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10 May 2016

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Subject: Submittal of the Final *Long-term Monitoring Report, October 2015 Event, CCFTBR0038 (Site 38), Fort Bragg, North Carolina* (Contract W912QR-12-D-0002, Task Order CV02)

Ms. Thompson,

Please find enclosed one electronic copy of the Final *Long-term Monitoring Report, October 2015 Event, CCFTBR0038 (Site 38), Fort Bragg, North Carolina.* This document was prepared by Parsons Government Services, Inc. (Parsons) for the U.S. Army Engineer District, Savannah and the Fort Bragg Directorate of Public Works (DPW). A copy of this document was also submitted to the North Carolina Department of Environmental Quality (NCDEQ).

If you have any questions or require additional information, please contact me at (801) 572-5999 or at ross.miller@parsons.com.

Sincerely,

PARSONS

Ross Miller PhD, P.E.
Project Manager

cc:

Mr. Paul Humphrey– Fort Bragg DPW (1 hard copy and 1 electronic copy)
Ms. Marti Morgan – NCDEQ (1 electronic copy)

FINAL

LONG-TERM MONITORING REPORT

FORMER ABOVE-GROUND STORAGE TANK A-2709, SITE CCFTBR0038

OCTOBER 2015 SAMPLING EVENT

REMEDIATION SERVICES

AT

FORT BRAGG, NORTH CAROLINA

Prepared For:

USACE Savannah District

and

Fort Bragg

Prepared By:

PARSONS

May 2016

LONG-TERM MONITORING REPORT

FORMER ABOVE-GROUND STORAGE TANK A-2709, CCFTBR0038 (SITE 38)

OCTOBER 2015 SAMPLING EVENT

Project Title: Performance Based Remediation of 66 Sites, Fort Bragg-Pope AAF, North Carolina

Project Number: 748776

Client Name: U.S. Army Corps of Engineers, Savannah District

Contract Number: W912QR-12-D-0002, Task Order CV02

Contractor: Parsons Government Services, Inc.

Original Submission: NA

REVIEWED AND APPROVED BY:

Project Manager: _____ May 10, 2016
Ross Miller, PhD, P.E. Date

Task Manager: _____ May 10, 2016
Angie M. Welch, P.G. Date

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ACRONYMS AND ABBREVIATIONS

ASTs	Above ground storage tanks
COC	Chemicals of concern
CSA	Comprehensive Site Assessment
DO	Dissolved oxygen
EPH	Extractable petroleum hydrocarbons
IDW	Investigation derived waste
LTM	Long Term Monitoring
MADEP	Massachusetts Department of Environmental Protection
MCL	Maximum Contaminant Level
mL/min	Milliliter per minute
MSCC	Maximum soil contaminant concentration
MW	Monitoring well
N.C. 2L	North Carolina Subchapter 2L groundwater standards
NCDEQ	North Carolina Department of Environmental Quality
PAHs	Polynuclear aromatic hydrocarbons
PMP	Project Management Plan
PWS	Performance work statement
QC	Quality control
RCRA	Resource Conservation and Recovery Act
RFI	RCRA facility investigation
SCRA-EEG	South Carolina Research Authority Environmental Enterprise Group
SVOC	Semivolatile organic compound
SWMU	Solid Waste Management Unit
TO	Task order
TPH	Total petroleum hydrocarbons
USACE	United States Army Corp of Engineers
US AEC	United States Army Environmental Command
USEPA	United States Environmental Protection Agency
USGS	Unites States Geological Survey
VOC	Volatile organic compound
VPH	Volatile petroleum hydrocarbons

LONG-TERM MONITORING REPORT
FORMER ABOVE-GROUND STORAGE TANK A-2709, SITE CCFTBR0038
OCTOBER 2015 SAMPLING EVENT
FORT BRAGG, NORTH CAROLINA

1.0 INTRODUCTION

This Long-term Monitoring (LTM) report presents the results of groundwater monitoring conducted by Parsons at Former Above-Ground Storage Tank A-2709, Site CCFTBR0038 (Site 38) during the October 2015 monitoring event. This report was prepared by Parsons Government Services, Inc. (Parsons) to meet the format and content requirements identified in the United States Army Corps of Engineers (USACE) Performance Work Statement issued for this Task Order, and the Project Management Plan for Remediation Services at Fort Bragg, North Carolina for Task Order CV02 issued under contract number W912QR-12-D-0002.

1.1 Project Description and Objectives

Groundwater at Site 38 is being addressed for aquifer protection with the North Carolina Department of Environmental Quality (NCDEQ) as the lead regulatory agency. The LTM activities are being performed to monitor contaminant concentration trends over time and to determine if contamination is migrating offsite. The analytical results from the groundwater samples for each sampling event will be compared to the North Carolina Subchapter 2L Groundwater Standards (N.C. 2L standards), or the federal Maximum Contaminant Levels (MCLs) in the absence of N.C. 2L standards.

1.2 Site Description and Summary of Previous Investigations

1.2.1 Fort Bragg

The U.S. Army Reservation at Fort Bragg was established in 1918 as a major logistic, training, and mobilization deployment center for the XVIII Airborne Corps, which is part of the U.S. Army's mobile infantry, assault, and armored forces. Fort Bragg occupies approximately 164,024 acres in Southeast North Carolina. Approximately 143,140 acres are designated for field maneuvers and military exercises. The cantonment area, which is in the eastern part of Fort Bragg, occupies 11,354 acres and includes about 6,195 buildings. Most military maintenance and production facilities, supply facilities, operation and training facilities, community installations, and family and troop housing are located within the cantonment area.

Fort Bragg lies within the Sand Hills section of the North Carolina Coastal Plain (**Figure 1**). The Sand Hills area is characterized by deep, sandy soil and has variable elevations. The topography at Fort Bragg is characterized by gently to steeply sloping ridges. Elevations across the base range from 550 feet above mean sea level (amsl) in the western part to about 150 feet amsl in the northeastern part of the military reservation.

The Fort Bragg area is underlain by three freshwater aquifers: the saprolite-basement, the Cape Fear, and the Middendorf aquifers. The subsurface material consists primarily of saprolite, sand, silty sand, clay, and sandy clay. The major water-bearing strata at Fort Bragg are in the Middendorf Formation (Bhate, 2005).

1.2.2 Site 38

Site 38 is located approximately 90 feet west of Gruber Road between Taylor Street and Butner Road, Fort Bragg, North Carolina (**Figure 2**). On May 16, 1997, two above ground storage tanks (ASTs), listed as A-2709A and A-2709B and associated dispensing equipment and piping were removed at the A-2709 motor pool location. Both ASTs had a capacity of 25,000 gallons and contained diesel fuel. During removal, soil samples collected from the fuel dispenser area were analyzed for total petroleum hydrocarbons (TPH) and exceeded North Carolina cleanup levels indicating the fuel dispensers and/or associated piping were the source(s) of the leak.

The South Carolina Research Authority-Environmental Enterprise Group (SCRA-EEG) completed a Limited Site Assessment (LSA), Phase I Investigation in 1999. Two monitoring wells (MWA-2709A and MWA-2709B) were installed in the dispenser area and soil and groundwater samples were collected and analyzed. Soil samples were analyzed for volatile organic compounds (VOCs) by Environmental Protection Agency (EPA) Method 8260B, semivolatile organic compounds (SVOCs) by EPA Method 8270, and volatile petroleum hydrocarbons (VPH) and extractable petroleum hydrocarbons (EPH) by the Massachusetts Department of Environmental Protection (MADEP) methods. Soil samples from MWA-2709A exceeded North Carolina soil-to-groundwater maximum soil contaminant concentrations (MSCCs) for MADEP C9-C18 aliphatics, benzene, ethylbenzene, isopropylbenzene, 2-methylnaphthalene, naphthalene, n-propylbenzene, toluene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and total xylenes. MADEP C5-C8 aliphatics and C9-C22 aromatics exceeded North Carolina residential MSCCs but did not exceed industrial/commercial MSCCs. Soil samples from MWA-2709B exceeded soil-to-groundwater MSCCs for benzene and 1,2-dichloroethane but did not exceed residential MSCCs. Groundwater samples collected during the LSA were analyzed for VOCs by Methods 602/601/6210D, SVOCs by Method 625, lead and chromium by Method 3030C and VPH and EPH by MADEP methods. MADEP C5-C8 aliphatic, C9-C22 aromatic, benzene and ethylbenzene exceeded NC 2L standards in at least one of the groundwater samples.

The U.S. Army Corps of Engineers (USACE) completed the field work for the Comprehensive Site Assessment (CSA) investigation during February and March 2004. Six soil borings were completed and a monitoring well was installed in each of these borings. Soil samples for laboratory analysis were collected from the unsaturated zone of the monitoring well borings. The soil samples were analyzed for VOCs by Method 8260B, SVOCs by Method 8270C, and EPH and VPH by MADEP methods. Several VOCs, SVOCs and MADEP fractions were detected, however, only 1,2-dichloroethane and benzene exceeded the soil-to-groundwater MSCCs in soil boring (SB)-2. No analytes exceeded the residential or industrial/commercial MSCCs. Groundwater

samples were collected from the six CSA monitoring wells (A-2709-MW1, A-2709-MW2, A-2709-MW3, A-2709-MW4, A-2709-MW5 and A-2709-MW6) and the two previously installed LSA monitoring wells and were also analyzed for VOCs, SVOCs, EPH, and VPH. Benzene, chloroform, ethylbenzene, 1,2-dichloroethane, 1,2-dibromomethane, 1,2-dichloropropane, tetrachloroethene, isopropyl ether, 2-methylnaphthalene, naphthalene, and MADEP C9-C22 aromatics exceeded NC 2L standards in one or more groundwater samples. There were no NC 2L exceedances in A-2709-MW4 or A-2709-MW5.

The CSA concluded that the site did not have any high level soil contamination and that groundwater contaminant concentrations were highest in A-2709-MW2, which is upgradient of the previously identified source. As a result, a supplemental site assessment was conducted by USACE in 2006 to determine whether the source of the contamination detected in the site groundwater is located onsite or at some upgradient location. Five additional soil borings were completed east of Gruber Road upgradient of the former fuel dispenser area (previously assumed to be the source of site groundwater contamination). Soil samples were collected from 5 to 35 feet below the ground surface in these 5 soil borings. Soil samples from the 5, 15, and 25 foot depths were also collected in the vicinity of A-2709-MW3 where evidence of surface petroleum contamination was noted during the CSA. The soil samples were analyzed for VOCs by Method 8260B, SVOCs by Method 8270C, and EPH and VPH by MADEP methods.

Benzene exceeded the soil-to-groundwater MSCC in SB5 which was advanced east of the site. This was the only exceedance in the five soil boring place east of the site. Several exceedances were noted in the soil samples from SB6, which was advanced near A-2709-MW3. Benzene exceeded the soil-to-groundwater MSCC, MADEP C9-C18 aliphatics exceeded residential MSCCs, and EPH C9-C22 aromatics exceeded industrial/commercial MSCCs at the 5-foot depth. Chloromethane, naphthalene, n-propylbenzene, 1,2,4-trimethylbenzene, total xylenes, and SVOC naphthalene exceeded soil-to-groundwater MSCCs, MADEP C9-C18 aliphatics exceeded residential MSCCs, and MADEP C9-C22 aromatics exceeded industrial/commercial MSCCs at the 15 foot depth. MADEP C9-C18 aliphatic exceeded the soil-to-groundwater MSCC at the 25 foot depth.

The most upgradient (A-2709-MW2) and downgradient (A-2709-MW5) site monitoring wells were also sampled as part of the supplemental site assessment, and groundwater was analyzed for VOCs, SVOCs, VPH, and EPH. In A-2709-MW2, benzene, ethylbenzene, naphthalene, 2-methylnaphthalene, MADEP C9-C22 aromatics, C5-C8 aliphatics, C9-C18 aliphatics and C9-C22 exceeded the NC 2L standards. No compounds were detected in downgradient A-2709-MW5. The CSA and supplemental site assessment data indicate that ASTs A-2709A and A-2709B are not the sole source of the groundwater contamination detected at this site.

Subsequent to the supplemental site assessment, all monitoring wells with the exception of A-2709-MW2 were abandoned due to construction activities on the west side of Gruber Road. At the completion of the construction activities, NCDEQ requested

that a new monitoring well be installed near the previous location of A-2709-MW3. Parsons installed this new monitoring well (A-2709-MW38) on 13 September 2010. The location of this well is depicted on **Figure 2**. The monitoring well is a 2-inch diameter well that is completed to a depth of 35 feet below ground surface (ft bgs) which corresponds to the top of the basal clay. The well is screened between 25 and 35 ft bgs. **Appendix A** contains the well construction log for A-2709-MW38, as well as, well construction summaries for A-2709-MW2 and the other historical site wells.

2.0 FIELD ACTIVITIES AND SAMPLING METHODOLOGY

Monitoring wells A-2709-MW38 and A-2709-MW2 were sampled on 23 October 2015 in accordance with the Final Quality Assurance Project Plan/Sampling and Analysis Plan for Performance Based Remediation of 66 Sites at Fort Bragg-Pope AAF (Parsons, 2013).

2.1 Water Level Gauging

Depth to groundwater was measured at MWs prior to the sampling activities. Static groundwater level measurements were collected using an electronic water level indicator. The indicator probe was lowered into each MW until the alarm sounded and/or the indicator light illuminated. The probe was then withdrawn several feet and slowly lowered again until the groundwater surface was contacted, as noted by the alarm and/or indicator light. Water level measurements were estimated to the nearest 0.01 ft from the top of the well casing. Depth to water and groundwater elevation measurements from each monitoring well are summarized in **Table 1**. Because there are only two wells at the site, a potentiometric surface map was not constructed. Instead, groundwater elevations are shown on **Figure 3**.

2.2 Monitoring Well Purging, Sampling, and Analysis

Purging and sampling of monitoring wells were performed using a decontaminated, non-dedicated bladder pump. Dedicated Teflon®-lined polyethylene tubing was used with the bladder pump and disposable polyethylene tubing was used with the peristaltic pump. Decontamination of non-dedicated equipment used for the purging of monitoring wells and collection of groundwater samples was conducted between samples. All decontamination liquids were contained and recovered for disposal as investigative derived waste (IDW).

Purging was performed using low-flow techniques with a pumping rate of less than 500 milliliters per minute (mL/min). The pH, specific conductance, dissolved oxygen (DO), oxidation-reduction potential (Redox), turbidity and temperature of the groundwater were recorded during well purging and sampling using a YSI 556® multi-meter equipped with a flow-through cell and a Lamotte 2020® stand-alone turbidity meter. The parameter readings were considered stable when three consecutive readings, taken at three to five minute intervals, satisfied the following NCDEQ criteria: temperature (± 0.2°C), pH (± 0.2 Standard Units), specific conductance (± 5.0% of reading), ORP (± 10% millivolts [not required by NCDEQ criteria, but included in

Parsons standard operating procedure]), DO (± 0.2 mg/L or 10% whichever is greater), and turbidity (<20 NTUs, if turbidity cannot be reduced to below 20 NTUs: ± 5NTUs, or 10% whichever is greater). A summary of the water quality parameters measured prior to sample collection are presented in **Table 2**, and field forms are provided in **Appendix B**.

Sampling of the monitoring wells was conducted immediately after completion of purging. All groundwater samples were transferred directly into pre-labeled laboratory sample containers from the pump discharge (bladder pump) or from the discharge tubing (peristaltic pump). Immediately after collection of samples, each container was placed into an ice-filled cooler to ensure preservation. Groundwater samples were shipped to Gulf Coast Analytical Laboratories, Inc. (GCAL) in Baton Rouge, Louisiana under standard chain of custody procedures. Gulf Coast Analytical Laboratories, Inc. is currently accredited by the North Carolina Division of Water Quality and holds certificate number 618. Gulf Coast Analytical Laboratories, Inc. provided analyses for the following parameters:

- VOCs by USEPA Method 8260B
- SVOCs by USEPA Method 8270C
- VPH by Method MADEP-VPH-04-1.1
- EPH by Method MADEP-EPH-04-1.1

Results of the groundwater analysis are presented in Section 3.0.

2.3 Investigative Derived Waste

All purge water and decontamination fluids were containerized within 55-gallon drums and properly sealed and labeled. Drums were staged at the post drum storage yard adjacent to Building 3-1137. The IDW was classified as non-hazardous based on previous analytical profiles and transported to an appropriate disposal facility.

3.0 GROUNDWATER ANALYTICAL RESULTS SUMMARY

This section presents the results of groundwater analysis from the October 2015 event. A summary of the groundwater analytical data is presented in **Table 3**, and concentrations in exceedance of NC 2L standards are presented on **Figure 4**. A summary of historical detections is presented in **Table 4**. Laboratory data sheets are included in **Appendix C**.

- **Monitoring Well A-2709-MW2 -** No measured compounds were detected at a concentration above the N.C. 2L Standard.

- **Monitoring Well A-2709-MW38 –** No measured compounds were detected at a concentration above the N.C. 2L Standard.

4.0 CONCLUSIONS AND RECOMMENDATIONS

During the October 2015 monitoring round, no compounds were detected at A-2709-MW2 at concentrations exceeding NC 2L standards. The concentration of benzene in A-2709-MW2 has decreased significantly from 186 µg/L in 2006 to a non-detect of 0.2 U µg/L during the October 2015 event. Also, naphthalene concentrations in this well have decreased from 141 µg/L in 2006 to a non-detect of 0.5 U µg/L in October 2015 (**Table 4**).

An approximate comparison of results from A-2709-MW38 can be made with historical data from A-2709-MW3 which was located near the current location of A-2709-MW38. This comparison is made with the caveat that monitoring well A-2709-MW3 was screened slightly deeper than A-2709-MW38. Six VOCs were detected in A-2709-MW3 at concentrations exceeding the NC 2L standard in 2004, yet there were no VOC detections in A-2709-MW38 during the 2011 through 2015 monitoring rounds.

Based on the complete lack of exceedances observed in A-2709-MW2 and A-2709-MW38 and the overall decrease in analyte concentrations compared to historical data, it is recommended that groundwater monitoring continue on a biennial basis. The next round of monitoring is recommended for first quarter 2018.

5.0 REFERENCES

Bhate Environmental Associates, Inc. 2005. *Compliance Monitoring Report Sampling Event1 SWMU 14, Within Operable Unit 3, Fort Bragg, North Carolina*, December 2005.

Parsons 2013. *Sampling and Analysis Plan/Quality Assurance Project Plan for Performance Based Remediation of 66 Sites at Fort Bragg-Pope AAF, North Carolina*, January 2013.

South Carolina Research Authority-Environmental Enterprise Group (SCRA-EEG), 2000. *North Carolina Limited Site Assessment Phase I Interim Report, ASTs A-2709A and A-2709B, Fort Bragg, North Carolina.* October 2, 2000.

