2014 OU2 GROUNDWATER INVESTIGATION
VPB 149
BETHPAGE, NY

Prepared for:

Department of the Navy
Naval Facilities Engineering Command, Mid-Atlantic
9742 Maryland Ave.
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CTO WE15

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List of Acronyms and Abbreviations

ANY	New York American Water
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
GPS	Global Positioning System
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
OU	Operable Unit
PCBs	Polychlorinated Biphenyls
PCE	Tetrachloroethene
PID	Photoionization Detector
POTW	Publicly Owned Treatment Works
PPE	Personal Protective Equipment
SFWD	South Farmingdale Water District
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 (NAVFAC), 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 149 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 149. The purpose of the VPB 149 investigation was to determine 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 149 are shown in Figure 2. VPB 149 was completed to 950 feet (ft) below ground surface (bgs). The data from VPB 149 provides information on the extent and magnitude of Volatile Organic Compounds (VOCs) north and west of South Farmingdale Water District wells 6-2 and 6-1 (SFWD-8664 and SFWD-8665, respectively) and north and east of New York American Water 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 offsite. 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, interbedded 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 groundwater flow in the area is to the south-southeast.

2.0 FIELD PROGRAM

Field investigation activities at VPB 149 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 149) was completed during this field effort between September 12 and October 24, 2014. The total depth of VPB 149 was 950 ft. The location is shown in Figure 2 and details are summarized in Table 1.

2.1.1 Drilling

VPB 149 was installed by drilling a 9-inch diameter hole using 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 eight 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 938 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 149 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 8260C. 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 C. T. Male, Inc., of Latham, NY, under the direct supervision of Resolution Consultants. The location was tied into the existing base map developed for this investigation. The survey elevation is referenced to the North American Vertical Datum (NAVD) 1988 and has a vertical accuracy of 0.01 foot. Vertical control is based on observations of COR Stations Queens and Central Islip. The horizontal location is referenced to the North American Datum (NAD) 1983 (2011) N.Y. Long Island Zone 3104 and has an accuracy of 0.1 foot. Local horizontal and vertical control is based on Global Positioning System (GPS) observations using the NYS Net Real Time Network.

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.

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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
VPB 149	9/12/2014	10/24/2014	69.38	950	53	8	945	40/46	608 - 610 ft bgs	10/17/2014	pending

* includes field duplicates

Figures

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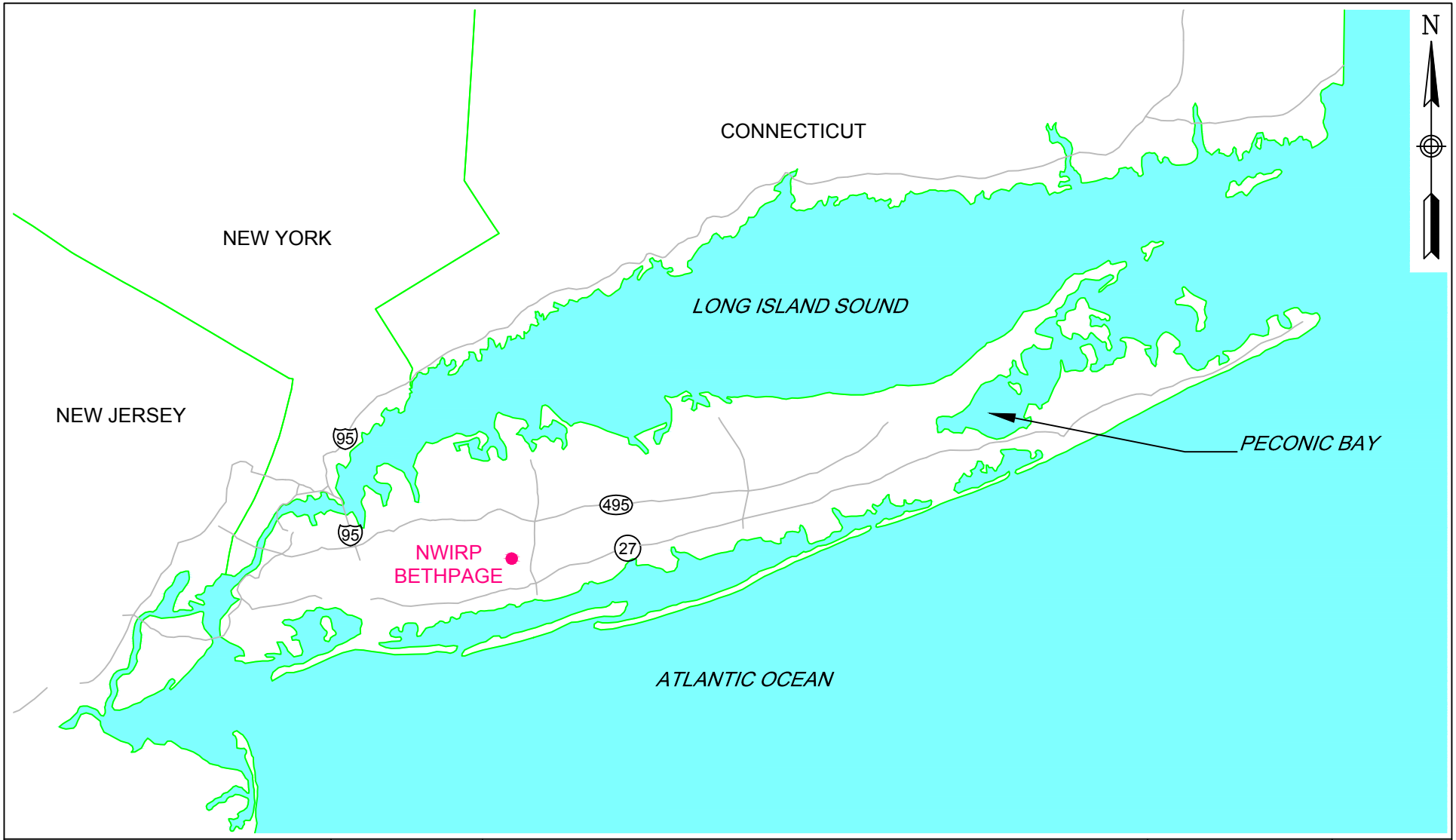

0 15 30

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\MISC\Location Maps\F2 VPB 149 2015 02 05 R1.mxd

Former Naval Weapons Industrial Reserve Plant

Former Northrop Grumman Site

Hempstead Tpke

Hicksville Rd

State Hwy 135

Southern State Parkway

Inset: VPB 149 Location

VPB 149

0 750 1,500 3,000 Feet

0 375 750 1,500 Feet

Legend

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

VPB 149 LOCATION MAP
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT
BETHPAGE, NEW YORK

CONTRACT NUMBER	CTO NUMBER
N62470-11-D8013	WE15
APPROVED BY: PS	DATE: 2/5/2015
APPROVED BY: —	DATE: —
FIGURE NO.: 2	REV: 0

Appendix A

VPB 147

Section 1

VPB 149 Boring and Gamma Logs

Resolution Consultants

Boring Log

BORING #: VPB149

Client: Department of the Navy, Naval Facilities Engineering Command, Mid-Atlantic		**Logged By:** Mike Zobel
Location: Maywood Dr and Swansdowne Dr, Bethpage, NY	**Northing:** 200957.25 **Easting:** 1125732.79	**Drilling Company:** Delta Well & Pump
Project #: 60266526	**Ground Elevation (ft amsl):** 69.38	**Well Screen Interval (ft):** NA
Start Date: 9/12/2014	**Drilling Method:** Auger (0-50' bgs) Mud Rotary (>50' bgs)	**Water Level (ft):** NA
Finish Date: 10/24/2014		**Total Depth (ft):** 950.0

Mud Rotary Drilling 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	SW		Dark yellowish brown (10 YR 4/4) well graded fine to coarse SAND and fine to medium subrounded Gravel
2–6						SW		Yellowish brown (10 YR 5/4) well graded fine to coarse SAND and fine to coarse subrounded Gravel
6–10						SW		Yellowish brown (10 YR 5/4) well graded fine to coarse SAND and fine to coarse subrounded Gravel
10–14						SW		Yellowish brown (10 YR 5/4) well graded fine to coarse SAND and fine to coarse subrounded Gravel
14–18						SW		Yellowish brown (10 YR 5/4) well graded fine to coarse SAND and fine to coarse subrounded Gravel
18–22						SW		Yellowish brown (10 YR 5/6) poorly graded medium subangular SAND and fine subrounded Gravel
22–26						SP		Yellowish brown (10 YR 5/6) poorly graded medium subangular SAND and fine subrounded Gravel
26–30						SP		Yellowish brown (10 YR 5/6) poorly graded medium subangular SAND and fine subrounded Gravel
30–34						SP		Yellowish brown (10 YR 5/6) poorly graded medium subangular SAND and fine subrounded Gravel
34–38						SP		Yellowish brown (10 YR 5/6) poorly graded medium subangular SAND and fine subrounded Gravel
38–42						SP		Yellowish brown (10 YR 5/6) poorly graded medium subangular SAND and fine subrounded Gravel
42–46						SP		Yellowish brown (10 YR 5/6) poorly graded medium subangular SAND and fine subrounded Gravel
46–50						SP-GP		Dark yellowish brown (10 YR 4/6) poorly graded medium subangular SAND and poorly graded subrounded medium Gravel
50–52						SP-GP		Dark yellowish brown (10 YR 4/6) poorly graded medium subangular SAND and poorly graded subrounded medium Gravel
52–54						SW		

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Resolution Consultants

Boring Log

BORING #: VPB149

DEPTH (ft)	Gamma Ray (30 60 90)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
54					Upper Glacial	SW		Brownish yellow (10 YR 6/8) well graded fine to coarse subrounded SAND with fine subrounded Gravel, few iron, trace silt *(continued)*
56								
58								
60			< 0.50	< 0.50		SW		Brownish yellow (10 YR 6/8) well graded fine to coarse subrounded SAND with fine subrounded Gravel, few iron, trace silt
62								
64						SW		Brownish yellow (10 YR 6/8) well graded fine to coarse subrounded SAND with fine subrounded Gravel, few iron, trace silt
66								
68						SW		Yellowish brown (10 YR 5/8) well graded fine to coarse subrounded SAND with fine subrounded Gravel, few iron, trace silt
70								
72						SW		Yellowish brown (10 YR 5/8) well graded fine to coarse subrounded SAND with fine subrounded Gravel, few iron, trace silt
74								
76						SW		Yellowish brown (10 YR 5/8) well graded fine to coarse subrounded SAND with fine subrounded Gravel, few iron, trace silt
78								
80						SW		Very pale brown (10 YR 8/4) well graded fine subrounded GRAVEL with fine to coarse subrounded Sand, few iron, trace silt
82								
84						GW		Very pale brown (10 YR 8/4) well graded fine to coarse subrounded SAND with fine subrounded Gravel, few iron, trace silt
86								
88						SW		Yellowish brown (10 YR 5/6) well graded fine to coarse subrounded SAND with Silt and fine subrounded gravel, trace iron, trace medium fat clay
90								
92						SW-SM		Yellowish brown (10 YR 5/6) well graded fine to coarse subrounded SAND with Silt and fine subrounded gravel, trace iron, trace medium fat clay
94								
96						SW-SM		Brownish yellow (10 YR 6/6) poorly graded fine to medium subangular SAND, few coarse subrounded Sand, few fine subrounded gravel, trace silt, trace medium fat clay, trace iron
98								
100			< 0.50	< 0.50		SP		Brownish yellow (10 YR 6/6) poorly graded fine to medium subangular SAND, few coarse subrounded Sand, few fine subrounded gravel, trace silt, trace medium fat clay, trace iron
102					Magothy			
104						SP		Brownish yellow (10 YR 6/6) poorly graded fine to medium subangular SAND, few coarse subrounded Sand, few fine subrounded gravel, trace silt, trace medium fat clay, trace iron
106								
108						SP		Brownish yellow (10 YR 6/6) poorly graded fine to medium subangular SAND, few coarse subrounded Sand, few fine subrounded gravel, trace silt, trace medium fat clay, trace iron
110								
112						SW		Brownish yellow (10 YR 6/6) well graded fine to coarse subangular SAND, trace fine subrounded Gravel, trace silt, trace medium fat clay, trace iron
114								

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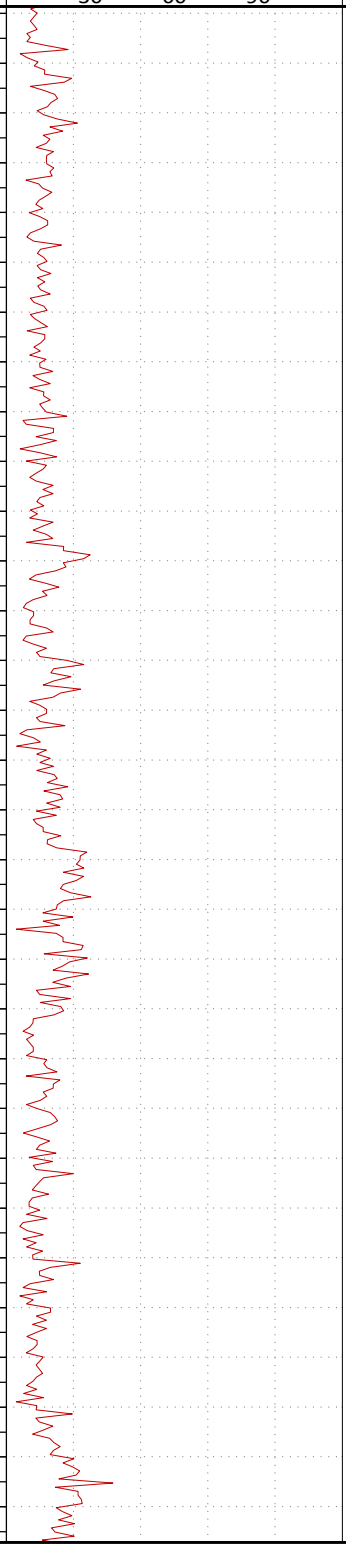
Boring Log

BORING #: VPB149



DEPTH (ft)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	MATERIAL DESCRIPTION
116				Magothy	SW	
118						
120					SP	Brownish yellow (10 YR 6/6) poorly graded fine to medium subangular SAND, few coarse subrounded Sand, trace fine subrounded gravel, trace silt, trace medium fat clay, trace iron
122						
124					SP	Pale brown (2.5 Y 7/4) poorly graded fine to medium subangular SAND, few coarse subrounded Sand, trace fine subrounded gravel, trace silt, trace medium fat clay, trace iron
126						
128					SW	Yellow (2.5 Y 7/6) well graded fine to coarse subangular SAND, trace medium fat Clay, trace fine subangular gravel, trace silt, trace iron
130						
132						
134					SP-SC	Pale brown (2.5 Y 7/4) poorly graded fine to medium subangular SAND with fat Clay, trace coarse subangular sand, trace fine subangular gravel, trace iron
136						
138					SP	Pale brown (2.5 Y 7/4) poorly graded fine to medium subangular SAND, trace medium fat Clay, trace coarse subangular sand, trace silt, trace iron
140						
142						
144					SP	Pale brown (2.5 Y 7/4) poorly graded fine to medium subangular SAND, trace medium fat Clay, trace coarse subangular sand, trace silt, trace iron
146						
148						
150		3.2	1.1		SP-SC	Pale brown (2.5 Y 7/4) poorly graded fine to medium subangular SAND with medium fat Clay, trace iron
152						
154					SP-SC	Pale brown (2.5 Y 7/4) poorly graded fine to medium subangular SAND with medium fat Clay, trace iron
156						
158						
160					SC	Pale brown (2.5 Y 8/4) medium fat Clayey fine to medium subangular SAND, trace iron, trace fine subangular gravel
162						
164					SC	Pale brown (2.5 Y 8/4) medium fat Clayey fine to medium subangular SAND, trace iron, trace fine subangular gravel
166						
168						
170					SC	Pale brown (2.5 Y 8/4) medium fat Clayey fine to medium subangular SAND, trace iron, trace fine subangular gravel
172						
174						
176					SC	Pale brown (2.5 Y 8/4) medium fat Clayey fine to medium subangular SAND, trace iron, trace fine subangular gravel

(Continued Next Page)

