

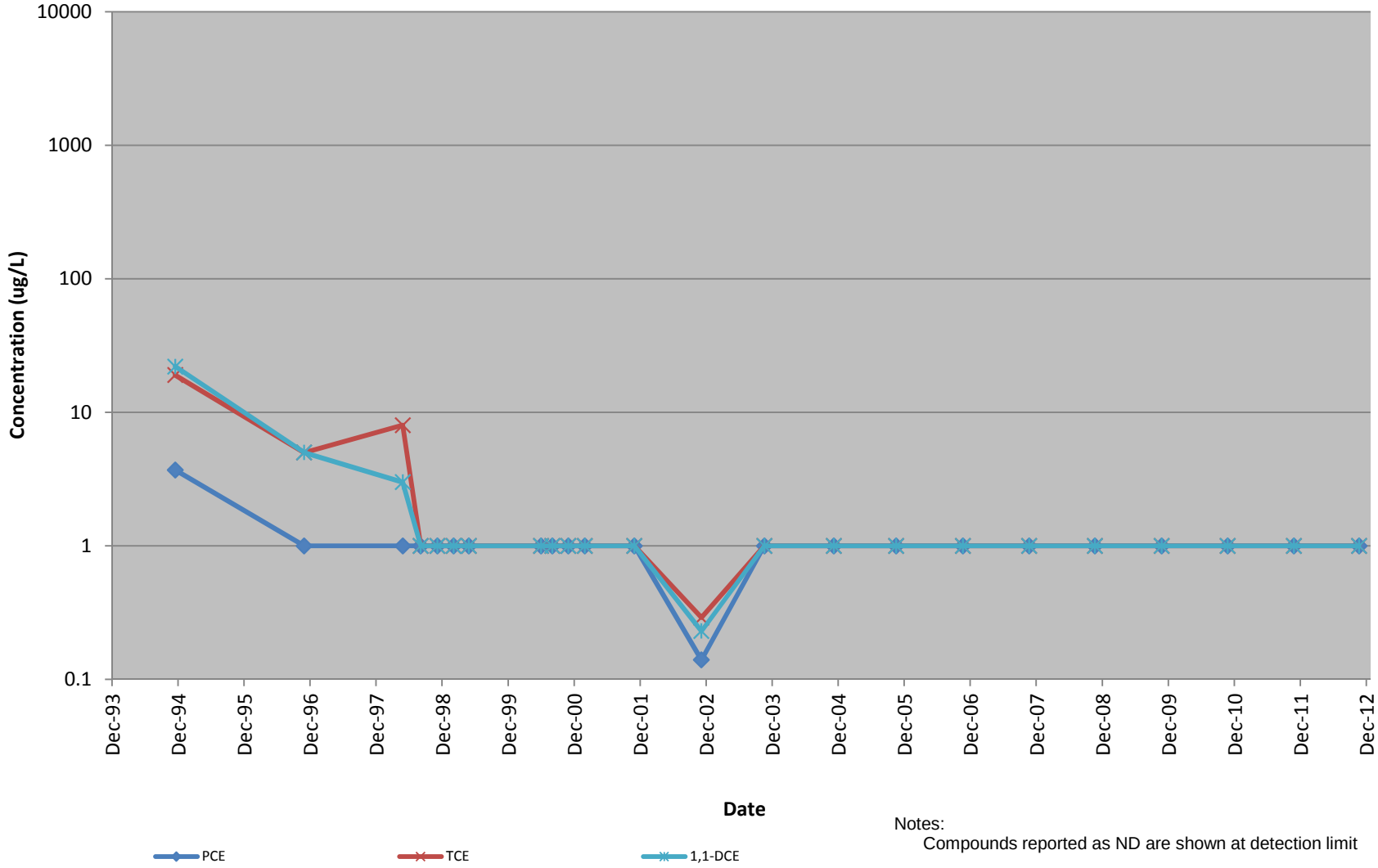
3H-1D Concentration vs Time Plot



Notes:
Compounds reported as ND are shown at detection limit

M:\DOCs\Lockheed\Burlington\2013\2013_JunePhaseVStatusReport\Time_Conc_Plots\TimeConcPlots_BurlingtonWells_2013_PCE_TCE_DCE\3H-1D

3H-1S Concentration vs Time Plot



Notes:
Compounds reported as ND are shown at detection limit

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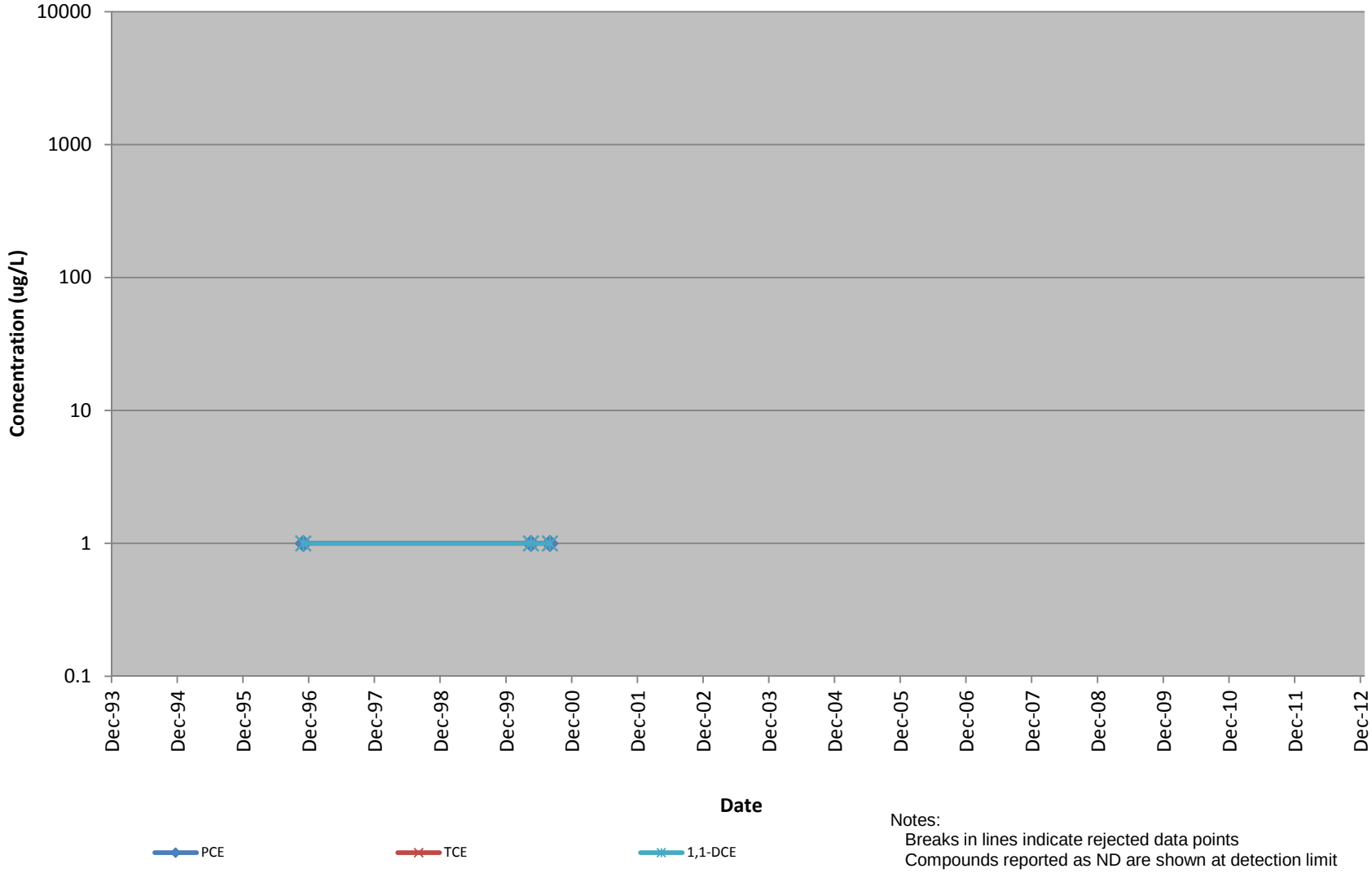
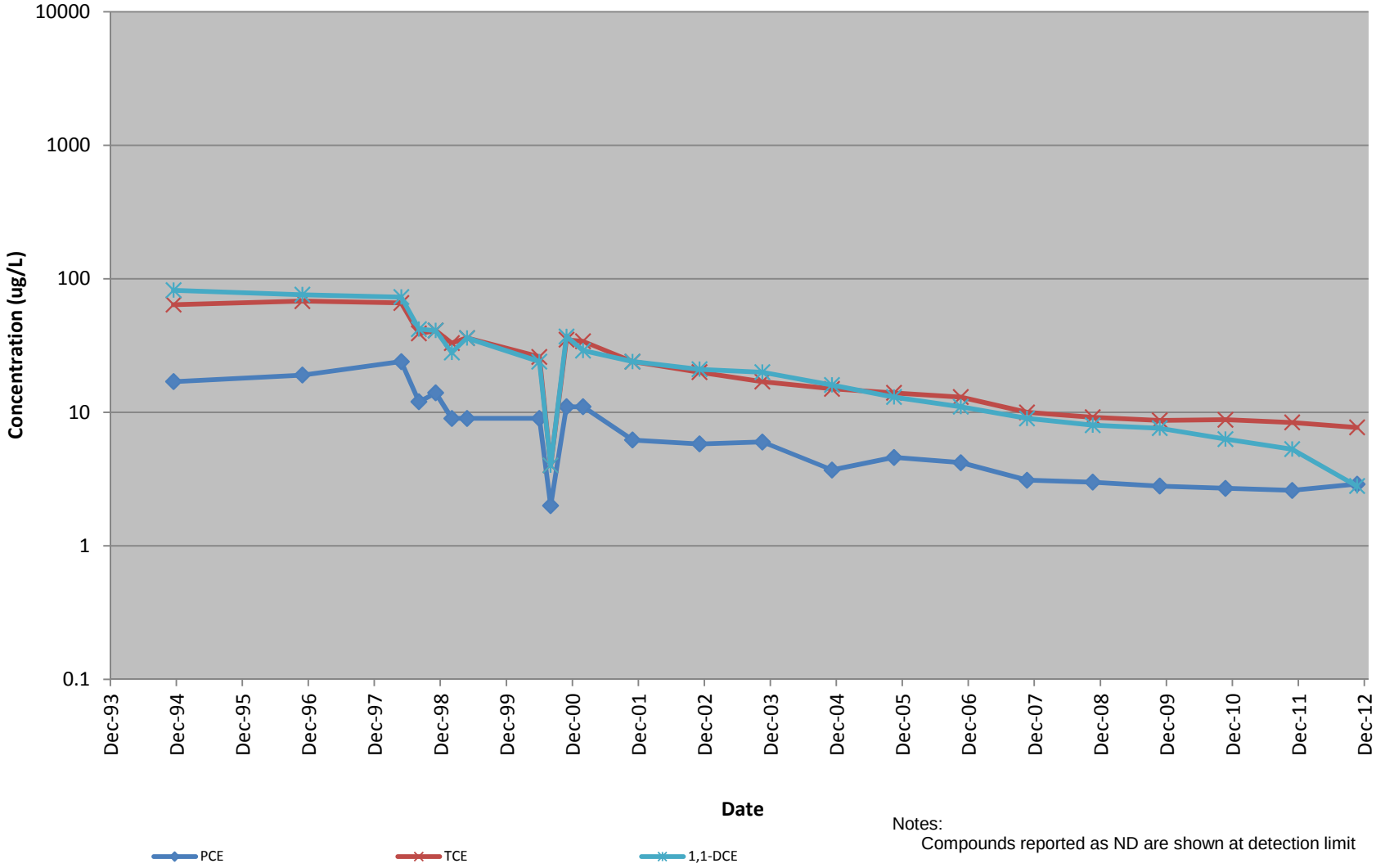
3H-3 Concentration vs Time Plot



