2014 OU2 GROUNDWATER INVESTIGATION
VPB 148
BETHPAGE, NY

Prepared for:

Department of the Navy
Naval Facilities Engineering Command, Mid-Atlantic
9742 Maryland Ave.
Norfolk, VA 23511-3095

Comprehensive Long-Term Environmental Action Navy
Contract Number N62470-11-D-8013

CTO WE15

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List of Acronyms and Abbreviations

AOC	Area of Concern
bgs	below ground surface
DoD	Department of Defense
ELAP	Environmental Laboratory Accreditation Program
EPA	Environmental Protection Agency, United States
ft	feet
GOCO	Government-Owned Contractor-Operated
IDW	Investigation Derived Waste
IR	Installation Restoration
Katahdin	Katahdin Analytical Services, Inc
NAD	North American Datum
NAVD	North American Vertical Datum
NAVFAC	Naval Facilities Engineering Command
NG	Northrop Grumman
NWIRP	Naval Weapons Industrial Reserve Plant
NYSDEC	New York State Department of Environmental Conservation
ONCT	On-site Containment Treatment System
OU	Operable Unit
PCBs	Polychlorinated Biphenyls
PCE	Tetrachloroethene
PID	Photoionization Detector
POTW	Publicly Owned Treatment Works
PPE	Personal Protective Equipment
RTN	Real Time Networks
SAP	Sampling and analysis plan
SVOC	Semivolatile Organic Compounds
TCE	Trichloroethene
TCL	Target Compound List
TCLP	Toxicity Characteristic Leaching Procedure
TOC	Total Organic Carbon
UFP	United Federal Programs
VOC	Volatile Organic Compounds
VPB	Vertical Profile Boring

1.0 PROJECT BACKGROUND

Resolution Consultants has prepared this Data Summary Report for the Naval Facilities Engineering Command, Mid-Atlantic under contract task order WE15 Contract N62470-11-D-8013. This report describes vertical profile boring (VPB) installation activities (specifically at the VPB 148 location) in 2014 for the Naval Weapons Industrial Reserve Plant (NWIRP) Bethpage Operable Unit (OU) 2 Site 1 offsite plume. NWIRP Bethpage is located in east-central Nassau County, Long Island, New York, approximately 30 miles east of New York City (Figure 1).

1.1 Scope and Objectives

This data summary report provides information on the installation of VPB 148. The purpose of the VPB 148 investigation was to ascertain contaminant levels and depths in the offsite plume area south of Hempstead Turnpike and west of Hicksville Road. VPB locations within the general vicinity of VPB 148 are shown in Figure 2. VPB 148 was completed to 970 feet (ft) below ground surface (bgs). The data from VPB 148 provides information on the extent and magnitude of Volatile Organic Compounds (VOCs) north and west of South Farmingdale Water District wells 6-1 and 6-2 (SFWD-8664 and SFWD-8665, respectively) and Aqua New York wells ANY-8480 and ANY-9339.

Field tasks were conducted in 2014 in accordance with the *United Federal Programs Sampling and Analysis Plan (UFP SAP)*, Bethpage, New York and the UFP SAP Addendum Installation of Vertical Profile Borings and Monitoring Wells (Resolution Consultants, 2013). The field investigation included completing one vertical profile boring, groundwater grab samples, geophysical logging and surveying.

Documentation of these activities is included in Appendix A of this report.

1.2 Site History

NWIRP Bethpage is in the Hamlet of Bethpage, Town of Oyster Bay, New York. Since its inception in 1941, the plant's primary mission was the research prototyping, testing, design, engineering, fabrication, and primary assembly of military aircraft. The facilities at NWIRP included four plants used for assembly and prototype testing, a group of quality control laboratories, two warehouse complexes (north and south), a salvage storage area, water recharge basins, the Industrial Wastewater Treatment Plant, and several smaller support buildings.

The Navy's property originally totaled 109.5 acres and was formerly a Government-Owned Contractor-Operated (GOCO) facility that was operated by Northrop Grumman (NG) until

September 1998. Prior to 2002, the NWIRP property was bordered on the north, west, and south by current or former NG facilities, and on the east by a residential neighborhood. By March 2008, approximately 100 acres of NWIRP property were transferred to Nassau County in three separate actions. The remaining 9 acres and access easements were retained by the Navy to continue remedial efforts at Installation Restoration (IR) Site 1 – Former Drum Marshalling Area and Site 4 – Former Underground Storage Tanks (Area of Concern [AOC] 22). A parcel of land connecting the two sites was also retained. Currently, the 9-acre parcel of NWIRP is bordered on the east by the residential neighborhood and on the north, south, and west by Nassau County property. Access to the NWIRP is from South Oyster Bay Road.

1.3 Geology and Hydrogeology

Overburden at the site consists of well over 1,000 ft of Cretaceous deposits overlying crystalline bedrock of the Hartland Formation. Overburden is divided into four geologic units: the upper Pleistocene deposits, the Magothy Formation, the clay member of the Raritan Formation ("Raritan Clay") and the Lloyd Sand member of the Raritan Formation ("Lloyd Sand") (Geraghty and Miller, 1994).

The upper Pleistocene ranges in thickness from approximately 50 to 100 ft and consists of till and outwash deposits of medium to coarse sand and gravel with lenses of fine sand, silt and clay (Smolensky and Feldman, 1990); these deposits form the Upper Glacial Aquifer. Directly underlying this unit is the Magothy Formation with a thickness of 650 to 900 ft bgs observed onsite. The Magothy is characterized by fine to medium sands and silts interbedded with zones of clays, silty sands and sandy clays. Sand and gravel lenses are found in some areas between depths of 600 and 875 ft bgs; these deposits form the Magothy Aquifer.

Investigations performed by the Navy since 2012 indicate that the bottom of the Magothy (top of the Raritan Clay) can extend to depths of 700 to greater than 1,000 ft bgs. The top of the Raritan Clay deepens to the south southeast, as evidenced by clay depths of 1,000 ft bgs (or more) in borings installed in the offsite plume to date. The Raritan Clay Unit is of continental origin and consists of clay, silty clay, clayey silt, and fine silty sand. This member acts as a confining layer over the Lloyd Sand Unit. The Lloyd Sand Unit is also of continental origin, having been deposited in a large fresh water lacustrine environment. The material consists of fine to coarse-grained sands, gravel, inter-bedded clay, and silty sand. These deposits form the Lloyd Aquifer.

The Upper Glacial Aquifer and the Magothy Aquifer comprise the aquifers of interest at the NWIRP. Regionally, these formations are generally considered to form a common, interconnected aquifer as the coarse nature of each unit near their contact and the lack of any regionally confining clay unit allows for the unrestricted flow of groundwater between the formations.

The Magothy Aquifer is the major source of public water in Nassau County. The most productive water bearing zones are the discontinuous lenses of sand and gravel that occur within the siltier matrix. The major water-bearing zones are course sand and gravel lenses located in the lower portion of the Magothy. The Magothy Aquifer is commonly regarded to function overall as an unconfined aquifer at shallow depths and a confined aquifer at deeper depths. The drilling program at the NWIRP has revealed that clay zones beneath the facility are common but laterally discontinuous. No confining clay units of facility-wide extent have been encountered.

Groundwater is encountered at a depth of approximately 50 ft bgs at the facility. Historically, because of pumping and recharge at the facility, groundwater depths have been measured to range from 40 to 60 ft bgs. The regional groundwater flow in the area is to the south-southeast.

2.0 FIELD PROGRAM

Field investigation activities at VPB 148 consisted of drilling, sampling, soil/groundwater analysis, geophysical logging, and surveying. Drilling during this investigation was performed by Delta Well and Pump Company of Ronkonkoma, New York. A description of these tasks is provided below.

2.1 Vertical Profile Borings

One vertical profile boring (VPB 148) was completed during this field effort between January 27, 2014 and March 10, 2014. The total depth of VPB 148 was 970 ft. The location is shown in Figure 2 and details are summarized in Table 1.

2.1.1 Drilling

VPB 148 was installed by drilling an 8-inch diameter hole via mud rotary drilling techniques. Drilling mud consisted of potable water and polymer-free sodium bentonite or equivalent. Drilling mud was contained and re-circulated in baffled, high capacity mud tubs. A sand separator was used intermittently to remove fines from circulation.

2.1.2 Sampling

A total of five split spoon samples were collected from ground surface to the bottom of the boring. A change in geology was observed by the field geologist at 913 ft bgs and three split spoon samples were subsequently collected to confirm the presence of the Raritan Clay. Samples were logged by the field geologist and screened for Volatile Organic Compounds (VOCs) utilizing a photoionization detector (PID). A detailed boring log for VPB 148 is included in Appendix A.

Groundwater grab samples were collected every 50 ft for the first 200 ft of borehole depth. After the first 200 ft, groundwater grab samples were collected approximately every 20 ft until the boring terminated in the Raritan. Groundwater grab samples were collected with a hydropunch sampler and analyzed for VOCs using Environmental Protection Agency (EPA) Method 8260B. The groundwater grab samples were analyzed by Katahdin Analytical Services (Katahdin), a Department of Defense (DoD), Environmental Laboratory Accreditation Program (ELAP), and New York State Department of Environmental Conservation (NYSDEC)-certified laboratory. During the collection of groundwater grab samples, field parameters were measured (pH, temperature, specific conductivity, oxidation reduction potential, dissolved oxygen, and turbidity). Data validation was performed by Resolution Consultants. Groundwater grab sample logs, data validation packages, and analytical data tables are included in Appendix A.

One soil sample was collected for laboratory analysis for total organic carbon (TOC) by EPA series SW-846 method 9060A. During drilling, air sampling was conducted under a Community Air Monitoring Plan. One air sample was collected per VPB using Summa canisters and submitted for laboratory analysis by EPA Method TO-15. All analyses were performed or sub-contracted by Katahdin. Data validation of both TOC and air data was performed by Resolution Consultants. Data validation packages and analytical data tables are included in Appendix A.

2.1.3 Geophysics

Borehole geophysical logs (gamma) were recorded after the borehole was drilled but prior to the removal of drill rods. A Mount Sopris Instrument model 2PGA-100 poly gamma was used. Starting at the top of the hole, the probe was advanced at a maximum rate of 12 ft per minute. A copy of the log was printed in the field for review once the probe reached the bottom of the borehole. The instrument was then raised to the top of the boring and a second log was generated and printed in the field. The down hole gamma log sheets and plots comparing the gamma log with trichloroethene (TCE) and tetrachloroethene (PCE) concentrations from hydropunch samples are included in Appendix A.

2.2 Decontamination and Investigation Derived Waste (IDW)

Resolution Consultants utilized dedicated and disposable sampling equipment when possible to avoid the potential for cross-contamination of samples. The sampling equipment included dedicated plastic scoops, disposable Teflon or polyethylene tubing, disposable gloves, and laboratory supplied sample bottles. Hand held equipment, split spoons, and the hydropunch were decontaminated using Liquinox and water wash, a potable water rinse, followed by a distilled water rinse. Water was collected in 5-gallon pails or 55-gallon drums.

As part of the IDW management practices and in accordance with the SAP, the investigation waste (consisting of soil cuttings, drilling muds, IDW fluids, and personal protective equipment (PPE)) generated during the boring installation was containerized and staged at NWIRP Bethpage. IDW solids were characterized and disposed of properly. Representative samples from each roll off were submitted to Katahdin for analysis of:

- Target Compound List (TCL) VOCs
- TCL Semi-volatile Organic Compounds (SVOCs)
- Toxicity Characteristic Leaching Procedure (TCLP) Metals

- Polychlorinated Biphenyls (PCBs)
- Total petroleum hydrocarbons
- Corrosivity
- Ignitability
- Reactive Cyanide
- Reactive Sulfide
- Paint Filter

IDW water was containerized in frac tanks and stored at NWIRP Bethpage for characterization and ultimate disposal to the Publicly Owned Treatment Works (POTW), in accordance with the facilities existing discharge permit. A representative water sample was collected from each frac tank and submitted to Katahdin for analysis of VOCs via Method SW 624, pH via Method SW 9040B, PCBs via Method 8082 and Total Metals via Method SW 846 (all waters). To the extent feasible, soil and water were not mixed. All analytical criteria were met for disposal of soil and water.

2.3 Surveying

A survey of the boring location was conducted at the end of fieldwork by GEOD Corporation of Newfoundland, New Jersey, under the direct supervision of Resolution Consultants. The location was tied into the existing base map developed for this investigation. Survey elevation is referenced to the North American Vertical Datum (NAVD) 1988 and has a vertical accuracy of 0.01 foot. Local vertical control was based on the National Geodetic Survey Station 11E 12N. The horizontal location is referenced to the North American Datum (NAD) 1983 (2011) NYL13104 and has an accuracy of 0.1 foot. Local horizontal control was based on Leica Smartnet\NYSNet Real Time Networks (RTN) station data.

A table of survey data (ground, latitude/longitude and northing/easting) and a survey map is included in Appendix A.

3.0 REFERENCES

Geraghty and Miller, Inc., 1994. *Remedial Investigation Report, Grumman Aerospace Corporation, Bethpage, New York*. Revised September 1994.

Naval Facilities Engineering Command (NAVFAC), 2003. *Record of Decision Naval Weapons Industrial Reserve Plant Bethpage, New York, Operable Unit 2 – Groundwater*, NYS Registry: 1-30-003B. April.

Resolution Consultants, 2013. *United Federal Programs Sampling and Analysis Plan*, *Site OU-2 Offsite TCE Groundwater Plume Investigation,* Bethpage, New York. April.

Resolution Consultants, 2013. UFP SAP Addendum, *Groundwater Sampling Using Low Stress (Low Flow) Purging and Sampling* Protocol. November.

Resolution Consultants, 2013. UFP SAP Addendum*, Installation of Vertical Profile Borings and Monitoring Wells.* December.

Smolensky, D., and Feldman, S., 1990. *Geohydrology of the Bethpage-Hicksville-Levittown Area, Long Island, New York, U.S*. Geological Survey Water-Resourced Investigations Report 88-4135, 25 pp.

Tables

TABLE 1
VERTICAL PROFILE BORING SUMMARY
2014 OU2 GROUNDWATER INVESTIGATION
NWIRP BETHPAGE, NY

BORING	BORING START DATE	BORING COMPLETION DATE	GROUND ELEVATION (MSL)	TOTAL DEPTH (ft bgs)	SURFACE CASING SET AT (ft bgs)	NO. OF SPOON SAMPLES	GAMMA LOG (ft bgs)	NO. GW SAMPLES COLLECTED / ATTEMPTED	TOC SAMPLES	DATE OF AIR SAMPLE	MONITORING WELLS INSTALLED AT LOCATION
VP 148	1/27/2014	3/10/2014	40.21	970	53	5	970	41/47 *	1 (298 - 300 ft bgs)	2/20/2014	None

* Includes 2 field duplicates

Figures

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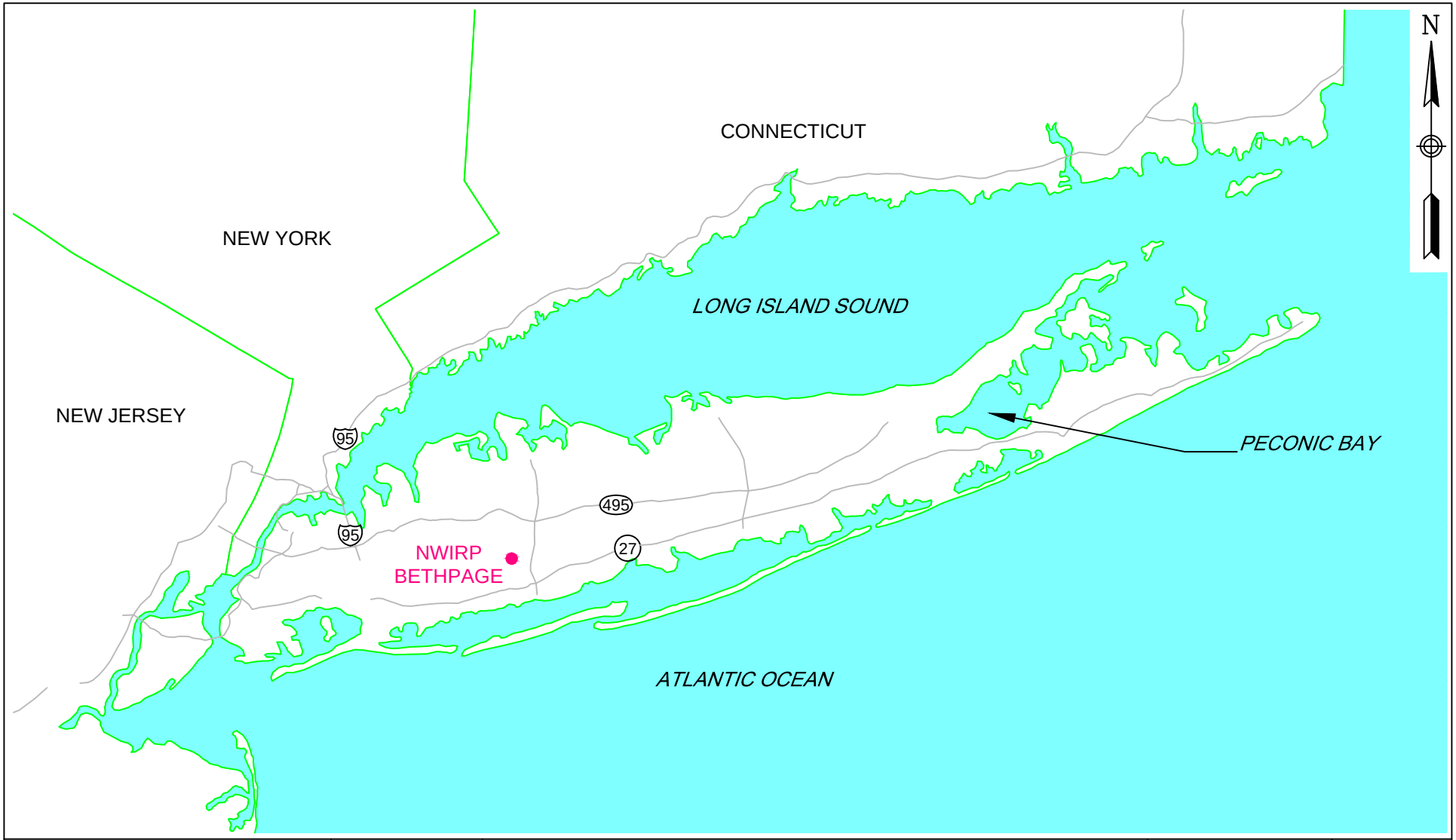

0 15 30

SCALE IN MILES

NAVFAC

GENERAL LOCATION MAP
NWIRP BETHPAGE
BETHPAGE, NEW YORK

CONTRACT NUMBER	CTO NUMBER
N62470-11-D-8013	WE15
APPROVED BY --	DATE --
APPROVED BY --	DATE --
FIGURE NO. 1	REV 0

F:\Projects\Navy\Bethpage WXE0817.0 Deliverables\7.2 CADD\GIS_files\Bethpage\MAP DOCS\MXD\Cross-Sections\VPB142\F2 VPB 148 2014 10 24 R1.mxd

Former Naval Weapons Industrial Reserve Plant

Former Northrop Grumman Site

Hempstead Tpke

Hicksville Rd

State Hwy 135

Southern State Parkway

New York American Water District Wells

South Farmingdale Water District Plant 3

Straight Ln

Ramble Ln

Duke Ct

Milton Ave

West Ln

South Ln

Miller Pl

Drake St

Elm Dr N

Elm Dr E

Emerald

Elbow Ln

End Ln

Taylor Ave

Bryant Ave

Eve Ln

Elm Dr W

0 375 750 1,500 Feet

Inset: VPB 148 Location

0 750 1,500 3,000 Feet

Legend

- Monitoring Well
- Vertical Profile Boring
- Vertical Profile Boring - Proposed
- Water Supply Well
- Extraction Well

NAVFAC

VPB 148 LOCATION MAP
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT
BETHPAGE, NEW YORK

CONTRACT NUMBER	CTO NUMBER
N62470-11-D8013	WE15
APPROVED BY: PS	DATE: 10/24/2014
APPROVED BY: —	DATE: —
FIGURE NO.: 2	REV: 0

Appendix A

VPB 148

Section 1

VPB 148 Boring and Gamma Logs

Resolution Consultants

DRAFT Boring Log

BORING #: VPB148

Client: Department of the Navy, Naval Facilities Engineering Command, Mid-Atlantic		**Logged By:** M.Zobel, G.Hicks
Location: Elm Drive North and Elbow Lane, Bethpage, NY	**Northing:** 201701.5 **Easting:** 1124253.93	**Drilling Company:** Delta Well & Pump
Project #: 60266526	**Ground Elevation (ft amsl):** 73.73	**Well Screen Interval (ft):** NA
Start Date: 1/27/2013	**Drilling Method:** Mud Rotary	**Water Level (ft):** NA
Finish Date: 3/10/2014		**Total Depth (ft):** 970.0

Note: Unless denoted by a splitspoon sample (indicated by the presence of a PID reading), boundaries between strata are approximate only and may be transitional because they are based on screened wash samples collected during mud rotary drilling at 5 ft. intervals.

DEPTH (ft)	Gamma Ray (30 60 90)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
0–2					Upper Glacial	GM-SM		Light brown Silty coarse to fine SAND, coarse to fine gravel
2–6						SM		Light brown Silty coarse to fine SAND, some fine gravel
6–12						GM-SM		Light brown Silty SAND with gravel
12–18						GM		Light brown yellowish orange 8/6 subrounded GRAVEL and medium Sand (30%), small amount silt
18–22						GP-GM		Yellowish orange GRAVEL (25%) SAND (>60%) mixture
22–28						GM-SM		Dark yellowish brown (10 YR 4/4) Sandy GRAVEL, trace silt
28–32						GP-GM		Yellowish brown (10 YR 5/6) Sandy GRAVEL, few silt, trace cobbles. All fractions subrounded
32–36						GM		Yellowish brown (10YR 5/5) subrounded GRAVEL, medium Sand, trace silt.
36–42						GM-GP		Yellowish brown (10 YR 5/5) medium and coarse SAND, few Gravel, trace silt
42–46						GP-GM		Yellow (10 YR 7/6)(>70%) coarse SAND, trace subrounded gravel
46–54		0				SW		Brown (10YR 5/3) well graded subangular SAND, 10-20% well graded Gravel, trace silt

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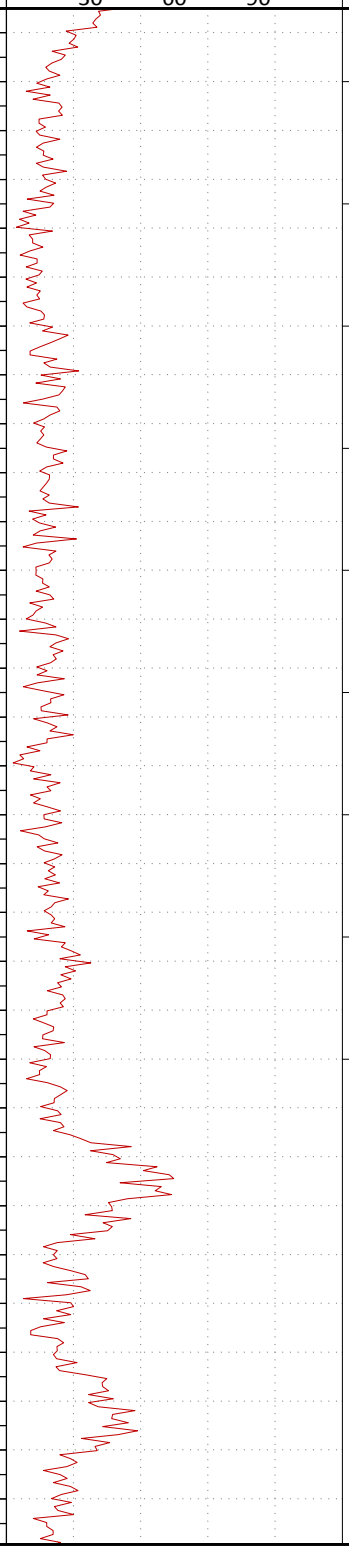
DRAFT Boring Log

BORING #: VPB148



DEPTH (ft)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
56–58	0			Upper Glacial	SW		Brown (10YR 5/3) well graded subangular SAND, 10-20% well graded Gravel, trace silt *(continued)*
58–62	0				SW		Yellowish brown (10YR 5/4) well graded SAND, subangular Gravel, and trace silt
62–66	0.1	< 0.50	< 0.50		GP-SP		Light yellowish brown (10YR 6/4) subrounded coarse SAND and GRAVEL, trace silt
66–72	0				SM		Brownish yellow (10 YR 6/8) fine SAND (>70%)
72–76	0				SM		Yellowish brown (10 YR 5/8) 80% fine and medium SAND, trace silt
76–82	0				SM		Yellowish brown (10 YR 5/6) SAND, trace silt.
82–86	0				GM		Bownish yellow (10 YR 6/8) SAND
86–92	0.1				SM		Yellow (10 YR 7/6) medium subrounded SAND, trace silt
92–98	0.1				SM		Very pale brown (10 YR 8/3) fine SAND and Silt, trace coarse sand
98–100		< 0.50	< 0.50		SM		Brown (10 YR 5/3) SAND (80% fine, 20% medium), Silt, and clay
100–104				Magothy	SM		Pale brown (2.5 Y 7/3) subangular SAND (90% fine, 10% medium) Silt (>40%), and clay.
104–110					SM		Pale brown (2.5 Y 7/4) subangular SAND (80% fine, 20% medium) and Silt
110–116					SM		Pale brown (2.5 Y 7/4) subangular fine SAND and trace Silt

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DRAFT Boring Log

BORING #: VPB148

DEPTH (ft)	Gamma Ray (30 60 90)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
118					Magothy			
120						SM		Very pale brown (10 YR 7/3) subangular SAND (75% fine, 25% medium) and Silt
122								
124						SM		Light yellowish brown (10 YR 6/3) subangular SAND (fine with trace medium), few silt, few clay
126								
128						SM-SC		Light yellowish brown (10 YR 6/4) subrounded SAND (60% fine, 40% medium) Silt, trace clay
130								
132						SM-SC		Light brownish yellow (10 YR 6/4) subrounded SAND (60% fine, 40% medium), Silt, and clay
134								
136						SM		Very pale brown (10 YR 7/3) subangular SAND and Silt
138								
140						SC		Light gray (2.5 Y 7/2) subangular and subrounded SAND (60% fine, 40% medium), Silt, few clay
142								
144						SM-SC		Pale brown (2.5 Y 7/4) subrounded SAND (90% fine, 10% medium), Silt, and clay
146								
148						SC		Pale brown (10 YR 6/3) subrounded fine SAND, Silt, trace stiff clay
150								
152						SM-SC		Very pale brown (10 YR 7/3) SAND (90% fine), Silt, and clay
154			< 0.50	< 0.50				
156						SM-SC		Light yellowish brown (2.5 Y 6/3) CLAY and subrounded fine Sand
158								
160						SM		Grayish brown (2.5 Y 5/2) Silty SAND and Clay
162								
164						SP		Pale brown (10 YR 6/3) subangular SAND (20% coarse, 20% medium, 60% fine) Silt, trace clay
166								
168						SP		Brownish yellow (10 YR 6/6) poorly graded fine SAND, Silt, trace clay
170								
172								
174								
176								
178								
180								

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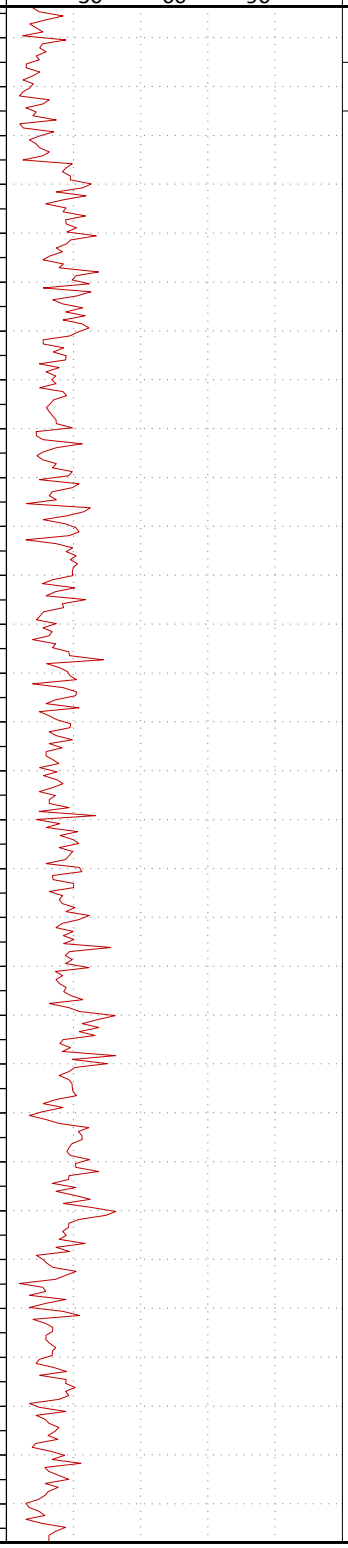
DRAFT Boring Log

BORING #: VPB148



DEPTH (ft)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
182				Magothy	SP		Brownish yellow (10 YR 6/6) poorly graded fine SAND, Silt, trace clay *(continued)*
184	0						Subrounded medium SAND, Clay nodules, a 1/2" clay band (orangish), rounded fine Gravel
186					SP-CL		
188							
190					SM		Pale brown (10 YR 5/4) SAND (subangular 25% medium, 75% fine), Silt, trace clay
192							
194					SM		Pale brown (10 YR 6/3) SAND, Silt, trace clay and Lignite
196							
198							
200		1.7	< 0.50		SM		Very pale brown (10 YR 7/4) SAND, Silt, few clay
202							
204					SM		Light yellowish brown (10 YR 6/4) fine SAND and Silt
206							
208							
210					SM		Yellow (10 YR 7/6) SAND, Silt, trace clay
212							
214					SM		Light yellowish brown (10 YR 6/4) SAND, Silt, trace clay
216							
218							
220		1.8	< 0.50		ML		Dark grayish brown (2.5 Y 4/2) fine to medium Sandy SILT, few Clay, trace fine rounded gravel, trace lignite, trace iron
222							
224					ML		Gray (2.5 Y 5/1) fine to medium Sandy SILT and Clay, trace fine rounded gravel, trace lignite, trace iron
226							
228							
230					ML		Gray (2.5 Y 5/1) fine to medium Sandy SILT, few Clay, trace fine rounded gravel, trace lignite, trace iron
232							
234					ML		Grayish brown (10 YR 5/2) fine to medium Sandy SILT, few fine rounded Gravel, trace clay, trace lignite, trace iron
236							
238							
240		2.4	0.99		SM		Dark grayish brown (2.5 Y 4/2) fine to medium Silty SAND, trace Clay, trace lignite, trace iron
242							

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DEPTH (ft)	Gamma Ray (30 60 90)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
244					Magothy	SM		Black (2.4 Y 2.5/1) fine to medium Silty SAND and Lignite, trace clay, trace iron *(continued)*
246						SM		
248								Very dark gray (2.5 Y 3/1) fine to medium Silty SAND and Lignite, trace clay, trace iron
250						SM		
252								
254								Very dark gray (2.5 Y 3/1) fine to medium Sandy SILT and Lignite, trace clay
256						ML		
258								
260			< 0.50	< 0.50		SM		Dark gray (5 Y 4/1) fine to medium Silty SAND, little Lignite, few clay
262								
264								Very dark gray (5 Y 3/1) fine to medium Silty SAND, little Lignite, few clay
266						SM		
268								
270								Very dark gray (5 Y 3/1) poorly graded fine to medium SAND and Lignite, few silt, trace clay
272						SP-SM		
274								Black (5Y 2.5/1) poorly graded fine to medium SAND and Lignite, silt, trace clay
276						SP-SM		
278								
280			< 0.50	< 0.50		SP		Dark gray (5 Y 4/1) poorly graded fine SAND, few Lignite, trace clay
282								
284								Dark gray (5 Y 4/1) poorly graded fine SAND, few Lignite, trace clay
286						SP		
288								
290								Dark gray (5 Y 4/1) poorly graded fine SAND, few Lignite, trace clay
292						SP		
294								Gray (5 Y 5/1) poorly graded fine SAND, few Lignite, trace clay
296						SP		
298								
300		0				SP		Gray (2.5 Y 5/1) poorly graded fine to medium SAND, trace Lignite
302						SP		Gray (2.5 Y 5/1) poorly graded fine to medium SAND, trace Lignite, trace clay
304			< 0.50	< 0.50		SP		Gray (2.5 Y 5/1) poorly graded fine to medium SAND, trace Lignite, trace clay
306								

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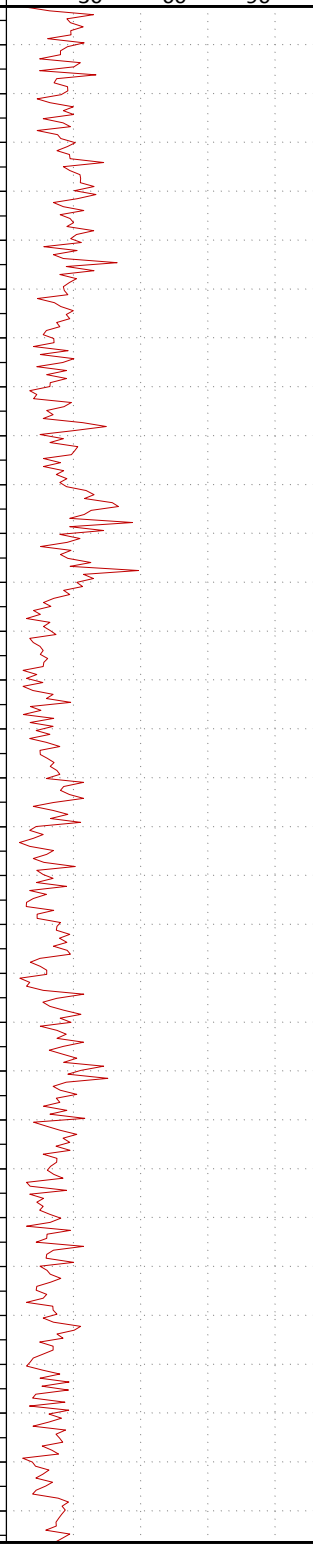
DRAFT Boring Log

BORING #: VPB148



DEPTH (ft)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
308				Magothy	SP		
310					SC		Gray (2.5 Y 5/1) clayey poorly graded fine SAND, trace Lignite
312							
314					CL		Dark gray (2.5 Y 4/1) fine Sandy lean CLAY, trace Lignite
316							
318							
320		< 0.50	< 0.50		CL		Dark gray (2.5 Y 4/1) fine Sandy lean CLAY, trace Lignite
322							
324					CL		Dark gray (Gley 1 4/N) fine Sandy lean CLAY, few Lignite, few fine subrounded gravel
326							
328							
330					SC		Very dark gray (2.5 Y 3/1) Clayey fine SAND, few Lignite
332							
334					SC		Very dark gray (2.5 Y 3/1) Clayey fine SAND, few Lignite
336							
338							
340		< 0.50	< 0.50		CL		Dark gray (2.5 Y 4/1) fine Sandy lean CLAY, little Lignite
342							
344					CL		Dark gray (2.5 Y 4/1) fine Sandy lean CLAY and Lignite
346							
348							
350					CL		Dark gray (2.5 Y 4/1) lean CLAY with fine Sand and Lignite
352							
354					CL		Dark gray (2.5 Y 4/1) lean CLAY with fine Sand and Lignite
356							
358							
360		< 0.50	< 0.50		SC		Gray (5 Y 5/1) Clayey fine SAND, few Lignite
362							
364							
366					SP-SC		Gray (5 Y 5/1) poorly graded fine SAND with Clay, trace Lignite
368							
					SP		

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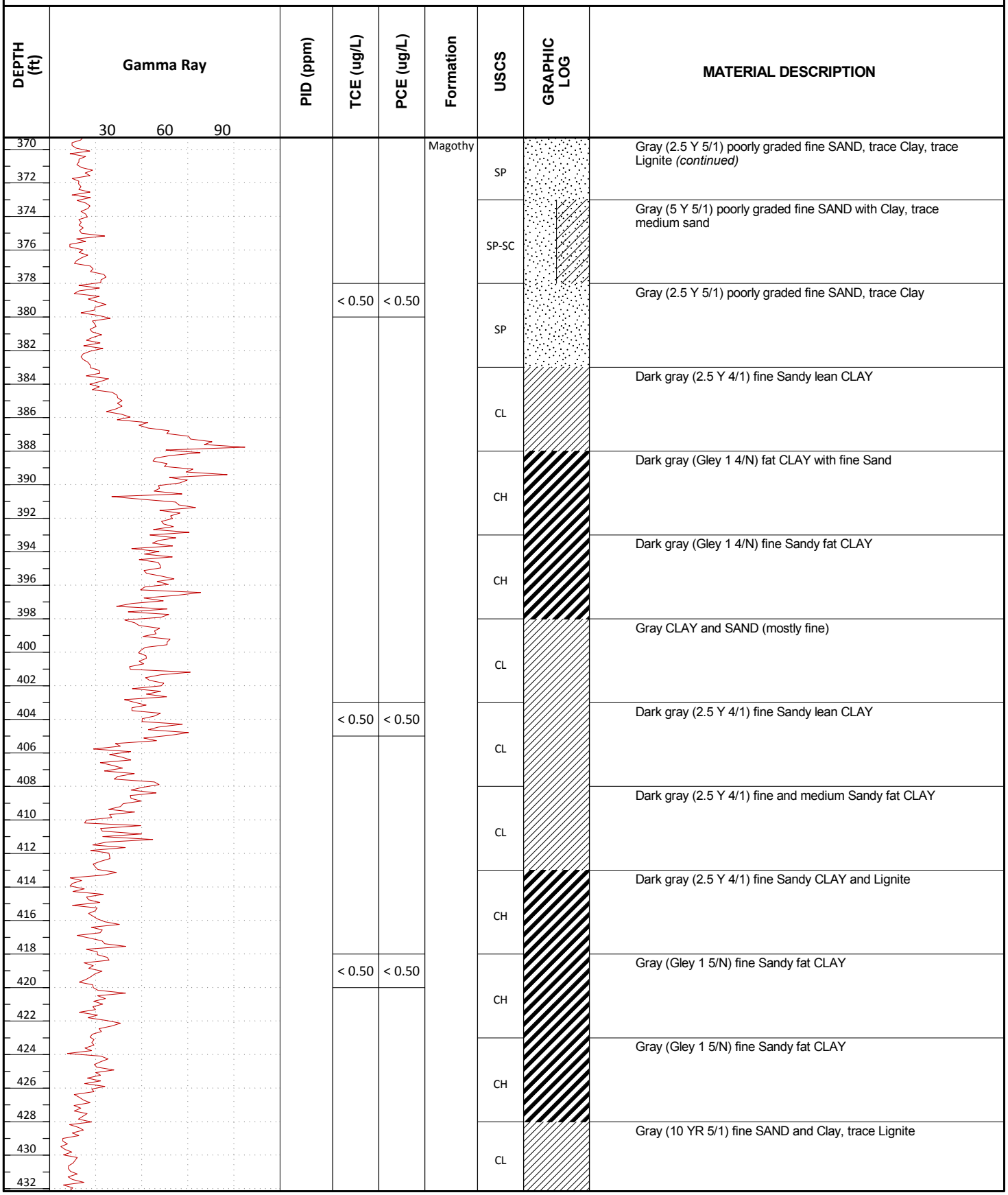
BORING #: VPB148



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Resolution Consultants

DRAFT Boring Log

BORING #: VPB148

DEPTH (ft)	Gamma Ray (30 60 90)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
434					Magothy			
436						CL		Gray (2.5 Y 5/1) lean Sandy CLAY and Lignite
438								
440			< 0.50	< 0.50		CL		Dark gray (2.5 Y 4/1) lean CLAY with fine Sand
442								
444						CH		Dark gray (5 Y 4/1) fine Sandy CLAY with lignite chips
446								
448								
450						SM-SC		Dark gray (Gley 1 4/N) fine and medium Silty SAND with Clay, trace coarse sand
452								
454						SM		Gray (Gley 1 5/N) silty fine and medium SAND, trace coarse sand
456								
458								
460			< 0.50	< 0.50		SM		Dark gray (Gley 1 4/N) Silty and Clayey SAND
462								
464						CL		Dark gray (Gley 1 4/N) fine Sandy lean CLAY
466								
468								
470						SC		Dark gray (Gley 1 4/N) Clayey fine SAND
472								
474						SM		Gray (Gley1 5/N) Silty fine SAND with lignite ships
476								
478								
480						CH		Very dark gray (Gley 1 3/N) Sandy CLAY with nodules of very firm Clay (10mm across)
482								
484			< 0.50	< 0.50		SM		Dark gray (Gley 1 4/N) fine and medium SILTY SAND, trace Clay
486								
488								
490						SC		Dark gray (2.5 Y 4/1) fine Clayey SAND
492								
494						SM		Dark gray (Gley 1 4/N) well graded medium and coarse SAND with Silt, trace gravel

(Continued Next Page)

Resolution Consultants

DRAFT Boring Log

BORING #: VPB148

DEPTH (ft)	Gamma Ray (30 60 90)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
496					Magothy	SM		Dark gray (Gley 1 4/N) well graded medium and coarse SAND with Silt, trace gravel *(continued)*
498								
500			1.8	< 0.50		SW-SM		Gray (Gley 1 5/N) well graded SAND with Silt and lignite chips
502								
504						SM-SC		Gray (Gley 1 5/N) well graded SAND with Silt and lean clay
506								
508								
510						SW-SC		Dark gray (Gley 1 4/N) well graded SAND with lean Clay
512								
514						CL		Gray (Gley 1 5/N) fine Sandy very soft lean CLAY
516								
518								
520			68	< 0.50		CH		Gray (Gley 1 5/N) fine Sandy fat CLAY
522								
524						GW-GC		Gray (Gley 1 5/N) well graded coarse SAND with fine Gravel and silt
526								
528								
530						SW		Gray (Gley 1 5/N) well graded subangular SAND with fine Gravel, trace silt, trace clay
532								
534						SM		Dark gray (Gley 1 4/N) well graded SAND with Silt
536								
538								
540			520	< 0.50		SP-SM		Gray (Gley 1 5/N) fine medium (75%) and coarse (10%) subangular SAND with Silt, trace gravel
542								
544						SM		Gray (Gley 1 5/N) fine and 20% medium subrounded Silty SAND, trace asicular lignite up to 5mm long
546								
548								
550						SM-SC		Gray (Gley 1 5/N) fine to coarse subrounded Silty SAND and 5mm nodules of fat Clay
552								
554						SM		Gray (Gley 1 5/N) fine subrounded Silty SAND with lean Clay
556								

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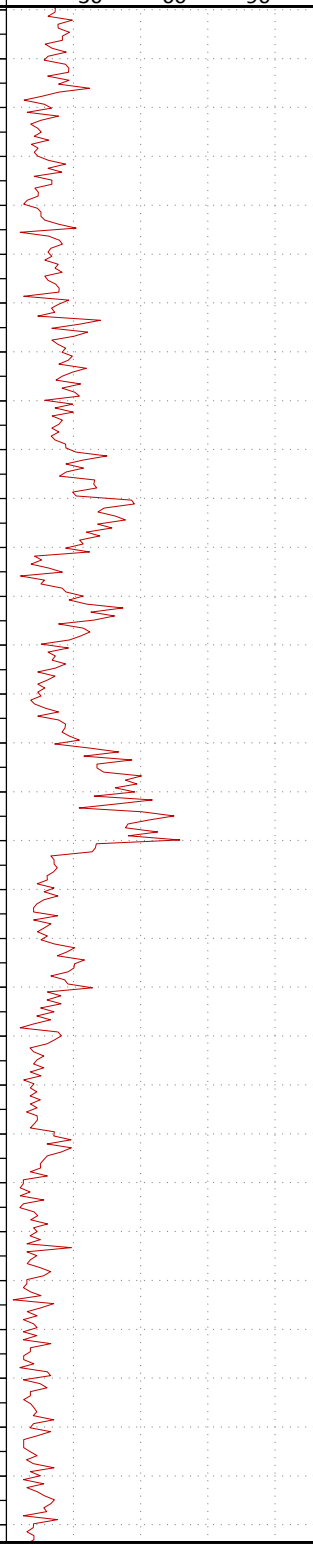
Resolution Consultants

DRAFT Boring Log

BORING #: VPB148



DEPTH (ft)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
558							
560		110	< 0.50	Magothy	SP-SM		Gray (Gley 1 5/N) subangular fine and 10% subrounded medium SAND with Silt
562							
564					SP		Dark gray (Gley 1 4/N) subangular fine Silty SAND
566							
568							
570					SP		Dark gray (Gley 1 4/N) subangular fine and 10% medium SAND with abundant Muscovite and 10 mm Lignite
572							
574					CH		Dark gray (Gley 1 4/N) fine subrounded Sandy fat CLAY, trace 5 mm Lignite chips
576							
578							
580		57	< 0.50		SC		Dark gray (2.5 Y 4/1) Clayey poorly graded fine SAND, trace medium sand
582							
584					SC		Dark gray (Gley 1 4/N) Clayey well graded fine to coarse subrounded SAND, trace Lignite
586							
588							
590					SC		Dark gray (Gley 1 4/N) Clayey well graded fine to coarse subrounded SAND, trace Lignite
592							
594					SW-SC		Dark gray (2.5 Y 4/1) well graded fine to coarse subrounded SAND with Clay, trace iron nodules
596							
598							
600		42	< 0.50		SP		Gray (2.5 Y 5/1) poorly graded fine to medium SAND, trace Clay, trace silt
602							
604					SW		Gray (2.5 Y 5/1) well graded fine to coarse subrounded SAND, trace Clay, trace silt
606							
608							
610					SP		Gray (2.5 Y 5/1) poorly graded fine to medium SAND, trace Clay, trace silt, trace iron
612							
614					SP-SM		Gray (2.5 Y 5/1) poorly graded fine to medium SAND with Silt, trace clay
616							
618							
620		100	< 0.50		SP-SC		Gray (2.5 Y 5/1) poorly graded fine SAND with fat Clay, trace silt

(Continued Next Page)

DEPTH (ft)	Gamma Ray (30 60 90)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
622					Magothy	SP-SC		Gray (2.5 Y 5/1) poorly graded fine SAND with fat Clay, trace silt *(continued)*
624								
626						SC		Grayish brown (2.5 Y 5/2) Clayey poorly graded fine SAND
628								
630						CL		Olive gray (5 Y 5/2) fine Sandy lean CLAY, trace iron
632								
634						CL		Gray (2.5 Y 6/1) fine Sandy lean CLAY
636								
638						CL		Gray (2.5 Y 6/1) fine Sandy lean CLAY, little Silt
640								
642						CH		Dark gray (Gley 1 4/N) fat CLAY, trace fine sand
644								
646						CH		Dark gray (Gley 1 4/N) fat CLAY with medium to coarse subangular Sand, trace fine subangular gravel
648								
650						SW		White (10 YR 9.5/1) with mixed yellows and browns, well graded fine to coarse subangular SAND, few fine subangular Gravel, trace silt
652								
654								
656								
658								
660			4.1	< 0.50		SW-SM		White (10 YR 9/1) with mixed yellows and browns, well graded medium to coarse subangular SAND with Silt, few fine subangular gravel, trace fine sand
662								
664						SW-SM		White (10 YR 8.5/1) with mixed yellows and browns well graded fine to coarse subangular SAND with Silt, few fine subrounded gravel
666								
668								
670						SW		White (10 YR 9/1) with mixed yellows and browns well graded fine to coarse subrounded SAND, trace Silt, trace fine subrounded gravel
672								
674								
676						SW		White (10 YR 8.5/1) with mixed yellows and browns well graded fine to medium subrounded SAND, few coarse subrounded Sand, trace silt, trace fine subrounded gravel
678								
680			0.30	< 0.50		SM		Light gray (2.5 Y 7/1) well graded Silty fine to coarse subrounded SAND, few Clay, trace fine subrounded gravel
682								