Resolution Consultants

Boring Log

BORING #: VPB149

DEPTH (ft)	Gamma Ray (30 60 90)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
178					Magothy			
180						CH		White (7.5 YR 8/1) fine Sandy loose fat CLAY, trace iron
182								
184						CH		White (7.5 YR 8/1) fine Sandy loose fat CLAY, trace iron
186								
188						CH		White (7.5 YR 8/1) fine Sandy medium fat CLAY, trace iron
190								
192						SC		Pale brown (2.5 Y 8/3) medium fat Clayey fine to medium subangular SAND, trace iron
194								
196						SC		Yellow (2.5 Y 8/6) loose fat Clayey fine to medium subangular SAND, few iron, trace coarse subangular sand
198			11	1.3				
200						CH		Light gray (2.5 Y 7/2) fine to medium Sandy medium fat CLAY, trace iron
202								
204						CH		Light gray (2.5 Y 7/2) fine to medium Sandy medium fat CLAY, trace iron
206								
208						SC		Pale brown (2.5 Y 8/3) loose fat Clayey fine to medium subangular SAND, few iron, few fine subangular gravel
210								
212						SC		Pale brown (2.5 Y 8/3) loose fat Clayey fine to medium subangular SAND, few iron, few fine subangular gravel
214								
216						SC		Pale brown (2.5 Y 8/4) loose fat Clayey fine to medium subangular SAND, trace iron
218			9.9	4.2				
220						SP-SC		Pale brown (2.5 Y 8/4) fine to medium subangular SAND with loose fat Clay, trace iron
222								
224						SP-SC		Pale brown (2.5 Y 8/4) fine to medium subangular SAND with loose fat Clay, trace iron
226								
228								
230								
232								
234								
236								
238			8.1	2.8		SP-SC		

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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
240			8.1	2.8	Magothy	SP-SC		Pale brown (2.5 Y 8/4) fine to medium subangular SAND with loose fat Clay, trace iron *(continued)*
242								
244						CH		Light gray (2.5 Y 7/1) loose fat CLAY with fine Sand
246								
248								
250						CH		Light gray (2.5 Y 7/1) fine Sandy medium fat CLAY
252								
254						CH		Light gray (2.5 Y 7/1) fine Sandy medium fat CLAY
256								
258								
260			< 0.50	< 0.50		SP-SC		Gray (Gley 1 5/N) poorly graded fine to medium subangular SAND with loose fat Clay, trace iron
262								
264						SP-SC		Very dark gray (5 Y 3/1) poorly graded fine to medium subangular SAND with loose fat Clay, few lignite, trace iron
266								
268								
270						SC		Very dark gray (5 Y 3/1) loose fat Clayey fine SAND, few lignite, trace iron
272								
274						SC		Very dark gray (5 Y 3/1) loose fat Clayey fine SAND, few lignite, trace iron
276								
278								
280						SP-SC		Gray (Gley 1 6/N) fine to medium subangular SAND with loose fat Clay, few lignite, trace iron
282								
284			< 0.50	< 0.50		CH		Dark gray (Gley 1 4/N) fine Sandy loose fat CLAY, trace lignite
286								
288								
290						CH		Dark gray (Gley 1 4/N) fine Sandy loose fat CLAY, trace lignite
292								
294						CH		Dark gray (Gley 1 4/N) loose fat CLAY with fine Sand, trace lignite
296								
298								
300			< 0.50	< 0.50		SC		Gray (Gley 1 5/N) loose fat Clayey fine SAND, trace lignite

(Continued Next Page)

Resolution Consultants

Boring Log

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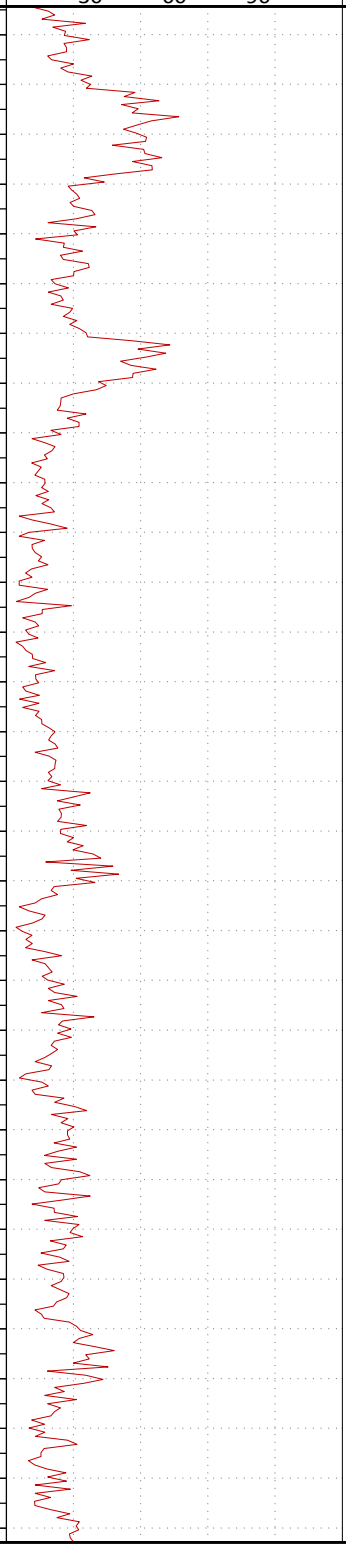

DEPTH (ft)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
302				Magothy	SC		Gray (Gley 1 5/N) loose fat Clayey fine SAND, trace lignite *(continued)*
304					SC		Gray (Gley 1 5/N) loose fat Clayey fine SAND, trace lignite, trace pyrite, trace iron
306							
308					SC		Gray (Gley 1 5/N) loose fat Clayey fine SAND, trace lignite, trace pyrite, trace iron
310							
312					SC		Gray (Gley 1 5/N) loose fat Clayey fine SAND, trace lignite, trace fine subangular gravel, trace pyrite, trace iron
314							
316					SC		Gray (Gley 1 5/N) loose fat Clayey fine SAND, trace lignite, trace fine subangular gravel, trace pyrite, trace iron
318							
320		< 0.50	< 0.50		SC		Gray (Gley 1 5/N) fine Sandy loose fat CLAY, trace lignite, trace pyrite
322							
324					CH		Gray (Gley 1 5/N) medium fat Clayey fine SAND, trace lignite, trace pyrite
326							
328					SC		Gray (Gley 1 5/N) medium fat Clayey fine SAND, few lignite, trace pyrite
330							
332					SC		Gray (Gley 1 5/N) medium fat Clayey fine SAND, few lignite, trace pyrite
334							
336					SC		Gray (Gley 1 5/N) fine SAND with loose fat Clay, trace lignite, trace pyrite
338							
340		< 0.50	< 0.50		SP-SC		Gray (2.5 Y 5/N) loose fat Clayey fine SAND, few lignite, trace pyrite
342							
344					SC		Gray (2.5 Y 5/N) loose fat Clayey fine SAND, few lignite, trace pyrite
346							
348					SC		Gray (Gley 1 5/N) fine SAND with loose fat Clay, trace lignite, trace pyrite
350							
352					SP-SC		
354							
356							
358							
360		< 0.50	< 0.50				
362							

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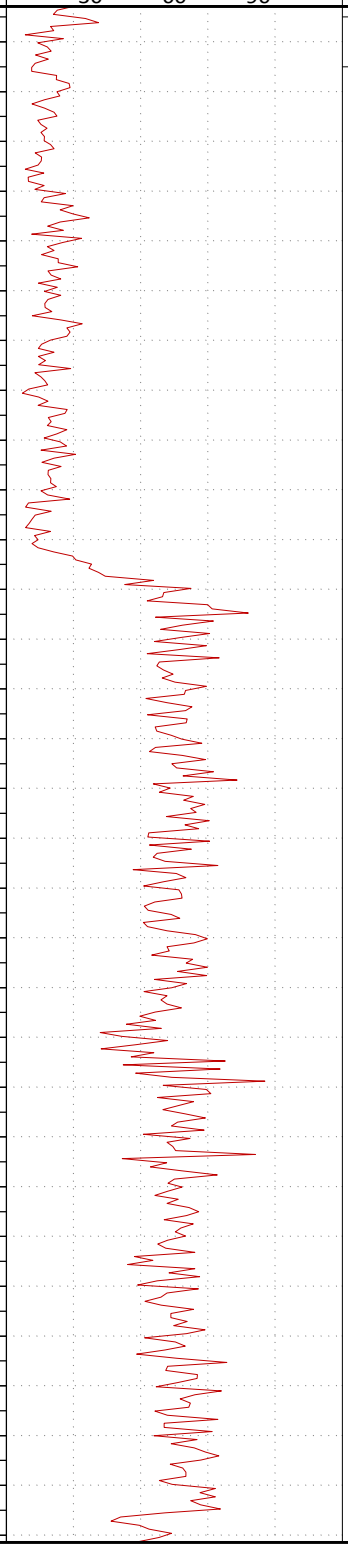

DEPTH (ft)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
364	0			Magothy	SP-SC		Gray (Gley 1 5/N) fine SAND with loose fat Clay, trace lignite
366					SP-SC		Gray (Gley 1 5/N) fine SAND with loose fat Clay, trace lignite
368					CH		Dark gray (Gley 1 4/N) fine Sandy medium fat CLAY, trace lignite
370							
372							
374					SC		Gray (Gley 1 5/N) medium fat Clayey fine SAND, trace lignite, trace pyrite
376							
378							
380		< 0.50	< 0.50		SC		Gray (Gley 1 5/N) medium fat Clayey fine SAND, trace lignite, trace pyrite
382							
384					SP-SC		Gray (Gley 1 5/N) poorly graded fine SAND with loose fat Clay, trace lignite, trace pyrite
386							
388							
390					SC		Gray (Gley 1 5/N) medium fat Clayey fine SAND, trace lignite, trace pyrite
392							
394					CH		Dark gray (Gley 1 4/N) medium fat CLAY
396							
398							
400					CH		Dark gray (Gley 1 4/N) medium fat CLAY
402							
404					CH		Dark gray (Gley 1 4/N) stiff fat CLAY
406							
408							
410					CH		Dark gray (Gley 1 4/N) stiff fat CLAY
412							
414					CH		Dark gray (Gley 1 4/N) stiff fat CLAY
416							
418							
420		< 0.50	< 0.50		CH		Dark gray (Gley 1 4/N) stiff fat CLAY
422							
424					CH		Dark gray (Gley 1 4/N) stiff fat CLAY

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Resolution Consultants

Boring Log

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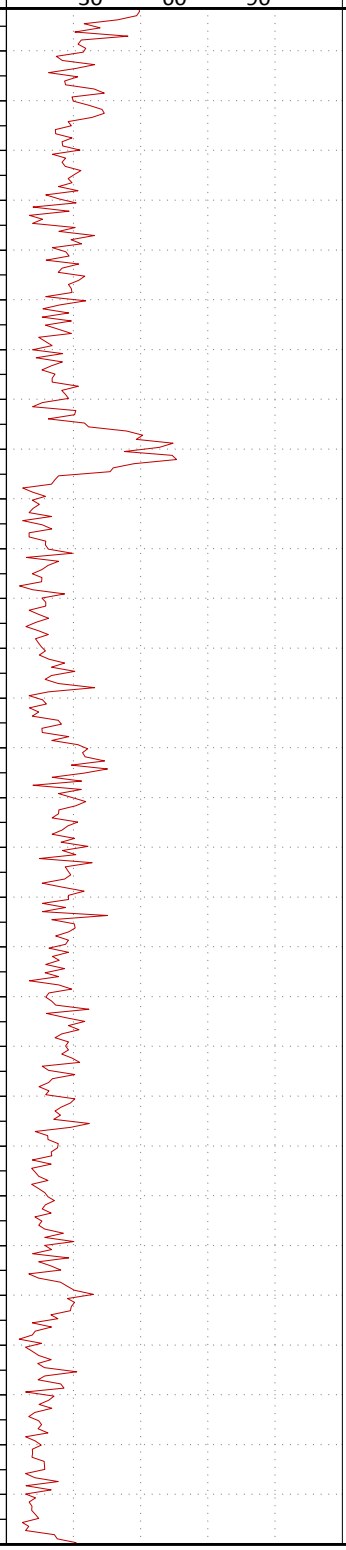

DEPTH (ft)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
426				Magothy	CH		Dark gray (Gley 1 4/N) stiff fat CLAY *(continued)*
428							
430					CH		Dark gray (Gley 1 4/N) fine Sandy stiff fat CLAY, trace lignite
432							
434					SC		Gray (Gley 1 5/N) medium fat Clayey fine SAND, trace lignite
436							
438							
440		< 0.50	< 0.50		CH		Gray (Gley 1 5/N) fine to medium subangular Sandy medium fat CLAY, trace lignite
442							
444					SC		Gray (Gley 1 5/N) medium fat Clayey fine to medium subangular SAND, trace lignite
446							
448					SC		Gray (Gley 1 5/N) medium fat Clayey fine to medium subangular SAND, trace lignite
450							
452					SC		Gray (Gley 1 5/N) medium fat Clayey fine to medium subangular SAND, trace lignite
454							
456							
458							
460		< 0.50	< 0.50		CH		Gray (Gley 1 5/N) fine to medium subangular Sandy medium fat CLAY, trace lignite
462							
464					SC		Gray (Gley 1 5/N) medium fat Clayey fine to medium subangular SAND, trace lignite
466							
468							
470					CH		Gray (Gley 1 5/N) fine to medium subangular Sandy medium fat CLAY, trace lignite
472							
474					SC		Gray (Gley 1 5/N) medium fat Clayey fine to medium subangular SAND, trace lignite
476							
478							
480		< 0.50	< 0.50		SC		Gray (Gley 1 5/N) medium fat Clayey fine SAND, trace medium subangular sand, trace lignite
482							
484					SC		Gray (Gley 1 5/N) medium fat Clayey fine SAND, trace medium subangular sand, trace lignite
486							

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Boring Log

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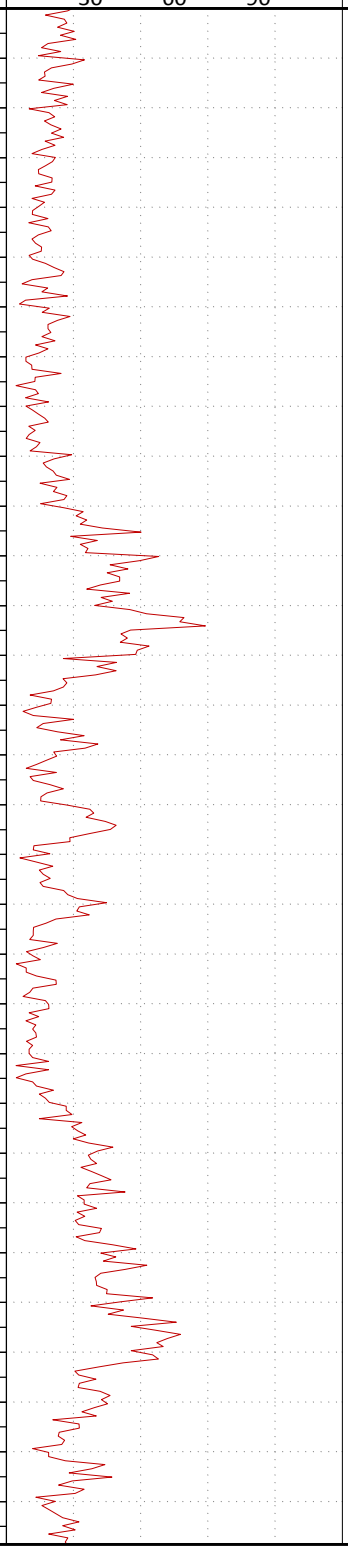

DEPTH (ft)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
486				Magothy	SC		Gray (Gley 1 5/N) medium fat Clayey fine SAND, trace medium subangular sand, trace lignite *(continued)*
488							
490					CH		Gray (Gley 1 5/N) fine to medium subangular Sandy medium fat CLAY, trace lignite
492							
494					SC		Gray (Gley 1 5/N) medium fat Clayey fine to medium subagular SAND, trace pyrite, trace lignite
496							
498							
500		< 0.50	< 0.50		SC		Gray (Gley 1 5/N) medium fat Clayey fine to medium subagular SAND, trace pyrite, trace lignite
502							
504					SC		Gray (Gley 1 5/N) medium fat Clayey fine to medium subagular SAND, trace pyrite, trace lignite
506							
508							
510					CH		Dark gray (Gley 1 4/N) medium fat CLAY with fine to medium subangular Sand
512							
514					CH		Dark gray (Gley 1 4/N) medium fat CLAY with fine to medium subangular Sand
516							
518							
520		< 0.50	< 0.50		CH		Dark gray (Gley 1 4/N) medium fat CLAY with fine to medium subangular Sand
522							
524					SC		Gray (Gley 1 5/N) medium fat Clayey fine to medium subangular SAND, trace lignite
526							
528							
530					SC		Gray (Gley 1 5/N) medium fat Clayey fine to medium subangular SAND, trace lignite
532							
534					CH		Gray (Gley 1 5/N) medium fat CLAY with fine to medium subangular Sand
536							
538							
540		< 0.50	< 0.50		CH		Gray (Gley 1 5/N) loose fat CLAY with fine to medium subangular Sand, trace pyrite
542							
544					CH		Dark gray (Gley 1 4/N) fine to medium subangular Sandy medium fat CLAY, trace pyrite
546							