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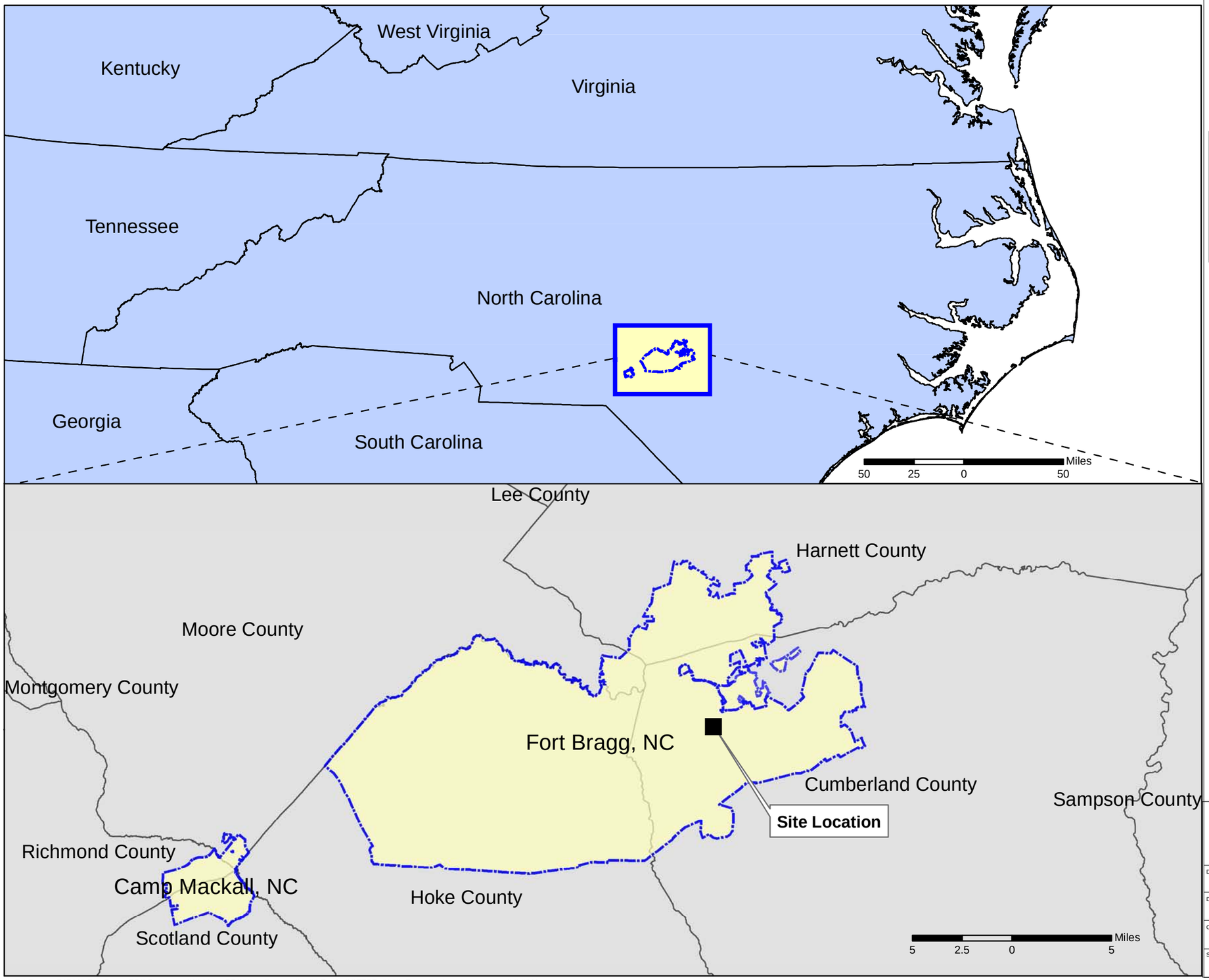
USGS. 1996b. *RCRA Facility Investigation at Operable Unit 3, Fort Bragg Installation Restoration Program, Fort Bragg, North Carolina, Volume 2.*

FIGURES

Figure 1

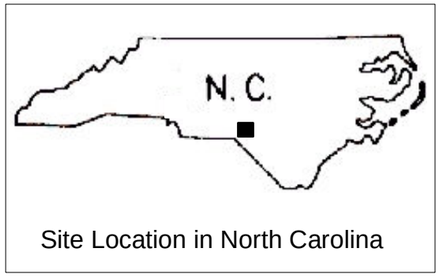
CCFTBR0038
Site Location

Fort Bragg, North Carolina



Legend

- Site Boundary
- Installation Boundary
- County Boundary
- State Boundary



Site Location in North Carolina

Coordinate System: North Carolina State Plane, NAD83, Feet

N

PARSONS	SITE 38 Fort Bragg North Carolina		
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DRAWN BY: LH			
CHECKED BY: AK	SCALE: As Shown	PROJECT NUMBER: 747356.09000	
SUBMITTED BY: JD	DATE: July 2011	FIGURE NUMBER:	1
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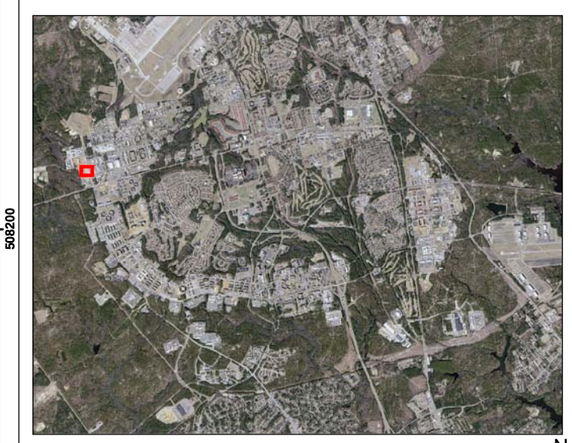
Figure 2

CCFTBR0038
Site Layout

Fort Bragg, North Carolina

Legend

- Groundwater Monitoring Well
- Abandoned Monitoring Well
- CCTFBR Site
- Street/Road
- Building
- Existing Infrastructure
- Fence Line



Coordinate System: North Carolina State Plane, NAD83, Feet

60 30 0 60 Feet

N

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DRAWN BY: LH			
CHECKED BY: AC	SCALE: As Shown	PROJECT NUMBER:	
SUBMITTED BY: AC	DATE: July 2011	FIGURE NUMBER:	2
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Figure 3

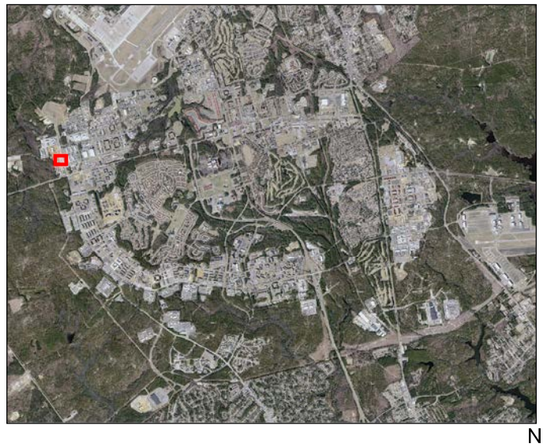
Site CCFTBR0038
Groundwater Elevation
October 23 2015

Fort Bragg, North Carolina

Legend

- Groundwater Monitoring Well
- Abandoned Monitoring Well
- Street/Road
- Building
- Existing Infrastructure
- Fence Line

A-2709-MW2 — Well ID
256.56 — Groundwater Elevation (feet above mean sea level)



Coordinate System: North Carolina State Plane, NAD83, Feet

60 30 0 60 Feet

N

PARSONS	748776.09000
DESIGNED BY: BT	Site CCFTBR0038
DRAWN BY: LH	
CHECKED BY: AW	SCALE: As Shown — PROJECT NUMBER:
SUBMITTED BY: AW	DATE: January 2016 — FIGURE NUMBER: 3
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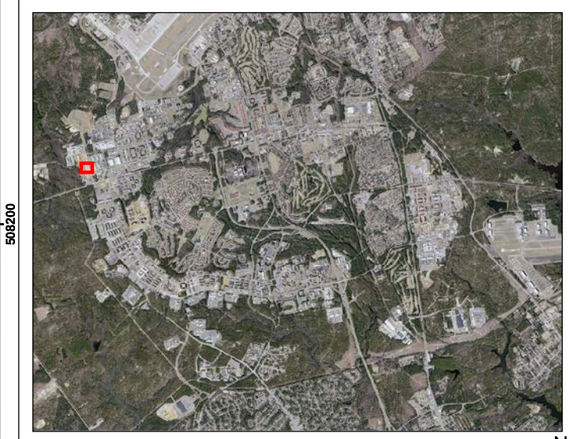
Figure 4

CCFTBR0038
Groundwater Analytical Results
NC 2L Exceedances
October 2015 Monitoring Event
Fort Bragg, North Carolina

Legend

- Groundwater Monitoring Well
- Abandoned Monitoring Well
- Street/Road
- Building
- Existing Infrastructure
- Fence Line

NC 2L = North Carolina Subchapter 2L Groundwater Standards



Coordinate System: North Carolina State Plane, NAD83, Feet

60 30 0 60 Feet

N

PARSONS	748776.09000
DESIGNED BY: BT	CCFTBR0038
DRAWN BY: LH	SCALE: As Shown / PROJECT NUMBER:
CHECKED BY: AW	DATE: January 2016 / FIGURE NUMBER: 4
SUBMITTED BY: AW	FILE: Fig-4_SAP_CCFTBR38_Ana.mxd

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TABLES

Table 1
Well Gauging Summary
CCFTBR0038 (Site 38)
Ft. Bragg, NC

Monitoring Well	Screen Interval (ft bgs)	TOC Elevation (ft msl)	Well Depth at Construction (ft bgs)	Depth to Water (ft btoc)	Date Measured	Water Elevation (ft msl)
A-2709-MW2	49.5 - 59.5	305.54	60.00	51.60	03/16/11	253.94
				52.03	03/01/12	253.51
				51.52	11/13/13	254.02
				48.98	10/23/15	256.56
A-2709-MW38	25.0 - 35.0	286.01	35.05	28.61	03/16/11	257.40
				29.78	03/01/12	256.23
				30.24	11/13/13	255.77
				28.28	10/23/15	257.73

Notes:
NA - Not Available
ft msl - feet above mean sea level
ft btoc - feet below top of casing

Table 2
Well Purging Data Summary
CCFTBR0038 (Site 38)
Ft. Bragg, NC

Monitoring Well ID	Sampling Date	Purging Data							
		Temperature (^{o}C)	pH	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Volume Purged (liters)	Pumping Rate (mL/min)
A-2709-MW2	03/16/11	17.97	5.17	35	1.09	138.5	2.11	4.8	125
	03/01/12	21.04	5.40	43	0.00	97.0	4.85	4.8	120
	11/13/13	17.74	4.81	25	0.42	-33.4	20.80	11.5	200
	10/23/15	21.15	5.63	130	1.46	75.3	12.90	10.5	250
A-2709-MW38	03/16/11	18.02	5.24	21	9.22	226.1	1.08	9.0	250
	03/01/12	22.24	4.65	33	6.91	320.0	34.70	9.0	300
	11/13/13	20.10	5.32	37	0.65	-95.1	13.00	8.8	250
	10/23/15	21.53	5.48	145	1.45	101.7	9.16	10.5	250

Values represent last reading taken after equilibrium was reached.
^{o}C = degrees centigrade
µS/cm = microsiemens per centimeter
mg/L = milligrams per liter
mV = millivolts
mL/min = milliliters per minute

Table 3
Analytical Results, October 2015 Event
CCFTBR0038 (Site 38)
Fort Bragg, North Carolina

Well ID Date Sampled Units Laboratory Control ID	Federal MCL (µg/L)	NC 2L Groundwater Standard (µg/L)	A-2709-MW2 10/23/2015 µg/L 21510241101	A-2709-MW38 10/23/2015 µg/L 21510241102
VOCS (SW8260B)				
1,1,1-TRICHLOROETHANE	200	200	0.2 U	0.2 U
1,1,2,2-TETRACHLOROETHANE	NA	0.2	0.2 U	0.2 U
1,1,2-TRICHLOROETHANE	5	0.6	0.2 U	0.2 U
1,1-DICHLOROETHANE	NA	6	0.2 U	0.2 U
1,1-DICHLOROETHENE	7	350	0.2 U	0.2 U
1,1-DICHLOROPROPENE	NA	NA	0.2 U	0.2 U
1,2,3-TRICHLOROBENZENE	NA	NA	0.2 U	0.2 U
1,2,3-TRICHLOROPROPANE	NA	0.005	0.2 U	0.2 U
1,2,4-TRICHLOROBENZENE	70	70	0.2 U	0.2 U
1,2,4-TRIMETHYLBENZENE	NA	400	0.2 U	0.2 U
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	NA	0.02	0.2 U	0.2 U
1,2-DICHLOROBENZENE	600	20	0.2 U	0.2 U
1,2-DICHLOROETHANE	5	0.4	0.2 U	0.2 U
1,2-DICHLOROPROPANE	5	0.6	0.2 U	0.2 U
1,3,5-TRIMETHYLBENZENE (MESITYLENE)	NA	400	0.2 U	0.2 U
1,3-DICHLOROBENZENE	NA	200	0.2 U	0.2 U
1,3-DICHLOROPROPANE	NA	0.4	0.2 U	0.2 U
1,4-DICHLOROBENZENE	75	6	0.2 U	0.2 U
2,2-DICHLOROPROPANE	NA	NA	0.2 U	0.2 U
2-CHLOROTOLUENE	NA	100	0.2 U	0.2 U
2-HEXANONE	NA	40	0.5 U	0.5 U
4-CHLOROTOLUENE	NA	24	0.2 U	0.2 U
ACETONE	NA	6000	0.5 U	0.5 U
BENZENE	5	1	0.2 U	0.2 U
BROMOBENZENE	NA	NA	0.2 U	0.2 U
BROMOCHLOROMETHANE	NA	NA	0.2 U	0.2 U
BROMODICHLOROMETHANE	80	0.6	0.2 U	0.2 U
BROMOFORM	80	4	0.25 U	0.25 U
BROMOMETHANE	NA	100	0.5 U	0.5 U
CARBON TETRACHLORIDE	5	0.3	0.25 U	0.25 U
CHLOROBENZENE	100	50	0.2 U	0.2 U
CHLOROETHANE	NA	3000	0.25 UQ	0.25 UQ
CHLOROFORM	80	70	0.2 U	0.2 U
CHLOROMETHANE	NA	3	0.2 U	0.2 U
cis-1,2-DICHLOROETHYLENE	70	70	0.2 U	0.2 U
cis-1,3-DICHLOROPROPENE	NA	0.4	0.2 U	0.2 U
DIBROMOCHLOROMETHANE	NA	0.4	0.2 U	0.2 U
DICHLORODIFLUOROMETHANE	NA	1000	0.2 U	0.2 U
ETHYLBENZENE	700	600	0.2 U	0.2 U
ISOPROPYL ETHER	NA	70	0.5 U	0.5 U
ISOPROPYLBENZENE (CUMENE)	NA	70	0.2 U	0.2 U
M,P-XYLENE (SUM OF ISOMERS)	10000	500	0.2 U	0.2 U

Table 3
Analytical Results, October 2015 Event
CCFTBR0038 (Site 38)
Fort Bragg, North Carolina

Well ID Date Sampled Units Laboratory Control ID	Federal MCL (µg/L)	NC 2L Groundwater Standard (µg/L)	A-2709-MW2 10/23/2015 µg/L 21510241101	A-2709-MW38 10/23/2015 µg/L 21510241102
VOCS (SW8260B)				
METHYL ETHYL KETONE (2-BUTANONE)	NA	4000	0.2 U	0.2 U
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	NA	100	0.2 U	0.2 U
METHYLENE CHLORIDE	NA	5	0.2 U	0.2 U
n-BUTYLBENZENE	NA	70	0.2 U	0.2 U
n-PROPYLBENZENE	NA	70	1 U	1 U
O-XYLENE (1,2-DIMETHYLBENZENE)	10000	500	0.2 U	0.2 U
P-CYMENE (p-ISOPROPYLTOLUENE)	NA	25	0.2 U	0.2 U
SEC-BUTYLBENZENE	NA	70	0.2 U	0.2 U
STYRENE	100	70	0.2 U	0.2 U
t-BUTYLBENZENE	NA	70	0.2 U	0.2 U
tert-BUTYL METHYL ETHER	NA	20	0.2 U	0.2 U
TETRACHLOROETHYLENE (PCE)	5	0.7	0.2 U	0.2 U
TOLUENE	1000	600	0.2 U	0.2 U
trans-1,2-DICHLOROETHENE	100	100	0.2 U	0.2 U
trans-1,3-DICHLOROPROPENE	NA	0.4	0.2 U	0.2 U
TRICHLOROETHYLENE (TCE)	5	3	0.2 U	0.2 U
TRICHLOROFLUOROMETHANE	NA	2000	0.2 U	0.2 U
VINYL ACETATE	NA	88	0.2 U	0.2 U
VINYL CHLORIDE	2	0.03	0.2 U	0.2 U
XYLENES, TOTAL	10000	500	0.4 U	0.4 U
SVOCS (SW8270D)				
1,2-DIPHENYLHYDRAZINE	NA	NA	0.5 U	0.5 U
2,2'-DICHLORODIISOPROPYL ETHER	NA	NA	0.5 U	0.5 U
2,4,6-TRICHLOROPHENOL	NA	4	0.5 U	0.5 U
2,4-DICHLOROPHENOL	NA	0.98	0.5 U	0.5 U
2,4-DIMETHYLPHENOL	NA	100	0.5 U	0.5 U
2,4-DINITROPHENOL	NA	NA	1.5 U	1.5 U
2,4-DINITROTOLUENE	NA	0.1	0.5 U	0.5 U
2,6-DINITROTOLUENE	NA	NA	0.5 U	0.5 U
2-CHLORONAPHTHALENE	NA	NA	0.5 U	0.5 U
2-CHLOROPHENOL	NA	0.4	0.5 U	0.5 U
2-METHYLNAPHTHALENE	NA	30	0.5 U	0.5 U
2-METHYLPHENOL (o-CRESOL)	NA	400	0.5 U	0.5 U
2-NITROPHENOL	NA	NA	0.5 U	0.5 U
3,3'-DICHLOROBENZIDINE	NA	NA	0.5 U	0.5 U
4,6-DINITRO-2-METHYLPHENOL	NA	NA	1.5 U	1.5 U
4-BROMOPHENYL PHENYL ETHER	NA	NA	0.5 U	0.5 U
4-CHLORO-3-METHYLPHENOL	NA	NA	0.5 U	0.5 U
4-CHLOROANILINE	NA	NA	0.5 U	0.5 U
4-CHLOROPHENYL PHENYL ETHER	NA	NA	0.5 U	0.5 U
4-NITROPHENOL	NA	NA	1.5 U	1.5 U
SVOCS (SW8270D)				
ACENAPHTHENE	NA	80	0.5 U	0.5 U
ACENAPHTHYLENE	NA	200	0.5 U	0.5 U
ANTHRACENE	NA	2000	0.25 U	0.25 U
BENZO(a)ANTHRACENE	0.2	0.05	0.25 U	0.25 U
BENZO(a)PYRENE	0.2	0.005	0.2 UQ	0.2 UQ

Table 3
Analytical Results, October 2015 Event
CCFTBR0038 (Site 38)
Fort Bragg, North Carolina

Well ID Date Sampled Units Laboratory Control ID	Federal MCL (µg/L)	NC 2L Groundwater Standard (µg/L)	A-2709-MW2 10/23/2015 µg/L 21510241101	A-2709-MW38 10/23/2015 µg/L 21510241102
BENZO(b)FLUORANTHENE	NA	0.05	0.25 U	0.25 U
BENZO(g,h,i)PERYLENE	NA	200	0.25 U	0.25 U
BENZO(k)FLUORANTHENE	NA	0.5	0.5 U	0.5 U
BENZOIC ACID	NA	30000	1.5 UQ	1.5 UQ
BENZYL ALCOHOL	NA	700	0.5 U	0.5 U
BENZYL BUTYL PHTHALATE	NA	1000	0.25 UQ	0.25 UQ
bis(2-CHLOROETHOXY) METHANE	NA	NA	0.5 U	0.5 U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	NA	0.03	0.5 U	0.5 U
bis(2-ETHYLHEXYL) PHTHALATE	6	3	0.25 UQ	0.25 UQ
CHRYSENE	NA	5	0.25 U	0.25 U
CRESOLS, m & p	NA	40	0.25 U	0.25 U
DIBENZ(a,h)ANTHRACENE	NA	0.005	0.25 U	0.25 U
DIBENZOFURAN	NA	28	0.5 U	0.5 U
DIETHYL PHTHALATE	NA	6000	0.5 U	0.5 U
DIMETHYL PHTHALATE	NA	NA	0.5 U	0.5 U
DI-n-BUTYL PHTHALATE	NA	700	0.5 U	0.5 U
DI-n-OCTYLPHTHALATE	NA	100	0.25 U	0.25 U
FLUORANTHENE	NA	300	0.25 U	0.25 U
FLUORENE	NA	300	0.5 U	0.5 U
HEXACHLOROBENZENE	1	0.02	0.5 U	0.5 U
HEXACHLOROBUTADIENE	NA	0.4	0.5 U	0.5 U
HEXACHLOROCYCLOPENTADIENE	50	NA	1.5 U	1.5 U
HEXACHLOROETHANE	NA	NA	0.5 U	0.5 U
INDENO(1,2,3-c,d)PYRENE	NA	0.05	0.25 U	0.25 U
ISOPHORONE	NA	40	0.5 U	0.5 U
NAPHTHALENE	NA	6	0.5 U	0.5 U
NITROBENZENE	NA	NA	0.5 U	0.5 U
N-NITROSODI-n-PROPYLAMINE	NA	NA	0.5 U	0.5 U
N-NITROSODIPHENYLAMINE	NA	NA	0.5 U	0.5 U
PENTACHLOROPHENOL	1	0.3	0.5 U	0.5 U
PHENANTHRENE	NA	200	0.25 U	0.25 U
PHENOL	NA	30	0.5 U	0.5 U
PYRENE	NA	200	0.5 U	0.5 U

Table 3
Analytical Results, October 2015 Event
CCFTBR0038 (Site 38)
Fort Bragg, North Carolina

Well ID Date Sampled Units Laboratory Control ID	Federal MCL (µg/L)	NC 2L Groundwater Standard (µg/L)	A-2709-MW2 10/23/2015 µg/L 21510241101	A-2709-MW38 10/23/2015 µg/L 21510241102
VPH (MADEP-VPH-04-1.1)				
VOLATILE PETROLEUM HYDROCARBONS C5-C8 ALIPHATIC	NA	400	4.78 U	4.78 U
VOLATILE PETROLEUM HYDROCARBONS C9-C10 AROMATIC	NA	200	3.16 U	3.16 U
VOLATILE PETROLEUM HYDROCARBONS C9-C12 ALIPHATIC	NA	700	4.54 U	4.54 U
EPH (MADEP-EPH-04-1.1)				
EXTRACTABLE PETROLEUM HYDROCARBONS C11-C22 AROMAT	NA	200	42.1 U	42.1 U
EXTRACTABLE PETROLEUM HYDROCARBONS C19-C36 ALIPHAT	NA	10000	31.3 U	31.3 U
EXTRACTABLE PETROLEUM HYDROCARBONS C9-C18 ALIPHAT	NA	700	21.8 U	21.8 U
Calculated Petroleum Hydrocarbon Fractions				
Final C9 - C22 Aromatic (calculated)	NA	200 [2]	ND	ND
Final C9 - C18 Aliphatic (calculated)	NA	700 [3]	ND	ND

[1] = Interim Maximum Allowable Concentration (IMAC) are established under 15A NCAC 2L .0202.

[2] In accordance with Table 11 of *Guidelines for Assessment and Corrective Action for UST Releases* (2008), the "Final" C9 - C22 Aromatic fraction is calculated as follows:
(Final C9 - C22 Aromatics) = (C9 - C10 Aromatics) + (C11 - C22 Aromatics)

[3] In accordance with Table 11 of *Guidelines for Assessment and Corrective Action for UST Releases (2008)*, the "Final" C9 - C18 Aliphatic fraction is calculated as follows:
(Final C9 - C18 Aliphatic) = (C9 - C12 Aliphatics) - (C9 - C10 Aromatics) + (C9 - C18 Aliphatics)

Bolded value = detectable concentration.
Red value = exceeds NC 2L Groundwater Standard.
NA = an NC 2L Groundwater Standard does not exist for this analyte.