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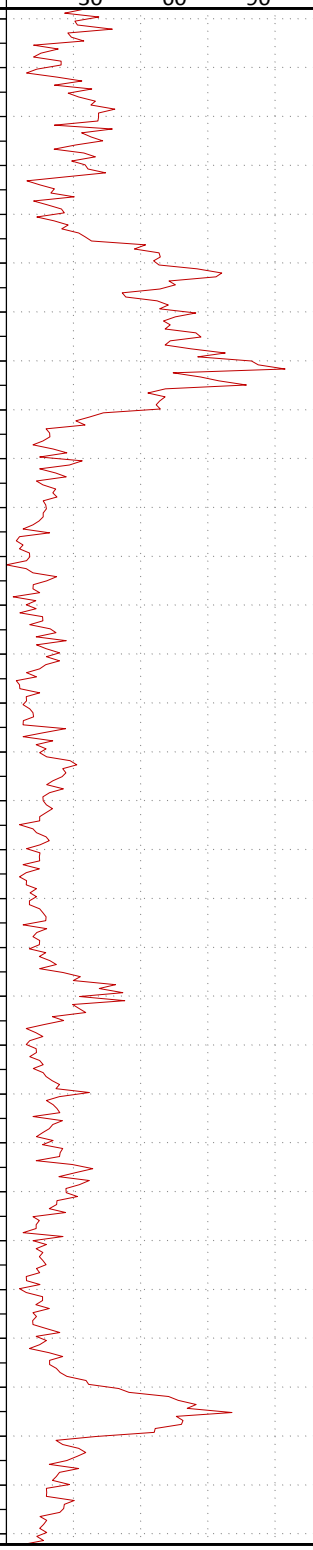
BORING #: VPB148



DEPTH (ft)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
684				Magothy	CH		Pinkish gray (7.5 YR 7/2) fat CLAY, few Silt, few fine to medium sand, trace iron *(continued)*
686					CH		
688							
690					CH		Reddish yellow (7.5 YR 7/6) and white (2.5 Y 9/1)fat CLAY, trace Silt, trace fine to medium sand, trace iron
692							
694					CH		Reddish yellow (7.5 YR 7/8) and white (2.5 Y 9/1) fat CLAY, trace Silt, trace fine sand, trace iron
696							
698					CH		White (10 YR 8.5/1) fat CLAY, trace Silt, trace fine sand
700							
702							
704		28	< 0.50		SW		White (7.5 YR 8.5/1) with mixed yellow and browns well graded fine to coarse subangular SAND, trace Silt, trace clay
706							
708					SW		White (10 YR 8.5/1) with mixed yellows and browns well graded medium to coarse subangular SAND with fine subangular Gravel, trace clay, trace fine sand
710							
712					SW		White (10 YR 8.5/1) with mixed yellows and browns well graded medium to coarse subangular SAND with fine subangular Gravel, trace clay, trace fine sand
714							
716					SW-SC		White (10 YR 8.5/1) with mixed yellows and browns well graded angular medium-coarse SAND with Clay and fine angular gravel
718							
720		14	< 0.50		SW-SC		White (10 YR 8.5/1) with mixed yellows and browns well graded angular medium-coarse SAND with Clay and fine angular gravel
722							
724					GW-GC		White (10 YR 8.5/1) with mixed yellows and browns well graded fine angular GRAVEL with Clay and medium to coarse angular sand
726							
728					SW-SC		White (10 YR 8.5/1) with mixed yellows and browns well graded medium to coarse subangular SAND with Clay and fine subangular gravel
730							
732					SC		White (10 YR 8.5/1) with mixed yellows and browns clayey well graded medium to coarse subrounded SAND with fine subrounded Gravel
734							
736					SW-SC		White (2.5 YR 8.5/1) with mixed yellows and browns well graded subrounded medium to coarse SAND with Clay and fine subrounded gravel
738							
740		< 0.50	< 0.50				
742							
744							
746							

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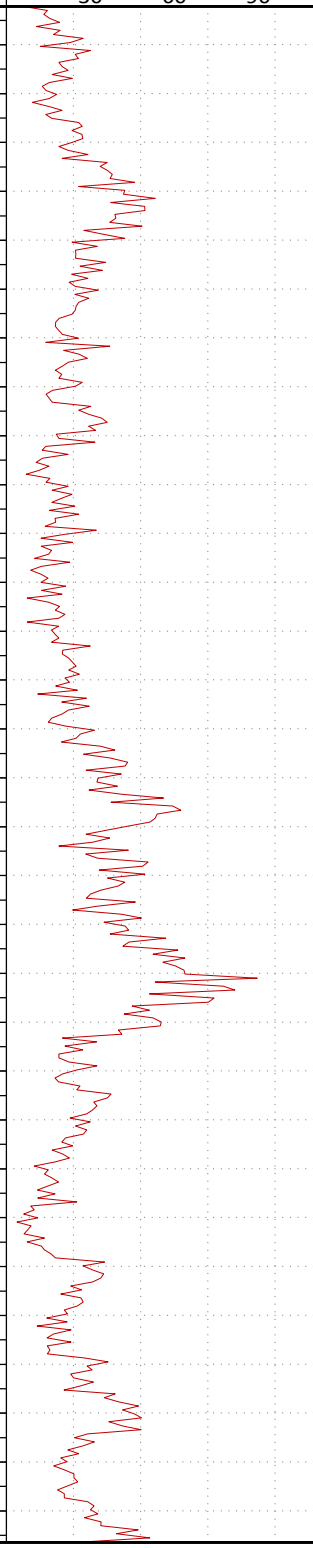
DRAFT Boring Log

BORING #: VPB148



DEPTH (ft)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
748				Magothy	SW-SC		
750					SW-SC		White (10 YR 8.5/1) with mixed yellows and browns well graded subangular medium to coarse SAND with Clay and fine subrounded gravel
752							
754					SC		White (10 YR 8.5/1) with mixed yellows and browns clayey well graded medium to coarse subangular SAND with fine subangular Gravel
756							
758							
760		< 2.5	< 2.5		CH		Dark gray (5 Y 4/1) fat CLAY, trace fine subangular sand
762							
764					CH		Gray (5 Y 6/1) fat CLAY, fine and coarse subangular Sand
766							
768							
770					CH		Light gray (2.5 Y 7/1) fat CLAY, trace subangular fine gravel
772							
774					CH		White (2.5 Y 8/1) fat CLAY, trace subangular coarse sand
776							
778							
780					CH		Gray (5 Y 6/1) fat CLAY, trace fine subangular gravel
782							
784					CH		Gray (2.5 Y 6/1) fat CLAY, trace fine subangular sand
786							
788							
790					CH		Gray (2.5 Y 5/1) fat CLAY
792							
794					CH		Gray (5 Y 6/1) fat CLAY with subangular medium and fine Sand
796							
798							
800		< 0.50	< 0.50		CL		Dark gray (Gley 1 4/N) very soft lean CLAY of low plasticity with subangular medium and fine Sand
802							
804					CH		Gray (5 Y 6/1) soft fat CLAY with medium subrounded and fine subangular Sand
806							
808							
					CL		

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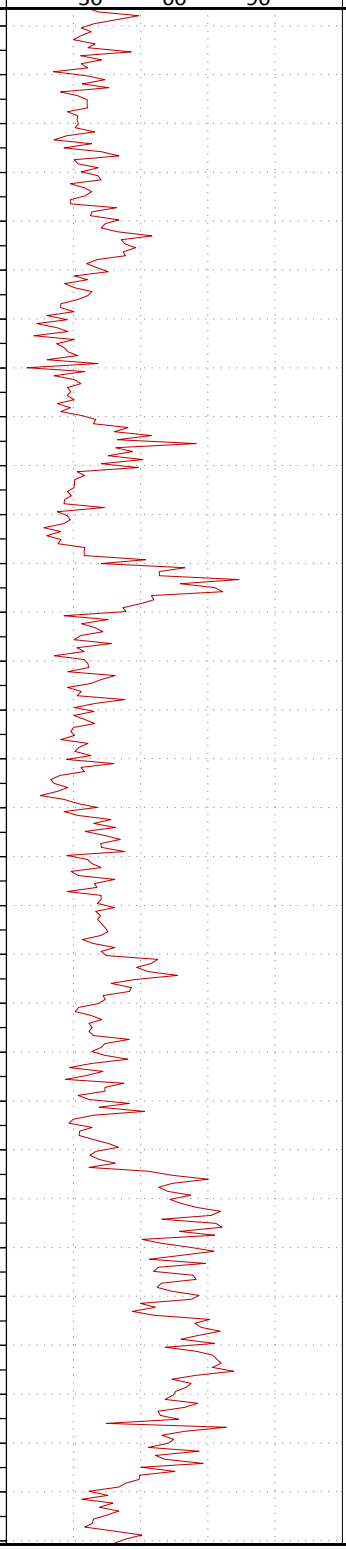
DRAFT Boring Log

BORING #: VPB148



DEPTH (ft)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
810				Magothy	CL		Dark gray (Gley 1 4/N) very soft lean CLAY of low plasticity with fine subangular Sand *(continued)*
812							
814					CH		Dark gray (5 Y 6/1) soft fat CLAY, trace fine subangular sand
816							
818							
820		< 0.50	< 0.50		CH		Gray (Gley 1 6/N) fat very soft non-plastic CLAY with fine subangular Sand
822							
824					CH		Gray (Gley 1 6/N) fat soft CLAY with Silt and fine subangular sand
826							
828							
830					CH		Dark gray (5 Y 4/N) fat medium plasticity CLAY with fine subangular Sand, trace rounded medium sand
832							
834					CH		Dark gray (5 Y 4/N) fat medium plasticity CLAY with Silt and fine sand, trace subrounded sand
836							
838							
840		< 10	< 10		CH		Gray (Gley 1 6/N) fat CLAY, trace fine Sand
842							
844					CH		Gray (Gley 1 6/N) fat CLAY with fine Sand
846							
848							
850					CH		Gray (Gley 1 6/N) fat CLAY, trace fine Sand
852							
854					CH		Gray (Gley 1 6/N) fat CLAY, trace fine Sand
856							
858							
860		< 5.0	< 5.0		CH		Gray (Gley 1 5/N) fat CLAY, trace fine Sand
862							
864					CH		Gray (Gley 1 5/N) fat CLAY with fine Sand
866							
868							
870					CH		Gray (Gley 1 6/N) fat CLAY, trace fine Sand
872							

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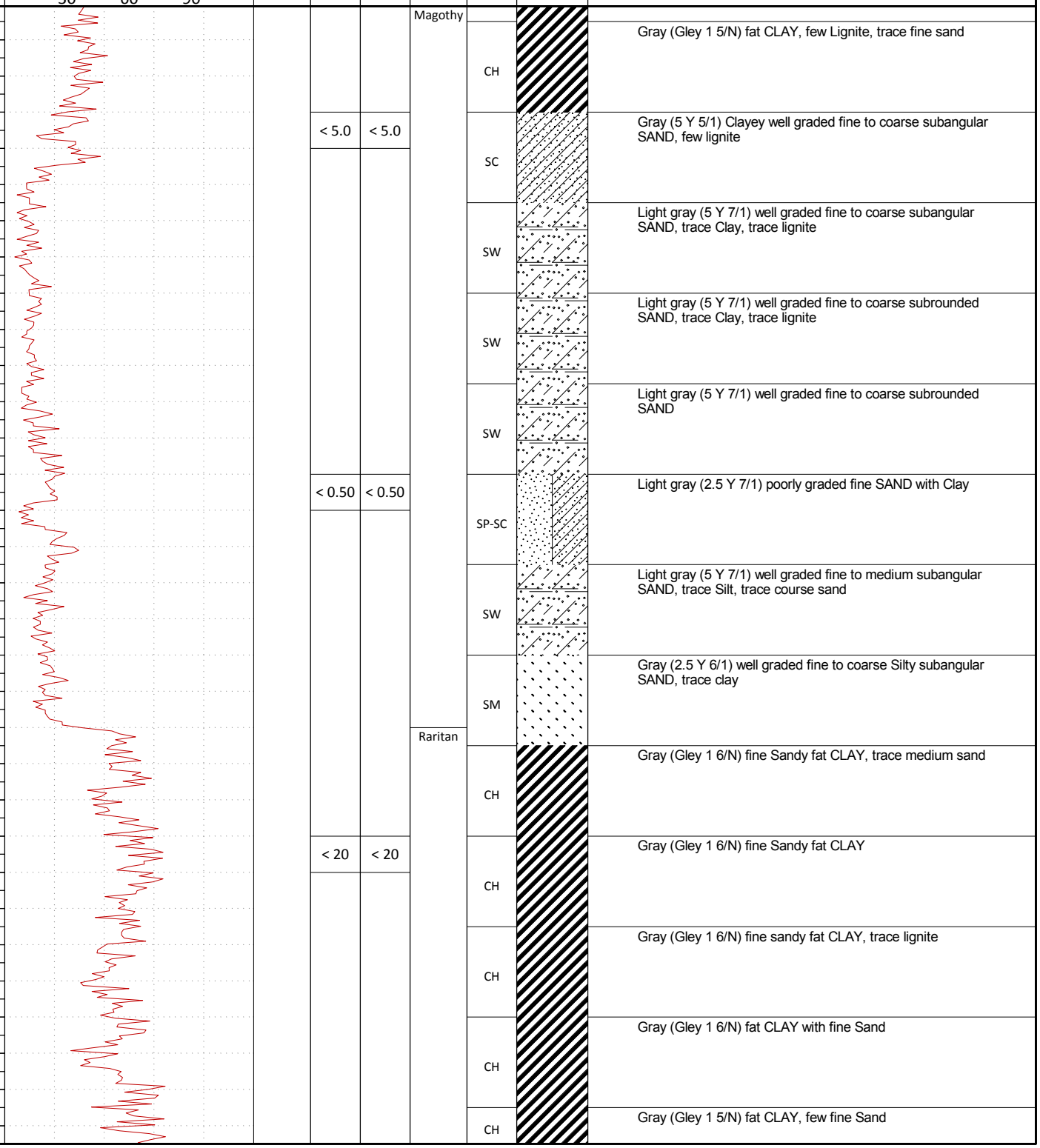
DRAFT Boring Log

BORING #: VPB148



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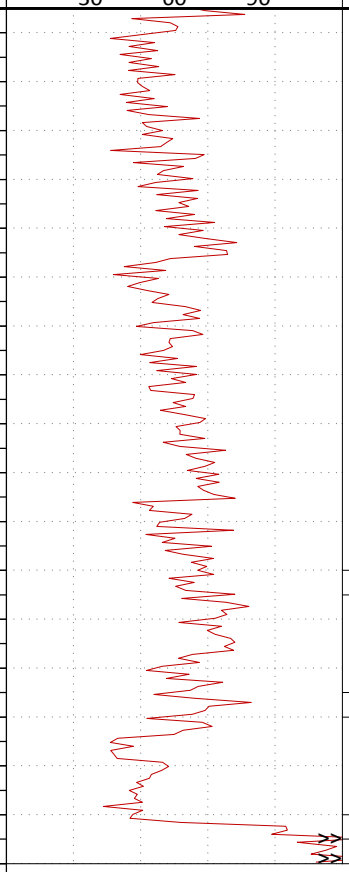
DRAFT Boring Log

BORING #: VPB148

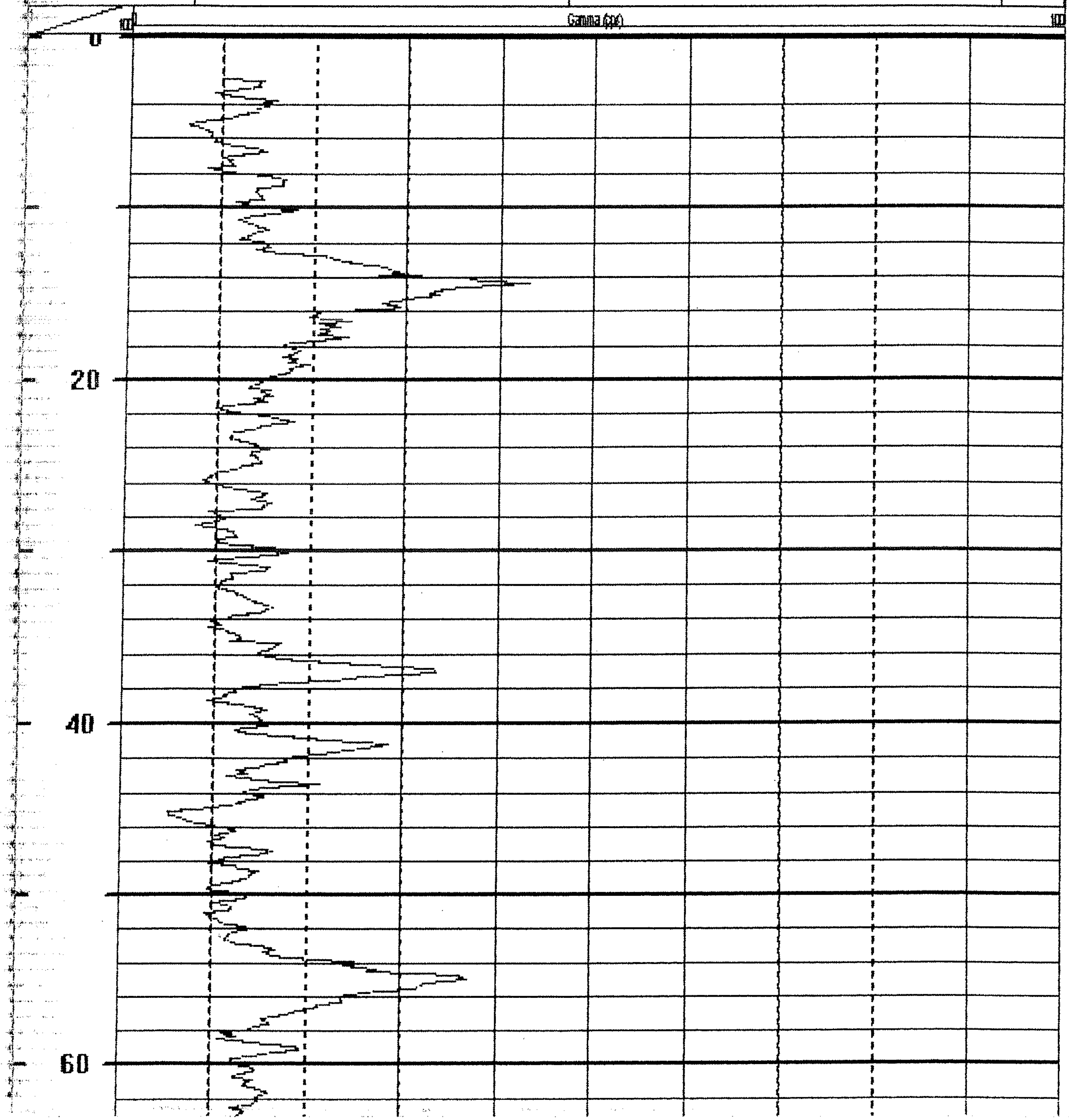


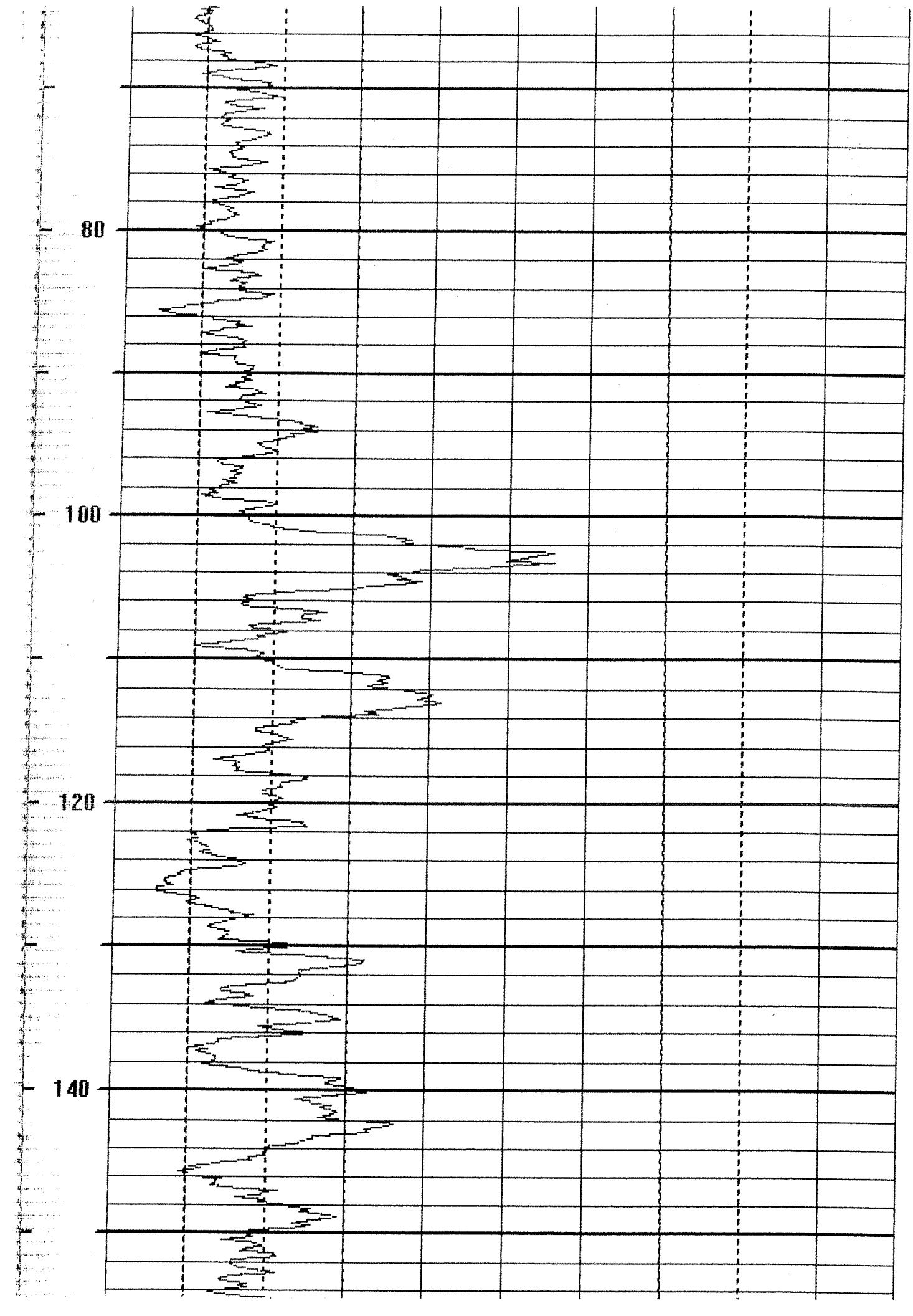
DEPTH (ft)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
936				Raritan	CH		Gray (Gley 1 5/N) fat CLAY, few fine Sand *(continued)*
938							
940					SC		Gray (2.5 Y 6/1) Clayey poorly graded fine SAND
942							
944					CH		Gray (Gley 1 5/N) trace light red (10 R 6/6) fine Sandy fat CLAY
946							
948							
950		< 20	< 20		CH		Red (10 R 5/6) few gray (Gley 1 5/N) fat CLAY with fine Sand
952							
954					CH		Red (10 R 5/6) few gray (Gley 1 5/N) fat CLAY with fine Sand
956							
958							
960	0				CH		Gray (Gley 1 6/N) few red (10 R 4/6) trace white (white N/9) stiff fat CLAY, trace Lignite
962					CH		Red (10 R 4/6) fat CLAY
964	0				CH		Gray (Gley 1 6/N) few white (white N/9) trace red (10 R 4/6) fat CLAY, trace Lignite
966					CH		Red (10 R 5/6) and gray (Gley 1 6/N) fat CLAY
968							
970	0				CH		Red (10 R 4/6) white (white N/9) and gray (Gley 1 6/N) fat CLAY
							End of boring at 970.0 ft. bgs.

DOWNHOLE

Date: Tuesday, March 11, 2014 Time: 10:?? File: [illegible]

COMPANY:	DELTA WELL & PUMP CO., INC.		Casing
Location:	NWIRP BETHPAGE - ELM DR N		
Well	VPB148	Depth Driller	
		Depth Logger	
Date	03/11/2014	BH Fluid	Logged by: CMC
File Name	729		Witness: MIKE

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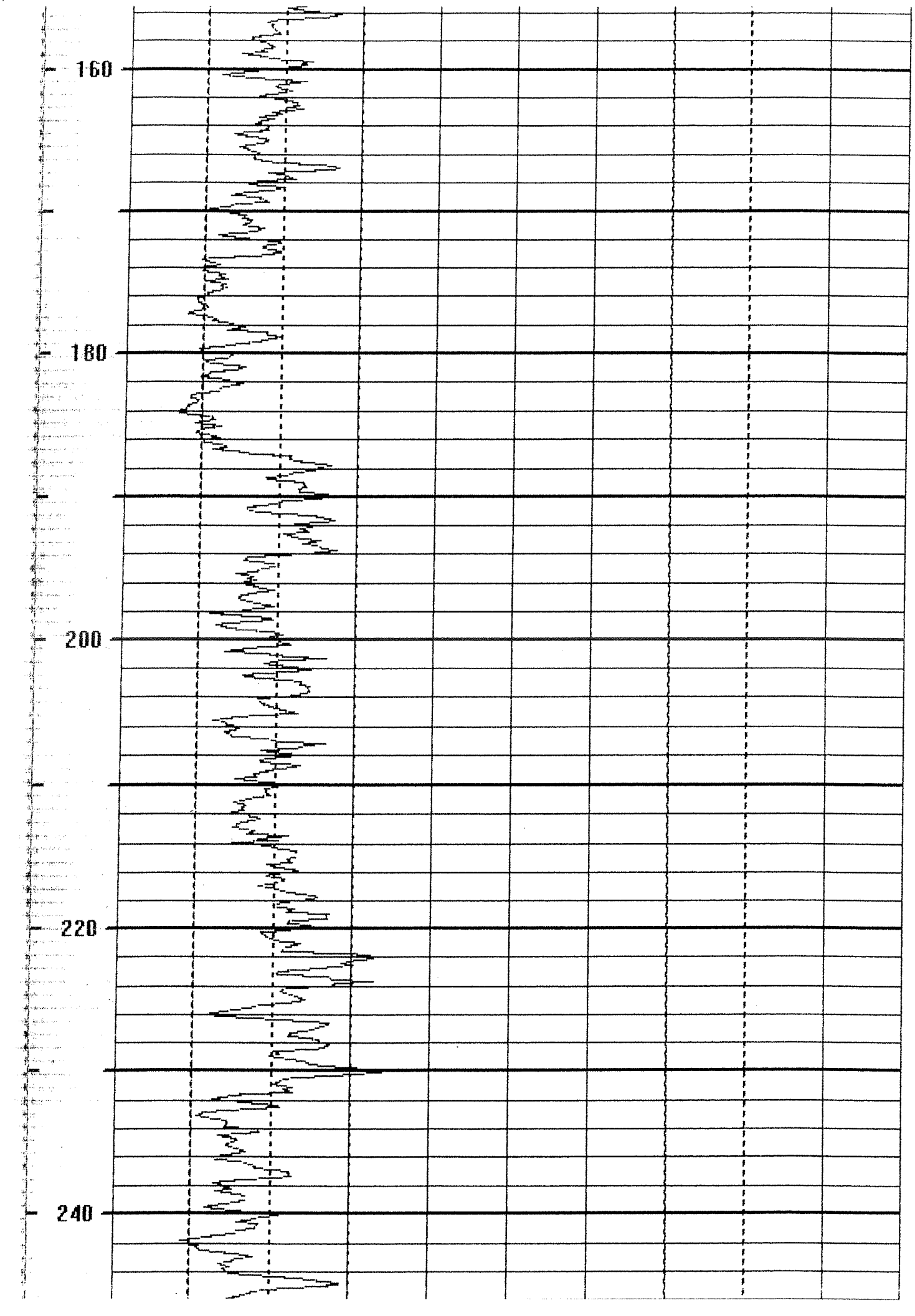
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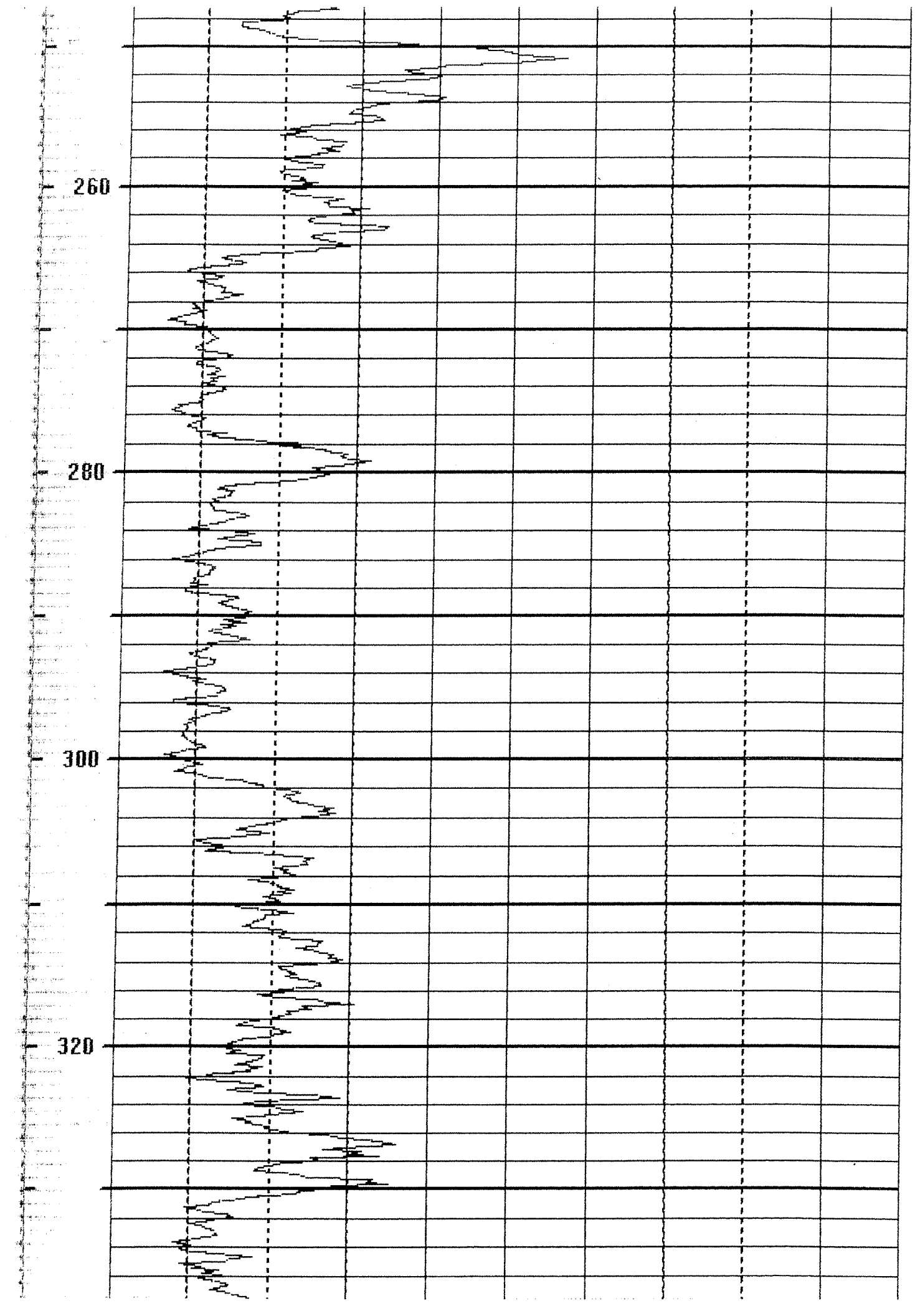
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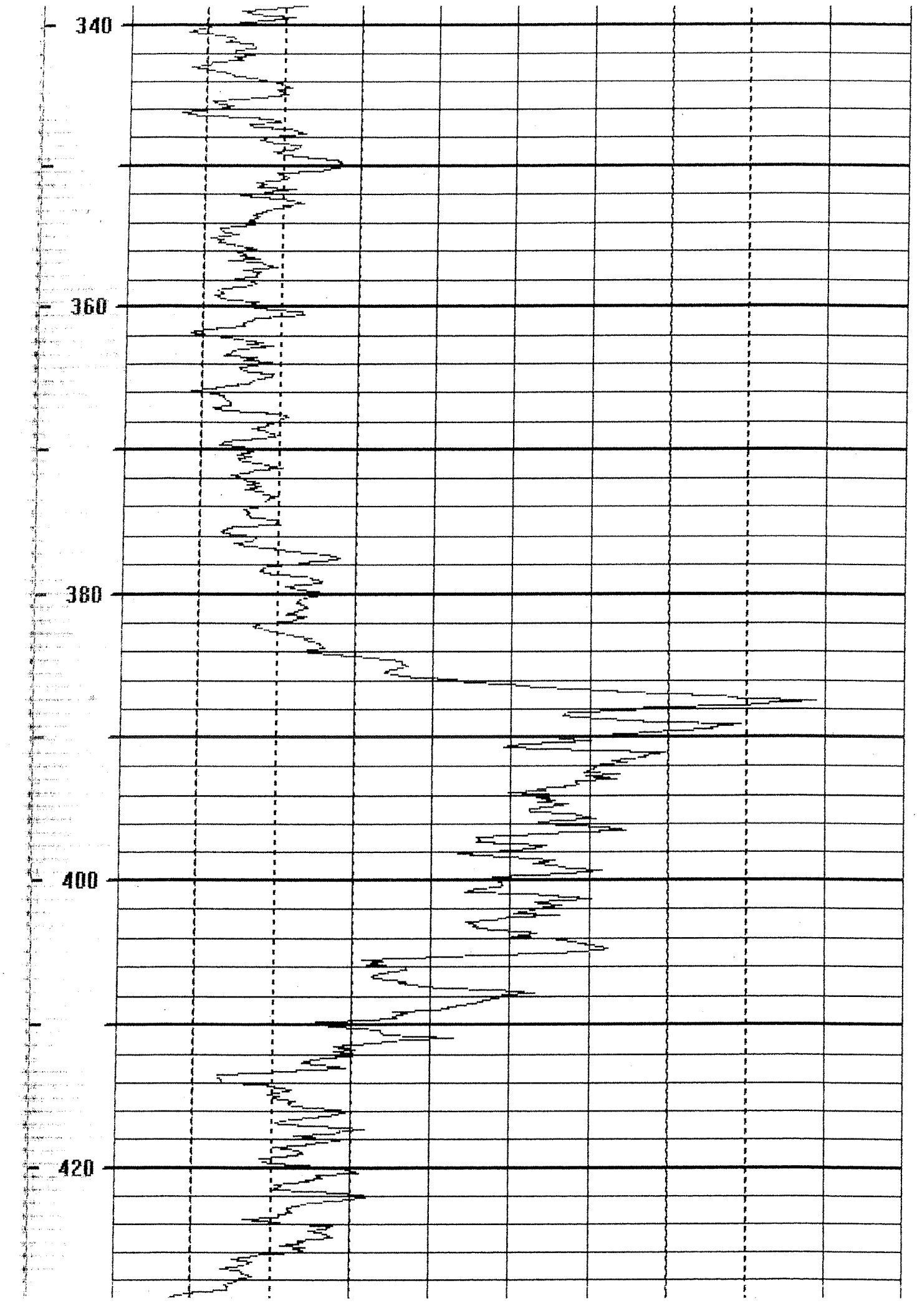
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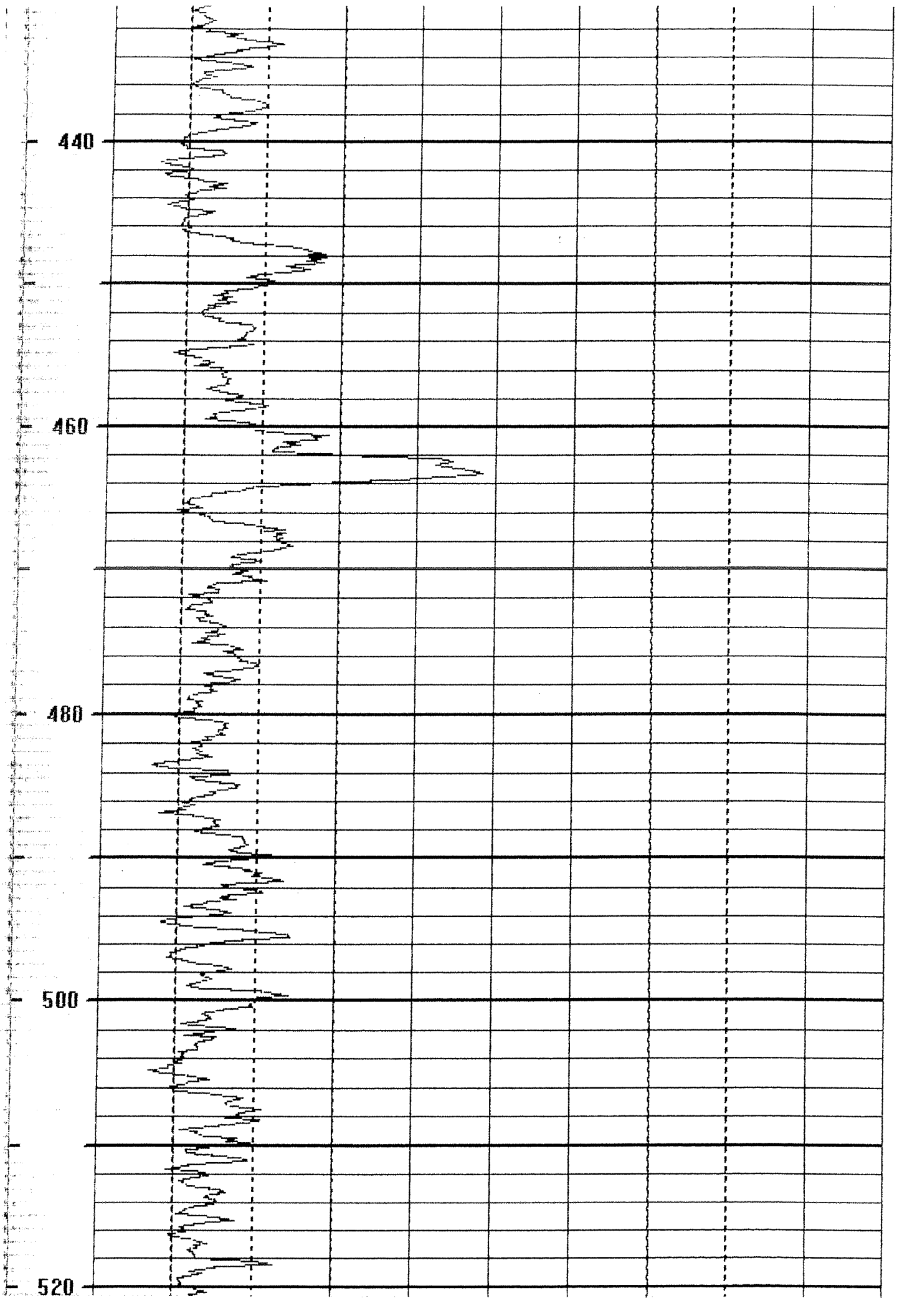
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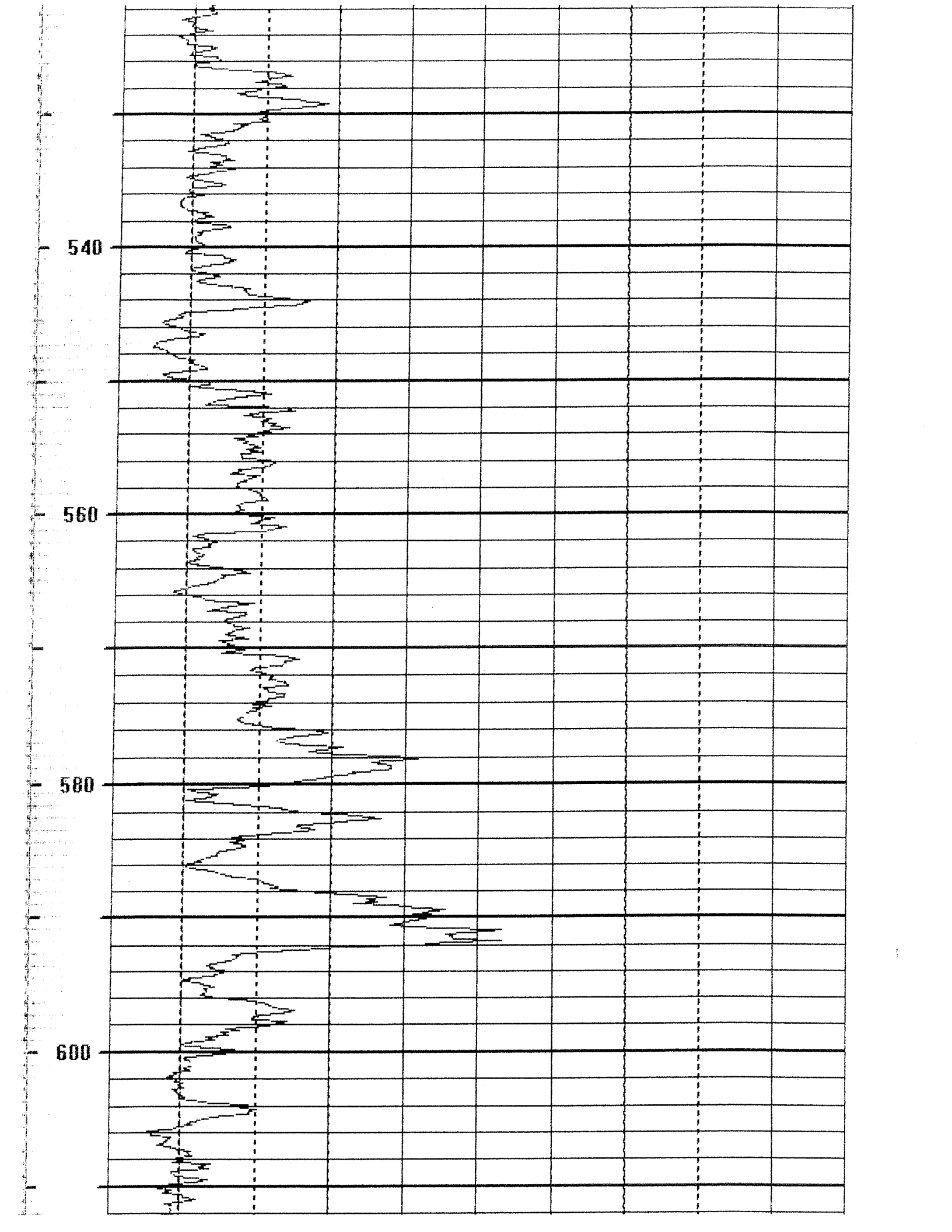
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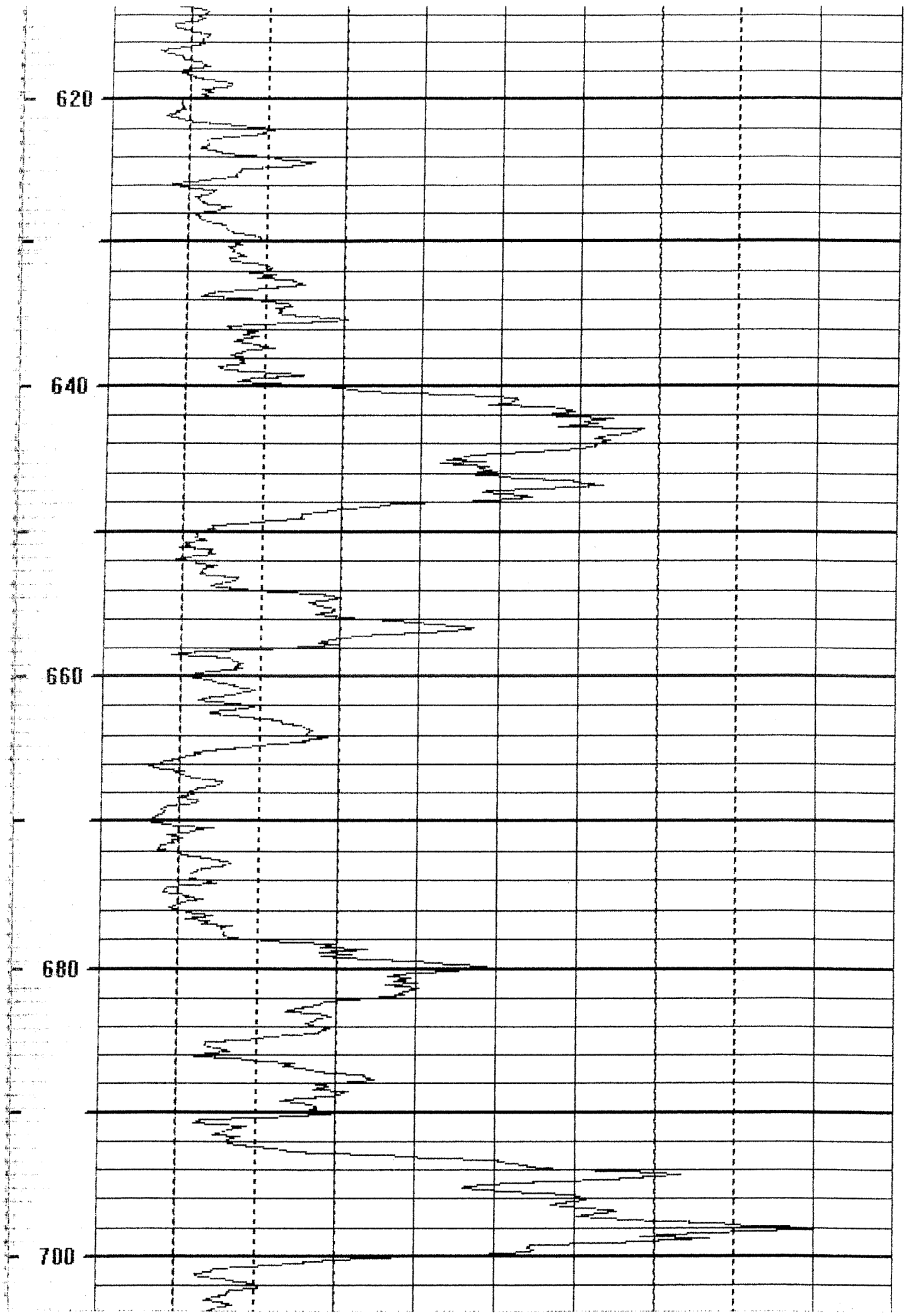
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640
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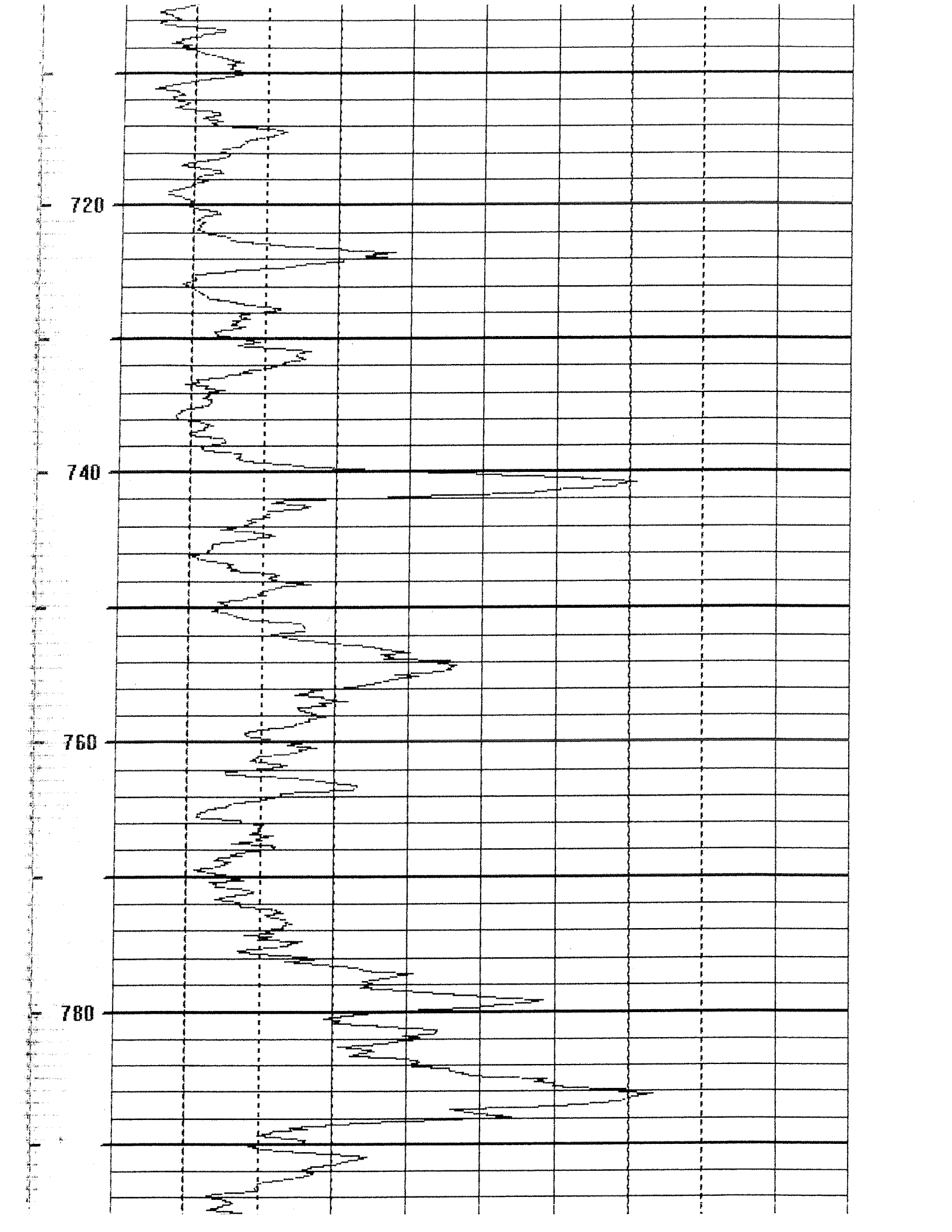
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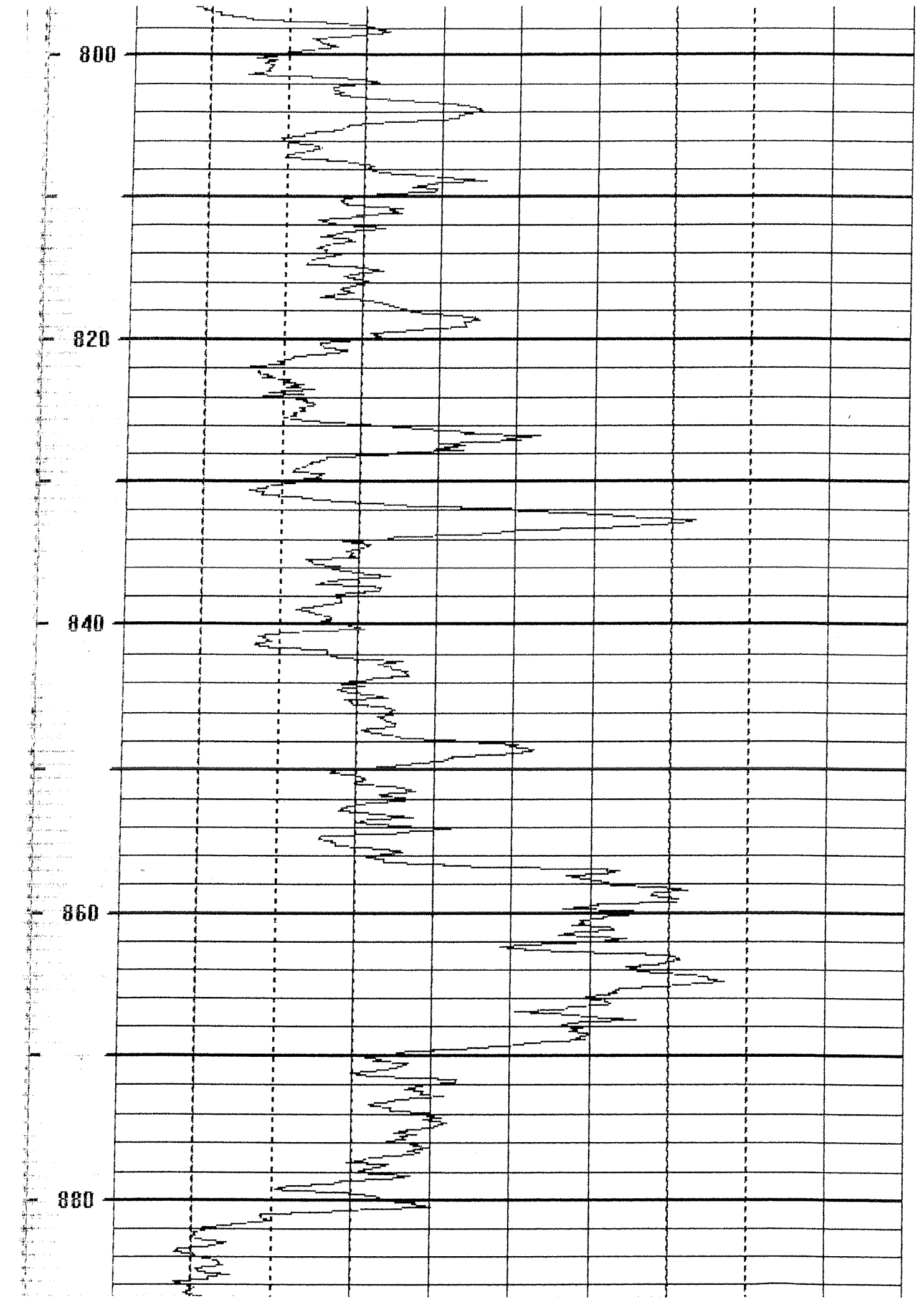
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820
840
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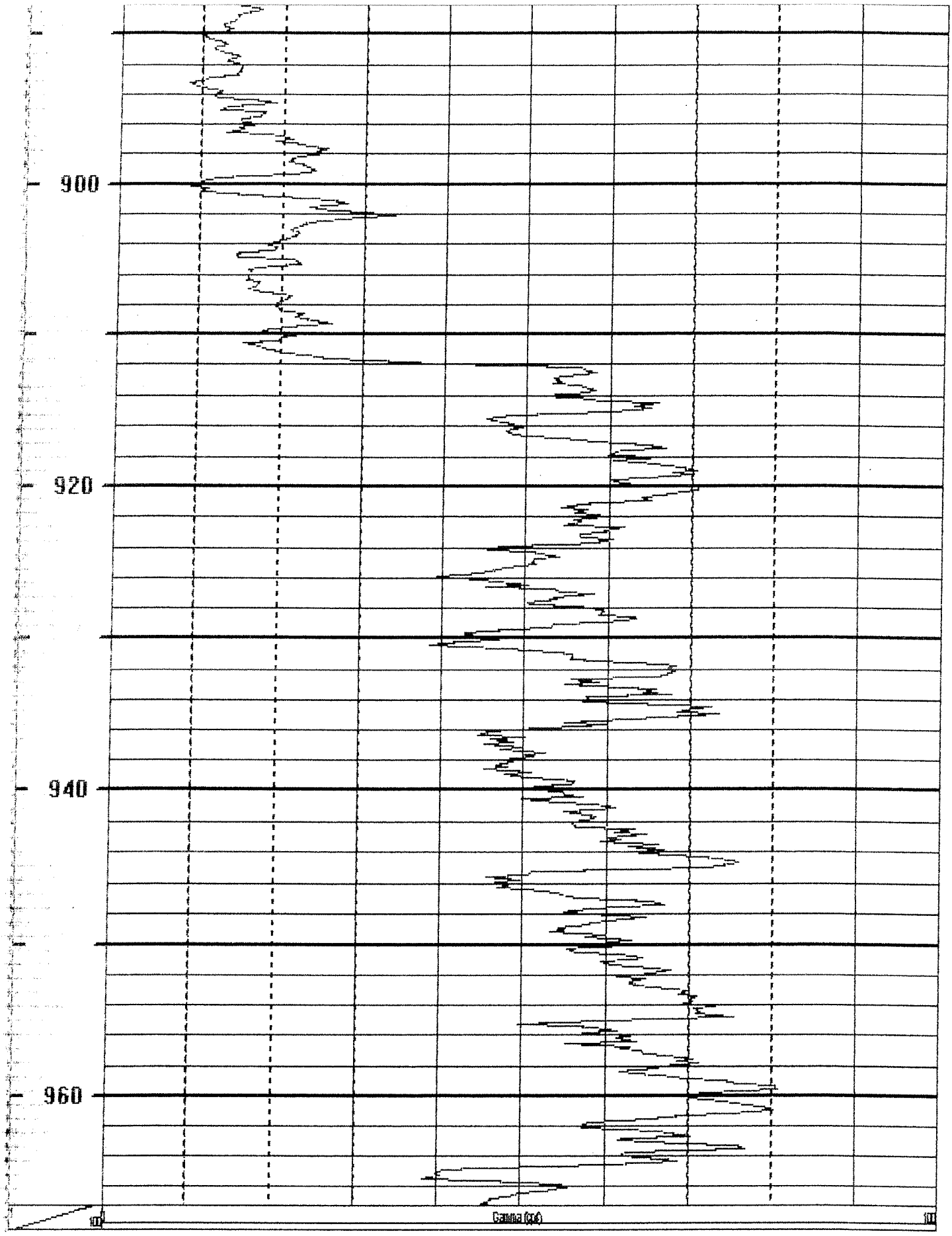
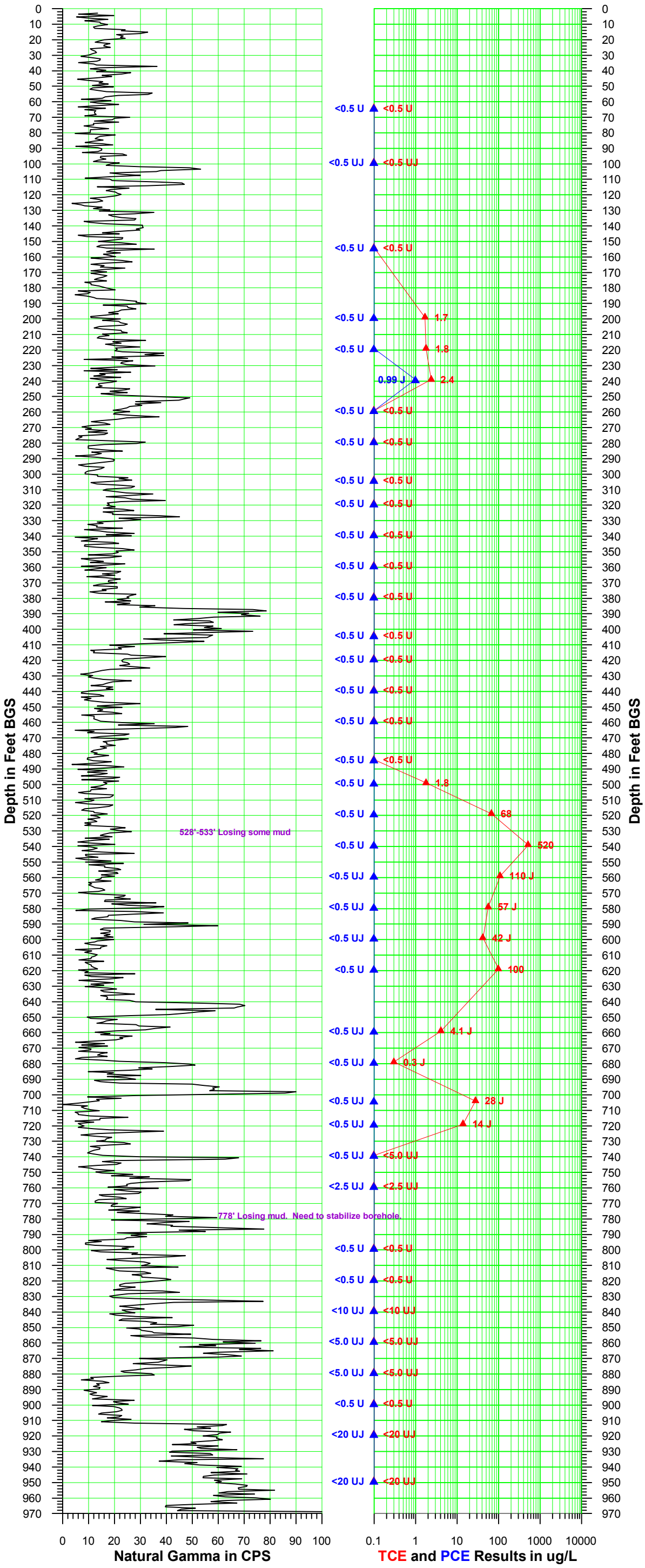