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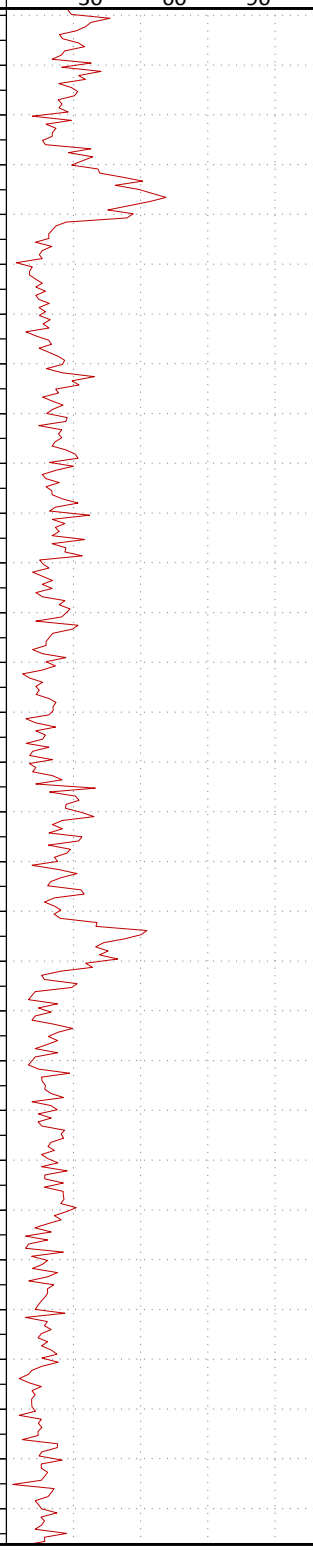

DEPTH (ft)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
548				Magothy			
550					SC		Gray (Gley 1 6/N) medium fat Clayey fine to coarse subangular SAND, trace pyrite
552							
554					SC		Gray (Gley 1 6/N) medium fat Clayey fine to coarse subangular SAND, trace pyrite
556							
558					SP		Gray (Gley 1 6/N) poorly graded fine to medium subangular SAND, trace coarse subangular Sand, trace loose fat clay
560		< 0.50	< 0.50				
562							
564					SC		Gray (Gley 1 6/N) loose fat Clayey fine to medium subangular SAND, trace pyrite
566							
568							
570					SC		Gray (Gley 1 6/N) loose fat Clayey fine to medium subangular SAND, trace pyrite
572							
574					SC		Gray (Gley 1 6/N) loose fat Clayey fine to medium subangular SAND, trace pyrite
576							
578							
580		< 0.50	< 0.50		SW		Gray (Gley 1 6/N) well graded fine to coarse subangular SAND, trace medium fat Clay
582							
584					SW-SC		Gray (Gley 1 6/N) well graded fine to coarse subangular SAND with medium fat Clay
586							
588							
590					SW		Gray (Gley 1 6/N) well graded fine to coarse subangular SAND, trace medium fat Clay
592							
594					SW		Gray (Gley 1 6/N) well graded fine to coarse subangular SAND, trace medium fat Clay
596							
598							
600					SW-SM		Gray (Gley 1 6/N) well graded fine to coarse subangular SAND with Silt
602							
604		< 0.50	< 0.50		SP		Light gray (2.5 Y 7/1) poorly graded fine to medium subangular SAND, trace Silt, trace coarse subangular gravel
606							
608							
	0				SP		

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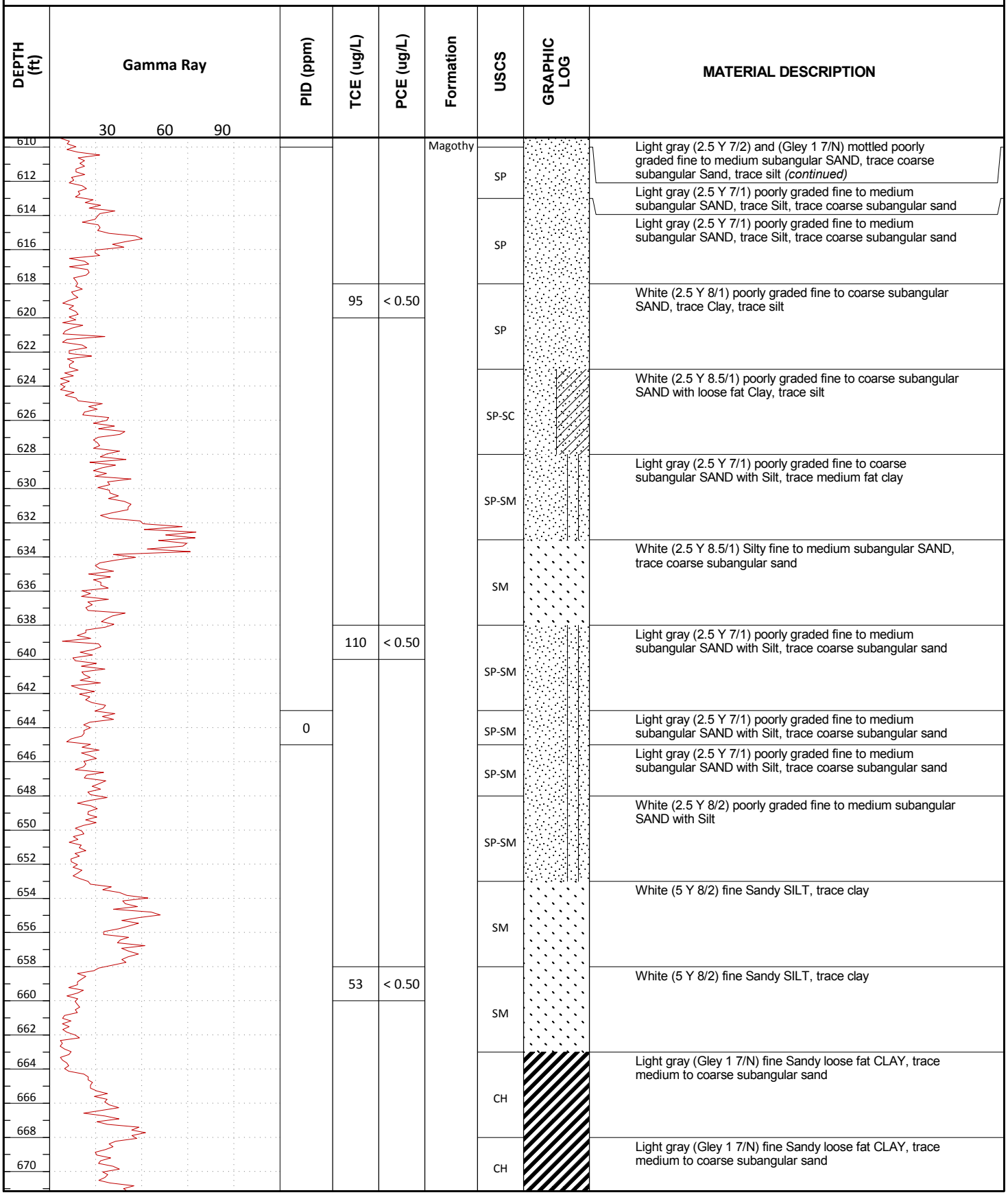

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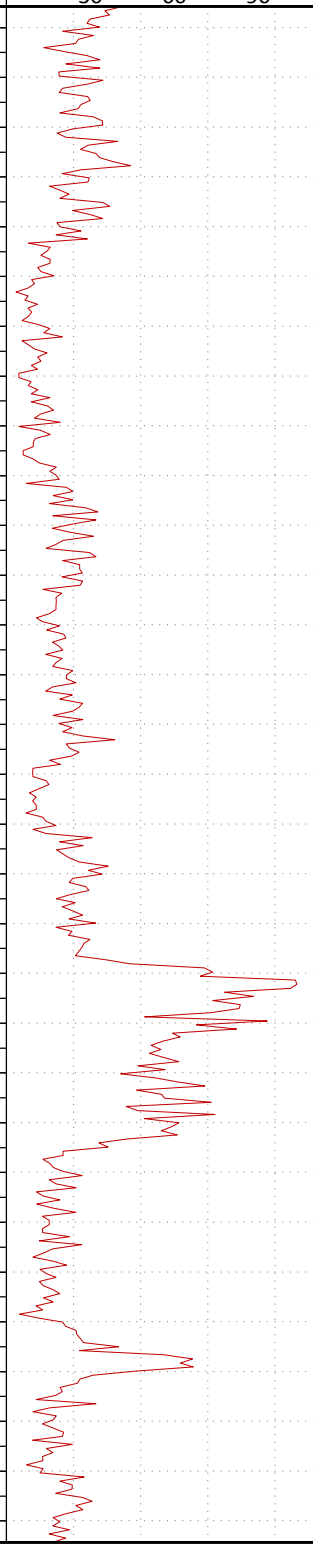

DEPTH (ft)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
672				Magothy	CH		Light gray (Gley 1 7/N) fine Sandy loose fat CLAY, trace medium to coarse subangular sand *(continued)*
674					ML		Light greenish gray (Gley 1 8/10Y) fine Sandy SILT
676							
678							
680		0.61	< 0.50		ML		Pale yellow (5 Y 8/2) medium to coarse Sandy SILT, trace medium fat clay, trace fine sand
682							
684					SP-SM		Pale yellow (5 Y 8/2) poorly graded fine to coarse SAND with Silt and fine subangular gravel
686							
688							
690					SP		Light gray (2.5 Y 7/2) poorly graded fine to coarse subangular SAND with fine subangular Gravel, trace fat clay
692							
694					SP		Light gray (2.5 Y 7/2) poorly graded fine to coarse subangular SAND with fine subangular Gravel, trace fat clay
696							
698							
700		< 0.50	< 0.50		SP		Light gray (2.5 Y 7/2) poorly graded fine to coarse subangular SAND with fine subangular Gravel, trace fat clay
702							
704	0				SP-SM		Dark gray (2.5 Y 4/1) poorly graded fine to coarse subangular SAND with Silt, trace fine subangular gravel
706					SP-SM		Dark gray (2.5 Y 4/1) poorly graded fine to coarse subangular SAND with Silt, trace fine subangular gravel
708							
710					SP-SM		Dark gray (2.5 Y 4/1) poorly graded fine to coarse subangular SAND with Silt, trace fine subangular gravel
712							
714					CH		Gray (Gley 1 6/N) loose fat CLAY with fine to coarse subangular Sand, trace fine subangular gravel
716							
718							
720		8.8	< 0.50		CH		Gray (Gley 1 6/N) loose fat CLAY with fine to coarse subangular Sand, trace fine subangular gravel
722							
724					CH		Gray (Gley 1 6/N) loose fat CLAY with fine to coarse subangular Sand and fine subangular gravel
726							
728							
730					GC		Gray (Gley 1 6/N) loose fat Clayey fine subangular GRAVEL, trace fine to coarse subangular sand
732							

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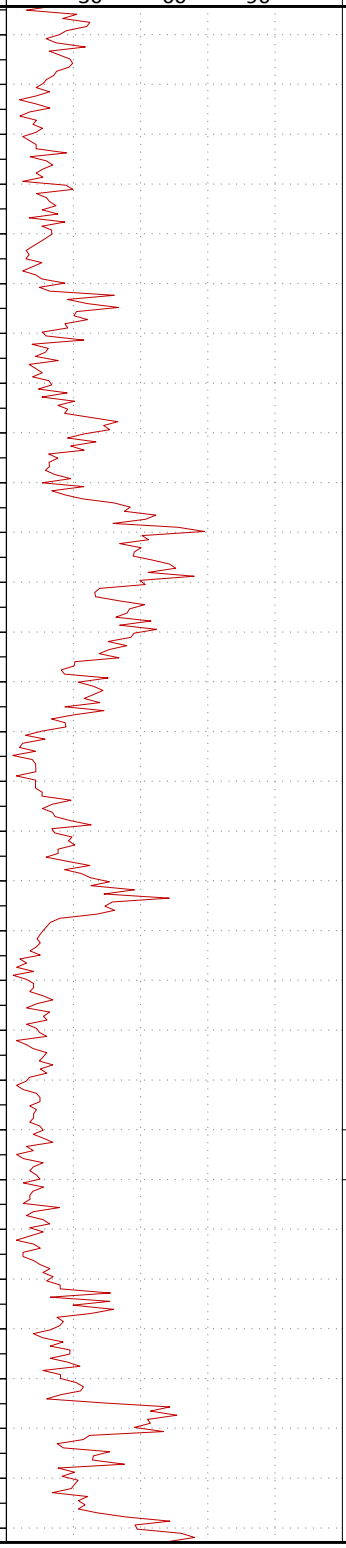

DEPTH (ft)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
734–738				Magothy	GP-GC		Light gray (Gley 1 7/N) poorly graded fine subangular GRAVEL with loose fat Clay, trace fine to coarse subangular sand
738–742		16	< 0.50		GP-GC		Light gray (Gley 1 7/N) poorly graded fine subangular GRAVEL with loose fat Clay, trace fine to coarse subangular sand
742–748					GP		Light gray (Gley 1 7/N) poorly graded fine subangular GRAVEL, trace loose fat Clay, trace fine to coarse subangular sand
748–754					GP-GC		Light gray (Gley 1 7/N) poorly graded fine subangular GRAVEL with loose fat Clay, trace fine to coarse subangular sand
754–760					GP-GC		Light gray (Gley 1 7/N) poorly graded fine subangular GRAVEL with loose fat Clay, trace fine to coarse subangular sand
760–764		< 0.50	< 0.50		GC		Gray (Gley 1 6/N) loose fat Clayey fine subangular GRAVEL with fine to coarse subangular sand
764–768					CH		Gray (Gley 1 6/N) fine subangular Gravelly medium fat CLAY with fine to coarse subangular sand
768–772					CH		Gray (Gley 1 6/N) medium fat CLAY with fine to coarse subangular Sand and fine subangular gravel
772–778					CH		Gray (Gley 1 7/N) medium fat CLAY with fine to coarse subangular Sand and fine subangular gravel
778–780	14				CH		Gray (Gley 1 5/N) fine to coarse subangular Sandy loose fat CLAY with fine subangular gravel
780–784					CH		Gray (Gley 1 5/N) fine to coarse subangular Sandy loose fat CLAY with fine subangular gravel
784–788					SC		Gray (Gley 1 6/N) loose fat Clayey fine to coarse subangular SAND, trace fine subangular gravel
788–792					SC		White (2.5 Y 9/1) medium fat Clayey fine to coarse subangular SAND with fine subangular gravel
792–794					CH		

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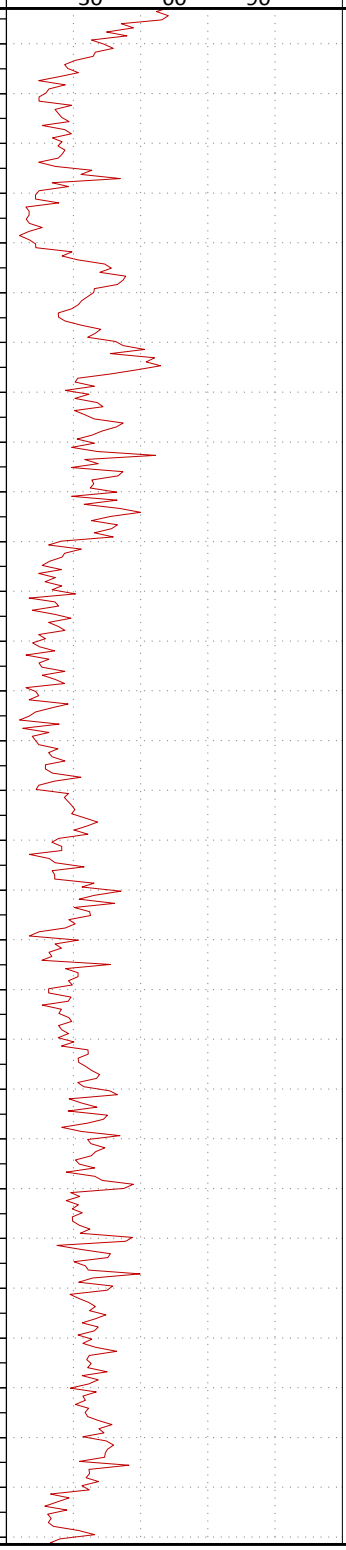