U = Undetected. The analyte was analyzed for, but not detected at the stated method detection limit (MDL).
J = Indicates an estimated value.
Q = non-compliant QC result
ND = not detected above the method detection limit
NC 2L = North Carolina subchapter 2L groundwater standards.
µg/L = micrograms per liter
MCL = Maximum Contaminant Level

Table 4
Summary of Historical Groundwater Detections
CCFTBR0038 (Site 38)
Fort Bragg, N.C.

Well ID Date Sampled units Laboratory Control ID			A-2709-MW-1 03/13/2004 ug/L	A-2709-MW-1-DUP 03/13/2004 ug/L	A-2709-MW-2 03/13/2004 ug/L	A-2709-MW-2 12/20/2006 ug/L	A-2709-MW2 3/16/2011 ug/L N 21103170902	A-2709-MW2 3/1/2012 ug/L FD 21203024503	A-2709-MW2 3/1/2012 ug/L N 21203024502	A-2709-MW2 11/13/2013 µg/L 21311140702	A-2709-MW2 10/23/2015 ug/L FD 21510241103	A-2709-MW2 10/23/2015 ug/L N 21510241101	A-2709-MW-3 03/13/2004 ug/L	A-2709-MW-4 03/13/2004 ug/L	A-2709-MW-5 03/13/2004 ug/L
Analyte (ug/L)	**Federal MCL (ug/L)**	**NC 2L Ground-water Standard (ug/L)**													
VOCs (SW8260B)															
1,2 DIBROMOETHANE	NA	0.02	U	U	**3.0**	**3.32 J**	**0.565 J**	0.169 U	0.169 U	0.102 U	0.2 U	0.2 U	U	U	U
1,2-DICHLOROETHANE	5	0.4	U	U	**15**	--	**3.38 J**	**2.7**	**2.57**	**0.697 J**	0.2 U	0.2 U	**71 D**	U	U
1,2-DICHLOROPROPANE	5	0.6	U	U	**3.0**	--	**0.887 J**	0.114 U	0.114 U	0.15 U	0.2 U	0.2 U	**1.6**	U	U
1,2,4-TRIMETHYLBENZENE	NA	400	U	U	**98 D**	**61.2**	**22.1**	**1.67**	**1.77**	**0.874 J**	0.2 U	0.2 U	**7.7**	U	U
1,3,5-TRIMETHYLBENZENE	NA	400	U	U	**60 D**	**59.7**	**19.5**	**2.34**	**2.28**	**0.789 J**	0.2 U	0.2 U	U	U	U
METHYL ETHYL KETONE (2-BUTANONE)	NA	4000	U	U	**1.1 J**	--	0.235 U	0.235 U	0.235 U	0.142 U	0.2 U	0.2 U	U	U	U
BENZENE	5	1	U	U	U	**186**	**18.4**	**13.4**	**12.9**	**2.35**	0.2 U	0.2 U	**120 D**	U	U
CHLOROFORM	NA	70	U	U	U	--	0.062 U	0.062 U	0.062 U	0.155 U	0.2 U	0.2 U	U	U	U
di-ISOPROPYL ETHER	NA	70	--	--	--	**9.89 J**	--	--	--	--	--	--	--	--	--
ETHYLBENZENE	700	600	U	U	**76 D**	--	**50.9**	**42.9**	**43.9**	**13.6**	0.2 U	0.2 U	U	U	U
ISOPROPYLBENZENE	NA	70	U	U	**3.7**	**7.93 J**	**3.09 J**	**2.38**	**2.38**	**2.03**	0.2 U	0.2 U	**1.1**	U	U
ISOPROPYL ETHER	NA	70	U	U	**33**	--	0.105 U	0.105 U	0.105 U	0.479 U	0.5 U	0.5 U	**290 D**	U	U
M,P-XYLENE (SUM OF ISOMERS)	1.00E+04	500	--	--	--	--	**25.3**	**2.66**	**2.49**	**3.42**	0.2 U	0.2 U	--	--	--
METHYLENE CHLORIDE	NA	5	U	U	U	--	0.102 U	0.102 U	0.102 U	0.149 U	0.2 U	0.2 U	**0.88 J**	**0.78 J**	**0.79 J**
NAPHTHALENE	NA	6	U	U	**70 D**	**141**	--	--	--	--	--	--	**10**	U	1.3
n-BUTYLBENZENE	NA	70	U	U	U	--	0.068 U	0.068 U	0.068 U	**1.73**	0.2 U	0.2 U	U	U	U
n-PROPYLBENZENE	NA	70	U	U	**4.3**	--	**3.86 J**	**4.38**	**4.47**	**2.7**	1 U	1 U	U	U	U
O-XYLENE (1,2-DIMETHYLBENZENE)	1.00E+04	NA	--	--	--	--	**4.95 J**	0.077 U	0.077 U	0.055 U	0.2 U	0.2 U	--	--	--
p-ISOPROPYLTOLUENE (P-CYMENE, 4-ISOPROPYLTOLUENE)	NA	25[1]	U	U	**2.4**	**5.10 J**	0.175 U	0.175 U	0.175 U	**1.15**	0.2 U	0.2 U	U	U	U
sec-BUTYLBENZENE	NA	70	--	--	--	**1.49 J**	0.088 U	0.088 U	0.088 U	**0.268 J**	0.2 U	0.2 U	--	--	--
TETRACHLOROETHENE (PCE)	5	0.7	**4.9**	**4.7**	U	--	**0.24 J**	0.141 U	0.141 U	0.193 U	0.2 U	0.2 U	**1.4**	U	U
TOLUENE	1000	600	U	U	**13**	**12**	0.078 U	0.078 U	0.078 U	0.122 U	0.2 U	0.2 U	**0.38 J**	**0.57 J**	**0.66 J**
XYLENES	1.00E+04	500	U	U	**400 D**	**308.6**	**30.2**	**2.66 J**	**2.49 J**	**3.42**	0.4 U	0.4 U	U	U	U
SVOCs (SW8270C)															
ACENAPHTHENE	NA	80	U	U	**1.9 J**	--	**1.5 J**	**1.14 J**	**1.95 J**	**1.06 J**	0.5 U	0.5 U	U	U	U
CARBAZOLE	NA	2[1]	U	U	**1.9 J**	**6.78 J**	--	--	--	--	--	--	U	U	U
2,4-DIMETHYLPHENOL	NA	100	U	U	**18**	40.5	0.731 U	0.708 U	0.708 U	0.39 U	0.5 U	0.5 U	U	U	U
bis(2-ETHYLHEXYL) PHTHALATE	6	3	--	--	--	--	0.201 U	0.195 UB	**6.64 JB**	0.194 U	0.25 UQ	0.25 UQ	--	--	--
DIBENZOFURAN	NA	28[1]	--	--	--	--	**1.01 J**	**0.75 J**	**1.3 J**	**0.683 J**	0.5 U	0.5 U	--	--	--
FLUORENE	NA	300	U	U	**2.9 J**	2.90 J	**1.55 J**	**1.46 J**	**2.3 J**	**1.21 J**	0.5 U	0.5 U	U	U	U
1-METHYLNAPHTHALENE	NA	1[1]	U	U	**28**	--	--	--	--	--	--	--	U	U	U
2-METHYLNAPHTHALENE	NA	30	U	U	**37**	**60.1**	**42.8**	**35.3**	**54.3**	**28.8**	0.5 U	0.5 U	U	U	U
2-METHYLPHENOL	NA	NA	U	U	2.8 J	--	0.346 U	0.336 U	0.336 U	0.476 U	0.5 U	0.5 U	U	U	U
NAPHTHALENE	NA	6	U	U	**19**	**87.8**	**46**	**35.3**	**51.9**	**27.1**	0.5 U	0.5 U	U	U	U
PHENANTHRENE	NA	200	U	U	**2.1 J**	**3.57 J**	**1.27 J**	**1.02 J**	**1.63 J**	**0.758 J**	0.25 U	0.25 U	U	U	U
PHENOL	NA	30	U	U	U	--	0.158 U	0.153 U	0.153 U	0.199 U	0.5 U	0.5 U	U	U	U
VPH/EPH (MADEP)															
C5-C8 ALIPHATICS	NA	400	**12 J**	U	**320**	**2,170**	**403 J**	**232 J**	**333 J**	**158 J**	4.78 U	4.78 U	**330**	19 J	**22 J**
C9-C12 ALIPHATICS	NA	700	U	U	**230**	**1,570**	**1850**	**793**	**1150**	**446**	4.54 U	4.54 U	**10 J**	6.0 J	**4.0 J**
C9-C18 ALIPHATICS	NA	700	**5.5 J**	**4.2 J**	**10 J**	**2,860**	**72 J**	21.8 U	21.8 U	**27.4 J**	21.8 U	21.8 U	**2.5 J**	U	U
C19-C36 ALIPHATICS	NA	10,000	--	--	--	--	**400**	31.3 U	31.3 U	**88.1 J**	31.3 U	31.3 U	--	--	--
C9-C10 AROMATICS	NA	200	U	U	**700**	**1,230**	**445**	**253**	**362**	**196**	3.16 U	3.16 U	**35 J**	10 J	U
C11-C22 AROMATICS	NA	200	U	U	**110**	**2,520**	**320**	**295**	**214**	**215**	42.1 U	42.1 U	U	U	U
Final C9-C22 AROMATICS (calculated)	NA	200 [2]	--	--	--	--	**765**	**548**	**576**	**411**	ND	ND	--	--	--
Final C9 - C18 ALIPHATIC (calculated)	NA	700 [3]	--	--	--	--	**1477**	**540**	**788**	**277.4**	ND	ND	--	--	--

Notes:

Data from 1999 - 2006 contained within this table were obtained through historical reports produced by SCRA-EEG (2000) and USACE (2004 and 2007). Since the historical tables reported detections only, cells with "--" indicated that data were not available for this analyte. In addition, method detection limits were not reported with the "U" qualifier for analytes that were not detected.

Bolded value = detectable concentration.

Red value = an NC 2L Groundwater Standard exceedance.

NA = an NC 2L Groundwater Standard does not exist for this analyte.

U = Undetected. The analyte was analyzed for, but not detected at the stated method detection limit (MDL).

ND = not detected above the method detection limit

J = Indicates an estimated value. The concentration was less than the laboratory quantitation limit but above the method detection limit.

B = (Organics) indicates the analyte was detected in the associated Method Blank.

Q = LCS/LCSD recovery and/or RPD was outside control limits/CCV did not meet acceptance criteria.

D = sample was diluted because the concentrations exceeded the calibration limits.

FD = Field Duplicate Sample

N = Normal Sample

NC 2L = North Carolina subchapter 2L groundwater standards.

ug/L = micrograms per liter

MCL = Maximum Contaminant Level

[1] = Interim Maximum Allowable Concentration (IMAC) are established under 15A NCAC 2L .0202.

[2] In accordance with Table 11 of *Guidelines for Assessment and Corrective Action for UST Releases* (2008), the "Final" C9 -

(Final C9 - C22 Aromatics) = (C9 - C10 Aromatics) + (C11 - C22 Aromatics)

[3] In accordance with Table 11 of *Guidelines for Assessment and Corrective Action for UST Releases (2008)* , the "Final" C9 - C18 Aliphatic fraction is calculated as follows:

(Final C9 - C18 Aliphatic) = (C9 - C12 Aliphatics) - (C9 - C10 Aromatics) + (C9 - C18 Aliphatics)

Table 4
Summary of Historical Groundwater Detections
CCFTBR0038 (Site 38)
Fort Bragg, N.C.

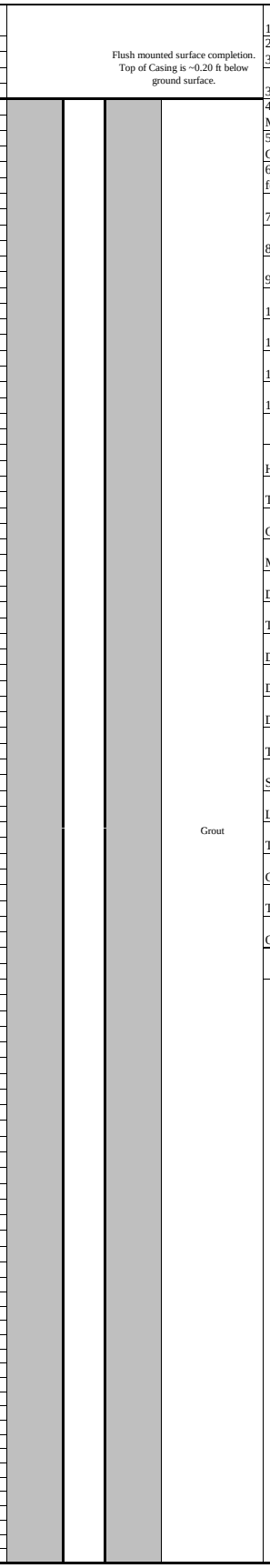
Well ID Date Sampled units Laboratory Control ID			A-2709-MW-5 12/20/2006 ug/L	A-2709-MW-6 03/13/2004 ug/L	A-2709-MW-A 06/6/1999 ug/L	A-2709-MW-A 03/13/2004 ug/L	A-2709-MW-B 04/26/1999 ug/L	A-2709-MW-B 03/13/2004 ug/L	A-2709-MW38 3/16/2011 ug/L N 21103170901	A-2709-MW38 3/1/2012 ug/L N 21203024504	A-2709-MW38 11/13/2013 µg/L 21311140703	A-2709-MW38 10/23/2015 ug/L N 21510241102
Analyte (ug/L)	Federal MCL (ug/L)	NC 2L Ground-water Standard (ug/L)										
VOCs (SW8260B)												
1,2 DIBROMOETHANE	NA	0.02	U	U	--	U	--	**3**	0.169 U	0.169 U	0.102 U	0.2 U
1,2-DICHLOROETHANE	5	0.4	--	U	--	**0.96**	--	**28**	0.121 U	0.121 U	0.116 U	0.2 U
1,2-DICHLOROPROPANE	5	0.6	--	U	--	U	--	**5.3**	0.114 U	0.114 U	0.15 U	0.2 U
1,2,4-TRIMETHYLBENZENE	NA	400	U	**0.50 J**	**52J**	**5.6**	--	**27**	0.08 U	0.08 U	**9.31**	0.2 U
1,3,5-TRIMETHYLBENZENE	NA	400	U	U	--	U	27J	**35 D**	0.053 U	0.053 U	**3.6**	0.2 U
METHYL ETHYL KETONE (2-BUTANONE)	NA	4000	--	U	--	U	--	U	0.235 U	0.235 U	0.142 U	0.2 U
BENZENE	5	1	U	U	**51**	**0.83 J**	**82**	**55 D**	0.049 U	0.049 U	0.111 U	0.2 U
CHLOROFORM	NA	70	--	**0.86 J**	--	U	--	U	0.062 U	0.062 U	0.155 U	0.2 U
di-ISOPROPYL ETHER	NA	70	U		--	--	--	--	--	--	--	--
ETHYLBENZENE	700	600	--	U	**26**	**1.3**	63	**27**	0.18 U	0.18 U	**1.7**	0.2 U
ISOPROPYLBENZENE	NA	70	U	U	--	U	--	**0.79 J**	0.058 U	0.058 U	**1.79**	0.2 U
ISOPROPYL ETHER	NA	70	--	U	--	U	--	38 D	0.105 U	0.105 U	0.479 U	0.5 U
M,P-XYLENE (SUM OF ISOMERS)	1.00E+04	500		--	--		--		0.099 U	0.099 U	**3.82**	0.2 U
METHYLENE CHLORIDE	NA	5	--	**0.81 J**	--	U	--	U	0.102 U	0.102 U	0.149 U	0.2 U
NAPHTHALENE	NA	6	U	U	--	**5.7**	--	**50 D**	--	--	--	--
n-BUTYLBENZENE	NA	70	--	U	--	U	--	**5.2**	0.068 U	0.068 U	0.123 U	0.2 U
n-PROPYLBENZENE	NA	70	--	U	--	U	--	U	0.069 U	0.069 U	**1.78**	1 U
O-XYLENE (1,2-DIMETHYLBENZENE)	1.00E+04	NA	--	--	--	--	--	--	0.077 U	0.077 U	**5.91**	0.2 U
p-ISOPROPYLTOLUENE (P-CYMENE, 4-ISOPROPYLTOLUENE)	NA	25[1]	U	U	--	U	--	**0.55 J**	0.175 U	0.175 U	**0.871 J**	0.2 U
sec-BUTYLBENZENE	NA	70	U	--	--	--	--	--	0.088 U	0.088 U	**0.342 J**	0.2 U
TETRACHLOROETHENE (PCE)	5	0.7	--	U	--	U	--	U	0.141 U	0.141 U	0.193 U	0.2 U
TOLUENE	1000	600	U	**0.75 J**	**87**	U	**19**	**11**	0.078 U	0.078 U	0.122 U	0.2 U
XYLENES	1.00E+04	500	U	U	**319**	**18**	**375**	**200 D**	0.123 U	0.123 U	**9.73**	0.4 U
SVOCs (SW8270C)												
ACENAPHTHENE	NA	80	--	U	--	U	--	**1.3 J**	0.279 U	0.273 U	**0.906 J**	0.5 U
CARBAZOLE	NA	2[1]	U	U	--	U	--	**2.2 J**	--	--	--	--
2,4-DIMETHYLPHENOL	NA	100	U	U	--	U	**2.4**	**18**	0.723 U	2.65 U	0.416 U	0.5 U
bis(2-ETHYLHEXYL) PHTHALATE	6	3	--	--	--	--	--	--	0.099 U	**6.73 JB**	0.207 U	0.25 UQ
DIBENZOFURAN	NA	28[1]	--	--	--	--	--	--	0.236 U	0.232 U	**0.616 J**	0.5 U
FLUORENE	NA	300	U	U	--	U	--	**1.9 J**	0.3 U	0.294 U	**1.1 J**	0.5 U
1-METHYLNAPHTHALENE	NA	1[1]	--	U	--	U	--	**24**	--	--	--	--
2-METHYLNAPHTHALENE	NA	30	U	U	--	U	--	**21**	0.266 U	0.266 U	**2.29 J**	0.5 U
2-METHYLPHENOL	NA	NA	--	U	--	U	--	U	0.343 U	0.336 U	0.281 U	0.5 U
NAPHTHALENE	NA	6	U	U	--	U	--	**22**	0.305 U	0.299 U	**1.4 J**	0.5 U
PHENANTHRENE	NA	200	U	U	--	U	--	U	0.317 U	0.31 U	0.21 U	0.25 U
PHENOL	NA	30	--	U	--	U	--	**5.4 J**	0.156 U	0.153 U	0.451 U	0.5 U
VPH/EPH (MADEP)												
C5-C8 ALIPHATICS	NA	400	U	**12 J**	**1750**	**16 J**	**1240**	**320**	3.31 U	3.31 U	23.9 U	4.78 U
C9-C12 ALIPHATICS	NA	700	U	**3.0 J**	--	**15 J**	--	**130**	3.2 U	3.2 U	**354**	4.54 U
C9-C18 ALIPHATICS	NA	700	U	U	**500**	--	**610**	**9.3 J**	**13200**	21.8 U	21.8 U	21.8 U
C19-C36 ALIPHATICS	NA	10,000	--	--	--	--	--	--	**2070**	31.3 U	**73.7 J**	31.3 U
C9-C10 AROMATICS	NA	200	U	U	--	**38 J**	--	**390**	1.24 U	1.24 U	**240**	3.16 U
C11-C22 AROMATICS	NA	200	U	U	--	--	--	U	**34100**	42.1 U	**201**	42.1 U
Final C9-C22 AROMATICS (calculated)	NA	200 [2]	--	--	**770**	--	**540**	--	**34100**	ND	**441**	ND
Final C9 - C18 ALIPHATIC (calculated)	NA	700 [3]	--	--	--	--	--	--	**13200**	ND	**114**	ND

APPENDIX A
WELL CONSTRUCTION DATA

WELL CONSTRUCTION LOG

MW-38

ELEV. (AMSL)	DEPTH (FT BGS)
286.207	
	1
	2
	3
	4
281.207	5
	6
	7
	8
	9
276.207	10
	11
	12
	13
	14
271.207	15
	16
	17
	18
	19



1. COMPANY NAME: Parsons
2. DRILLING CONTRACTOR: Geolab of Dacula, Ga. (N.C. Well Contractor # 3972-B)
3. PROJECT: Environmental Remediation for 40 Sites at Fort Bragg, N.C.
4. DRILL RIG TYPE: Hollow Stem Auger (8in OD) - Powered by Geoprobe Model 6600
5. LOCATION: ~100ft East of Building A-2206, Nortwest of intersection of Gruber Rd. and Taylor St., Fort Bragg, N.C.
6. WELL COORDINATES: N 508208.261, E 1989242.439 (N.C. State Plane feet)
7. SURFACE ELEVATION: 286.207 ft AMSL
8. DATE STARTED: September 13, 2010
9. DATE COMPLETED: September 13, 2010
10. TOTAL DEPTH: 35.05 ft bgs
11. SCREENED INTERVAL: 25 - 35 ft bgs
12. DEPTH TO WATER: 29.97 ft bgs
13. LOGGER / INSPECTOR: F. S. Saville