900
920
940
960
Gamma (gAPI)

Section 2

VPB 148 Gamma and PCE/TCE Plot

Vertical Profile Boring VPB-148
Downward Run - March 11, 2014
Validated Analytical Data



Section 3

VPB 148 Groundwater Sample Log Sheets

Hydropunch Sample

Client: Navy
Project No: 60265526
Site Location: VPB 148 Pettigrew
Weather Conds: 30°F

Date: 2-6-14
VPB: 148
Collector(s): G. Hicks V. Verriello

Sample Date	Time	Temp (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Starting depth(ft)	Ending depth(ft)	Color
2-6-14	12:37	4.3	7.61	349	63.2 (%)	136.2	32@4	63	65	pale yellow brown
2-6-14	15:10	7.24	7.05	~~797~~ 447	10.48	17.9	~~>1000~~ >1100	98	100	brown
2-7-14	12:45	7.30	6.69	586	10.49	27.5	986.5	153	155	pale yellow
2-10-14	11:50	5.60	6.63	512	12.64	96.9	655.0	198	200	pale yellow
2-11-14	13:50	6.48	6.50	342	8.57	62.1	>1100	218	220	yellow
2-11-14	13:05	7.03	6.22	361	10.54	27.6	392.3	238	240	cloudy
2-12-14	11:05	6.75	6.52	294	10.31	-12.4	538.9	278	280	cloudy
2-11-14	15:05	7.13	6.48	321	10.95	-32.1	412.2	258	260	cloudy
2-12-14	15:40	7.25	6.23	253	9.78	36.8	783.5	303	305	cloudy
2-14-14	1230	7.44	6.21	309	6.91	65.5	393.1	318	320	Cloudy
2-14-14	1445	9.11	6.39	268	10.05	90.1	>1100	338	340	cloudy brown
2-17-14	1105	7.88	6.53	283	10.21	67.0	545.2	358	360	Cloudy
2-17-14	1310	7.49	6.56	264	10.37	37.3	265.7	378	380	Cloudy
2-18-14	1015	7.72	7.13	55	13.45	86.2	1051	403	405	pale yellow brown
2-18-14	1210	9.26	6.75	56	16.11	65.0	882.4	418	420	pale brown
2-18-14	1500	9.79	6.17	82	13.45	45.8	728.8	438	440	Cloudy * DUP
2-19-14	1055	9.19	6.58	113	8.03	18.2	773.7	458	460	cloudy
2-19-14	1535	10.73	6.99	123	4.75	31.5	>1,100	483	485	Cloudy
2-20-14	1055	13.54	7.11	184	7.18	-84.2	>1,100	498	500	Cloudy
2-20-14	1300	11.93	6.56	127	6.86	-13.9	>1,100	518	520	Cloudy
2-20-14	1510	10.93	6.11	140	9.12	24.3	>1,100	538	540	Pale yellow
2-21-14	1020	9.33	7.48	152	8.26	30.9	>1,100	558	560	Cloudy

Hydropunch Sample

Client: Navy
Project No: 60265526
Site Location: Bethpage / Levittown
Weather Conds:

Date: 2-21-14
VPB: 148
Collector(s): G. Hicks, M. Zobel

Sample Date	Time	Temp (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Starting depth(ft)	Ending depth(ft)	Color
2-21-14	1240	10.93	6.30	124	7.12	29.0	>1,100	578	580	murky yellow/cloudy
2-24-14	1040	9.60	7.03	221	9.04	39.5	>1,100	598	600	brown
2-24-14	1255	9.89	6.99	152	10.49	-14.8	>1,100	618	620	brown
2-26-14	1000	7.01	7.58	504	9.61	98.2	>1,100	658	660	brown
2-26-14	1255	9.16	7.37	389	9.74	41.9	>1,100	678	680	brown
2-27-14	1105	5.74	7.89	179	3.28	7.2	>1,100	703	705	light brown
2-27-14	1315	6.14	7.56	134	2.84	-37.1	>1,100	718	720	light brown
2-27-14	1525	7.02	7.44	107	4.02	-11.5	18).2	738	740	light brown
2-28-14	1215	7.63	7.00	613	0.76	-22.8	>1,100	758	760	Dark gray
3-3-14	1315	4.63	8.23	223	14.51	32.1	>1,100	798	800	pale gray
3-3-14	1530	5.20	8.29	138	14.75	61.7	>1,100	818	820	light brown
3-4-14	1140	7.58	7.87	152	7.31	82.9	>1,100	838	840	gray
3-4-14	1355	-	-	-	-	-	>1,100	858	860	gray * not enough sample for YSI
3-5-14	1250	10.44	7.28	523	7.40	-27.6	>1,100	878	880	gray
3-5-14	1505	7.65	6.80	321	7.79	-64.4	432	898	900	Cloudy * DUP
3-6-14	1050	9.20	6.69	530	9.13	40.4	>1,100	918	920	Grey/brown
3-7-14	1230	-	-	-	-	-	>1,100	948	950	red/brown * not enough sample for YSI

Section 4

VPB 148 Analytical Data Validation

- Analytical Data Sheets
- Chain of Custody Records
- Validation Letter and Table

AECOM
250 Apollo Drive
Chelmsford, MA 01824

978.905.2100 tel
978.905.2101 fax

Data Validation Report

Project:	Regional Groundwater Investigation - NWIRP Bethpage	
Laboratory:	Katahdin Analytical Services, Inc.	
Service Request:	SH0863	
Analyses/Method:	EPA SW-846 Method 8260B for VOCs (GC/MS)	
Validation Level:	Limited	
RESCON Project Number:	60266526.SA.DV	
Prepared by:	Sheena Blair/RESCON	Completed on: 05/26/2014
Reviewed by:	Lori Herberich/RESCON	File Name: SH0863_8260B

SUMMARY

The samples listed below were collected by Resolution Consultants (RESCON) from the Regional Groundwater Investigation - NWIRP Bethpage site on February 6, 7, and 10, 2014.

Sample ID	Matrix/Sample Type
VPB148-GW-020614-63-65	Groundwater
VPB148-GW-020614-98-100	Groundwater
VPB148-GW-020714-153-155	Groundwater
VPB148-GW-021014-198-200	Groundwater
VPB148-GW-021014-218-220	Groundwater
VPB148-TRIPBLANK-021014	Trip Blank

Data validation activities were conducted with reference to *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods SW846, specifically SW-846 Method 8260B, Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry* (USEPA, 1996), *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (June 2008), and Quality Systems Manual (QSM) for Environmental Laboratories, Version 4.2 (DoD, October 2010). In the absence of method-specific information, laboratory quality control (QC) limits, project-specific requirements and/or professional judgment were used as appropriate.

REVIEW ELEMENTS

The data were evaluated based on the following review elements (where applicable to the method):

- ✗ Data completeness (chain-of-custody [COC])/sample integrity
- ✓ Holding times and sample preservation
- ✓ GC/MS performance checks
- ✓ Initial calibration/continuing calibration verification
- ✓ Laboratory blanks/equipment blanks/trip blanks
- ✗ Surrogate spike recoveries
- ✓ Matrix spike (MS) results

✗	Laboratory control sample (LCS) results
NA	Field duplicate results
✓	Internal standard results
✓	Sample results/reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (✗) indicates that a QC nonconformance resulted in the qualification of data. Any QC nonconformance that resulted in the qualification of data is discussed below. In addition, nonconformances or other issues that were noted during validation, but did not result in qualification of data, may be discussed for informational purposes only.

The data appear valid as reported and may be used for decision making purposes. Selected data points were estimated due to nonconformances of certain QC criteria (see discussion below). Qualified sample results are presented in Table 1.

RESULTS

Data Completeness/Sample Integrity

The data package was reviewed and found to meet acceptance criteria for completeness:

- The COCs were reviewed for completeness of information relevant to the samples and requested analyses, and for signatures indicating transfer of sample custody.
- The laboratory sample login sheet(s) were reviewed for issues potentially affecting sample integrity, including the condition of sample containers upon receipt at the laboratory.
- Completeness of analyses was verified by comparing the reported results to the COC requests.

Due to limitations in the reporting system, the laboratory omitted the "VPB-148-" prefix from the sample ID in the report. The submitted EDD file reflects the full sample ID.

Sample VPB148-GW-020614-98-100 was mostly soil and had very little standing water. The laboratory decanted the water from the individual vials prior to analysis. Positive and nondetect results for this sample were qualified as estimated (J and UJ) respectively, due to possible loss of sample integrity during the decanting procedure.

Holding Times/Sample Preservation

Sample preservation and preparation/analysis holding times were reviewed for conformance with the QC acceptance criteria. All QC acceptance criteria were met.

GC/MS Performance Checks

The data were reviewed to ensure that the 4-bromofluorobenzene (BFB) tuning was performed at the correct frequency and that the method acceptance criteria were met. All QC acceptance criteria were met.

Initial Calibration/Continuing Calibration Verification

Calibration data were reviewed for conformance with the QC acceptance criteria to ensure that:

- the initial calibration (ICAL) percent relative standard deviation (%RSD), correlation coefficient (r)/coefficient of determination (r^2), and/or response factor method acceptance criteria were met;
- the initial calibration verification standard (ICV) percent recoveries (%Rs) acceptance criteria were met;
- the continuing calibration verification standard (CCV) method percent difference or percent drift (%Ds) and RF acceptance criteria were met; and
- the retention time method acceptance criteria were met.

The QC acceptance criteria were met for all sample results reported.

Laboratory Blanks/Equipment Blanks/Trip Blanks

Laboratory method blanks, equipment rinsate and trip blanks were evaluated as to whether there were contaminants detected above the detection limit (DL).

Data validation qualifications for individual samples are based on the maximum contaminant concentration detected in all associated blanks.

Method, equipment rinsate and trip blank results were reviewed for conformance with the QC acceptance criteria. Detected results in blanks are not discussed in this data validation report if the associated results were nondetect or if qualification of sample results was not required.

The QC acceptance criteria were met and/or qualification of the sample results was not required.

Surrogate Spike Recoveries

The surrogate recoveries (%Rs) were reviewed for conformance with the QC acceptance criteria.

Data qualification on the basis of surrogate recovery nonconformances was as follows:

	Action	
Nonconformance	**Detected Compounds**	**Nondetected Compounds**
%R > Upper Limit (UL)	J	No qualification
20% ≤%R < Lower Limit (LL)	J	UJ
%R < 20%	J	R

Nonconformances are summarized in Attachment A in Table A-1. Qualified sample results are shown in Table 1.

MS Results

The MS %Rs were reviewed for conformance with the QC acceptance criteria.

The MS was performed on sample VPB148-GW-020714-153-155. Although some compounds had high recoveries the related sample results were nondetect and no validation action was required.

LCS Results

The LCS %Rs were reviewed for conformance with the QC acceptance criteria.

Data qualification to the analytes associated with the specific LCS %Rs was as follows:

Nonconformances[1]	Action	
	Detected Compounds	Nondetected Compounds
%R or RPD > UL	J	No qualification
%R < LL	J	UJ
%R < 20% (see note 1)	J	R
(LL = lower limit, UL = upper limit)		

Notes:

1. Based on NFG 2008 VOC guidance, professional judgment is used to reject (R) nondetects in all associated samples for any analyte with < 20% recovery. Also, professional judgment is used to estimate (UJ) rather the reject sample results previously negated (U) on the basis of blank contamination.

Nonconformances are summarized in Attachment A in Table A-2. Qualified sample results are shown in Table 1.

Field Duplicate Results

There were no field duplicate samples submitted with this data set. No validation actions were taken on this basis.

Internal Standard Results

The internal standard (IS) recoveries were reviewed for conformance with the QC acceptance criteria. All QC acceptance criteria were met.

Sample Results/Reporting Issues

Compounds that were not detected in the sample are reported as undetected (U) at the Limit of Detection (LOD).

Compounds detected at concentrations less than the LOQ but greater than the detection limit (DL) were qualified by the laboratory as estimated (J). This "J" qualifier was retained during data validation.

Any sample that was analyzed at a dilution due to high concentrations of target or non-target compounds or matrix interferences was checked to ensure that the results and/or sample specific LODs and LOQs were adjusted accordingly by the laboratory.

QUALIFICATION ACTIONS

Sample results qualified as a result of validation actions are summarized in Table 1. All actions are described above.

ATTACHMENTS

Attachment A: Nonconformance Summary Tables

Attachment B: Qualifier Codes and Explanations

Attachment C: Reason Codes and Explanations

Table 1 - Data Validation Summary of Qualified Data

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB148-GW-020614-63-65	WG	ACETONE	11	2.5	UG/L	J	I
VPB148-GW-020614-98-100	WG	1,1,1-TRICHLOROETHANE		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	1,1,2,2-TETRACHLOROETHANE		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	1,1,2-TRICHLOROETHANE		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	1,1-DICHLOROETHANE		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	1,1-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	1,2,4-TRICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	1,2-DIBROMOETHANE		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	1,2-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	1,2-DICHLOROETHANE		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	1,2-DICHLOROETHENE, TOTAL		1.0	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	1,2-DICHLOROPROPANE		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	1,3-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	1,4-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	2-BUTANONE		2.5	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	2-HEXANONE		2.5	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	ACETONE	12	2.5	UG/L	J	mc,s,I
VPB148-GW-020614-98-100	WG	BENZENE		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	BROMODICHLOROMETHANE		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	BROMOFORM		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	BROMOMETHANE		1.0	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	CARBON DISULFIDE		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	CARBON TETRACHLORIDE		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	CHLOROBENZENE		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	CHLOROETHANE		1.0	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	CHLOROFORM		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	CHLOROMETHANE		1.0	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	CIS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	CIS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	CYCLOHEXANE		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	DIBROMOCHLOROMETHANE		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	DICHLORODIFLUOROMETHANE		1.0	UG/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB148-GW-020614-98-100	WG	ETHYLBENZENE		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	ISOPROPYLBENZENE		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	M- AND P-XYLENE		1.0	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	METHYL ACETATE		0.75	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	METHYL CYCLOHEXANE		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	METHYL TERT-BUTYL ETHER		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	METHYLENE CHLORIDE		2.5	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	O-XYLENE		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	STYRENE		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	TETRACHLOROETHENE		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	TOLUENE		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	TRANS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	TRANS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	TRICHLOROETHENE		0.50	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	TRICHLOROFLUOROMETHANE		1.0	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	VINYL CHLORIDE		1.0	UG/L	UJ	mc
VPB148-GW-020614-98-100	WG	XYLENES, TOTAL		1.5	UG/L	UJ	mc

Attachment A

Nonconformance Summary Tables

Table A1 - Surrogates

Sample ID	Surrogate	% Recovery	Lower Limit	Upper Limit
VPB148-GW-020614-98-100	1,2-DICHLOROETHANE-D4	124	70	120

Table A2 - Lab Control Samples

LCS ID	Compound	LCS % Recovery	Lower Limit	Upper Limit	Associated Samples
WG138694-1	ACETONE	142	40	140	VPB148-GW-020614-63-65, VPB148-GW-020614-98-100 ,

Attachment B

Qualifier Codes and Explanations

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

Attachment C

Reason Codes and Explanations

Reason Code	Explanation
be	Equipment blank contamination
bf	Field blank contamination
bl	Laboratory blank contamination
c	Calibration issue
co	Analyte carryover
d	Reporting limit raised due to chromatographic interference
fd	Field duplicate RPDs
h	Holding times
i	Internal standard areas
k	Estimated Maximum Possible Concentration (EMPC)
l	LCS or OPR recoveries
lc	Labeled compound recovery
ld	Laboratory duplicate RPDs
lp	Laboratory control sample/laboratory control sample duplicate RPDs
m	Matrix spike recovery
md	Matrix spike/matrix spike duplicate RPDs
nb	Negative laboratory blank contamination
p	Chemical preservation issue
r	Dual column RPD
q	Quantitation issue
s	Surrogate recovery
su	Ion suppression
t	Temperature preservation issue
x	Percent solids
y	Serial dilution results
z	ICS results
mc	Method compliance nonconformance

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client: Resolution Consultants | Contact: Eleand Vivadan | Phone #: (845) 425-4980 | Fax #: ( )

Address: 100 Red Schoolhouse Rd | City: Chestnut Ridge | State: NY | Zip Code: 10977

Purchase Order # | Proj. Name / No.: NWIRP Bethpage / 60265526 | Katahdin Quote #

Bill (if different than above) | Address

Sampler (Print / Sign): Gordon Hicks

Copies To:

LAB USE ONLY | WORK ORDER #:

KATAHDIN PROJECT NUMBER

REMARKS: SH0863

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: VOC (Filt. ☐Y ☐N)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	VPB148-GWMS-020714-153-155	2-7-14 / 12:40	GW	3	3									
	VPB148-GW-020614-63-65	2-6-14 / 12:45	GW	3	3									
	VPB148-GW-020614-98-100	2-6-14 / 15:00	GW	3	3									
	VPB148-GWMSD-020714-153-155	2-7-14 / 12:40	GW	3	3									
	VPB148-GW-020714-153-155	2-7-14 / 12:40	GW	3	3									
	VPB148-GW-021014-198-200	2-10-14 / 11:40	GW	3	3									
	VPB148-GW-021014-218-220	2-10-14 / 13:45	GW	3	3									
	VPB148-TRIPBLANK-021014	~~12-10-13~~ 1-25-13 / 14:00	W	3	3									
		/												
		/												
		/												
		/												
		/												
		/												
		/												
		/												

COMMENTS

2-11-14 0910

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
[signature]	2-10-14 16:30	[signature]			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

ORIGINAL

KAS-COC1

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH0863-1RA
Client ID: GW-020714-153-155
Project: Navy Clean WE15 NWIRP B
SDG: SH0863
Lab File ID: C5666.D

Sample Date: 07-FEB-14
Received Date: 11-FEB-14
Extract Date: 18-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG138933

Analysis Date: 18-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 19-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	JM	1.2	ug/L	1	2	2.0	0.24	1.0
Chloromethane	UMM	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	UMM	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	UM	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	UM	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	UMM	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	J	4.2	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	JM	0.47	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	UMM	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	UMM	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	J	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	UMM	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	UMM	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	UMM	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	UMM	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH0863-1RA
Client ID: GW-020714-153-155
Project: Navy Clean WE15 NWIRP B
SDG: SH0863
Lab File ID: C5666.D

Sample Date: 07-FEB-14
Received Date: 11-FEB-14
Extract Date: 18-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG138933

Analysis Date: 18-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 19-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	UMM	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	UMM	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	UMM	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		103.	%					
Toluene-d8		101.	%					
1,2-Dichloroethane-d4		104.	%					
Dibromofluoromethane		97.1	%					

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Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH0863-2
Client ID: GW-020614-63-65
Project: Navy Clean WE15 NWIRP B
SDG: SH0863
Lab File ID: C5598.D

Sample Date: 06-FEB-14
Received Date: 11-FEB-14
Extract Date: 12-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG138694

Analysis Date: 12-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 19-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	UL	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	UL	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	~~U~~ J	11	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	J	0.44	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH0863-2
Client ID: GW-020614-63-65
Project: Navy Clean WE15 NWIRP B
SDG: SH0863
Lab File ID: C5598.D

Sample Date: 06-FEB-14
Received Date: 11-FEB-14
Extract Date: 12-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG138694

Analysis Date: 12-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 19-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	UL	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		81.2	%					
Toluene-d8		88.1	%					
1,2-Dichloroethane-d4		119.	%					
Dibromofluoromethane		101.	%					

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH0863-3
Client ID: GW-020614-98-100
Project: Navy Clean WE15 NWIRP B
SDG: SH0863
Lab File ID: C5599.D

Sample Date: 06-FEB-14
Received Date: 11-FEB-14
Extract Date: 12-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG138694

Analysis Date: 12-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 19-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UJ	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	UL	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	UL	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	J J	12	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U UJ	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH0863-3
Client ID: GW-020614-98-100
Project: Navy Clean WE15 NWIRP B
SDG: SH0863
Lab File ID: C5599.D

Sample Date: 06-FEB-14
Received Date: 11-FEB-14
Extract Date: 12-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG138694

Analysis Date: 12-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 19-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U UJ	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	UL	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		86.8	%					
Toluene-d8		89.8	%					
1,2-Dichloroethane-d4	*	124.	%					
Dibromofluoromethane		106.	%					

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH0863-4RA
Client ID: GW-021014-198-200
Project: Navy Clean WE15 NWIRP B
SDG: SH0863
Lab File ID: C5667.D

Sample Date: 10-FEB-14
Received Date: 11-FEB-14
Extract Date: 18-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG138933

Analysis Date: 18-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 19-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene		1.5	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone		5.9	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	J	0.40	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane		4.0	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	J	0.68	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	J	0.73	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene		1.7	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH0863-4RA
Client ID: GW-021014-198-200
Project: Navy Clean WE15 NWIRP B
SDG: SH0863
Lab File ID: C5667.D

Sample Date: 10-FEB-14
Received Date: 11-FEB-14
Extract Date: 18-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG138933

Analysis Date: 18-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 19-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		104.	%					
Toluene-d8		101.	%					
1,2-Dichloroethane-d4		108.	%					
Dibromofluoromethane		99.3	%					

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH0863-5RA
Client ID: GW-021014-218-220
Project: Navy Clean WE15 NWIRP B
SDG: SH0863
Lab File ID: C5668.D

Sample Date: 10-FEB-14
Received Date: 11-FEB-14
Extract Date: 18-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG138933

Analysis Date: 18-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 19-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene		2.3	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	J	4.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane		8.1	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform		1.8	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane		1.2	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene		1.8	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	J	0.68	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH0863-5RA
Client ID: GW-021014-218-220
Project: Navy Clean WE15 NWIRP B
SDG: SH0863
Lab File ID: C5668.D

Sample Date: 10-FEB-14
Received Date: 11-FEB-14
Extract Date: 18-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG138933

Analysis Date: 18-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 19-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		101.	%					
Toluene-d8		99.4	%					
1,2-Dichloroethane-d4		104.	%					
Dibromofluoromethane		95.5	%					

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH0863-6
Client ID: TRIPBLANK-021014
Project: Navy Clean WE15 NWIRP B
SDG: SH0863
Lab File ID: C5596.D

Sample Date: 10-FEB-14
Received Date: 11-FEB-14
Extract Date: 12-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG138694

Analysis Date: 12-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 19-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	UL	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	UL	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	J	2.7	ug/L	1	5	5.0	1.1	2.5
Acetone	UL	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH0863-6
Client ID: TRIPBLANK-021014
Project: Navy Clean WE15 NWIRP B
SDG: SH0863
Lab File ID: C5596.D

Sample Date: 10-FEB-14
Received Date: 11-FEB-14
Extract Date: 12-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG138694

Analysis Date: 12-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 19-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	UL	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		80.9	%					
Toluene-d8		87.8	%					
1,2-Dichloroethane-d4		120.	%					
Dibromofluoromethane		102.	%					

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Data Validation Report

Project:	Regional Groundwater Investigation - NWIRP Bethpage	
Laboratory:	Katahdin Analytical Services, Inc.	
Service Request:	SH0937	
Analyses/Method:	EPA SW-846 Method 8260B for VOCs (GC/MS)	
Validation Level:	Limited	
AECOM Project Number:	60266526.SA.DV	
Prepared by:	Sheena Blair/AECOM	Completed on: 03/06/2014
Reviewed by:	Lori Herberich/AECOM	File Name: SH0937_8260B

SUMMARY

The samples listed below were collected by Resolution Consultants from the Regional Groundwater Investigation - NWIRP Bethpage site on February 11 and February 12, 2014.

Sample ID	Matrix/Sample Type
VPB148-GW-021114-238-240	Ground water
VPB148-GW-021114-258-260	Ground water
VPB148-GW-021214-278-280	Ground water
VPB148-GW-021214-303-305	Ground water
VPB148-TRIP BLANK-021214	Trip Blank

Data validation activities were conducted with reference to *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods SW846, specifically SW-846 Method 8260B, Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry* (USEPA, 1996), *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (June 2008), and Quality Systems Manual (QSM) for Environmental Laboratories, Version 4.2 (DoD, October 2010). In the absence of method-specific information, laboratory quality control (QC) limits, project-specific requirements and/or professional judgment were used as appropriate.

REVIEW ELEMENTS

The data were evaluated based on the following review elements (where applicable to the method):

- ✓ Data completeness (chain-of-custody (COC))/sample integrity
- ✓ Holding times and sample preservation
- ✓ GC/MS performance checks
- ✓ Initial calibration/continuing calibration verification
- ✓ Laboratory blanks/trip blanks/equipment blanks
- ✓ Surrogate spike recoveries
- NA Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- ✓ Laboratory control sample (LCS) results

NA	Field duplicates
✓	Internal standards
✓	Sample results/reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (✗) indicates that a QC nonconformance resulted in the qualification of data. Any QC nonconformance that resulted in the qualification of data is discussed below. In addition, nonconformances or other issues that were noted during validation, but did not result in qualification of data, may be discussed for informational purposes only.

The data appear valid as reported and may be used for decision making purposes. There were no data points qualified or rejected on the basis of this data review.

RESULTS

Data Completeness/Sample Integrity

The data package was reviewed and found to meet acceptance criteria for completeness:

- The COCs were reviewed for completeness of information relevant to the samples and requested analyses, and for signatures indicating transfer of sample custody.
- The laboratory sample login sheet(s) were reviewed for issues potentially affecting sample integrity, including the condition of sample containers upon receipt at the laboratory.
- Completeness of analyses was verified by comparing the reported results to the COC requests.

Due to limitations in the reporting system, the laboratory omitted the "VPB-148-" prefix from the sample ID in the report. The submitted EDD file reflects the full sample ID.

Holding Times/Sample Preservation

Sample preservation and preparation/analysis holding times were reviewed for conformance with the QC acceptance criteria.

The QC acceptance criteria were met.

GC/MS Performance Checks

The data were reviewed to ensure that the 4-bromofluorobenzene (BFB) tuning was performed at the correct frequency and that the method acceptance criteria were met.

Initial Calibration/Continuing Calibration Verification

Calibration data were reviewed for conformance with the QC acceptance criteria to ensure that:

- the initial calibration (ICAL) percent relative standard deviation (%RSD), correlation coefficient (r)/coefficient of determination (r^2), and/or response factor method acceptance criteria were met;
- the continuing calibration verification standard (CCV) method percent difference or percent drift (%Ds) and RF acceptance criteria were met; and

- the retention time method acceptance criteria were met.

The QC acceptance criteria were met.

Laboratory Blanks/Equipment Blanks/Trip Blanks

Laboratory method blanks and trip blanks were evaluated as to whether there were contaminants detected above the detection limit (DL).

Data validation qualifications for individual samples are based on the maximum contaminant concentration detected in all associated blanks.

Method and trip blank results were reviewed for conformance with the QC acceptance criteria. Detected results in blanks are not discussed in this data validation report

Surrogate Spike Recoveries

The surrogate recoveries (%Rs) were reviewed for conformance with the QC acceptance criteria.

All QC acceptance criteria were met.

MS/MSD Results

MS/MSD analyses were not performed on samples reported in this SDG. There were no validation actions taken on this basis.

LCS Results

The LCS %Rs were reviewed for conformance with the QC acceptance criteria.

All QC acceptance criteria were met.

Field Duplicate Results

There were no field duplicate samples submitted with this data set. No validation actions were taken on this basis.

Internal Standard Results

The internal standard (IS) recoveries were reviewed for conformance with the QC acceptance criteria.

All QC acceptance criteria were met.

Sample Results/Reporting Issues

Compounds that were not detected in the sample are reported as undetected (U) at the Limit of Detection (LOD).

Compounds detected at concentrations less than the LOQ but greater than the detection limit (DL) were qualified by the laboratory as estimated (J). This "J" qualifier was retained during data validation.

Any sample that was analyzed at a dilution due to high concentrations of target or non-target compounds or matrix interferences was checked to ensure that the results and/or sample specific LODs and LOQs were adjusted accordingly by the laboratory.

QUALIFICATION ACTIONS

No sample results were qualified as a result of this data review.

ATTACHMENTS

Attachment A: Nonconformance Summary Tables

Attachment B: Qualifier Codes and Explanations

Attachment A

Non Conformance Summary Tables

No nonconformances were identified in this data set.

Attachment B

Qualifier Codes and Explanations

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

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PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client: Resolution Consultants	Contact: Eleanor Vivaudou	Phone #: (845) 425 4180	Fax #: ( )
Address: 100 Red Schoolhouse Rd	City: Chestnut Ridge	State: NY	Zip Code: 10977
Purchase Order #	Proj. Name / No.: NWIRP Bethpage / 60265526		Katahdin Quote #
Bill (if different than above)	Address		
Sampler (Print / Sign): Michael Zobel / Michael Zobel			Copies To:

LAB USE ONLY WORK ORDER #: S140937

KATAHDIN PROJECT NUMBER

REMARKS:

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: VOC (Filt. ☐Y ☐N)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	VPB14B-GW-021114-236-240	2-11-14 / 1305	GW	3	3									
	VPB14B-GW-021114-256-260	2-11-14 / 1505	GW	3	3									
	VPB14B-GW-021214-278-280	2-12-14 / 1105	GW	3	3									
	VPB14B-GW-021214-303-305	2-12-14 / 1340	GW	3	3									
	VPB14B-DUP-021214	1-25-13 / 1400	W	3	3									
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COMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
Michael Zobel	2-12-14 / 16:15	2-13-14 0850			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH0937-1RA
Client ID: GW-021114-238-240
Project: Navy Clean WE15 NWIRP B
SDG: SH0937
Lab File ID: C5673.D

Sample Date: 11-FEB-14
Received Date: 13-FEB-14
Extract Date: 18-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG138933

Analysis Date: 18-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene		2.6	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	J	4.4	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane		6.7	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	J	0.70	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane		1.1	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene		2.4	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	J	0.99	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://www.katahdinlab.com

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH0937-1RA
Client ID: GW-021114-238-240
Project: Navy Clean WE15 NWIRP B
SDG: SH0937
Lab File ID: C5673.D

Sample Date: 11-FEB-14
Received Date: 13-FEB-14
Extract Date: 18-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG138933

Analysis Date: 18-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		102.	%					
Toluene-d8		102.	%					
1,2-Dichloroethane-d4		112.	%					
Dibromofluoromethane		99.3	%					

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ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH0937-2RA
Client ID: GW-021114-258-260
Project: Navy Clean WE15 NWIRP B
SDG: SH0937
Lab File ID: C5674.D

Sample Date: 11-FEB-14
Received Date: 13-FEB-14
Extract Date: 18-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG138933

Analysis Date: 18-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH0937-2RA
Client ID: GW-021114-258-260
Project: Navy Clean WE15 NWIRP B
SDG: SH0937
Lab File ID: C5674.D

Sample Date: 11-FEB-14
Received Date: 13-FEB-14
Extract Date: 18-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG138933

Analysis Date: 18-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		104.	%					
Toluene-d8		101.	%					
1,2-Dichloroethane-d4		112.	%					
Dibromofluoromethane		98.5	%					

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH0937-3RA
Client ID: GW-021214-278-280
Project: Navy Clean WE15 NWIRP B
SDG: SH0937
Lab File ID: C5675.D

Sample Date: 12-FEB-14
Received Date: 13-FEB-14
Extract Date: 18-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG138933

Analysis Date: 18-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	J	4.9	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH0937-3RA
Client ID: GW-021214-278-280
Project: Navy Clean WE15 NWIRP B
SDG: SH0937
Lab File ID: C5675.D

Sample Date: 12-FEB-14
Received Date: 13-FEB-14
Extract Date: 18-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG138933

Analysis Date: 18-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		104.	%					
Toluene-d8		103.	%					
1,2-Dichloroethane-d4		115.	%					
Dibromofluoromethane		98.7	%					

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH0937-4RA
Client ID: GW-021214-303-305
Project: Navy Clean WE15 NWIRP B
SDG: SH0937
Lab File ID: C5676.D

Sample Date: 12-FEB-14
Received Date: 13-FEB-14
Extract Date: 18-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG138933

Analysis Date: 18-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone		5.6	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH0937-4RA
Client ID: GW-021214-303-305
Project: Navy Clean WE15 NWIRP B
SDG: SH0937
Lab File ID: C5676.D

Sample Date: 12-FEB-14
Received Date: 13-FEB-14
Extract Date: 18-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG138933

Analysis Date: 18-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		103.	%					
Toluene-d8		102.	%					
1,2-Dichloroethane-d4		115.	%					
Dibromofluoromethane		99.2	%					

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ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH0937-5RA
Client ID: TRIP BLANK-021214
Project: Navy Clean WE15 NWIRP B
SDG: SH0937
Lab File ID: C5664.D

Sample Date: 12-FEB-14
Received Date: 13-FEB-14
Extract Date: 18-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG138933

Analysis Date: 18-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	J	1.8	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH0937-5RA
Client ID: TRIP BLANK-021214
Project: Navy Clean WE15 NWIRP B
SDG: SH0937
Lab File ID: C5664.D

Sample Date: 12-FEB-14
Received Date: 13-FEB-14
Extract Date: 18-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG138933

Analysis Date: 18-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		99.1	%					
Toluene-d8		96.8	%					
1,2-Dichloroethane-d4		99.0	%					
Dibromofluoromethane		93.2	%					

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AECOM
250 Apollo Drive
Chelmsford, MA 01886-3140

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Data Validation Report

Project:	Regional Groundwater Investigation - NWIRP Bethpage
Laboratory:	Katahdin Analytical Services, Inc.
Service Request:	SH1025
Analyses/Method:	EPA SW-846 Method 8260B for VOCs (GC/MS) and EPA SW-846 Method 9060A for TOC (Carbonaceous analyzer, IR or FID)
Validation Level:	Limited
AECOM Project Number:	60266526.SA.DV
Prepared by: Sheena Blair/AECOM	Completed on: 03/21/2014
Reviewed by: Lori Herberich/AECOM	File Name: SH1025_8260B_9060

SUMMARY

The samples listed below were collected by Resolution Consultants from the Regional Groundwater Investigation - NWIRP Bethpage site on February 12, 14, 17, and 18, 2014.