Notes:
Breaks in lines indicate rejected data points
Compounds reported as ND are shown at detection limit

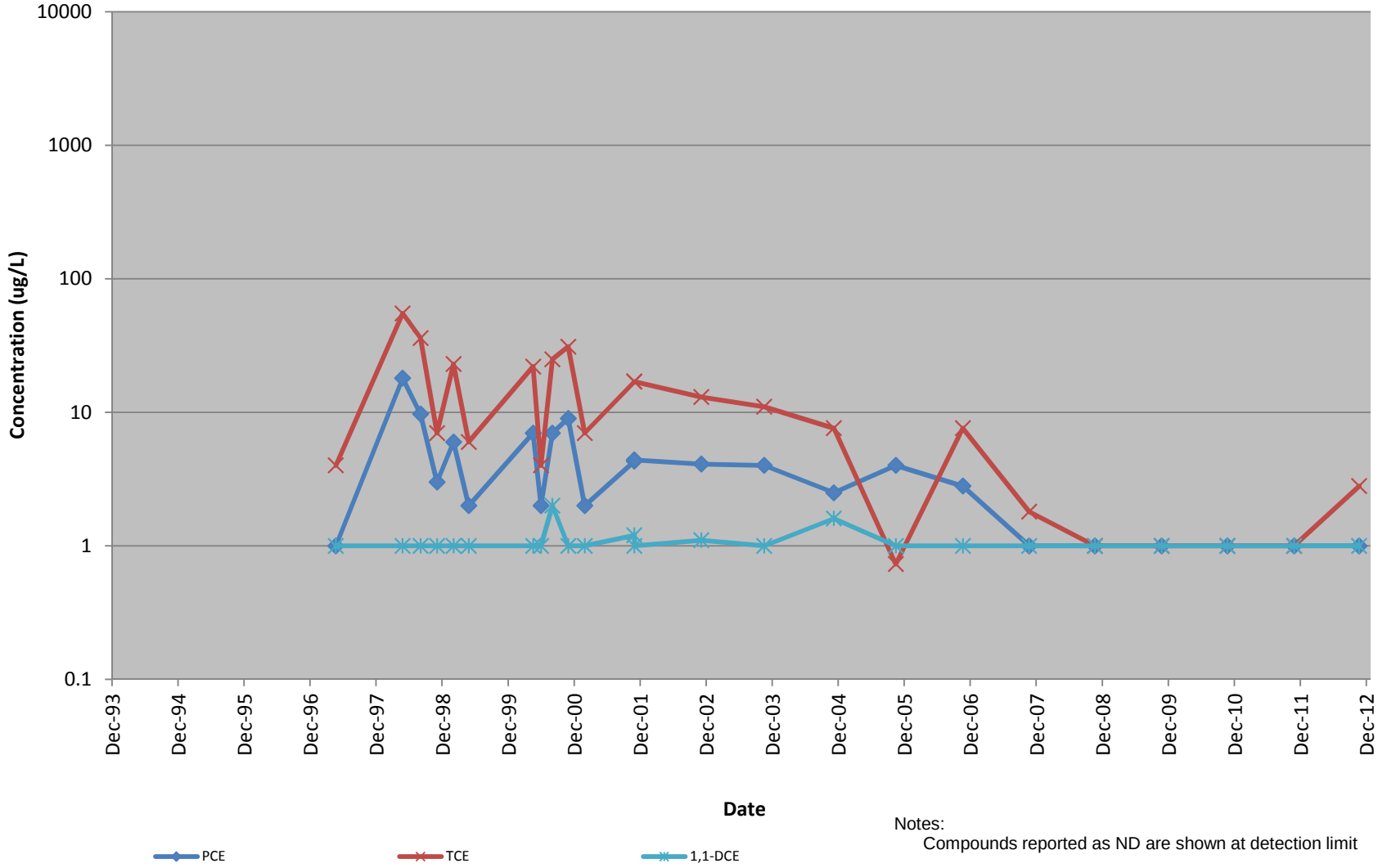
A-1D Concentration vs Time Plot



Notes:
Compounds reported as ND are shown at detection limit

M:\DOCs\Lockheed\Burlington\2013\2013_JunePhaseVStatusReport\Time_Conc_Plots\TimeConcPlots_BurlingtonWells_2013_PCE_TCE_DCE\A-1D

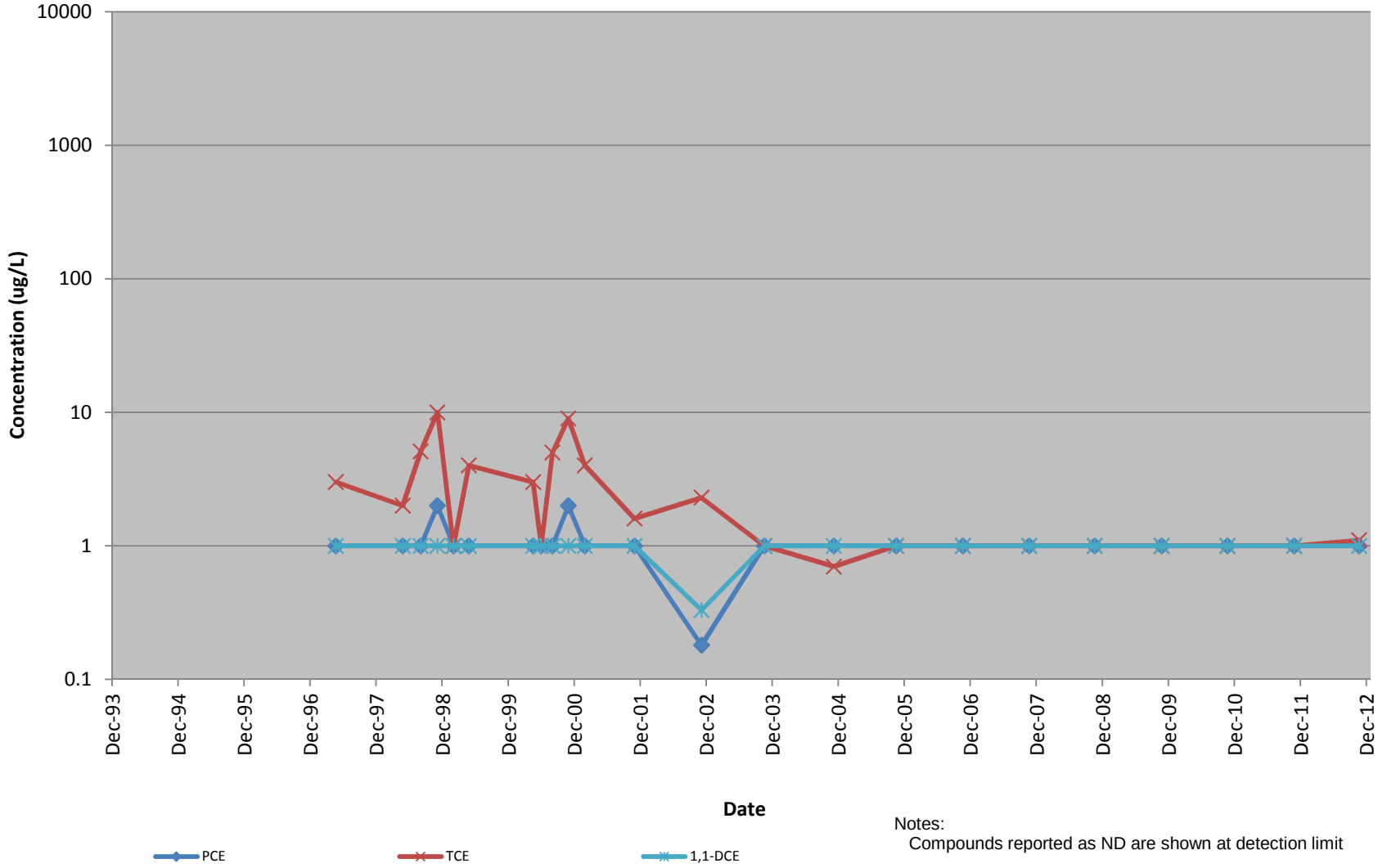
EMW-10D Concentration vs Time Plot



Notes:
Compounds reported as ND are shown at detection limit

M:\DOCs\Lockheed\Burlington\2013\2013_JunePhaseVStatusReport\Time_Conc_Plots\TimeConcPlots_BurlingtonWells_2013_PCE_TCE_DCE\EMW-10D