WELLPOINT CONSTRUCTION DETAILS

HEIGHT OF CASING ABOVE GROUND: ~0.20 ft below ground surface

TYPE OF WELLPOINT PROTECTION: flush mounted surface completion

GROUT MIXTURE: Portland-Bentonite

METHOD OF PLACEMENT: Tremied by PVC pipe

DEPTH TO TOP OF SCREEN: 25 ft bgs

TOTAL LENGTH OF RISER: 25 ft

DIAMETER OF WELLPOINT: 2" ID

DEPTH TO TOP OF SEAL: 20 ft bgs

DEPTH TO TOP OF FILTER PACK: 22 ft bgs

TYPE OF FILTER PACK: medium sand

SIZE: 0.65993

LENGTH OF SCREEN: 10 ft

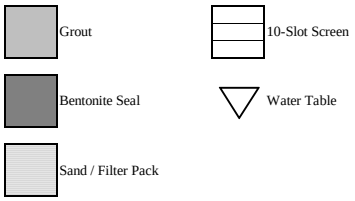
TOTAL DEPTH OF WELLPOINT: 35 ft

CASING DEPTH BELOW SURFACE: 25 ft

TYPE OF SEAL: Bentonite Pellet

QUANTITY USED:

COMMENTS / LOCATION SKETCH



WELL CONSTRUCTION LOG

MW-38

ELEV. (AMSL)	DEPTH (FT BGS)
266.207	20
	21
	22
	23
	24
261.207	25
	26
	27
	28
	29
256.207	30
	31
	32
	33
	34
251.207	35

Grout

Bentonite Seal

Sand / Filter Pack

Sand / Filter Pack

1. COMPANY NAME: Parsons
2. DRILLING CONTRACTOR: Geolab of Dacula, Ga. (N.C. Well Contractor # 3972-B)
3. PROJECT: Environmental Remediation for 40 Sites at Fort Bragg, N.C.
4. DRILL RIG TYPE: Hollow Stem Auger (8in OD) - Powered by Geoprobe Model 6600
5. LOCATION: ~100ft East of Building A-2206, Nortwest of intersection of Gruber Rd. and Taylor St., Fort Bragg, N.C.
6. WELL COORDINATES: N 508208.261, E 1989242.439 (N.C. State Plane feet)
7. SURFACE ELEVATION: 286.207 ft AMSL
8. DATE STARTED: September 13, 2010
9. DATE COMPLETED: September 13, 2010
10. TOTAL DEPTH: 35.05 ft bgs
11. SCREENED INTERVAL: 25 - 35 ft bgs
12. DEPTH TO WATER: 29.97 ft bgs
13. LOGGER / INSPECTOR: F. S. Saville

WELLPOINT CONSTRUCTION DETAILS

HEIGHT OF CASING ABOVE GROUND: ~0.20 ft below ground surface

TYPE OF WELLPOINT PROTECTION: flush mounted surface completion

GROUT MIXTURE: Portland-Bentonite

METHOD OF PLACEMENT: Tremied by PVC pipe

DEPTH TO TOP OF SCREEN: 25 ft bgs

TOTAL LENGTH OF RISER: 25 ft

DIAMETER OF WELLPOINT: 2" ID

DEPTH TO TOP OF SEAL: 20 ft bgs

DEPTH TO TOP OF FILTER PACK: 22 ft bgs

TYPE OF FILTER PACK: medium sand

SIZE: 0.65993

LENGTH OF SCREEN: 10 ft

TOTAL DEPTH OF WELLPOINT: 35 ft

CASING DEPTH BELOW SURFACE: 25 ft

TYPE OF SEAL: Bentonite Pellet

QUANTITY USED:

COMMENTS / LOCATION SKETCH

Grout

10-Slot Screen

Bentonite Seal

Water Table

Sand / Filter Pack

Table 7

Fort Bragg, NC, AST A-2709A/B
MONITORING WELL CONSTRUCTION INFORMATION

Date: 13 March 2004 Incident Number and Name: A-2709-A,B Facility ID: N/A

Well ID	Date Installed (mm/dd/yyyy)	Date Water Level Measured (mm/dd/yyyy)	Well Casing Depth (ft. BGS)	Screened Interval (x - y ft. BGS)	Bottom of Well (ft. BGS)	Top of Casing Elevation* (ft.)	Depth to Water from Top of Casing (ft.)	Free Product Thickness **(ft.)	Ground-Water Elevation* (ft)	Comments
A-2709-MWA	05/09/1999	03/12/2004	None	31.0 - 61.0	61.0	304.84	53.90	None	250.94	
A-2709-MWB	04/25/1999	3/13/2004	None	51.0 - 81.0	81.0	306.23	57.42	None	245.66	
A-2709-MW1	02/28/2004	03/13/2004	None	82.7 - 87.7	88.2	305.56	60.57	None	244.99	
A-2709-MW2	03/03/2004	03/13/2004	None	49.5 - 59.5	60.0	305.54	53.40	None	252.14	
A-2709-MW3	03/11/2004	03/03/2004	None	49.6 - 59.6	60.1	293.21	48.42	None	244.79	
A-2709-MW4	02/29/2004	03/13/2004	None	45.3 - 55.3	55.8	296.01	48.79	None	247.22	
A-2709-MW5	03/02/2004	03/13/2004	None	43.0 - 53.0	53.5	288.98	45.01	None	243.97	
A-2709-MW6	03/01/2004	03/13/2004	None	34.6 - 44.6	45.1	281.64	36.03	None	245.61	

* Reference Point for Elevation Measurements msl. Assumed Elevation:_____ ft.

** If free product is present in a well, ground-water elevation should be calculated by: [Top of Casing Elevation - Depth to Water] + [free product thickness x 0.8581].

ft BGS = feet below ground surface

52

APPENDIX B
FIELD FORMS

GROUNDWATER SAMPLING RECORD

SWMU / Site Number: 38
Well/Sample ID: A-2709-MW38
Project Number: 748776
Sampling Crew: HUGY

Project: Fort Bragg Remediations Services

Weather: SUNNY LOW 50s
Background PID: 0 (ppm) Well Headspace: 0 (ppm)

Depth to Water: 28.28
Total Depth: 35.10
Depth to LNAPL: NA
Date Purged: 10-23-15

Datum for Measurement: TOC
Casing Diameter: 2"
Casing Volume:
Purge Method: Bailer, Peristaltic Pump, Bladder Pump, other (circle)

Direct-Reading Meter Measurements:

Time	Vol. Purged (liters)	Pumping Rate (mL/min	Temp (°C)	pH (SU)	Electrical Conductivity (µs/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	Visual Appearance	Water Level
08:23	3.0	250	21.40	5.70	149	2.51	140.8	15.4	VERY SLIGHT	28.31
08:28	4.25	250	21.36	5.65	149	2.34	130.3	13.6	CLOUDINESS	28.33
08:33	5.5	250	21.43	5.55	147	1.71	119.2	11.6	"	28.34
08:38	6.75	250	21.47	5.51	147	1.60	116.9	11.1	"	28.36
08:43	8.0	250	21.49	5.50	147	1.50	104.3	9.23	CLEAR	28.37
08:48	9.25	250	21.50	5.50	145	1.46	102.9	9.49	"	28.38
08:53	10.5	250	21.53	5.48	145	1.45	101.7	9.16	"	28.39

Date Sampled: 10-23-15
MS/MSD Collected? NO
Duplicate Sample ID: NO

Time Sampled: 08:55
Parameters: —
Duplicate Date/Time: —

Laboratory Analytical Methods:

VOCs (SW8260B)	3 + 3	(3-40 ml VOA vials w/ HCL)
SVOCs (8270C)	2 + 2	(2-1L Amber)
EPH	2 + 2	(2-1L Amber w/ HCL)
VPH	3 + 3	3 (2-40ml VOA w/ HCL)
PAHs (8310)		(2-1L Amber)
RCRA Metals (6010B/7470)		(1-500 mL poly w/HNO3)
Pesticides/PCB (8081/8082)		(2-1L Amber)
Chloride & Sulfate (E300.1)		(1-250 poly)
Methane, Ethane, Ethene (AM-20)		(3-40mL VOA vials w/HCL)
Nitrate + Nitrite as N (E353.2)		(1-250mL poly)
Total Organic Carbon (SW9060)		(2-40 mL VOA amber vials w/HCL)

Total Containers: 10 + 10 = 20

Field Geochemistry:	**Results:**	**Method/Comments:**
Ferrous Iron:		
Sulfide:		
CO_2:		
Alkalinity:		
Manganese:		
Nitrite:		
Other:		

Notes (i.e. Wellhead Condition, Repairs, etc.): COLLECT EQUIPMENT BLANK AFTER SAMPLING THIS WELL AND BEFORE PURGING A-2709-MW2 EB-102315-04 @ 09:25 SAME PARAMETERS AS SAMPLE

GROUNDWATER SAMPLING RECORD

SWMU / Site Number: 38
Well/Sample ID: A-2709-MW2
Project Number: 748776
Sampling Crew: HUEY

Project: Fort Bragg Remediations Services

Weather: SUNNY HIGH 50°
Background PID: 0 (ppm) Well Headspace: 0 (ppm)

Depth to Water: 48.98
Total Depth: ~~60.00~~ 59.40 cH
Depth to LNAPL: NA
Date Purged: 10-23-15

Datum for Measurement: TOC
Casing Diameter: 2"
Casing Volume:
Purge Method: Bailer, Peristaltic Pump, (Bladder Pump) other (circle)

Direct-Reading Meter Measurements:

Time	Vol. Purged (liters)	Pumping Rate (mL/min	Temp (°C)	pH (SU)	Electrical Conductivity (µs/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	Visual Appearance	Water Level
10:13	3.0	250	21.21	5.64	135	2.12	90.2	300	CLOUDY W/	49.03
10:18	4.25	250	21.23	5.56	131	2.06	90.4	156	SLIGHT ORANGE	49.05
10:23	5.5	250	21.20	5.58	129	1.62	88.9	58.5	COLOR	49.06
10:28	6.75	250	21.20	5.61	129	1.52	86.1	32.2	CLEARER	49.07
10:33	8.0	250	21.25	5.56	129	1.50	77.5	13.8	"	49.08
10:38	9.25	250	21.17	5.62	128	1.49	76.4	13.2	"	49.10
10:43	10.5	250	21.15	5.63	130	1.46	75.3	12.9	"	49.11

Date Sampled: 10-23-15
MS/MSD Collected? NO
Duplicate Sample ID: A-2709-MW20

Time Sampled: 10:45
Parameters: —
Duplicate Date/Time: 10-23-15 / 11:15

Laboratory Analytical Methods:

VOCs (SW8260B)	3+3	(3-40 ml VOA vials w/ HCL)
SVOCs (8270C)	2+2	(2-1L Amber)
EPH	2+2	(2-1L Amber w/ HCL)
VPH	3+3	(2-40ml VOA w/ HCL)
PAHs (8310)		(2-1L Amber)
RCRA Metals (6010B/7470)		(1-500 mL poly w/HNO3)
Pesticides/PCB (8081/8082)		(2-1L Amber)
Chloride & Sulfate (E300.1)		(1-250 poly)
Methane, Ethane, Ethene (AM-20)		(3-40mL VOA vials w/HCL)
Nitrate + Nitrite as N (E353.2)		(1-250mL poly)
Total Organic Carbon (SW9060)		(2-40 mL VOA amber vials w/HCL)

Total Containers: 20

Field Geochemistry:	Results:	Method/Comments:
Ferrous Iron:		
Sulfide:		
CO_2:		
Alkalinity:		
Manganese:		
Nitrite:		
Other:		

Notes (i.e. Wellhead Condition, Repairs, etc.): VERIFIED pH WITH OTHER METER 10:18 pH 5.5

APPENDIX C
LABORATORY DATA SHEETS
(INCLUDED IN ELECTRONIC VERSION ONLY)

NELAP CERTIFICATE NUMBER: 01955
DOD ELAP CERTIFICATE NUMBER: L14-243

ANALYTICAL RESULTS

PERFORMED BY

GCAL, LLC
7979 Innovation Park Dr.
Baton Rouge, LA 70820

Report Date 11/05/2015

GCAL Report 215102411

Project Ft. Bragg - Site 38

Deliver To Ross Miller Parsons 406 W South Jordan Pkwy Suite 300 South Jordan, UT 84095 801-572-5999

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with GCAL's Standard Operating Procedures.

Common Abbreviations that may be Utilized in this Report

ND	Indicates the result was Not Detected at the specified reporting limit
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
DL	Detection Limit
DL	Diluted analysis – when appended to Client Sample ID
LOD	Limit of Detection
LOQ	Limit of Quantitation
RE	Re-analysis
00:01	Reported as a time equivalent to 12:00 AM

Reporting Flags that may be Utilized in this Report

J or I	Indicates the result is between the MDL and LOQ
J	DOD flag on analyte in the parent sample for MS/MSD outside acceptance criteria
U	Indicates the compound was analyzed for but not detected
B or V	Indicates the analyte was detected in the associated Method Blank
Q	Indicates a non-compliant QC Result (See Q Flag Application Report)
*****	Indicates a non-compliant or not applicable QC recovery or RPD – see narrative
E	The result is estimated because it exceeded the instrument calibration range
E	Metals - % diference for the serial dilution is > 10%

Sample receipt at GCAL is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of GCAL. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with the NELAC Institute standard and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.

_____
Authorized Signature
GCAL Report 215102411

Case Narrative

Client: Parsons **Report:** 215102411

Gulf Coast Analytical Laboratories received and analyzed the sample(s) listed on the Report Sample Summary page of this report. Receipt of the sample(s) is documented by the attached chain of custody. This applies only to the sample(s) listed in this report. No sample integrity or quality control exceptions were identified unless noted below.

VOLATILES MASS SPECTROMETRY

In the EPA 8260B analysis for analytical batch 571133, the %D/%Drift is outside ± 20% for Chloroethanein the CCV. The response is high and this analyte was not detected in the associated samples; this is a poor performing analyte.

SEMI-VOLATILES MASS SPECTROMETRY

In the EPA 8270D analysis for prep batch 570983, the LCS/LCSD exhibited recoveries above the established control limits for Benzo(a)pyrene and Butyl benzyl phthalate. However, Benzo(a)pyrene and Butyl benzyl phthalate were not detected in the associated samples, therefore the data is reportable. The LCS/LCSD RPD is above the control limit for Benzoic acid. The LCS is below the lower control limit for Benzoic acid.

In the EPA 8270D analysis for analytical batch 571196, the %D/%Drift is outside ± 20% for Butylbenzylphthalate and bis (2-ethylhexyl)phthalate in the CCV. The response is high and this analyte was not detected in the associated samples; this is a poor performing analyte.

MISCELLANEOUS

N-nitrosodiphenylamine decomposes in the GC inlet and cannot be separated from Diphenylamine. The laboratory uses N-nitrosodiphenylamine as the calibration and QC standard.

Q Flag Summary

Client Sample ID: **A-2709-MW2** Lab Sample ID: **21510241101**

Method: **EPA 8260B**	Analysis Date: **10/27/2015 10:32:00 PM**						
Analyte	**CAS**	**CCV OUL**	**LCS/LCSD OUL**	**SURROGATE OUL**	**ANALYTE NC**	**IS OUL**	**CLCCV OUL**
Chloroethane	75-00-3	X					
Method: **EPA 8270D**	Analysis Date: **10/28/2015 4:21:00 PM**						
Analyte	**CAS**	**CCV OUL**	**LCS/LCSD OUL**	**SURROGATE OUL**	**ANALYTE NC**	**IS OUL**	**CLCCV OUL**
Benzo(a)pyrene	50-32-8		X				
Benzoic acid	65-85-0		X				
Bis(2-Ethylhexyl)phthalate	117-81-7	X					
Butyl benzyl phthalate	85-68-7	X	X				

Client Sample ID: **A-2709-MW38** Lab Sample ID: **21510241102**

Method: **EPA 8260B**	Analysis Date: **10/27/2015 10:52:00 PM**						
Analyte	**CAS**	**CCV OUL**	**LCS/LCSD OUL**	**SURROGATE OUL**	**ANALYTE NC**	**IS OUL**	**CLCCV OUL**
Chloroethane	75-00-3	X					
Method: **EPA 8270D**	Analysis Date: **10/28/2015 4:37:00 PM**						
Analyte	**CAS**	**CCV OUL**	**LCS/LCSD OUL**	**SURROGATE OUL**	**ANALYTE NC**	**IS OUL**	**CLCCV OUL**
Benzo(a)pyrene	50-32-8		X				
Benzoic acid	65-85-0		X				
Bis(2-Ethylhexyl)phthalate	117-81-7	X					
Butyl benzyl phthalate	85-68-7	X	X				

Client Sample ID: **A-2709-MW20** Lab Sample ID: **21510241103**

Method: **EPA 8260B**	Analysis Date: **10/27/2015 11:11:00 PM**						
Analyte	**CAS**	**CCV OUL**	**LCS/LCSD OUL**	**SURROGATE OUL**	**ANALYTE NC**	**IS OUL**	**CLCCV OUL**
Chloroethane	75-00-3	X					
Method: **EPA 8270D**	Analysis Date: **10/28/2015 4:54:00 PM**						
Analyte	**CAS**	**CCV OUL**	**LCS/LCSD OUL**	**SURROGATE OUL**	**ANALYTE NC**	**IS OUL**	**CLCCV OUL**
Benzo(a)pyrene	50-32-8		X				
Benzoic acid	65-85-0		X				
Bis(2-Ethylhexyl)phthalate	117-81-7	X					
Butyl benzyl phthalate	85-68-7	X	X				

Client Sample ID: **EB-102315-04** Lab Sample ID: **21510241104**

Method: **EPA 8260B**	Analysis Date: **10/27/2015 9:53:00 PM**						
Analyte	**CAS**	**CCV OUL**	**LCS/LCSD OUL**	**SURROGATE OUL**	**ANALYTE NC**	**IS OUL**	**CLCCV OUL**
Chloroethane	75-00-3	X					
Method: **EPA 8270D**	Analysis Date: **10/28/2015 5:10:00 PM**						
Analyte	**CAS**	**CCV OUL**	**LCS/LCSD OUL**	**SURROGATE OUL**	**ANALYTE NC**	**IS OUL**	**CLCCV OUL**
Benzo(a)pyrene	50-32-8		X				
Benzoic acid	65-85-0		X				
Bis(2-Ethylhexyl)phthalate	117-81-7	X					
Butyl benzyl phthalate	85-68-7	X	X				

Client Sample ID: **TB-102315-04** Lab Sample ID: **21510241105**

Method: **EPA 8260B** Analysis Date: **10/27/2015 10:13:00 PM**

Analyte	CAS	CCV OUL	LCS/LCSD OUL	SURROGATE OUL	ANALYTE NC	IS OUL	CLCCV OUL
Chloroethane	75-00-3	X					

CCV OUL=CCV out of limits
LCS/LCSD OUL=LCS/LCSD out of limits
SURROGATE OUL=Surrogate out of limits
ANALYTE NC=The analyte did not confirm
IS OUL=Internal Standard out of limits
CLCCV OUL=Closing CCV out of limits

Sample Summary

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21510241101	A-2709-MW2	Water	10/23/2015 10:45	10/24/2015 10:00
21510241102	A-2709-MW38	Water	10/23/2015 08:55	10/24/2015 10:00
21510241103	A-2709-MW20	Water	10/23/2015 11:15	10/24/2015 10:00
21510241104	EB-102315-04	Water	10/23/2015 09:25	10/24/2015 10:00
21510241105	TB-102315-04	Water	10/23/2015 07:30	10/24/2015 10:00

Sample Results

A-2709-MW2	**Collect Date**	10/23/2015 10:45	**GCAL ID**	21510241101
	Receive Date	10/24/2015 10:00	**Matrix**	Water

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	10/27/2015 22:32	CLH	571133

CAS#	Parameter	Result	DL	LOQ	Units
71-55-6	1,1,1-Trichloroethane	0.200U	0.200	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.200U	0.200	1.00	ug/L
79-00-5	1,1,2-Trichloroethane	0.200U	0.200	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.200U	0.200	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.200U	0.200	1.00	ug/L
563-58-6	1,1-Dichloropropene	0.200U	0.200	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.200U	0.200	1.00	ug/L
96-18-4	1,2,3-Trichloropropane	0.200U	0.200	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.200U	0.200	1.00	ug/L
95-63-6	1,2,4-Trimethylbenzene	0.200U	0.200	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.200U	0.200	1.00	ug/L
95-50-1	1,2-Dichlorobenzene	0.200U	0.200	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.200U	0.200	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.200U	0.200	1.00	ug/L
108-67-8	1,3,5-Trimethylbenzene	0.200U	0.200	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.200U	0.200	1.00	ug/L
142-28-9	1,3-Dichloropropane	0.200U	0.200	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.200U	0.200	1.00	ug/L
594-20-7	2,2-Dichloropropane	0.200U	0.200	1.00	ug/L
78-93-3	2-Butanone	0.200U	0.200	5.00	ug/L
95-49-8	2-Chlorotoluene	0.200U	0.200	1.00	ug/L
591-78-6	2-Hexanone	0.500U	0.500	5.00	ug/L
106-43-4	4-Chlorotoluene	0.200U	0.200	1.00	ug/L
99-87-6	4-Isopropyltoluene	0.200U	0.200	1.00	ug/L
108-10-1	4-Methyl-2-pentanone	0.200U	0.200	5.00	ug/L
67-64-1	Acetone	0.500U	0.500	5.00	ug/L
71-43-2	Benzene	0.200U	0.200	1.00	ug/L
108-86-1	Bromobenzene	0.200U	0.200	1.00	ug/L
74-97-5	Bromochloromethane	0.200U	0.200	1.00	ug/L
75-27-4	Bromodichloromethane	0.200U	0.200	1.00	ug/L
75-25-2	Bromoform	0.250U	0.250	1.00	ug/L
74-83-9	Bromomethane	0.500U	0.500	1.00	ug/L
56-23-5	Carbon tetrachloride	0.250U	0.250	1.00	ug/L
108-90-7	Chlorobenzene	0.200U	0.200	1.00	ug/L
75-00-3	Chloroethane	0.250UQ	0.250	1.00	ug/L
67-66-3	Chloroform	0.200U	0.200	1.00	ug/L
74-87-3	Chloromethane	0.200U	0.200	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.200U	0.200	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.200U	0.200	1.00	ug/L
124-48-1	Dibromochloromethane	0.200U	0.200	1.00	ug/L
75-71-8	Dichlorodifluoromethane	0.200U	0.200	1.00	ug/L
108-20-3	diisopropyl Ether (DIPE)	0.500U	0.500	5.00	ug/L
100-41-4	Ethylbenzene	0.200U	0.200	1.00	ug/L
98-82-8	Isopropylbenzene (Cumene)	0.200U	0.200	1.00	ug/L
136777-61-2	m,p-Xylene	0.200U	0.200	2.00	ug/L
75-09-2	Methylene chloride	0.200U	0.200	5.00	ug/L
104-51-8	n-Butylbenzene	0.200U	0.200	1.00	ug/L
103-65-1	n-Propylbenzene	1.00U	1.00	5.00	ug/L