Sample ID	Matrix/Sample Type
VPB148-GW-021414-318-320	Ground water
VPB148-GW-021414-338-340	Ground water
VPB148-GW-021714-358-360	Ground water
VPB148-GW-021714-378-380	Ground water
VPB148-GW-021814-403-405	Ground water
VPB148-GW-021814-418-420	Ground water
VPB148-GW-021814-438-440	Ground water
VPB148-SOIL-021214-298-300	Soil
VPB148-GW-D-021814	Field Duplicate of VPB148-GW-021814-438-440
VPB148-SOIL-D-021214	Field Duplicate of VPB148-SOIL-021214-298-300
VPB148-TRIP BLANK-021814	Trip Blank

The samples were analyzed in accordance with *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods SW846* (USEPA, 1996), specifically:

- Method 8260B, *Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry*
- Method 9060A, *Total Organic Carbon*

Data validation activities were conducted with reference to these methods, *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (June 2008), *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review* (January 2010), and Quality Systems Manual (QSM) for Environmental Laboratories, Version 4.2 (DoD, October 2010) where applicable. In the absence of method-specific information, laboratory quality control (QC) limits, project-specific requirements and/or professional judgment were used as appropriate

REVIEW ELEMENTS

The data were evaluated based on the following review elements (where applicable to the method):

- ✓ Data completeness (chain-of-custody (COC))/sample integrity
- ✓ Holding times and sample preservation
- ✓ GC/MS performance checks
- ✓ Initial calibration/continuing calibration verification
- ✓ Laboratory blanks/trip blanks/equipment blanks
- ✓ Surrogate spike recoveries
- ✗ Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- ✓ Laboratory control sample (LCS)/laboratory control sample duplicate (LCSD) results
- ✓ Field duplicates
- ✓ Internal standards
- ✓ Sample results/reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (✗) indicates that a QC nonconformance resulted in the qualification of data. Any QC nonconformance that resulted in the qualification of data is discussed below. In addition, nonconformances or other issues that were noted during validation, but did not result in qualification of data, may be discussed for informational purposes only.

The data appear valid as reported and may be used for decision making purposes. No data were rejected. Selected data points were estimated due to nonconformances of certain QC criteria (see discussion below). Qualified sample results are presented in Table 1.

RESULTS

Data Completeness/Sample Ingegrity

The data package was reviewed and found to meet acceptance criteria for completeness:

- The COCs were reviewed for completeness of information relevant to the samples and requested analyses, and for signatures indicating transfer of sample custody.
- The laboratory sample login sheet(s) were reviewed for issues potentially affecting sample integrity, including the condition of sample containers upon receipt at the laboratory.
- Completeness of analyses was verified by comparing the reported results to the COC requests.

Due to limitations in the reporting system, the laboratory omitted the "VPB-148-" prefix, and "TRIP BLANK" or GW, or "SOIL" from the sample ID in the report. The submitted EDD file reflects the full sample ID.

Holding Times/Sample Preservation

Sample preservation and preparation/analysis holding times were reviewed for conformance with the QC acceptance criteria.

The QC acceptance criteria were met.

GC/MS Performance Checks

The data were reviewed to ensure that the 4-bromofluorobenzene (BFB) tuning was performed at the correct frequency and that the method acceptance criteria were met.

Initial Calibration/Continuing Calibration Verification

Calibration data were reviewed for conformance with the QC acceptance criteria to ensure that:

- the initial calibration (ICAL) percent relative standard deviation (%RSD), correlation coefficient (r)/coefficient of determination (r^2), and/or response factor method acceptance criteria were met;
- the initial calibration verification (ICV) percent recovery (%R) criteria were met; and
- the continuing calibration verification standard (CCV) method percent difference or percent drift (%Ds), %Rs, and/or RF acceptance criteria were met; and/or
- the retention time method acceptance criteria were met.

The QC acceptance criteria were met.

Laboratory Blanks/Equipment Blanks/Trip Blanks

Laboratory method blanks, equipment rinsate and trip blanks were evaluated as to whether there were contaminants detected above the detection limit (DL).

Data validation qualifications for individual samples are based on the maximum contaminant concentration detected in all associated blanks.

Method, equipment rinsate and trip blank results were reviewed for conformance with the QC acceptance criteria. Detected results in blanks are not discussed in this data validation report if the associated results were nondetect or if qualification of sample results was not required.

The QC acceptance criteria were met and/or qualification of the sample results was not required.

Surrogate Spike Recoveries

The surrogate recoveries (%Rs) were reviewed for conformance with the QC acceptance criteria.

Although, selected samples had a high surrogate, the samples were non-detect and accepted without qualification.

MS/MSD Results

The MS/MSD %Rs and relative percent differences (RPDs) were reviewed for conformance with the QC acceptance criteria.

Data qualification to the analytes associated with the specific MS/MSD nonconformances was as follows:

Nonconformance	Action	
	Detected Compounds	Nondetected Compounds
%R> UL	J	No qualification
20% ≤ %R < LL	J	UJ
%R <20% (see note 1)	J	R*
%RPD > UL (see note 2)	J	No qualification
Note: Actions are applied to the native unspiked sample only (see note 3) *When the native sample concentration is >4X the concentration of the spike added (based on Region I criteria), evaluate the MS, MSD, and native sample with regards to %RSD rather than %R (Resolution Consultants professional judgment)		

Notes:

1. Based on NFG 2008 VOC guidance, professional judgment is used to reject (R) non-detects in all associated samples for any analyte with < 20% recovery. Also, professional judgment is used to estimate (UJ) rather the reject (R) sample results previously negated (U) on the basis of blank contamination.
2. In the absence of Region 2 guidance, RPD actions are based on professional judgment.
3. If a field duplicate sample was also collected for the native sample chosen for MS/MSD analysis, professional judgment is used to apply MS/MSD actions to the corresponding field duplicate sample as well as the native sample.

Nonconformances are summarized in Attachment A in Table A-1. Qualified sample results are shown in Table 1.

LCS/LCSD Results

The LCS/LCSD %Rs and/or relative percent recoveries (RPDs) were reviewed for conformance with the QC acceptance criteria.

All QC acceptance criteria were met.

Field Duplicate Results

Field duplicate RPDs were reviewed for conformance with the QC criterion of ≤30% for aqueous and ≤ 50% for soil matrices. This criterion applies if both results were greater than five times the Limit of Quantitation (LOQ).

All QC acceptance criteria were met.

Internal Standard Results

The internal standard (IS) recoveries were reviewed for conformance with the QC acceptance criteria.

All QC acceptance criteria were met.

Sample Results/Reporting Issues

Compounds that were not detected in the sample are reported as undetected (U) at the Limit of Detection (LOD).

QUALIFICATION ACTIONS

Sample results qualified as a result of validation actions are summarized in Table 1. All actions are described above.

ATTACHMENTS

Attachment A: Nonconformance Summary Tables

Attachment B: Qualifier Codes and Explanations

Attachment C: Reason Codes and Explanations

Table 1A - Data Validation Summary of Qualified Data

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB148-SOIL-021214-298-300	SO	TOC	2200	370	ug/g	J	m
VPB148-SOIL-D-021214	SO	TOC	1500	360	ug/g	J	m

Attachment A

Non Conformance Summary Tables

Table-A-1- Matrix Spikes

Sample ID	Compound	MS % Recovery	Lower Limit	Upper Limit
VPB146-SOIL-012014-343-345	TOC	144	75	125
VPB148-SOIL-021214-298-300	TOC	179	75	125

Attachment B

Qualifier Codes and Explanations

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

Attachment C

Reason Codes and Explanations

Reason Code	Explanation
be	Equipment blank contamination
bf	Field blank contamination
bl	Laboratory blank contamination
c	Calibration issue
co	Analyte carryover
d	Reporting limit raised due to chromatographic interference
fd	Field duplicate RPDs
h	Holding times
i	Internal standard areas
k	Estimated Maximum Possible Concentration (EMPC)
l	LCS or OPR recoveries
lc	Labeled compound recovery
ld	Laboratory duplicate RPDs
lp	Laboratory control sample/laboratory control sample duplicate RPDs
m	Matrix spike recovery
md	Matrix spike/matrix spike duplicate RPDs
nb	Negative laboratory blank contamination
p	Chemical preservation issue
r	Dual column RPD
q	Quantitation issue
s	Surrogate recovery
su	Ion suppression
t	Temperature preservation issue
x	Percent solids
y	Serial dilution results
z	ICS results

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CHAIN of CUSTODY

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Client	Contact	Phone #	Fax #
Resolution Consultants	Eleanor Vivaudou	( )	( )

Address	City	State	Zip Code
100 Red Schoolhouse Rd.	Chestnut Ridge	NY	11907

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	NWIRP Bethpage / 60265526	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:
Michael Zobel / Michael Zobel	

LAB USE ONLY WORK ORDER #: 5H1025

KATAHDIN PROJECT NUMBER

REMARKS:

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: VOC (Filt. ☐Y ☐N)	TOC (Filt. ☐Y ☐N)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	VPB148-Trip Blank-021814	11-25-13/ 1400	W	3	3									
	VPB148-GW-021814-488-420	2-18-14/ 1215	GW	3	3									
	VPB148-GW-021814-403-405	2-18-14/ 1015	GW	3	3									
	VPB148-GW-021414-318-320	2-14-14/ 1230	GW	3	3									
	VPB148-GW-021714-358-360	2-17-14/ 1105	GW	3	3									
	VPB148-GW-021414-338-340	2-14-14/ 1440	GW	2	2									
	VPB148-GW-021714-378-380	2-17-14/ 1310	GW	2	2									
	VPB148-SOIL-021214-298-300	2-12-14/ 11:55	S	1		1								
	VPB148-SOIL-D-021214	2-12-14/ -	S	1		1								
	VPB148-SOIL-MS/MSD-021214-298-300	2-12-14/ 11:55	S	1		1								
	VPB148-GW-021814-438-440	2-18-14/ 1500	GW	3	3									
	VPB148-GW-D-021814	2-18-14/ -	GW	3	3									
		/												
		/												
		/												
		/												

COMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
Michael Zobel	2-18-14 / 1650	2-19-14 0900			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

ORIGINAL 02/20/2012

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1025-1
Client ID: VPB148-TB-021814
Project: Navy Clean WE15 NWIRP B
SDG: SH1025
Lab File ID: C5715.D

Sample Date: 18-FEB-14
Received Date: 19-FEB-14
Extract Date: 20-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139028

Analysis Date: 20-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 24-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	J	1.7	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1025-1
Client ID: VPB148-TB-021814
Project: Navy Clean WE15 NWIRP B
SDG: SH1025
Lab File ID: C5715.D

Sample Date: 18-FEB-14
Received Date: 19-FEB-14
Extract Date: 20-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139028

Analysis Date: 20-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 24-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		108.	%					
Toluene-d8		102.	%					
1,2-Dichloroethane-d4		113.	%					
Dibromofluoromethane		97.0	%					

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1025-2
Client ID: 148-021814-418-420
Project: Navy Clean WE15 NWIRP B
SDG: SH1025
Lab File ID: C5716.D

Sample Date: 18-FEB-14
Received Date: 19-FEB-14
Extract Date: 20-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139028

Analysis Date: 20-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 24-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1025-2
Client ID: 148-021814-418-420
Project: Navy Clean WE15 NWIRP B
SDG: SH1025
Lab File ID: C5716.D

Sample Date: 18-FEB-14
Received Date: 19-FEB-14
Extract Date: 20-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139028

Analysis Date: 20-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 24-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		108.	%					
Toluene-d8		105.	%					
1,2-Dichloroethane-d4	*	121.	%					
Dibromofluoromethane		100.	%					

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Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1025-3
Client ID: 148-021814-403-405
Project: Navy Clean WE15 NWIRP B
SDG: SH1025
Lab File ID: C5717.D

Sample Date: 18-FEB-14
Received Date: 19-FEB-14
Extract Date: 20-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139028

Analysis Date: 20-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 24-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	J	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1025-3
Client ID: 148-021814-403-405
Project: Navy Clean WE15 NWIRP B
SDG: SH1025
Lab File ID: C5717.D

Sample Date: 18-FEB-14
Received Date: 19-FEB-14
Extract Date: 20-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139028

Analysis Date: 20-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 24-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		106.	%					
Toluene-d8		103.	%					
1,2-Dichloroethane-d4		119.	%					
Dibromofluoromethane		101.	%					

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1025-4
Client ID: 148-021414-318-320
Project: Navy Clean WE15 NWIRP B
SDG: SH1025
Lab File ID: C5718.D

Sample Date: 14-FEB-14
Received Date: 19-FEB-14
Extract Date: 20-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139028

Analysis Date: 20-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 24-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	J	4.4	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1025-4
Client ID: 148-021414-318-320
Project: Navy Clean WE15 NWIRP B
SDG: SH1025
Lab File ID: C5718.D

Sample Date: 14-FEB-14
Received Date: 19-FEB-14
Extract Date: 20-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139028

Analysis Date: 20-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 24-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		109.	%					
Toluene-d8		106.	%					
1,2-Dichloroethane-d4	*	123.	%					
Dibromofluoromethane		104.	%					

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1025-5
Client ID: 148-021714-358-360
Project: Navy Clean WE15 NWIRP B
SDG: SH1025
Lab File ID: C5719.D

Sample Date: 17-FEB-14
Received Date: 19-FEB-14
Extract Date: 20-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139028

Analysis Date: 20-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 24-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	J	3.7	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1025-5
Client ID: 148-021714-358-360
Project: Navy Clean WE15 NWIRP B
SDG: SH1025
Lab File ID: C5719.D

Sample Date: 17-FEB-14
Received Date: 19-FEB-14
Extract Date: 20-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139028

Analysis Date: 20-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 24-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		110.	%					
Toluene-d8		106.	%					
1,2-Dichloroethane-d4	*	125.	%					
Dibromofluoromethane		105.	%					

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1025-6RA
Client ID: 148-021414-338-340
Project: Navy Clean WE15 NWIRP B
SDG: SH1025
Lab File ID: C5747.D

Sample Date: 14-FEB-14
Received Date: 19-FEB-14
Extract Date: 21-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139075

Analysis Date: 21-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 24-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	J	4.7	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1025-6RA
Client ID: 148-021414-338-340
Project: Navy Clean WE15 NWIRP B
SDG: SH1025
Lab File ID: C5747.D

Sample Date: 14-FEB-14
Received Date: 19-FEB-14
Extract Date: 21-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139075

Analysis Date: 21-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 24-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		92.1	%					
Toluene-d8		87.9	%					
1,2-Dichloroethane-d4		106.	%					
Dibromofluoromethane		86.1	%					

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1025-7RA
Client ID: 148-021714-378-380
Project: Navy Clean WE15 NWIRP B
SDG: SH1025
Lab File ID: C5748.D

Sample Date: 17-FEB-14
Received Date: 19-FEB-14
Extract Date: 21-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139075

Analysis Date: 21-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 24-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	J	3.0	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1025-7RA
Client ID: 148-021714-378-380
Project: Navy Clean WE15 NWIRP B
SDG: SH1025
Lab File ID: C5748.D

Sample Date: 17-FEB-14
Received Date: 19-FEB-14
Extract Date: 21-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139075

Analysis Date: 21-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 24-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		89.2	%					
Toluene-d8		86.7	%					
1,2-Dichloroethane-d4		103.	%					
Dibromofluoromethane		85.3	%					

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1025-10
Client ID: 148-021814-438-440
Project: Navy Clean WE15 NWIRP B
SDG: SH1025
Lab File ID: C5722.D

Sample Date: 18-FEB-14
Received Date: 19-FEB-14
Extract Date: 20-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139028

Analysis Date: 20-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 24-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1025-10
Client ID: 148-021814-438-440
Project: Navy Clean WE15 NWIRP B
SDG: SH1025
Lab File ID: C5722.D

Sample Date: 18-FEB-14
Received Date: 19-FEB-14
Extract Date: 20-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139028

Analysis Date: 20-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 24-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		107.	%					
Toluene-d8		103.	%					
1,2-Dichloroethane-d4		119.	%					
Dibromofluoromethane		99.2	%					

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1025-11
Client ID: VPB148-GW-D-021814
Project: Navy Clean WE15 NWIRP B
SDG: SH1025
Lab File ID: C5723.D

Sample Date: 18-FEB-14
Received Date: 19-FEB-14
Extract Date: 20-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139028

Analysis Date: 20-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 24-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	J	3.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1025-11
Client ID: VPB148-GW-D-021814
Project: Navy Clean WE15 NWIRP B
SDG: SH1025
Lab File ID: C5723.D

Sample Date: 18-FEB-14
Received Date: 19-FEB-14
Extract Date: 20-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139028

Analysis Date: 20-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 24-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		110.	%					
Toluene-d8		105.	%					
1,2-Dichloroethane-d4	*	125.	%					
Dibromofluoromethane		105.	%					

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Report of Analytical Results

Client: Rick Purdy
AECOM
701 Edgewater Drive
Wakefield,MA 01880

Lab Sample ID: SH1025-8
Report Date: 05-MAR-14
Client PO: 60266526 ATS-3(WE15)
Project: Navy Clean WE15 NWIR
SDG: SH1025

Sample Description	Matrix	Date Sampled	Date Received
148--021214-298-300	SL	12-FEB-14	19-FEB-14

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
TOC In Soil	2200 J ug/gdrywt	500	100	370	SW846 9060A	WG139318	27-FEB-14 12:48:42	N/A	N/A	
Total Solids	80. %	1		N/A	SM2540G	WG139072	24-FEB-14 15:39:33	SM2540G	24-FEB-14	

Fe 3/25/14

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Rick Purdy
AECOM
701 Edgewater Drive
Wakefield,MA 01880

Lab Sample ID: SH1025-9
Report Date: 05-MAR-14
Client PO: 60266526 ATS-3(WE15)
Project: Navy Clean WE15 NWIR
SDG: SH1025

Sample Description	Matrix	Date Sampled	Date Received
148-SOIL-D-021214	SL	12-FEB-14	19-FEB-14

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
TOC In Soil	1500 J ug/gdrywt	480	100	360	SW846 9060A	WG139318	27-FEB-14 11:57:19	N/A	N/A	
Total Solids	83. %	1		N/A	SM2540G	WG139072	24-FEB-14 15:40:05	SM2540G	24-FEB-14	

3/25/14

Katahdin Analytical Services 0000183

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Data Validation Report

Project:	Regional Groundwater Investigation - NWIRP Bethpage
Laboratory:	Katahdin Analytical Services, Inc.
Service Request:	SH1096
Analyses/Method:	EPA SW-846 Method 8260B for VOCs (GC/MS)
Validation Level:	Limited
AECOM Project Number:	60266526.SA.DV
Prepared by:	Sheena Blair/AECOM
Completed on:	04/21/2014
Reviewed by:	Lori Herberich/AECOM
File Name:	SH1096_SW8260B

SUMMARY

The samples listed below were collected by Resolution Consultants from the Regional Groundwater Investigation - NWIRP Bethpage site February 19 and 20, 2014.

Sample ID	Matrix/Sample Type
VPB148-EB-022014	Equipment blank
VPB148-FB-022014	Field blank
VPB148-GW-021914-458-460	Ground water
VPB148-GW-021914-483-485	Ground water
VPB148-GW-022014-498-500	Ground water
VPB148-GW-022014-518-520	Ground water
VPB148-GW-022014-538-540	Ground water
VPB148-TRIP BLANK-022014	Trip Blank

Data validation activities were conducted with reference to *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods SW846, specifically SW-846 Method 8260B, Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry* (USEPA, 1996) and the *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (June 2008). In the absence of method-specific information, laboratory quality control (QC) limits, project-specific requirements and/or AECOM professional judgment were used as appropriate.

REVIEW ELEMENTS

The data were evaluated based on the following review elements (where applicable to the method):

- ✓ Data completeness (chain-of-custody (COC))/sample integrity
- ✓ Holding times and sample preservation
- ✓ GC/MS performance checks
- ✗ Initial calibration/continuing calibration verification
- ✓ Laboratory blanks/trip blanks/equipment blanks

✗	Surrogate spike recoveries
NA	Matrix spike (MS) and/or matrix spike duplicate (MSD) results
✓	Laboratory control sample (LCS) results
NA	Field duplicates
✓	Internal standards
✓	Sample results/reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (✗) indicates that a QC nonconformance resulted in the qualification of data. Any QC nonconformance that resulted in the qualification of data is discussed below. In addition, nonconformances or other issues that were noted during validation, but did not result in qualification of data, may be discussed for informational purposes only.

The data appear valid as reported and may be used for decision making purposes. No data were rejected. Selected data points were estimated due to nonconformances of certain QC criteria (see discussion below). Qualified sample results are presented in Table 1.

RESULTS

Data Completeness

The data package was reviewed and found to meet acceptance criteria for completeness:

- The COCs were reviewed for completeness of information relevant to the samples and requested analyses, and for signatures indicating transfer of sample custody.
- The laboratory sample login sheet(s) were reviewed for issues potentially affecting sample integrity, including the condition of sample containers upon receipt at the laboratory.
- Completeness of analyses was verified by comparing the reported results to the COC requests.

Due to limitations in the reporting system, the laboratory omitted the "VPB-148-" prefix from the sample ID, and truncated IDs for GW and Trip Blank in the report. The submitted EDD file reflects the full sample ID.

Holding Times/Sample Preservation

Sample preservation and preparation/analysis holding times were reviewed for conformance with the QC acceptance criteria.

The QC acceptance criteria were met.

GC/MS Performance Checks

The data were reviewed to ensure that the 4-bromofluorobenzene (BFB) tuning was performed at the correct frequency and that the method acceptance criteria were met.

Initial Calibration/Continuing Calibration Verification

Calibration data were reviewed for conformance with the QC acceptance criteria to ensure that:

- the initial calibration (ICAL) percent relative standard deviation (%RSD), correlation coefficient (r)/coefficient of determination (r^2), and/or response factor method acceptance criteria were met;
- the continuing calibration verification standard (CCV) method percent difference or percent drift (%Ds) and RF acceptance criteria were met; and
- the retention time method acceptance criteria were met.

Data qualification to the analytes associated with the specific CCV was as follows:

CCV Linearity Nonconformances:

Nonconformance	Actions	
	Detected Results	Nondetected Results
%D > 20%	J	UJ
%Drift	J*	UJ*
* No guidance in NFG, thus professional judgment was used		

Qualified sample results are shown in Table 1. Nonconformances are summarized in Attachment A in Table A-1.

Laboratory Blanks/Equipment Blanks/Trip Blanks

Laboratory method blanks, equipment rinsate and trip blanks were evaluated as to whether there were contaminants detected above the detection limit (DL).

Data validation qualifications for individual samples are based on the maximum contaminant concentration detected in all associated blanks.

Method, equipment rinsate and trip blank results were reviewed for conformance with the QC acceptance criteria. Detected results in blanks are not discussed in this data validation report if the associated results were nondetect or if qualification of sample results was not required.

The QC acceptance criteria were met and/or qualification of the sample results was not required.

Surrogate Spike Recoveries

The surrogate recoveries (%Rs) were reviewed for conformance with the QC acceptance criteria.

Data qualification on the basis of surrogate recovery nonconformances was as follows:

	Action	
Nonconformance	Detected Compounds	Nondetected Compounds
%R > Upper Limit (UL)	J	No qualification
20% ≤%R < Lower Limit (LL)	J	UJ
%R < 20%	J	R

Nonconformances are summarized in Attachment A in Table A-2. Qualified sample results are shown in Table 1.

MS/MSD Results

MS/MSD analyses were not performed on samples reported in this SDG. There were no validation actions taken on this basis.

LCS Results

The LCS %Rs was reviewed for conformance with the QC acceptance criteria.

All QC acceptance criteria were met.

Field Duplicate Results

There were no field duplicate samples submitted with this data set. No validation actions were taken on this basis.

Internal Standard Results

The internal standard (IS) recoveries were reviewed for conformance with the QC acceptance criteria.

All QC acceptance criteria were met.

Sample Results/Reporting Issues

Compounds that were not detected in the sample are reported as undetected (U) at the Limit of Detection (LOD).

Compounds detected at concentrations less than the LOQ but greater than the DL were qualified by the laboratory as estimated (J). This "J" qualifier was retained during data validation.

Any sample that was analyzed at a dilution due to high concentrations of target or non-target compounds or matrix interferences was checked to ensure that the results and/or sample specific LODs and LOQs were adjusted accordingly by the laboratory.

QUALIFICATION ACTIONS

Sample results qualified as a result of validation actions are summarized in Table 1. All actions are described above.

ATTACHMENTS

Attachment A: Nonconformance Summary Tables

Attachment B: Qualifier Codes and Explanations

Attachment C: Reason Codes and Explanations

Table 1 - Data Validation Summary of Qualified Data

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB148-GW-021914-483-485	WG	4-METHYL-2-PENTANONE		2.5	ug//L	UJ	c
VPB148-GW-022014-518-520	WG	4-METHYL-2-PENTANONE		2.5	ug//L	UJ	c
VPB148-GW-022014-538-540	WG	1,1-DICHLOROETHANE	0.96	0.50	ug//L	J	s
VPB148-GW-022014-538-540	WG	CARBON TETRACHLORIDE	0.86	0.50	ug//L	J	s
VPB148-GW-022014-538-540	WG	DICHLORODIFLUOROMETHANE	1.5	1.0	ug//L	J	s
VPB148-GW-022014-538-540	WG	VINYL CHLORIDE	0.34	1.0	ug//L	J	s

Attachment A

Non Conformance Summary Tables

Table A-1 -Continuing Calibration Verification Standard

CCV ID	Compound	% D or %Drift	Limits	Associated Samples
WG139192	4-METHYL-2-PENTANONE	20.9	≤ 20%	Samples in Batch WG139192

Table A-2 - Surrogates

Sample ID	Surrogate	% Recovery	Lower Limit	Upper Limit
VPB148-GW-021914-458-460	1,2-DICHLOROETHANE-D4	125	70	120
VPB148-GW-022014-538-540	1,2-DICHLOROETHANE-D4	123	70	120

Attachment B

Qualifier Codes and Explanations

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

Attachment C

Reason Codes and Explanations

Reason Code	Explanation
be	Equipment blank contamination
bf	Field blank contamination
bl	Laboratory blank contamination
c	Calibration issue
co	Analyte carryover
d	Reporting limit raised due to chromatographic interference
fd	Field duplicate RPDs
h	Holding times
i	Internal standard areas
k	Estimated Maximum Possible Concentration (EMPC)
l	LCS or OPR recoveries
lc	Labeled compound recovery
ld	Laboratory duplicate RPDs
lp	Laboratory control sample/laboratory control sample duplicate RPDs
m	Matrix spike recovery
md	Matrix spike/matrix spike duplicate RPDs
nb	Negative laboratory blank contamination
p	Chemical preservation issue
r	Dual column RPD
q	Quantitation issue
s	Surrogate recovery
su	Ion suppression
t	Temperature preservation issue
x	Percent solids
y	Serial dilution results
z	ICS results

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
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CHAIN of CUSTODY

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Page 1 of 1

Client: Resolution Consultants | Contact: Eleanor Vivadou | Phone #: (845) 425-4980 | Fax #: ( )

Address: 100 Red Schoolhouse Rd. | City: Chestnut Ridge | State: NY | Zip Code: 10977

Purchase Order # | Proj. Name / No.: NWIRP-Bethpage / 60265526 | Katahdin Quote #

Bill (if different than above) | Address

Sampler (Print / Sign): Gordon Hicks | Copies To:

LAB USE ONLY

WORK ORDER #:

KATAHDIN PROJECT NUMBER: SH1096

REMARKS:

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: VOC	TOC	Filt. ☐Y ☐N (×8)
	VPB148-GW-022014-498-500	2-20-14/1055	GW	3	3		
	VPB148-GW-021914-483-485	2-19-14/1530	GW	3	3		
	VPB148-GW-021914-458-460	2-19-14/1055	GW	3	3		
	VPB148-GW-022014-518-520	2-20-14/1300	GW	3	3		
	VPB148-EB-022014	2-20-14/1200	W	3	3		
	VPB148-FB-022014	2-20-14/1215	W	3	3		
	VPB148-FB-022014	2-20-14/1215	W	3		3	
	VPB148-EB-022014	2-20-14/1200	W	3		3	
	VPB148-TRIP BLANK-022014	12-13-13/1130	W	3	3		
	VPB148-GW-022014-538-540	2-20-14/1510	GW	3	3		
		/					
		/					
		/					
		/					
		/					
		/					

COMMENTS

2-21-14 0900

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	2-20-14 1630				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

ORIGINAL

KAS-COC1

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1096-1
Client ID: 148-022014-498-500
Project: Navy Clean WE15 NWIRP B
SDG: SH1096
Lab File ID: C5770.D

Sample Date: 20-FEB-14
Received Date: 21-FEB-14
Extract Date: 24-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139162

Analysis Date: 24-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 27-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	J	0.44	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	J	4.9	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	J	0.31	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene		1.8	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1096-1
Client ID: 148-022014-498-500
Project: Navy Clean WE15 NWIRP B
SDG: SH1096
Lab File ID: C5770.D

Sample Date: 20-FEB-14
Received Date: 21-FEB-14
Extract Date: 24-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139162

Analysis Date: 24-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 27-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	J	0.31	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		104.	%					
Toluene-d8		99.9	%					
1,2-Dichloroethane-d4	*	120.	%					
Dibromofluoromethane		99.4	%					

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1096-2RA
Client ID: 148-021914-483-485
Project: Navy Clean WE15 NWIRP B
SDG: SH1096
Lab File ID: C5795.D

Sample Date: 19-FEB-14
Received Date: 21-FEB-14
Extract Date: 25-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139192

Analysis Date: 25-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 27-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone		5.2	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	UL	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	~~U~~ UJ	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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8/25/14

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1096-2RA
Client ID: 148-021914-483-485
Project: Navy Clean WE15 NWIRP B
SDG: SH1096
Lab File ID: C5795.D

Sample Date: 19-FEB-14
Received Date: 21-FEB-14
Extract Date: 25-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139192

Analysis Date: 25-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 27-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		102.	%					
Toluene-d8		93.5	%					
1,2-Dichloroethane-d4		116.	%					
Dibromofluoromethane		94.2	%					

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1096-3
Client ID: 148-021914-458-460
Project: Navy Clean WE15 NWIRP B
SDG: SH1096
Lab File ID: C5772.D

Sample Date: 19-FEB-14
Received Date: 21-FEB-14
Extract Date: 24-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139162

Analysis Date: 24-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 27-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1096-3
Client ID: 148-021914-458-460
Project: Navy Clean WE15 NWIRP B
SDG: SH1096
Lab File ID: C5772.D

Sample Date: 19-FEB-14
Received Date: 21-FEB-14
Extract Date: 24-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139162

Analysis Date: 24-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 27-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		103.	%					
Toluene-d8		99.3	%					
1,2-Dichloroethane-d4	*	125.	%					
Dibromofluoromethane		103.	%					

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1096-4RA
Client ID: 148-022014-518-520
Project: Navy Clean WE15 NWIRP B
SDG: SH1096
Lab File ID: C5796.D

Sample Date: 20-FEB-14
Received Date: 21-FEB-14
Extract Date: 25-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139192

Analysis Date: 25-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 27-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	J	1.7	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene		2.0	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113		6.2	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	J	2.8	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	J	0.35	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene		4.7	ug/L	1	1	1.0	0.21	0.50
Chloroform		4.3	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	J	0.40	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride		1.2	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene		68	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	UL	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	~~U~~ UJ	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	J	0.69	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1096-4RA
Client ID: 148-022014-518-520
Project: Navy Clean WE15 NWIRP B
SDG: SH1096
Lab File ID: C5796.D

Sample Date: 20-FEB-14
Received Date: 21-FEB-14
Extract Date: 25-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139192

Analysis Date: 25-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 27-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)		4.7	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		96.4	%					
Toluene-d8		91.4	%					
1,2-Dichloroethane-d4		113.	%					
Dibromofluoromethane		94.2	%					

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1096-5
Client ID: VPB148-EB-022014
Project: Navy Clean WE15 NWIRP B
SDG: SH1096
Lab File ID: C5768.D

Sample Date: 20-FEB-14
Received Date: 21-FEB-14
Extract Date: 24-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139162

Analysis Date: 24-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 27-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1096-5
Client ID: VPB148-EB-022014
Project: Navy Clean WE15 NWIRP B
SDG: SH1096
Lab File ID: C5768.D

Sample Date: 20-FEB-14
Received Date: 21-FEB-14
Extract Date: 24-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139162

Analysis Date: 24-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 27-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		104.	%					
Toluene-d8		99.2	%					
1,2-Dichloroethane-d4		119.	%					
Dibromofluoromethane		102.	%					

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1096-6
Client ID: VPB148-FB-022014
Project: Navy Clean WE15 NWIRP B
SDG: SH1096
Lab File ID: C5769.D

Sample Date: 20-FEB-14
Received Date: 21-FEB-14
Extract Date: 24-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139162

Analysis Date: 24-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 27-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1096-6
Client ID: VPB148-FB-022014
Project: Navy Clean WE15 NWIRP B
SDG: SH1096
Lab File ID: C5769.D

Sample Date: 20-FEB-14
Received Date: 21-FEB-14
Extract Date: 24-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139162

Analysis Date: 24-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 27-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		107.	%					
Toluene-d8		101.	%					
1,2-Dichloroethane-d4	*	120.	%					
Dibromofluoromethane		103.	%					

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Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1096-7
Client ID: VPB148-TB-022014
Project: Navy Clean WE15 NWIRP B
SDG: SH1096
Lab File ID: C5767.D

Sample Date: 13-DEC-13
Received Date: 21-FEB-14
Extract Date: 24-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139162

Analysis Date: 24-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 27-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	J	2.6	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1096-7
Client ID: VPB148-TB-022014
Project: Navy Clean WE15 NWIRP B
SDG: SH1096
Lab File ID: C5767.D

Sample Date: 13-DEC-13
Received Date: 21-FEB-14
Extract Date: 24-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139162

Analysis Date: 24-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 27-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		107.	%					
Toluene-d8		100.	%					
1,2-Dichloroethane-d4	*	120.	%					
Dibromofluoromethane		103.	%					

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ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1096-8
Client ID: 148-022014-538-540
Project: Navy Clean WE15 NWIRP B
SDG: SH1096
Lab File ID: C5774.D

Sample Date: 20-FEB-14
Received Date: 21-FEB-14
Extract Date: 24-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139162

Analysis Date: 24-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 27-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	~~J~~ J	1.5	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	~~J~~ J	0.34	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene		3.7	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113		15	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone		8.0	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	~~J~~ J	0.96	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene		5.0	ug/L	1	1	1.0	0.21	0.50
Chloroform		6.1	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	~~J~~ J	0.86	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	~~E~~	~~600~~ 520	ug/L	~~1~~ 10	1	~~1.0~~ 10	~~0.28~~ 2.8	~~0.50~~ 5.0
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane		1.8	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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GC 8/25/14

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1096-8
Client ID: 148-022014-538-540
Project: Navy Clean WE15 NWIRP B
SDG: SH1096
Lab File ID: C5774.D

Sample Date: 20-FEB-14
Received Date: 21-FEB-14
Extract Date: 24-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139162

Analysis Date: 24-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 27-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)		5.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		104.	%					
Toluene-d8		97.7	%					
1,2-Dichloroethane-d4	*	123.	%					
Dibromofluoromethane		104.	%					

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Data Validation Report

Project:	Regional Groundwater Investigation - NWIRP Bethpage		
Laboratory:	Katahdin Analytical Services, Inc.		
Service Request:	SH1184		
Analyses/Method:	EPA SW-846 Method 8260B for VOCs (GC/MS)		
Validation Level:	Limited		
AECOM Project Number:	60266526.SA.DV		
Prepared by:	Sheena Blair/AECOM	Completed on:	03/21/2014
Reviewed by:	Lori Herberich/AECOM	File Name:	SH1184_8260B

SUMMARY

The samples listed below were collected by Resolution Consultants from the Regional Groundwater Investigation - NWIRP Bethpage site on February 21 and 24, 2014.

Sample ID	Matrix/Sample Type
VPB148-GW-022114-558-560	Ground water
VPB148-GW-022114-578-580	Ground water
VPB148-GW-022414-598-600	Ground water
VPB148-GW-022414-618-620	Ground water
VPB148-TRIP BLANK-022414	Trip Blank

Data validation activities were conducted with reference to Test Methods for Evaluating Solid Waste, Physical/Chemical Methods SW846, specifically SW-846 Method 8260B, Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (USEPA, 1996), USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008), and Quality Systems Manual (QSM) for Environmental Laboratories, Version 4.2 (DoD, October 2010). In the absence of method-specific information, laboratory quality control (QC) limits, project-specific requirements and/or professional judgment were used as appropriate.

REVIEW ELEMENTS

The data were evaluated based on the following review elements (where applicable to the method):

✗	Data completeness (chain-of-custody (COC))/sample integrity
✓	Holding times and sample preservation
✓	GC/MS performance checks
✓	Initial calibration/continuing calibration verification
✓	Laboratory blanks/trip blanks/equipment blanks
✓	Surrogate spike recoveries
NA	Matrix spike (MS) and/or matrix spike duplicate (MSD) results
✓	Laboratory control sample (LCS) results

NA	Field duplicates
✓	Internal standards
✓	Sample results/reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (✗) indicates that a QC nonconformance resulted in the qualification of data. Any QC nonconformance that resulted in the qualification of data is discussed below. In addition, nonconformances or other issues that were noted during validation, but did not result in qualification of data, may be discussed for informational purposes only.

The data appear valid as reported and may be used for decision making purposes. No data were rejected. Selected data points were estimated due to possible loss of sample integrity, (see discussion below).

RESULTS

Data Completeness/Sample Integrity

The data package was reviewed and found to meet acceptance criteria for completeness:

- The COCs were reviewed for completeness of information relevant to the samples and requested analyses, and for signatures indicating transfer of sample custody.
- The laboratory sample login sheet(s) were reviewed for issues potentially affecting sample integrity, including the condition of sample containers upon receipt at the laboratory.
- Completeness of analyses was verified by comparing the reported results to the COC requests.

Due to limitations in the reporting system, the laboratory omitted the "VPB-148-" prefix, and "TRIP BLANK" or GW, from the sample ID in the report. The submitted EDD file reflects the full sample ID.

Samples VPB148-GW-022114-578-580, VPB148-GW-022114-558-560, and VPB148-GW-022414-598-600 were extremely silty and had very little standing water. The laboratory decanted the water from the individual vials and made a composite for each of the samples. Positive and non-detect results for these sample were qualified as estimated (J and UJ) respectively, due to possible loss of sample integrity during the compositing procedure.

Holding Times/Sample Preservation

Sample preservation and preparation/analysis holding times were reviewed for conformance with the QC acceptance criteria.

The QC acceptance criteria were met.

GC/MS Performance Checks

The data were reviewed to ensure that the 4-bromofluorobenzene (BFB) tuning was performed at the correct frequency and that the method acceptance criteria were met.

Initial Calibration/Continuing Calibration Verification

Calibration data were reviewed for conformance with the QC acceptance criteria to ensure that:

- the initial calibration (ICAL) percent relative standard deviation (%RSD), correlation coefficient (r)/coefficient of determination (r^2), and/or response factor method acceptance criteria were met;
- the continuing calibration verification standard (CCV) method percent difference or percent drift (%Ds) and RF acceptance criteria were met; and
- the retention time method acceptance criteria were met.

The QC acceptance criteria were met.

Laboratory Blanks/Equipment Blanks/Trip Blanks

Laboratory method blanks, equipment rinsate blanks, field blanks, and trip blanks were evaluated as to whether there were contaminants detected above the detection limit (DL).

Data validation qualifications for individual samples are based on the maximum contaminant concentration detected in all associated blanks.

Method, equipment rinsate, field and trip blank results were reviewed for conformance with the QC acceptance criteria. Detected results in blanks are not discussed in this data validation report if the associated results were nondetect or if qualification of sample results was not required.

The QC acceptance criteria were met and/or qualification of the sample results was not required

Surrogate Spike Recoveries

The surrogate percent recoveries (%Rs) were reviewed for conformance with the QC acceptance criteria.

All QC acceptance criteria were met.

MS/MSD Results

MS/MSD analyses were not performed on samples reported in this SDG. There were no validation actions taken on this basis.

LCS Results

The LCS %Rs were reviewed for conformance with the QC acceptance criteria.

All QC acceptance criteria were met.

Field Duplicate Results

There were no field duplicate samples submitted with this data set. No validation actions were taken on this basis.

Internal Standard Results

The internal standard (IS) recoveries were reviewed for conformance with the QC acceptance criteria.

All QC acceptance criteria were met.

Sample Results/Reporting Issues

Compounds that were not detected in the sample are reported as undetected (U) at the Limit of Detection (LOD).

Compounds detected at concentrations less than the LOQ but greater than the detection limit (DL) were qualified by the laboratory as estimated (J). This "J" qualifier was retained during data validation.

Any sample that was analyzed at a dilution due to high concentrations of target or non-target compounds or matrix interferences was checked to ensure that the results and/or sample specific LODs and LOQs were adjusted accordingly by the laboratory.

QUALIFICATION ACTIONS

Sample results qualified as a result of validation actions are summarized in Table 1. All actions are described above.