DEPTH (ft)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
796				Magothy	CH		White (2.5 Y 9/1) fine to coarse subangular Sandy medium fat CLAY with fine subangular gravel *(continued)*
798							
800		< 0.50	< 0.50		SC		Gray (Gley 1 6/N) medium fat Clayey fine to coarse subangular SAND, trace fine subangular gravel
802							
804					CH		Gray (Gley 1 6/N) fine to coarse subangular Sandy loose fat CLAY
806							
808							
810		< 0.50	< 0.50		SP-SC		Gray (Gley 1 5/N) poorly graded medium to coarse subangular SAND with medium fat Clay, trace fine sand
812							
814					CH		Light gray (Gley 1 7/N) medium fat CLAY with fine Sand, trace medium to coarse subangular sand
816							
818							
820		< 0.50	< 0.50		CH		Light gray (Gley 1 7/N) medium fat CLAY with fine Sand, trace medium to coarse subangular sand
822							
824					SC		Gray (Gley 1 6/N) loose fat Clayey fine to medium subangular SAND, trace coarse subangular sand
826							
828							
830					SC		Gray (Gley 1 6/N) loose fat Clayey fine to medium subangular SAND, trace coarse subangular sand
832							
834					SC		Gray (Gley 1 6/N) loose fat Clayey fine to medium subangular SAND with silt
836							
838							
840		< 0.50	< 0.50		CH		Light gray (Gley 1 7/N) fine Sandy loose fat CLAY
842							
844					SM		Gray (Gley 1 6/N) Silty fine SAND with loose fat clay
846							
848							
850					SM		Gray (Gley 1 6/N) Silty fine SAND with loose fat clay
852							
854					SM		Gray (Gley 1 6/N) Silty fine SAND with loose fat clay
856							

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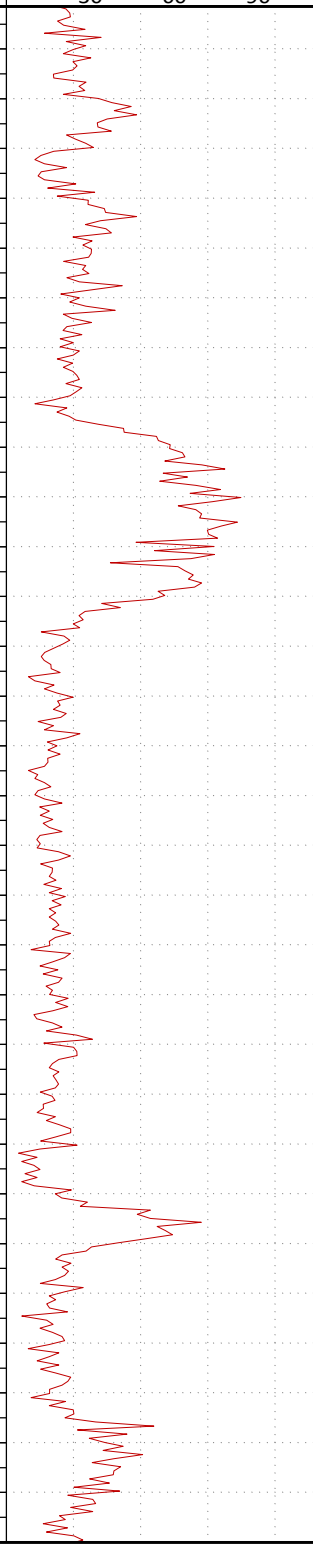

DEPTH (ft)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	MATERIAL DESCRIPTION
858				Magothy	SM	Gray (Gley 1 6/N) Silty fine SAND with loose fat clay *(continued)*
860		< 4.0	< 4.0		SM	Gray (Gley 1 6/N) Silty fine SAND with loose fat clay
862						
864					SM	Gray (Gley 1 6/N) Silty fine SAND with loose fat clay, trace lignite
866						
868						
870					SM	Gray (Gley 1 6/N) Silty fine SAND with loose fat clay
872						
874					SC	Gray (Gley 1 6/N) loose fat Clayey fine SAND with silt
876						
878						
880		< 2.0	< 2.0		CH	Gray (Gley 1 6/N) stiff fat CLAY, trace fine Sand
882						
884					CH	Gray (Gley 1 6/N) fine to medium Sandy stiff fat CLAY
886						
888						
890					SC	Gray (Gley 1 6/N) loose fat Clayey fine to medium subangular SAND
892						
894					SC	Gray (Gley 1 6/N) loose fat Clayey fine to medium subangular SAND
896						
898						
900					SC	Light gray (Gley 1 7/N) medium fat Clayey coarse sangular SAND, trace fine to medium subangular sand
902						
904		< 5.0	< 5.0		SP-SC	Light gray (Gley 1 7/N) poorly graded coarse angular SAND with stiff fat Clay, trace lignite
906						
908						
910					SC	Gray (Gley 1 6/N) stiff Clayey coarse angular SAND, trace lignite
912						
914						
916					SC	Gray (Gley 1 6/N) stiff Clayey coarse angular SAND, trace lignite
918						

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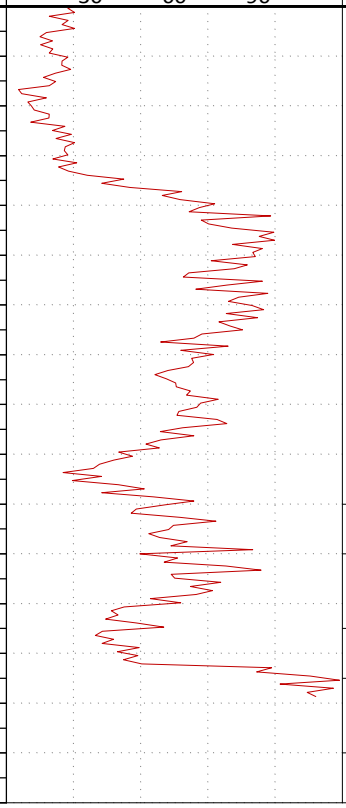


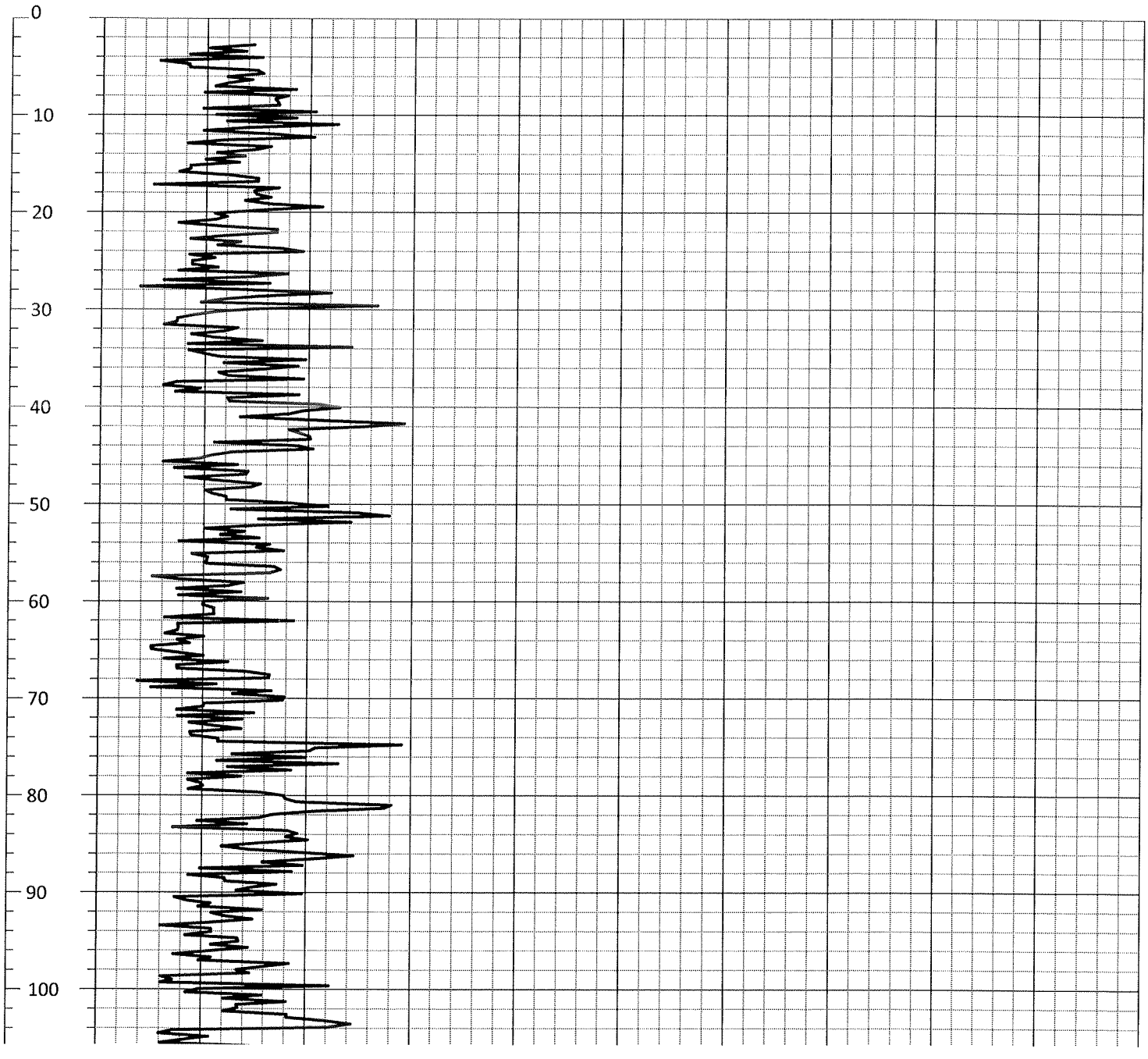
DEPTH (ft)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
920		< 4.0	< 4.0	Magothy	SC		Gray (Gley 1 6/N) medium fat Clayey coarse angular SAND, trace fine to medium sand, trace lignite
924					SC		Gray (Gley 1 6/N) medium fat Clayey fine to coarse subangular SAND, trace lignite
928					CH		Gray (Gley 1 5/N) stiff fat CLAY with fine Sand, trace lignite
934					CH		Gray (Gley 1 5/N) stiff fat CLAY with fine Sand, trace lignite
940	0			Raritan	CL		Gray (Gley 1 5/N) very stiff lean CLAY with fine Sand, trace lignite
942					CH		Gray (Gley 1 5/N) stiff fat CLAY with fine Sand, trace lignite
944	0				CH		Gray (Gley 1 5/N) very stiff fat CLAY, trace lignite
948					CH		Gray (Gley 1 5/N) very stiff fat CLAY, trace lignite
950	0				CH		Gray (Gley 1 5/N) very stiff fat CLAY, trace lignite

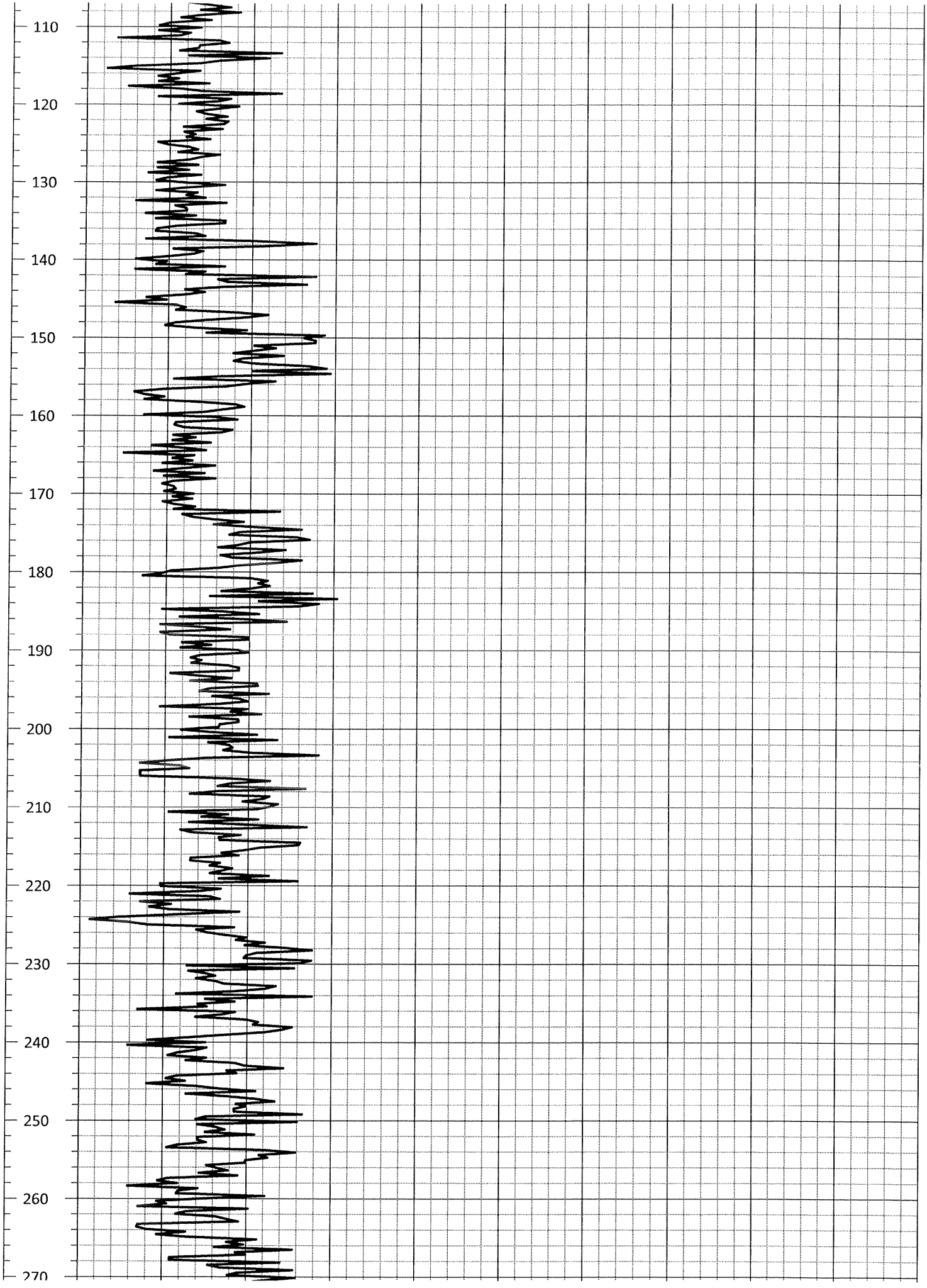
End of boring at 950.0 ft. bgs.