Sample Results

A-2709-MW2	Collect Date	10/23/2015 10:45	GCAL ID	21510241101
	Receive Date	10/24/2015 10:00	Matrix	Water

EPA 8260B (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	10/27/2015 22:32	CLH	571133

CAS#	Parameter	Result	DL	LOQ	Units
95-47-6	o-Xylene	0.200U	0.200	1.00	ug/L
135-98-8	sec-Butylbenzene	0.200U	0.200	1.00	ug/L
100-42-5	Styrene	0.200U	0.200	1.00	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.200U	0.200	1.00	ug/L
98-06-6	tert-Butylbenzene	0.200U	0.200	1.00	ug/L
127-18-4	Tetrachloroethene	0.200U	0.200	1.00	ug/L
108-88-3	Toluene	0.200U	0.200	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.200U	0.200	1.00	ug/L
10061-02-6	trans-1,3-Dichloropropene	0.200U	0.200	1.00	ug/L
79-01-6	Trichloroethene	0.200U	0.200	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.200U	0.200	1.00	ug/L
108-05-4	Vinyl acetate	0.200U	0.200	1.00	ug/L
75-01-4	Vinyl chloride	0.200U	0.200	1.00	ug/L
1330-20-7	Xylene (total)	0.400U	0.400	3.00	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	46.5	ug/L	93	75 - 120
1868-53-7	Dibromofluoromethane	50	50	ug/L	100	85 - 115
2037-26-5	Toluene d8	50	50.4	ug/L	101	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	51.4	ug/L	103	70 - 120

EPA 8270D

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
10/27/2015 07:30	570983	EPA 3510C	1	10/28/2015 16:21	DSL	571196

CAS#	Parameter	Result	DL	LOQ	Units
122-66-7	1,2Diphenylhydrazine/Azobenzen	0.500U	0.500	10.0	ug/L
88-06-2	2,4,6-Trichlorophenol	0.500U	0.500	10.0	ug/L
120-83-2	2,4-Dichlorophenol	0.500U	0.500	10.0	ug/L
105-67-9	2,4-Dimethylphenol	0.500U	0.500	10.0	ug/L
51-28-5	2,4-Dinitrophenol	1.50U	1.50	50.0	ug/L
121-14-2	2,4-Dinitrotoluene	0.500U	0.500	10.0	ug/L
606-20-2	2,6-Dinitrotoluene	0.500U	0.500	10.0	ug/L
91-58-7	2-Chloronaphthalene	0.500U	0.500	10.0	ug/L
95-57-8	2-Chlorophenol	0.500U	0.500	10.0	ug/L
91-57-6	2-Methylnaphthalene	0.500U	0.500	10.0	ug/L
88-75-5	2-Nitrophenol	0.500U	0.500	10.0	ug/L
91-94-1	3,3'-Dichlorobenzidine	0.500U	0.500	10.0	ug/L
534-52-1	4,6-Dinitro-2-methylphenol	1.50U	1.50	50.0	ug/L
101-55-3	4-Bromophenyl phenyl ether	0.500U	0.500	10.0	ug/L
59-50-7	4-Chloro-3-methylphenol	0.500U	0.500	10.0	ug/L
106-47-8	4-Chloroaniline	0.500U	0.500	10.0	ug/L
7005-72-3	4-Chlorophenyl phenyl ether	0.500U	0.500	10.0	ug/L

Sample Results

A-2709-MW2	**Collect Date**	10/23/2015 10:45	**GCAL ID**	21510241101
	Receive Date	10/24/2015 10:00	**Matrix**	Water

EPA 8270D (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
10/27/2015 07:30	570983	EPA 3510C	1	10/28/2015 16:21	DSL	571196

CAS#	Parameter	Result	DL	LOQ	Units
100-02-7	4-Nitrophenol	1.50U	1.50	50.0	ug/L
83-32-9	Acenaphthene	0.500U	0.500	10.0	ug/L
208-96-8	Acenaphthylene	0.500U	0.500	10.0	ug/L
120-12-7	Anthracene	0.250U	0.250	10.0	ug/L
56-55-3	Benzo(a)anthracene	0.250U	0.250	10.0	ug/L
50-32-8	Benzo(a)pyrene	0.200UQ	0.200	10.0	ug/L
205-99-2	Benzo(b)fluoranthene	0.250U	0.250	10.0	ug/L
191-24-2	Benzo(g,h,i)perylene	0.250U	0.250	10.0	ug/L
207-08-9	Benzo(k)fluoranthene	0.500U	0.500	10.0	ug/L
65-85-0	Benzoic acid	1.50UQ	1.50	50.0	ug/L
100-51-6	Benzyl alcohol	0.500U	0.500	10.0	ug/L
111-91-1	Bis(2-Chloroethoxy)methane	0.500U	0.500	10.0	ug/L
111-44-4	Bis(2-Chloroethyl)ether	0.500U	0.500	10.0	ug/L
108-60-1	Bis(2-Chloroisopropyl)ether	0.500U	0.500	10.0	ug/L
117-81-7	Bis(2-Ethylhexyl)phthalate	0.250UQ	0.250	10.0	ug/L
85-68-7	Butyl benzyl phthalate	0.250UQ	0.250	10.0	ug/L
218-01-9	Chrysene	0.250U	0.250	10.0	ug/L
53-70-3	Dibenz(a,h)anthracene	0.250U	0.250	10.0	ug/L
132-64-9	Dibenzofuran	0.500U	0.500	10.0	ug/L
84-66-2	Diethyl phthalate	0.500U	0.500	10.0	ug/L
131-11-3	Dimethyl phthalate	0.500U	0.500	10.0	ug/L
84-74-2	Di-n-butyl phthalate	0.500U	0.500	10.0	ug/L
117-84-0	Di-n-octyl phthalate	0.250U	0.250	10.0	ug/L
206-44-0	Fluoranthene	0.250U	0.250	10.0	ug/L
86-73-7	Fluorene	0.500U	0.500	10.0	ug/L
118-74-1	Hexachlorobenzene	0.500U	0.500	10.0	ug/L
87-68-3	Hexachlorobutadiene	0.500U	0.500	10.0	ug/L
77-47-4	Hexachlorocyclopentadiene	1.50U	1.50	10.0	ug/L
67-72-1	Hexachloroethane	0.500U	0.500	10.0	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	0.250U	0.250	10.0	ug/L
78-59-1	Isophorone	0.500U	0.500	10.0	ug/L
1319-77-3MP	m,p-Cresol	0.250U	0.250	10.0	ug/L
91-20-3	Naphthalene	0.500U	0.500	10.0	ug/L
98-95-3	Nitrobenzene	0.500U	0.500	10.0	ug/L
621-64-7	n-Nitrosodi-n-propylamine	0.500U	0.500	10.0	ug/L
86-30-6	n-Nitrosodiphenylamine	0.500U	0.500	10.0	ug/L
95-48-7	o-Cresol	0.500U	0.500	10.0	ug/L
87-86-5	Pentachlorophenol	0.500U	0.500	10.0	ug/L
85-01-8	Phenanthrene	0.250U	0.250	10.0	ug/L
108-95-2	Phenol	0.500U	0.500	10.0	ug/L

Sample Results

A-2709-MW2	**Collect Date**	10/23/2015 10:45	**GCAL ID**	21510241101
	Receive Date	10/24/2015 10:00	**Matrix**	Water

EPA 8270D (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
10/27/2015 07:30	570983	EPA 3510C	1	10/28/2015 16:21	DSL	571196

CAS#	Parameter	Result	DL	LOQ	Units
129-00-0	Pyrene	0.500U	0.500	10.0	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
4165-60-0	Nitrobenzene-d5	50	45.3	ug/L	91	40 - 110
321-60-8	2-Fluorobiphenyl	50	46.6	ug/L	93	50 - 110
1718-51-0	Terphenyl-d14	50	60	ug/L	120	50 - 135
4165-62-2	Phenol-d5	100	38.9	ug/L	39	10 - 120
367-12-4	2-Fluorophenol	100	56.2	ug/L	56	20 - 110
118-79-6	2,4,6-Tribromophenol	100	75.8	ug/L	76	40 - 125

MADEP VPH Revision 1.1

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	10/29/2015 19:04	JAR	571308

CAS#	Parameter	Result	DL	LOQ	Units
GCV-00-4	C5-C8 Aliphatics	4.78U	4.78	30.0	ug/L
GCV-00-6	C9-C10 Aromatics	3.16U	3.16	10.0	ug/L
GCV-00-5	C9-C12 Aliphatics	4.54U	4.54	20.0	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
GCV-00-7	2,5-Dibromotoluene (PID)	50	41.8	ug/L	84	70 - 130
GCV-00-8	2,5-Dibromotoluene (FID)	50	44.2	ug/L	88	70 - 130

MADEP EPH Revision 1.1

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
10/27/2015 13:30	571000	MADEP EPH Revision 1.1	1	10/30/2015 20:40	DLB	571425

CAS#	Parameter	Result	DL	LOQ	Units
GCSV-02-24	C19-C36 Aliphatics	31.3U	31.3	100	ug/L
GCSV-02-23	C9-C18 Aliphatics	21.8U	21.8	100	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
3386-33-2	1-Chlorooctadecane	40	23.3	ug/L	58	40 - 140

Sample Results

A-2709-MW2

Collect Date	10/23/2015 10:45	**GCAL ID**	21510241101
Receive Date	10/24/2015 10:00	**Matrix**	Water

MADEP EPH Revision 1.1

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
10/27/2015 13:30	571000	MADEP EPH Revision 1.1	1	10/30/2015 20:40	DLB	571424

CAS#	Parameter	Result	DL	LOQ	Units
GCSV-02-22	C11-C22 Aromatics	42.1U	42.1	100	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
84-15-1	o-Terphenyl	40	35	ug/L	88	40 - 140
580-13-2	2-Bromonaphthalene	40	42.5	ug/L	106	40 - 140
321-60-8	2-Fluorobiphenyl	40	38.6	ug/L	97	40 - 140

A-2709-MW38

Collect Date	10/23/2015 08:55	**GCAL ID**	21510241102
Receive Date	10/24/2015 10:00	**Matrix**	Water

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	10/27/2015 22:52	CLH	571133

CAS#	Parameter	Result	DL	LOQ	Units
71-55-6	1,1,1-Trichloroethane	0.200U	0.200	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.200U	0.200	1.00	ug/L
79-00-5	1,1,2-Trichloroethane	0.200U	0.200	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.200U	0.200	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.200U	0.200	1.00	ug/L
563-58-6	1,1-Dichloropropene	0.200U	0.200	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.200U	0.200	1.00	ug/L
96-18-4	1,2,3-Trichloropropane	0.200U	0.200	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.200U	0.200	1.00	ug/L
95-63-6	1,2,4-Trimethylbenzene	0.200U	0.200	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.200U	0.200	1.00	ug/L
95-50-1	1,2-Dichlorobenzene	0.200U	0.200	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.200U	0.200	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.200U	0.200	1.00	ug/L
108-67-8	1,3,5-Trimethylbenzene	0.200U	0.200	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.200U	0.200	1.00	ug/L
142-28-9	1,3-Dichloropropane	0.200U	0.200	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.200U	0.200	1.00	ug/L
594-20-7	2,2-Dichloropropane	0.200U	0.200	1.00	ug/L
78-93-3	2-Butanone	0.200U	0.200	5.00	ug/L
95-49-8	2-Chlorotoluene	0.200U	0.200	1.00	ug/L
591-78-6	2-Hexanone	0.500U	0.500	5.00	ug/L
106-43-4	4-Chlorotoluene	0.200U	0.200	1.00	ug/L
99-87-6	4-Isopropyltoluene	0.200U	0.200	1.00	ug/L
108-10-1	4-Methyl-2-pentanone	0.200U	0.200	5.00	ug/L
67-64-1	Acetone	0.500U	0.500	5.00	ug/L
71-43-2	Benzene	0.200U	0.200	1.00	ug/L

Sample Results

A-2709-MW38	**Collect Date**	10/23/2015 08:55	**GCAL ID**	21510241102
	Receive Date	10/24/2015 10:00	**Matrix**	Water

EPA 8260B (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	10/27/2015 22:52	CLH	571133

CAS#	Parameter	Result	DL	LOQ	Units
108-86-1	Bromobenzene	0.200U	0.200	1.00	ug/L
74-97-5	Bromochloromethane	0.200U	0.200	1.00	ug/L
75-27-4	Bromodichloromethane	0.200U	0.200	1.00	ug/L
75-25-2	Bromoform	0.250U	0.250	1.00	ug/L
74-83-9	Bromomethane	0.500U	0.500	1.00	ug/L
56-23-5	Carbon tetrachloride	0.250U	0.250	1.00	ug/L
108-90-7	Chlorobenzene	0.200U	0.200	1.00	ug/L
75-00-3	Chloroethane	0.250UQ	0.250	1.00	ug/L
67-66-3	Chloroform	0.200U	0.200	1.00	ug/L
74-87-3	Chloromethane	0.200U	0.200	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.200U	0.200	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.200U	0.200	1.00	ug/L
124-48-1	Dibromochloromethane	0.200U	0.200	1.00	ug/L
75-71-8	Dichlorodifluoromethane	0.200U	0.200	1.00	ug/L
108-20-3	diisopropyl Ether (DIPE)	0.500U	0.500	5.00	ug/L
100-41-4	Ethylbenzene	0.200U	0.200	1.00	ug/L
98-82-8	Isopropylbenzene (Cumene)	0.200U	0.200	1.00	ug/L
136777-61-2	m,p-Xylene	0.200U	0.200	2.00	ug/L
75-09-2	Methylene chloride	0.200U	0.200	5.00	ug/L
104-51-8	n-Butylbenzene	0.200U	0.200	1.00	ug/L
103-65-1	n-Propylbenzene	1.00U	1.00	5.00	ug/L
95-47-6	o-Xylene	0.200U	0.200	1.00	ug/L
135-98-8	sec-Butylbenzene	0.200U	0.200	1.00	ug/L
100-42-5	Styrene	0.200U	0.200	1.00	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.200U	0.200	1.00	ug/L
98-06-6	tert-Butylbenzene	0.200U	0.200	1.00	ug/L
127-18-4	Tetrachloroethene	0.200U	0.200	1.00	ug/L
108-88-3	Toluene	0.200U	0.200	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.200U	0.200	1.00	ug/L
10061-02-6	trans-1,3-Dichloropropene	0.200U	0.200	1.00	ug/L
79-01-6	Trichloroethene	0.200U	0.200	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.200U	0.200	1.00	ug/L
108-05-4	Vinyl acetate	0.200U	0.200	1.00	ug/L
75-01-4	Vinyl chloride	0.200U	0.200	1.00	ug/L
1330-20-7	Xylene (total)	0.400U	0.400	3.00	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	46.5	ug/L	93	75 - 120
1868-53-7	Dibromofluoromethane	50	49.7	ug/L	99	85 - 115
2037-26-5	Toluene d8	50	50.5	ug/L	101	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	51.1	ug/L	102	70 - 120

Sample Results

A-2709-MW38	**Collect Date**	10/23/2015 08:55	**GCAL ID**	21510241102
	Receive Date	10/24/2015 10:00	**Matrix**	Water

EPA 8270D

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
10/27/2015 07:30	570983	EPA 3510C	1	10/28/2015 16:37	DSL	571196

CAS#	Parameter	Result	DL	LOQ	Units
122-66-7	1,2Diphenylhydrazine/Azobenzen	0.500U	0.500	10.0	ug/L
88-06-2	2,4,6-Trichlorophenol	0.500U	0.500	10.0	ug/L
120-83-2	2,4-Dichlorophenol	0.500U	0.500	10.0	ug/L
105-67-9	2,4-Dimethylphenol	0.500U	0.500	10.0	ug/L
51-28-5	2,4-Dinitrophenol	1.50U	1.50	50.0	ug/L
121-14-2	2,4-Dinitrotoluene	0.500U	0.500	10.0	ug/L
606-20-2	2,6-Dinitrotoluene	0.500U	0.500	10.0	ug/L
91-58-7	2-Chloronaphthalene	0.500U	0.500	10.0	ug/L
95-57-8	2-Chlorophenol	0.500U	0.500	10.0	ug/L
91-57-6	2-Methylnaphthalene	0.500U	0.500	10.0	ug/L
88-75-5	2-Nitrophenol	0.500U	0.500	10.0	ug/L
91-94-1	3,3'-Dichlorobenzidine	0.500U	0.500	10.0	ug/L
534-52-1	4,6-Dinitro-2-methylphenol	1.50U	1.50	50.0	ug/L
101-55-3	4-Bromophenyl phenyl ether	0.500U	0.500	10.0	ug/L
59-50-7	4-Chloro-3-methylphenol	0.500U	0.500	10.0	ug/L
106-47-8	4-Chloroaniline	0.500U	0.500	10.0	ug/L
7005-72-3	4-Chlorophenyl phenyl ether	0.500U	0.500	10.0	ug/L
100-02-7	4-Nitrophenol	1.50U	1.50	50.0	ug/L
83-32-9	Acenaphthene	0.500U	0.500	10.0	ug/L
208-96-8	Acenaphthylene	0.500U	0.500	10.0	ug/L
120-12-7	Anthracene	0.250U	0.250	10.0	ug/L
56-55-3	Benzo(a)anthracene	0.250U	0.250	10.0	ug/L
50-32-8	Benzo(a)pyrene	0.200UQ	0.200	10.0	ug/L
205-99-2	Benzo(b)fluoranthene	0.250U	0.250	10.0	ug/L
191-24-2	Benzo(g,h,i)perylene	0.250U	0.250	10.0	ug/L
207-08-9	Benzo(k)fluoranthene	0.500U	0.500	10.0	ug/L
65-85-0	Benzoic acid	1.50UQ	1.50	50.0	ug/L
100-51-6	Benzyl alcohol	0.500U	0.500	10.0	ug/L
111-91-1	Bis(2-Chloroethoxy)methane	0.500U	0.500	10.0	ug/L
111-44-4	Bis(2-Chloroethyl)ether	0.500U	0.500	10.0	ug/L
108-60-1	Bis(2-Chloroisopropyl)ether	0.500U	0.500	10.0	ug/L
117-81-7	Bis(2-Ethylhexyl)phthalate	0.250UQ	0.250	10.0	ug/L
85-68-7	Butyl benzyl phthalate	0.250UQ	0.250	10.0	ug/L
218-01-9	Chrysene	0.250U	0.250	10.0	ug/L
53-70-3	Dibenz(a,h)anthracene	0.250U	0.250	10.0	ug/L
132-64-9	Dibenzofuran	0.500U	0.500	10.0	ug/L
84-66-2	Diethyl phthalate	0.500U	0.500	10.0	ug/L
131-11-3	Dimethyl phthalate	0.500U	0.500	10.0	ug/L
84-74-2	Di-n-butyl phthalate	0.500U	0.500	10.0	ug/L
117-84-0	Di-n-octyl phthalate	0.250U	0.250	10.0	ug/L
206-44-0	Fluoranthene	0.250U	0.250	10.0	ug/L
86-73-7	Fluorene	0.500U	0.500	10.0	ug/L
118-74-1	Hexachlorobenzene	0.500U	0.500	10.0	ug/L
87-68-3	Hexachlorobutadiene	0.500U	0.500	10.0	ug/L
77-47-4	Hexachlorocyclopentadiene	1.50U	1.50	10.0	ug/L
67-72-1	Hexachloroethane	0.500U	0.500	10.0	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	0.250U	0.250	10.0	ug/L
78-59-1	Isophorone	0.500U	0.500	10.0	ug/L

Sample Results

A-2709-MW38	**Collect Date**	10/23/2015 08:55	**GCAL ID**	21510241102
	Receive Date	10/24/2015 10:00	**Matrix**	Water

EPA 8270D (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
10/27/2015 07:30	570983	EPA 3510C	1	10/28/2015 16:37	DSL	571196