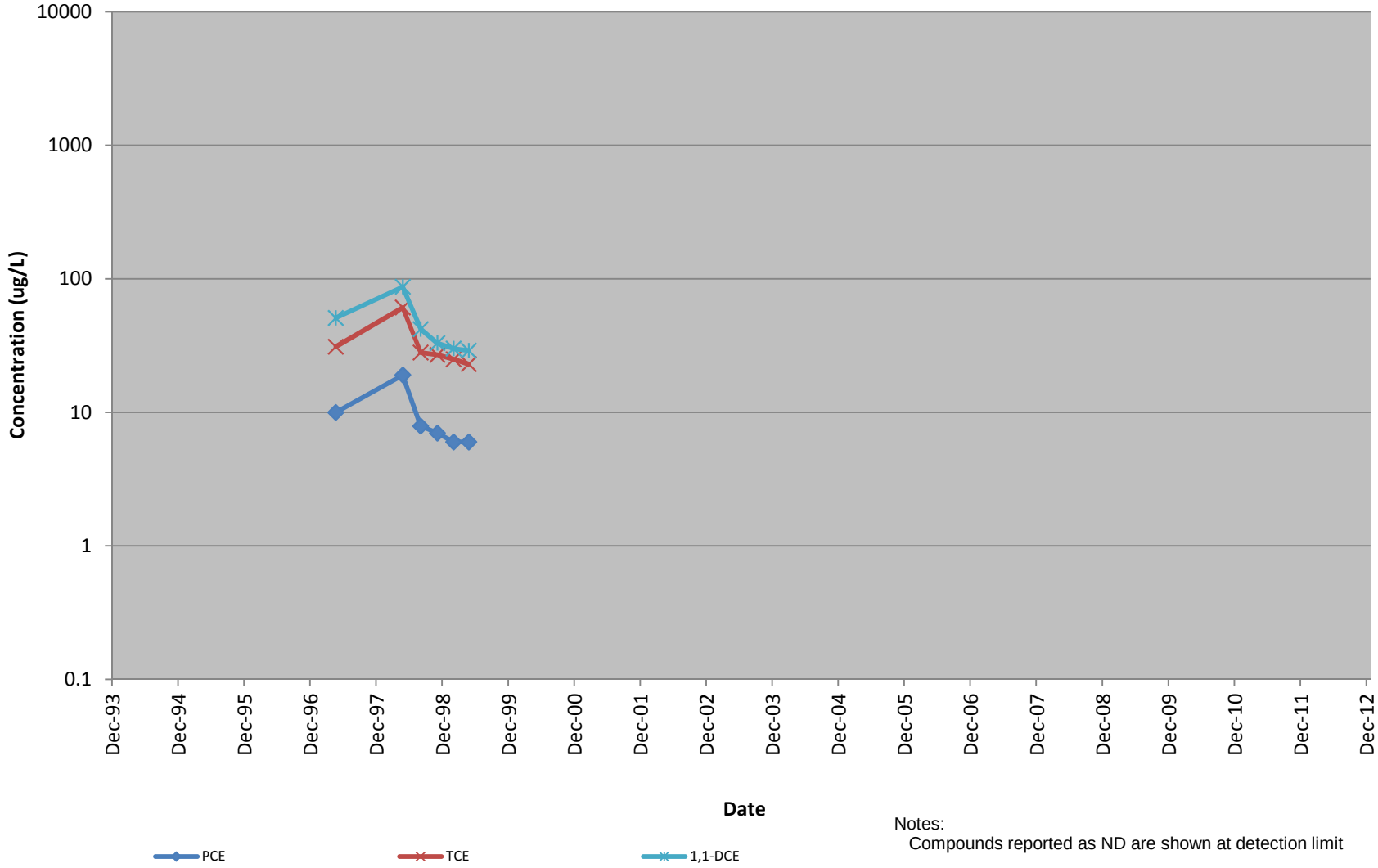
EMW-10R Concentration vs Time Plot



Notes:
Compounds reported as ND are shown at detection limit

M:\DOCs\Lockheed\Burlington\2013\2013_JunePhaseVStatusReport\Time_Conc_Plots\TimeConcPlots_BurlingtonWells_2013_PCE_TCE_DCE\EMW-10R

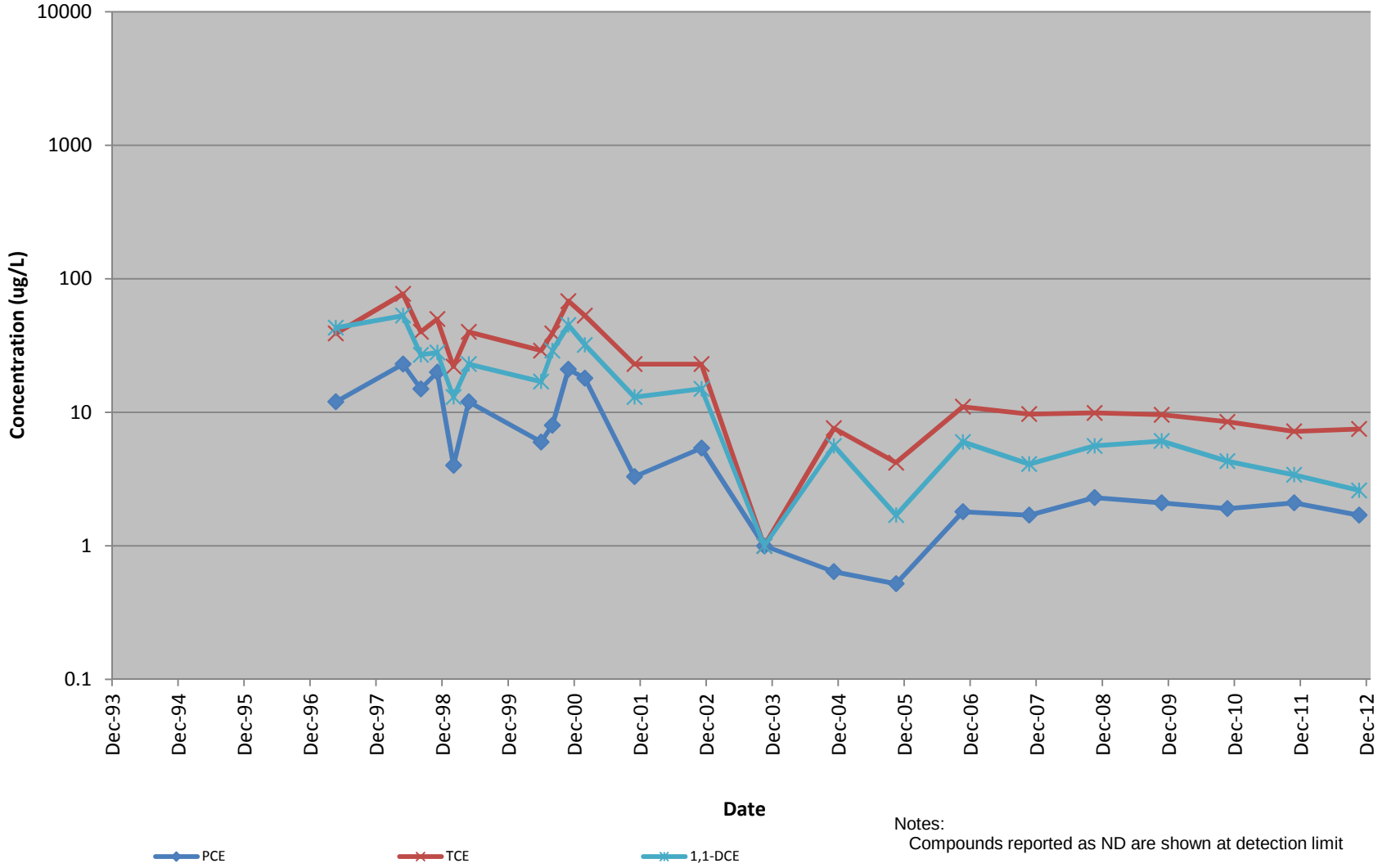
EMW-11D Concentration vs Time Plot



Notes:
Compounds reported as ND are shown at detection limit

M:\DOCs\Lockheed\Burlington\2013\2013_JunePhaseVStatusReport\Time_Conc_Plots\TimeConcPlots_BurlingtonWells_2013_PCE_TCE_DCE\EMW-11D