DOWN HOLE

COMPANY:	DELTA WELL & PUMP CO., INC.
LOCATION:	NWIRP FERRIS ROAD

Well: VPB-149		Depth Driller:
		Depth Logger:
Date: 10/20/2014	Time:	Logged by: CMO
File Name: 739		Witness: MIKE

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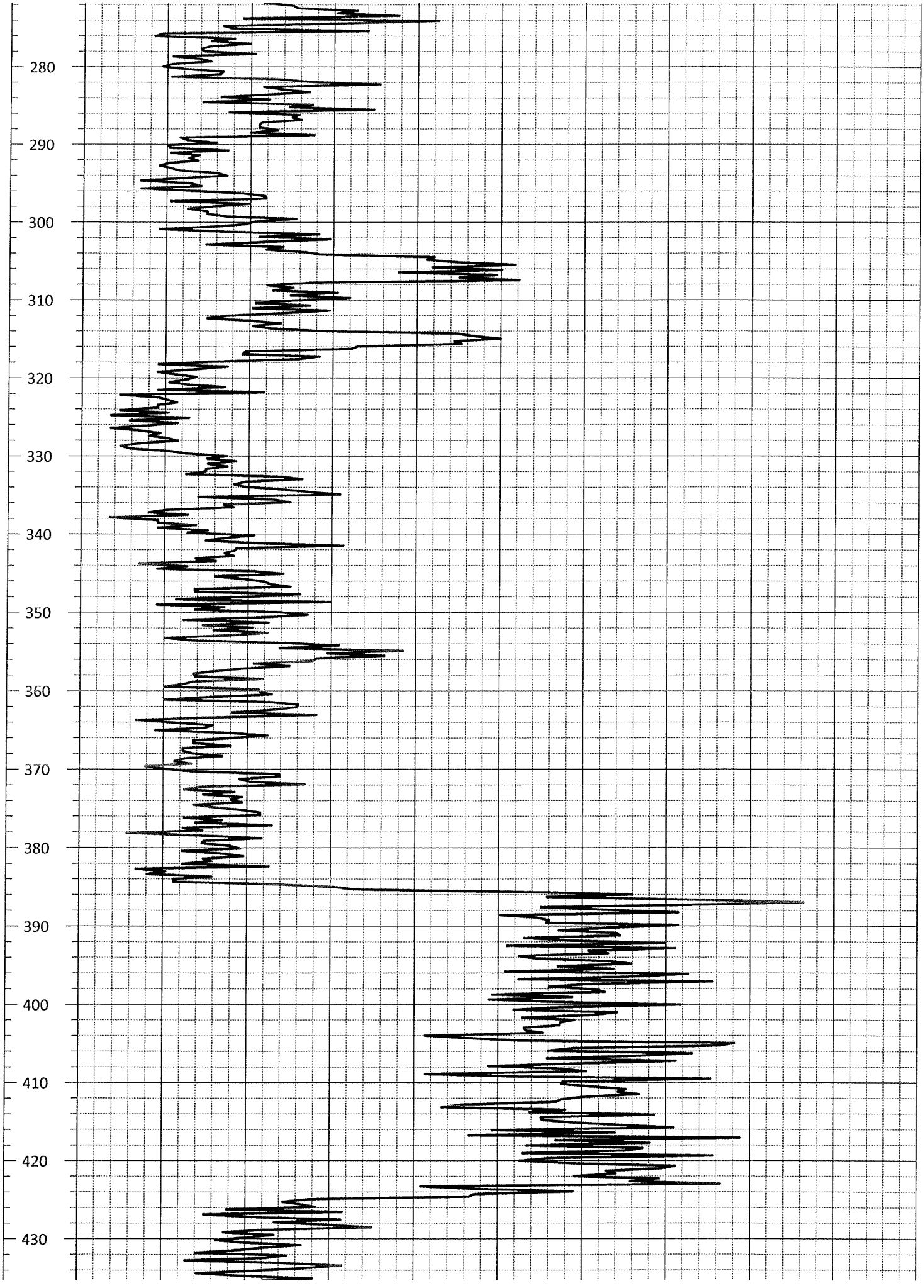
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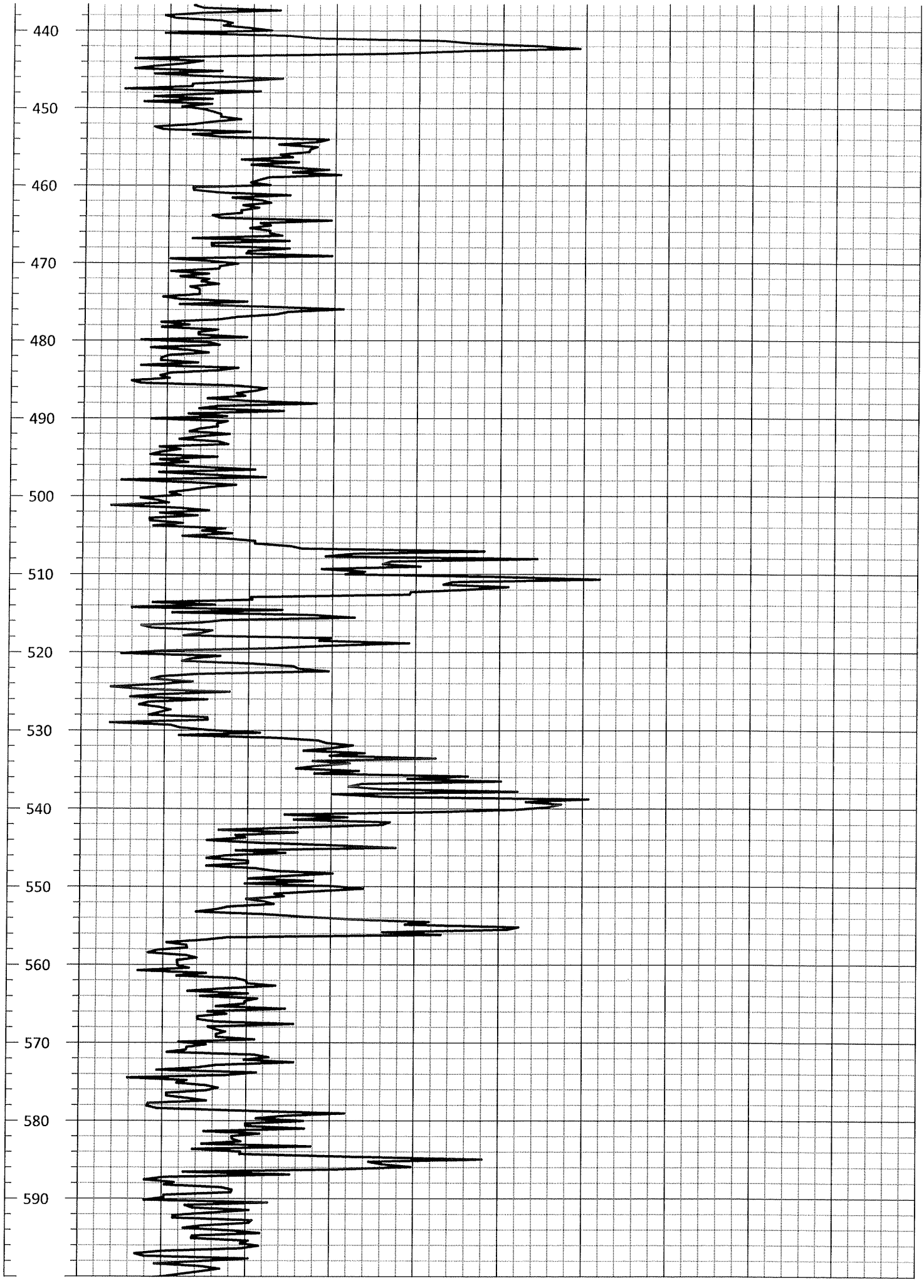
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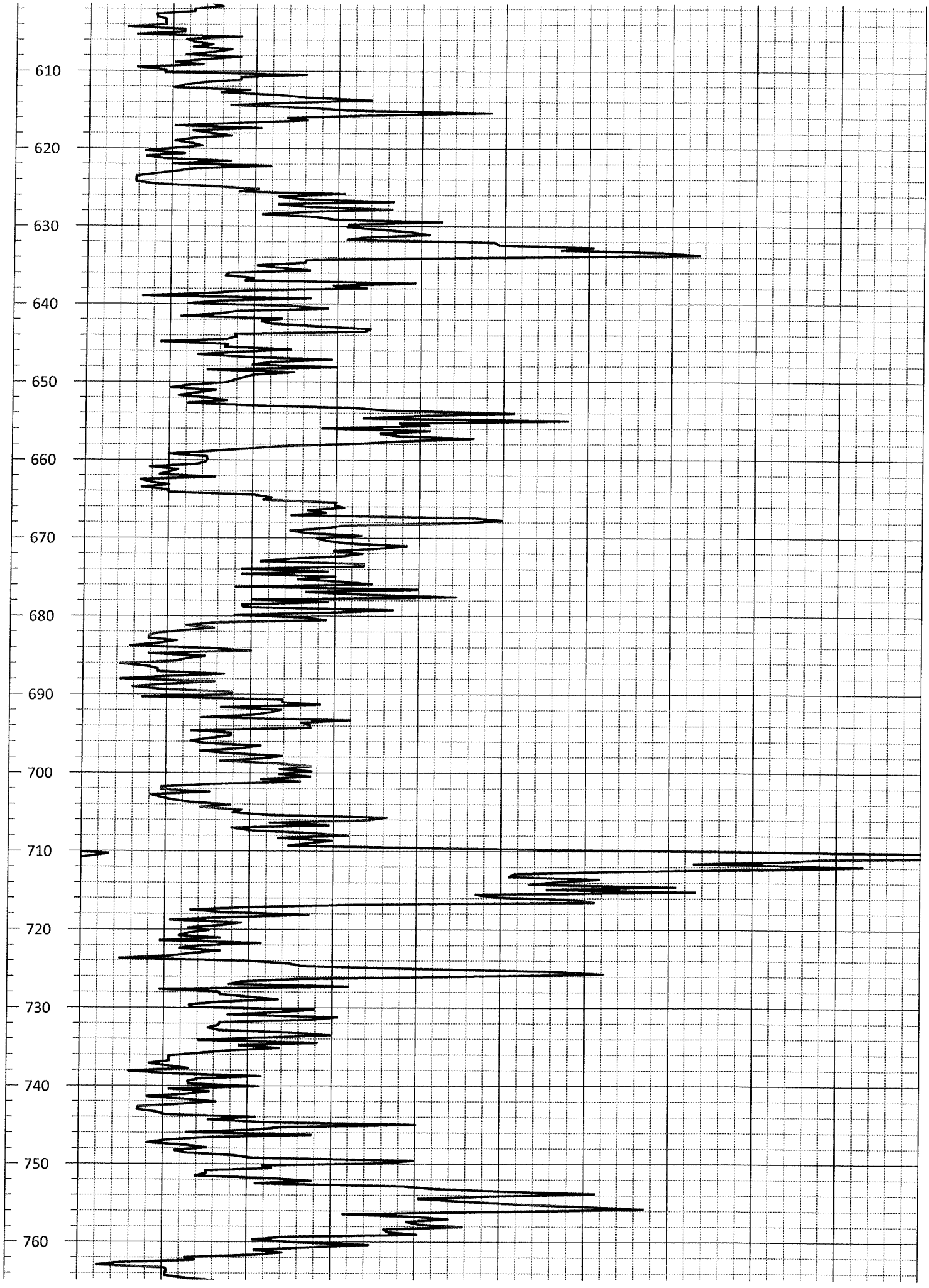
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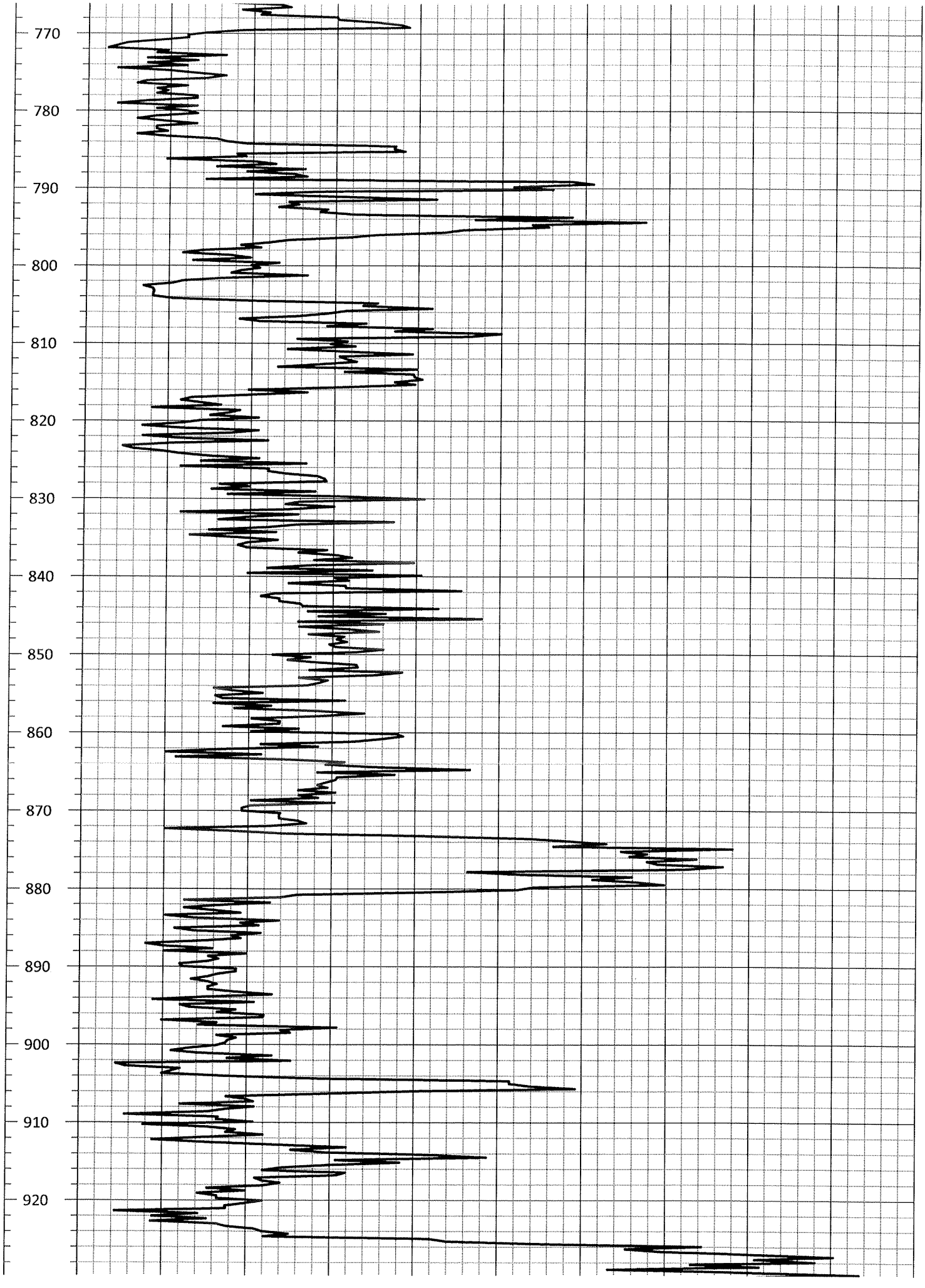
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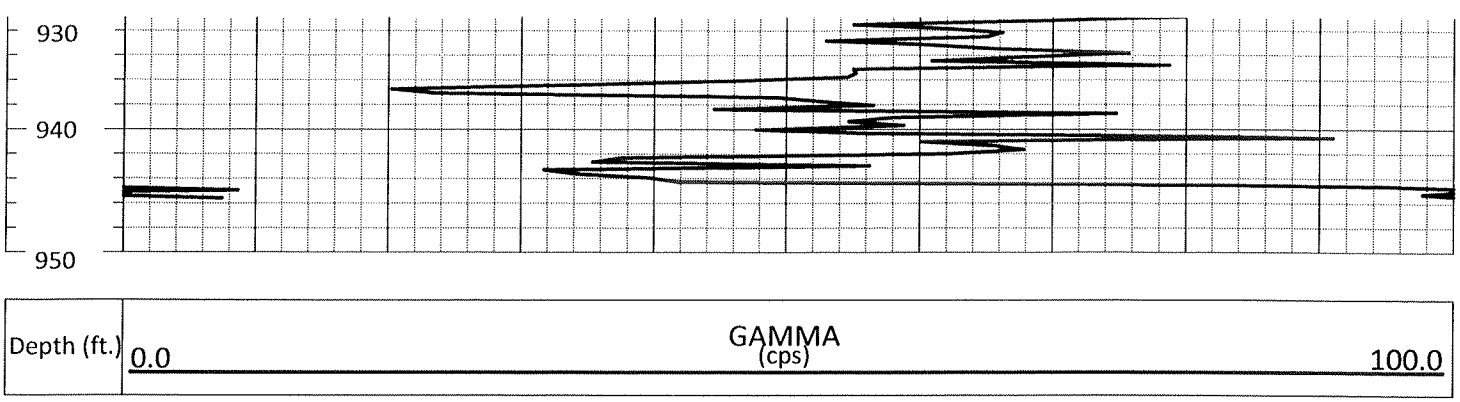
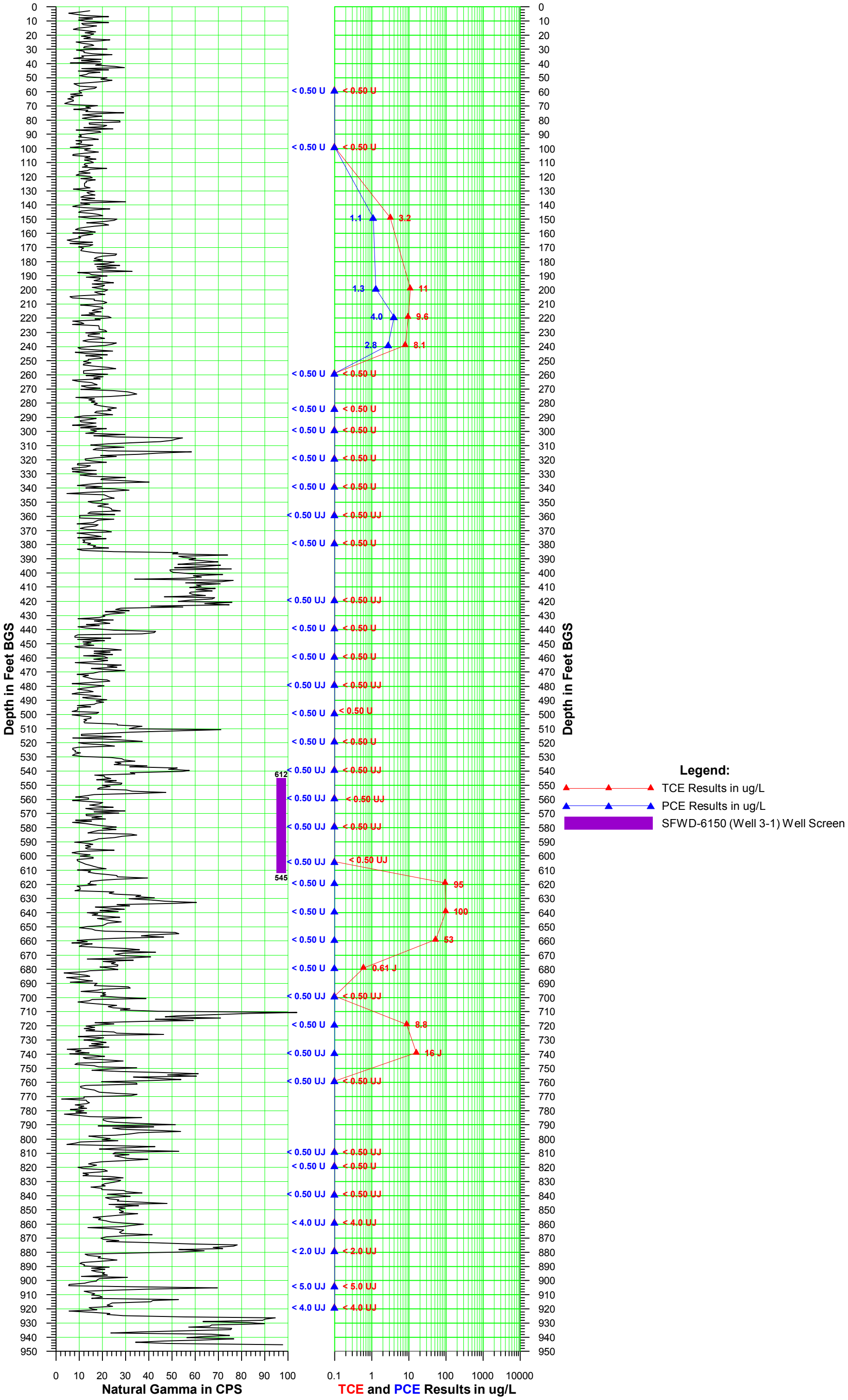