ATTACHMENTS

Attachment A: Qualifier Codes and Explanations

Attachment B: Reason Codes and Explanations

Table 1 - Data Validation Summary of Qualified Data

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB148-GW-022114-558-560	WG	1,1,1-TRICHLOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	1,1,2,2-TETRACHLOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	1,1,2-TRICHLOROETHANE	0.85	0.50	ug/L	J	mc
VPB148-GW-022114-558-560	WG	1,1-DICHLOROETHANE	0.68	0.50	ug/L	J	mc
VPB148-GW-022114-558-560	WG	1,1-DICHLOROETHENE	0.46	0.50	ug/L	J	mc
VPB148-GW-022114-558-560	WG	1,2,4-TRICHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	1,2-DIBROMOETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	1,2-DICHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	1,2-DICHLOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	1,2-DICHLOROETHENE, TOTAL	2.0	1.0	ug/L	J	mc
VPB148-GW-022114-558-560	WG	1,2-DICHLOROPROPANE		0.50	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	1,3-DICHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	1,4-DICHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	2-BUTANONE	1.5	2.5	ug/L	J	mc
VPB148-GW-022114-558-560	WG	2-HEXANONE		2.5	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	4-METHYL-2-PENTANONE		2.5	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	ACETONE	7.1	2.5	ug/L	J	mc
VPB148-GW-022114-558-560	WG	BENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	BROMODICHLOROMETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	BROMOFORM		0.50	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	BROMOMETHANE		1.0	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	CARBON DISULFIDE		0.50	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	CARBON TETRACHLORIDE		0.50	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	CHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	CHLOROETHANE		1.0	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	CHLOROFORM	1.4	0.50	ug/L	J	mc
VPB148-GW-022114-558-560	WG	CHLOROMETHANE		1.0	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	CIS-1,2-DICHLOROETHENE	2.0	0.50	ug/L	J	mc
VPB148-GW-022114-558-560	WG	CIS-1,3-DICHLOROPROPENE		0.50	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	CYCLOHEXANE		0.50	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	DIBROMOCHLOROMETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	DICHLORODIFLUOROMETHANE		1.0	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	ETHYLBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	ISOPROPYLBENZENE		0.50	ug/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB148-GW-022114-558-560	WG	M- AND P-XYLENE		1.0	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	METHYL ACETATE		0.75	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	METHYL CYCLOHEXANE		0.50	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	METHYL TERT-BUTYL ETHER		0.50	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	METHYLENE CHLORIDE		2.5	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	O-XYLENE		0.50	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	STYRENE		0.50	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	TETRACHLOROETHENE		0.50	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	TOLUENE		0.50	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	TRANS-1,2-DICHLOROETHENE		0.50	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	TRANS-1,3-DICHLOROPROPENE		0.50	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	TRICHLOROETHENE	110	0.50	ug/L	J	mc
VPB148-GW-022114-558-560	WG	TRICHLOROFLUOROMETHANE		1.0	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	VINYL CHLORIDE		1.0	ug/L	UJ	mc
VPB148-GW-022114-558-560	WG	XYLENES, TOTAL		1.5	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	1,1,1-TRICHLOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	1,1,2,2-TETRACHLOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	1,1,2-TRICHLOROETHANE	0.73	0.50	ug/L	J	mc
VPB148-GW-022114-578-580	WG	1,1-DICHLOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	1,1-DICHLOROETHENE		0.50	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	1,2,4-TRICHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	1,2-DIBROMOETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	1,2-DICHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	1,2-DICHLOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	1,2-DICHLOROETHENE, TOTAL	0.64	1.0	ug/L	J	mc
VPB148-GW-022114-578-580	WG	1,2-DICHLOROPROPANE		0.50	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	1,3-DICHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	1,4-DICHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	2-BUTANONE		2.5	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	2-HEXANONE		2.5	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	4-METHYL-2-PENTANONE		2.5	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	ACETONE	6.1	2.5	ug/L	J	mc
VPB148-GW-022114-578-580	WG	BENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	BROMODICHLOROMETHANE		0.50	ug/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB148-GW-022114-578-580	WG	BROMOFORM		0.50	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	BROMOMETHANE		1.0	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	CARBON DISULFIDE		0.50	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	CARBON TETRACHLORIDE		0.50	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	CHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	CHLOROETHANE		1.0	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	CHLOROFORM	0.80	0.50	ug/L	J	mc
VPB148-GW-022114-578-580	WG	CHLOROMETHANE	1.0	1.0	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	CIS-1,2-DICHLOROETHENE		0.50	ug/L	J	mc
VPB148-GW-022114-578-580	WG	CIS-1,3-DICHLOROPROPENE		0.50	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	CYCLOHEXANE		0.50	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	DIBROMOCHLOROMETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	DICHLORODIFLUOROMETHANE		1.0	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	ETHYLBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	ISOPROPYLBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	M- AND P-XYLENE		1.0	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	METHYL ACETATE		0.75	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	METHYL CYCLOHEXANE		0.50	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	METHYL TERT-BUTYL ETHER		0.50	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	METHYLENE CHLORIDE		2.5	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	O-XYLENE		0.50	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	STYRENE		0.50	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	TETRACHLOROETHENE		0.50	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	TOLUENE		0.50	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	TRANS-1,2-DICHLOROETHENE		0.50	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	TRANS-1,3-DICHLOROPROPENE		0.50	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	TRICHLOROETHENE	57	0.50	ug/L	J	mc
VPB148-GW-022114-578-580	WG	TRICHLOROFLUOROMETHANE		1.0	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	VINYL CHLORIDE		1.0	ug/L	UJ	mc
VPB148-GW-022114-578-580	WG	XYLENES, TOTAL		1.5	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	1,1,1-TRICHLOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	1,1,2,2-TETRACHLOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	1,1,2-TRICHLOROETHANE	0.38	0.50	ug/L	J	mc
VPB148-GW-022414-598-600	WG	1,1-DICHLOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	1,1-DICHLOROETHENE		0.50	ug/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB148-GW-022414-598-600	WG	1,2,4-TRICHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	1,2-DIBROMOETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	1,2-DICHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	1,2-DICHLOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	1,2-DICHLOROETHENE, TOTAL	0.46	1.0	ug/L	J	mc
VPB148-GW-022414-598-600	WG	1,2-DICHLOROPROPANE		0.50	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	1,3-DICHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	1,4-DICHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	2-BUTANONE		2.5	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	2-HEXANONE		2.5	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	4-METHYL-2-PENTANONE		2.5	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	ACETONE	4.7	2.5	ug/L	J	mc
VPB148-GW-022414-598-600	WG	BENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	BROMODICHLOROMETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	BROMOFORM		0.50	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	BROMOMETHANE		1.0	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	CARBON DISULFIDE		0.50	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	CARBON TETRACHLORIDE		0.50	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	CHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	CHLOROETHANE		1.0	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	CHLOROFORM	0.48	0.50	ug/L	J	mc
VPB148-GW-022414-598-600	WG	CHLOROMETHANE		1.0	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	CIS-1,2-DICHLOROETHENE	0.46	0.50	ug/L	J	mc
VPB148-GW-022414-598-600	WG	CIS-1,3-DICHLOROPROPENE		0.50	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	CYCLOHEXANE		0.50	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	DIBROMOCHLOROMETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	DICHLORODIFLUOROMETHANE		1.0	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	ETHYLBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	ISOPROPYLBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	M- AND P-XYLENE		1.0	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	METHYL ACETATE		0.75	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	METHYL CYCLOHEXANE		0.50	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	METHYL TERT-BUTYL ETHER		0.50	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	METHYLENE CHLORIDE		2.5	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	O-XYLENE		0.50	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	STYRENE		0.50	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	TETRACHLOROETHENE		0.50	ug/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB148-GW-022414-598-600	WG	TOLUENE		0.50	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	TRANS-1,2-DICHLOROETHENE		0.50	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	TRANS-1,3-DICHLOROPROPENE		0.50	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	TRICHLOROETHENE	42	0.50	ug/L	J	mc
VPB148-GW-022414-598-600	WG	TRICHLOROFLUOROMETHANE		1.0	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	VINYL CHLORIDE		1.0	ug/L	UJ	mc
VPB148-GW-022414-598-600	WG	XYLENES, TOTAL		1.5	ug/L	UJ	mc

Attachment B

Qualifier Codes and Explanations

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

Attachment C

Reason Codes and Explanations

Reason Code	Explanation
be	Equipment blank contamination
bf	Field blank contamination
bl	Laboratory blank contamination
c	Calibration issue
co	Analyte carryover
d	Reporting limit raised due to chromatographic interference
fd	Field duplicate RPDs
h	Holding times
i	Internal standard areas
k	Estimated Maximum Possible Concentration (EMPC)
l	LCS or OPR recoveries
lc	Labeled compound recovery
ld	Laboratory duplicate RPDs
lp	Laboratory control sample/laboratory control sample duplicate RPDs
m	Matrix spike recovery
md	Matrix spike/matrix spike duplicate RPDs
nb	Negative laboratory blank contamination
p	Chemical preservation issue
r	Dual column RPD
q	Quantitation issue
s	Surrogate recovery
su	Ion suppression
t	Temperature preservation issue
x	Percent solids
y	Serial dilution results
z	ICS results
mc	Method compliance deviation

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
Resolution Consultants	Eleanor Vivaudou	(845)425-4180	( )

Address	City	State	Zip Code
100 Red Schoolhouse Rd.	Chestnut Ridge	NY	11902

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	NWIRP Bethpage / 60265526	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:
Michael Zebel / Michael Zebel	

LAB USE ONLY WORK ORDER #: SH1184

KATAHDIN PROJECT NUMBER _____

REMARKS: _____

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO: _____

TEMP°C _____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: VOC Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	VPB148-TRIP BLANK-022414	12-13-13 / 1130	W	3	3									
	VPB148-GW-022114-578-580	2-21-14 / 1240	GW	2	2									
	VPB148-GW-022114-558-560	2-21-14 / 1020	GW	2	2									
	VPB148-GW-022414-598-600	2-24-14 / 1040	GW	3	3									
	VPB148-GW-022414-618-620	2-24-14 / 1255	GW	3	3									
	~~VPB148-GW-022414-636-640~~	~~2-24-14 / 1510~~	~~GW~~	~~3~~	~~3~~	(MZ)								
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COMMENTS

2-26-14/09:15

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
Michael Zebel	2-24-14 1645				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

ORIGINAL

060009

CAS-COC1

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1184-1
Client ID: VPB148-TB-022414
Project: Navy Clean WE15 NWIRP B
SDG: SH1184
Lab File ID: C5814.D

Sample Date: 24-FEB-14
Received Date: 26-FEB-14
Extract Date: 26-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139250

Analysis Date: 26-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 27-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	J	1.9	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
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http://www.katahdinlab.com

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1184-1
Client ID: VPB148-TB-022414
Project: Navy Clean WE15 NWIRP B
SDG: SH1184
Lab File ID: C5814.D

Sample Date: 24-FEB-14
Received Date: 26-FEB-14
Extract Date: 26-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139250

Analysis Date: 26-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 27-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		102.	%					
Toluene-d8		94.8	%					
1,2-Dichloroethane-d4		114.	%					
Dibromofluoromethane		91.3	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1184-2
Client ID: 148-022114-578-580
Project: Navy Clean WE15 NWIRP B
SDG: SH1184
Lab File ID: C5815.D

Sample Date: 21-FEB-14
Received Date: 26-FEB-14
Extract Date: 26-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139250

Analysis Date: 26-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 27-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UJ	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	J	6.1	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U UJ	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	J	0.64	ug/L	1	1	1.0	0.21	0.50
Chloroform	J	0.80	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U UJ	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	J	57	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U UJ	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	J	0.73	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U UJ	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1184-2
Client ID: 148-022114-578-580
Project: Navy Clean WE15 NWIRP B
SDG: SH1184
Lab File ID: C5815.D

Sample Date: 21-FEB-14
Received Date: 26-FEB-14
Extract Date: 26-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139250

Analysis Date: 26-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 27-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U UJ	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	J J	0.64	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U UJ	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U UJ	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		103.	%					
Toluene-d8		97.5	%					
1,2-Dichloroethane-d4		113.	%					
Dibromofluoromethane		97.6	%					

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Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1184-3
Client ID: 148-022114-558-560
Project: Navy Clean WE15 NWIRP B
SDG: SH1184
Lab File ID: C5816.D

Sample Date: 21-FEB-14
Received Date: 26-FEB-14
Extract Date: 26-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139250

Analysis Date: 26-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 27-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UJ	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	J J	0.46	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U UJ	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	J	7.1	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U UJ	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U UJ	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	J J	0.68	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	J	2.0	ug/L	1	1	1.0	0.21	0.50
Chloroform	J	1.4	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U UJ	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	J J	1.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U UJ	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	J	110	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U UJ	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	J J	0.85	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U UJ	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1184-3
Client ID: 148-022114-558-560
Project: Navy Clean WE15 NWIRP B
SDG: SH1184
Lab File ID: C5816.D

Sample Date: 21-FEB-14
Received Date: 26-FEB-14
Extract Date: 26-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139250

Analysis Date: 26-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 27-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U UJ	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	J	2.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U UJ	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U UJ	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		99.0	%					
Toluene-d8		94.0	%					
1,2-Dichloroethane-d4		115.	%					
Dibromofluoromethane		93.1	%					

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1184-4
Client ID: 148-022414-598-600
Project: Navy Clean WE15 NWIRP B
SDG: SH1184
Lab File ID: C5817.D

Sample Date: 24-FEB-14
Received Date: 26-FEB-14
Extract Date: 26-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139250

Analysis Date: 26-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 27-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UJ	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	J UJ	4.7	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U UJ	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	J	0.46	ug/L	1	1	1.0	0.21	0.50
Chloroform	J	0.48	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U UJ	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	J	42	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U UJ	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	J	0.38	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U UJ	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1184-4
Client ID: 148-022414-598-600
Project: Navy Clean WE15 NWIRP B
SDG: SH1184
Lab File ID: C5817.D

Sample Date: 24-FEB-14
Received Date: 26-FEB-14
Extract Date: 26-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139250

Analysis Date: 26-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 27-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U UJ	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	J	0.46	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U UJ	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U UJ	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		101.	%					
Toluene-d8		95.7	%					
1,2-Dichloroethane-d4		118.	%					
Dibromofluoromethane		97.1	%					

2/25/14

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1184-5
Client ID: 148-022414-618-620
Project: Navy Clean WE15 NWIRP B
SDG: SH1184
Lab File ID: C5818.D

Sample Date: 24-FEB-14
Received Date: 26-FEB-14
Extract Date: 26-FEB-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139250

Analysis Date: 26-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 27-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	J	0.92	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113		5.0	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	J	3.9	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	J	0.59	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	J	0.88	ug/L	1	1	1.0	0.21	0.50
Chloroform	J	0.56	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	J	0.55	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene		100	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	J	0.46	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

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Lab ID: SH1184-5
Client ID: 148-022414-618-620
Project: Navy Clean WE15 NWIRP B
SDG: SH1184
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Sample Date: 24-FEB-14
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Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139250

Analysis Date: 26-FEB-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 27-FEB-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	J	0.88	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		104.	%					
Toluene-d8		96.9	%					
1,2-Dichloroethane-d4		119.	%					
Dibromofluoromethane		97.6	%					

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Data Validation Report

Project:	Regional Groundwater Investigation - NWIRP Bethpage
Laboratory:	Katahdin Analytical Services, Inc.
Service Request:	SH1261
Analyses/Method:	EPA SW-846 Method 8260B for VOCs (GC/MS)
Validation Level:	Limited
AECOM Project Number:	60266526.SA.DV
Prepared by: Sheena Blair/AECOM	Completed on: 03/22/2014
Reviewed by: Lori Herberich/AECOM	File Name: SH1261_8260B

SUMMARY

The samples listed below were collected by Resolution Consultants from the Regional Groundwater Investigation - NWIRP Bethpage site on February 26 and 27, 2014.

Sample ID	Matrix/Sample Type
VPB148-GW-022614-658-660	Ground water
VPB148-GW-022614-678-680	Ground water
VPB148-GW-022714-703-705	Ground water
VPB148-GW-022714-718-720	Ground water
VPB148-GW-022714-738-740	Ground water
VPB148-TRIP BLANK-022714	Trip Blank

Data validation activities were conducted with reference to *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods SW846, specifically SW-846 Method 8260B, Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry* (USEPA, 1996), *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (June 2008), and Quality Systems Manual (QSM) for Environmental Laboratories, Version 4.2 (DoD, October 2010). In the absence of method-specific information, laboratory quality control (QC) limits, project-specific requirements and/or professional judgment were used as appropriate.

REVIEW ELEMENTS

The data were evaluated based on the following review elements (where applicable to the method):

✗	Data completeness (chain-of-custody (COC))/sample integrity
✓	Holding times and sample preservation
✓	GC/MS performance checks
✗	Initial calibration/continuing calibration verification
✓	Laboratory blanks/trip blanks/equipment blanks
✗	Surrogate spike recoveries
NA	Matrix spike (MS) and/or matrix spike duplicate (MSD) results

✗	Laboratory control sample (LCS) results
NA	Field duplicates
✓	Internal standards
✓	Sample results/reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (✗) indicates that a QC nonconformance resulted in the qualification of data. Any QC nonconformance that resulted in the qualification of data is discussed below. In addition, nonconformances or other issues that were noted during validation, but did not result in qualification of data, may be discussed for informational purposes only.

The data appear valid as reported and may be used for decision making purposes. No data were rejected. Selected data points were estimated due to nonconformances of certain QC criteria (see discussion below). Qualified sample results are presented in Table 1.

RESULTS

Data Completeness/Sample Integrity

The data package was reviewed and found to meet acceptance criteria for completeness:

- The COCs were reviewed for completeness of information relevant to the samples and requested analyses, and for signatures indicating transfer of sample custody.
- The laboratory sample login sheet(s) were reviewed for issues potentially affecting sample integrity, including the condition of sample containers upon receipt at the laboratory.
- Completeness of analyses was verified by comparing the reported results to the COC requests.

Due to limitations in the reporting system, the laboratory omitted the "VPB-148-" prefix from the sample ID, and truncated IDs for GW and Trip Blank in the report. The submitted EDD file reflects the full sample ID.

Samples VPB148-GW-022614-658-660, PB148-GW-022614-678-680, VPB148-GW-022714-703-705, VPB148-GW-022714-718-720, and VPB148-GW-022714-738-740 were mostly soil and had very little standing water. The laboratory decanted the water from the individual vials into one vial, for each sample for analysis. Positive and non-detect results for this sample were qualified as estimated (J and UJ) respectively, due to possible loss of sample integrity during the decanting procedure.

Holding Times/Sample Preservation

Sample preservation and preparation/analysis holding times were reviewed for conformance with the QC acceptance criteria.

The QC acceptance criteria were met.

GC/MS Performance Checks

The data were reviewed to ensure that the 4-bromofluorobenzene (BFB) tuning was performed at the correct frequency and that the method acceptance criteria were met.

Initial Calibration/Continuing Calibration Verification

Calibration data were reviewed for conformance with the QC acceptance criteria to ensure that:

- the initial calibration (ICAL) percent relative standard deviation (%RSD), correlation coefficient (r)/coefficient of determination (r^2), and/or response factor method acceptance criteria were met;
- the continuing calibration verification standard (CCV) method percent difference or percent drift (%Ds) and RF acceptance criteria were met; and
- the retention time method acceptance criteria were met.

Data qualification to the analytes associated with the specific CCV was as follows:

CCV Linearity Nonconformances:

Nonconformance	Actions	
	Detected Results	Nondetected Results
%D > 20%	J	UJ
%Drift	J*	UJ*
* No guidance in NFG, thus professional judgment was used		

Qualified sample results are shown in Table 1. Nonconformances are summarized in Attachment A in Table A-1.

Laboratory Blanks/Equipment Blanks/Trip Blanks

Laboratory method blanks, equipment rinsate and trip blanks were evaluated as to whether there were contaminants detected above the detection limit (DL).

Data validation qualifications for individual samples are based on the maximum contaminant concentration detected in all associated blanks.

Method, equipment rinsate and trip blank results were reviewed for conformance with the QC acceptance criteria. Detected results in blanks are not discussed in this data validation report if the associated results were nondetect or if qualification of sample results was not required.

The QC acceptance criteria were met and/or qualification of the sample results was not required.

Surrogate Spike Recoveries

The surrogate recoveries (%Rs) were reviewed for conformance with the QC acceptance criteria.

Data qualification on the basis of surrogate recovery nonconformances was as follows:

	Action	
Nonconformance	Detected Compounds	Nondetected Compounds
%R > Upper Limit (UL)	J	No qualification
20% ≤%R < Lower Limit (LL)	J	UJ
%R < 20%	J	R

Nonconformances are summarized in Attachment A in Table A-2. Qualified sample results are shown in Table 1.

MS/MSD Results

MS/MSD analyses were not performed on samples reported in this SDG. There were no validation actions taken on this basis.

LCS Results

The LCS %Rs were reviewed for conformance with the QC acceptance criteria.

Data qualification to the analytes associated with the specific LCS %Rs was as follows:

Nonconformances[1]	Action	
	Detected Compounds	Nondetected Compounds
%R or RPD > UL	J	No qualification
%R < LL	J	UJ
%R < 20% (see note 1)	J	R
(LL = lower limit, UL = upper limit)		

Notes:

1. Based on NFG 2008 VOC guidance, professional judgment is used to reject (R) non-detects in all associated samples for any analyte with < 20% recovery. Also, professional judgment is used to estimate (UJ) rather the reject sample results previously negated (U) on the basis of blank contamination.

Nonconformances are summarized in Attachment A in Table A-3. Qualified sample results are shown in Table 1.

Field Duplicate Results

There were no field duplicate samples submitted with this data set. No validation actions were taken on this basis.

Internal Standard Results

The internal standard (IS) recoveries were reviewed for conformance with the QC acceptance criteria.

All QC acceptance criteria were met.

Sample Results/Reporting Issues

Compounds that were not detected in the sample are reported as undetected (U) at the Limit of Detection (LOD).

Compounds detected at concentrations less than the LOQ but greater than the detection limit (DL) were qualified by the laboratory as estimated (J). This "J" qualifier was retained during data validation.

Any sample that was analyzed at a dilution due to high concentrations of target or non-target compounds or matrix interferences was checked to ensure that the results and/or sample specific LODs and LOQs were adjusted accordingly by the laboratory.

QUALIFICATION ACTIONS

Sample results qualified as a result of validation actions are summarized in Table 1. All actions are described above.

ATTACHMENTS

Attachment A: Nonconformance Summary Tables

Attachment B: Qualifier Codes and Explanations

Attachment C: Reason Codes and Explanations

Table 1 - Data Validation Summary of Qualified Data

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB148-GW-022614-658-660	WG	1,1,1-TRICHLOROETHANE		0.50	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	1,1,2,2-TETRACHLOROETHANE		0.50	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	3.5	0.50	ug/L	J	mc,s
VPB148-GW-022614-658-660	WG	1,1,2-TRICHLOROETHANE		0.50	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	1,1-DICHLOROETHANE		0.50	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	1,1-DICHLOROETHENE		0.50	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	1,2,4-TRICHLOROBENZENE		0.50	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	1,2-DIBROMOETHANE		0.50	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	1,2-DICHLOROBENZENE		0.50	ug/L	UL	mc,s
VPB148-GW-022614-658-660	WG	1,2-DICHLOROETHANE		0.50	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	1,2-DICHLOROETHENE, TOTAL		1.0	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	1,2-DICHLOROPROPANE		0.50	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	1,3-DICHLOROBENZENE		0.50	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	1,4-DICHLOROBENZENE		0.50	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	2-BUTANONE		2.5	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	2-HEXANONE		2.5	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	4-METHYL-2-PENTANONE		2.5	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	ACETONE	3.7	2.5	ug/L	J	mc,s
VPB148-GW-022614-658-660	WG	BENZENE		0.50	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	BROMODICHLOROMETHANE		0.50	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	BROMOFORM		0.50	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	BROMOMETHANE		1.0	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	CARBON DISULFIDE		0.50	ug/L	UJ	mc,s,c
VPB148-GW-022614-658-660	WG	CARBON TETRACHLORIDE		0.50	ug/L	UJ	mc,s,c
VPB148-GW-022614-658-660	WG	CHLOROBENZENE		0.50	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	CHLOROETHANE		1.0	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	CHLOROFORM	0.33	0.50	ug/L	J	mc,s
VPB148-GW-022614-658-660	WG	CHLOROMETHANE		1.0	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	CIS-1,2-DICHLOROETHENE		0.50	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	CIS-1,3-DICHLOROPROPENE		0.50	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	CYCLOHEXANE		0.50	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	DIBROMOCHLOROMETHANE		0.50	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	DICHLORODIFLUOROMETHANE		1.0	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	ETHYLBENZENE		0.50	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	ISOPROPYLBENZENE		0.50	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	M- AND P-XYLENE		1.0	ug/L	UJ	mc,s

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB148-GW-022614-658-660	WG	METHYL ACETATE		0.75	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	METHYL CYCLOHEXANE		0.50	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	METHYL TERT-BUTYL ETHER		0.50	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	METHYLENE CHLORIDE		2.5	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	O-XYLENE		0.50	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	STYRENE		0.50	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	TETRACHLOROETHENE		0.50	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	TOLUENE		0.50	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	TRANS-1,2-DICHLOROETHENE		0.50	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	TRANS-1,3-DICHLOROPROPENE		0.50	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	TRICHLOROETHENE	4.1	0.50	ug/L	J	mc,s
VPB148-GW-022614-658-660	WG	TRICHLOROFLUOROMETHANE		1.0	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	VINYL CHLORIDE		1.0	ug/L	UJ	mc,s
VPB148-GW-022614-658-660	WG	XYLENES, TOTAL		1.5	ug/L	UJ	mc,s
VPB148-GW-022614-678-680	WG	1,1,1-TRICHLOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	1,1,2,2-TETRACHLOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	1,1,2-TRICHLOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	1,1-DICHLOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	1,1-DICHLOROETHENE		0.50	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	1,2,4-TRICHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	1,2-DIBROMOETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	1,2-DICHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	1,2-DICHLOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	1,2-DICHLOROETHENE, TOTAL		1.0	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	1,2-DICHLOROPROPANE		0.50	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	1,3-DICHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	1,4-DICHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	2-BUTANONE		2.5	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	2-HEXANONE		2.5	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	4-METHYL-2-PENTANONE		2.5	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	ACETONE	5.9	2.5	ug/L	J	mc
VPB148-GW-022614-678-680	WG	BENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	BROMODICHLOROMETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	BROMOFORM		0.50	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	BROMOMETHANE		1.0	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	CARBON DISULFIDE		0.50	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	CARBON TETRACHLORIDE		0.50	ug/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB148-GW-022614-678-680	WG	CHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	CHLOROETHANE		1.0	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	CHLOROFORM		0.50	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	CHLOROMETHANE		1.0	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	CIS-1,2-DICHLOROETHENE		0.50	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	CIS-1,3-DICHLOROPROPENE		0.50	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	CYCLOHEXANE		0.50	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	DIBROMOCHLOROMETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	DICHLORODIFLUOROMETHANE		1.0	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	ETHYLBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	ISOPROPYLBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	M- AND P-XYLENE		1.0	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	METHYL ACETATE		0.75	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	METHYL CYCLOHEXANE		0.50	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	METHYL TERT-BUTYL ETHER		0.50	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	METHYLENE CHLORIDE		2.5	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	O-XYLENE		0.50	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	STYRENE		0.50	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	TETRACHLOROETHENE		0.50	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	TOLUENE		0.50	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	TRANS-1,2-DICHLOROETHENE		0.50	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	TRANS-1,3-DICHLOROPROPENE		0.50	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	TRICHLOROETHENE	0.30	0.50	ug/L	J	mc
VPB148-GW-022614-678-680	WG	TRICHLOROFLUOROMETHANE		1.0	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	VINYL CHLORIDE		1.0	ug/L	UJ	mc
VPB148-GW-022614-678-680	WG	XYLENES, TOTAL		1.5	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	1,1,1-TRICHLOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	1,1,2,2-TETRACHLOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	6.1	0.50	ug/L	J	mc
VPB148-GW-022714-703-705	WG	1,1,2-TRICHLOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	1,1-DICHLOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	1,1-DICHLOROETHENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	1,2,4-TRICHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	1,2-DIBROMOETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	1,2-DICHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	1,2-DICHLOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	1,2-DICHLOROETHENE, TOTAL	0.33	1.0	ug/L	J	mc
VPB148-GW-022714-703-705	WG	1,2-DICHLOROPROPANE		0.50	ug/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB148-GW-022714-703-705	WG	1,3-DICHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	1,4-DICHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	2-BUTANONE		2.5	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	2-HEXANONE		2.5	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	4-METHYL-2-PENTANONE		2.5	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	ACETONE	2.8	2.5	ug/L	J	mc
VPB148-GW-022714-703-705	WG	BENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	BROMODICHLOROMETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	BROMOFORM		0.50	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	BROMOMETHANE		1.0	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	CARBON DISULFIDE		0.50	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	CARBON TETRACHLORIDE		0.50	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	CHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	CHLOROETHANE		1.0	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	CHLOROFORM	0.32	0.50	ug/L	J	mc
VPB148-GW-022714-703-705	WG	CHLOROMETHANE		1.0	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	CIS-1,2-DICHLOROETHENE	0.33	0.50	ug/L	J	mc
VPB148-GW-022714-703-705	WG	CIS-1,3-DICHLOROPROPENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	CYCLOHEXANE		0.50	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	DIBROMOCHLOROMETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	DICHLORODIFLUOROMETHANE		1.0	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	ETHYLBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	ISOPROPYLBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	M- AND P-XYLENE		1.0	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	METHYL ACETATE		0.75	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	METHYL CYCLOHEXANE		0.50	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	METHYL TERT-BUTYL ETHER		0.50	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	METHYLENE CHLORIDE		2.5	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	O-XYLENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	STYRENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	TETRACHLOROETHENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	TOLUENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	TRANS-1,2-DICHLOROETHENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	TRANS-1,3-DICHLOROPROPENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	TRICHLOROETHENE	28	0.50	ug/L	J	mc
VPB148-GW-022714-703-705	WG	TRICHLOROFLUOROMETHANE		1.0	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	VINYL CHLORIDE		1.0	ug/L	UJ	mc
VPB148-GW-022714-703-705	WG	XYLENES, TOTAL		1.5	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	1,1,1-TRICHLOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	1,1,2,2-TETRACHLOROETHANE		0.50	ug/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB148-GW-022714-718-720	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	3.4	0.50	ug/L	J	mc
VPB148-GW-022714-718-720	WG	1,1,2-TRICHLOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	1,1-DICHLOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	1,1-DICHLOROETHENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	1,2,4-TRICHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	1,2-DIBROMOETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	1,2-DICHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	1,2-DICHLOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	1,2-DICHLOROETHENE, TOTAL		1.0	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	1,2-DICHLOROPROPANE		0.50	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	1,3-DICHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	1,4-DICHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	2-BUTANONE		2.5	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	2-HEXANONE		2.5	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	4-METHYL-2-PENTANONE		2.5	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	ACETONE	4.0	2.5	ug/L	J	mc
VPB148-GW-022714-718-720	WG	BENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	BROMODICHLOROMETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	BROMOFORM		0.50	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	BROMOMETHANE		1.0	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	CARBON DISULFIDE		0.50	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	CARBON TETRACHLORIDE		0.50	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	CHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	CHLOROETHANE		1.0	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	CHLOROFORM		0.50	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	CHLOROMETHANE		1.0	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	CIS-1,2-DICHLOROETHENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	CIS-1,3-DICHLOROPROPENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	CYCLOHEXANE		0.50	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	DIBROMOCHLOROMETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	DICHLORODIFLUOROMETHANE		1.0	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	ETHYLBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	ISOPROPYLBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	M- AND P-XYLENE		1.0	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	METHYL ACETATE		0.75	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	METHYL CYCLOHEXANE		0.50	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	METHYL TERT-BUTYL ETHER		0.50	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	METHYLENE CHLORIDE		2.5	ug/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB148-GW-022714-718-720	WG	O-XYLENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	STYRENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	TETRACHLOROETHENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	TOLUENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	TRANS-1,2-DICHLOROETHENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	TRANS-1,3-DICHLOROPROPENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	TRICHLOROETHENE	14	0.50	ug/L	J	mc
VPB148-GW-022714-718-720	WG	TRICHLOROFLUOROMETHANE		1.0	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	VINYL CHLORIDE		1.0	ug/L	UJ	mc
VPB148-GW-022714-718-720	WG	XYLENES, TOTAL		1.5	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	1,1,1-TRICHLOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	1,1,2,2-TETRACHLOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	1,1,2-TRICHLOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	1,1-DICHLOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	1,1-DICHLOROETHENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	1,2,4-TRICHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	1,2-DIBROMOETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	1,2-DICHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	1,2-DICHLOROETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	1,2-DICHLOROETHENE, TOTAL		1.0	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	1,2-DICHLOROPROPANE		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	1,3-DICHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	1,4-DICHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	2-BUTANONE		2.5	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	2-HEXANONE		2.5	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	4-METHYL-2-PENTANONE		2.5	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	ACETONE	3.4	2.5	ug/L	J	mc
VPB148-GW-022714-738-740	WG	BENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	BROMODICHLOROMETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	BROMOFORM		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	BROMOMETHANE		1.0	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	CARBON DISULFIDE		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	CARBON TETRACHLORIDE		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	CHLOROBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	CHLOROETHANE		1.0	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	CHLOROFORM		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	CHLOROMETHANE		1.0	ug/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB148-GW-022714-738-740	WG	CIS-1,2-DICHLOROETHENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	CIS-1,3-DICHLOROPROPENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	CYCLOHEXANE		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	DIBROMOCHLOROMETHANE		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	DICHLORODIFLUOROMETHANE		1.0	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	ETHYLBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	ISOPROPYLBENZENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	M- AND P-XYLENE		1.0	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	METHYL ACETATE		0.75	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	METHYL CYCLOHEXANE		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	METHYL TERT-BUTYL ETHER		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	METHYLENE CHLORIDE		2.5	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	O-XYLENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	STYRENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	TETRACHLOROETHENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	TOLUENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	TRANS-1,2-DICHLOROETHENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	TRANS-1,3-DICHLOROPROPENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	TRICHLOROETHENE		0.50	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	TRICHLOROFLUOROMETHANE		1.0	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	VINYL CHLORIDE		1.0	ug/L	UJ	mc
VPB148-GW-022714-738-740	WG	XYLENES, TOTAL		1.5	ug/L	UJ	mc

Attachment A

Non Conformance Summary Tables

Table A-1 -Continuing Calibration Verification Standard

CCV	Compound	% D	Limit
WG139358	CARBON DISULFIDE	33.8	<20
	CARBON TETRACHLORIDE	23.34	<20
Associated samples: Samples in batch WG139358			

Table A-2 - Surrogates

Sample ID	Surrogate	% Recovery	Lower Limit	Upper Limit
VPB148-GW-022614-658-660	TOLUENE-D8	83.6	85	120

Table A-3 - Lab Control Samples

LCS ID	Compound	LCS % Recovery	Lower Limit	Upper Limit	Associated Samples
WG139358-1	ACETONE	162	40	140	VPB148-GW-022614-658-660
WG139358-1	BROMODICHLOROMETHANE	121	75	120	VPB148-GW-022614-658-660
WG139358-1	1,2-DICHLOROBENZENE	121	70	120	VPB148-GW-022614-658-660

Attachment B

Qualifier Codes and Explanations

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

Attachment C

Reason Codes and Explanations

Reason Code	Explanation
be	Equipment blank contamination
bf	Field blank contamination
bl	Laboratory blank contamination
c	Calibration issue
co	Analyte carryover
d	Reporting limit raised due to chromatographic interference
fd	Field duplicate RPDs
h	Holding times
i	Internal standard areas
k	Estimated Maximum Possible Concentration (EMPC)
l	LCS or OPR recoveries
lc	Labeled compound recovery
ld	Laboratory duplicate RPDs
lp	Laboratory control sample/laboratory control sample duplicate RPDs
m	Matrix spike recovery
md	Matrix spike/matrix spike duplicate RPDs
nb	Negative laboratory blank contamination
p	Chemical preservation issue
r	Dual column RPD
q	Quantitation issue
s	Surrogate recovery
su	Ion suppression
t	Temperature preservation issue
x	Percent solids
y	Serial dilution results
z	ICS results
mc	Method compliance nonconformance

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
Resolution Consultants	Eleanor Vivaudou	(845) 425-4160	( )

Address	City	State	Zip Code
100 Red Schoolhouse Rd.	Chestnut Ridge	NY	10977

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	NWIRP Bethpage / 60260526	

Bill (if different than above) — Address

Sampler (Print / Sign): Michael Zobel / Michael Zobel — Copies To:

LAB USE ONLY — WORK ORDER #: 5H1261

KATAHDIN PROJECT NUMBER

REMARKS:

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: VOC (Filt. ☐Y ☐N)
	VPB14S-GW-022614-658-660	2-26-14 / 1000	GW	3	3
	VPB14S-GW-022614-678-680	2-26-14 / 1255	GW	3	3
	VPB14S-GW-022714-703-705	2-27-14 / 1105	GW	3	3
	VPB14S-GW-022714-718-720	2-27-14 / 1315	GW	3	3
	VPB14S-TRIP BLANK-022714	12-13-13 / 1130	W	3	3
	VPB14S-GW-022714-738-740	2-27-14 / 1525	GW	3	3
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		/			
		/			

COMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
Michael Zobel	2-27-14 / 1700	2-28-14 0930			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

ORIGINAL

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1261-1
Client ID: 148-022614-658-660
Project: Navy Clean WE15 NWIRP B
SDG: SH1261
Lab File ID: D7795.D

Sample Date: 26-FEB-14
Received Date: 28-FEB-14
Extract Date: 28-FEB-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG139358

Analysis Date: 28-FEB-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 04-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UJ	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	J	3.5	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U UJ	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	J	3.7	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U UJ	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	J	0.33	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U UJ	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	J	4.1	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U UJ	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	UL	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

8/25/14

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1261-1
Client ID: 148-022614-658-660
Project: Navy Clean WE15 NWIRP B
SDG: SH1261
Lab File ID: D7795.D

Sample Date: 26-FEB-14
Received Date: 28-FEB-14
Extract Date: 28-FEB-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG139358

Analysis Date: 28-FEB-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 04-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U UJ	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	UL	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		82.8	%					
Toluene-d8	*	83.6	%					
1,2-Dichloroethane-d4		113.	%					
Dibromofluoromethane		96.8	%					

8/25/14

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Katahdin
ANALYTICAL SERVICES

Accredited in accordance with melac Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1261-2RA
Client ID: 148-022614-678-680
Project: Navy Clean WE15 NWIRP B
SDG: SH1261
Lab File ID: D7823.D

Sample Date: 26-FEB-14
Received Date: 28-FEB-14
Extract Date: 03-MAR-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG139496

Analysis Date: 03-MAR-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 04-MAR-14

Compound	Qualifier		Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	UJ	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U		1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U		1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U		1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U		1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U		1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U		0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U		0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U		0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U		2.5	ug/L	1	5	5.0	1.1	2.5
Acetone		J	5.9	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	UJ	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U		0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U		0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U		0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U		0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U		0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U		2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U		0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U		0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U		0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U		0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	J	J	0.30	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	UJ	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U		0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U		0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U		0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U		2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U		0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U		0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U		0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U		0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U		2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U		0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U		0.50	ug/L	1	1	1.0	0.21	0.50

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3/6/14

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1261-2RA
Client ID: 148-022614-678-680
Project: Navy Clean WE15 NWIRP B
SDG: SH1261
Lab File ID: D7823.D

Sample Date: 26-FEB-14
Received Date: 28-FEB-14
Extract Date: 03-MAR-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG139496

Analysis Date: 03-MAR-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 04-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U UJ	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		81.2	%					
Toluene-d8		93.4	%					
1,2-Dichloroethane-d4		109.6	%					
Dibromofluoromethane		95.6	%					

8/25/14

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Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH melac
Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1261-3RA
Client ID: 148-022714-703-705
Project: Navy Clean WE15 NWIRP B
SDG: SH1261
Lab File ID: D7824.D

Sample Date: 27-FEB-14
Received Date: 28-FEB-14
Extract Date: 03-MAR-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG139496

Analysis Date: 03-MAR-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 04-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UJ	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	J	6.1	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U UJ	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	J J	2.8	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U UJ	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	J J	0.33	ug/L	1	1	1.0	0.21	0.50
Chloroform	J J	0.32	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	J	28	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U UJ	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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R 8/25/14

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1261-3RA
Client ID: 148-022714-703-705
Project: Navy Clean WE15 NWIRP B
SDG: SH1261
Lab File ID: D7824.D

Sample Date: 27-FEB-14
Received Date: 28-FEB-14
Extract Date: 03-MAR-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG139496

Analysis Date: 03-MAR-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 04-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U WJ	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	J J	0.33	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U UJ	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U UJ	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		77.4	%					
Toluene-d8		86.2	%					
1,2-Dichloroethane-d4		112	%					
Dibromofluoromethane		96.8	%					

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Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1261-4RA
Client ID: 148-022714-718-720
Project: Navy Clean WE15 NWIRP B
SDG: SH1261
Lab File ID: D7825.D

Sample Date: 27-FEB-14
Received Date: 28-FEB-14
Extract Date: 03-MAR-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG139496

Analysis Date: 03-MAR-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 04-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UJ	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	J	3.4	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U UJ	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	J	4.0	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	J	14	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1261-4RA
Client ID: 148-022714-718-720
Project: Navy Clean WE15 NWIRP B
SDG: SH1261
Lab File ID: D7825.D

Sample Date: 27-FEB-14
Received Date: 28-FEB-14
Extract Date: 03-MAR-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG139496

Analysis Date: 03-MAR-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 04-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U WJ	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		81.6	%					
Toluene-d8		94.0	%					
1,2-Dichloroethane-d4		114.0	%					
Dibromofluoromethane		101.0	%					

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1261-5RA
Client ID: VPB148-TB-022714
Project: Navy Clean WE15 NWIRP B
SDG: SH1261
Lab File ID: D7822.D

Sample Date: 27-FEB-14
Received Date: 28-FEB-14
Extract Date: 03-MAR-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG139496

Analysis Date: 03-MAR-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 04-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	J	2.6	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1261-5RA
Client ID: VPB148-TB-022714
Project: Navy Clean WE15 NWIRP B
SDG: SH1261
Lab File ID: D7822.D

Sample Date: 27-FEB-14
Received Date: 28-FEB-14
Extract Date: 03-MAR-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG139496

Analysis Date: 03-MAR-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 04-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		77.6	%					
Toluene-d8		88.8	%					
1,2-Dichloroethane-d4		104.6	%					
Dibromofluoromethane		96.0	%					

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1261-6RA
Client ID: 148-022714-738-740
Project: Navy Clean WE15 NWIRP B
SDG: SH1261
Lab File ID: D7826.D

Sample Date: 27-FEB-14
Received Date: 28-FEB-14
Extract Date: 03-MAR-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG139496

Analysis Date: 03-MAR-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 04-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UJ	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	J J	3.4	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U UJ	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1261-6RA
Client ID: 148-022714-738-740
Project: Navy Clean WE15 NWIRP B
SDG: SH1261
Lab File ID: D7826.D

Sample Date: 27-FEB-14
Received Date: 28-FEB-14
Extract Date: 03-MAR-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG139496

Analysis Date: 03-MAR-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 04-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U UJ	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		80.4	%					
Toluene-d8		91.0	%					
1,2-Dichloroethane-d4		112.4	%					
Dibromofluoromethane		97.6	%					

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Data Validation Report

Project:	Regional Groundwater Investigation - NWIRP Bethpage	
Laboratory:	Test-America, South Burlington, Vermont	
Service Request:	200-21047	
Analyses/Method:	EPA Method TO-15, VOCs Collected in Canisters - GC/MS	
Validation Level:	Limited	
AECOM Project Number:	60266526.SA.DV	
Prepared by:	Sheena Blair/AECOM	Completed on: 03/22/2014
Reviewed by:	Lori Herberich/AECOM	File Name: 200-21047_TO-15

SUMMARY

The samples listed below were collected by Resolution Consultants from the Regional Groundwater Investigation - NWIRP Bethpage site on February 20, 2014.

Sample ID	Matrix/Sample Type
VPB148-AIR-022014	Ambient air

Data validation activities were conducted with reference to *Determination Of Volatile Organic Compounds (VOCs) In Air Collected In Specially-Prepared Canisters And Analyzed By Gas Chromatography/Mass Spectrometry (GC/MS)* (USEPA, Method TO-15) and the *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (June 2008). In the absence of method-specific information, laboratory quality control (QC) limits, project-specific requirements and/or professional judgment were used as appropriate.

REVIEW ELEMENTS

The data were evaluated based on the following review elements (where applicable to the method):

- ✓ Data completeness (chain-of-custody (COC))/sample integrity
- ✓ Holding times and sample preservation
- ✓ GC/MS performance checks
- ✓ Initial calibration/continuing calibration verification
- ✓ Laboratory blanks
- NA Matrix duplicate (MD) results
- ✓ Laboratory control sample (LCS) results
- NA Field duplicates
- ✓ Internal standards
- ✓ Sample results/reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this

validation and therefore not reviewed. The symbol (✗) indicates that a QC nonconformance resulted in the qualification of data. Any QC nonconformance that resulted in the qualification of data is discussed below. In addition, nonconformances or other issues that were noted during validation, but did not result in qualification of data, may be discussed for informational purposes only.

The data appear valid as reported and may be used for decision making purposes. There were no data points qualified or rejected on the basis of this data review.

RESULTS

Data Completeness

The data package was reviewed and found to meet acceptance criteria for completeness:

- The COCs were reviewed for completeness of information relevant to the samples and requested analyses, and for signatures indicating transfer of sample custody.
- The laboratory sample login sheet(s) were reviewed for issues potentially affecting sample integrity, including the condition of sample containers upon receipt at the laboratory.
- Completeness of analyses was verified by comparing the reported results to the COC requests.

Holding Times/Sample Preservation

Sample preservation and preparation/analysis holding times were reviewed for conformance with the QC acceptance criteria.

The QC acceptance criteria were met.

GC/MS Performance Checks

The data were reviewed to ensure that the 4-bromofluorobenzene (BFB) tuning was performed at the correct frequency and that the method acceptance criteria were met.

The QC acceptance criteria were met.

Initial Calibration/Continuing Calibration Verification

Calibration data were reviewed for conformance with the QC acceptance criteria to ensure that:

- the initial calibration (ICAL) percent relative standard deviation (%RSD), correlation coefficient (r)/coefficient of determination (r^2), and/or response factor method acceptance criteria were met;
- the continuing calibration verification standard (CCV) method percent difference or percent drift (%Ds) and RF acceptance criteria were met; and
- the retention time method acceptance criteria were met.

The QC acceptance criteria were met.

Laboratory Blanks/Equipment Blanks/Trip Blanks

Laboratory method blanks were evaluated as to whether there were contaminants detected above the detection limit (DL). Blank results were reviewed for conformance with the QC acceptance criteria. Data validation qualifications for individual samples are based on the maximum contaminant concentration detected in all associated blanks.

The QC acceptance criteria were met; qualification of the sample results was not required.

MD Results

MD analyses were not performed on samples reported in this SDG. There were no validation actions taken on this basis.

LCS/LCSD Results

The LCS recoveries were reviewed for conformance with the QC acceptance criteria.

All QC acceptance criteria were met.

Field Duplicate Results

There were no field duplicate samples submitted with this data set. No validation actions were taken on this basis.

Internal Standard Results

The internal standard (IS) recoveries were reviewed for conformance with the QC acceptance criteria.

All QC acceptance criteria were met.

Sample Results/Reporting Issues

Compounds that were not detected in the sample are reported as undetected (U) at the Limit of Detection (LOD).

Compounds detected at concentrations less than the LOQ but greater than the detection limit (DL) were qualified by the laboratory as estimated (J). This "J" qualifier was retained during data validation.

Any sample that was analyzed at a dilution due to high concentrations of target or non-target compounds or matrix interferences was checked to ensure that the results and/or sample specific LODs and LOQs were adjusted accordingly by the laboratory.

QUALIFICATION ACTIONS

No sample results were qualified as a result of this data review.

ATTACHMENTS

Attachment A: Nonconformance Summary Tables

Attachment B: Qualifier Codes and Explanations

Attachment A

Non Conformance Summary Tables

No nonconformances were identified during this review.

Attachment B

Qualifier Codes and Explanations

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

SH1300

TestAmerica Burlington
30 Community Drive
Suite 11
South Burlington, VT 05403
phone 802-660-1990 fax 802-660-1919

Canister Samples Chain of Custody Record

TestAmerica Analytical Testing Corp. assumes no liability with respect to the collection and shipment of these samples.