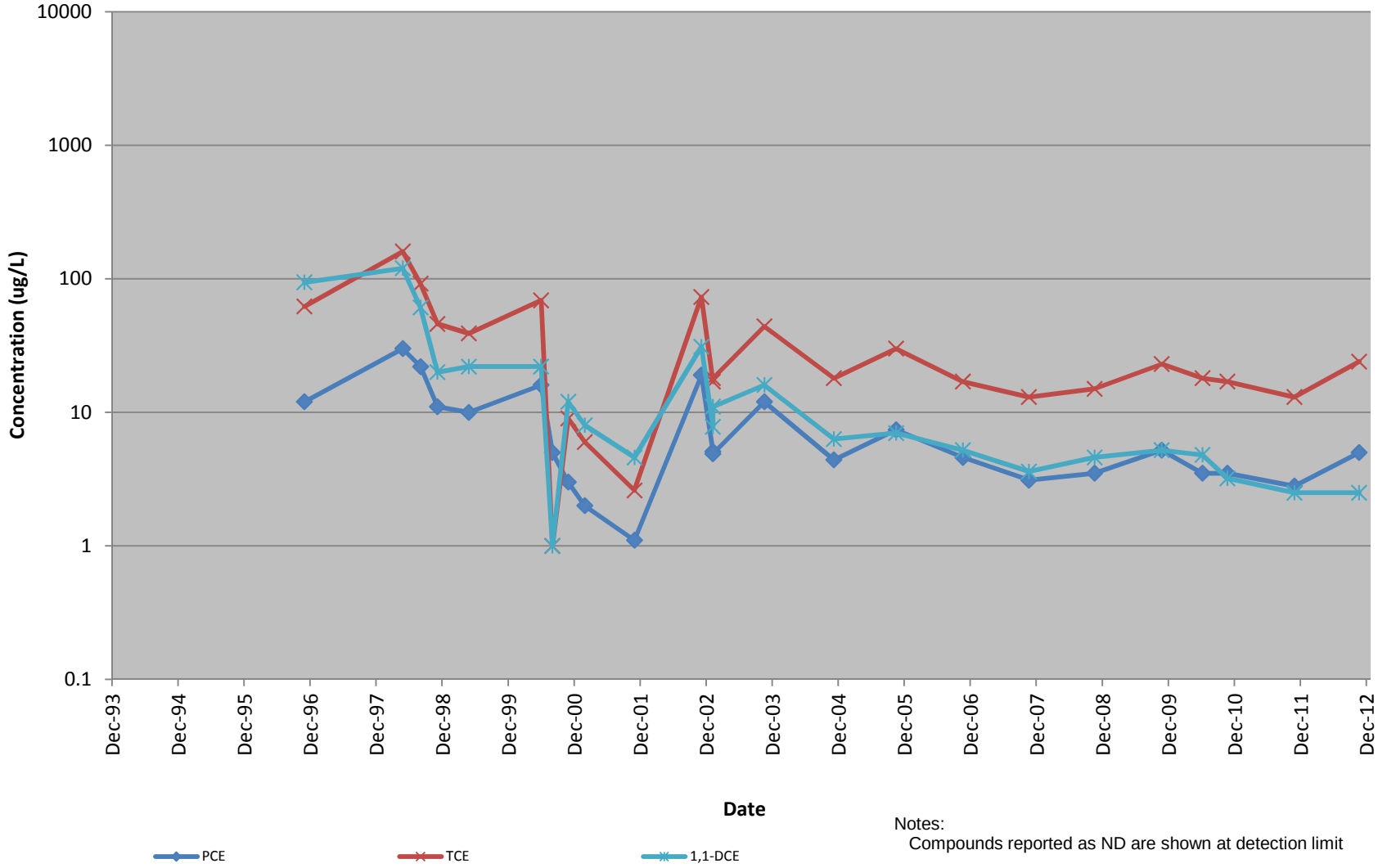
EMW-11R Concentration vs Time Plot



Notes:
Compounds reported as ND are shown at detection limit

M:\DOCs\Lockheed\Burlington\2013\2013_JunePhaseVStatusReport\Time_Conc_Plots\TimeConcPlots_BurlingtonWells_2013_PCE_TCE_DCE\EMW-11R

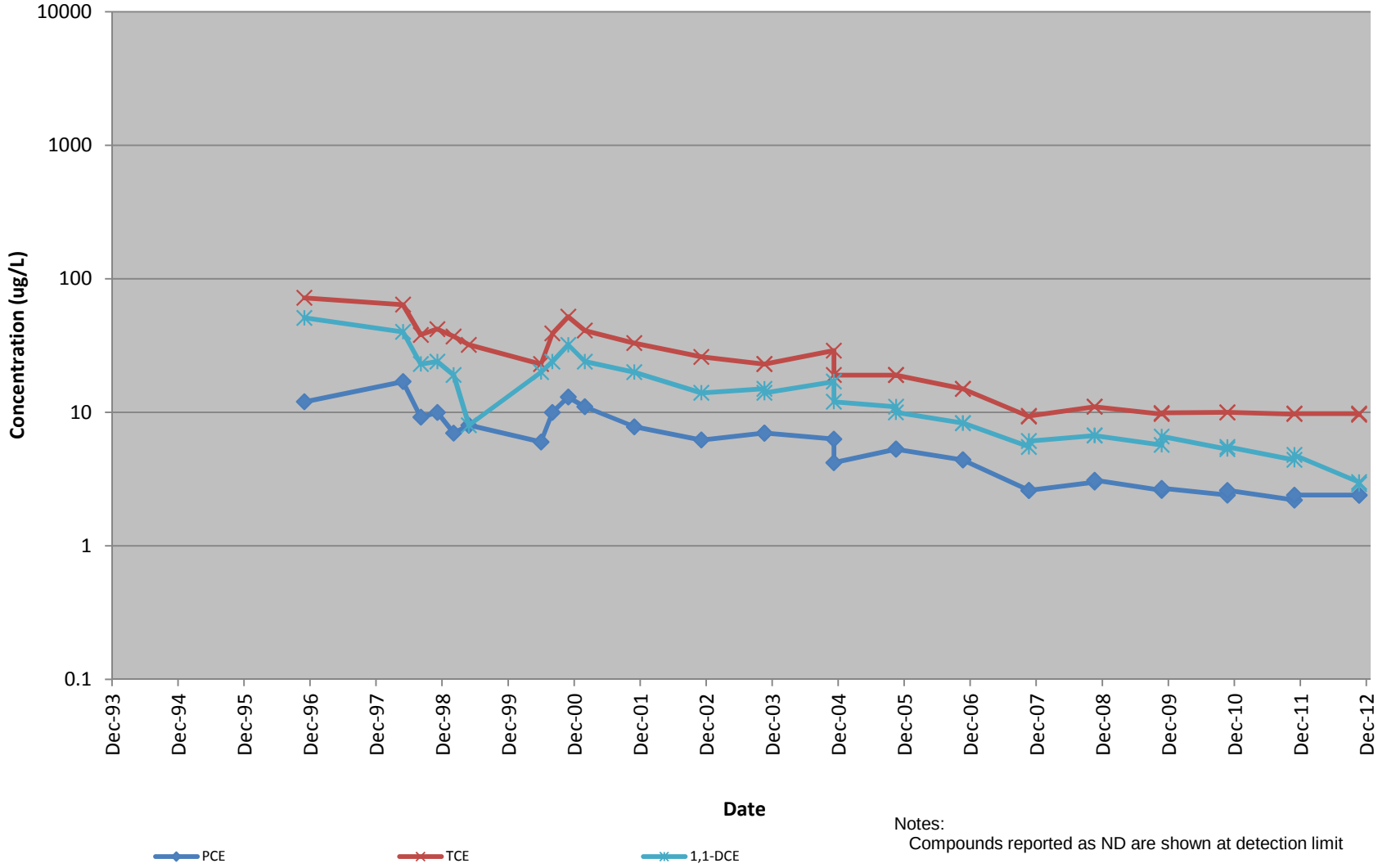
EMW-1D Concentration vs Time Plot



Notes:
Compounds reported as ND are shown at detection limit

M:\DOCs\Lockheed\Burlington\2013\2013_JunePhaseVStatusReport\Time_Conc_Plots\TimeConcPlots_BurlingtonWells_2013_PCE_TCE_DCE\EMW-1D

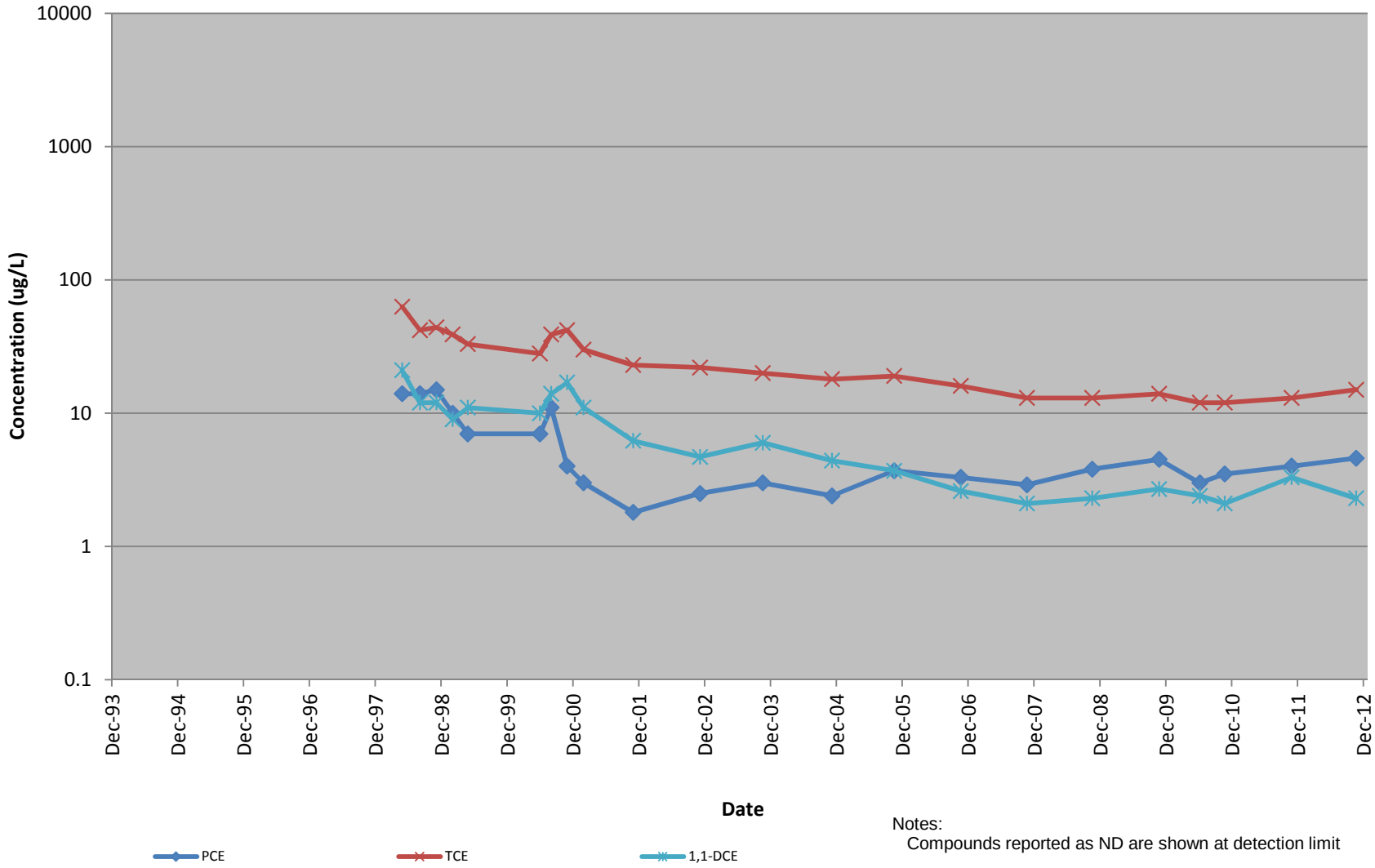
EMW-2D Concentration vs Time Plot



Notes:
Compounds reported as ND are shown at detection limit

M:\DOCs\Lockheed\Burlington\2013\2013_JunePhaseVStatusReport\Time_Conc_Plots\TimeConcPlots_BurlingtonWells_2013_PCE_TCE_DCE\EMW-2D