930
940
950
Depth (ft.)
0.0
GAMMA
(cps)
100.0

Section 2

VPB 149 Gamma and PCE/TCE Plot

Vertical Profile Boring VPB-149
Downward Run - October 20, 2014
Validated Analytical Data



Section 3

VPB 149 Groundwater Sample Log Sheets

Hydropunch Sample

Client: Navy (ResCon)
Project No: 60266526
Site Location: NWIRP Bethpage
Weather Conds:

Date:
VPB: 149
Collector(s): MZ

	Sample Date	Time	Temp (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Starting depth(ft)	Ending depth(ft)	Color
	9/23/14	1250	20.27	6.48	184	3.87	65.4	>1,100	58	60	brown
	9/23/14	1530	20.11	6.56	193	4.02	47.1	386	95	100	light brown
	9/24/14	1155	19.58	6.62	210	4.60	2.5	646	148	150	light brown
	9/25/14	1030	18.17	6.41	256	3.64	11.9	862	198	200	light brown
DUP #	9/25/14	1250	18.10	6.52	306	3.91	2.1	347	218	220	light brown
	9/25/14	1530	18.25	6.37	285	3.02	3.6	481	238	240	light brown
MS/MSD #	9/26/14	1045	17.38	6.25	330	2.87	-15.1	598	258	260	light brown
	9/26/14	1445	19.10	5.98	333	3.02	17.1	461	283	285	cloudy
	9/29/14	1050	19.03	6.57	315	3.72	14.1	287	298	300	cloudy
	9/29/14	1335	19.25	6.01	309	2.46	49.3	2358	318	320	cloudy
	9/30/14	1010	18.63	6.15	3286	3.15	41.1	546	338	340	light grey
	9/30/14	1240	18.84	6.10	291	3.34	42.8	461	358	360	light brown
	10/1/14	1115	17.12	6.35	204	3.64	41.8	651	338	350	light brown
	10/1/14	1540	17.41	6.20	166	3.52	68.1	>1,100	418	420	gray
	10/2/14	1020	17.84	6.02	182	3.96	122.4	371	438	440	cloudy
	10/2/14	1245	—	—	Not enough to take readings				458	460	cloudy
	10/2/14	1540	17.76	6.27	190	2.87	65.1	4168	478	480	cloudy
	10/3/14	1015	18.12	6.49	187	1.12	17.2	581	498	500	cloudy
MS/MSD #	10/3/14	1250	18.56	6.56	199	0.65	12.4	733	518	520	gray
	10/3/14	1440	18.61	6.51	178	1.23	16.1	681	538	540	cloudy
	10/6/14	1115	14.62	6.89	514	0.26	-23.4	>1,100	558	560	gray
	10/6/14	1340	14.79	6.81	385	0.19	-67.4	>1,100	578	580	gray

Hydropunch Sample

Client: Navy (ResCon)
Project No: 60266526
Site Location: NWIRP Bethpage
Weather Conds:

Date :
VPB: 149
Collector(s): MR

Sample Date	Time	Temp (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Starting depth(ft)	Ending depth(ft)	Color
10-7-14	1140	—	Not	enough	sample to	take readings	—	603	608	gray
10-7-14	1430	16.86	6.70	128	4.16	12.8	868	618	620	brown
10-8-14	1050	16.89	6.20	160	3.11	42.4	471	638	640	cloudy / brown
Dup # 10-8-14	1335	15.41	6.18	184	3.62	26.8	>1,100	658	660	~~cloudy~~ gray
10-8-14	1540	17.62	6.32	119	3.84	-16.3	>1,100	678	680	~~cloudy~~ gray
10-9-14	1040	16.73	6.11	125	3.48	-14.1	>1,100	698	700	light gray
10-9-14	1345	17.02	5.98	92	4.17	111.1	261	718	720	clear
10-10-14	1020	—	Not	enough	to take	readings	—	738	740	gray
10-10-14	1300	—	not enough sample to take readings				—	758	760	gray
10-14-14	1105	—	not enough sample to take readings				—	804	810	gray
10-14-14	1325	17.61	6.12	104	3.62	91.4	987	818	820	dk/gray
10-14-14	1535	17.14	6.19	116	4.01	82.1	>1,100	838	840	light gray
10-15-14	1045	-	not enough sample to take readings				—	858	860	gray
10-15-14	1340	—	not enough sample to take readings				—	878	880	gray
10-16-14	~~1240~~	17.53	6.09	.97	3.81	64.2	>1,100	~~903~~	905	gray
10-16-14	1445	—	not enough sample to take reading					918	920	gray

Section 4

VPB 149 Analytical Data Validation

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

RESOLUTION CONSULTANTS

Resolution Consultants
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	
Service Request:	SH8165	
Analyses/Method:	EPA SW-846 Method 8260C for VOCs (GC/MS)	
Validation Level:	3	
AECOM Project Number:	60266526.SA.DV	
Prepared by:	Dawn Brule/RESCON	Completed on: 12/23/2014
Reviewed by:	Lori Herberich/RESCON	File Name: SH8165_8260C

SUMMARY

The samples listed below were collected by Resolution Consultants from the Regional Groundwater Investigation - NWIRP Bethpage site on September 23 - 25, 2014.

Sample ID	Matrix/Sample Type
VPB149-GWD-092514	Field Duplicate of VPB149-GW-092514-218-220
VPB149-GW-092314-58-60	Groundwater
VPB149-GW-092314-98-100	Groundwater
VPB149-GW-092414-148-150	Groundwater
VPB149-GW-092514-198-200	Groundwater
VPB149-GW-092514-218-220	Groundwater
VPB149-GW-092514-238-240	Groundwater
VPB149-TRIP BLANK-092514	Trip Blank

Data validation activities were conducted with reference to *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods SW-846, specifically SW-846 Method 8260C, Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry* (USEPA, 2006), *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
NA	Matrix spike (MS) and/or matrix spike duplicate (MSD) 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 and/or 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 and the "GW" from the sample ID, and truncated the ID for the Trip Blank in the report. The submitted EDD file reflects the full sample ID.

Holding Times and 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 initial calibration verification (ICV) percent recovery (%R) criteria were met;
- the continuing calibration verification standard (CCV) method percent difference or percent drift (%Ds) and RF acceptance criteria were met; and/or
- the retention time method acceptance criteria were met.

Nonconformances are summarized in Attachment A in Tables A-1 and A-2.

Data qualification to the analytes associated with the specific ICAL and/or CCV 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.

CCV Linearity Nonconformances:

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

Qualified sample results are shown in Table 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). An equipment blank was not submitted with the samples in this data set.

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 if the associated results were nondetect or if qualification of sample results was not required.

Nonconformances are summarized in Attachment A in Table A-3.

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 professional judgment			

LOQ - Limit of Quantitation.

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/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

Field duplicate RPDs were reviewed for conformance with the QC criterion of ≤30% for aqueous matrices. This criteria 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 not detected (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
VPB149-GW-092314-58-60	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	c
VPB149-GW-092314-58-60	WG	ACETONE		5.5**	UG/L	UJ	c,bt
VPB149-GW-092314-98-100	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	c
VPB149-GW-092314-98-100	WG	ACETONE		5.0*	UG/L	UJ	c,bt
VPB149-GW-092414-148-150	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	c
VPB149-GW-092414-148-150	WG	ACETONE		5.9**	UG/L	UJ	c,bt
VPB149-GW-092514-198-200	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	c
VPB149-GW-092514-198-200	WG	ACETONE		5.0*	UG/L	UJ	c,bt
VPB149-GW-092514-218-220	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	c
VPB149-GW-092514-218-220	WG	ACETONE		5.0*	UG/L	UJ	c,bt
VPB149-GW-092514-238-240	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	c
VPB149-GW-092514-238-240	WG	ACETONE		9.9**	UG/L	UJ	c,bt
VPB149-GWD-092514	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	c
VPB149-GWD-092514	WG	ACETONE		2.5	UG/L	UJ	c
VPB149-TRIP BLANK-092514	WQ	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	c
VPB149-TRIP BLANK-092514	WQ	ACETONE	4.9	2.5	UG/L	J	c

*LOQ

**sample value

Attachment A

Nonconformance Summary Tables

Table A-1 - Initial Calibration Verification Standard

ICV ID	Compound	% R	Limits
WG150662-7	ACETONE	151	80-120%
Associated samples: all samples in SDG SH8165			

Table A-2 -Continuing Calibration Verification Standard

CCV ID	Compound	% D	Limits
WG151040-4	ACETONE	-21	≤20%
	1,2-DIBROMO-3-CHLOROPROPANE	-25	≤20%
Associated samples: all samples in SDG SH8165			

Table A-3 - Field Blanks

Blank ID	Compound	Result	LOD	Units	Associated Samples
VPB149-TRIP BLANK-092514	ACETONE	4.9	2.5	UG/L	VPB149-GW-092314-58-60, VPB149-GW-092314-98-100, VPB149-GW-092414 148-150, VPB149-GW-092514-198-200, VPB149-GW-092514-218-220, VPB149-GW-092514-238-240

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

Page 1 of 1

Client	Contact	Phone #	Fax #
Resolution Consultants	Eleanor Vivarelo	(845) 424-4820	( )

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

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	NWIRP Bethpage / ~~[illegible]~~ 60266526	

Bill (if different than above) — Address

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

LAB USE ONLY WORK ORDER #: 5H8165

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 ☐
	VPB149-GW-092314-58-60	9-23-14 / 1250	GW	3	X										
	VPB149-GW-092314-98-100	9-23-14 / 1530	GW	3	X										
	VPB149-GW-092414-148-150	9-24-14 / 1155	GW	3	X										
	VPB149-GW-092514-198-200	9-25-14 / 1030	GW	3	X										
	VPB149-GW-092514-218-220	9-25-14 / 1250	GW	3	X										
	VPB149-GWD-092514	9-25-14 / -	GW	3	X										
	VPB149-GW-092514-238240	9-25-14 / 1530	GW	3	X										
	VPB149-TRIPBLANK-092514	9-15-14 / 1130	W	3	X										
		/													
		/													
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		/													
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		/													
		/													

OMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
Michael Zebel	9/25/14 / 1600	FedEx	FedEx	9/27/14 0940	[signature]
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

ORIGINAL

Report of Analytical Results

Client: ENSAFE
Lab ID: SH8165-1
Client ID: 149-092314-58-60
Project: Navy Clean WE15-03-06 NW
SDG: SH8165
Lab File ID: C9200.D

Sample Date: 23-SEP-14
Received Date: 27-SEP-14
Extract Date: 29-SEP-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151040

Analysis Date: 29-SEP-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 01-OCT-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	UJ	5.5	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	J	0.41	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	J	0.65	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: ENSAFE
Lab ID: SH8165-1
Client ID: 149-092314-58-60
Project: Navy Clean WE15-03-06 NW
SDG: SH8165
Lab File ID: C9200.D

Sample Date: 23-SEP-14
Received Date: 27-SEP-14
Extract Date: 29-SEP-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151040

Analysis Date: 29-SEP-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 01-OCT-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~~ UJ	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		96.3	%					
Toluene-d8		100.	%					
1,2-Dichloroethane-d4		106.	%					
Dibromofluoromethane		101.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8165-2
Client ID: 149-092314-98-100
Project: Navy Clean WE15-03-06 NW
SDG: SH8165
Lab File ID: C9201.D

Sample Date: 23-SEP-14
Received Date: 27-SEP-14
Extract Date: 29-SEP-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151040

Analysis Date: 29-SEP-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 01-OCT-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~~ UJ	~~2.6~~ 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	J	0.55	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: ENSAFE
Lab ID: SH8165-2
Client ID: 149-092314-98-100
Project: Navy Clean WE15-03-06 NW
SDG: SH8165
Lab File ID: C9201.D

Sample Date: 23-SEP-14
Received Date: 27-SEP-14
Extract Date: 29-SEP-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151040

Analysis Date: 29-SEP-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 01-OCT-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~~ UJ	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		92.4	%					
Toluene-d8		98.5	%					
1,2-Dichloroethane-d4		107.	%					
Dibromofluoromethane		103.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8165-3
Client ID: 149-092414-148-150
Project: Navy Clean WE15-03-06 NW
SDG: SH8165
Lab File ID: C9202.D

Sample Date: 24-SEP-14
Received Date: 27-SEP-14
Extract Date: 29-SEP-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151040

Analysis Date: 29-SEP-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 01-OCT-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	UJ	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		8.4	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	0.22	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		8.2	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		3.2	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	J	0.33	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		1.1	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: ENSAFE
Lab ID: SH8165-3
Client ID: 149-092414-148-150
Project: Navy Clean WE15-03-06 NW
SDG: SH8165
Lab File ID: C9202.D

Sample Date: 24-SEP-14
Received Date: 27-SEP-14
Extract Date: 29-SEP-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151040

Analysis Date: 29-SEP-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 01-OCT-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		37	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	0.22	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~~ UJ	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		91.5	%					
Toluene-d8		96.6	%					
1,2-Dichloroethane-d4		102.	%					
Dibromofluoromethane		104.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8165-4
Client ID: 149-092514-198-200
Project: Navy Clean WE15-03-06 NW
SDG: SH8165
Lab File ID: C9203.D

Sample Date: 25-SEP-14
Received Date: 27-SEP-14
Extract Date: 29-SEP-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151040