CAS#	Parameter	Result	DL	LOQ	Units
1319-77-3MP	m,p-Cresol	0.250U	0.250	10.0	ug/L
91-20-3	Naphthalene	0.500U	0.500	10.0	ug/L
98-95-3	Nitrobenzene	0.500U	0.500	10.0	ug/L
621-64-7	n-Nitrosodi-n-propylamine	0.500U	0.500	10.0	ug/L
86-30-6	n-Nitrosodiphenylamine	0.500U	0.500	10.0	ug/L
95-48-7	o-Cresol	0.500U	0.500	10.0	ug/L
87-86-5	Pentachlorophenol	0.500U	0.500	10.0	ug/L
85-01-8	Phenanthrene	0.250U	0.250	10.0	ug/L
108-95-2	Phenol	0.500U	0.500	10.0	ug/L
129-00-0	Pyrene	0.500U	0.500	10.0	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
4165-60-0	Nitrobenzene-d5	50	45.3	ug/L	91	40 - 110
321-60-8	2-Fluorobiphenyl	50	47.1	ug/L	94	50 - 110
1718-51-0	Terphenyl-d14	50	60.5	ug/L	121	50 - 135
4165-62-2	Phenol-d5	100	39.6	ug/L	40	10 - 120
367-12-4	2-Fluorophenol	100	56.9	ug/L	57	20 - 110
118-79-6	2,4,6-Tribromophenol	100	80.5	ug/L	81	40 - 125

MADEP VPH Revision 1.1

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	10/29/2015 19:40	JAR	571308

CAS#	Parameter	Result	DL	LOQ	Units
GCV-00-4	C5-C8 Aliphatics	4.78U	4.78	30.0	ug/L
GCV-00-6	C9-C10 Aromatics	3.16U	3.16	10.0	ug/L
GCV-00-5	C9-C12 Aliphatics	4.54U	4.54	20.0	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
GCV-00-7	2,5-Dibromotoluene (PID)	50	41.3	ug/L	83	70 - 130
GCV-00-8	2,5-Dibromotoluene (FID)	50	45.1	ug/L	90	70 - 130

MADEP EPH Revision 1.1

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
10/27/2015 13:30	571000	MADEP EPH Revision 1.1	1	10/30/2015 20:59	DLB	571425

CAS#	Parameter	Result	DL	LOQ	Units
GCSV-02-24	C19-C36 Aliphatics	31.3U	31.3	100	ug/L

Sample Results

A-2709-MW38

Collect Date	10/23/2015 08:55	**GCAL ID**	21510241102
Receive Date	10/24/2015 10:00	**Matrix**	Water

MADEP EPH Revision 1.1 (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
10/27/2015 13:30	571000	MADEP EPH Revision 1.1 (Continued)	1	10/30/2015 20:59	DLB	571425

CAS#	Parameter	Result	DL	LOQ	Units
GCSV-02-23	C9-C18 Aliphatics	21.8U	21.8	100	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
3386-33-2	1-Chlorooctadecane	40	22.2	ug/L	56	40 - 140

MADEP EPH Revision 1.1

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
10/27/2015 13:30	571000	MADEP EPH Revision 1.1	1	10/30/2015 20:59	DLB	571424

CAS#	Parameter	Result	DL	LOQ	Units
GCSV-02-22	C11-C22 Aromatics	42.1U	42.1	100	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
84-15-1	o-Terphenyl	40	37.3	ug/L	93	40 - 140
580-13-2	2-Bromonaphthalene	40	41.5	ug/L	104	40 - 140
321-60-8	2-Fluorobiphenyl	40	39.1	ug/L	98	40 - 140

A-2709-MW20

Collect Date	10/23/2015 11:15	**GCAL ID**	21510241103
Receive Date	10/24/2015 10:00	**Matrix**	Water

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	10/27/2015 23:11	CLH	571133

CAS#	Parameter	Result	DL	LOQ	Units
71-55-6	1,1,1-Trichloroethane	0.200U	0.200	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.200U	0.200	1.00	ug/L
79-00-5	1,1,2-Trichloroethane	0.200U	0.200	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.200U	0.200	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.200U	0.200	1.00	ug/L
563-58-6	1,1-Dichloropropene	0.200U	0.200	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.200U	0.200	1.00	ug/L
96-18-4	1,2,3-Trichloropropane	0.200U	0.200	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.200U	0.200	1.00	ug/L
95-63-6	1,2,4-Trimethylbenzene	0.200U	0.200	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.200U	0.200	1.00	ug/L
95-50-1	1,2-Dichlorobenzene	0.200U	0.200	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.200U	0.200	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.200U	0.200	1.00	ug/L

Sample Results

A-2709-MW20	**Collect Date**	10/23/2015 11:15	**GCAL ID**	21510241103
	Receive Date	10/24/2015 10:00	**Matrix**	Water

EPA 8260B (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	10/27/2015 23:11	CLH	571133

CAS#	Parameter	Result	DL	LOQ	Units
108-67-8	1,3,5-Trimethylbenzene	0.200U	0.200	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.200U	0.200	1.00	ug/L
142-28-9	1,3-Dichloropropane	0.200U	0.200	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.200U	0.200	1.00	ug/L
594-20-7	2,2-Dichloropropane	0.200U	0.200	1.00	ug/L
78-93-3	2-Butanone	0.200U	0.200	5.00	ug/L
95-49-8	2-Chlorotoluene	0.200U	0.200	1.00	ug/L
591-78-6	2-Hexanone	0.500U	0.500	5.00	ug/L
106-43-4	4-Chlorotoluene	0.200U	0.200	1.00	ug/L
99-87-6	4-Isopropyltoluene	0.200U	0.200	1.00	ug/L
108-10-1	4-Methyl-2-pentanone	0.200U	0.200	5.00	ug/L
67-64-1	Acetone	0.500U	0.500	5.00	ug/L
71-43-2	Benzene	0.200U	0.200	1.00	ug/L
108-86-1	Bromobenzene	0.200U	0.200	1.00	ug/L
74-97-5	Bromochloromethane	0.200U	0.200	1.00	ug/L
75-27-4	Bromodichloromethane	0.200U	0.200	1.00	ug/L
75-25-2	Bromoform	0.250U	0.250	1.00	ug/L
74-83-9	Bromomethane	0.500U	0.500	1.00	ug/L
56-23-5	Carbon tetrachloride	0.250U	0.250	1.00	ug/L
108-90-7	Chlorobenzene	0.200U	0.200	1.00	ug/L
75-00-3	Chloroethane	0.250UQ	0.250	1.00	ug/L
67-66-3	Chloroform	0.200U	0.200	1.00	ug/L
74-87-3	Chloromethane	0.200U	0.200	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.200U	0.200	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.200U	0.200	1.00	ug/L
124-48-1	Dibromochloromethane	0.200U	0.200	1.00	ug/L
75-71-8	Dichlorodifluoromethane	0.200U	0.200	1.00	ug/L
108-20-3	diisopropyl Ether (DIPE)	0.500U	0.500	5.00	ug/L
100-41-4	Ethylbenzene	0.200U	0.200	1.00	ug/L
98-82-8	Isopropylbenzene (Cumene)	0.200U	0.200	1.00	ug/L
136777-61-2	m,p-Xylene	0.200U	0.200	2.00	ug/L
75-09-2	Methylene chloride	0.200U	0.200	5.00	ug/L
104-51-8	n-Butylbenzene	0.200U	0.200	1.00	ug/L
103-65-1	n-Propylbenzene	1.00U	1.00	5.00	ug/L
95-47-6	o-Xylene	0.200U	0.200	1.00	ug/L
135-98-8	sec-Butylbenzene	0.200U	0.200	1.00	ug/L
100-42-5	Styrene	0.200U	0.200	1.00	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.200U	0.200	1.00	ug/L
98-06-6	tert-Butylbenzene	0.200U	0.200	1.00	ug/L
127-18-4	Tetrachloroethene	0.200U	0.200	1.00	ug/L
108-88-3	Toluene	0.200U	0.200	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.200U	0.200	1.00	ug/L
10061-02-6	trans-1,3-Dichloropropene	0.200U	0.200	1.00	ug/L
79-01-6	Trichloroethene	0.200U	0.200	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.200U	0.200	1.00	ug/L
108-05-4	Vinyl acetate	0.200U	0.200	1.00	ug/L
75-01-4	Vinyl chloride	0.200U	0.200	1.00	ug/L

Sample Results

A-2709-MW20	**Collect Date**	10/23/2015 11:15	**GCAL ID**	21510241103
	Receive Date	10/24/2015 10:00	**Matrix**	Water

EPA 8260B (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	10/27/2015 23:11	CLH	571133

CAS#	Parameter	Result	DL	LOQ	Units
1330-20-7	Xylene (total)	0.400U	0.400	3.00	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	45.8	ug/L	92	75 - 120
1868-53-7	Dibromofluoromethane	50	49.4	ug/L	99	85 - 115
2037-26-5	Toluene d8	50	50	ug/L	100	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	50.2	ug/L	100	70 - 120

EPA 8270D

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
10/27/2015 07:30	570983	EPA 3510C	1	10/28/2015 16:54	DSL	571196

CAS#	Parameter	Result	DL	LOQ	Units
122-66-7	1,2Diphenylhydrazine/Azobenzen	0.500U	0.500	10.0	ug/L
88-06-2	2,4,6-Trichlorophenol	0.500U	0.500	10.0	ug/L
120-83-2	2,4-Dichlorophenol	0.500U	0.500	10.0	ug/L
105-67-9	2,4-Dimethylphenol	0.500U	0.500	10.0	ug/L
51-28-5	2,4-Dinitrophenol	1.50U	1.50	50.0	ug/L
121-14-2	2,4-Dinitrotoluene	0.500U	0.500	10.0	ug/L
606-20-2	2,6-Dinitrotoluene	0.500U	0.500	10.0	ug/L
91-58-7	2-Chloronaphthalene	0.500U	0.500	10.0	ug/L
95-57-8	2-Chlorophenol	0.500U	0.500	10.0	ug/L
91-57-6	2-Methylnaphthalene	0.500U	0.500	10.0	ug/L
88-75-5	2-Nitrophenol	0.500U	0.500	10.0	ug/L
91-94-1	3,3'-Dichlorobenzidine	0.500U	0.500	10.0	ug/L
534-52-1	4,6-Dinitro-2-methylphenol	1.50U	1.50	50.0	ug/L
101-55-3	4-Bromophenyl phenyl ether	0.500U	0.500	10.0	ug/L
59-50-7	4-Chloro-3-methylphenol	0.500U	0.500	10.0	ug/L
106-47-8	4-Chloroaniline	0.500U	0.500	10.0	ug/L
7005-72-3	4-Chlorophenyl phenyl ether	0.500U	0.500	10.0	ug/L
100-02-7	4-Nitrophenol	1.50U	1.50	50.0	ug/L
83-32-9	Acenaphthene	0.500U	0.500	10.0	ug/L
208-96-8	Acenaphthylene	0.500U	0.500	10.0	ug/L
120-12-7	Anthracene	0.250U	0.250	10.0	ug/L
56-55-3	Benzo(a)anthracene	0.250U	0.250	10.0	ug/L
50-32-8	Benzo(a)pyrene	0.200UQ	0.200	10.0	ug/L
205-99-2	Benzo(b)fluoranthene	0.250U	0.250	10.0	ug/L
191-24-2	Benzo(g,h,i)perylene	0.250U	0.250	10.0	ug/L
207-08-9	Benzo(k)fluoranthene	0.500U	0.500	10.0	ug/L
65-85-0	Benzoic acid	1.50UQ	1.50	50.0	ug/L
100-51-6	Benzyl alcohol	0.500U	0.500	10.0	ug/L
111-91-1	Bis(2-Chloroethoxy)methane	0.500U	0.500	10.0	ug/L
111-44-4	Bis(2-Chloroethyl)ether	0.500U	0.500	10.0	ug/L

Sample Results

A-2709-MW20	Collect Date	10/23/2015 11:15	GCAL ID	21510241103
	Receive Date	10/24/2015 10:00	Matrix	Water

EPA 8270D (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
10/27/2015 07:30	570983	EPA 3510C	1	10/28/2015 16:54	DSL	571196

CAS#	Parameter	Result	DL	LOQ	Units
108-60-1	Bis(2-Chloroisopropyl)ether	0.500U	0.500	10.0	ug/L
117-81-7	Bis(2-Ethylhexyl)phthalate	0.250UQ	0.250	10.0	ug/L
85-68-7	Butyl benzyl phthalate	0.250UQ	0.250	10.0	ug/L
218-01-9	Chrysene	0.250U	0.250	10.0	ug/L
53-70-3	Dibenz(a,h)anthracene	0.250U	0.250	10.0	ug/L
132-64-9	Dibenzofuran	0.500U	0.500	10.0	ug/L
84-66-2	Diethyl phthalate	0.500U	0.500	10.0	ug/L
131-11-3	Dimethyl phthalate	0.500U	0.500	10.0	ug/L
84-74-2	Di-n-butyl phthalate	0.500U	0.500	10.0	ug/L
117-84-0	Di-n-octyl phthalate	0.250U	0.250	10.0	ug/L
206-44-0	Fluoranthene	0.250U	0.250	10.0	ug/L
86-73-7	Fluorene	0.500U	0.500	10.0	ug/L
118-74-1	Hexachlorobenzene	0.500U	0.500	10.0	ug/L
87-68-3	Hexachlorobutadiene	0.500U	0.500	10.0	ug/L
77-47-4	Hexachlorocyclopentadiene	1.50U	1.50	10.0	ug/L
67-72-1	Hexachloroethane	0.500U	0.500	10.0	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	0.250U	0.250	10.0	ug/L
78-59-1	Isophorone	0.500U	0.500	10.0	ug/L
1319-77-3MP	m,p-Cresol	0.250U	0.250	10.0	ug/L
91-20-3	Naphthalene	0.500U	0.500	10.0	ug/L
98-95-3	Nitrobenzene	0.500U	0.500	10.0	ug/L
621-64-7	n-Nitrosodi-n-propylamine	0.500U	0.500	10.0	ug/L
86-30-6	n-Nitrosodiphenylamine	0.500U	0.500	10.0	ug/L
95-48-7	o-Cresol	0.500U	0.500	10.0	ug/L
87-86-5	Pentachlorophenol	0.500U	0.500	10.0	ug/L
85-01-8	Phenanthrene	0.250U	0.250	10.0	ug/L
108-95-2	Phenol	0.500U	0.500	10.0	ug/L
129-00-0	Pyrene	0.500U	0.500	10.0	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
4165-60-0	Nitrobenzene-d5	50	46.3	ug/L	93	40 - 110
321-60-8	2-Fluorobiphenyl	50	47.5	ug/L	95	50 - 110
1718-51-0	Terphenyl-d14	50	62.6	ug/L	125	50 - 135
4165-62-2	Phenol-d5	100	41.4	ug/L	41	10 - 120
367-12-4	2-Fluorophenol	100	60	ug/L	60	20 - 110
118-79-6	2,4,6-Tribromophenol	100	82.1	ug/L	82	40 - 125

MADEP VPH Revision 1.1

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	10/29/2015 20:07	JAR	571308

CAS#	Parameter	Result	DL	LOQ	Units
GCV-00-4	C5-C8 Aliphatics	4.78U	4.78	30.0	ug/L

Sample Results

A-2709-MW20	**Collect Date**	10/23/2015 11:15	**GCAL ID**	21510241103
	Receive Date	10/24/2015 10:00	**Matrix**	Water

MADEP VPH Revision 1.1 (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	10/29/2015 20:07	JAR	571308

CAS#	Parameter	Result	DL	LOQ	Units
GCV-00-6	C9-C10 Aromatics	3.16U	3.16	10.0	ug/L
GCV-00-5	C9-C12 Aliphatics	4.54U	4.54	20.0	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
GCV-00-7	2,5-Dibromotoluene (PID)	50	41.6	ug/L	83	70 - 130
GCV-00-8	2,5-Dibromotoluene (FID)	50	46.1	ug/L	92	70 - 130

MADEP EPH Revision 1.1

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
10/27/2015 13:30	571000	MADEP EPH Revision 1.1	1	10/30/2015 21:18	DLB	571425

CAS#	Parameter	Result	DL	LOQ	Units
GCSV-02-24	C19-C36 Aliphatics	31.3U	31.3	100	ug/L
GCSV-02-23	C9-C18 Aliphatics	21.8U	21.8	100	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
3386-33-2	1-Chlorooctadecane	40	19.7	ug/L	49	40 - 140

MADEP EPH Revision 1.1

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
10/27/2015 13:30	571000	MADEP EPH Revision 1.1	1	10/30/2015 21:18	DLB	571424

CAS#	Parameter	Result	DL	LOQ	Units
GCSV-02-22	C11-C22 Aromatics	42.1U	42.1	100	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
84-15-1	o-Terphenyl	40	36.7	ug/L	92	40 - 140
580-13-2	2-Bromonaphthalene	40	44.5	ug/L	111	40 - 140
321-60-8	2-Fluorobiphenyl	40	40.6	ug/L	102	40 - 140

Sample Results

EB-102315-04	**Collect Date**	10/23/2015 09:25	**GCAL ID**	21510241104
	Receive Date	10/24/2015 10:00	**Matrix**	Water

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	10/27/2015 21:53	CLH	571133

CAS#	Parameter	Result	DL	LOQ	Units
71-55-6	1,1,1-Trichloroethane	0.200U	0.200	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.200U	0.200	1.00	ug/L
79-00-5	1,1,2-Trichloroethane	0.200U	0.200	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.200U	0.200	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.200U	0.200	1.00	ug/L
563-58-6	1,1-Dichloropropene	0.200U	0.200	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.200U	0.200	1.00	ug/L
96-18-4	1,2,3-Trichloropropane	0.200U	0.200	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.200U	0.200	1.00	ug/L
95-63-6	1,2,4-Trimethylbenzene	0.200U	0.200	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.200U	0.200	1.00	ug/L
95-50-1	1,2-Dichlorobenzene	0.200U	0.200	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.200U	0.200	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.200U	0.200	1.00	ug/L
108-67-8	1,3,5-Trimethylbenzene	0.200U	0.200	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.200U	0.200	1.00	ug/L
142-28-9	1,3-Dichloropropane	0.200U	0.200	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.200U	0.200	1.00	ug/L
594-20-7	2,2-Dichloropropane	0.200U	0.200	1.00	ug/L
78-93-3	2-Butanone	0.200U	0.200	5.00	ug/L
95-49-8	2-Chlorotoluene	0.200U	0.200	1.00	ug/L
591-78-6	2-Hexanone	0.500U	0.500	5.00	ug/L
106-43-4	4-Chlorotoluene	0.200U	0.200	1.00	ug/L
99-87-6	4-Isopropyltoluene	0.200U	0.200	1.00	ug/L
108-10-1	4-Methyl-2-pentanone	0.200U	0.200	5.00	ug/L
67-64-1	Acetone	0.500U	0.500	5.00	ug/L
71-43-2	Benzene	0.200U	0.200	1.00	ug/L
108-86-1	Bromobenzene	0.200U	0.200	1.00	ug/L
74-97-5	Bromochloromethane	0.200U	0.200	1.00	ug/L
75-27-4	Bromodichloromethane	0.200U	0.200	1.00	ug/L
75-25-2	Bromoform	0.250U	0.250	1.00	ug/L
74-83-9	Bromomethane	0.500U	0.500	1.00	ug/L
56-23-5	Carbon tetrachloride	0.250U	0.250	1.00	ug/L
108-90-7	Chlorobenzene	0.200U	0.200	1.00	ug/L
75-00-3	Chloroethane	0.250UQ	0.250	1.00	ug/L
67-66-3	Chloroform	0.200U	0.200	1.00	ug/L
74-87-3	Chloromethane	0.200U	0.200	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.200U	0.200	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.200U	0.200	1.00	ug/L
124-48-1	Dibromochloromethane	0.200U	0.200	1.00	ug/L
75-71-8	Dichlorodifluoromethane	0.200U	0.200	1.00	ug/L
108-20-3	diisopropyl Ether (DIPE)	0.500U	0.500	5.00	ug/L
100-41-4	Ethylbenzene	0.200U	0.200	1.00	ug/L
98-82-8	Isopropylbenzene (Cumene)	0.200U	0.200	1.00	ug/L
136777-61-2	m,p-Xylene	0.200U	0.200	2.00	ug/L
75-09-2	Methylene chloride	0.200U	0.200	5.00	ug/L
104-51-8	n-Butylbenzene	0.200U	0.200	1.00	ug/L
103-65-1	n-Propylbenzene	1.00U	1.00	5.00	ug/L

Sample Results

EB-102315-04	Collect Date	10/23/2015 09:25	GCAL ID	21510241104
	Receive Date	10/24/2015 10:00	Matrix	Water

EPA 8260B (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	10/27/2015 21:53	CLH	571133

CAS#	Parameter	Result	DL	LOQ	Units
95-47-6	o-Xylene	0.200U	0.200	1.00	ug/L
135-98-8	sec-Butylbenzene	0.200U	0.200	1.00	ug/L
100-42-5	Styrene	0.200U	0.200	1.00	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.200U	0.200	1.00	ug/L
98-06-6	tert-Butylbenzene	0.200U	0.200	1.00	ug/L
127-18-4	Tetrachloroethene	0.200U	0.200	1.00	ug/L
108-88-3	Toluene	0.200U	0.200	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.200U	0.200	1.00	ug/L
10061-02-6	trans-1,3-Dichloropropene	0.200U	0.200	1.00	ug/L
79-01-6	Trichloroethene	0.200U	0.200	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.200U	0.200	1.00	ug/L
108-05-4	Vinyl acetate	0.200U	0.200	1.00	ug/L
75-01-4	Vinyl chloride	0.200U	0.200	1.00	ug/L
1330-20-7	Xylene (total)	0.400U	0.400	3.00	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	47.4	ug/L	95	75 - 120
1868-53-7	Dibromofluoromethane	50	49.4	ug/L	99	85 - 115
2037-26-5	Toluene d8	50	50.9	ug/L	102	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	49.6	ug/L	99	70 - 120