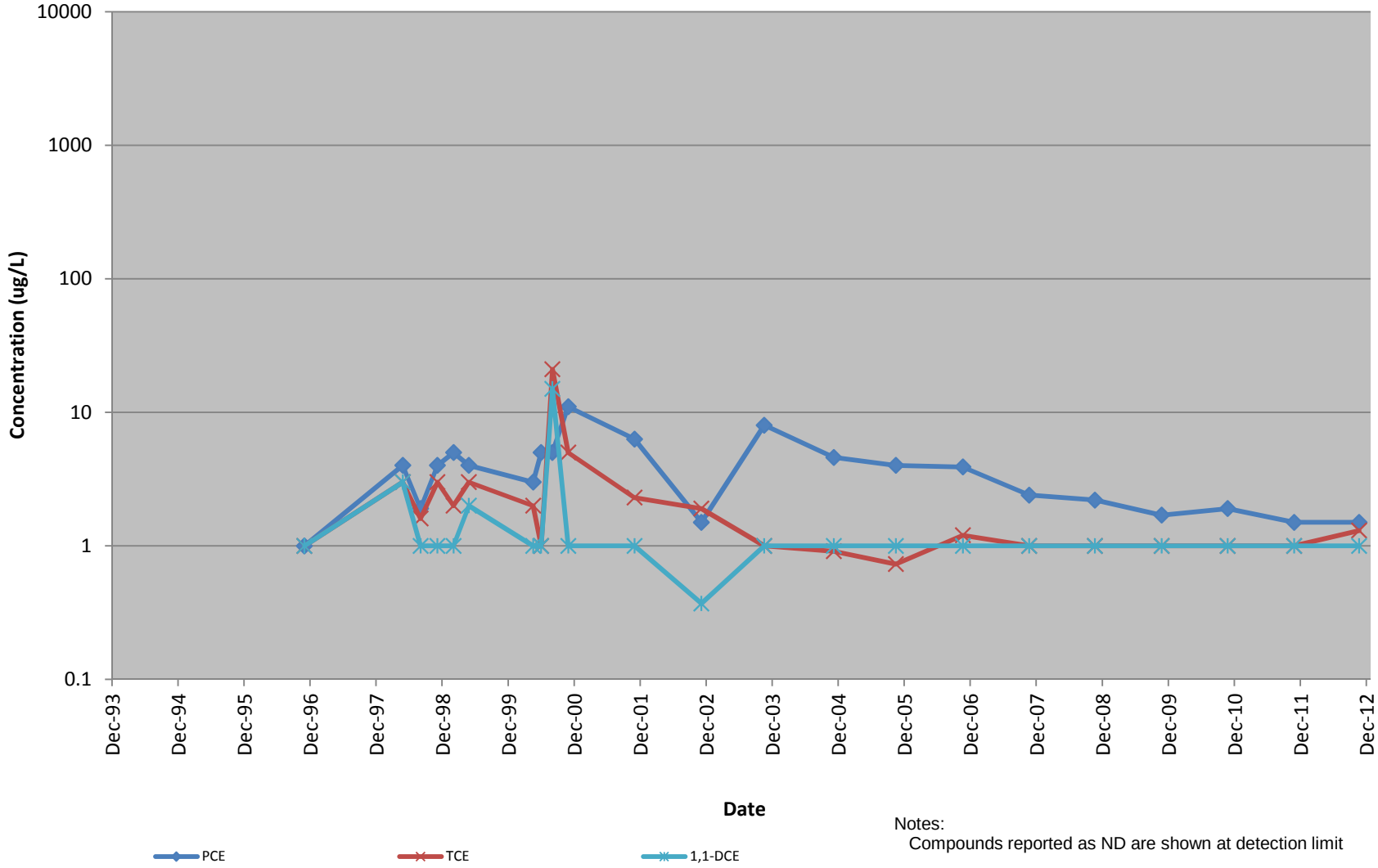
EMW-3R Concentration vs Time Plot



Notes:
Compounds reported as ND are shown at detection limit

M:\DOCs\Lockheed\Burlington\2013\2013_JunePhaseVStatusReport\Time_Conc_Plots\TimeConcPlots_BurlingtonWells_2013_PCE_TCE_DCE\EMW-3R

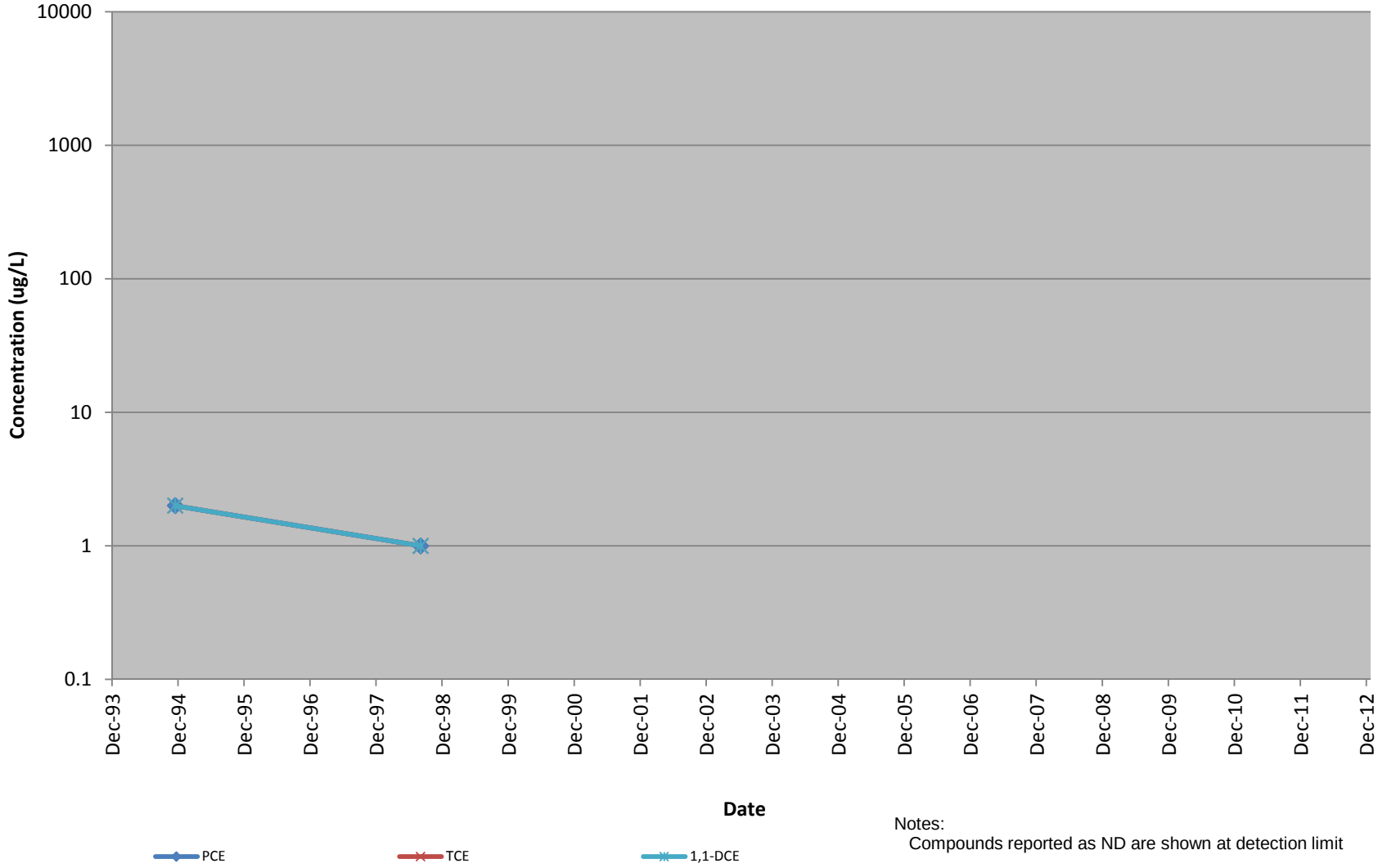
EMW-7 Concentration vs Time Plot



Notes:
Compounds reported as ND are shown at detection limit

M:\DOCs\Lockheed\Burlington\2013\2013_JunePhaseVStatusReport\Time_Conc_Plots\TimeConcPlots_BurlingtonWells_2013_PCE_TCE_DCE\EMW-7

OA-1 Concentration vs Time Plot



Notes:
Compounds reported as ND are shown at detection limit

M:\DOCs\Lockheed\Burlington\2013\2013_JunePhaseVStatusReport\Time_Conc_Plots\TimeConcPlots_BurlingtonWells_2013_PCE_TCE_DCE\OA-1