Analysis Date: 29-SEP-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 01-OCT-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	0.39	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	~~4.8~~ 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		3.9	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane		1.5	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	J	0.72	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		11	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		1.3	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: ENSAFE
Lab ID: SH8165-4
Client ID: 149-092514-198-200
Project: Navy Clean WE15-03-06 NW
SDG: SH8165
Lab File ID: C9203.D

Sample Date: 25-SEP-14
Received Date: 27-SEP-14
Extract Date: 29-SEP-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151040

Analysis Date: 29-SEP-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 01-OCT-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	J	0.17	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		2.5	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	0.72	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~~ UJ	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		92.9	%					
Toluene-d8		100.	%					
1,2-Dichloroethane-d4		104.	%					
Dibromofluoromethane		105.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8165-5
Client ID: 149-092514-218-220
Project: Navy Clean WE15-03-06 NW
SDG: SH8165
Lab File ID: C9204.D

Sample Date: 25-SEP-14
Received Date: 27-SEP-14
Extract Date: 29-SEP-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151040

Analysis Date: 29-SEP-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 01-OCT-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	0.53	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	~~4.1~~ 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		3.3	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane		2.3	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene		1.5	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		4.7	ug/L	1	1	1.0	0.20	0.50
Trichloroethene		9.6	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		4.0	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: ENSAFE
Lab ID: SH8165-5
Client ID: 149-092514-218-220
Project: Navy Clean WE15-03-06 NW
SDG: SH8165
Lab File ID: C9204.D

Sample Date: 25-SEP-14
Received Date: 27-SEP-14
Extract Date: 29-SEP-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151040

Analysis Date: 29-SEP-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 01-OCT-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		2.2	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	1.5	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~~ UJ	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		94.6	%					
Toluene-d8		98.0	%					
1,2-Dichloroethane-d4		104.	%					
Dibromofluoromethane		100.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8165-6
Client ID: VPB149-GWD-092514
Project: Navy Clean WE15-03-06 NW
SDG: SH8165
Lab File ID: C9205.D

Sample Date: 25-SEP-14
Received Date: 27-SEP-14
Extract Date: 29-SEP-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151040

Analysis Date: 29-SEP-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 01-OCT-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	0.54	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~~ UJ	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		3.3	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane		2.3	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene		1.6	ug/L	1	1	1.0	0.21	0.50
Chloroform	J	0.45	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		4.6	ug/L	1	1	1.0	0.20	0.50
Trichloroethene		9.9	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		4.2	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: ENSAFE
Lab ID: SH8165-6
Client ID: VPB149-GWD-092514
Project: Navy Clean WE15-03-06 NW
SDG: SH8165
Lab File ID: C9205.D

Sample Date: 25-SEP-14
Received Date: 27-SEP-14
Extract Date: 29-SEP-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151040

Analysis Date: 29-SEP-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 01-OCT-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		2.1	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	1.6	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~~ UJ	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		93.4	%					
Toluene-d8		99.7	%					
1,2-Dichloroethane-d4		105.	%					
Dibromofluoromethane		104.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8165-7
Client ID: 149-092514-238-240
Project: Navy Clean WE15-03-06 NW
SDG: SH8165
Lab File ID: C9206.D

Sample Date: 25-SEP-14
Received Date: 27-SEP-14
Extract Date: 29-SEP-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151040

Analysis Date: 29-SEP-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 01-OCT-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	0.42	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	UJ	9.9	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		2.1	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane		1.6	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene		1.3	ug/L	1	1	1.0	0.21	0.50
Chloroform	J	0.60	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		6.6	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		4.1	ug/L	1	1	1.0	0.20	0.50
Trichloroethene		8.1	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	J	0.33	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		2.8	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: ENSAFE
Lab ID: SH8165-7
Client ID: 149-092514-238-240
Project: Navy Clean WE15-03-06 NW
SDG: SH8165
Lab File ID: C9206.D

Sample Date: 25-SEP-14
Received Date: 27-SEP-14
Extract Date: 29-SEP-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151040

Analysis Date: 29-SEP-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 01-OCT-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		34	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	1.3	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~~ UJ	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		96.0	%					
Toluene-d8		99.6	%					
1,2-Dichloroethane-d4		103.	%					
Dibromofluoromethane		102.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8165-8
Client ID: VPB149-TB-092514
Project: Navy Clean WE15-03-06 NW
SDG: SH8165
Lab File ID: C9197.D

Sample Date: 25-SEP-14
Received Date: 27-SEP-14
Extract Date: 29-SEP-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151040

Analysis Date: 29-SEP-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 01-OCT-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~~ 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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10/29/15

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

Report of Analytical Results

Client: ENSAFE
Lab ID: SH8165-8
Client ID: VPB149-TB-092514
Project: Navy Clean WE15-03-06 NW
SDG: SH8165
Lab File ID: C9197.D

Sample Date: 25-SEP-14
Received Date: 27-SEP-14
Extract Date: 29-SEP-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151040

Analysis Date: 29-SEP-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 01-OCT-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~~ UJ	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		91.6	%					
Toluene-d8		98.4	%					
1,2-Dichloroethane-d4		107.	%					
Dibromofluoromethane		104.	%					

R. 12/9/15

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RESOLUTION CONSULTANTS

Resolution Consultants
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Chelmsford, MA 01824

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978.905.2101 fax

Data Validation Report

Project:	Regional Groundwater Investigation - NWIRP Bethpage	
Laboratory:	Katahdin Analytical	
Service Request:	SH8192	
Analyses/Method:	EPA SW-846 Method 8260C for VOCs (GC/MS)	
Validation Level:	3	
AECOM Project Number:	60266526.SA.DV	
Prepared by:	Dawn Brule/RESCON	Completed on: 12/23/2014
Reviewed by:	Lori Herberich/RESCON	File Name: SH8192_8260C

SUMMARY

The samples listed below were collected by Resolution Consultants from the Regional Groundwater Investigation - NWIRP Bethpage site on September 26 and 29, 2014..

Sample ID	Matrix/Sample Type
VPB149-GW-092614-258-260	Groundwater
VPB149-GW-092614-283-285	Groundwater
VPB149-GW-092914-298-300	Groundwater
VPB149-GW-092914-318-320	Groundwater
VPB149-TRIP BLANK-092914	Trip Blank

Data validation activities were conducted with reference to *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods SW-846, specifically SW-846 Method 8260C, Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry* (USEPA, 2006), *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) and/or matrix spike duplicate (MSD) 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 (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 and the "GW" from the sample ID, and truncated the ID for the Trip Blank in the report. The submitted EDD file reflects the full sample ID.

Holding Times and 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 initial calibration verification (ICV) percent recovery (%R) criteria were met;

- the continuing calibration verification standard (CCV) method percent difference or percent drift (%Ds) and RF acceptance criteria were met; and/or
- the retention time method acceptance criteria were met.

Nonconformances are summarized in Attachment A in Tables A-1 and A-2.

Data qualification to the analytes associated with the specific ICAL and/or CCV 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.

CCV Linearity Nonconformances:

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

Qualified sample results are shown in Table 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). An equipment blank was not submitted with the samples in this data set.

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 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. All QC acceptance criteria were met.

MS/MSD Results

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

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

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 not detected (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
VPB149-GW-092614-258-260	WG	ACETONE	3.3	2.5	UG/L	J	c
VPB149-GW-092614-258-260	WG	CHLOROETHANE		1.0	UG/L	UJ	c
VPB149-GW-092614-283-285	WG	ACETONE	5.1	2.5	UG/L	J	c
VPB149-GW-092614-283-285	WG	CHLOROETHANE		1.0	UG/L	UJ	c
VPB149-GW-092914-298-300	WG	ACETONE	3.5	2.5	UG/L	J	c
VPB149-GW-092914-298-300	WG	CHLOROETHANE		1.0	UG/L	UJ	c
VPB149-GW-092914-318-320	WG	ACETONE	4.8	2.5	UG/L	J	c
VPB149-GW-092914-318-320	WG	CHLOROETHANE		1.0	UG/L	UJ	c
VPB149-TRIP BLANK-092914	WQ	CHLOROETHANE		1.0	UG/L	UJ	c

Attachment A

Nonconformance Summary Tables

Table A-1 - Initial Calibration Verification Standard

ICV ID	Compound	% R	Limits
WG150662-7	ACETONE	151	80-120%
Associated samples: all samples in SDG SH8192			

Table A-2 -Continuing Calibration Verification Standard

CCV ID	Compound	% D	Limits
WG151252-4	CHLOROETHANE	-30	≤20%
Associated samples: all samples in SDG SH8192			

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

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
Resolution Consultants	Eleanor Vivander	(845) 428-	( )

Address	City	State	Zip Code
100 Red Schoolhouse Rd.	Chestnut Ridge	NY	09079

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

Bill (if different than above) Address

Sampler (Print / Sign) Michael Zobel / Michael Zobel

Copies To:

LAB USE ONLY WORK ORDER #: SH8192

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 ☐
	VPB149-GW-092614-258-260	9-26-14 / 1045	GW	3	✓									
	GW MS/MSD- VPB149-GW-092614-258-260	9-26-14 / 1045	GW	6	✓									
	VPB149-GW-092614-283-285	9-26-14 / 1445	GW	3	✓									
	VPB149-GW-092914-298-300	9-29-14 / 1050	GW	3	✓									
	VPB149-GW-092914-318-320	9-29-14 / 1335	GW	3	✓									
	VPB149-TripBlank-092914	9-19-14 / 1130	W	3	✓									
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		/												
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OMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
Michael Zobel	9-29-14 / 1530	9-30-14 0900			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

ORIGINAL

Report of Analytical Results

Client: ENSAFE
Lab ID: SH8192-1
Client ID: 149-092614-258-260
Project: Navy Clean WE15-03-06 NW
SDG: SH8192
Lab File ID: C9248.D

Sample Date: 26-SEP-14
Received Date: 30-SEP-14
Extract Date: 01-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151252

Analysis Date: 01-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 02-OCT-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	3.3	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	J	0.84	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane		1.5	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	J	0.33	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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K. 12/5/15

Report of Analytical Results

Client: ENSAFE
Lab ID: SH8192-1
Client ID: 149-092614-258-260
Project: Navy Clean WE15-03-06 NW
SDG: SH8192
Lab File ID: C9248.D

Sample Date: 26-SEP-14
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Analysis Date: 01-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 02-OCT-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		1.8	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		94.0	%					
Toluene-d8		99.8	%					
1,2-Dichloroethane-d4		103.	%					
Dibromofluoromethane		98.9	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8192-2
Client ID: 149-092614-283-285
Project: Navy Clean WE15-03-06 NW
SDG: SH8192
Lab File ID: C9249.D

Sample Date: 26-SEP-14
Received Date: 30-SEP-14
Extract Date: 01-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151252

Analysis Date: 01-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 02-OCT-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	5.1	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: ENSAFE
Lab ID: SH8192-2
Client ID: 149-092614-283-285
Project: Navy Clean WE15-03-06 NW
SDG: SH8192
Lab File ID: C9249.D

Sample Date: 26-SEP-14
Received Date: 30-SEP-14
Extract Date: 01-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151252

Analysis Date: 01-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 02-OCT-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		3.1	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		94.4	%					
Toluene-d8		100.	%					
1,2-Dichloroethane-d4		104.	%					
Dibromofluoromethane		103.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8192-3
Client ID: 149-092914-298-300
Project: Navy Clean WE15-03-06 NW
SDG: SH8192
Lab File ID: C9250.D

Sample Date: 29-SEP-14
Received Date: 30-SEP-14
Extract Date: 01-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151252

Analysis Date: 01-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 02-OCT-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	0.38	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	3.5	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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1/24/15

Report of Analytical Results

Client: ENSAFE
Lab ID: SH8192-3
Client ID: 149-092914-298-300
Project: Navy Clean WE15-03-06 NW
SDG: SH8192
Lab File ID: C9250.D

Sample Date: 29-SEP-14
Received Date: 30-SEP-14
Extract Date: 01-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151252

Analysis Date: 01-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 02-OCT-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		92.7	%					
Toluene-d8		99.2	%					
1,2-Dichloroethane-d4		100.	%					
Dibromofluoromethane		99.9	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8192-4
Client ID: 149-092914-318-320
Project: Navy Clean WE15-03-06 NW
SDG: SH8192
Lab File ID: C9251.D

Sample Date: 29-SEP-14
Received Date: 30-SEP-14
Extract Date: 01-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151252

Analysis Date: 01-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 02-OCT-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	4.8	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	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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10/29/15

Report of Analytical Results

Client: ENSAFE
Lab ID: SH8192-4
Client ID: 149-092914-318-320
Project: Navy Clean WE15-03-06 NW
SDG: SH8192
Lab File ID: C9251.D

Sample Date: 29-SEP-14
Received Date: 30-SEP-14
Extract Date: 01-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151252

Analysis Date: 01-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 02-OCT-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	J	0.84	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		93.0	%					
Toluene-d8		99.4	%					
1,2-Dichloroethane-d4		103.	%					
Dibromofluoromethane		102.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8192-5
Client ID: VPB149-TB-092914
Project: Navy Clean WE15-03-06 NW
SDG: SH8192
Lab File ID: C9247.D

Sample Date: 29-SEP-14
Received Date: 30-SEP-14
Extract Date: 01-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151252

Analysis Date: 01-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 02-OCT-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	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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R: 12/9/15

Report of Analytical Results

Client: ENSAFE
Lab ID: SH8192-5
Client ID: VPB149-TB-092914
Project: Navy Clean WE15-03-06 NW
SDG: SH8192
Lab File ID: C9247.D

Sample Date: 29-SEP-14
Received Date: 30-SEP-14
Extract Date: 01-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151252

Analysis Date: 01-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 02-OCT-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		93.2	%					
Toluene-d8		99.8	%					
1,2-Dichloroethane-d4		104.	%					
Dibromofluoromethane		97.9	%					

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RESOLUTION CONSULTANTS

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Chelmsford, MA 01824

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Data Validation Report

Project:	Regional Groundwater Investigation - NWIRP Bethpage	
Laboratory:	Katahdin Analytical	
Service Request:	SH8337	
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:	3	
AECOM Project Number:	60266526.SA.DV	
Prepared by:	Dawn Brule/RESCON	Completed on: 12/23/2014
Reviewed by:	Lori Herberich/RESCON	File Name: SH8337_5310B and 8260B

SUMMARY

The samples listed below were collected by Resolution Consultants from the Regional Groundwater Investigation - NWIRP Bethpage site on September 30 and October 1 and 2, 2014.

Sample ID	Matrix/Sample Type
VPB149-EB-093014	Equipment blank
VPB149-FB-093014	Field blank
VPB149-GW-093014-338-340	Ground water
VPB149-GW-093014-358-360	Ground water
VPB149-GW-100114-378-380	Ground water
VPB149-GW-100114-418-420	Ground water
VPB149-GW-100214-438-440	Ground water
VPB149-GW-100214-458-460	Ground water
VPB149-GW-100214-478-480	Ground water
VPB149-TRIPBLANK-100214	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 SM5310B, 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
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. 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 (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 and the "GW" from the sample ID, and truncated the ID for the 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 VPB149-GW-093014-358-360 and VPB149-GW-100214-478-480, the laboratory decanted the liquid from each vial prior to analysis.
- For sample VPB149-GW-100114-418-420 the laboratory decanted the water from three individual vials into one vial as a composite.

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. 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 initial calibration verification (ICV) percent recovery (%R) criteria were met;
- the continuing calibration verification standard (CCV) method percent difference or percent drift (%Ds) and RF acceptance criteria were met; and/or
- the retention time method acceptance criteria were met.

Nonconformances are summarized in Attachment A in Tables A-1 and A-2.

Data qualification to the analytes associated with the specific ICAL and/or CCV 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.

CCV Linearity Nonconformances:

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

Qualified sample results are shown in Table 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.

Nonconformances are summarized in Attachment A in Table A-3.

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
		≥ 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.**
	TIC detected	Detects	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 professional judgment.			

LOQ - Limit of Quantitation.