EPA 8270D

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
10/27/2015 07:30	570983	EPA 3510C	1	10/28/2015 17:10	DSL	571196

CAS#	Parameter	Result	DL	LOQ	Units
122-66-7	1,2Diphenylhydrazine/Azobenzen	0.500U	0.500	10.0	ug/L
88-06-2	2,4,6-Trichlorophenol	0.500U	0.500	10.0	ug/L
120-83-2	2,4-Dichlorophenol	0.500U	0.500	10.0	ug/L
105-67-9	2,4-Dimethylphenol	0.500U	0.500	10.0	ug/L
51-28-5	2,4-Dinitrophenol	1.50U	1.50	50.0	ug/L
121-14-2	2,4-Dinitrotoluene	0.500U	0.500	10.0	ug/L
606-20-2	2,6-Dinitrotoluene	0.500U	0.500	10.0	ug/L
91-58-7	2-Chloronaphthalene	0.500U	0.500	10.0	ug/L
95-57-8	2-Chlorophenol	0.500U	0.500	10.0	ug/L
91-57-6	2-Methylnaphthalene	0.500U	0.500	10.0	ug/L
88-75-5	2-Nitrophenol	0.500U	0.500	10.0	ug/L
91-94-1	3,3'-Dichlorobenzidine	0.500U	0.500	10.0	ug/L
534-52-1	4,6-Dinitro-2-methylphenol	1.50U	1.50	50.0	ug/L
101-55-3	4-Bromophenyl phenyl ether	0.500U	0.500	10.0	ug/L
59-50-7	4-Chloro-3-methylphenol	0.500U	0.500	10.0	ug/L
106-47-8	4-Chloroaniline	0.500U	0.500	10.0	ug/L
7005-72-3	4-Chlorophenyl phenyl ether	0.500U	0.500	10.0	ug/L

Sample Results

EB-102315-04	**Collect Date**	10/23/2015 09:25	**GCAL ID**	21510241104
	Receive Date	10/24/2015 10:00	**Matrix**	Water

EPA 8270D (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
10/27/2015 07:30	570983	EPA 3510C	1	10/28/2015 17:10	DSL	571196

CAS#	Parameter	Result	DL	LOQ	Units
100-02-7	4-Nitrophenol	1.50U	1.50	50.0	ug/L
83-32-9	Acenaphthene	0.500U	0.500	10.0	ug/L
208-96-8	Acenaphthylene	0.500U	0.500	10.0	ug/L
120-12-7	Anthracene	0.250U	0.250	10.0	ug/L
56-55-3	Benzo(a)anthracene	0.250U	0.250	10.0	ug/L
50-32-8	Benzo(a)pyrene	0.200UQ	0.200	10.0	ug/L
205-99-2	Benzo(b)fluoranthene	0.250U	0.250	10.0	ug/L
191-24-2	Benzo(g,h,i)perylene	0.250U	0.250	10.0	ug/L
207-08-9	Benzo(k)fluoranthene	0.500U	0.500	10.0	ug/L
65-85-0	Benzoic acid	1.50UQ	1.50	50.0	ug/L
100-51-6	Benzyl alcohol	0.500U	0.500	10.0	ug/L
111-91-1	Bis(2-Chloroethoxy)methane	0.500U	0.500	10.0	ug/L
111-44-4	Bis(2-Chloroethyl)ether	0.500U	0.500	10.0	ug/L
108-60-1	Bis(2-Chloroisopropyl)ether	0.500U	0.500	10.0	ug/L
117-81-7	Bis(2-Ethylhexyl)phthalate	0.250UQ	0.250	10.0	ug/L
85-68-7	Butyl benzyl phthalate	0.250UQ	0.250	10.0	ug/L
218-01-9	Chrysene	0.250U	0.250	10.0	ug/L
53-70-3	Dibenz(a,h)anthracene	0.250U	0.250	10.0	ug/L
132-64-9	Dibenzofuran	0.500U	0.500	10.0	ug/L
84-66-2	Diethyl phthalate	0.500U	0.500	10.0	ug/L
131-11-3	Dimethyl phthalate	0.500U	0.500	10.0	ug/L
84-74-2	Di-n-butyl phthalate	0.500U	0.500	10.0	ug/L
117-84-0	Di-n-octyl phthalate	0.250U	0.250	10.0	ug/L
206-44-0	Fluoranthene	0.250U	0.250	10.0	ug/L
86-73-7	Fluorene	0.500U	0.500	10.0	ug/L
118-74-1	Hexachlorobenzene	0.500U	0.500	10.0	ug/L
87-68-3	Hexachlorobutadiene	0.500U	0.500	10.0	ug/L
77-47-4	Hexachlorocyclopentadiene	1.50U	1.50	10.0	ug/L
67-72-1	Hexachloroethane	0.500U	0.500	10.0	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	0.250U	0.250	10.0	ug/L
78-59-1	Isophorone	0.500U	0.500	10.0	ug/L
1319-77-3MP	m,p-Cresol	0.250U	0.250	10.0	ug/L
91-20-3	Naphthalene	0.500U	0.500	10.0	ug/L
98-95-3	Nitrobenzene	0.500U	0.500	10.0	ug/L
621-64-7	n-Nitrosodi-n-propylamine	0.500U	0.500	10.0	ug/L
86-30-6	n-Nitrosodiphenylamine	0.500U	0.500	10.0	ug/L
95-48-7	o-Cresol	0.500U	0.500	10.0	ug/L
87-86-5	Pentachlorophenol	0.500U	0.500	10.0	ug/L
85-01-8	Phenanthrene	0.250U	0.250	10.0	ug/L
108-95-2	Phenol	0.500U	0.500	10.0	ug/L

Sample Results

EB-102315-04	Collect Date	10/23/2015 09:25	GCAL ID	21510241104
	Receive Date	10/24/2015 10:00	Matrix	Water

EPA 8270D (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
10/27/2015 07:30	570983	EPA 3510C	1	10/28/2015 17:10	DSL	571196

CAS#	Parameter	Result	DL	LOQ	Units
129-00-0	Pyrene	0.500U	0.500	10.0	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
4165-60-0	Nitrobenzene-d5	50	45.5	ug/L	91	40 - 110
321-60-8	2-Fluorobiphenyl	50	47.8	ug/L	96	50 - 110
1718-51-0	Terphenyl-d14	50	61.3	ug/L	123	50 - 135
4165-62-2	Phenol-d5	100	39.3	ug/L	39	10 - 120
367-12-4	2-Fluorophenol	100	57.5	ug/L	58	20 - 110
118-79-6	2,4,6-Tribromophenol	100	81.8	ug/L	82	40 - 125

MADEP VPH Revision 1.1

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	10/29/2015 20:34	JAR	571308

CAS#	Parameter	Result	DL	LOQ	Units
GCV-00-4	C5-C8 Aliphatics	4.78U	4.78	30.0	ug/L
GCV-00-6	C9-C10 Aromatics	3.16U	3.16	10.0	ug/L
GCV-00-5	C9-C12 Aliphatics	4.54U	4.54	20.0	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
GCV-00-7	2,5-Dibromotoluene (PID)	50	40.7	ug/L	81	70 - 130
GCV-00-8	2,5-Dibromotoluene (FID)	50	45.6	ug/L	91	70 - 130

MADEP EPH Revision 1.1

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
10/27/2015 13:30	571000	MADEP EPH Revision 1.1	1	10/30/2015 21:38	DLB	571425

CAS#	Parameter	Result	DL	LOQ	Units
GCSV-02-24	C19-C36 Aliphatics	31.3U	31.3	100	ug/L
GCSV-02-23	C9-C18 Aliphatics	21.8U	21.8	100	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
3386-33-2	1-Chlorooctadecane	40	23.2	ug/L	58	40 - 140

Sample Results

EB-102315-04

Collect Date	10/23/2015 09:25	**GCAL ID**	21510241104
Receive Date	10/24/2015 10:00	**Matrix**	Water

MADEP EPH Revision 1.1

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
10/27/2015 13:30	571000	MADEP EPH Revision 1.1	1	10/30/2015 21:38	DLB	571424

CAS#	Parameter	Result	DL	LOQ	Units
GCSV-02-22	C11-C22 Aromatics	42.1U	42.1	100	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
84-15-1	o-Terphenyl	40	40.3	ug/L	101	40 - 140
580-13-2	2-Bromonaphthalene	40	48.2	ug/L	121	40 - 140
321-60-8	2-Fluorobiphenyl	40	44	ug/L	110	40 - 140

TB-102315-04

Collect Date	10/23/2015 07:30	**GCAL ID**	21510241105
Receive Date	10/24/2015 10:00	**Matrix**	Water

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	10/27/2015 22:13	CLH	571133

CAS#	Parameter	Result	DL	LOQ	Units
71-55-6	1,1,1-Trichloroethane	0.200U	0.200	1.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.200U	0.200	1.00	ug/L
79-00-5	1,1,2-Trichloroethane	0.200U	0.200	1.00	ug/L
75-34-3	1,1-Dichloroethane	0.200U	0.200	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.200U	0.200	1.00	ug/L
563-58-6	1,1-Dichloropropene	0.200U	0.200	1.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.200U	0.200	1.00	ug/L
96-18-4	1,2,3-Trichloropropane	0.200U	0.200	1.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.200U	0.200	1.00	ug/L
95-63-6	1,2,4-Trimethylbenzene	0.200U	0.200	1.00	ug/L
106-93-4	1,2-Dibromoethane	0.200U	0.200	1.00	ug/L
95-50-1	1,2-Dichlorobenzene	0.200U	0.200	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.200U	0.200	1.00	ug/L
78-87-5	1,2-Dichloropropane	0.200U	0.200	1.00	ug/L
108-67-8	1,3,5-Trimethylbenzene	0.200U	0.200	1.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.200U	0.200	1.00	ug/L
142-28-9	1,3-Dichloropropane	0.200U	0.200	1.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.200U	0.200	1.00	ug/L
594-20-7	2,2-Dichloropropane	0.200U	0.200	1.00	ug/L
78-93-3	2-Butanone	0.200U	0.200	5.00	ug/L
95-49-8	2-Chlorotoluene	0.200U	0.200	1.00	ug/L
591-78-6	2-Hexanone	0.500U	0.500	5.00	ug/L
106-43-4	4-Chlorotoluene	0.200U	0.200	1.00	ug/L
99-87-6	4-Isopropyltoluene	0.200U	0.200	1.00	ug/L
108-10-1	4-Methyl-2-pentanone	0.200U	0.200	5.00	ug/L
67-64-1	Acetone	0.500U	0.500	5.00	ug/L
71-43-2	Benzene	0.200U	0.200	1.00	ug/L

Sample Results

TB-102315-04	**Collect Date**	10/23/2015 07:30	**GCAL ID**	21510241105
	Receive Date	10/24/2015 10:00	**Matrix**	Water

EPA 8260B (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	10/27/2015 22:13	CLH	571133

CAS#	Parameter	Result	DL	LOQ	Units
108-86-1	Bromobenzene	0.200U	0.200	1.00	ug/L
74-97-5	Bromochloromethane	0.200U	0.200	1.00	ug/L
75-27-4	Bromodichloromethane	0.200U	0.200	1.00	ug/L
75-25-2	Bromoform	0.250U	0.250	1.00	ug/L
74-83-9	Bromomethane	0.500U	0.500	1.00	ug/L
56-23-5	Carbon tetrachloride	0.250U	0.250	1.00	ug/L
108-90-7	Chlorobenzene	0.200U	0.200	1.00	ug/L
75-00-3	Chloroethane	0.250UQ	0.250	1.00	ug/L
67-66-3	Chloroform	0.200U	0.200	1.00	ug/L
74-87-3	Chloromethane	0.200U	0.200	1.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.200U	0.200	1.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.200U	0.200	1.00	ug/L
124-48-1	Dibromochloromethane	0.200U	0.200	1.00	ug/L
75-71-8	Dichlorodifluoromethane	0.200U	0.200	1.00	ug/L
108-20-3	diisopropyl Ether (DIPE)	0.500U	0.500	5.00	ug/L
100-41-4	Ethylbenzene	0.200U	0.200	1.00	ug/L
98-82-8	Isopropylbenzene (Cumene)	0.200U	0.200	1.00	ug/L
136777-61-2	m,p-Xylene	0.200U	0.200	2.00	ug/L
75-09-2	Methylene chloride	0.200U	0.200	5.00	ug/L
104-51-8	n-Butylbenzene	0.200U	0.200	1.00	ug/L
103-65-1	n-Propylbenzene	1.00U	1.00	5.00	ug/L
95-47-6	o-Xylene	0.200U	0.200	1.00	ug/L
135-98-8	sec-Butylbenzene	0.200U	0.200	1.00	ug/L
100-42-5	Styrene	0.200U	0.200	1.00	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.200U	0.200	1.00	ug/L
98-06-6	tert-Butylbenzene	0.200U	0.200	1.00	ug/L
127-18-4	Tetrachloroethene	0.200U	0.200	1.00	ug/L
108-88-3	Toluene	0.200U	0.200	1.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.200U	0.200	1.00	ug/L
10061-02-6	trans-1,3-Dichloropropene	0.200U	0.200	1.00	ug/L
79-01-6	Trichloroethene	0.200U	0.200	1.00	ug/L
75-69-4	Trichlorofluoromethane	0.200U	0.200	1.00	ug/L
108-05-4	Vinyl acetate	0.200U	0.200	1.00	ug/L
75-01-4	Vinyl chloride	0.200U	0.200	1.00	ug/L
1330-20-7	Xylene (total)	0.400U	0.400	3.00	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	47.1	ug/L	94	75 - 120
1868-53-7	Dibromofluoromethane	50	49.8	ug/L	100	85 - 115
2037-26-5	Toluene d8	50	51.1	ug/L	102	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	50.9	ug/L	102	70 - 120

GC/MS Volatiles QC Summary

Analytical Batch 571133	Client ID	MB571133		LCS571133				LCSD571133				
	GCAL ID	1503283		1503284				1503285				
	Sample Type	MB		LCS				LCSD				
	Prep Date	NA		NA				NA				
	Analysis Date	10/27/2015 15:45		10/27/2015 14:22				10/27/2015 14:46				
	Matrix	Water		Water				Water				
EPA 8260B		Units Result	ug/L DL	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
1,1,1-Trichloroethane	71-55-6	0.200U	0.200	50.0	52.5	105	65 - 130	50.0	52.1	104	1	30
1,1,2,2-Tetrachloroethane	79-34-5	0.200U	0.200	50.0	49.4	99	65 - 130	50.0	50.7	101	3	30
1,1,2-Trichloroethane	79-00-5	0.200U	0.200	50.0	49.6	99	75 - 125	50.0	49.6	99	0	30
1,1-Dichloroethane	75-34-3	0.200U	0.200	50.0	51.4	103	70 - 135	50.0	50.6	101	2	30
1,1-Dichloroethene	75-35-4	0.200U	0.200	50.0	54.5	109	70 - 130	50.0	53.3	107	2	30
1,1-Dichloropropene	563-58-6	0.200U	0.200	50.0	54.2	108	75 - 130	50.0	52.7	105	3	30
1,2,3-Trichlorobenzene	87-61-6	0.200U	0.200	50.0	47.7	95	55 - 140	50.0	46.6	93	2	30
1,2,3-Trichloropropane	96-18-4	0.200U	0.200	50.0	46.3	93	75 - 125	50.0	48.3	97	4	30
1,2,4-Trichlorobenzene	120-82-1	0.200U	0.200	50.0	47.8	96	65 - 135	50.0	46.8	94	2	30
1,2,4-Trimethylbenzene	95-63-6	0.200U	0.200	50.0	51.7	103	75 - 130	50.0	50.9	102	2	30
1,2-Dibromoethane	106-93-4	0.200U	0.200	50.0	50.7	101	80 - 120	50.0	51.0	102	1	30
1,2-Dichlorobenzene	95-50-1	0.200U	0.200	50.0	50.6	101	70 - 120	50.0	50.1	100	1	30
1,2-Dichloroethane	107-06-2	0.200U	0.200	50.0	49.5	99	70 - 130	50.0	49.5	99	0	30
1,2-Dichloropropane	78-87-5	0.200U	0.200	50.0	50.7	101	75 - 125	50.0	50.7	101	0	30
1,3,5-Trimethylbenzene	108-67-8	0.200U	0.200	50.0	51.1	102	75 - 130	50.0	50.9	102	0	30
1,3-Dichlorobenzene	541-73-1	0.200U	0.200	50.0	50.9	102	75 - 125	50.0	50.9	102	0	30
1,3-Dichloropropane	142-28-9	0.200U	0.200	50.0	50.4	101	75 - 125	50.0	51.0	102	1	30
1,4-Dichlorobenzene	106-46-7	0.200U	0.200	50.0	50.4	101	75 - 125	50.0	49.9	100	1	30
2,2-Dichloropropane	594-20-7	0.200U	0.200	50.0	54.8	110	70 - 135	50.0	53.2	106	3	30
2-Butanone	78-93-3	0.200U	0.200	50.0	48.1	96	30 - 150	50.0	51.0	102	6	30
2-Chlorotoluene	95-49-8	0.200U	0.200	50.0	50.3	101	75 - 125	50.0	50.5	101	0	30
2-Hexanone	591-78-6	0.500U	0.500	50.0	48.8	98	55 - 130	50.0	52.5	105	7	30
4-Chlorotoluene	106-43-4	0.200U	0.200	50.0	50.9	102	75 - 130	50.0	50.4	101	1	30
4-Isopropyltoluene	99-87-6	0.200U	0.200	50.0	51.9	104	75 - 130	50.0	51.0	102	2	30
4-Methyl-2-pentanone	108-10-1	0.200U	0.200	50.0	48.2	96	60 - 135	50.0	50.9	102	5	30
Acetone	67-64-1	0.500U	0.500	50.0	42.9	86	40 - 140	50.0	46.4	93	8	30
Benzene	71-43-2	0.200U	0.200	50.0	51.6	103	80 - 120	50.0	50.5	101	2	30
Bromobenzene	108-86-1	0.200U	0.200	50.0	49.8	100	75 - 125	50.0	49.9	100	0	30
Bromochloromethane	74-97-5	0.200U	0.200	50.0	52.0	104	65 - 130	50.0	50.2	100	4	30
Bromodichloromethane	75-27-4	0.200U	0.200	50.0	52.8	106	75 - 120	50.0	52.0	104	2	30
Bromoform	75-25-2	0.250U	0.250	50.0	51.6	103	70 - 130	50.0	53.0	106	3	30
Bromomethane	74-83-9	0.500U	0.500	50.0	50.2	100	30 - 145	50.0	51.8	104	3	30
Carbon tetrachloride	56-23-5	0.250U	0.250	50.0	54.5	109	65 - 140	50.0	53.3	107	2	30
Chlorobenzene	108-90-7	0.200U	0.200	50.0	51.3	103	80 - 120	50.0	50.6	101	1	30
Chloroethane	75-00-3	0.250U	0.250	50.0	60.3	121	60 - 135	50.0	51.3	103	16	30
Chloroform	67-66-3	0.200U	0.200	50.0	51.0	102	65 - 135	50.0	49.7	99	3	30
Chloromethane	74-87-3	0.200U	0.200	50.0	49.8	100	40 - 125	50.0	50.6	101	2	30
cis-1,2-Dichloroethene	156-59-2	0.200U	0.200	50.0	51.4	103	70 - 125	50.0	50.5	101	2	30
cis-1,3-Dichloropropene	10061-01-5	0.200U	0.200	50.0	52.6	105	70 - 130	50.0	52.7	105	0	30
Dibromochloromethane	124-48-1	0.200U	0.200	50.0	51.8	104	60 - 135	50.0	51.6	103	0	30
Dichlorodifluoromethane	75-71-8	0.200U	0.200	50.0	54.0	108	30 - 155	50.0	52.8	106	2	30
diisopropyl Ether (DIPE)	108-20-3	0.500U	0.500	50.0	46.3	93	60 - 140	50.0	45.5	91	2	30
Ethylbenzene	100-41-4	0.200U	0.200	50.0	51.9	104	75 - 125	50.0	51.6	103	1	30
Isopropylbenzene (Cumene)	98-82-8	0.200U	0.200	50.0	52.9	106	75 - 125	50.0	52.2	104	1	30
m,p-Xylene	136777-61-2	0.200U	0.200	100	104	104	75 - 130	100	104	104	0	30
Methylene chloride	75-09-2	0.200U	0.200	50.0	48.5	97	55 - 140	50.0	48.0	96	1	30
n-Butylbenzene	104-51-8	0.200U	0.200	50.0	53.5	107	70 - 135	50.0	51.6	103	4	30
n-Propylbenzene	103-65-1	1.00U	1.00	50.0	51.3	103	70 - 130	50.0	50.2	100	2	30
o-Xylene	95-47-6	0.200U	0.200	50.0	52.2	104	80 - 120	50.0	51.9	104	1	30
sec-Butylbenzene	135-98-8	0.200U	0.200	50.0	51.7	103	70 - 125	50.0	50.9	102	2	30
Styrene	100-42-5	0.200U	0.200	50.0	53.9	108	65 - 135	50.0	53.9	108	0	30
tert-Butyl methyl ether (MTBE)	1634-04-4	0.200U	0.200	50.0	50.5	101	65 - 125	50.0	50.9	102	1	30
tert-Butylbenzene	98-06-6	0.200U	0.200	50.0	51.2	102	70 - 130	50.0	50.9	102	1	30
Tetrachloroethene	127-18-4	0.200U	0.200	50.0	53.0	106	45 - 150	50.0	53.4	107	1	30
Toluene	108-88-3	0.200U	0.200	50.0	50.6	101	75 - 120	50.0	50.1	100	1	30
trans-1,2-Dichloroethene	156-60-5	0.200U	0.200	50.0	52.2	104	60 - 140	50.0	51.0	102	2	30
trans-1,3-Dichloropropene	10061-02-6	0.200U	0.200	50.0	52.6	105	55 - 140	50.0	52.4	105	0	30
Trichloroethene	79-01-6	0.200U	0.200	50.0	51.1	102	70 - 125	50.0	50.8	102	1	30