Client Contact Information	Project Manager: Eleanor Vivaudou	Samples Collected By: Michael Zobel	1 of 1 COCs
Company: Resolution Consultants	Phone:		
Address: 100 Redemocracy Rd.	Email: eleanor.vivaudou@aecom.com		
City/State/Zip Chestnut Ridge, NY 11907			
Phone:	Site Contact: Michael Zobel		
FAX:	TA Contact:		
Project Name: NWIRP Bethpage	**Analysis Turnaround Time**		
Site: VPB148	Standard (Specify) ✓		
PO #	Rush (Specify)		

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum In Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	MA-APH	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
VPB148-AIR-022014	2-20-14	0746	1546	-30	-8	5176	6978	1						AIR					

Temperature (Fahrenheit)	Interior	Ambient	
Start	-	33°F	
Stop	-	41°F	

Pressure (Inches of Hg)	Interior	Ambient	
Start			
Stop			

Special Instructions/QC Requirements & Comments:
8-hr summa canister ambient air (outdoor) sample

Samples Shipped by: Michael Zobel	Date/Time: 2-20-14 / 1630	Samples Received by:	
Samples Relinquished by:	Date/Time:	Received by:	
Relinquished by:	Date/Time: 2/21/14 1000	Received by: TA Burl	200-21047 COC

Lab Use Only Shipper Name: Opened by: Condition:

Page 285 of 287

02/28/2014

0000003

Client: Katahdin Analytical Services

Job Number: 200-21047-1
Sdg Number: 200-21047

Client Sample ID: **VPB148-AIR-022014**

Lab Sample ID: 200-21047-1
Client Matrix: Air

Date Sampled: 02/20/2014 1546
Date Received: 02/21/2014 1000

TO-15 Volatile Organic Compounds in Ambient Air

Analysis Method:	TO-15	Analysis Batch:	200-68810	Instrument ID:	CHW.i
Prep Method:	Summa Canister	Prep Batch:	N/A	Lab File ID:	6317_023.d
Dilution:	1.0			Initial Weight/Volume:	200 mL
Analysis Date:	02/26/2014 0728			Final Weight/Volume:	200 mL
Prep Date:	02/26/2014 0728			Injection Volume:	200 mL

Analyte	Result (ppb v/v)	Qualifier	DL	LOQ
1,1,1-Trichloroethane	0.080	U	0.20	0.20
1,1,2,2-Tetrachloroethane	0.030	U	0.20	0.20
1,1,2-Trichloro-1,2,2-trifluoroethane	0.030	U	0.20	0.20
1,1,2-Trichloroethane	0.030	U	0.20	0.20
1,1-Dichloroethane	0.080	U	0.20	0.20
1,1-Dichloroethene	0.080	U	0.20	0.20
1,2,4-Trichlorobenzene	0.080	U	0.50	0.50
1,2-Dibromoethane (EDB)	0.080	U	0.20	0.20
1,2-Dichlorobenzene	0.030	U	0.20	0.20
1,2-Dichloroethane	0.030	U	0.20	0.20
1,2-Dichloropropane	0.080	U	0.20	0.20
Acetone	2.5	U	5.0	5.0
1,3-Dichlorobenzene	0.030	U	0.20	0.20
1,4-Dichlorobenzene	0.030	U	0.20	0.20
2-Butanone (MEK)	0.50	U	0.50	0.50
2-Hexanone	0.20	U	0.50	0.50
4-Methyl-2-pentanone	0.080	U	0.50	0.50
Benzene	0.27		0.20	0.20
Bromoform	0.030	U	0.20	0.20
Bromomethane	0.080	U	0.20	0.20
Carbon disulfide	0.20	U	0.50	0.50
Carbon tetrachloride	0.080	U	0.20	0.20
Chlorobenzene	0.030	U	0.20	0.20
Dibromochloromethane	0.030	U	0.20	0.20
Chloroethane	0.080	U	0.50	0.50
Chloroform	0.080	U	0.20	0.20
Chloromethane	0.55		0.50	0.50
cis-1,2-Dichloroethene	0.080	U	0.20	0.20
cis-1,3-Dichloropropene	0.080	U	0.20	0.20
Cyclohexane	0.080	U	0.20	0.20
Bromodichloromethane	0.030	U	0.20	0.20
Dichlorodifluoromethane	0.51		0.50	0.50
Ethylbenzene	0.030	U	0.20	0.20
Isopropylbenzene	0.030	U	0.20	0.20
Methyl tert-butyl ether	0.080	U	0.20	0.20
Methylene Chloride	0.20	U	0.50	0.50
m,p-Xylene	0.080	U	0.50	0.50
Xylene, o-	0.030	U M	0.20	0.20
Styrene	0.030	U	0.20	0.20
Tetrachloroethene	0.030	U	0.20	0.20
Toluene	0.28		0.20	0.20
trans-1,2-Dichloroethene	0.080	U	0.20	0.20
trans-1,3-Dichloropropene	0.080	U	0.20	0.20
Trichloroethene	0.080	U	0.20	0.20
Trichlorofluoromethane	0.21		0.20	0.20
Vinyl chloride	0.080	U	0.20	0.20

Client: Katahdin Analytical Services

Job Number: 200-21047-1
Sdg Number: 200-21047

Client Sample ID: VPB148-AIR-022014

Lab Sample ID: 200-21047-1
Client Matrix: Air

Date Sampled: 02/20/2014 1546
Date Received: 02/21/2014 1000

TO-15 Volatile Organic Compounds in Ambient Air

Analysis Method:	TO-15	Analysis Batch:	200-68810	Instrument ID:	CHW.i
Prep Method:	Summa Canister	Prep Batch:	N/A	Lab File ID:	6317_023.d
Dilution:	1.0			Initial Weight/Volume:	200 mL
Analysis Date:	02/26/2014 0728			Final Weight/Volume:	200 mL
Prep Date:	02/26/2014 0728			Injection Volume:	200 mL

Analyte	Result (ppb v/v)	Qualifier	DL	LOQ
Xylene (total)	0.080	U	0.20	0.20

Analyte	Result (ug/m3)	Qualifier	DL	LOQ
1,1,1-Trichloroethane	0.44	U	1.1	1.1
1,1,2,2-Tetrachloroethane	0.21	U	1.4	1.4
1,1,2-Trichloro-1,2,2-trifluoroethane	0.23	U	1.5	1.5
1,1,2-Trichloroethane	0.16	U	1.1	1.1
1,1-Dichloroethane	0.32	U	0.81	0.81
1,1-Dichloroethene	0.32	U	0.79	0.79
1,2,4-Trichlorobenzene	0.59	U	3.7	3.7
1,2-Dibromoethane (EDB)	0.61	U	1.5	1.5
1,2-Dichlorobenzene	0.18	U	1.2	1.2
1,2-Dichloroethane	0.12	U	0.81	0.81
1,2-Dichloropropane	0.37	U	0.92	0.92
Acetone	5.9	U	12	12
1,3-Dichlorobenzene	0.18	U	1.2	1.2
1,4-Dichlorobenzene	0.18	U	1.2	1.2
2-Butanone (MEK)	1.5	U	1.5	1.5
2-Hexanone	0.82	U	2.0	2.0
4-Methyl-2-pentanone	0.33	U	2.0	2.0
Benzene	0.86		0.64	0.64
Bromoform	0.31	U	2.1	2.1
Bromomethane	0.31	U	0.78	0.78
Carbon disulfide	0.62	U	1.6	1.6
Carbon tetrachloride	0.50	U	1.3	1.3
Chlorobenzene	0.14	U	0.92	0.92
Dibromochloromethane	0.26	U	1.7	1.7
Chloroethane	0.21	U	1.3	1.3
Chloroform	0.39	U	0.98	0.98
Chloromethane	1.1		1.0	1.0
cis-1,2-Dichloroethene	0.32	U	0.79	0.79
cis-1,3-Dichloropropene	0.36	U	0.91	0.91
Cyclohexane	0.28	U	0.69	0.69
Bromodichloromethane	0.20	U	1.3	1.3
Dichlorodifluoromethane	2.5		2.5	2.5
Ethylbenzene	0.13	U	0.87	0.87
Isopropylbenzene	0.15	U	0.98	0.98
Methyl tert-butyl ether	0.29	U	0.72	0.72
Methylene Chloride	0.69	U	1.7	1.7
m,p-Xylene	0.35	U	2.2	2.2
Xylene, o-	0.13	U M	0.87	0.87
Styrene	0.13	U	0.85	0.85
Tetrachloroethene	0.20	U	1.4	1.4
Toluene	1.0		0.75	0.75
trans-1,2-Dichloroethene	0.32	U	0.79	0.79
trans-1,3-Dichloropropene	0.36	U	0.91	0.91

Client: Katahdin Analytical Services

Job Number: 200-21047-1
Sdg Number: 200-21047

Client Sample ID: **VPB148-AIR-022014**

Lab Sample ID: 200-21047-1
Client Matrix: Air

Date Sampled: 02/20/2014 1546
Date Received: 02/21/2014 1000

TO-15 Volatile Organic Compounds in Ambient Air

Analysis Method:	TO-15	Analysis Batch:	200-68810	Instrument ID:	CHW.i
Prep Method:	Summa Canister	Prep Batch:	N/A	Lab File ID:	6317_023.d
Dilution:	1.0			Initial Weight/Volume:	200 mL
Analysis Date:	02/26/2014 0728			Final Weight/Volume:	200 mL
Prep Date:	02/26/2014 0728			Injection Volume:	200 mL

Analyte	Result (ug/m3)	Qualifier	DL	LOQ
Trichloroethene	0.43	U	1.1	1.1
Trichlorofluoromethane	1.2		1.1	1.1
Vinyl chloride	0.20	U	0.51	0.51
Xylene (total)	0.35	U	0.87	0.87

AECOM
250 Apollo Drive
Chelmsford, MA 01886-3140

978.905.2100 tel
978.905.2101 fax

Data Validation Report

Project:	Regional Groundwater Investigation - NWIRP Bethpage	
Laboratory:	Katahdin Analytical Services, Inc.	
Service Request:	SH1321	
Analyses/Method:	EPA SW-846 B for VOCs (GC/MS)	
Validation Level:	Limited	
AECOM Project Number:	60266526.SA.DV	
Prepared by:	Sheena Blair/AECOM	Completed on: 03/22/2014
Reviewed by:	Lori Herberich/AECOM	File Name: SH1321_8260B

SUMMARY

The samples listed below were collected by Resolution Consultants from the Regional Groundwater Investigation - NWIRP Bethpage site on February 28 and March 3, 2014.

Sample ID	Matrix/Sample Type
VPB148-GW-022814-758-760	Ground water
VPB148-GW-030314-798-800	Ground water
VPB148-GW-030314-818-820	Ground water
VPB148-TRIP BLANK-030314	Trip Blank

Data validation activities were conducted with reference to *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods SW846, specifically SW-846 Method 8260B, Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry* (USEPA, 1996), *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (June 2008), and Quality Systems Manual (QSM) for Environmental Laboratories, Version 4.2 (DoD, October 2010). In the absence of method-specific information, laboratory quality control (QC) limits, project-specific requirements and/or professional judgment were used as appropriate.

REVIEW ELEMENTS

The data were evaluated based on the following review elements (where applicable to the method):

✗	Data completeness (chain-of-custody (COC))/sample integrity
✓	Holding times and sample preservation
✓	GC/MS performance checks
✗	Initial calibration/continuing calibration verification
✗	Laboratory blanks/trip blanks/equipment blanks
✓	Surrogate spike recoveries
NA	Matrix spike (MS) and/or matrix spike duplicate (MSD) results
✓	Laboratory control sample (LCS) results
NA	Field duplicates

✓ Internal standards
✓ Sample results/reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (✗) indicates that a QC nonconformance resulted in the qualification of data. Any QC nonconformance that resulted in the qualification of data is discussed below. In addition, nonconformances or other issues that were noted during validation, but did not result in qualification of data, may be discussed for informational purposes only.

The data appear valid as reported and may be used for decision making purposes. No data were rejected. Selected data points were estimated and/or negated due to nonconformances of certain QC criteria (see discussion below). Qualified sample results are presented in Table 1.

RESULTS

Data Completeness/Sample Integrity

The data package was reviewed and found to meet acceptance criteria for completeness:

- The COCs were reviewed for completeness of information relevant to the samples and requested analyses, and for signatures indicating transfer of sample custody.
- The laboratory sample login sheet(s) were reviewed for issues potentially affecting sample integrity, including the condition of sample containers upon receipt at the laboratory.
- Completeness of analyses was verified by comparing the reported results to the COC requests.

Due to limitations in the reporting system, the laboratory omitted the "VPB-148-" prefix from the sample ID, and truncated IDs for GW and Trip Blank in the report. The submitted EDD file reflects the full sample ID.

Sample VPB148-GW-022814-758-760 was mostly soil and had very little standing water. The laboratory decanted the water from the individual vials into one vial. As a result sample VPB148-GW-022814-758-760 was analyzed at a 5-fold dilution, due to limited sample volume. Positive and non-detect results for this sample were qualified as estimated (J and UJ) respectively, due to possible loss of sample integrity during the decanting procedure.

Holding Times/Sample Preservation

Sample preservation and preparation/analysis holding times were reviewed for conformance with the QC acceptance criteria.

The QC acceptance criteria were met.

GC/MS Performance Checks

The data were reviewed to ensure that the 4-bromofluorobenzene (BFB) tuning was performed at the correct frequency and that the method acceptance criteria were met.

Initial Calibration/Continuing Calibration Verification

Calibration data were reviewed for conformance with the QC acceptance criteria to ensure that:

- the initial calibration (ICAL) percent relative standard deviation (%RSD), correlation coefficient (r)/coefficient of determination (r^2), and/or response factor method acceptance criteria were met;
- the continuing calibration verification standard (CCV) method percent difference or percent drift (%Ds) and RF acceptance criteria were met; and
- the retention time method acceptance criteria were met.

Data qualification to the analytes associated with the specific ICV was as follows:

ICV Recovery Nonconformances:

Nonconformance	Actions	
	Detected	Nondetected Compounds
%R > 120%	J	No qualification
20% < %R < 80%	J	UJ
%R <20% (see note)	J	R*

Notes: Based on NFG 2008 VOC guidance, professional judgment is used to reject (R) non-detects in all associated samples for any analyte with < 20% recovery. Also, professional judgment is used to estimate (UJ) rather the reject (R) sample results previously negated (U) on the basis of blank contamination.

Qualified sample results are shown in Table 1. Nonconformances are summarized in Attachment A in Table A-1.

Laboratory Blanks/Equipment Blanks/Trip Blanks

Laboratory method blanks, equipment rinsate and trip blanks were evaluated as to whether there were contaminants detected above the detection limit (DL).

Data validation qualifications for individual samples are based on the maximum contaminant concentration detected in all associated blanks.

Method, equipment rinsate and trip blank results were reviewed for conformance with the QC acceptance criteria. Detected results in blanks are not discussed in this data validation report if the associated results were nondetect or if qualification of sample results was not required.

Sample results were qualified as follows:

Blank type	Blank result	Sample result	Action for samples
Method, Storage, Field, Trip, or Instrument*	Detects	Not detected	No qualification
	≤ LOQ	< LOQ	Report sample LOQ value with a U
		≥ LOQ and ≤ 2x LOQ	Report the sample result with a U**
		≥ 2x the LOQ	No qualifications
	> LOQ	< LOQ	Report sample LOQ value with a U
		≥ LOQ and < blank contamination	Report the sample result with a U or reject the sample result as unusable R

Blank type	Blank result	Sample result	Action for samples
		≥ LOQ and ≥ blank contamination	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**
* Qualifications based on instrument blank results affect only the sample analyzed immediately after the sample that has target compounds that exceed the calibration range or non-target compounds that exceed 100 g/L.			
**Based on Resolution Consultants professional judgment.			

LOQ - Limit of Quantitation. Nonconformances are summarized in Attachment A in Table A-2a and A2b. Qualified sample results are shown in Table 1.

Surrogate Spike Recoveries

The surrogate percent recoveries (%Rs) were reviewed for conformance with the QC acceptance criteria.

All QC acceptance criteria were met.

MS/MSD Results

MS/MSD analyses were not performed on samples reported in this SDG. There were no validation actions taken on this basis.

LCS Results

The LCS %Rs was reviewed for conformance with the QC acceptance criteria.

All QC acceptance criteria were met.

Field Duplicate Results

There were no field duplicate samples submitted with this data set. No validation actions were taken on this basis.

Internal Standard Results

The internal standard (IS) recoveries were reviewed for conformance with the QC acceptance criteria.

All QC acceptance criteria were met.

Sample Results/Reporting Issues

Compounds that were not detected in the sample are reported as undetected (U) at the Limit of Detection (LOD).

Compounds detected at concentrations less than the LOQ but greater than the detection limit (DL) were qualified by the laboratory as estimated (J). This "J" qualifier was retained during data validation.

Any sample that was analyzed at a dilution due to high concentrations of target or non-target compounds or matrix interferences was checked to ensure that the results and/or sample specific LODs and LOQs were adjusted accordingly by the laboratory.

QUALIFICATION ACTIONS

Sample results qualified as a result of validation actions are summarized in Table 1. All actions are described above.

ATTACHMENTS

Attachment A: Nonconformance Summary Tables

Attachment B: Qualifier Codes and Explanations

Attachment C: Reason Codes and Explanations

Table 1 - Data Validation Summary of Qualified Data

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB148-GW-022814-758-760	WG	1,1,1-TRICHLOROETHANE		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	1,1,2,2-TETRACHLOROETHANE		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	1,1,2-TRICHLOROETHANE		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	1,1-DICHLOROETHANE		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	1,1-DICHLOROETHENE		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	1,2,4-TRICHLOROBENZENE		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	1,2-DIBROMO-3-CHLOROPROPANE		3.8	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	1,2-DIBROMOETHANE		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	1,2-DICHLOROBENZENE		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	1,2-DICHLOROETHANE		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	1,2-DICHLOROETHENE, TOTAL		5.0	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	1,2-DICHLOROPROPANE		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	1,3-DICHLOROBENZENE		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	1,4-DICHLOROBENZENE		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	2-BUTANONE		12	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	2-HEXANONE		12	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	4-METHYL-2-PENTANONE		12	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	ACETONE	34	12	ug//L	J	mc
VPB148-GW-022814-758-760	WG	BENZENE		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	BROMODICHLOROMETHANE		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	BROMOFORM		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	BROMOMETHANE		5.0	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	CARBON DISULFIDE		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	CARBON TETRACHLORIDE		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	CHLOROBENZENE		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	CHLOROETHANE		5.0	ug//L	UJ	c,mc
VPB148-GW-022814-758-760	WG	CHLOROFORM		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	CHLOROMETHANE		5.0	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	CIS-1,2-DICHLOROETHENE		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	CIS-1,3-DICHLOROPROPENE		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	CYCLOHEXANE		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	DIBROMOCHLOROMETHANE		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	DICHLORODIFLUOROMETHANE		5.0	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	ETHYLBENZENE		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	ISOPROPYLBENZENE		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	M- AND P-XYLENE		5.0	ug//L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB148-GW-022814-758-760	WG	METHYL ACETATE		3.8	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	METHYL CYCLOHEXANE		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	METHYL TERT-BUTYL ETHER		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	METHYLENE CHLORIDE		12	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	O-XYLENE		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	STYRENE		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	TETRACHLOROETHENE		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	TOLUENE		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	TRANS-1,2-DICHLOROETHENE		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	TRANS-1,3-DICHLOROPROPENE		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	TRICHLOROETHENE		2.5	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	TRICHLOROFLUOROMETHANE		5.0	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	VINYL CHLORIDE		5.0	ug//L	UJ	mc
VPB148-GW-022814-758-760	WG	XYLENES, TOTAL		7.5	ug//L	UJ	mc
VPB148-GW-030314-798-800	WG	ACETONE		2.5	ug//L	J	c
VPB148-GW-030314-798-800	WG	CHLOROETHANE		1.0	ug//L	UJ	c
VPB148-GW-030314-818-820	WG	ACETONE	4.0	2.5	ug//L	J	c
VPB148-GW-030314-818-820	WG	CARBON DISULFIDE		1.0*	ug//L	U	bl
VPB148-GW-030314-818-820	WG	CHLOROETHANE		1.0	ug//L	UJ	c
VPB148-TRIP BLANK-030314	WQ	CHLOROETHANE		1.0	ug//L	UJ	c
*LOQ for Carbon Disulfide							

Attachment A

Non Conformance Summary Tables

Table A-1 - Initial Calibration Verification Standard

ICV	Compound	% R	Limit
WG138480	CHLOROETHANE	76.65	80-120%
	ACETONE	127.99	80-120%
	2-HEXANONE	131.64	80-120%
Associated samples: All samples in the SDG			

Table A2a - Lab Blanks

Blank ID	Compound	Result	LOD	Units	Associated Samples
WG139535-2	CARBON DISULFIDE	0.35	0.50	ug//L	VPB148-GW-030314-818-820

Table A2b- Field Blanks

Blank ID	Compound	Result	LOD	Units	Associated Samples
VPB148-TRIP BLANK-030314	METHYLENE CHLORIDE	2.7	2.5	ug//L	

Attachment B

Qualifier Codes and Explanations

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

Attachment C

Reason Codes and Explanations

Reason Code	Explanation
be	Equipment blank contamination
bf	Field blank contamination
bl	Laboratory blank contamination
c	Calibration issue
co	Analyte carryover
d	Reporting limit raised due to chromatographic interference
fd	Field duplicate RPDs
h	Holding times
i	Internal standard areas
k	Estimated Maximum Possible Concentration (EMPC)
l	LCS or OPR recoveries
lc	Labeled compound recovery
ld	Laboratory duplicate RPDs
lp	Laboratory control sample/laboratory control sample duplicate RPDs
m	Matrix spike recovery
md	Matrix spike/matrix spike duplicate RPDs
nb	Negative laboratory blank contamination
p	Chemical preservation issue
r	Dual column RPD
q	Quantitation issue
s	Surrogate recovery
su	Ion suppression
t	Temperature preservation issue
x	Percent solids
y	Serial dilution results
z	ICS results
mc	Method compliance nonconformance

Katahdin ANALYTICAL SERVICES
600 Technology Way
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Tel: (207) 874-2400
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CHAIN of CUSTODY

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Page 1 of 1

Client	Contact	Phone #	Fax #
Resolution Consultants	Eleanor Vivaudou	(845) 425-4180	( )

Address	City	State	Zip Code
100 Red Schoolhouse Rd	Chestnut Ridge	NY	10977

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	NWIRP Bethpage / 60265526	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:
Michael Zabel / Michael Zabel	

LAB USE ONLY WORK ORDER #: 514321

KATAHDIN PROJECT NUMBER _____

REMARKS: _____

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO: _____

TEMP°C _____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	VPB148-GW-022614-758-760	2-28-14 / 1215	GW	3	3									
	VPB148-GW-030314-798-800	3-3-14 / 1315	GW	3	3									
	VPB148-TRIP BLANK-030314	12-13-13 / 1130	W	3	3									
	VPB148-GW-030314-818-820	3-3-14 / 1530	GW	3	3									
		/												
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		/												

COMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
Michael Zabel	3-3-14 / 1700	3-4-14 1000			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

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Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1321-1DL
Client ID: 148-022814-758-760
Project: Navy Clean WE15 NWIRP B
SDG: SH1321
Lab File ID: C5861.D

Sample Date: 28-FEB-14
Received Date: 04-MAR-14
Extract Date: 04-MAR-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139535

Analysis Date: 04-MAR-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 06-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UJ	5.0	ug/L	5	2	10.	1.2	5.0
Chloromethane	U	5.0	ug/L	5	2	10.	1.8	5.0
Vinyl Chloride	U	5.0	ug/L	5	2	10.	1.2	5.0
Bromomethane	U	5.0	ug/L	5	2	10.	2.4	5.0
Chloroethane	U	5.0	ug/L	5	2	10.	2.8	5.0
Trichlorofluoromethane	U	5.0	ug/L	5	2	10.	1.2	5.0
1,1-Dichloroethene	U	2.5	ug/L	5	1	5.0	1.8	2.5
Carbon Disulfide	U	2.5	ug/L	5	1	5.0	1.2	2.5
Freon-113	U	2.5	ug/L	5	1	5.0	1.6	2.5
Methylene Chloride	U	12	ug/L	5	5	25.	5.6	12.
Acetone	J	34	ug/L	5	5	25.	11.	12.
trans-1,2-Dichloroethene	U UJ	2.5	ug/L	5	1	5.0	1.2	2.5
Methyl tert-butyl Ether	U	2.5	ug/L	5	1	5.0	1.8	2.5
1,1-Dichloroethane	U	2.5	ug/L	5	1	5.0	1.0	2.5
cis-1,2-Dichloroethene	U	2.5	ug/L	5	1	5.0	1.0	2.5
Chloroform	U	2.5	ug/L	5	1	5.0	1.6	2.5
1,1,1-Trichloroethane	U	2.5	ug/L	5	1	5.0	1.0	2.5
2-Butanone	U	12	ug/L	5	5	25.	6.6	12.
Cyclohexane	U	2.5	ug/L	5	1	5.0	1.6	2.5
Carbon Tetrachloride	U	2.5	ug/L	5	1	5.0	1.1	2.5
Benzene	U	2.5	ug/L	5	1	5.0	1.3	2.5
1,2-Dichloroethane	U	2.5	ug/L	5	1	5.0	1.0	2.5
Trichloroethene	U	2.5	ug/L	5	1	5.0	1.4	2.5
1,2-Dichloropropane	U	2.5	ug/L	5	1	5.0	1.2	2.5
Bromodichloromethane	U	2.5	ug/L	5	1	5.0	1.6	2.5
cis-1,3-Dichloropropene	U	2.5	ug/L	5	1	5.0	0.95	2.5
Toluene	U	2.5	ug/L	5	1	5.0	1.4	2.5
4-Methyl-2-Pentanone	U	12	ug/L	5	5	25.	6.6	12.
trans-1,3-Dichloropropene	U	2.5	ug/L	5	1	5.0	1.0	2.5
1,1,2-Trichloroethane	U	2.5	ug/L	5	1	5.0	1.6	2.5
Tetrachloroethene	U	2.5	ug/L	5	1	5.0	2.0	2.5
Dibromochloromethane	U	2.5	ug/L	5	1	5.0	1.5	2.5
2-Hexanone	U	12	ug/L	5	5	25.	8.5	12.
Chlorobenzene	U	2.5	ug/L	5	1	5.0	1.1	2.5
Ethylbenzene	U	2.5	ug/L	5	1	5.0	1.0	2.5

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FT 8/25/14

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1321-1DL
Client ID: 148-022814-758-760
Project: Navy Clean WE15 NWIRP B
SDG: SH1321
Lab File ID: C5861.D

Sample Date: 28-FEB-14
Received Date: 04-MAR-14
Extract Date: 04-MAR-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139535

Analysis Date: 04-MAR-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 06-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U UJ	7.5	ug/L	5	3	15.	1.2	7.5
Styrene	U	2.5	ug/L	5	1	5.0	1.2	2.5
Bromoform	U	2.5	ug/L	5	1	5.0	1.2	2.5
Isopropylbenzene	U	2.5	ug/L	5	1	5.0	1.2	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/L	5	1	5.0	1.9	2.5
1,3-Dichlorobenzene	U	2.5	ug/L	5	1	5.0	1.3	2.5
1,4-Dichlorobenzene	U	2.5	ug/L	5	1	5.0	1.2	2.5
1,2-Dichlorobenzene	U	2.5	ug/L	5	1	5.0	0.75	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/L	5	1	5.0	1.8	2.5
Methyl Acetate	U	3.8	ug/L	5	1	5.0	2.6	3.8
Methylcyclohexane	U	2.5	ug/L	5	1	5.0	1.5	2.5
o-Xylene	U	2.5	ug/L	5	1	5.0	1.2	2.5
M+P-Xylenes	U	5.0	ug/L	5	2	10.	3.0	5.0
1,2-Dichloroethylene (Total)	U	5.0	ug/L	5	2	10.	1.0	5.0
1,2-Dibromoethane	U	2.5	ug/L	5	1	5.0	1.1	2.5
1,2-Dibromo-3-Chloropropane	U	3.8	ug/L	5	1	5.0	2.5	3.8
P-Bromofluorobenzene		87.3	%					
Toluene-d8		89.3	%					
1,2-Dichloroethane-d4		98.9	%					
Dibromofluoromethane		95.7	%					

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1321-2
Client ID: 148-030314-798-800
Project: Navy Clean WE15 NWIRP B
SDG: SH1321
Lab File ID: C5862.D

Sample Date: 03-MAR-14
Received Date: 04-MAR-14
Extract Date: 04-MAR-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139535

Analysis Date: 04-MAR-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 06-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	~~U~~ UJ	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	J J	4.6	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1321-2
Client ID: 148-030314-798-800
Project: Navy Clean WE15 NWIRP B
SDG: SH1321
Lab File ID: C5862.D

Sample Date: 03-MAR-14
Received Date: 04-MAR-14
Extract Date: 04-MAR-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139535

Analysis Date: 04-MAR-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 06-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		85.3	%					
Toluene-d8		89.5	%					
1,2-Dichloroethane-d4		97.6	%					
Dibromofluoromethane		95.5	%					

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Tel:(207) 874-2400 Fax:(207) 775-4029

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1321-3
Client ID: VPB148-TB-030314
Project: Navy Clean WE15 NWIRP B
SDG: SH1321
Lab File ID: C5858.D

Sample Date: 03-MAR-14
Received Date: 04-MAR-14
Extract Date: 04-MAR-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139535

Analysis Date: 04-MAR-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 06-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	~~U~~ UJ	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	J	2.7	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Rev 6/25/14

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1321-3
Client ID: VPB148-TB-030314
Project: Navy Clean WE15 NWIRP B
SDG: SH1321
Lab File ID: C5858.D

Sample Date: 03-MAR-14
Received Date: 04-MAR-14
Extract Date: 04-MAR-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139535

Analysis Date: 04-MAR-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 06-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		88.7	%					
Toluene-d8		90.9	%					
1,2-Dichloroethane-d4		101.	%					
Dibromofluoromethane		97.4	%					

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ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1321-4
Client ID: 148-030314-818-820
Project: Navy Clean WE15 NWIRP B
SDG: SH1321
Lab File ID: C5863.D

Sample Date: 03-MAR-14
Received Date: 04-MAR-14
Extract Date: 04-MAR-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139535

Analysis Date: 04-MAR-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 06-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	~~U~~ UJ	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	~~J~~ U	~~0.27~~ 1.0	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	~~J~~ J	4.0	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1321-4
Client ID: 148-030314-818-820
Project: Navy Clean WE15 NWIRP B
SDG: SH1321
Lab File ID: C5863.D

Sample Date: 03-MAR-14
Received Date: 04-MAR-14
Extract Date: 04-MAR-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139535

Analysis Date: 04-MAR-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 06-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		88.0	%					
Toluene-d8		90.6	%					
1,2-Dichloroethane-d4		98.6	%					
Dibromofluoromethane		96.3	%					

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RESOLUTION CONSULTANTS

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Data Validation Report

Project:	Regional Groundwater Investigation - NWIRP Bethpage	
Laboratory:	Katahdin Analytical Services, Scarborough, Maine	
Service Request:	SH1444	
Analyses/Method:	EPA SW-846 Method 8260B for VOCs (GC/MS) and Standard Method 5310 for Total Organic Carbon by High-Temperature Combustion	
Validation Level:	Limited	
RESCON Project Number:	60266526.SA.DV	
Prepared by:	Sheena Blair/RESCON	Completed on: 06/27/2014
Reviewed by:	Lori Herberich/RESCON	File Name: SH1444_5310B and 8260B

SUMMARY

The samples listed below were collected by Resolution Consultants (RESCON) from the Regional Groundwater Investigation - NWIRP Bethpage site on March 4, 5, and 6, 2014.

Sample ID	Matrix/Sample Type
VPB148-EB-030514	Equipment blank
VPB148-GW-D-030514	Field Duplicate of VPB148-GW-030514-898-900
VPB148-GW-030414-838-840	Groundwater
VPB148-GW-030414-858-860	Groundwater
VPB148-GW-030514-878-880	Groundwater
VPB148-GW-030514-898-900	Groundwater
VPB148-GW-030614-918-920	Groundwater
VPB148-TRIP BLANK-030614	Trip Blank

The samples were analyzed in accordance with:

- *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods SW846,* Method 8260B, *Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry* (USEPA, 1996).

- *Standard Methods for the Examination of Water and Wastewater, Method SM310B, Total Organic Carbon by High-Temperature Combustion*

Data validation activities were conducted with reference to these methods, *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (June 2008), *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review* (January 2010), and Quality Systems Manual (QSM) for Environmental Laboratories, Version 4.2 (DoD, October 2010) where applicable. In the absence of method-specific information, laboratory quality control (QC) limits, project-specific requirements and/or professional judgment were used as appropriate.

REVIEW ELEMENTS

The data were evaluated based on the following review elements (where applicable to the method):

✗	Data completeness (chain-of-custody [COC])/sample integrity
✓	Holding times and sample preservation
✓	GC/MS performance checks
✗	Initial calibration/continuing calibration verification
✗	Laboratory blanks/equipment blanks/trip blanks
✓	Surrogate spike recoveries
✓	Matrix spike (MS) results
✓	Laboratory control sample (LCS) results
✓	Field duplicate results
✓	Internal standard results
✓	Sample results/reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (✗) indicates that a QC nonconformance resulted in the qualification of data. Any QC nonconformance that resulted in the qualification of data is discussed below. In addition, nonconformances or other issues that were noted during validation, but did not result in qualification of data, may be discussed for informational purposes only.

The data appear valid as reported and may be used for decision making purposes. Selected data points were estimated, negated, due to nonconformances of certain QC criteria (see discussion below). Qualified sample results are presented in Table 1.

RESULTS

Data Completeness (COC)/Sample Integrity

The data package was reviewed and found to meet acceptance criteria for completeness:

- The COCs were reviewed for completeness of information relevant to the samples and requested analyses, and for signatures indicating transfer of sample custody.
- The laboratory sample login sheet(s) were reviewed for issues potentially affecting sample integrity, including the condition of sample containers upon receipt at the laboratory.
- Completeness of analyses was verified by comparing the reported results to the COC requests.

Due to limitations in the reporting system, the laboratory omitted the "VPB" prefix from the sample ID, and truncated IDs for GW and Trip Blank in the report. The submitted EDD file reflects the full sample ID.

Selected samples were mostly soil and had very little standing water.

For samples VPB148-GW-030414-838-840, VPB148-GW-030414-858-860, VPB148-GW-030514-878-880, and VPB148-GW-030614-918-920 the laboratory decanted the water from the individual vials into one vial as a composite for each sample. As a result the samples were analyzed at dilutions, due to limited sample volume.

Positive and nondetect results for these sample were qualified as estimated (J and UJ) respectively, due to possible loss of sample integrity during the decanting procedure.

Holding Times/Sample Preservation

Sample preservation and preparation/analysis holding times were reviewed for conformance with the QC acceptance criteria. All QC acceptance criteria were met.

GC/MS Performance Checks

The data were reviewed to ensure that the 4-bromofluorobenzene (BFB) tuning was performed at the correct frequency and that the method acceptance criteria were met. All QC acceptance criteria were met.

Initial Calibration/Continuing Calibration Verification

Calibration data were reviewed for conformance with the QC acceptance criteria to ensure that:

- the initial calibration (ICAL) percent relative standard deviation (%RSD), correlation coefficient (r)/coefficient of determination (r^2), and/or response factor method acceptance criteria were met;
- the initial calibration verification (ICV) percent recovery (%R) criteria were met; and
- the continuing calibration verification standard (CCV) method percent difference or percent drift (%Ds), %Rs, and/or RF acceptance criteria were met; and/or
- the retention time method acceptance criteria were met.

Data qualification to the analytes associated with the specific ICAL was as follows:

ICV Recovery Nonconformances:

Nonconformance	Actions	
	Detected Compounds	Nondetected Compounds
%R > 120%	J	No qualification
20% < %R < 80%	J	UJ
%R <20% (see note)	J	R*

Notes: Based on NFG 2008 VOC guidance, professional judgment is used to reject (R) nondetects in all associated samples for any analyte with < 20% recovery. Also, professional judgment is used to estimate (UJ) rather the reject (R) sample results previously negated (U) on the basis of blank contamination.

Qualified sample results are shown in Table 1. Nonconformances are summarized in Attachment A in Table A-1.

Laboratory Blanks/Equipment Blanks/Trip Blanks

Laboratory method blanks, equipment rinsate and trip blanks were evaluated as to whether there were contaminants detected above the detection limit (DL).

Data validation qualifications for individual samples are based on the maximum contaminant concentration detected in all associated blanks.

Method, equipment rinsate and trip blank results were reviewed for conformance with the QC acceptance criteria. Detected results in blanks are not discussed in this data validation report if the associated results were nondetect or if qualification of sample results was not required.

Sample results were qualified as follows:

For common lab contaminants (methylene chloride, acetone, 2-butanone):

Blank type	Blank result	Sample result	Action for samples
Method, Storage, Field, Trip, or Instrument*	Detects	Not detected	No qualification
	≤ 2x LOQ	< 2x LOQ	Report sample LOQ value with a U
		≥ 2x LOQ and ≤ 4x LOQ	Report the sample result with a U**
		≥ 4x LOQ	No qualifications
	> 2x LOQ	< 2x LOQ	Report sample LOQ value with a U
		≥ 2x LOQ and < blank contamination	Report the sample result with a U
		≥ 2x LOQ and ≥ blank contamination	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**
* Qualifications based on instrument blank results affect only the sample analyzed immediately after the sample that has target compounds that exceed the calibration range or non-target compounds that exceed 100 g/L.			
**Based on RESCON professional judgment			

For all other compounds:

Blank type	Blank result	Sample result	Action for samples
Method, Storage, Field, Trip, or Instrument*	Detects	Not detected	No qualification
	≤ LOQ	< LOQ	Report sample LOQ value with a U
		≥ LOQ and ≤ 2x LOQ	Report the sample result with a U**
		≥ 2x the LOQ	No qualifications
	> LOQ	< LOQ	Report sample LOQ value with a U
		≥ LOQ and < blank contamination	Report the sample result with a U or reject the sample result as unusable R
		≥ LOQ and ≥ blank contamination	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**
* Qualifications based on instrument blank results affect only the sample analyzed immediately after the sample that has target compounds that exceed the calibration range or non-target compounds that exceed 100 g/L.			
**Based on RESCON professional judgment.			

LOQ - Limit of Quantitation.

Nonconformances are summarized in Attachment A in Table A-2 and A-3. Qualified sample results are shown in Table 1.

Surrogate Spike Recoveries

The surrogate recoveries (%Rs) were reviewed for conformance with the QC acceptance criteria. All QC acceptance criteria were met.

MS Results

The MS %Rs were reviewed for conformance with the QC acceptance criteria.

The MS analysis was performed on sample VPB148-GW-030514-898-900. Although some compounds had high recoveries, nondetects were reported for these compounds in the parent (unspiked) sample and no validation action was required.

LCS Results

The LCS/LCSD %Rs were reviewed for conformance with the QC acceptance criteria. All QC acceptance criteria were met.

Field Duplicate Results

Field duplicate RPDs were reviewed for conformance with the QC criterion of $\leq$30% for aqueous matrices. This criterion applies if both results were greater than five times the Limit of Quantitation (LOQ). All QC acceptance criteria were met.

Internal Standard Results

The internal standard (IS) recoveries were reviewed for conformance with the QC acceptance criteria. All QC acceptance criteria were met.

Sample Results/Reporting Issues

Compounds that were not detected in the sample are reported as undetected (U) at the Limit of Detection (LOD).

Compounds detected at concentrations less than the LOQ but greater than the detection limit (DL) were qualified by the laboratory as estimated (J). This "J" qualifier was retained during data validation.

Any sample that was analyzed at a dilution due to high concentrations of target or non-target compounds or matrix interferences was checked to ensure that the results and/or sample specific LODs and LOQs were adjusted accordingly by the laboratory.

QUALIFICATION ACTIONS

Sample results qualified as a result of validation actions are summarized in Table 1. All actions are described above.

ATTACHMENTS

Attachment A: Nonconformance Summary Tables

Attachment B: Qualifier Codes and Explanations

Attachment C: Reason Codes and Explanations

Table 1 - Data Validation Summary of Qualified Data

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB148-EB-030514	WQ	CARBON DISULFIDE		1.0*	UG/L	U	bl
VPB148-GW-030414-838-840	WG	1,1,1-TRICHLOROETHANE		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	1,1,2,2-TETRACHLOROETHANE		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	1,1,2-TRICHLOROETHANE		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	1,1-DICHLOROETHANE		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	1,1-DICHLOROETHENE		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	1,2,4-TRICHLOROBENZENE		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	1,2-DIBROMO-3-CHLOROPROPANE		15	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	1,2-DIBROMOETHANE		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	1,2-DICHLOROBENZENE		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	1,2-DICHLOROETHANE		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	1,2-DICHLOROETHENE, TOTAL		20	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	1,2-DICHLOROPROPANE		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	1,3-DICHLOROBENZENE		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	1,4-DICHLOROBENZENE		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	2-BUTANONE		50	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	2-HEXANONE		50	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	4-METHYL-2-PENTANONE		50	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	ACETONE		50	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	BENZENE		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	BROMODICHLOROMETHANE		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	BROMOFORM		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	BROMOMETHANE		20	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	CARBON DISULFIDE		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	CARBON TETRACHLORIDE		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	CHLOROBENZENE		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	CHLOROETHANE		20	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	CHLOROFORM		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	CHLOROMETHANE		20	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	CIS-1,2-DICHLOROETHENE		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	CIS-1,3-DICHLOROPROPENE		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	CYCLOHEXANE		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	DIBROMOCHLOROMETHANE		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	DICHLORODIFLUOROMETHANE		20	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	ETHYLBENZENE		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	ISOPROPYLBENZENE		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	M- AND P-XYLENE		20	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	METHYL ACETATE		15	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	METHYL CYCLOHEXANE		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	METHYL TERT-BUTYL ETHER		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	METHYLENE CHLORIDE		50	UG/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB148-GW-030414-838-840	WG	O-XYLENE		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	STYRENE		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	TETRACHLOROETHENE		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	TOLUENE		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	TRANS-1,2-DICHLOROETHENE		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	TRANS-1,3-DICHLOROPROPENE		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	TRICHLOROETHENE		10	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	TRICHLOROFLUOROMETHANE		20	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	VINYL CHLORIDE		20	UG/L	UJ	mc
VPB148-GW-030414-838-840	WG	XYLENES, TOTAL		30	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	1,1,1-TRICHLOROETHANE		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	1,1,2,2-TETRACHLOROETHANE		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	1,1,2-TRICHLOROETHANE		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	1,1-DICHLOROETHANE		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	1,1-DICHLOROETHENE		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	1,2,4-TRICHLOROBENZENE		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	1,2-DIBROMO-3-CHLOROPROPANE		7.5	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	1,2-DIBROMOETHANE		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	1,2-DICHLOROBENZENE		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	1,2-DICHLOROETHANE		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	1,2-DICHLOROETHENE, TOTAL		10	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	1,2-DICHLOROPROPANE		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	1,3-DICHLOROBENZENE		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	1,4-DICHLOROBENZENE		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	2-BUTANONE		25	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	2-HEXANONE		25	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	4-METHYL-2-PENTANONE		25	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	ACETONE		25	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	BENZENE		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	BROMODICHLOROMETHANE		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	BROMOFORM		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	BROMOMETHANE		10	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	CARBON DISULFIDE		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	CARBON TETRACHLORIDE		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	CHLOROBENZENE		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	CHLOROETHANE		10	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	CHLOROFORM		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	CHLOROMETHANE		10	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	CIS-1,2-DICHLOROETHENE		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	CIS-1,3-DICHLOROPROPENE		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	CYCLOHEXANE		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	DIBROMOCHLOROMETHANE		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	DICHLORODIFLUOROMETHANE		10	UG/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB148-GW-030414-858-860	WG	ETHYLBENZENE		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	ISOPROPYLBENZENE		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	M- AND P-XYLENE		10	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	METHYL ACETATE		7.5	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	METHYL CYCLOHEXANE		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	METHYL TERT-BUTYL ETHER		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	METHYLENE CHLORIDE		25	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	O-XYLENE		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	STYRENE		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	TETRACHLOROETHENE		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	TOLUENE		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	TRANS-1,2-DICHLOROETHENE		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	TRANS-1,3-DICHLOROPROPENE		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	TRICHLOROETHENE		5.0	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	TRICHLOROFLUOROMETHANE		10	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	VINYL CHLORIDE		10	UG/L	UJ	mc
VPB148-GW-030414-858-860	WG	XYLENES, TOTAL		15	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	1,1,1-TRICHLOROETHANE		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	1,1,2,2-TETRACHLOROETHANE		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	1,1,2-TRICHLOROETHANE		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	1,1-DICHLOROETHANE		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	1,1-DICHLOROETHENE		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	1,2,4-TRICHLOROBENZENE		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	1,2-DIBROMO-3-CHLOROPROPANE		7.5	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	1,2-DIBROMOETHANE		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	1,2-DICHLOROBENZENE		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	1,2-DICHLOROETHANE		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	1,2-DICHLOROETHENE, TOTAL		10	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	1,2-DICHLOROPROPANE		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	1,3-DICHLOROBENZENE		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	1,4-DICHLOROBENZENE		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	2-BUTANONE		25	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	2-HEXANONE		25	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	4-METHYL-2-PENTANONE		25	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	ACETONE		25	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	BENZENE		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	BROMODICHLOROMETHANE		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	BROMOFORM		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	BROMOMETHANE		10	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	CARBON DISULFIDE		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	CARBON TETRACHLORIDE		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	CHLOROBENZENE		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	CHLOROETHANE		10	UG/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB148-GW-030514-878-880	WG	CHLOROFORM		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	CHLOROMETHANE		10	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	CIS-1,2-DICHLOROETHENE		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	CIS-1,3-DICHLOROPROPENE		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	CYCLOHEXANE		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	DIBROMOCHLOROMETHANE		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	DICHLORODIFLUOROMETHANE		10	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	ETHYLBENZENE		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	ISOPROPYLBENZENE		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	M- AND P-XYLENE		10	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	METHYL ACETATE		7.5	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	METHYL CYCLOHEXANE		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	METHYL TERT-BUTYL ETHER		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	METHYLENE CHLORIDE		25	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	O-XYLENE		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	STYRENE		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	TETRACHLOROETHENE		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	TOLUENE		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	TRANS-1,2-DICHLOROETHENE		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	TRANS-1,3-DICHLOROPROPENE		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	TRICHLOROETHENE		5.0	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	TRICHLOROFLUOROMETHANE		10	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	VINYL CHLORIDE		10	UG/L	UJ	mc
VPB148-GW-030514-878-880	WG	XYLENES, TOTAL		15	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	1,1,1-TRICHLOROETHANE		20	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	1,1,2,2-TETRACHLOROETHANE		20	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		20	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	1,1,2-TRICHLOROETHANE		20	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	1,1-DICHLOROETHANE		20	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	1,1-DICHLOROETHENE		20	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	1,2,4-TRICHLOROBENZENE		20	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	1,2-DIBROMO-3-CHLOROPROPANE		30	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	1,2-DIBROMOETHANE		20	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	1,2-DICHLOROBENZENE		20	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	1,2-DICHLOROETHANE		20	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	1,2-DICHLOROETHENE, TOTAL		40	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	1,2-DICHLOROPROPANE		20	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	1,3-DICHLOROBENZENE		20	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	1,4-DICHLOROBENZENE		20	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	2-BUTANONE		100	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	2-HEXANONE		100	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	4-METHYL-2-PENTANONE		100	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	ACETONE		100	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	BENZENE		20	UG/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB148-GW-030614-918-920	WG	BROMODICHLOROMETHANE		20	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	BROMOFORM		20	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	BROMOMETHANE		40	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	CARBON DISULFIDE		20	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	CARBON TETRACHLORIDE		20	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	CHLOROBENZENE		20	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	CHLOROETHANE		40	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	CHLOROFORM		20	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	CHLOROMETHANE		40	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	CIS-1,2-DICHLOROETHENE		20	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	CIS-1,3-DICHLOROPROPENE		20	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	CYCLOHEXANE		20	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	DIBROMOCHLOROMETHANE		20	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	DICHLORODIFLUOROMETHANE		40	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	ETHYLBENZENE		20	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	ISOPROPYLBENZENE		20	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	M- AND P-XYLENE		40	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	METHYL ACETATE		30	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	METHYL CYCLOHEXANE		20	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	METHYL TERT-BUTYL ETHER		20	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	METHYLENE CHLORIDE		100	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	O-XYLENE		20	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	STYRENE		20	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	TETRACHLOROETHENE		20	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	TOLUENE		20	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	TRANS-1,2-DICHLOROETHENE		20	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	TRANS-1,3-DICHLOROPROPENE		20	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	TRICHLOROETHENE		20	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	TRICHLOROFLUOROMETHANE		40	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	VINYL CHLORIDE		40	UG/L	UJ	mc
VPB148-GW-030614-918-920	WG	XYLENES, TOTAL		60	UG/L	UJ	mc
VPB148-GW-D-030514	WG	ACETONE		5.0*	UG/L	U	bf
*LOQ							

Attachment A

Nonconformance Summary Tables

Table A-1 - Initial Calibration Verification

ICV	Compound	% D	Limit
WG139494-7	ACETONE	128.0	80-120%
Associated samples: All samples in the SDG			

Table A-2 - Lab Blanks

Blank ID	Compound	Result	QL	Units	Associated Samples
WG139706-2	CARBON DISULFIDE	0.37	0.50	UG/L	VPB148-EB-030514

Table A-3 - Field Blanks

Blank ID	Compound	Result	QL	Units	Associated Samples
VPB148-TRIP BLANK-030614	ACETONE	2.3	2.5	UG/L	VPB148-GW-D-030514

Attachment B

Qualifier Codes and Explanations

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

Attachment C

Reason Codes and Explanations

Reason Code	Explanation
be	Equipment blank contamination
bf	Field blank contamination
bl	Laboratory blank contamination
c	Calibration issue
co	Analyte carryover
d	Reporting limit raised due to chromatographic interference
fd	Field duplicate RPDs
h	Holding times
i	Internal standard areas
k	Estimated Maximum Possible Concentration (EMPC)
l	LCS or OPR recoveries
lc	Labeled compound recovery
ld	Laboratory duplicate RPDs
lp	Laboratory control sample/laboratory control sample duplicate RPDs
m	Matrix spike recovery
md	Matrix spike/matrix spike duplicate RPDs
nb	Negative laboratory blank contamination
p	Chemical preservation issue
r	Dual column RPD
q	Quantitation issue
s	Surrogate recovery
su	Ion suppression
t	Temperature preservation issue
x	Percent solids
y	Serial dilution results
z	ICS results
mc	Method compliance nonconformance

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
Resolution Consultants	Eleanor Vivaudou	(845) 425-9180	( )

Address	City	State	Zip Code
100 Red Schoolhouse Rd	Chestnut Ridge	NY	10977

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	NWIRP Bethpage / 60265526	

Bill (if different than above) Address

Sampler (Print / Sign) Michael Zabel / Michael Zabel

Copies To:

LAB USE ONLY WORK ORDER #: SH1444

KATAHDIN PROJECT NUMBER

REMARKS:

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: VOC	TOC	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	VPB14S-GW-030414-838-840	3-4-14 / 1140	GW	3	3										
	VPB14S-GW-030414-858-860	3-4-14 / 1355	GW	2	2										
	VPB14S-GW-030514-878-880	3-5-14 / 1250	GW	2	2										
	VPB14S-GW-030514-898-900	3-5-14 / 1505	GW	3	3										
	VPB14S-EB-030514	3-5-14 / 1410	W	6	3	3									
	VPB14S-GW-P-030514	3-5-14 / N/A	GW	3	3										
	VPB14S-GW-MS/MSD-030514-898-900	3-5-14 / 1505	GW	6	6										
	VPB14S-GW-030614-918-920	3-6-14 / 1050	GW	3	3										
	VPB14S-TRIP BLANK-030614	12-13-13 / 1130	W	3	3										
		/													
		/													
		/													
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		/													
		/													

COMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
Michael Zabel	3-6-14 / 1630				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
		3-7-14 0930			

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

0002012 ORIGINAL

KAS-COC1

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH melac Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1444-1DL
Client ID: 148-030414-838-840
Project: Navy Clean WE15 NWIRP B
SDG: SH1444
Lab File ID: C5887.D

Sample Date: 04-MAR-14
Received Date: 07-MAR-14
Extract Date: 07-MAR-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG139706

Analysis Date: 07-MAR-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 10-MAR-14

Compound	Qualifier		Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	UJ	20	ug/L	20	2	40.	4.8	20.
Chloromethane	U		20	ug/L	20	2	40.	7.2	20.
Vinyl Chloride	U		20	ug/L	20	2	40.	5.0	20.
Bromomethane	U		20	ug/L	20	2	40.	9.8	20.
Chloroethane	U		20	ug/L	20	2	40.	11.	20.
Trichlorofluoromethane	U		20	ug/L	20	2	40.	4.8	20.
1,1-Dichloroethene	U		10	ug/L	20	1	20.	7.0	10.
Carbon Disulfide	U		10	ug/L	20	1	20.	5.0	10.
Freon-113	U		10	ug/L	20	1	20.	6.2	10.
Methylene Chloride	U		50	ug/L	20	5	100	23.	50.
Acetone	U		50	ug/L	20	5	100	44.	50.
trans-1,2-Dichloroethene	U		10	ug/L	20	1	20.	5.0	10.
Methyl tert-butyl Ether	U		10	ug/L	20	1	20.	7.2	10.
1,1-Dichloroethane	U		10	ug/L	20	1	20.	4.2	10.
cis-1,2-Dichloroethene	U		10	ug/L	20	1	20.	4.2	10.
Chloroform	U		10	ug/L	20	1	20.	6.4	10.
1,1,1-Trichloroethane	U		10	ug/L	20	1	20.	4.0	10.
2-Butanone	U		50	ug/L	20	5	100	26.	50.
Cyclohexane	U		10	ug/L	20	1	20.	6.2	10.
Carbon Tetrachloride	U		10	ug/L	20	1	20.	4.4	10.
Benzene	U		10	ug/L	20	1	20.	5.2	10.
1,2-Dichloroethane	U		10	ug/L	20	1	20.	4.0	10.
Trichloroethene	U		10	ug/L	20	1	20.	5.6	10.
1,2-Dichloropropane	U		10	ug/L	20	1	20.	5.0	10.
Bromodichloromethane	U		10	ug/L	20	1	20.	6.6	10.
cis-1,3-Dichloropropene	U		10	ug/L	20	1	20.	3.8	10.
Toluene	U		10	ug/L	20	1	20.	5.4	10.
4-Methyl-2-Pentanone	U		50	ug/L	20	5	100	26.	50.
trans-1,3-Dichloropropene	U		10	ug/L	20	1	20.	4.0	10.
1,1,2-Trichloroethane	U		10	ug/L	20	1	20.	6.6	10.
Tetrachloroethene	U		10	ug/L	20	1	20.	8.0	10.
Dibromochloromethane	U		10	ug/L	20	1	20.	6.0	10.
2-Hexanone	U		50	ug/L	20	5	100	34.	50.
Chlorobenzene	U		10	ug/L	20	1	20.	4.4	10.
Ethylbenzene	U		10	ug/L	20	1	20.	4.2	10.