APPENDIX C

MassDEP BUREAU OF WASTE SITE CLEANUP SITE SCORING MAP

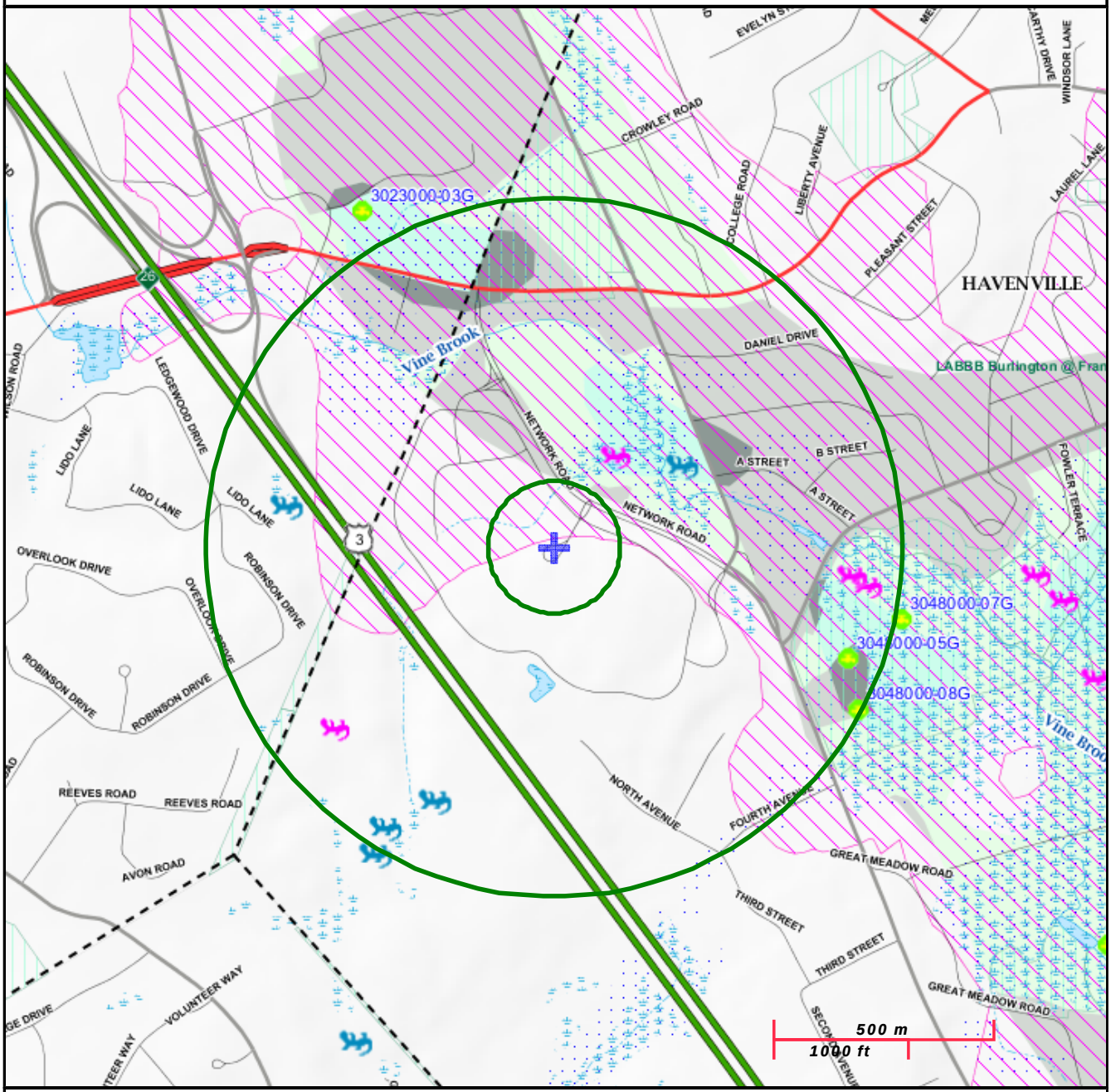
MassDEP - Bureau of Waste Site Cleanup

MCP Numerical Ranking System Map: 500 feet & 0.5 Mile Radii

Site Information:
FORMER RCA SITE
ONE NETWORK DRIVE BURLINGTON, MA
3-000000265
NAD83 UTM Meters:
4707311mN , 316596mE (Zone: 19)
June 25, 2013

The information shown is the best available at the date of printing. However, it may be incomplete. The responsible party and LSP are ultimately repsponsible for ascertaining the true conditions surrounding the site. Metadata for data layers shown on this map can be found at: http://www.mass.gov/mgis/.

MassDEP
Commonwealth of Massachusetts
Department of Environmental Protection



APPENDIX D

TRANSMITTAL FORMS

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC108

Release Tracking Number
3 - 265

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL FORM & PHASE I COMPLETION STATEMENT

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

A. SITE LOCATION:

1. Site Name: RCA CORP FMR
2. Street Address: 1 NETWORK DR
3. City/Town: BURLINGTON 4. ZIP Code:

☑ 5. Check here if a Tier Classification Submittal has been provided to DEP for this disposal site.

☐ a. Tier IA ☑ b. Tier IB ☐ c. Tier IC ☐ d. Tier II

6. If applicable, provide the Permit Number: 102258

B. THIS FORM IS BEING USED (check all that apply)

☐ 1. Submit a **Phase I Completion Statement**, pursuant to 310 CMR 40.0484.

☐ 2. Submit a **Revised Phase I Completion Statement**, pursuant to 310 CMR 40.0484.

☐ 3. Submit a **Phase II Scope of Work**, pursuant to 310 CMR 40.0834.

☐ 4. Submit an **interim Phase II Report**. This report does not satisfy the response action deadline requirements in 310 CMR 40.0500.

☐ 5. Submit a **final Phase II Report and Completion Statement**, pursuant to 310 CMR 40.0836.

☐ 6. Submit a **Revised Phase II Report and Completion Statement**, pursuant to 310 CMR 40.0836.

☐ 7. Submit a **Phase III Remedial Action Plan and Completion Statement**, pursuant to 310 CMR 40.0862.

☐ 8. Submit a **Revised Phase III Remedial Action Plan and Completion Statement**, pursuant to 310 CMR 40.0862.

☐ 9. Submit a **Phase IV Remedy Implementation Plan**, pursuant to 310 CMR 40.0874.

☐ 10. Submit a **Modified Phase IV Remedy Implementation Plan**, pursuant to 310 CMR 40.0874.

☐ 11. Submit an **As-Built Construction Report**, pursuant to 310 CMR 40.0875.

☐ 12. Submit a **Phase IV Status Report**, pursuant to 310 CMR 40.0877.

☐ 13. Submit a **Phase IV Completion Statement**, pursuant to 310 CMR 40.0878 and 40.0879.

Specify the outcome of Phase IV activities: (check one)

☐ a. Phase V Operation, Maintenance or Monitoring of the Comprehensive Remedial Action is necessary to achieve a Response Action Outcome.

☐ b. The requirements of a Class A Response Action Outcome have been met. No additional Operation, Maintenance or Monitoring is necessary to ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement and Report (BWSC104) will be submitted to DEP.

☐ c. The requirements of a Class C Response Action Outcome have been met. No additional Operation, Maintenance or Monitoring is necessary to ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement and Report (BWSC104) has been or will be submitted to DEP.

☐ d. The requirements of a Class C Response Action Outcome have been met. Further Operation, Maintenance or Monitoring of the remedial action is necessary to ensure that conditions are maintained and that further progress is made toward a Permanent Solution. A completed Response Action Outcome Statement and Report (BWSC104) has been or will be submitted to DEP.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC108

Release Tracking Number
3 - 265

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL FORM & PHASE I COMPLETION STATEMENT

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

B. THIS FORM IS BEING USED TO (cont.):(check all that apply)

☐ 14. Submit a **Revised Phase IV Completion Statement**, pursuant to 310 CMR 40.0878 and 40.0879.

☐ 15. Submit a **Phase V Status Report**, pursuant to 310 CMR 40.0892.

☑ 16. Submit a **Remedial Monitoring Report**. (This report can only be submitted through eDEP.)

a. Type of Report: (check one) ☐ i. Initial Report ☑ ii. Interim Report ☐ iii. Final Report

b. Frequency of Submittal: (check all that apply)

☐ i. A Remedial Monitoring Report(s) submitted monthly to address an Imminent Hazard.

☐ ii. A Remedial Monitoring Report(s) submitted monthly to address a Condition of Substantial Release Migration.

☑ iii. A Remedial Monitoring Report(s) submitted concurrent with a Status Report.

c. Status of Site: (check one) ☐ i. Phase IV ☐ ii. Phase V ☑ iii. Remedy Operation Status ☐ iv. Class C RAO

d. Number of Remedial Systems and/or Monitoring Programs: 1

A separate BWSC108A, CRA Remedial Monitoring Report, must be filled out for each Remedial System and/or Monitoring Program addressed by this transmittal form.

☐ 17. Submit a **Remedy Operation Status**, pursuant to 310 CMR 40.0893.

☑ 18. Submit a **Status Report to maintain a Remedy Operation Status**, pursuant to 310 CMR 40.0893(2).

☐ 19. Submit a **Transfer and/or a Modification of Persons Maintaining a Remedy Operation Status (ROS)** , pursuant to 310 CMR 40.0893(5) (check one, or both, if applicable).

☐ a. Submit a Transfer of Persons Maintaining an ROS (the transferee should be the person listed in Section D, "Person Undertaking Response Actions").

☐ b. Submit a Modification of Persons Maintaining an ROS (the primary representative should be the person listed in Section D, "Person Undertaking Response Actions").

c. Number of Persons Maintaining an ROS not including the primary representative: _____

☐ 20. Submit a **Termination of a Remedy Operation Status**, pursuant to 310 CMR 40.0893(6).(check one)

☐ a. Submit a notice indicating ROS performance standards have not been met. A plan and timetable pursuant to 310 CMR 40.0893(6)(b) for resuming the ROS are attached.

☐ b. Submit a notice of Termination of ROS.

☐ 21. Submit a **Phase V Completion Statement**, pursuant to 310 CMR 40.0894.

Specify the outcome of Phase V activities: (check one)

☐ a. The requirements of a Class A Response Action Outcome have been met. No additional Operation, Maintenance or Monitoring is necessary to ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement (BWSC104) will be submitted to DEP.

☐ b. The requirements of a Class C Response Action Outcome have been met. No additional Operation, Maintenance or Monitoring is necessary to ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement and Report (BWSC104) will be submitted to DEP.

☐ c. The requirements of a Class C Response Action Outcome have been met. Further Operation, Maintenance or Monitoring of the remedial action is necessary to ensure that conditions are maintained and/or that further progress is made toward a Permanent Solution. A completed Response Action Outcome Statement and Report (BWSC104) will be submitted to DEP.

☐ 22. Submit a **Revised Phase V Completion Statement**, pursuant to 310 CMR 40.0894.