GC/MS Volatiles QC Summary

Analytical Batch 571133	Client ID	MB571133		LCS571133				LCSD571133				
	GCAL ID	1503283		1503284				1503285				
	Sample Type	MB		LCS				LCSD				
	Prep Date	NA		NA				NA				
	Analysis Date	10/27/2015 15:45		10/27/2015 14:22				10/27/2015 14:46				
	Matrix	Water		Water				Water				
EPA 8260B		Units Result	ug/L DL	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Trichlorofluoromethane	75-69-4	0.200U	0.200	50.0	55.3	111	60 - 145	50.0	53.2	106	4	30
Vinyl acetate	108-05-4	0.200U	0.200	50.0	53.2	106	66 - 145	50.0	52.2	104	2	30
Vinyl chloride	75-01-4	0.200U	0.200	50.0	52.2	104	50 - 145	50.0	52.0	104	0	30
Xylene (total)	1330-20-7	0.400U	0.400	150	156	104	75 - 130	150	156	104	0	30
Surrogate												
1,2-Dichloroethane-d4	17060-07-0	50.1	100	50	49.9	100	70 - 120	50	49.7	99	0	NA
4-Bromofluorobenzene	460-00-4	50.2	100	50	51.2	102	75 - 120	50	51.7	103	1	NA
Dibromofluoromethane	1868-53-7	49.4	99	50	51.5	103	85 - 115	50	50.5	101	2	NA
Toluene d8	2037-26-5	51.2	102	50	49.9	100	85 - 120	50	49.7	99	0	NA

GC/MS Semi-Volatiles QC Summary

Analytical Batch	Client ID	MB570983	LCS570983	LCSD570983
571196	GCAL ID	1502533	1502534	1502535
Prep Batch	Sample Type	MB	LCS	LCSD
570983	Prep Date	10/27/2015 07:30	10/27/2015 07:30	10/27/2015 07:30
Prep Method	Analysis Date	10/28/2015 10:24	10/28/2015 10:56	10/28/2015 15:32
EPA 3510C	Matrix	Water	Water	Water

EPA 8270D		Units Result	ug/L DL	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
1,2Diphenylhydrazine/Azobenzen	122-66-7	0.500U	0.500	50.0	48.1	96	55 - 115	50.0	49.0	98	2	30
2,4,6-Trichlorophenol	88-06-2	0.500U	0.500	50.0	43.7	87	50 - 115	50.0	44.9	90	3	30
2,4-Dichlorophenol	120-83-2	0.500U	0.500	50.0	42.3	85	50 - 105	50.0	44.7	89	6	30
2,4-Dimethylphenol	105-67-9	0.500U	0.500	50.0	41.2	82	30 - 110	50.0	42.4	85	3	30
2,4-Dinitrophenol	51-28-5	1.50U	1.50	50.0	36.6	73	15 - 140	50.0	39.0	78	6	30
2,4-Dinitrotoluene	121-14-2	0.500U	0.500	50.0	45.2	90	50 - 120	50.0	46.9	94	4	30
2,6-Dinitrotoluene	606-20-2	0.500U	0.500	50.0	46.5	93	50 - 115	50.0	48.7	97	5	30
2-Chloronaphthalene	91-58-7	0.500U	0.500	50.0	39.0	78	50 - 105	50.0	42.2	84	8	30
2-Chlorophenol	95-57-8	0.500U	0.500	50.0	39.6	79	35 - 105	50.0	41.1	82	4	30
2-Methylnaphthalene	91-57-6	0.500U	0.500	50.0	32.0	64	45 - 105	50.0	37.5	75	16	30
2-Nitrophenol	88-75-5	0.500U	0.500	50.0	46.9	94	40 - 115	50.0	50.4	101	7	30
3,3'-Dichlorobenzidine	91-94-1	0.500U	0.500	50.0	54.0	108	20 - 110	50.0	55.1	110	2	30
4,6-Dinitro-2-methylphenol	534-52-1	1.50U	1.50	50.0	44.5	89	40 - 130	50.0	47.7	95	7	30
4-Bromophenyl phenyl ether	101-55-3	0.500U	0.500	50.0	48.0	96	50 - 115	50.0	49.1	98	2	30
4-Chloro-3-methylphenol	59-50-7	0.500U	0.500	50.0	38.6	77	45 - 110	50.0	38.6	77	0	30
4-Chloroaniline	106-47-8	0.500U	0.500	50.0	34.5	69	15 - 110	50.0	36.9	74	7	30
4-Chlorophenyl phenyl ether	7005-72-3	0.500U	0.500	50.0	42.9	86	50 - 110	50.0	44.6	89	4	30
4-Nitrophenol	100-02-7	1.50U	1.50	50.0	19.7	39	10 - 120	50.0	22.3	45	12	30
Acenaphthene	83-32-9	0.500U	0.500	50.0	42.5	85	45 - 110	50.0	45.4	91	7	30
Acenaphthylene	208-96-8	0.500U	0.500	50.0	43.5	87	50 - 105	50.0	47.0	94	8	30
Anthracene	120-12-7	0.250U	0.250	50.0	48.9	98	55 - 110	50.0	51.6	103	5	30
Benzo(a)anthracene	56-55-3	0.250U	0.250	50.0	52.3	105	55 - 110	50.0	53.4	107	2	30
Benzo(a)pyrene	50-32-8	0.200U	0.200	50.0	55.3	**111***	55 - 110	50.0	57.0	**114***	3	30
Benzo(b)fluoranthene	205-99-2	0.250U	0.250	50.0	55.1	110	45 - 120	50.0	59.6	119	8	30
Benzo(g,h,i)perylene	191-24-2	0.250U	0.250	50.0	38.7	77	40 - 125	50.0	39.6	79	2	30
Benzo(k)fluoranthene	207-08-9	0.500U	0.500	50.0	57.4	115	45 - 125	50.0	57.0	114	1	30
Benzoic acid	65-85-0	1.50U	1.50	50.0	7.25	**15***	20 - 120	50.0	11.5	23	**45***	30
Benzyl alcohol	100-51-6	0.500U	0.500	50.0	35.6	71	30 - 110	50.0	36.0	72	1	30
Bis(2-Chloroethoxy)methane	111-91-1	0.500U	0.500	50.0	45.6	91	45 - 105	50.0	47.4	95	4	30
Bis(2-Chloroethyl)ether	111-44-4	0.500U	0.500	50.0	42.5	85	35 - 110	50.0	43.1	86	1	30
Bis(2-Chloroisopropyl)ether	108-60-1	0.500U	0.500	50.0	40.7	81	25 - 130	50.0	41.3	83	1	30
Bis(2-Ethylhexyl)phthalate	117-81-7	0.250U	0.250	50.0	60.8	122	40 - 125	50.0	62.3	125	2	30
Butyl benzyl phthalate	85-68-7	0.250U	0.250	50.0	62.6	**125***	45 - 115	50.0	65.2	**130***	4	30
Chrysene	218-01-9	0.250U	0.250	50.0	49.1	98	55 - 110	50.0	51.3	103	4	30
Dibenz(a,h)anthracene	53-70-3	0.250U	0.250	50.0	39.3	79	40 - 125	50.0	41.1	82	4	30
Dibenzofuran	132-64-9	0.500U	0.500	50.0	42.5	85	55 - 105	50.0	45.0	90	6	30
Diethyl phthalate	84-66-2	0.500U	0.500	50.0	45.6	91	40 - 120	50.0	47.4	95	4	30
Dimethyl phthalate	131-11-3	0.500U	0.500	50.0	44.5	89	25 - 125	50.0	45.8	92	3	30
Di-n-butyl phthalate	84-74-2	0.500U	0.500	50.0	51.2	102	55 - 115	50.0	54.0	108	5	30
Di-n-octyl phthalate	117-84-0	0.250U	0.250	50.0	55.0	110	35 - 135	50.0	56.9	114	3	30
Fluoranthene	206-44-0	0.250U	0.250	50.0	44.6	89	55 - 115	50.0	48.1	96	8	30
Fluorene	86-73-7	0.500U	0.500	50.0	43.8	88	50 - 110	50.0	45.6	91	4	30
Hexachlorobenzene	118-74-1	0.500U	0.500	50.0	47.3	95	50 - 110	50.0	49.2	98	4	30
Hexachlorobutadiene	87-68-3	0.500U	0.500	50.0	18.4	37	25 - 105	50.0	24.8	50	30	30
Hexachlorocyclopentadiene	77-47-4	1.50U	1.50	50.0	25.5	51	16 - 120	50.0	32.7	65	25	30
Hexachloroethane	67-72-1	0.500U	0.500	50.0	18.1	36	30 - 100	50.0	21.5	43	17	30
Indeno(1,2,3-cd)pyrene	193-39-5	0.250U	0.250	50.0	38.7	77	45 - 125	50.0	41.1	82	6	30
Isophorone	78-59-1	0.500U	0.500	50.0	46.4	93	50 - 110	50.0	47.9	96	3	30
m,p-Cresol	1319-77-3MP	0.250U	0.250	50.0	32.7	65	30 - 110	50.0	33.4	67	2	30
Naphthalene	91-20-3	0.500U	0.500	50.0	30.3	61	40 - 100	50.0	36.6	73	19	30
Nitrobenzene	98-95-3	0.500U	0.500	50.0	44.5	89	45 - 110	50.0	46.4	93	4	30
n-Nitrosodi-n-propylamine	621-64-7	0.500U	0.500	50.0	41.1	82	35 - 130	50.0	41.4	83	1	30
n-Nitrosodiphenylamine	86-30-6	0.500U	0.500	50.0	48.6	97	50 - 110	50.0	50.1	100	3	30
o-Cresol	95-48-7	0.500U	0.500	50.0	35.0	70	40 - 110	50.0	36.1	72	3	30
Pentachlorophenol	87-86-5	0.500U	0.500	50.0	42.5	85	40 - 115	50.0	43.9	88	3	30
Phenanthrene	85-01-8	0.250U	0.250	50.0	46.8	94	50 - 115	50.0	48.3	97	3	30
Phenol	108-95-2	0.500U	0.500	50.0	18.7	37	10 - 120	50.0	20.8	42	11	30
Pyrene	129-00-0	0.500U	0.500	50.0	58.2	116	50 - 130	50.0	59.6	119	2	30

GC/MS Semi-Volatiles QC Summary

Analytical Batch	Client ID	MB570983		LCS570983				LCSD570983				
571196	GCAL ID	1502533		1502534				1502535				
Prep Batch	Sample Type	MB		LCS				LCSD				
570983	Prep Date	10/27/2015 07:30		10/27/2015 07:30				10/27/2015 07:30				
Prep Method	Analysis Date	10/28/2015 10:24		10/28/2015 10:56				10/28/2015 15:32				
EPA 3510C	Matrix	Water		Water				Water				
EPA 8270D		Units Result	ug/L DL	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Surrogate												
2,4,6-Tribromophenol	118-79-6	91.2	91	100	87.6	88	40 - 125	100	91.3	91	4	NA
2-Fluorobiphenyl	321-60-8	45.8	92	50	45.2	90	50 - 110	50	48.4	97	7	NA
2-Fluorophenol	367-12-4	59.7	60	100	54.6	55	20 - 110	100	59.2	59	8	NA
Nitrobenzene-d5	4165-60-0	47.2	94	50	44.6	89	40 - 110	50	48.8	98	9	NA
Phenol-d5	4165-62-2	42.5	43	100	37.5	38	10 - 120	100	43.3	43	14	NA
Terphenyl-d14	1718-51-0	62.8	126	50	62.9	126	50 - 135	50	65.6	131	4	NA

GC Volatiles QC Summary

Analytical Batch 571308	Client ID	MB571308		LCS571308				LCSD571308				
	GCAL ID	1504268		1504269				1504270				
	Sample Type	MB		LCS				LCSD				
	Prep Date	NA		NA				NA				
	Analysis Date	10/29/2015 18:23		10/29/2015 16:03				10/29/2015 17:03				
	Matrix	Water		Water				Water				
MADEP VPH Revision 1.1		Units Result	ug/L DL	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
C5-C8 Aliphatics	GCV-00-4	4.78U	4.78	150	154	103	60 - 140	150	143	95	7	30
C9-C10 Aromatics	GCV-00-6	3.16U	3.16	50.0	48.1	96	60 - 140	50.0	45.4	91	6	30
C9-C12 Aliphatics	GCV-00-5	4.54U	4.54	100	90.6	91	60 - 140	100	87.8	88	3	30
Surrogate												
2,5-Dibromotoluene (FID)	GCV-00-8	46.6	93	50	47.5	95	70 - 130	50	47.8	96	1	NA
2,5-Dibromotoluene (PID)	GCV-00-7	41.5	83	50	45.1	90	70 - 130	50	43.3	87	4	NA

GC Semi-Volatiles QC Summary

Analytical Batch	Client ID	MB571000		LCS571000				LCSD571000				
571425	GCAL ID	1502591		1502592				1502593				
Prep Batch	Sample Type	MB		LCS				LCSD				
571000	Prep Date	10/27/2015 13:30		10/27/2015 13:30				10/27/2015 13:30				
Prep Method	Analysis Date	10/30/2015 19:42		10/30/2015 20:01				10/30/2015 20:20				
MADEP EPH Revision 1.1	Matrix	Water		Water				Water				
MADEP EPH Revision 1.1		Units Result	ug/L DL	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
C19-C36 Aliphatics	GCSV-02-24	31.3U	31.3	400	298	75	40 - 140	400	271	68	9	25
C9-C18 Aliphatics	GCSV-02-23	21.8U	21.8	300	206	69	40 - 140	300	183	61	12	25
Surrogate												
1-Chlorooctadecane	3386-33-2	19.5	49	40	26.9	67	40 - 140	40	24.7	62	9	NA

Analytical Batch	Client ID	MB571000		LCS571000				LCSD571000				
571424	GCAL ID	1502591		1502592				1502593				
Prep Batch	Sample Type	MB		LCS				LCSD				
571000	Prep Date	10/27/2015 13:30		10/27/2015 13:30				10/27/2015 13:30				
Prep Method	Analysis Date	10/30/2015 19:42		10/30/2015 20:01				10/30/2015 20:20				
MADEP EPH Revision 1.1	Matrix	Water		Water				Water				
MADEP EPH Revision 1.1		Units Result	ug/L DL	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
C11-C22 Aromatics	GCSV-02-22	42.1U	42.1	850	761	90	40 - 140	850	837	98	10	25
Surrogate												
2-Bromonaphthalene	580-13-2	41.1	103	40	42.6	107	40 - 140	40	47.8	120	12	NA
2-Fluorobiphenyl	321-60-8	37.6	94	40	39.4	99	40 - 140	40	43.7	109	10	NA
o-Terphenyl	84-15-1	35.5	89	40	37.4	94	40 - 140	40	38.8	97	4	NA

GCAL ANALYTICAL LABORATORIES, LLC

CHAIN OF CUSTODY RECORD

7979 Innovation Park Dr., Baton Rouge, LA 70820-7402
Phone: 225.769.4900 • Fax: 225.767.5717 • www.gcal.com

Client ID: 4476 - Parsons
SDG: 215102411
PM: RCH2

Report to:
Client: PARSONS
Address: 3577 PARKWAY LANE S-100
NORCROSS, GA 30092
Contact: ANGIE WELCH
Phone: 404-803-3791
E-mail: Angie.Welch@parsons.com

Bill to:
Client: PARSONS
Address:
Contact: STEPHANIE BLISS
Phone: 801-572-5999
E-mail: Stephanie.Bliss@parsons.com

P.O. Number:
Project Name/Number: FT. BRAGG - SITE 38
Sampled By: C. HUGY

Analytical Requests & Method

GCAL use only:
Custody Seal used ☐ yes ☐ no
intact ☐ yes ☐ no
Temperature °C 1.1 EZ4 3.3, 5.3
☐ Dissolved Analysis Requested
☐ Field filtered
☐ Lab filtered

Matrix[1]	Date	Time (2400)	Comp	Grab	Sample Description	No Containers	VOCs SW8260B HCL	SVOCs 8270C NONE	EPH HCL	VPH HCL								Preservative
W	10/23/15	10:45		X	A-2709-MW2	10	X	X	X	X								1
W	10/23/15	08:55		X	A-2709-MW38	10	X	X	X	X								2
W	10/23/15	11:15		X	A-2709-MW20	10	X	X	X	X								3
W	10/23/15	09:25		X	EB-102315-04	10	X	X	X	X								4

Air Bill No: 8053 1078 4829

Turn Around Time (Business Days): ☐ 24h* ☐ 48h* ☐ 3 days* ☐ 1 week* ☒ Standard (Per Contract/Quote)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
[signature]	10/23/15	15:00	FEDEX	10/23/15	15:00
Relinquished by: (Signature) Fedex	10/24/15	1000	Received by: (Signature) [signature]	10/24/15	1000
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

Note: THESE SAMPLES SHIPPED WITH SITE 305 - ONE TRIP BLANK FOR SHIPMENT TB-102315-04

By submitting these samples, you agree to GCAL's terms and conditions contained in our most recent schedule of services.

Matrix[1]: W = water, S = solid, L = liquid, T = tissue

*Requires prior approval, rush charges may apply.

We cannot accept verbal changes. Please email written changes to your PM.

WHITE: CLIENT FINAL REPORT - CANARY: CLIENT

GCAL ANALYTICAL LABORATORIES, LLC

7979 Innovation Park Dr., Baton Rouge, LA 70820-7402
Phone: 225.769.4900 • Fax: 225.767.5717 • www.gcal.com

CHAIN OF CUSTODY RECORD

Client ID: 4476 - Parsons
SDG: ~~215102413~~ 215102411 CAE 11/2/15
PM: RCH2

Report to:
Client: PARSONS
Address: 3577 PARKWAY LANE S-100 NORCROSS, GA 30092
Contact: ANGIE WELCH
Phone: 404-803-3791
E-mail: Angie.Welch@parsons.com

Bill to:
Client: PARSONS
Address:
Contact: STEPHANIE BLISS
Phone: 801-572-5999
E-mail: Stephanie.Bliss@parsons.com

P.O. Number:
Project Name/Number: FT. BRAGG - SITE 305
Sampled By: HUGH / MANGLONA / TEPLY

Analytical Requests & Method: VOCs SW8260B; TAL METALS

GCAL use only:
Custody Seal used ☐ yes ☐ no
intact ☐ yes ☐ no
Temperature °C 1.1 E24
3.3, 5.3

☐ Dissolved Analysis Requested
☐ Field filtered
☐ Lab filtered

Matrix[1]	Date	Time (2400)	Comp	Grab	Sample Description	No Containers	HCL	HNO3	Preservative
W	10/23/15	07:30		X	TB-102315-04	3	X		2151024/105 CAE 11/2/15
~~W~~	~~10/23/15~~	~~14:25~~		~~X~~	~~305-18MW07~~	~~4~~	~~X~~	~~X~~	
~~W~~	~~10/23/15~~	~~14:05~~		~~X~~	~~305-18MW19~~	~~4~~	~~X~~	~~X~~	

Air Bill No: 8053 1078 4829

Turn Around Time (Business Days): ☐ 24h* ☐ 48h* ☐ 3 days* ☐ 1 week* ☒ Standard (Per Contract/Quote)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
[signature]	10/23/15	15:00	FEDEX	10/23/15	15:00
FEDEX	10/24/15	1000	[signature]	10/24/15	1000
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

Note:

By submitting these samples, you agree to GCAL's terms and conditions contained in our most recent schedule of services.

Matrix[1]: W = water, S = solid, L = liquid, T = tissue

*Requires prior approval, rush charges may apply.

We cannot accept verbal changes. Please email written changes to your PM.

WHITE: CLIENT FINAL REPORT CANARY: CLIENT

GCAL ANALYTICAL LABORATORIES, LLC

SAMPLE RECEIVING CHECKLIST

215102411

SAMPLE DELIVERY GROUP 215102411

Client PM RCH2 4476 - Parsons	**Transport Method** FEDEX
Profile Number 243150	**Received By** Saucier, Charlotte M.
Line Item(s) 1 - Water Cr/Pb	**Receive Date(s)** 10/24/15

CHECKLIST	YES	NO	NA
Were all samples received using proper thermal preservation?	☑	☐	☐
When used, were all custody seals intact?	☑	☐	☐
Were all samples received in proper containers?	☑	☐	☐
Were all samples received using proper chemical preservation?	☑	☐	☐
Was preservative added to any container at the lab?	☐	☑	☐
Were all containers received in good condition?	☐	☑	☐
Were all VOA vials received with no head space?	☑	☐	☐
Do all sample labels match the Chain of Custody?	☑	☐	☐
Did the Chain of Custody list the sampling technician?	☑	☐	☐
Was the COC maintained i.e. all signatures, dates and time of receipt included?	☑	☐	☐

COOLERS

Airbill	Thermometer ID: E24	Temp(°C)
8053 1078 4829		1.1
		3.3
		5.3

DISCREPANCIES

21510241102 - A-2709-MW38:
Broken Container (Container 10 - Unassigned)
Broken Container (Container 5 - Unassigned)

LAB PRESERVATIONS

None

NOTES

Revision 1.4

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