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

JC 9/15/14

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH melac
Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1444-1DL
Client ID: 148-030414-838-840
Project: Navy Clean WE15 NWIRP B
SDG: SH1444
Lab File ID: C5887.D

Sample Date: 04-MAR-14
Received Date: 07-MAR-14
Extract Date: 07-MAR-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG139706

Analysis Date: 07-MAR-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 10-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U U5	30	ug/L	20	3	60.	5.0	30.
Styrene	U	10	ug/L	20	1	20.	4.6	10.
Bromoform	U	10	ug/L	20	1	20.	4.6	10.
Isopropylbenzene	U	10	ug/L	20	1	20.	4.6	10.
1,1,2,2-Tetrachloroethane	U	10	ug/L	20	1	20.	7.6	10.
1,3-Dichlorobenzene	U	10	ug/L	20	1	20.	5.2	10.
1,4-Dichlorobenzene	U	10	ug/L	20	1	20.	4.8	10.
1,2-Dichlorobenzene	U	10	ug/L	20	1	20.	3.0	10.
1,2,4-Trichlorobenzene	U	10	ug/L	20	1	20.	7.4	10.
Methyl Acetate	U	15	ug/L	20	1	20.	11.	15.
Methylcyclohexane	U	10	ug/L	20	1	20.	6.0	10.
o-Xylene	U	10	ug/L	20	1	20.	5.0	10.
M+P-Xylenes	U	20	ug/L	20	2	40.	12.	20.
1,2-Dichloroethylene (Total)	U	20	ug/L	20	2	40.	4.2	20.
1,2-Dibromoethane	U	10	ug/L	20	1	20.	4.4	10.
1,2-Dibromo-3-Chloropropane	U	15	ug/L	20	1	20.	10.	15.
P-Bromofluorobenzene		87.8	%					
Toluene-d8		89.7	%					
1,2-Dichloroethane-d4		103.	%					
Dibromofluoromethane		101.	%					

3/15/14

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1444-2DL
Client ID: 148-030414-858-860
Project: Navy Clean WE15 NWIRP B
SDG: SH1444
Lab File ID: C5888.D

Sample Date: 04-MAR-14
Received Date: 07-MAR-14
Extract Date: 07-MAR-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG139706

Analysis Date: 07-MAR-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 10-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UJ	10	ug/L	10	2	20.	2.4	10.
Chloromethane	U	10	ug/L	10	2	20.	3.6	10.
Vinyl Chloride	U	10	ug/L	10	2	20.	2.5	10.
Bromomethane	U	10	ug/L	10	2	20.	4.9	10.
Chloroethane	U	10	ug/L	10	2	20.	5.5	10.
Trichlorofluoromethane	U	10	ug/L	10	2	20.	2.4	10.
1,1-Dichloroethene	U	5.0	ug/L	10	1	10.	3.5	5.0
Carbon Disulfide	U	5.0	ug/L	10	1	10.	2.5	5.0
Freon-113	U	5.0	ug/L	10	1	10.	3.1	5.0
Methylene Chloride	U	25	ug/L	10	5	50.	11.	25.
Acetone	U	25	ug/L	10	5	50.	22.	25.
trans-1,2-Dichloroethene	U	5.0	ug/L	10	1	10.	2.5	5.0
Methyl tert-butyl Ether	U	5.0	ug/L	10	1	10.	3.6	5.0
1,1-Dichloroethane	U	5.0	ug/L	10	1	10.	2.1	5.0
cis-1,2-Dichloroethene	U	5.0	ug/L	10	1	10.	2.1	5.0
Chloroform	U	5.0	ug/L	10	1	10.	3.2	5.0
1,1,1-Trichloroethane	U	5.0	ug/L	10	1	10.	2.0	5.0
2-Butanone	U	25	ug/L	10	5	50.	13.	25.
Cyclohexane	U	5.0	ug/L	10	1	10.	3.1	5.0
Carbon Tetrachloride	U	5.0	ug/L	10	1	10.	2.2	5.0
Benzene	U	5.0	ug/L	10	1	10.	2.6	5.0
1,2-Dichloroethane	U	5.0	ug/L	10	1	10.	2.0	5.0
Trichloroethene	U	5.0	ug/L	10	1	10.	2.8	5.0
1,2-Dichloropropane	U	5.0	ug/L	10	1	10.	2.5	5.0
Bromodichloromethane	U	5.0	ug/L	10	1	10.	3.3	5.0
cis-1,3-Dichloropropene	U	5.0	ug/L	10	1	10.	1.9	5.0
Toluene	U	5.0	ug/L	10	1	10.	2.7	5.0
4-Methyl-2-Pentanone	U	25	ug/L	10	5	50.	13.	25.
trans-1,3-Dichloropropene	U	5.0	ug/L	10	1	10.	2.0	5.0
1,1,2-Trichloroethane	U	5.0	ug/L	10	1	10.	3.3	5.0
Tetrachloroethene	U	5.0	ug/L	10	1	10.	4.0	5.0
Dibromochloromethane	U	5.0	ug/L	10	1	10.	3.0	5.0
2-Hexanone	U	25	ug/L	10	5	50.	17.	25.
Chlorobenzene	U	5.0	ug/L	10	1	10.	2.2	5.0
Ethylbenzene	U	5.0	ug/L	10	1	10.	2.1	5.0

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1444-2DL
Client ID: 148-030414-858-860
Project: Navy Clean WE15 NWIRP B
SDG: SH1444
Lab File ID: C5888.D

Sample Date: 04-MAR-14
Received Date: 07-MAR-14
Extract Date: 07-MAR-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG139706

Analysis Date: 07-MAR-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 10-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U U5	15	ug/L	10	3	30.	2.5	15.
Styrene	U	5.0	ug/L	10	1	10.	2.3	5.0
Bromoform	U	5.0	ug/L	10	1	10.	2.3	5.0
Isopropylbenzene	U	5.0	ug/L	10	1	10.	2.3	5.0
1,1,2,2-Tetrachloroethane	U	5.0	ug/L	10	1	10.	3.8	5.0
1,3-Dichlorobenzene	U	5.0	ug/L	10	1	10.	2.6	5.0
1,4-Dichlorobenzene	U	5.0	ug/L	10	1	10.	2.4	5.0
1,2-Dichlorobenzene	U	5.0	ug/L	10	1	10.	1.5	5.0
1,2,4-Trichlorobenzene	U	5.0	ug/L	10	1	10.	3.7	5.0
Methyl Acetate	U	7.5	ug/L	10	1	10.	5.3	7.5
Methylcyclohexane	U	5.0	ug/L	10	1	10.	3.0	5.0
o-Xylene	U	5.0	ug/L	10	1	10.	2.5	5.0
M+P-Xylenes	U	10	ug/L	10	2	20.	5.9	10.
1,2-Dichloroethylene (Total)	U	10	ug/L	10	2	20.	2.1	10.
1,2-Dibromoethane	U	5.0	ug/L	10	1	10.	2.2	5.0
1,2-Dibromo-3-Chloropropane	U	7.5	ug/L	10	1	10.	5.0	7.5
P-Bromofluorobenzene		88.4	%					
Toluene-d8		90.7	%					
1,2-Dichloroethane-d4		104.	%					
Dibromofluoromethane		103.	%					

9/15/14

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Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH melac Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1444-3DL
Client ID: 148-030514-878-880
Project: Navy Clean WE15 NWIRP B
SDG: SH1444
Lab File ID: C5889.D

Sample Date: 05-MAR-14
Received Date: 07-MAR-14
Extract Date: 07-MAR-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG139706

Analysis Date: 07-MAR-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 10-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UJ	10	ug/L	10	2	20.	2.4	10.
Chloromethane	U	10	ug/L	10	2	20.	3.6	10.
Vinyl Chloride	U	10	ug/L	10	2	20.	2.5	10.
Bromomethane	U	10	ug/L	10	2	20.	4.9	10.
Chloroethane	U	10	ug/L	10	2	20.	5.5	10.
Trichlorofluoromethane	U	10	ug/L	10	2	20.	2.4	10.
1,1-Dichloroethene	U	5.0	ug/L	10	1	10.	3.5	5.0
Carbon Disulfide	U	5.0	ug/L	10	1	10.	2.5	5.0
Freon-113	U	5.0	ug/L	10	1	10.	3.1	5.0
Methylene Chloride	U	25	ug/L	10	5	50.	11.	25.
Acetone	U	25	ug/L	10	5	50.	22.	25.
trans-1,2-Dichloroethene	U	5.0	ug/L	10	1	10.	2.5	5.0
Methyl tert-butyl Ether	U	5.0	ug/L	10	1	10.	3.6	5.0
1,1-Dichloroethane	U	5.0	ug/L	10	1	10.	2.1	5.0
cis-1,2-Dichloroethene	U	5.0	ug/L	10	1	10.	2.1	5.0
Chloroform	U	5.0	ug/L	10	1	10.	3.2	5.0
1,1,1-Trichloroethane	U	5.0	ug/L	10	1	10.	2.0	5.0
2-Butanone	U	25	ug/L	10	5	50.	13.	25.
Cyclohexane	U	5.0	ug/L	10	1	10.	3.1	5.0
Carbon Tetrachloride	U	5.0	ug/L	10	1	10.	2.2	5.0
Benzene	U	5.0	ug/L	10	1	10.	2.6	5.0
1,2-Dichloroethane	U	5.0	ug/L	10	1	10.	2.0	5.0
Trichloroethene	U	5.0	ug/L	10	1	10.	2.8	5.0
1,2-Dichloropropane	U	5.0	ug/L	10	1	10.	2.5	5.0
Bromodichloromethane	U	5.0	ug/L	10	1	10.	3.3	5.0
cis-1,3-Dichloropropene	U	5.0	ug/L	10	1	10.	1.9	5.0
Toluene	U	5.0	ug/L	10	1	10.	2.7	5.0
4-Methyl-2-Pentanone	U	25	ug/L	10	5	50.	13.	25.
trans-1,3-Dichloropropene	U	5.0	ug/L	10	1	10.	2.0	5.0
1,1,2-Trichloroethane	U	5.0	ug/L	10	1	10.	3.3	5.0
Tetrachloroethene	U	5.0	ug/L	10	1	10.	4.0	5.0
Dibromochloromethane	U	5.0	ug/L	10	1	10.	3.0	5.0
2-Hexanone	U	25	ug/L	10	5	50.	17.	25.
Chlorobenzene	U	5.0	ug/L	10	1	10.	2.2	5.0
Ethylbenzene	U	5.0	ug/L	10	1	10.	2.1	5.0

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8/15/14

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH
nelac
Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1444-3DL
Client ID: 148-030514-878-880
Project: Navy Clean WE15 NWIRP B
SDG: SH1444
Lab File ID: C5889.D

Sample Date: 05-MAR-14
Received Date: 07-MAR-14
Extract Date: 07-MAR-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG139706

Analysis Date: 07-MAR-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 10-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U UJ	15	ug/L	10	3	30.	2.5	15.
Styrene	U	5.0	ug/L	10	1	10.	2.3	5.0
Bromoform	U	5.0	ug/L	10	1	10.	2.3	5.0
Isopropylbenzene	U	5.0	ug/L	10	1	10.	2.3	5.0
1,1,2,2-Tetrachloroethane	U	5.0	ug/L	10	1	10.	3.8	5.0
1,3-Dichlorobenzene	U	5.0	ug/L	10	1	10.	2.6	5.0
1,4-Dichlorobenzene	U	5.0	ug/L	10	1	10.	2.4	5.0
1,2-Dichlorobenzene	U	5.0	ug/L	10	1	10.	1.5	5.0
1,2,4-Trichlorobenzene	U	5.0	ug/L	10	1	10.	3.7	5.0
Methyl Acetate	U	7.5	ug/L	10	1	10.	5.3	7.5
Methylcyclohexane	U	5.0	ug/L	10	1	10.	3.0	5.0
o-Xylene	U	5.0	ug/L	10	1	10.	2.5	5.0
M+P-Xylenes	U	10	ug/L	10	2	20.	5.9	10.
1,2-Dichloroethylene (Total)	U	10	ug/L	10	2	20.	2.1	10.
1,2-Dibromoethane	U	5.0	ug/L	10	1	10.	2.2	5.0
1,2-Dibromo-3-Chloropropane	U	7.5	ug/L	10	1	10.	5.0	7.5
P-Bromofluorobenzene		88.7	%					
Toluene-d8		91.5	%					
1,2-Dichloroethane-d4		105.	%					
Dibromofluoromethane		102.	%					

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Tel:(207) 874-2400 Fax:(207) 775-4029

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1444-4
Client ID: 148-030514-898-900
Project: Navy Clean WE15 NWIRP B
SDG: SH1444
Lab File ID: C5890.D

Sample Date: 05-MAR-14
Received Date: 07-MAR-14
Extract Date: 07-MAR-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG139706

Analysis Date: 07-MAR-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 10-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	UM	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	UM	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1444-4
Client ID: 148-030514-898-900
Project: Navy Clean WE15 NWIRP B
SDG: SH1444
Lab File ID: C5890.D

Sample Date: 05-MAR-14
Received Date: 07-MAR-14
Extract Date: 07-MAR-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG139706

Analysis Date: 07-MAR-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 10-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	UM	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	UM	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		88.6	%					
Toluene-d8		89.1	%					
1,2-Dichloroethane-d4		104.	%					
Dibromofluoromethane		100.	%					

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1444-5
Client ID: VPB148-EB-030514
Project: Navy Clean WE15 NWIRP B
SDG: SH1444
Lab File ID: C5883.D

Sample Date: 05-MAR-14
Received Date: 07-MAR-14
Extract Date: 07-MAR-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG139706

Analysis Date: 07-MAR-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 10-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	~~J~~ U	~~0.28~~ 1.0	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	J	1.6	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1444-5
Client ID: VPB148-EB-030514
Project: Navy Clean WE15 NWIRP B
SDG: SH1444
Lab File ID: C5883.D

Sample Date: 05-MAR-14
Received Date: 07-MAR-14
Extract Date: 07-MAR-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG139706

Analysis Date: 07-MAR-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 10-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		87.6	%					
Toluene-d8		89.5	%					
1,2-Dichloroethane-d4		101.	%					
Dibromofluoromethane		98.7	%					

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1444-6
Client ID: VPB148-GW-D-030514
Project: Navy Clean WE15 NWIRP B
SDG: SH1444
Lab File ID: C5891.D

Sample Date: 05-MAR-14
Received Date: 07-MAR-14
Extract Date: 07-MAR-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG139706

Analysis Date: 07-MAR-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 10-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	~~J~~ U	~~2~~ 5.0	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1444-6
Client ID: VPB148-GW-D-030514
Project: Navy Clean WE15 NWIRP B
SDG: SH1444
Lab File ID: C5891.D

Sample Date: 05-MAR-14
Received Date: 07-MAR-14
Extract Date: 07-MAR-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG139706

Analysis Date: 07-MAR-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 10-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		89.5	%					
Toluene-d8		91.4	%					
1,2-Dichloroethane-d4		104.	%					
Dibromofluoromethane		102.	%					

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1444-7DL
Client ID: 148-030614-918-920
Project: Navy Clean WE15 NWIRP B
SDG: SH1444
Lab File ID: C5892.D

Sample Date: 06-MAR-14
Received Date: 07-MAR-14
Extract Date: 07-MAR-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG139706

Analysis Date: 07-MAR-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 10-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UJ	40	ug/L	40	2	80.	9.6	40.
Chloromethane	U	40	ug/L	40	2	80.	14.	40.
Vinyl Chloride	U	40	ug/L	40	2	80.	10.	40.
Bromomethane	U	40	ug/L	40	2	80.	20.	40.
Chloroethane	U	40	ug/L	40	2	80.	22.	40.
Trichlorofluoromethane	U	40	ug/L	40	2	80.	9.6	40.
1,1-Dichloroethene	U	20	ug/L	40	1	40.	14.	20.
Carbon Disulfide	U	20	ug/L	40	1	40.	10.	20.
Freon-113	U	20	ug/L	40	1	40.	12.	20.
Methylene Chloride	U	100	ug/L	40	5	200	45.	100
Acetone	U	100	ug/L	40	5	200	88.	100
trans-1,2-Dichloroethene	U	20	ug/L	40	1	40.	10.	20.
Methyl tert-butyl Ether	U	20	ug/L	40	1	40.	14.	20.
1,1-Dichloroethane	U	20	ug/L	40	1	40.	8.4	20.
cis-1,2-Dichloroethene	U	20	ug/L	40	1	40.	8.4	20.
Chloroform	U	20	ug/L	40	1	40.	13.	20.
1,1,1-Trichloroethane	U	20	ug/L	40	1	40.	8.0	20.
2-Butanone	U	100	ug/L	40	5	200	52.	100
Cyclohexane	U	20	ug/L	40	1	40.	12.	20.
Carbon Tetrachloride	U	20	ug/L	40	1	40.	8.8	20.
Benzene	U	20	ug/L	40	1	40.	10.	20.
1,2-Dichloroethane	U	20	ug/L	40	1	40.	8.0	20.
Trichloroethene	U	20	ug/L	40	1	40.	11.	20.
1,2-Dichloropropane	U	20	ug/L	40	1	40.	10.	20.
Bromodichloromethane	U	20	ug/L	40	1	40.	13.	20.
cis-1,3-Dichloropropene	U	20	ug/L	40	1	40.	7.6	20.
Toluene	U	20	ug/L	40	1	40.	11.	20.
4-Methyl-2-Pentanone	U	100	ug/L	40	5	200	53.	100
trans-1,3-Dichloropropene	U	20	ug/L	40	1	40.	8.0	20.
1,1,2-Trichloroethane	U	20	ug/L	40	1	40.	13.	20.
Tetrachloroethene	U	20	ug/L	40	1	40.	16.	20.
Dibromochloromethane	U	20	ug/L	40	1	40.	12.	20.
2-Hexanone	U	100	ug/L	40	5	200	68.	100
Chlorobenzene	U	20	ug/L	40	1	40.	8.8	20.
Ethylbenzene	U	20	ug/L	40	1	40.	8.4	20.

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1444-7DL
Client ID: 148-030614-918-920
Project: Navy Clean WE15 NWIRP B
SDG: SH1444
Lab File ID: C5892.D

Sample Date: 06-MAR-14
Received Date: 07-MAR-14
Extract Date: 07-MAR-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG139706

Analysis Date: 07-MAR-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 10-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U UJ	60	ug/L	40	3	120	10.	60.
Styrene	U	20	ug/L	40	1	40.	9.2	20.
Bromoform	U	20	ug/L	40	1	40.	9.2	20.
Isopropylbenzene	U	20	ug/L	40	1	40.	9.2	20.
1,1,2,2-Tetrachloroethane	U	20	ug/L	40	1	40.	15.	20.
1,3-Dichlorobenzene	U	20	ug/L	40	1	40.	10.	20.
1,4-Dichlorobenzene	U	20	ug/L	40	1	40.	9.6	20.
1,2-Dichlorobenzene	U	20	ug/L	40	1	40.	6.0	20.
1,2,4-Trichlorobenzene	U	20	ug/L	40	1	40.	15.	20.
Methyl Acetate	U	30	ug/L	40	1	40.	21.	30.
Methylcyclohexane	U	20	ug/L	40	1	40.	12.	20.
o-Xylene	U	20	ug/L	40	1	40.	10.	20.
M+P-Xylenes	U	40	ug/L	40	2	80.	24.	40.
1,2-Dichloroethylene (Total)	U	40	ug/L	40	2	80.	8.4	40.
1,2-Dibromoethane	U	20	ug/L	40	1	40.	8.8	20.
1,2-Dibromo-3-Chloropropane	U	30	ug/L	40	1	40.	20.	30.
P-Bromofluorobenzene		87.7	%					
Toluene-d8		88.0	%					
1,2-Dichloroethane-d4		100.	%					
Dibromofluoromethane		98.2	%					

5/15/14

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1444-8
Client ID: VPB148-TB-030614
Project: Navy Clean WE15 NWIRP B
SDG: SH1444
Lab File ID: C5884.D

Sample Date: 06-MAR-14
Received Date: 07-MAR-14
Extract Date: 07-MAR-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG139706

Analysis Date: 07-MAR-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 10-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	J	2.8	ug/L	1	5	5.0	1.1	2.5
Acetone	J	2.3	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1444-8
Client ID: VPB148-TB-030614
Project: Navy Clean WE15 NWIRP B
SDG: SH1444
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Sample Date: 06-MAR-14
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Analysis Date: 07-MAR-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 10-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		87.8	%					
Toluene-d8		90.1	%					
1,2-Dichloroethane-d4		102.	%					
Dibromofluoromethane		99.1	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Rick Purdy
AECOM
701 Edgewater Drive
Wakefield,MA 01880

Lab Sample ID: SH1444-5
Report Date: 20-MAR-14
Client PO: 60266526 ATS-3(WE15)
Project: Navy Clean WE15 NWIR
SDG: SH1444

Sample Description	Matrix	Date Sampled	Date Received
VPB148-EB-030514	AQ	05-MAR-14	07-MAR-14

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Organic Carbon	U0.50 mg/L	1.0	.1023	0.50	SM5310B	WG139868	10-MAR-14 13:07:44	N/A	N/A	

Katahdin Analytical Services 0000144

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Data Validation Report

Project:	Regional Groundwater Investigation - NWIRP Bethpage	
Laboratory:	Katahdin Analytical Services, Inc.	
Service Request:	SH1504	
Analyses/Method:	EPA SW-846 Method 8260B for VOCs (GC/MS)	
Validation Level:	Limited	
AECOM Project Number:	60266526.SA.DV	
Prepared by:	Sheena Blair/AECOM	Completed on: 05/14/2014
Reviewed by:	Lori Herberich/AECOM	File Name: SH1504_8260B

SUMMARY

The samples listed below were collected by Resolution Consultants from the Regional Groundwater Investigation - NWIRP Bethpage site on March 7 and 10, 2014.

Sample ID	Matrix/Sample Type
VPB148-GW-030714-948-950	Ground water
VPB148-TRIP BLANK-031014	Trip Blank

Data validation activities were conducted with reference to *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods SW846, specifically SW-846 Method 8260B, Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry* (USEPA, 1996), *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (June 2008), and Quality Systems Manual (QSM) for Environmental Laboratories, Version 4.2 (DoD, October 2010). In the absence of method-specific information, laboratory quality control (QC) limits, project-specific requirements and/or professional judgment were used as appropriate.

REVIEW ELEMENTS

The data were evaluated based on the following review elements (where applicable to the method):

✗	Data completeness (chain-of-custody (COC))/sample integrity
✓	Holding times and sample preservation
✓	GC/MS performance checks
✗	Initial calibration/continuing calibration verification
✓	Laboratory blanks/trip blanks/equipment blanks
✓	Surrogate spike recoveries
NA	Matrix spike (MS) and/or matrix spike duplicate (MSD) results
✓	Laboratory control sample (LCS) results
NA	Field duplicates
✓	Internal standards
✓	Sample results/reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (✗) indicates that a QC nonconformance resulted in the qualification of data. Any QC nonconformance that resulted in the qualification of data is discussed below. In addition, nonconformances or other issues that were noted during validation, but did not result in qualification of data, may be discussed for informational purposes only.

The data appear valid as reported and may be used for decision making purposes. No data were rejected. Selected data points were estimated due to nonconformances of certain QC criteria (see discussion below). Qualified sample results are presented in Table 1.

RESULTS

Data Completeness (COC))/Sample Integrity

The data package was reviewed and found to meet acceptance criteria for completeness:

- The COCs were reviewed for completeness of information relevant to the samples and requested analyses, and for signatures indicating transfer of sample custody.
- The laboratory sample login sheet(s) were reviewed for issues potentially affecting sample integrity, including the condition of sample containers upon receipt at the laboratory.
- Completeness of analyses was verified by comparing the reported results to the COC requests.

Due to limitations in the reporting system, the laboratory omitted the "VPB-148-" prefix from the sample ID, and truncated IDs for GW and Trip Blank in the report. The submitted EDD file reflects the full sample ID.

Sample VPB148-GW-030714-948-950 was mostly soil and had very little standing water. The laboratory decanted the water from the individual vials into one vial. As a result sample VPB148-GW-030714-948-950 was analyzed at a 40-fold dilution, due to limited sample volume. Positive and non-detect results for this sample were qualified as estimated (J and UJ) respectively, due to possible loss of sample integrity during the decanting procedure.

Holding Times/Sample Preservation

Sample preservation and preparation/analysis holding times were reviewed for conformance with the QC acceptance criteria.

The QC acceptance criteria were met.

GC/MS Performance Checks

The data were reviewed to ensure that the 4-bromofluorobenzene (BFB) tuning was performed at the correct frequency and that the method acceptance criteria were met.

Initial Calibration/Continuing Calibration Verification

Calibration data were reviewed for conformance with the QC acceptance criteria to ensure that:

- the initial calibration (ICAL) percent relative standard deviation (%RSD), correlation coefficient (r)/coefficient of determination (r^2), and/or response factor method acceptance criteria were met;
- the continuing calibration verification standard (CCV) method percent difference or percent drift (%Ds) and RF acceptance criteria were met; and
- the retention time method acceptance criteria were met.

Data qualification to the analytes associated with the specific ICV was as follows:

ICV Recovery Nonconformances:

Nonconformance	Actions	
	Detected Compounds	Nondetected Compounds
%R > 120%	J	No qualification
20% < %R < 80%	J	UJ
%R <20% (see note)	J	R*

Notes: Based on NFG 2008 VOC guidance, professional judgment is used to reject (R) non-detects in all associated samples for any analyte with < 20% recovery. Also, professional judgment is used to estimate (UJ) rather the reject (R) sample results previously negated (U) on the basis of blank contamination.

Qualified sample results are shown in Table 1. Nonconformances are summarized in Attachment A in Table A-1.

Laboratory Blanks/Equipment Blanks/Trip Blanks

Laboratory method blanks, equipment rinsate and trip blanks were evaluated as to whether there were contaminants detected above the detection limit (DL).

Data validation qualifications for individual samples are based on the maximum contaminant concentration detected in all associated blanks.

Method, equipment rinsate and trip blank results were reviewed for conformance with the QC acceptance criteria. Detected results in blanks are not discussed in this data validation report if the associated results were nondetect or if qualification of sample results was not required.

The QC acceptance criteria were met and/or qualification of the sample results was not required.

Surrogate Spike Recoveries

The surrogate percent recoveries (%Rs) were reviewed for conformance with the QC acceptance criteria.

All QC acceptance criteria were met.

MS/MSD Results

MS/MSD analyses were not performed on samples reported in this SDG. There were no validation actions taken on this basis.

LCS Results

The LCS %Rs were reviewed for conformance with the QC acceptance criteria.

All QC acceptance criteria were met.

Field Duplicate Results

There were no field duplicate samples submitted with this data set. No validation actions were taken on this basis.

Internal Standard Results

The internal standard (IS) recoveries were reviewed for conformance with the QC acceptance criteria.

All QC acceptance criteria were met.

Sample Results/Reporting Issues

Compounds that were not detected in the sample are reported as undetected (U) at the Limit of Detection (LOD).

Compounds detected at concentrations less than the LOQ but greater than the detection limit (DL) were qualified by the laboratory as estimated (J). This "J" qualifier was retained during data validation.

Any sample that was analyzed at a dilution due to high concentrations of target or non-target compounds or matrix interferences was checked to ensure that the results and/or sample specific LODs and LOQs were adjusted accordingly by the laboratory.

QUALIFICATION ACTIONS

Sample results qualified as a result of validation actions are summarized in Table 1. All actions are described above.

ATTACHMENTS

Attachment A: Nonconformance Summary Tables

Attachment B: Qualifier Codes and Explanations

Attachment C: Reason Codes and Explanations

Table 1 - Data Validation Summary of Qualified Data

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB148-GW-030714-948-950	WG	1,1,1-TRICHLOROETHANE		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	1,1,2,2-TETRACHLOROETHANE		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	1,1,2-TRICHLOROETHANE		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	1,1-DICHLOROETHANE		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	1,1-DICHLOROETHENE		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	1,2,4-TRICHLOROBENZENE		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	1,2-DIBROMO-3-CHLOROPROPANE		30.	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	1,2-DIBROMOETHANE		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	1,2-DICHLOROBENZENE		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	1,2-DICHLOROETHANE		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	1,2-DICHLOROETHENE, TOTAL		40	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	1,2-DICHLOROPROPANE		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	1,3-DICHLOROBENZENE		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	1,4-DICHLOROBENZENE		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	2-BUTANONE		100	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	2-HEXANONE		100	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	4-METHYL-2-PENTANONE		100	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	ACETONE		100	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	BENZENE		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	BROMODICHLOROMETHANE		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	BROMOFORM		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	BROMOMETHANE		40	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	CARBON DISULFIDE		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	CARBON TETRACHLORIDE		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	CHLOROBENZENE		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	CHLOROETHANE		40	ug/L	UJ	c,mc
VPB148-GW-030714-948-950	WG	CHLOROFORM		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	CHLOROMETHANE		40	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	CIS-1,2-DICHLOROETHENE		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	CIS-1,3-DICHLOROPROPENE		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	CYCLOHEXANE		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	DIBROMOCHLOROMETHANE		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	DICHLORODIFLUOROMETHANE		40	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	ETHYLBENZENE		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	ISOPROPYLBENZENE		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	M- AND P-XYLENE		40	ug/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB148-GW-030714-948-950	WG	METHYL ACETATE		30.	ug/L	UJ	c,mc
VPB148-GW-030714-948-950	WG	METHYL CYCLOHEXANE		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	METHYL TERT-BUTYL ETHER		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	METHYLENE CHLORIDE		100	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	O-XYLENE		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	STYRENE		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	TETRACHLOROETHENE		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	TOLUENE		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	TRANS-1,2-DICHLOROETHENE		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	TRANS-1,3-DICHLOROPROPENE		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	TRICHLOROETHENE		20	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	TRICHLOROFLUOROMETHANE		40	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	VINYL CHLORIDE		40	ug/L	UJ	mc
VPB148-GW-030714-948-950	WG	XYLENES, TOTAL		60.	ug/L	UJ	mc
VPB148-TRIP BLANK-031014	WQ	CHLOROETHANE		1.0	ug/L	UJ	c
VPB148-TRIP BLANK-031014	WQ	METHYL ACETATE		0.75	ug/L	UJ	c

Attachment A

Nonconformance Summary Tables

Table A-1 - Continuing Calibration Verification

ICV	Compound	% R	Limit
WG139494-7	CHLOROETHANE	76.65	80-120%
	ACETONE	127.99	80-120%
	2-HEXANONE	131.64	80-120%
	METHYL ACETATE	78.15	80-120%
Associated samples: All samples in the SDG			

Attachment B

Qualifier Codes and Explanations

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

Attachment C

Reason Codes and Explanations

Reason Code	Explanation
be	Equipment blank contamination
bf	Field blank contamination
bl	Laboratory blank contamination
c	Calibration issue
co	Analyte carryover
d	Reporting limit raised due to chromatographic interference
fd	Field duplicate RPDs
h	Holding times
i	Internal standard areas
k	Estimated Maximum Possible Concentration (EMPC)
l	LCS or OPR recoveries
lc	Labeled compound recovery
ld	Laboratory duplicate RPDs
lp	Laboratory control sample/laboratory control sample duplicate RPDs
m	Matrix spike recovery
md	Matrix spike/matrix spike duplicate RPDs
nb	Negative laboratory blank contamination
p	Chemical preservation issue
r	Dual column RPD
q	Quantitation issue
s	Surrogate recovery
su	Ion suppression
t	Temperature preservation issue
x	Percent solids
y	Serial dilution results
z	ICS results
mc	Method compliance nonconformance

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Scarborough, ME 04074
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Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
Resolution Consultants	Eleanor Vivaudou	(845) 425-4180	( )

Address	City	State	Zip Code
100 Reel Schoolhouse Rd	Chestnut Ridge	NY	10977

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	NWERP Bethpage / 60265526	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:
Michael Zobel / Michael Zobel	

LAB USE ONLY WORK ORDER #: 5H1504

KATAHDIN PROJECT NUMBER _____

REMARKS: _____

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO: _____

TEMP°C _____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: VOCs	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	VPB148-GW-030714-948-950	3-7-14 1250 (MW) / 1230	GW	3	3									
	VPB148-TRIP BLANK-031014	12-13YB / 1130	W	3	3									
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COMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
Michael Zobel	3-10-14 / 1630	3-11-14 0935			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

00000009

ORIGINAL

Katahdin
ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1504-1DL
Client ID: 148-030714-948-950
Project: Navy Clean WE15 NWIRP B
SDG: SH1504
Lab File ID: C5958.D

Sample Date: 07-MAR-14
Received Date: 11-MAR-14
Extract Date: 11-MAR-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139857

Analysis Date: 11-MAR-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 12-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UJ	40	ug/L	40	2	80.	9.6	40.
Chloromethane	U	40	ug/L	40	2	80.	14.	40.
Vinyl Chloride	U	40	ug/L	40	2	80.	10.	40.
Bromomethane	U	40	ug/L	40	2	80.	20.	40.
Chloroethane	U	40	ug/L	40	2	80.	22.	40.
Trichlorofluoromethane	U	40	ug/L	40	2	80.	9.6	40.
1,1-Dichloroethene	U	20	ug/L	40	1	40.	14.	20.
Carbon Disulfide	U	20	ug/L	40	1	40.	10.	20.
Freon-113	U	20	ug/L	40	1	40.	12.	20.
Methylene Chloride	U	100	ug/L	40	5	200	45.	100
Acetone	U	100	ug/L	40	5	200	88.	100
trans-1,2-Dichloroethene	U	20	ug/L	40	1	40.	10.	20.
Methyl tert-butyl Ether	U	20	ug/L	40	1	40.	14.	20.
1,1-Dichloroethane	U	20	ug/L	40	1	40.	8.4	20.
cis-1,2-Dichloroethene	U	20	ug/L	40	1	40.	8.4	20.
Chloroform	U	20	ug/L	40	1	40.	13.	20.
1,1,1-Trichloroethane	U	20	ug/L	40	1	40.	8.0	20.
2-Butanone	U	100	ug/L	40	5	200	52.	100
Cyclohexane	U	20	ug/L	40	1	40.	12.	20.
Carbon Tetrachloride	U	20	ug/L	40	1	40.	8.8	20.
Benzene	U	20	ug/L	40	1	40.	10.	20.
1,2-Dichloroethane	U	20	ug/L	40	1	40.	8.0	20.
Trichloroethene	U	20	ug/L	40	1	40.	11.	20.
1,2-Dichloropropane	U	20	ug/L	40	1	40.	10.	20.
Bromodichloromethane	U	20	ug/L	40	1	40.	13.	20.
cis-1,3-Dichloropropene	U	20	ug/L	40	1	40.	7.6	20.
Toluene	U	20	ug/L	40	1	40.	11.	20.
4-Methyl-2-Pentanone	U	100	ug/L	40	5	200	53.	100
trans-1,3-Dichloropropene	U	20	ug/L	40	1	40.	8.0	20.
1,1,2-Trichloroethane	U	20	ug/L	40	1	40.	13.	20.
Tetrachloroethene	U	20	ug/L	40	1	40.	16.	20.
Dibromochloromethane	U	20	ug/L	40	1	40.	12.	20.
2-Hexanone	U	100	ug/L	40	5	200	68.	100
Chlorobenzene	U	20	ug/L	40	1	40.	8.8	20.
Ethylbenzene	U	20	ug/L	40	1	40.	8.4	20.

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2/25/14

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1504-1DL
Client ID: 148-030714-948-950
Project: Navy Clean WE15 NWIRP B
SDG: SH1504
Lab File ID: C5958.D

Sample Date: 07-MAR-14
Received Date: 11-MAR-14
Extract Date: 11-MAR-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139857

Analysis Date: 11-MAR-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 12-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U UJ	60	ug/L	40	3	120	10.	60.
Styrene	U	20	ug/L	40	1	40.	9.2	20.
Bromoform	U	20	ug/L	40	1	40.	9.2	20.
Isopropylbenzene	U	20	ug/L	40	1	40.	9.2	20.
1,1,2,2-Tetrachloroethane	U	20	ug/L	40	1	40.	15.	20.
1,3-Dichlorobenzene	U	20	ug/L	40	1	40.	10.	20.
1,4-Dichlorobenzene	U	20	ug/L	40	1	40.	9.6	20.
1,2-Dichlorobenzene	U	20	ug/L	40	1	40.	6.0	20.
1,2,4-Trichlorobenzene	U	20	ug/L	40	1	40.	15.	20.
Methyl Acetate	U	30	ug/L	40	1	40.	21.	30.
Methylcyclohexane	U	20	ug/L	40	1	40.	12.	20.
o-Xylene	U	20	ug/L	40	1	40.	10.	20.
M+P-Xylenes	U	40	ug/L	40	2	80.	24.	40.
1,2-Dichloroethylene (Total)	U	40	ug/L	40	2	80.	8.4	40.
1,2-Dibromoethane	U	20	ug/L	40	1	40.	8.8	20.
1,2-Dibromo-3-Chloropropane	U	30	ug/L	40	1	40.	20.	30.
P-Bromofluorobenzene		90.4	%					
Toluene-d8		91.4	%					
1,2-Dichloroethane-d4		103.	%					
Dibromofluoromethane		98.3	%					

8/25/13

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1504-2
Client ID: VPB148-TB-031014
Project: Navy Clean WE15 NWIRP B
SDG: SH1504
Lab File ID: C5957.D

Sample Date: 10-MAR-14
Received Date: 11-MAR-14
Extract Date: 11-MAR-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139857

Analysis Date: 11-MAR-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 12-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	J	2.6	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: AECOM Environment
Lab ID: SH1504-2
Client ID: VPB148-TB-031014
Project: Navy Clean WE15 NWIRP B
SDG: SH1504
Lab File ID: C5957.D

Sample Date: 10-MAR-14
Received Date: 11-MAR-14
Extract Date: 11-MAR-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG139857

Analysis Date: 11-MAR-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 12-MAR-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		87.9	%					
Toluene-d8		90.7	%					
1,2-Dichloroethane-d4		99.6	%					
Dibromofluoromethane		94.9	%					

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Section 5

VPB 148 Analytical Data Table

Vertical Profile Boring 148, Analytical Data Table
Naval Weapons Industrial Reserve Plant
Bethpage - Bethpage, New York

Resolution Consultants

Location		VPB148	VPB148	VPB148	VPB148
Sample Date	NYSDEC Groundwater Guidance or Standard Value (Note 1)	2/6/2014	2/6/2014	2/7/2014	2/10/2014
Sample ID		VPB148-GW-020614-63-65	VPB148-GW-020614-98-100	VPB148-GW-020714-153-155	VPB148-GW-021014-198-200
Sample Interval		63 - 65 ft	98 - 100 ft	153 - 155 ft	198 - 200 ft
Sample type code		N	N	N	N
VOC 8260B (ug/L)					
1,1,1-TRICHLOROETHANE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	**0.73 J**
1,1,2,2-TETRACHLOROETHANE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
1,1,2-TRICHLOROETHANE	1	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
1,1-DICHLOROETHANE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	**4.0**
1,1-DICHLOROETHENE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	**1.5**
1,2,4-TRICHLOROBENZENE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	*< 0.75 U*	***< 0.75 UJ***	*< 0.75 U*	*< 0.75 U*
1,2-DIBROMOETHANE	NL	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
1,2-DICHLOROBENZENE	3	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
1,2-DICHLOROETHANE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
1,2-DICHLOROETHENE, TOTAL	5	< 1.0 U	< 1.0 UJ	< 1.0 U	< 1.0 U
1,2-DICHLOROPROPANE	1	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
1,3-DICHLOROBENZENE	3	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
1,4-DICHLOROBENZENE	3	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
2-BUTANONE	50	< 2.5 U	< 2.5 UJ	< 2.5 U	< 2.5 U
2-HEXANONE	50	< 2.5 U	< 2.5 UJ	< 2.5 U	< 2.5 U
4-METHYL-2-PENTANONE	NL	< 2.5 U	< 2.5 UJ	< 2.5 U	< 2.5 U
ACETONE	50	**11 J**	**12 J**	**4.2 J**	**5.9**
BENZENE	1	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
BROMODICHLOROMETHANE	50	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
BROMOFORM	50	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
BROMOMETHANE	5	< 1.0 U	< 1.0 UJ	< 1.0 U	< 1.0 U
CARBON DISULFIDE	60	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
CARBON TETRACHLORIDE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
CHLOROBENZENE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
CHLOROETHANE	5	< 1.0 U	< 1.0 UJ	< 1.0 U	< 1.0 U
CHLOROFORM	7	**0.44 J**	< 0.50 UJ	**0.50 J**	**0.68 J**
CHLOROMETHANE	5	< 1.0 U	< 1.0 UJ	< 1.0 U	< 1.0 U
CIS-1,2-DICHLOROETHENE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
CIS-1,3-DICHLOROPROPENE	0.4	*< 0.50 U*	***< 0.50 UJ***	*< 0.50 U*	*< 0.50 U*
CYCLOHEXANE	NL	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
DIBROMOCHLOROMETHANE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
DICHLORODIFLUOROMETHANE	5	< 1.0 U	< 1.0 UJ	**1.2 J**	< 1.0 U
ETHYLBENZENE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
ISOPROPYLBENZENE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
M- AND P-XYLENE	NL	< 1.0 U	< 1.0 UJ	< 1.0 U	< 1.0 U
METHYL ACETATE	NL	< 0.75 U	< 0.75 UJ	< 0.75 U	< 0.75 U
METHYL CYCLOHEXANE	NL	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
METHYL TERT-BUTYL ETHER	10	< 0.50 U	< 0.50 UJ	**0.47 J**	**0.40 J**
METHYLENE CHLORIDE	5	< 2.5 U	< 2.5 UJ	< 2.5 U	< 2.5 U
O-XYLENE	NL	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
STYRENE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
TETRACHLOROETHENE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
TOLUENE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
TRANS-1,2-DICHLOROETHENE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
TRANS-1,3-DICHLOROPROPENE	0.4	*< 0.50 U*	***< 0.50 UJ***	*< 0.50 U*	*< 0.50 U*
TRICHLOROETHENE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	**1.7**
TRICHLOROFLUOROMETHANE	5	< 1.0 U	< 1.0 UJ	< 1.0 U	< 1.0 U
VINYL CHLORIDE	2	< 1.0 U	< 1.0 UJ	< 1.0 U	< 1.0 U
XYLENES, TOTAL	5	< 1.5 U	< 1.5 UJ	< 1.5 U	< 1.5 U

Location		VPB148	VPB148	VPB148	VPB148
Sample Date	NYSDEC Groundwater Guidance or Standard Value (Note 1)	2/10/2014	2/11/2014	2/11/2014	2/12/2014
Sample ID		VPB148-GW-021014-218-220	VPB148-GW-021114-238-240	VPB148-GW-021114-258-260	VPB148-GW-021214-278-280
Sample Interval		218 - 220 ft	238 - 240 ft	258 - 260 ft	278 - 280 ft
Sample type code		N	N	N	N
VOC 8260B (ug/L)					
1,1,1-TRICHLOROETHANE	5	**1.2**	**1.1**	< 0.50 U	< 0.50 U
1,1,2,2-TETRACHLOROETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,1,2-TRICHLOROETHANE	1	**0.68 J**	< 0.50 U	< 0.50 U	< 0.50 U
1,1-DICHLOROETHANE	5	**8.1**	**6.7**	< 0.50 U	< 0.50 U
1,1-DICHLOROETHENE	5	**2.3**	**2.6**	< 0.50 U	< 0.50 U
1,2,4-TRICHLOROBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	*< 0.75 U*	*< 0.75 U*	*< 0.75 U*	*< 0.75 U*
1,2-DIBROMOETHANE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,2-DICHLOROBENZENE	3	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,2-DICHLOROETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,2-DICHLOROETHENE, TOTAL	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-DICHLOROPROPANE	1	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,3-DICHLOROBENZENE	3	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,4-DICHLOROBENZENE	3	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
2-BUTANONE	50	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
2-HEXANONE	50	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
4-METHYL-2-PENTANONE	NL	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
ACETONE	50	**4.5 J**	**4.4 J**	< 2.5 U	**4.9 J**
BENZENE	1	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
BROMODICHLOROMETHANE	50	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
BROMOFORM	50	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
BROMOMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
CARBON DISULFIDE	60	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CARBON TETRACHLORIDE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CHLOROBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CHLOROETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
CHLOROFORM	7	**1.8**	**0.70 J**	< 0.50 U	< 0.50 U
CHLOROMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
CIS-1,2-DICHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CIS-1,3-DICHLOROPROPENE	0.4	*< 0.50 U*	*< 0.50 U*	*< 0.50 U*	*< 0.50 U*
CYCLOHEXANE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
DIBROMOCHLOROMETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
DICHLORODIFLUOROMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
ETHYLBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
ISOPROPYLBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
M- AND P-XYLENE	NL	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
METHYL ACETATE	NL	< 0.75 U	< 0.75 U	< 0.75 U	< 0.75 U
METHYL CYCLOHEXANE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
METHYL TERT-BUTYL ETHER	10	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
METHYLENE CHLORIDE	5	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
O-XYLENE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
STYRENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TETRACHLOROETHENE	5	< 0.50 U	**0.99 J**	< 0.50 U	< 0.50 U
TOLUENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TRANS-1,2-DICHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TRANS-1,3-DICHLOROPROPENE	0.4	*< 0.50 U*	*< 0.50 U*	*< 0.50 U*	*< 0.50 U*
TRICHLOROETHENE	5	**1.8**	**2.4**	< 0.50 U	< 0.50 U
TRICHLOROFLUOROMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
VINYL CHLORIDE	2	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
XYLENES, TOTAL	5	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U