☐ 23. Submit a **Post-Class C Response Action Outcome Status Report**, pursuant to 310 CMR 40.0898.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC108

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL FORM & PHASE I COMPLETION STATEMENT

Release Tracking Number: 3 - 265

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

C. LSP SIGNATURE AND STAMP:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief,

> *if Section B indicates that a* ***Phase I, Phase II, Phase III, Phase IV or Phase V Completion Statement*** *and/or a* ***Termination of a Remedy Operation Status*** *is being submitted,* the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> *if Section B indicates that a* ***Phase II Scope of Work*** *or a* ***Phase IV Remedy Implementation Plan*** *is being submitted,* the response action(s) that is (are) the subject of this submittal (i) has (have) been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> *if Section B indicates that an* ***As-Built Construction Report****, a* ***Remedy Operation Status****, a* ***Phase IV, Phase V or Post-Class C RAO Status Report,*** *a* ***Status Report to Maintain a Remedy Operation Status,*** *a* ***Transfer or Modification of Persons Maintaining a Remedy Operation Status*** *and/or a* ***Remedial Monitoring Report*** *is being submitted,* the response action(s) that is (are) the subject of this submittal (i) is (are) being implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal.

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

1. LSP #: 9867
2. First Name: STEPHEN S
3. Last Name: PARKER
4. Telephone: 9786587899
5. Ext.:
6. FAX:
7. Signature: STEPHEN S PARKER
8. Date: 6/27/2013 (mm/dd/yyyy)
9. LSP Stamp:

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC108

Release Tracking Number
3 - 265

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL FORM & PHASE I COMPLETION STATEMENT

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

D. PERSON UNDERTAKING RESPONSE ACTIONS:

1. Check all that apply: ☐ a. change in contact name ☐ b. change of address ☑ c. change in the person undertaking response actions

2. Name of Organization: LOCKHEED MARTIN CORPORATION

3. Contact First Name: ROBERT S 4. Last Name: PHILLIPS

5. Street: 2940 UNIVERSITY PARKWAY 6. Title: REMEDIATION PROJECT LEAD

7. City/Town: SARASOTA 8. State: FL 9. ZIP Code: 342430000

10. Telephone: 8174950251 11. Ext.: 12. FAX: 8177624884

E. RELATIONSHIP TO SITE OF PERSON UNDERTAKING RESPONSE ACTIONS:

☐ Check here to change relationship

☑ 1. RP or PRP ☐ a. Owner ☐ b. Operator ☐ c. Generator ☐ d. Transporter

☑ e. Other RP or PRP Specify: FORMER OWNER/OPERATOR

☐ 2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

☐ 3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

☐ 4. Any Other Person Undertaking Response Actions Specify Relationship:

F. REQUIRED ATTACHMENT AND SUBMITTALS:

☑ 1. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.

☑ 2. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the submittal of any Phase Reports to DEP.

☐ 3. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the availability of a Phase III Remedial Action Plan.

☐ 4. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the availability of a Phase IV Remedy Implementation Plan.

☐ 5. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of any field work involving the implementation of a Phase IV Remedial Action.

☐ 6. If submitting a Transfer of a Remedy Operation Status (as per 310 CMR 40.0893(5)), check here to certify that a statement detailing the compliance history for the person making this submittal (transferee) is attached.

☐ 7. If submitting a Modification of a Remedy Operation Status (as per 310 CMR 40.0893(5)), check here to certify that a statement detailing the compliance history for each new person making this submittal is attached.

☐ 8. Check here if any non-updatable information provided on this form is incorrect, e.g. Site Name. Send corrections to: BWSC.eDEP@state.ma.us.

☑ 9. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC108

Release Tracking Number
3 - 265

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL FORM & PHASE I COMPLETION STATEMENT

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

G. CERTIFICATION OF PERSON UNDERTAKING RESPONSE ACTIONS:

1. I, **Robert Stanley Phillips** , attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

>*if Section B indicates that this is a* **Modification of a Remedy Operation Status (ROS)**, I attest under the pains and penalties of perjury that I am fully authorized to act on behalf of all persons performing response actions under the ROS as stated in 310 CMR 40.0893(5)(d) to receive oral and written correspondence from MassDEP with respect to performance of response actions under the ROS, and to receive a statement of fee amount as per 4.03(3).

I understand that any material received by the Primary Representative from MassDEP shall be deemed received by all the persons perform ing response actions under the ROS, and I am aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate or incomplete information.

2. By: **Robert Stanley Phillips** (Signature)

3. Title: **REMEDIATION PROJECT LEAD**

4. For: **LOCKHEED MARTIN CORPORATION** (Name of person or entity recorded in Section D)

5. Date: **6/27/2013** (mm/dd/yyyy)

☐ 6. Check here if the address of the person providing certification is different from address recorded in Section D.

7. Street: _____

8. City/Town: _____ 9. State: _____ 10. ZIP Code: _____

11. Telephone: _____ 12. Ext.: _____ 13. FAX: _____

YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO $10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE

Date Stamp (DEP USE ONLY:)

Received by DEP on

6/27/2013 12:36:40 PM

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC108A

CRA REMEDIAL MONITORING REPORT

Pursuant to 310 CMR 40.0800 (SUBPART H)

Release Tracking Number: 3 - 265

Remedial System or Monitoring Program: 1 of: 1

A. DESCRIPTION OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM:

1. Type of Active Remedial System or Active Remedial Monitoring Program: (check all that apply)

☐ a. Active Remedial System: (check all that apply)

☐ i. NAPL Recovery ☐ ii. Soil Vapor Extraction/Bioventing ☐ iii. Vapor-phase Carbon Adsorption

☐ iv. Groundwater Recovery ☐ v. Dual/Multi-phase Extraction ☐ vi. Aqueous-phase Carbon Adsorption

☐ vii. Air Stripping ☐ viii. Sparging/Biosparging ☐ ix. Cat/Thermal Oxidation

☐ x. Other Describe:

☐ b. Application of Remedial Additives: (check all that apply)

☐ i. To the Subsurface ☐ ii. To Groundwater (Injection) ☐ iii. To the Surface

☑ c. Active Remedial Monitoring Program Without the Application of Remedial Additives: (check all that apply; Sections C, D and E are not required; attach supporting information, data, maps and/or sketches needed by checking Section F5)

☐ i. Reactive Wall ☑ ii. Natural Attenuation ☐ iii. Other Describe:

2. Mode of Operation: (check one)

☐ a. Continuous ☐ b. Intermittent ☐ c. Pulsed ☐ d. One-time Event Only ☐ e. Other:

3. System Effluent/Discharge: (check all that apply)

☐ a. Sanitary Sewer/POTW

☐ b. Groundwater Re-infiltration/Re-injection: (check one) ☐ i. Downgradient ☐ ii. Upgradient

☐ c. Vapor-phase Discharge to Ambient Air: (check one) ☐ i. Off-gas Controls ☐ ii. No Off-gas Controls

☐ d. Drinking Water Supply

☐ e. Surface Water (including Storm Drains)

☐ f. Other Describe:

B. MONITORING FREQUENCY:

1. Reporting period that is the subject of this submittal: From: 12/1/2012 (mm/dd/yyyy) To: 5/31/2013 (mm/dd/yyyy)

2. Number of monitoring events during the reporting period: (check one)

☐ a. System Startup: (if applicable)

☐ i. Days 1, 3, 6, and then weekly thereafter, for the first month.

☐ ii. Other Describe:

☑ b. Post-system Startup (after first month) or Monitoring Program:

☐ i. Monthly

☐ ii. Quarterly

☑ iii. Other Describe: ANNUALLY

☑ 3. Check here to certify that the number of required monitoring events were conducted during the reporting period.

C. EFFLUENT/DISCHARGE REGULATION: (check one to indicate how the effluent/discharge limits were established)

☐ 1. NPDES: (check one) ☐ a. Remediation General Permit ☐ b. Individual Permit ☐ c. Emergency Exclusion Effective Date of Permit: (mm/dd/yyyy)

☐ 2. MCP Performance Standard MCP Citations(s):

☐ 3. DEP Approval Letter Date of Letter: (mm/dd/yyyy)

☐ 4. Other Describe:

D. WASTEWATER TREATMENT PLANT OPERATOR: (check one)

☐ 1. Required due to Remedial Wastewater Treatment Plant in place for more than 30 days.

a. Name: _____ b. Grade: _____

c. License No.: _____ d. License Exp. Date: _____ (mm/dd/yyyy)

☐ 2. Not Required

☐ 3. Not Applicable

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (check all that apply)

☐ 1. The Active Remedial System was functional one or more days during the Reporting Period.

a. Days System was Fully Functional: _____ b. GW Recovered (gals): _____

c. NAPL Recovered (gals): _____ d. GW Discharged (gals): _____

e. Avg. Soil Gas Recovery Rate (scfm): _____ f. Avg. Sparging Rate (scfm) : _____

☐ 2. Remedial Additives: (check all that apply)

☐ a. No Remedial Additives applied during the Reporting Period.

☐ b. Enhanced Bioremediation Additives applied: (total quantity applied at the site for the current reporting period)

☐ i. Nitrogen/Phosphorus:

Name of Additive	Date	Quantity	Units

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

☐ iii. Microorganisms:

Name of Additive	Date	Quantity	Units

☐ iv. Other:

Name of Additive	Date	Quantity	Units

☐ c. Chemical oxidation/reduction additives applied: (total quantity applied at the site for the current reporting period)

☐ i. Permanganates:

Name of Additive	Date	Quantity	Units

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

☐ iii. Persulfates:

Name of Additive	Date	Quantity	Units

☐ iv. Other:

Name of Additive	Date	Quantity	Units

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC108A

CRA REMEDIAL MONITORING REPORT

Pursuant to 310 CMR 40.0800 (SUBPART H)

Release Tracking Number: 3 - 265

Remedial System or Monitoring Program: 1 of: 1

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (cont.) (check all that apply)

☐ d. Other additives applied: (total quantity applied at the site for the current reporting period)

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

☐ e. Check here if any additional Remedial Additives were applied. Attach list of additional additives and include Name of Additive, Date Applied, Quantity Applied and Units (in gals. or lbs.)

F. SHUTDOWNS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM: (check all that apply)

☐ 1. The Active Remedial System had unscheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Unscheduled Shutdowns: _____ b. Total Number of Days of Unscheduled Shutdowns: _____

c. Reason(s) for Unscheduled Shutdowns: _____

☐ 2. The Active Remedial System had scheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Scheduled Shutdowns: _____ b. Total Number of Days of Scheduled Shutdowns: _____

c. Reason(s) for Scheduled Shutdowns: _____

☐ 3. The Active Remedial System or Active Remedial Monitoring Program was permanently shutdown/discontinued during the Reporting Period.

a. Date of Final System or Monitoring Program Shutdown: _____ (mm/dd/yyyy)

☐ b. No Further Effluent Discharges.

☐ c. No Further Application of Remedial Additives planned; sufficient monitoring completed to demonstrate compliance with 310 CMR 40.0046.

☐ d. No Further Submittals Planned.

☐ e. Other: Describe: _____

G. SUMMARY STATEMENTS: (check all that apply for the current reporting period)

☐ 1. All Active Remedial System checks and effluent analyses required by the approved plan and/or permit were performed when applicable.

☐ 2. There were no significant problems or prolonged (>25% of reporting period) unscheduled shutdowns of the Active Remedial System.

☑ 3. The Active Remedial System or Active Remedial Monitoring Program operated in conformance with the MCP, and all applicable approval conditions and/or permits.

4. Indicate any Operational Problems or Notes:

☐ 5. Check here if additional/supporting Information, data, maps, and/or sketches are attached to the form.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC109

TIER I MINOR PERMIT MODIFICATION TRANSMITTAL FORM

Pursuant to 310 CMR 40.0725 (Subpart G)

Release Tracking Number: 3 - 265

A. DISPOSAL SITE LOCATION:

1. Disposal Site Name: RCA CORP FMR

2. Street Address: 1 NETWORK DR

3. City/Town: BURLINGTON 4. ZIP Code:

☑ 5. Specify Classification of Permitted Site:

☐ a. Tier IA ☑ b. Tier IB ☐ c. Tier IC

6. Provide Permit Number of Initial Tier I Permit: 102258

B. THIS FORM IS BEING USED TO: (check all that apply)

☐ 1. Correct Typographical Errors and/or Include Omissions that do not Materially Affect the Nature or Complexity of the Permitted Response Actions, and Make Other Changes of Similiar Scope to the Permit (Section E is not required).

☑ 2. Change the LSP-of-Record (Sections C and E are not required).

☐ 3. Change a Permittee Name, Address or Contact Person (the Permittee making the change is the person submitting the Minor Permit Modification; Sections C, D and E are not required).

☐ 4. Change or Designate a Primary Representative (required only for sites having more than one Permittee; Sections C and D are not required).

☐ 5. Add one or more Responsible Parties, Potentially Responsible Parties or Other Persons as Permittee (the permittee being added is the person submitting the Minor Permit Modification; Sections C, D and E are not required).

☐ 6. Submit a **Notice that an additional Release Tracking Number(s) is (are) being linked to this Permitted Tier I Site** (Primary RTN). Future response actions addressing the Release or Threat of Release notification condition associated with additional Release Tracking Numbers (RTNs) will be conducted as part of the Response Actions planned or ongoing at the Primary Site listed above. If there is a reasonable likelihood that the addition of the new secondary RTN(s) would change the classification of the site, a **Revised Tier Classification Submittal** and **Major Permit Modification** must be made (Sections C and E are not required).

Provide Release Tracking Number(s): a. ☐ - ☐ b. ☐ - ☐

All future Response Actions must occur according to the deadlines applicable to the Primary RTN. Use only the Primary RTN when making future submittals for this site unless specifically relating to response actions started before the linking occurred.

(All sections of this transmittal form must be filled out unless otherwise noted above. Minor Permit Modification Requests are not subject to permit processing requirements under 310 CMR 40.0720 or 310 CMR 4.00)

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

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TIER I MINOR PERMIT MODIFICATION TRANSMITTAL FORM

Pursuant to 310 CMR 40.0725 (Subpart G)

Release Tracking Number

3 - 265

C. TYPOGRAPHICAL ERRORS, OMISSIONS AND OTHER CHANGES OF SIMILIAR SCOPE TO THE PERMIT:

1. Describe typographical errors or omissions to be corrected. Omissions described here must not affect the nature or complexity of the permitted response action. Provide relevant information, including copies of applicable documentation:

☐ 2. Check here if additional description and/or documentation is attached.

D. LSP SIGNATURE AND STAMP:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief, this submittal has been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000.

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

1. LSP #: 9867

2. First Name: STEPHEN S 3. Last Name: PARKER

4. Telephone: 9786587899 5. Ext.: 6. FAX:

7. Signature: _____

8. Date: _____ mm/dd/yyyy

9. LSP Stamp:

☑ 10. Check here if the LSP listed in this section is a new LSP-of- Record.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

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TIER I MINOR PERMIT MODIFICATION TRANSMITTAL FORM

Pursuant to 310 CMR 40.0725 (Subpart G)

Release Tracking Number: 3 - 265

E. PRIMARY REPRESENTATIVE: (complete this section only if changing or designating a Primary Representative)

☐ 1. Check here if the Primary Representative is also a Permittee.

I attest under the pains and penalties of perjury that I am fully authorized to act on behalf of all permittees holding this Tier I Permit for the purposes stated in 310 CMR 40.0703(7)(a): to receive oral and written correspondence from DEP with respect to the application; to receive oral and written correspondence from DEP with respect to performance of response actions upon issuance of a Tier I permit; and to receive any statement of fee required by 310 CMR 4.03(3) upon issuance of a Tier I permit.

I understand that any material received by the Primary Representative from DEP shall be deemed received by the Permittee(s), and I am aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate or incomplete information.

If this form is being used to add a Responsible Party, Potentially Responsible Party or Other Person as a permittee, I give my consent as the authorized Primary Representation, to the new applicant to join the Tier I Permit.

2. Name of Primary Representative Organization:

3. Contact First Name: 4. Last Name:

5. Street: 6. Title:

7. City/Town: 8. State: 9. ZIP Code:

10. Telephone: 11. Ext.: 12. FAX:

13. Signature: 14. Date: mm/dd/yyyy

The person signing this certification MUST be the Primary Representative named above.

F. PERMITTEE SUBMITTING MINOR PERMIT MODIFICATION REQUEST:

1. Check all that apply: ☐ a. change in contact name ☐ b. change of address ☑ c. addition of new Permittee

2. Name of Organization: LOCKHEED MARTIN CORP

3. Contact First Name: ROBERT S 4. Last Name: PHILLIPS

5. Street: 2940 UNIVERSITY PARKWAY 6. Title: REMEDIATION PROJECT LEAD

7. City/Town: SARASOTA 8. State: FL 9. ZIP Code: 34243-0000

10. Telephone: 817-495-0251 11. Ext.: 12. FAX: 817-762-4884

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC109

TIER I MINOR PERMIT MODIFICATION TRANSMITTAL FORM

Pursuant to 310 CMR 40.0725 (Subpart G)

Release Tracking Number
3 - 265

G. RELATIONSHIP TO SITE OF PERMITTEE SUBMITTING MINOR PERMIT MODIFICATION REQUEST:

☑ 1. RP or PRP ☐ a. Owner ☐ b. Operator ☐ c. Generator ☐ d. Transporter

☑ e. Other RP or PRP Specify: **FORMER OWNER/OPERATOR**

☐ 2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

☐ 3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

☐ 4. Any Other Person Submitting Minor Modification Specify Relationship: _____

H. REQUIRED ATTACHMENT AND SUBMITTALS:

☐ 1. Check here if this minor permit modification affects a multi-party permit. If checked, all Permittees must sign the certification in BWSC109A, Section A. Additional Permittees may copy BWSC109A, sign the certification and provide their mailing address in Questions A.8. through A.14. Note that for a *Change in a Permittee Name, Address or Contact Person*, only that Permittee needs to fill out BWSC109A

2. Number of additional copies of BWSC109A attached: _____

☐ 3. If this form is being used to submit the addition of a Responsible Party, Potentially Responsible Party or Other Person, the compliance history of the new applicant , as required by 310 CMR 40.0703(9)(b) must be attached.

☐ 4. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.

YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE.

Date Stamp (DEP USE ONLY:)

Received by DEP on

6/26/2013 12:48:14 PM

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC109A

TIER I MINOR PERMIT MODIFICATION CERTIFICATION OF PERMITTEE

Pursuant to 310 CMR 40.0725 (Subpart G)

Release Tracking Number
3 - 265

A. CERTIFICATION OF PERMITTEE SUBMITTING MINOR PERMIT MODIFICATION:

1. I, **Robert Stanley Phillips** , attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

If I am a new applicant that is joining the Tier I Permit, I also attest under the pains and penalties of perjury that (i) I/the person(s) or entity(ies) on whose behalf this submittal is made has/have personally examined and am/is familiar with the requirements of M.G.L. c. 21E and 310 CMR 40.0000; (ii) based upon my inquiry of the/those Licensed Site Professional(s) employed or engaged to render Professional Services for the disposal site which is the subject of this Transmittal Form and of the person(s) or entity(ies) on whose behalf this submittal is made, and my/that person's(s') or entity's(ies') understanding as to the estimated costs of necessary response actions, that/those person(s) or entity(ies) has/have the technical, financial and legal ability to proceed with response actions for such site in accordance with M.G.L. c. 21E, 310 CMR 40.0000 and other applicable requirements; and (iii) that I am fully authorized to make this attestation on behalf of the person(s) or entity(ies) legally responsible for this submittal. I/the person(s) or entity(ies) on whose behalf this submittal is made is aware of the requirements in 310 CMR 40.0172 for notifying the Department in the event that I/the person(s) or entity(ies) on whose behalf this submittal is made learn(s) that it/they is/are unable to proceed with the necessary response actions.

2. By: **Robert Stanley Phillips** (Signature)

3. Title: **REMEDIATION PROJECT LEAD**

4. For: **LOCKHEED MARTIN CORP**
(Name of person or entity recorded in BWSC109, Section F, or additional Permittee for a multi-party Tier I Permit).

5. Date: **6/26/2013** mm/dd/yyyy

☐ 6. Check here if the address of the person providing certification is different from address recorded in BWSC109, Section F.

☐ 7. Check here if recording the address of an addtional Permittee for a multi-party Tier I Permit.

8. Street: _____

9. City/Town: _____ 10. State: _____ 11. ZIP Code: _____

12. Telephone: _____ 13. Ext.: _____ 14. FAX: _____