Location		VPB148	VPB148	VPB148	VPB148
Sample Date	NYSDEC Groundwater Guidance or Standard Value (Note 1)	2/12/2014	2/14/2014	2/14/2014	2/17/2014
Sample ID		VPB148-GW-021214-303-305	VPB148-GW-021414-318-320	VPB148-GW-021414-338-340	VPB148-GW-021714-358-360
Sample Interval		303 - 305 ft	318 - 320 ft	338 - 340 ft	358 - 360 ft
Sample type code		N	N	N	N
VOC 8260B (ug/L)					
1,1,1-TRICHLOROETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,1,2,2-TETRACHLOROETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,1,2-TRICHLOROETHANE	1	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,1-DICHLOROETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,1-DICHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,2,4-TRICHLOROBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	*< 0.75 U*	*< 0.75 U*	*< 0.75 U*	*< 0.75 U*
1,2-DIBROMOETHANE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,2-DICHLOROBENZENE	3	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,2-DICHLOROETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,2-DICHLOROETHENE, TOTAL	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-DICHLOROPROPANE	1	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,3-DICHLOROBENZENE	3	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,4-DICHLOROBENZENE	3	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
2-BUTANONE	50	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
2-HEXANONE	50	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
4-METHYL-2-PENTANONE	NL	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
ACETONE	50	**5.6**	**4.4 J**	**4.7 J**	**3.7 J**
BENZENE	1	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
BROMODICHLOROMETHANE	50	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
BROMOFORM	50	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
BROMOMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
CARBON DISULFIDE	60	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CARBON TETRACHLORIDE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CHLOROBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CHLOROETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
CHLOROFORM	7	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CHLOROMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
CIS-1,2-DICHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CIS-1,3-DICHLOROPROPENE	0.4	*< 0.50 U*	*< 0.50 U*	*< 0.50 U*	*< 0.50 U*
CYCLOHEXANE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
DIBROMOCHLOROMETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
DICHLORODIFLUOROMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
ETHYLBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
ISOPROPYLBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
M- AND P-XYLENE	NL	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
METHYL ACETATE	NL	< 0.75 U	< 0.75 U	< 0.75 U	< 0.75 U
METHYL CYCLOHEXANE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
METHYL TERT-BUTYL ETHER	10	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
METHYLENE CHLORIDE	5	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
O-XYLENE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
STYRENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TETRACHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TOLUENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TRANS-1,2-DICHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TRANS-1,3-DICHLOROPROPENE	0.4	*< 0.50 U*	*< 0.50 U*	*< 0.50 U*	*< 0.50 U*
TRICHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TRICHLOROFLUOROMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
VINYL CHLORIDE	2	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
XYLENES, TOTAL	5	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U

Location		VPB148	VPB148	VPB148	VPB148
Sample Date	NYSDEC Groundwater Guidance or Standard Value (Note 1)	2/17/2014	2/18/2014	2/18/2014	2/18/2014
Sample ID		VPB148-GW-021714-378-380	VPB148-GW-021814-403-405	VPB148-GW-021814-418-420	VPB148-GW-021814-438-440
Sample Interval		378 - 380 ft	403 - 405 ft	418 - 420 ft	438 - 440 ft
Sample type code		N	N	N	N
VOC 8260B (ug/L)					
1,1,1-TRICHLOROETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,1,2,2-TETRACHLOROETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,1,2-TRICHLOROETHANE	1	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,1-DICHLOROETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,1-DICHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,2,4-TRICHLOROBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	*< 0.75 U*	*< 0.75 U*	*< 0.75 U*	*< 0.75 U*
1,2-DIBROMOETHANE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,2-DICHLOROBENZENE	3	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,2-DICHLOROETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,2-DICHLOROETHENE, TOTAL	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-DICHLOROPROPANE	1	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,3-DICHLOROBENZENE	3	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,4-DICHLOROBENZENE	3	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
2-BUTANONE	50	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
2-HEXANONE	50	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
4-METHYL-2-PENTANONE	NL	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
ACETONE	50	**3.0 J**	**2.5 J**	< 2.5 U	< 2.5 U
BENZENE	1	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
BROMODICHLOROMETHANE	50	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
BROMOFORM	50	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
BROMOMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
CARBON DISULFIDE	60	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CARBON TETRACHLORIDE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CHLOROBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CHLOROETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
CHLOROFORM	7	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CHLOROMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
CIS-1,2-DICHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CIS-1,3-DICHLOROPROPENE	0.4	*< 0.50 U*	*< 0.50 U*	*< 0.50 U*	*< 0.50 U*
CYCLOHEXANE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
DIBROMOCHLOROMETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
DICHLORODIFLUOROMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
ETHYLBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
ISOPROPYLBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
M- AND P-XYLENE	NL	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
METHYL ACETATE	NL	< 0.75 U	< 0.75 U	< 0.75 U	< 0.75 U
METHYL CYCLOHEXANE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
METHYL TERT-BUTYL ETHER	10	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
METHYLENE CHLORIDE	5	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
O-XYLENE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
STYRENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TETRACHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TOLUENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TRANS-1,2-DICHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TRANS-1,3-DICHLOROPROPENE	0.4	*< 0.50 U*	*< 0.50 U*	*< 0.50 U*	*< 0.50 U*
TRICHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TRICHLOROFLUOROMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
VINYL CHLORIDE	2	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
XYLENES, TOTAL	5	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U

Location		VPB148	VPB148	VPB148	VPB148
Sample Date	NYSDEC Groundwater Guidance or Standard Value (Note 1)	2/18/2014	2/19/2014	2/19/2014	2/20/2014
Sample ID		VPB148-GW-D-021814	VPB148-GW-021914-458-460	VPB148-GW-021914-483-485	VPB148-GW-022014-498-500
Sample Interval		438 - 440 ft	458 - 460 ft	483 - 485 ft	498 - 500 ft
Sample type code		FD	N	N	N
VOC 8260B (ug/L)					
1,1,1-TRICHLOROETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,1,2,2-TETRACHLOROETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,1,2-TRICHLOROETHANE	1	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,1-DICHLOROETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,1-DICHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,2,4-TRICHLOROBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	*< 0.75 U*	*< 0.75 U*	*< 0.75 U*	*< 0.75 U*
1,2-DIBROMOETHANE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,2-DICHLOROBENZENE	3	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,2-DICHLOROETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,2-DICHLOROETHENE, TOTAL	5	< 1.0 U	< 1.0 U	< 1.0 U	**0.31 J**
1,2-DICHLOROPROPANE	1	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,3-DICHLOROBENZENE	3	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,4-DICHLOROBENZENE	3	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
2-BUTANONE	50	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
2-HEXANONE	50	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
4-METHYL-2-PENTANONE	NL	< 2.5 U	< 2.5 U	< 2.5 UJ	< 2.5 U
ACETONE	50	**3.5 J**	< 2.5 U	**5.2**	**4.9 J**
BENZENE	1	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
BROMODICHLOROMETHANE	50	< 0.50 U	< 0.50 U	< 0.50 UL	< 0.50 U
BROMOFORM	50	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
BROMOMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
CARBON DISULFIDE	60	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CARBON TETRACHLORIDE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CHLOROBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CHLOROETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
CHLOROFORM	7	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CHLOROMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
CIS-1,2-DICHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	**0.31 J**
CIS-1,3-DICHLOROPROPENE	0.4	*< 0.50 U*	*< 0.50 U*	*< 0.50 U*	*< 0.50 U*
CYCLOHEXANE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
DIBROMOCHLOROMETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
DICHLORODIFLUOROMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	**0.44 J**
ETHYLBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
ISOPROPYLBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
M- AND P-XYLENE	NL	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
METHYL ACETATE	NL	< 0.75 U	< 0.75 U	< 0.75 U	< 0.75 U
METHYL CYCLOHEXANE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
METHYL TERT-BUTYL ETHER	10	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
METHYLENE CHLORIDE	5	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
O-XYLENE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
STYRENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TETRACHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TOLUENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TRANS-1,2-DICHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TRANS-1,3-DICHLOROPROPENE	0.4	*< 0.50 U*	*< 0.50 U*	*< 0.50 U*	*< 0.50 U*
TRICHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	**1.8**
TRICHLOROFLUOROMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
VINYL CHLORIDE	2	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
XYLENES, TOTAL	5	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U

Location		VPB148	VPB148	VPB148	VPB148
Sample Date	NYSDEC Groundwater Guidance or Standard Value (Note 1)	2/20/2014	2/20/2014	2/21/2014	2/21/2014
Sample ID		VPB148-GW-022014-518-520	VPB148-GW-022014-538-540	VPB148-GW-022114-558-560	VPB148-GW-022114-578-580
Sample Interval		518 - 520 ft	538 - 540 ft	558 - 560 ft	578 - 580 ft
Sample type code		N	N	N	N
VOC 8260B (ug/L)					
1,1,1-TRICHLOROETHANE	5	**0.40 J**	< 0.50 U	< 0.50 UJ	< 0.50 UJ
1,1,2,2-TETRACHLOROETHANE	5	< 0.50 U	< 0.50 U	< 0.50 UJ	< 0.50 UJ
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	**6.2**	**15**	< 0.50 UJ	< 0.50 UJ
1,1,2-TRICHLOROETHANE	1	**0.69 J**	**1.8**	**0.85 J**	**0.73 J**
1,1-DICHLOROETHANE	5	**0.35 J**	**0.96 J**	**0.68 J**	< 0.50 UJ
1,1-DICHLOROETHENE	5	**2.0**	**3.7**	**0.46 J**	< 0.50 UJ
1,2,4-TRICHLOROBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 UJ	< 0.50 UJ
1,2-DIBROMO-3-CHLOROPROPANE	0.04	*< 0.75 U*	*< 0.75 U*	***< 0.75 UJ***	***< 0.75 UJ***
1,2-DIBROMOETHANE	NL	< 0.50 U	< 0.50 U	< 0.50 UJ	< 0.50 UJ
1,2-DICHLOROBENZENE	3	< 0.50 U	< 0.50 U	< 0.50 UJ	< 0.50 UJ
1,2-DICHLOROETHANE	5	< 0.50 U	< 0.50 U	< 0.50 UJ	< 0.50 UJ
1,2-DICHLOROETHENE, TOTAL	5	**4.7**	**5.0**	**2.0 J**	**0.64 J**
1,2-DICHLOROPROPANE	1	< 0.50 U	< 0.50 U	< 0.50 UJ	< 0.50 UJ
1,3-DICHLOROBENZENE	3	< 0.50 U	< 0.50 U	< 0.50 UJ	< 0.50 UJ
1,4-DICHLOROBENZENE	3	< 0.50 U	< 0.50 U	< 0.50 UJ	< 0.50 UJ
2-BUTANONE	50	< 2.5 U	< 2.5 U	**1.5 J**	< 2.5 UJ
2-HEXANONE	50	< 2.5 U	< 2.5 U	< 2.5 UJ	< 2.5 UJ
4-METHYL-2-PENTANONE	NL	< 2.5 UJ	< 2.5 U	< 2.5 UJ	< 2.5 UJ
ACETONE	50	**2.8 J**	**8.0**	**7.1 J**	**6.1 J**
BENZENE	1	< 0.50 U	< 0.50 U	< 0.50 UJ	< 0.50 UJ
BROMODICHLOROMETHANE	50	< 0.50 UL	< 0.50 U	< 0.50 UJ	< 0.50 UJ
BROMOFORM	50	< 0.50 U	< 0.50 U	< 0.50 UJ	< 0.50 UJ
BROMOMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 UJ	< 1.0 UJ
CARBON DISULFIDE	60	< 0.50 U	< 0.50 U	< 0.50 UJ	< 0.50 UJ
CARBON TETRACHLORIDE	5	**1.2**	**0.86 J**	< 0.50 UJ	< 0.50 UJ
CHLOROBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 UJ	< 0.50 UJ
CHLOROETHANE	5	< 1.0 U	< 1.0 U	< 1.0 UJ	< 1.0 UJ
CHLOROFORM	7	**4.3**	**6.1**	**1.4 J**	**0.80 J**
CHLOROMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 UJ	< 1.0 UJ
CIS-1,2-DICHLOROETHENE	5	**4.7**	**5.0**	**2.0 J**	**0.64 J**
CIS-1,3-DICHLOROPROPENE	0.4	*< 0.50 U*	*< 0.50 U*	***< 0.50 UJ***	***< 0.50 UJ***
CYCLOHEXANE	NL	< 0.50 U	< 0.50 U	< 0.50 UJ	< 0.50 UJ
DIBROMOCHLOROMETHANE	5	< 0.50 U	< 0.50 U	< 0.50 UJ	< 0.50 UJ
DICHLORODIFLUOROMETHANE	5	**1.7 J**	**1.5 J**	< 1.0 UJ	< 1.0 UJ
ETHYLBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 UJ	< 0.50 UJ
ISOPROPYLBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 UJ	< 0.50 UJ
M- AND P-XYLENE	NL	< 1.0 U	< 1.0 U	< 1.0 UJ	< 1.0 UJ
METHYL ACETATE	NL	< 0.75 U	< 0.75 U	< 0.75 UJ	< 0.75 UJ
METHYL CYCLOHEXANE	NL	< 0.50 U	< 0.50 U	< 0.50 UJ	< 0.50 UJ
METHYL TERT-BUTYL ETHER	10	< 0.50 U	< 0.50 U	< 0.50 UJ	< 0.50 UJ
METHYLENE CHLORIDE	5	< 2.5 U	< 2.5 U	< 2.5 UJ	< 2.5 UJ
O-XYLENE	NL	< 0.50 U	< 0.50 U	< 0.50 UJ	< 0.50 UJ
STYRENE	5	< 0.50 U	< 0.50 U	< 0.50 UJ	< 0.50 UJ
TETRACHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 UJ	< 0.50 UJ
TOLUENE	5	< 0.50 U	< 0.50 U	< 0.50 UJ	< 0.50 UJ
TRANS-1,2-DICHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 UJ	< 0.50 UJ
TRANS-1,3-DICHLOROPROPENE	0.4	*< 0.50 U*	*< 0.50 U*	***< 0.50 UJ***	***< 0.50 UJ***
TRICHLOROETHENE	5	**68**	**520**	**110 J**	**57 J**
TRICHLOROFLUOROMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 UJ	< 1.0 UJ
VINYL CHLORIDE	2	< 1.0 U	**0.34 J**	< 1.0 UJ	< 1.0 UJ
XYLENES, TOTAL	5	< 1.5 U	< 1.5 U	< 1.5 UJ	< 1.5 UJ

Location		VPB148	VPB148	VPB148	VPB148
Sample Date	NYSDEC Groundwater Guidance or Standard Value (Note 1)	2/24/2014	2/24/2014	2/26/2014	2/26/2014
Sample ID		VPB148-GW-022414-598-600	VPB148-GW-022414-618-620	VPB148-GW-022614-658-660	VPB148-GW-022614-678-680
Sample Interval		598 - 600 ft	618 - 620 ft	658 - 660 ft	678 - 680 ft
Sample type code		N	N	N	N
VOC 8260B (ug/L)					
1,1,1-TRICHLOROETHANE	5	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 UJ
1,1,2,2-TETRACHLOROETHANE	5	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 UJ
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	< 0.50 UJ	**5.0**	**3.5 J**	< 0.50 UJ
1,1,2-TRICHLOROETHANE	1	**0.38 J**	**0.46 J**	< 0.50 UJ	< 0.50 UJ
1,1-DICHLOROETHANE	5	< 0.50 UJ	**0.59 J**	< 0.50 UJ	< 0.50 UJ
1,1-DICHLOROETHENE	5	< 0.50 UJ	**0.92 J**	< 0.50 UJ	< 0.50 UJ
1,2,4-TRICHLOROBENZENE	5	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 UJ
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***< 0.75 UJ***	*< 0.75 U*	***< 0.75 UJ***	***< 0.75 UJ***
1,2-DIBROMOETHANE	NL	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 UJ
1,2-DICHLOROBENZENE	3	< 0.50 UJ	< 0.50 U	< 0.50 U	< 0.50 UJ
1,2-DICHLOROETHANE	5	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 UJ
1,2-DICHLOROETHENE, TOTAL	5	**0.46 J**	**0.88 J**	< 1.0 UJ	< 1.0 UJ
1,2-DICHLOROPROPANE	1	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 UJ
1,3-DICHLOROBENZENE	3	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 UJ
1,4-DICHLOROBENZENE	3	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 UJ
2-BUTANONE	50	< 2.5 UJ	< 2.5 U	< 2.5 UJ	< 2.5 UJ
2-HEXANONE	50	< 2.5 UJ	< 2.5 U	< 2.5 UJ	< 2.5 UJ
4-METHYL-2-PENTANONE	NL	< 2.5 UJ	< 2.5 U	< 2.5 UJ	< 2.5 UJ
ACETONE	50	**4.7 J**	**3.9 J**	**3.7 J**	**5.9 J**
BENZENE	1	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 UJ
BROMODICHLOROMETHANE	50	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 UJ
BROMOFORM	50	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 UJ
BROMOMETHANE	5	< 1.0 UJ	< 1.0 U	< 1.0 UJ	< 1.0 UJ
CARBON DISULFIDE	60	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 UJ
CARBON TETRACHLORIDE	5	< 0.50 UJ	**0.55 J**	< 0.50 UJ	< 0.50 UJ
CHLOROBENZENE	5	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 UJ
CHLOROETHANE	5	< 1.0 UJ	< 1.0 U	< 1.0 UJ	< 1.0 UJ
CHLOROFORM	7	**0.48 J**	**0.56 J**	**0.33 J**	< 0.50 UJ
CHLOROMETHANE	5	< 1.0 UJ	< 1.0 U	< 1.0 UJ	< 1.0 UJ
CIS-1,2-DICHLOROETHENE	5	**0.46 J**	**0.88 J**	< 0.50 UJ	< 0.50 UJ
CIS-1,3-DICHLOROPROPENE	0.4	***< 0.50 UJ***	*< 0.50 U*	***< 0.50 UJ***	***< 0.50 UJ***
CYCLOHEXANE	NL	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 UJ
DIBROMOCHLOROMETHANE	5	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 UJ
DICHLORODIFLUOROMETHANE	5	< 1.0 UJ	< 1.0 U	< 1.0 UJ	< 1.0 UJ
ETHYLBENZENE	5	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 UJ
ISOPROPYLBENZENE	5	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 UJ
M- AND P-XYLENE	NL	< 1.0 UJ	< 1.0 U	< 1.0 UJ	< 1.0 UJ
METHYL ACETATE	NL	< 0.75 UJ	< 0.75 U	< 0.75 UJ	< 0.75 UJ
METHYL CYCLOHEXANE	NL	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 UJ
METHYL TERT-BUTYL ETHER	10	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 UJ
METHYLENE CHLORIDE	5	< 2.5 UJ	< 2.5 U	< 2.5 UJ	< 2.5 UJ
O-XYLENE	NL	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 UJ
STYRENE	5	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 UJ
TETRACHLOROETHENE	5	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 UJ
TOLUENE	5	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 UJ
TRANS-1,2-DICHLOROETHENE	5	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 UJ
TRANS-1,3-DICHLOROPROPENE	0.4	***< 0.50 UJ***	*< 0.50 U*	***< 0.50 UJ***	***< 0.50 UJ***
TRICHLOROETHENE	5	**42 J**	**100**	**4.1 J**	**0.30 J**
TRICHLOROFLUOROMETHANE	5	< 1.0 UJ	< 1.0 U	< 1.0 UJ	< 1.0 UJ
VINYL CHLORIDE	2	< 1.0 UJ	< 1.0 U	< 1.0 UJ	< 1.0 UJ
XYLENES, TOTAL	5	< 1.5 UJ	< 1.5 U	< 1.5 UJ	< 1.5 UJ

Location		VPB148	VPB148	VPB148	VPB148
Sample Date	NYSDEC Groundwater Guidance or Standard Value (Note 1)	2/27/2014	2/27/2014	2/27/2014	2/28/2014
Sample ID		VPB148-GW-022714-703-705	VPB148-GW-022714-718-720	VPB148-GW-022714-738-740	VPB148-GW-022814-758-760
Sample Interval		703 - 705 ft	718 - 720 ft	738 - 740 ft	758 - 760 ft
Sample type code		N	N	N	N
VOC 8260B (ug/L)					
1,1,1-TRICHLOROETHANE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 2.5 UJ
1,1,2,2-TETRACHLOROETHANE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 2.5 UJ
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	**6.1 J**	**3.4 J**	< 0.50 UJ	< 2.5 UJ
1,1,2-TRICHLOROETHANE	1	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	***< 2.5 UJ***
1,1-DICHLOROETHANE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	***< 2.5 UJ***
1,1-DICHLOROETHENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	***< 2.5 UJ***
1,2,4-TRICHLOROBENZENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	***< 2.5 UJ***
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***< 0.75 UJ***	***< 0.75 UJ***	***< 0.75 UJ***	***< 3.8 UJ***
1,2-DIBROMOETHANE	NL	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 2.5 UJ
1,2-DICHLOROBENZENE	3	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 2.5 UJ
1,2-DICHLOROETHANE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 2.5 UJ
1,2-DICHLOROETHENE, TOTAL	5	**0.33 J**	< 1.0 UJ	< 1.0 UJ	< 5.0 UJ
1,2-DICHLOROPROPANE	1	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	***< 2.5 UJ***
1,3-DICHLOROBENZENE	3	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 2.5 UJ
1,4-DICHLOROBENZENE	3	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 2.5 UJ
2-BUTANONE	50	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ	< 12 UJ
2-HEXANONE	50	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ	< 12 UJ
4-METHYL-2-PENTANONE	NL	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ	< 12 UJ
ACETONE	50	**2.8 J**	**4.0 J**	**3.4 J**	**34 J**
BENZENE	1	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	***< 2.5 UJ***
BROMODICHLOROMETHANE	50	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 2.5 UJ
BROMOFORM	50	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 2.5 UJ
BROMOMETHANE	5	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ	< 5.0 UJ
CARBON DISULFIDE	60	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 2.5 UJ
CARBON TETRACHLORIDE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 2.5 UJ
CHLOROBENZENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 2.5 UJ
CHLOROETHANE	5	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ	< 5.0 UJ
CHLOROFORM	7	**0.32 J**	< 0.50 UJ	< 0.50 UJ	< 2.5 UJ
CHLOROMETHANE	5	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ	< 5.0 UJ
CIS-1,2-DICHLOROETHENE	5	**0.33 J**	< 0.50 UJ	< 0.50 UJ	< 2.5 UJ
CIS-1,3-DICHLOROPROPENE	0.4	***< 0.50 UJ***	***< 0.50 UJ***	***< 0.50 UJ***	***< 2.5 UJ***
CYCLOHEXANE	NL	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 2.5 UJ
DIBROMOCHLOROMETHANE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 2.5 UJ
DICHLORODIFLUOROMETHANE	5	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ	< 5.0 UJ
ETHYLBENZENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 2.5 UJ
ISOPROPYLBENZENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 2.5 UJ
M- AND P-XYLENE	NL	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ	< 5.0 UJ
METHYL ACETATE	NL	< 0.75 UJ	< 0.75 UJ	< 0.75 UJ	< 3.8 UJ
METHYL CYCLOHEXANE	NL	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 2.5 UJ
METHYL TERT-BUTYL ETHER	10	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 2.5 UJ
METHYLENE CHLORIDE	5	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ	***< 12 UJ***
O-XYLENE	NL	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 2.5 UJ
STYRENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 2.5 UJ
TETRACHLOROETHENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 2.5 UJ
TOLUENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 2.5 UJ
TRANS-1,2-DICHLOROETHENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 2.5 UJ
TRANS-1,3-DICHLOROPROPENE	0.4	*< 0.50 UJ*	*< 0.50 UJ*	*< 0.50 UJ*	***< 2.5 UJ***
TRICHLOROETHENE	5	**28 J**	**14 J**	< 0.50 UJ	< 2.5 UJ
TRICHLOROFLUOROMETHANE	5	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ	< 5.0 UJ
VINYL CHLORIDE	2	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ	***< 5.0 UJ***
XYLENES, TOTAL	5	< 1.5 UJ	< 1.5 UJ	< 1.5 UJ	***< 7.5 UJ***

Location		VPB148	VPB148	VPB148	VPB148
Sample Date	NYSDEC Groundwater Guidance or Standard Value (Note 1)	3/3/2014	3/3/2014	3/4/2014	3/4/2014
Sample ID		VPB148-GW-030314-798-800	VPB148-GW-030314-818-820	VPB148-GW-030414-838-840	VPB148-GW-030414-858-860
Sample Interval		798 - 800 ft	818 - 820 ft	838 - 840 ft	858 - 860 ft
Sample type code		N	N	N	N
VOC 8260B (ug/L)					
1,1,1-TRICHLOROETHANE	5	< 0.50 U	< 0.50 U	***< 10 UJ***	< 5.0 UJ
1,1,2,2-TETRACHLOROETHANE	5	< 0.50 U	< 0.50 U	***< 10 UJ***	< 5.0 UJ
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	< 0.50 U	< 0.50 U	***< 10 UJ***	< 5.0 UJ
1,1,2-TRICHLOROETHANE	1	< 0.50 U	< 0.50 U	***< 10 UJ***	***< 5.0 UJ***
1,1-DICHLOROETHANE	5	< 0.50 U	< 0.50 U	***< 10 UJ***	< 5.0 UJ
1,1-DICHLOROETHENE	5	< 0.50 U	< 0.50 U	***< 10 UJ***	< 5.0 UJ
1,2,4-TRICHLOROBENZENE	5	< 0.50 U	< 0.50 U	***< 10 UJ***	< 5.0 UJ
1,2-DIBROMO-3-CHLOROPROPANE	0.04	*< 0.75 U*	*< 0.75 U*	***< 15 UJ***	***< 7.5 UJ***
1,2-DIBROMOETHANE	NL	< 0.50 U	< 0.50 U	***< 10 UJ***	< 5.0 UJ
1,2-DICHLOROBENZENE	3	< 0.50 U	< 0.50 U	***< 10 UJ***	***< 5.0 UJ***
1,2-DICHLOROETHANE	5	< 0.50 U	< 0.50 U	***< 10 UJ***	< 5.0 UJ
1,2-DICHLOROETHENE, TOTAL	5	< 1.0 U	< 1.0 U	***< 20 UJ***	***< 10 UJ***
1,2-DICHLOROPROPANE	1	< 0.50 U	< 0.50 U	***< 10 UJ***	***< 5.0 UJ***
1,3-DICHLOROBENZENE	3	< 0.50 U	< 0.50 U	***< 10 UJ***	***< 5.0 UJ***
1,4-DICHLOROBENZENE	3	< 0.50 U	< 0.50 U	***< 10 UJ***	***< 5.0 UJ***
2-BUTANONE	50	< 2.5 U	< 2.5 U	< 50 UJ	< 25 UJ
2-HEXANONE	50	< 2.5 U	< 2.5 U	< 50 UJ	< 25 UJ
4-METHYL-2-PENTANONE	NL	< 2.5 U	< 2.5 U	< 50 UJ	< 25 UJ
ACETONE	50	**4.6 J**	**4.0 J**	< 50 UJ	< 25 UJ
BENZENE	1	< 0.50 U	< 0.50 U	***< 10 UJ***	***< 5.0 UJ***
BROMODICHLOROMETHANE	50	< 0.50 U	< 0.50 U	< 10 UJ	< 5.0 UJ
BROMOFORM	50	< 0.50 U	< 0.50 U	< 10 UJ	< 5.0 UJ
BROMOMETHANE	5	< 1.0 U	< 1.0 U	***< 20 UJ***	***< 10 UJ***
CARBON DISULFIDE	60	< 0.50 U	< 1.0 U	< 10 UJ	< 5.0 UJ
CARBON TETRACHLORIDE	5	< 0.50 U	< 0.50 U	***< 10 UJ***	< 5.0 UJ
CHLOROBENZENE	5	< 0.50 U	< 0.50 U	***< 10 UJ***	< 5.0 UJ
CHLOROETHANE	5	< 1.0 UJ	< 1.0 UJ	***< 20 UJ***	***< 10 UJ***
CHLOROFORM	7	< 0.50 U	< 0.50 U	***< 10 UJ***	< 5.0 UJ
CHLOROMETHANE	5	< 1.0 U	< 1.0 U	***< 20 UJ***	***< 10 UJ***
CIS-1,2-DICHLOROETHENE	5	< 0.50 U	< 0.50 U	***< 10 UJ***	< 5.0 UJ
CIS-1,3-DICHLOROPROPENE	0.4	*< 0.50 U*	*< 0.50 U*	***< 10 UJ***	***< 5.0 UJ***
CYCLOHEXANE	NL	< 0.50 U	< 0.50 U	< 10 UJ	< 5.0 UJ
DIBROMOCHLOROMETHANE	5	< 0.50 U	< 0.50 U	***< 10 UJ***	< 5.0 UJ
DICHLORODIFLUOROMETHANE	5	< 1.0 U	< 1.0 U	***< 20 UJ***	***< 10 UJ***
ETHYLBENZENE	5	< 0.50 U	< 0.50 U	***< 10 UJ***	< 5.0 UJ
ISOPROPYLBENZENE	5	< 0.50 U	< 0.50 U	***< 10 UJ***	< 5.0 UJ
M- AND P-XYLENE	NL	< 1.0 U	< 1.0 U	< 20 UJ	< 10 UJ
METHYL ACETATE	NL	< 0.75 U	< 0.75 U	< 15 UJ	< 7.5 UJ
METHYL CYCLOHEXANE	NL	< 0.50 U	< 0.50 U	< 10 UJ	< 5.0 UJ
METHYL TERT-BUTYL ETHER	10	< 0.50 U	< 0.50 U	< 10 UJ	< 5.0 UJ
METHYLENE CHLORIDE	5	< 2.5 U	< 2.5 U	***< 50 UJ***	***< 25 UJ***
O-XYLENE	NL	< 0.50 U	< 0.50 U	< 10 UJ	< 5.0 UJ
STYRENE	5	< 0.50 U	< 0.50 U	***< 10 UJ***	< 5.0 UJ
TETRACHLOROETHENE	5	< 0.50 U	< 0.50 U	***< 10 UJ***	< 5.0 UJ
TOLUENE	5	< 0.50 U	< 0.50 U	***< 10 UJ***	< 5.0 UJ
TRANS-1,2-DICHLOROETHENE	5	< 0.50 U	< 0.50 U	***< 10 UJ***	< 5.0 UJ
TRANS-1,3-DICHLOROPROPENE	0.4	*< 0.50 U*	*< 0.50 U*	***< 10 UJ***	***< 5.0 UJ***
TRICHLOROETHENE	5	< 0.50 U	< 0.50 U	***< 10 UJ***	< 5.0 UJ
TRICHLOROFLUOROMETHANE	5	< 1.0 U	< 1.0 U	***< 20 UJ***	***< 10 UJ***
VINYL CHLORIDE	2	< 1.0 U	< 1.0 U	***< 20 UJ***	***< 10 UJ***
XYLENES, TOTAL	5	< 1.5 U	< 1.5 U	***< 30 UJ***	***< 15 UJ***

Location		VPB148	VPB148	VPB148	VPB148
Sample Date	NYSDEC Groundwater Guidance or Standard Value (Note 1)	3/5/2014	3/5/2014	3/5/2014	3/6/2014
Sample ID		VPB148-GW-030514-878-880	VPB148-GW-030514-898-900	VPB148-GW-D-030514	VPB148-GW-030614-918-920
Sample Interval		878 - 880 ft	898 - 900 ft	898 - 900 ft	918 - 920 ft
Sample type code		N	N	FD	N
VOC 8260B (ug/L)					
1,1,1-TRICHLOROETHANE	5	< 5.0 UJ	< 0.50 U	< 0.50 U	***< 20 UJ***
1,1,2,2-TETRACHLOROETHANE	5	< 5.0 UJ	< 0.50 U	< 0.50 U	***< 20 UJ***
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	< 5.0 UJ	< 0.50 U	< 0.50 U	***< 20 UJ***
1,1,2-TRICHLOROETHANE	1	***< 5.0 UJ***	< 0.50 U	< 0.50 U	***< 20 UJ***
1,1-DICHLOROETHANE	5	< 5.0 UJ	< 0.50 U	< 0.50 U	***< 20 UJ***
1,1-DICHLOROETHENE	5	< 5.0 UJ	< 0.50 U	< 0.50 U	***< 20 UJ***
1,2,4-TRICHLOROBENZENE	5	< 5.0 UJ	< 0.50 U	< 0.50 U	***< 20 UJ***
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***< 7.5 UJ***	*< 0.75 U*	*< 0.75 U*	***< 30 UJ***
1,2-DIBROMOETHANE	NL	< 5.0 UJ	< 0.50 U	< 0.50 U	< 20 UJ
1,2-DICHLOROBENZENE	3	***< 5.0 UJ***	< 0.50 U	< 0.50 U	***< 20 UJ***
1,2-DICHLOROETHANE	5	< 5.0 UJ	< 0.50 U	< 0.50 U	***< 20 UJ***
1,2-DICHLOROETHENE, TOTAL	5	***< 10 UJ***	< 1.0 U	< 1.0 U	***< 40 UJ***
1,2-DICHLOROPROPANE	1	***< 5.0 UJ***	< 0.50 U	< 0.50 U	***< 20 UJ***
1,3-DICHLOROBENZENE	3	***< 5.0 UJ***	< 0.50 U	< 0.50 U	***< 20 UJ***
1,4-DICHLOROBENZENE	3	***< 5.0 UJ***	< 0.50 U	< 0.50 U	***< 20 UJ***
2-BUTANONE	50	< 25 UJ	< 2.5 U	< 2.5 U	***< 100 UJ***
2-HEXANONE	50	< 25 UJ	< 2.5 U	< 2.5 U	***< 100 UJ***
4-METHYL-2-PENTANONE	NL	< 25 UJ	< 2.5 U	< 2.5 U	< 100 UJ
ACETONE	50	< 25 UJ	< 2.5 U	< 5.0 U	***< 100 UJ***
BENZENE	1	***< 5.0 UJ***	< 0.50 U	< 0.50 U	***< 20 UJ***
BROMODICHLOROMETHANE	50	< 5.0 UJ	< 0.50 U	< 0.50 U	< 20 UJ
BROMOFORM	50	< 5.0 UJ	< 0.50 U	< 0.50 U	< 20 UJ
BROMOMETHANE	5	***< 10 UJ***	< 1.0 U	< 1.0 U	***< 40 UJ***
CARBON DISULFIDE	60	< 5.0 UJ	< 0.50 U	< 0.50 U	< 20 UJ
CARBON TETRACHLORIDE	5	< 5.0 UJ	< 0.50 U	< 0.50 U	***< 20 UJ***
CHLOROBENZENE	5	< 5.0 UJ	< 0.50 U	< 0.50 U	***< 20 UJ***
CHLOROETHANE	5	***< 10 UJ***	< 1.0 U	< 1.0 U	***< 40 UJ***
CHLOROFORM	7	< 5.0 UJ	< 0.50 U	< 0.50 U	***< 20 UJ***
CHLOROMETHANE	5	***< 10 UJ***	< 1.0 U	< 1.0 U	***< 40 UJ***
CIS-1,2-DICHLOROETHENE	5	< 5.0 UJ	< 0.50 U	< 0.50 U	***< 20 UJ***
CIS-1,3-DICHLOROPROPENE	0.4	**< 5.0 UJ**	*< 0.50 U*	*< 0.50 U*	***< 20 UJ***
CYCLOHEXANE	NL	< 5.0 UJ	< 0.50 U	< 0.50 U	< 20 UJ
DIBROMOCHLOROMETHANE	5	< 5.0 UJ	< 0.50 U	< 0.50 U	***< 20 UJ***
DICHLORODIFLUOROMETHANE	5	***< 10 UJ***	< 1.0 U	< 1.0 U	***< 40 UJ***
ETHYLBENZENE	5	< 5.0 UJ	< 0.50 U	< 0.50 U	***< 20 UJ***
ISOPROPYLBENZENE	5	< 5.0 UJ	< 0.50 U	< 0.50 U	***< 20 UJ***
M- AND P-XYLENE	NL	< 10 UJ	< 1.0 U	< 1.0 U	< 40 UJ
METHYL ACETATE	NL	< 7.5 UJ	< 0.75 U	< 0.75 U	< 30 UJ
METHYL CYCLOHEXANE	NL	< 5.0 UJ	< 0.50 U	< 0.50 U	< 20 UJ
METHYL TERT-BUTYL ETHER	10	< 5.0 UJ	< 0.50 U	< 0.50 U	***< 20 UJ***
METHYLENE CHLORIDE	5	***< 25 UJ***	< 2.5 U	< 2.5 U	***< 100 UJ***
O-XYLENE	NL	< 5.0 UJ	< 0.50 U	< 0.50 U	< 20 UJ
STYRENE	5	< 5.0 UJ	< 0.50 U	< 0.50 U	***< 20 UJ***
TETRACHLOROETHENE	5	< 5.0 UJ	< 0.50 U	< 0.50 U	***< 20 UJ***
TOLUENE	5	< 5.0 UJ	< 0.50 U	< 0.50 U	***< 20 UJ***
TRANS-1,2-DICHLOROETHENE	5	< 5.0 UJ	< 0.50 U	< 0.50 U	***< 20 UJ***
TRANS-1,3-DICHLOROPROPENE	0.4	***< 5.0 UJ***	*< 0.50 U*	*< 0.50 U*	***< 20 UJ***
TRICHLOROETHENE	5	< 5.0 UJ	< 0.50 U	< 0.50 U	***< 20 UJ***
TRICHLOROFLUOROMETHANE	5	***< 10 UJ***	< 1.0 U	< 1.0 U	***< 40 UJ***
VINYL CHLORIDE	2	***< 10 UJ***	< 1.0 U	< 1.0 U	***< 40 UJ***
XYLENES, TOTAL	5	***< 15 UJ***	< 1.5 U	< 1.5 U	***< 60 UJ***

Location		VPB148
Sample Date	NYSDEC Groundwater Guidance or Standard Value (Note 1)	3/7/2014
Sample ID		VPB148-GW-030714-948-950
Sample Interval		948 - 950 ft
Sample type code		N
VOC 8260B (ug/L)		
1,1,1-TRICHLOROETHANE	5	***< 20 UJ***
1,1,2,2-TETRACHLOROETHANE	5	***< 20 UJ***
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	***< 20 UJ***
1,1,2-TRICHLOROETHANE	1	***< 20 UJ***
1,1-DICHLOROETHANE	5	***< 20 UJ***
1,1-DICHLOROETHENE	5	***< 20 UJ***
1,2,4-TRICHLOROBENZENE	5	***< 20 UJ***
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***30 UJ***
1,2-DIBROMOETHANE	NL	< 20 UJ
1,2-DICHLOROBENZENE	3	***< 20 UJ***
1,2-DICHLOROETHANE	5	***< 20 UJ***
1,2-DICHLOROETHENE, TOTAL	5	***< 40 UJ***
1,2-DICHLOROPROPANE	1	***< 20 UJ***
1,3-DICHLOROBENZENE	3	***< 20 UJ***
1,4-DICHLOROBENZENE	3	***< 20 UJ***
2-BUTANONE	50	***< 100 UJ***
2-HEXANONE	50	***< 100 UJ***
4-METHYL-2-PENTANONE	NL	< 100 UJ
ACETONE	50	***< 100 UJ***
BENZENE	1	***< 20 UJ***
BROMODICHLOROMETHANE	50	***< 20 UJ***
BROMOFORM	50	***< 20 UJ***
BROMOMETHANE	5	***< 40 UJ***
CARBON DISULFIDE	60	***< 20 UJ***
CARBON TETRACHLORIDE	5	***< 20 UJ***
CHLOROBENZENE	5	***< 20 UJ***
CHLOROETHANE	5	***< 40 UJ***
CHLOROFORM	7	***< 20 UJ***
CHLOROMETHANE	5	***< 40 UJ***
CIS-1,2-DICHLOROETHENE	5	***< 20 UJ***
CIS-1,3-DICHLOROPROPENE	0.4	***< 20 UJ***
CYCLOHEXANE	NL	< 20 UJ
DIBROMOCHLOROMETHANE	5	***< 20 UJ***
DICHLORODIFLUOROMETHANE	5	***< 40 UJ***
ETHYLBENZENE	5	***< 20 UJ***
ISOPROPYLBENZENE	5	***< 20 UJ***
M- AND P-XYLENE	NL	< 40 UJ
METHYL ACETATE	NL	30 UJ
METHYL CYCLOHEXANE	NL	< 20 UJ
METHYL TERT-BUTYL ETHER	10	***< 20 UJ***
METHYLENE CHLORIDE	5	***< 100 UJ***
O-XYLENE	NL	< 20 UJ
STYRENE	5	***< 20 UJ***
TETRACHLOROETHENE	5	***< 20 UJ***
TOLUENE	5	***< 20 UJ***
TRANS-1,2-DICHLOROETHENE	5	***< 20 UJ***
TRANS-1,3-DICHLOROPROPENE	0.4	***< 20 UJ***
TRICHLOROETHENE	5	***< 20 UJ***
TRICHLOROFLUOROMETHANE	5	***< 40 UJ***
VINYL CHLORIDE	2	***< 40 UJ***
XYLENES, TOTAL	5	***60 UJ***

Notes:

1 New York State Department of Environmental Conservation Division of Water Technical and Operation Guidance series (6 NYCRR 700-706, Part 703.5 summarized in TOGS 1.1.1)
Ambient water quality standards and groundwater effluent limitations, class GA; NL = Not Listed

Bold = Detected; ***Bold and Italics*** =Not detect exceeds NYS Groundwater Standards or guidance value

Yellow highlighted values exceed Groundwater Standards or guidance value

Sample type codes: N - normal environmental sample, FD - field duplicate

U = Nondetected result. The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

UJ = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

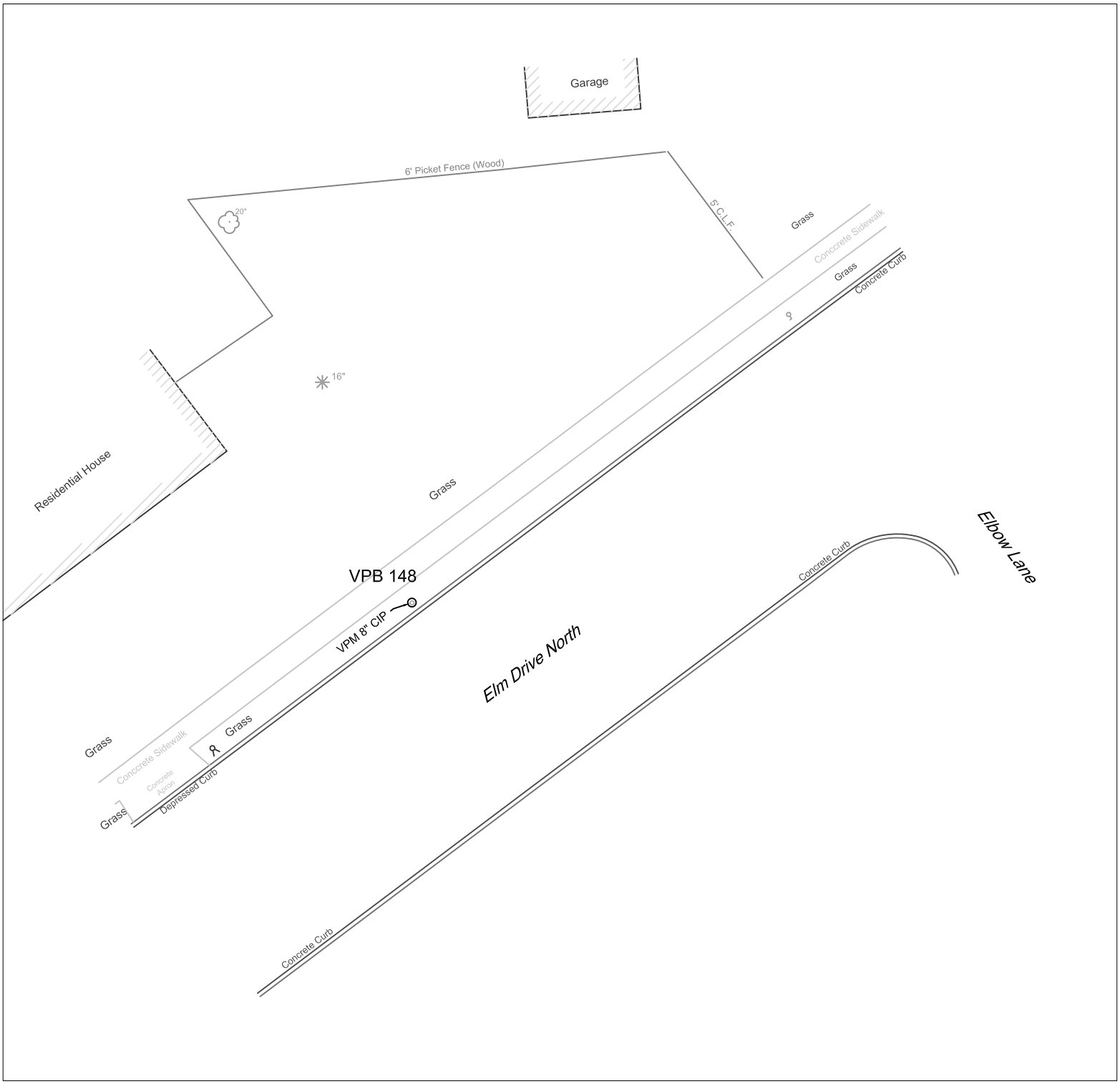
Section 6

Survey

SURVEY RESULTS, BETHPAGE, LONG ISLAND, NY
Project No: 3276
Client: AECOM

Horizontal Datum: NAD 83(2011) NYLI3104
Vertical Datum: NAVD 88
Units: U.S. Survey Feet
Survey date: 5/9/2014

Description	Point	Northing	Easting	Latitude	Longitude	Ground	Rim	PVC
VPB 142	6003	207661.53	1125468.82	40-44-07.92	73-29-25.53	94.97	N/A	N/A
RE108D1	6001	207665.03	1125499.54	40-44-07.95	73-29-25.14	95.68	95.70	95.38
RE108D2	6002	207663.29	1125484.08	40-44-07.93	73-29-25.34	95.72	95.75	95.43
VPB 144	4001	210194.30	1124109.96	40-44-33.02	73-29-42.99	100.37	N/A	N/A
VPB 148	5001	201701.50	1124253.93	40-43-09.09	73-29-41.76	73.73	N/A	N/A



Vertical Profile Boring 148 Survey Location

Adapted from mapping provided by GeodCorp, 5/9/2014