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/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 not detected (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
VPB149-EB-093014	WQ	BROMOMETHANE		1.0	UG/L	UJ	c
VPB149-EB-093014	WQ	CHLOROETHANE		1.0	UG/L	UJ	c
VPB149-FB-093014	WQ	BROMOMETHANE		1.0	UG/L	UJ	c
VPB149-FB-093014	WQ	CHLOROETHANE		1.0	UG/L	UJ	c
VPB149-GW-093014-338-340	WG	ACETONE	8.2	2.5	UG/L	J	c
VPB149-GW-093014-338-340	WG	BROMOMETHANE		1.0	UG/L	UJ	c
VPB149-GW-093014-338-340	WG	CARBON DISULFIDE		1.0*	UG/L	U	bl
VPB149-GW-093014-338-340	WG	CHLOROETHANE		1.0	UG/L	UJ	c
VPB149-GW-093014-358-360	WG	1,1,1-TRICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	1,1,2,2-TETRACHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	1,1,2-TRICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	1,1-DICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	1,1-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	1,2,4-TRICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	1,2-DIBROMOETHANE		0.50	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	1,2-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	1,2-DICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	1,2-DICHLOROETHENE, TOTAL		1.0	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	1,2-DICHLOROPROPANE		0.50	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	1,3-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	1,4-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	2-BUTANONE		2.5	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	2-HEXANONE		2.5	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	ACETONE	8.6	2.5	UG/L	J	mc,c
VPB149-GW-093014-358-360	WG	BENZENE		0.50	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	BROMODICHLOROMETHANE		0.50	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	BROMOFORM		0.50	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	BROMOMETHANE		1.0	UG/L	UJ	mc,c
VPB149-GW-093014-358-360	WG	CARBON DISULFIDE		1.0*	UG/L	UJ	mc,bl
VPB149-GW-093014-358-360	WG	CARBON TETRACHLORIDE		0.50	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	CHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	CHLOROETHANE		1.0	UG/L	UJ	mc,c
VPB149-GW-093014-358-360	WG	CHLOROFORM		0.50	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	CHLOROMETHANE		1.0	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	CIS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB149-GW-093014-358-360	WG	CIS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	CYCLOHEXANE		0.50	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	DIBROMOCHLOROMETHANE		0.50	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	DICHLORODIFLUOROMETHANE		1.0	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	ETHYLBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	ISOPROPYLBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	M- AND P-XYLENE		1.0	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	METHYL ACETATE		0.75	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	METHYL CYCLOHEXANE	4.6	0.50	UG/L	J	mc
VPB149-GW-093014-358-360	WG	METHYL TERT-BUTYL ETHER		0.50	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	METHYLENE CHLORIDE		2.5	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	O-XYLENE		0.50	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	STYRENE		0.50	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	TETRACHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	TOLUENE		0.50	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	TRANS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	TRANS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	TRICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	TRICHLOROFLUOROMETHANE		1.0	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	VINYL CHLORIDE		1.0	UG/L	UJ	mc
VPB149-GW-093014-358-360	WG	XYLENES, TOTAL		1.5	UG/L	UJ	mc
VPB149-GW-100114-378-380	WG	ACETONE	6.3	2.5	UG/L	J	c
VPB149-GW-100114-378-380	WG	BROMOMETHANE		1.0	UG/L	UJ	c
VPB149-GW-100114-378-380	WG	CARBON DISULFIDE		1.0*	UG/L	U	bl
VPB149-GW-100114-378-380	WG	CHLOROETHANE		1.0	UG/L	UJ	c
VPB149-GW-100114-418-420	WG	1,1,1-TRICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	1,1,2,2-TETRACHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	1,1,2-TRICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	1,1-DICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	1,1-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	1,2,4-TRICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	1,2-DIBROMOETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	1,2-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	1,2-DICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	1,2-DICHLOROETHENE, TOTAL		1.0	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	1,2-DICHLOROPROPANE		0.50	UG/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB149-GW-100114-418-420	WG	1,3-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	1,4-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	2-BUTANONE		2.5	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	2-HEXANONE		2.5	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	ACETONE	14	2.5	UG/L	J	mc,c
VPB149-GW-100114-418-420	WG	BENZENE		0.50	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	BROMODICHLOROMETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	BROMOFORM		0.50	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	BROMOMETHANE		1.0	UG/L	UJ	mc,c
VPB149-GW-100114-418-420	WG	CARBON DISULFIDE		1.0*	UG/L	UJ	mc,bl
VPB149-GW-100114-418-420	WG	CARBON TETRACHLORIDE		0.50	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	CHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	CHLOROETHANE		1.0	UG/L	UJ	mc,c
VPB149-GW-100114-418-420	WG	CHLOROFORM		0.50	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	CHLOROMETHANE		1.0	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	CIS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	CIS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	CYCLOHEXANE		0.50	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	DIBROMOCHLOROMETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	DICHLORODIFLUOROMETHANE		1.0	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	ETHYLBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	ISOPROPYLBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	M- AND P-XYLENE		1.0	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	METHYL ACETATE		0.75	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	METHYL CYCLOHEXANE	2.0	0.50	UG/L	J	mc
VPB149-GW-100114-418-420	WG	METHYL TERT-BUTYL ETHER		0.50	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	METHYLENE CHLORIDE		2.5	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	O-XYLENE		0.50	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	STYRENE		0.50	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	TETRACHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	TOLUENE		0.50	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	TRANS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	TRANS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	TRICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	TRICHLOROFLUOROMETHANE		1.0	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	VINYL CHLORIDE		1.0	UG/L	UJ	mc
VPB149-GW-100114-418-420	WG	XYLENES, TOTAL		1.5	UG/L	UJ	mc
VPB149-GW-100214-438-440	WG	BROMOMETHANE		1.0	UG/L	UJ	c

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB149-GW-100214-438-440	WG	CHLOROETHANE		1.0	UG/L	UJ	c
VPB149-GW-100214-458-460	WG	ACETONE	7.2	2.5	UG/L	J	c
VPB149-GW-100214-458-460	WG	BROMOMETHANE		1.0	UG/L	UJ	c
VPB149-GW-100214-458-460	WG	CHLOROETHANE		1.0	UG/L	UJ	c
VPB149-GW-100214-478-480	WG	1,1,1-TRICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	1,1,2,2-TETRACHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	1,1,2-TRICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	1,1-DICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	1,1-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	1,2,4-TRICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	1,2-DIBROMOETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	1,2-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	1,2-DICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	1,2-DICHLOROETHENE, TOTAL		1.0	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	1,2-DICHLOROPROPANE		0.50	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	1,3-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	1,4-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	2-BUTANONE		2.5	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	2-HEXANONE		2.5	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	ACETONE	2.8	2.5	UG/L	J	mc,c
VPB149-GW-100214-478-480	WG	BENZENE		0.50	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	BROMODICHLOROMETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	BROMOFORM		0.50	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	BROMOMETHANE		1.0	UG/L	UJ	mc,c
VPB149-GW-100214-478-480	WG	CARBON DISULFIDE		0.50	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	CARBON TETRACHLORIDE		0.50	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	CHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	CHLOROETHANE		1.0	UG/L	UJ	mc,c
VPB149-GW-100214-478-480	WG	CHLOROFORM		0.50	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	CHLOROMETHANE		1.0	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	CIS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	CIS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	CYCLOHEXANE		0.50	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	DIBROMOCHLOROMETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	DICHLORODIFLUOROMETHANE		1.0	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	ETHYLBENZENE		0.50	UG/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB149-GW-100214-478-480	WG	ISOPROPYLBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	M- AND P-XYLENE		1.0	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	METHYL ACETATE		0.75	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	METHYL CYCLOHEXANE	0.35	0.50	UG/L	J	mc
VPB149-GW-100214-478-480	WG	METHYL TERT-BUTYL ETHER		0.50	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	METHYLENE CHLORIDE		2.5	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	O-XYLENE		0.50	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	STYRENE		0.50	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	TETRACHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	TOLUENE		0.50	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	TRANS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	TRANS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	TRICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	TRICHLOROFLUOROMETHANE		1.0	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	VINYL CHLORIDE		1.0	UG/L	UJ	mc
VPB149-GW-100214-478-480	WG	XYLENES, TOTAL		1.5	UG/L	UJ	mc
VPB149-TRIPBLANK-100214	WQ	BROMOMETHANE		1.0	UG/L	UJ	c
VPB149-TRIPBLANK-100214	WQ	CHLOROETHANE		1.0	UG/L	UJ	c

*LOQ

Attachment A

Nonconformance Summary Tables

Table A-1 - Initial Calibration Verification Standard

ICV ID	Compound	% R	Limits
WG150662-7	ACETONE	151	80-120%
Associated samples: all samples in SDG SH8337			

Table A-2 -Continuing Calibration Verification Standard

CCV ID	Compound	% D	Limits
WG151555-4	BROMOMETHANE	-25	≤20%
	CHLOROETHANE	-40	≤20%
Associated samples: all samples in SDG SH8337			

Table A-3 - Lab Blanks

Blank ID	Compound	Result	LOD	Units	Associated Samples
WG151555-2	CARBON DISULFIDE	0.34	0.50	UG/L	VPB149-GW-093014-338-340 VPB149-GW-093014-358-360 VPB149-GW-100114-378-380 VPB149-GW-100114-418-420

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 Vivandou	(845) 425-4980	( )

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

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	NWIRP Bethpage / 60266526	

Bill (if different than above) Address

Sampler (Print / Sign) Michael Zobel / Michael Zobel

Copies To:

LAB USE ONLY WORK ORDER #:

KATAHDIN PROJECT NUMBER SH8337

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 ☐I
					VOC	TOC								
	VPB149-GW-093014-338-340	9-30-14 / 1010	GW	3	X									
	VPB149-GW-093014-358-360	9-30-14 / 1240	GW	3	X									
	VPB149-EB-093014	9-30-14 / 1400	W	6	X	X								
	VPB149-FB-093014	9-30-14 / 1410	W	6	X	X								
	VPB149-GW-100114-378-380	10-1-14 / 1115	GW	3	X									
	VPB149-GW-100114-418-420	10-1-14 / 1540	GW	3	X									
	VPB149-GW-100214-438-440	10-2-14 / 1020	GW	3	X									
	VPB149-GW-100214-458-460	10-2-14 / 1245	GW	3	X									
	VPB149-TripBlank-100214	9-19-14 / 1130	W	3	X									
	VPB149-GW-100214-478-480	10-2-14 / 1500	GW	3	X									
		/												
		/												
		/												
		/												
		/												
		/												

COMMENTS

10-3-14 04:45

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
Michael Zobel	10-2-14 / 1530	Donna Medley			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

0000016 ORIGINAL

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

Report of Analytical Results

Client: ENSAFE
Lab ID: SH8337-3
Client ID: VPB149-EB-093014
Project: Navy Clean WE15-03-06 NW
SDG: SH8337
Lab File ID: C9348.D

Sample Date: 30-SEP-14
Received Date: 03-OCT-14
Extract Date: 06-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151555

Analysis Date: 06-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 07-OCT-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~~ UJ	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	~~UL~~ 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	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	J	0.93	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	J	0.53	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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JK 10/29/15

Report of Analytical Results

Client: ENSAFE
Lab ID: SH8337-3
Client ID: VPB149-EB-093014
Project: Navy Clean WE15-03-06 NW
SDG: SH8337
Lab File ID: C9348.D

Sample Date: 30-SEP-14
Received Date: 03-OCT-14
Extract Date: 06-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151555

Analysis Date: 06-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 07-OCT-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		97.3	%					
Toluene-d8		100.	%					
1,2-Dichloroethane-d4		99.0	%					
Dibromofluoromethane		100.	%					

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http://www.katahdinlab.com

Report of Analytical Results

Client: ENSAFE
Lab ID: SH8337-4
Client ID: VPB149-FB-093014
Project: Navy Clean WE15-03-06 NW
SDG: SH8337
Lab File ID: C9349.D

Sample Date: 30-SEP-14
Received Date: 03-OCT-14
Extract Date: 06-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151555

Analysis Date: 06-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 07-OCT-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~~ UJ	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	~~UL~~ 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	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: ENSAFE
Lab ID: SH8337-4
Client ID: VPB149-FB-093014
Project: Navy Clean WE15-03-06 NW
SDG: SH8337
Lab File ID: C9349.D

Sample Date: 30-SEP-14
Received Date: 03-OCT-14
Extract Date: 06-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151555

Analysis Date: 06-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 07-OCT-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		97.9	%					
Toluene-d8		101.	%					
1,2-Dichloroethane-d4		100.	%					
Dibromofluoromethane		101.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8337-1
Client ID: 149-093014-338-340
Project: Navy Clean WE15-03-06 NW
SDG: SH8337
Lab File ID: C9352.D

Sample Date: 30-SEP-14
Received Date: 03-OCT-14
Extract Date: 06-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151555

Analysis Date: 06-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 07-OCT-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~~ UJ	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	~~UL~~ 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	~~0.26~~ 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	8.2	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	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: ENSAFE
Lab ID: SH8337-1
Client ID: 149-093014-338-340
Project: Navy Clean WE15-03-06 NW
SDG: SH8337
Lab File ID: C9352.D

Sample Date: 30-SEP-14
Received Date: 03-OCT-14
Extract Date: 06-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151555

Analysis Date: 06-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 07-OCT-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		2.7	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		97.1	%					
Toluene-d8		98.7	%					
1,2-Dichloroethane-d4		99.6	%					
Dibromofluoromethane		103.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8337-2
Client ID: 149-093014-358-360
Project: Navy Clean WE15-03-06 NW
SDG: SH8337
Lab File ID: C9353.D

Sample Date: 30-SEP-14
Received Date: 03-OCT-14
Extract Date: 06-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151555

Analysis Date: 06-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 07-OCT-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	UL	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	~~0.44~~ 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	8.6	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: ENSAFE
Lab ID: SH8337-2
Client ID: 149-093014-358-360
Project: Navy Clean WE15-03-06 NW
SDG: SH8337
Lab File ID: C9353.D

Sample Date: 30-SEP-14
Received Date: 03-OCT-14
Extract Date: 06-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151555

Analysis Date: 06-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 07-OCT-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	J	4.6	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U UJ	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		94.9	%					
Toluene-d8		98.6	%					
1,2-Dichloroethane-d4		102.	%					
Dibromofluoromethane		103.	%					

10/28/15

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8337-5
Client ID: 149-100114-378-380
Project: Navy Clean WE15-03-06 NW
SDG: SH8337
Lab File ID: C9354.D

Sample Date: 01-OCT-14
Received Date: 03-OCT-14
Extract Date: 06-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151555

Analysis Date: 06-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 07-OCT-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~~ UJ	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	~~Ut~~ 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	~~0.37~~ 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	6.3	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: ENSAFE
Lab ID: SH8337-5
Client ID: 149-100114-378-380
Project: Navy Clean WE15-03-06 NW
SDG: SH8337
Lab File ID: C9354.D

Sample Date: 01-OCT-14
Received Date: 03-OCT-14
Extract Date: 06-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151555

Analysis Date: 06-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 07-OCT-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	J	0.38	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		102.	%					
1,2-Dichloroethane-d4		101.	%					
Dibromofluoromethane		106.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8337-6
Client ID: 149-100114-418-420
Project: Navy Clean WE15-03-06 NW
SDG: SH8337
Lab File ID: C9351.D

Sample Date: 01-OCT-14
Received Date: 03-OCT-14
Extract Date: 06-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151555

Analysis Date: 06-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 07-OCT-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	UL	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	~~0.33~~ 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	14	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: ENSAFE
Lab ID: SH8337-6
Client ID: 149-100114-418-420
Project: Navy Clean WE15-03-06 NW
SDG: SH8337
Lab File ID: C9351.D

Sample Date: 01-OCT-14
Received Date: 03-OCT-14
Extract Date: 06-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151555

Analysis Date: 06-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 07-OCT-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	J	2.0	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U UJ	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		94.4	%					
Toluene-d8		98.1	%					
1,2-Dichloroethane-d4		98.0	%					
Dibromofluoromethane		96.8	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8337-7
Client ID: 149-100214-438-440
Project: Navy Clean WE15-03-06 NW
SDG: SH8337
Lab File ID: C9355.D

Sample Date: 02-OCT-14
Received Date: 03-OCT-14
Extract Date: 06-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151555

Analysis Date: 06-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 07-OCT-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~~ UJ	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	~~UL~~ 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	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: ENSAFE
Lab ID: SH8337-7
Client ID: 149-100214-438-440
Project: Navy Clean WE15-03-06 NW
SDG: SH8337
Lab File ID: C9355.D

Sample Date: 02-OCT-14
Received Date: 03-OCT-14
Extract Date: 06-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151555

Analysis Date: 06-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 07-OCT-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		96.3	%					
Toluene-d8		99.2	%					
1,2-Dichloroethane-d4		102.	%					
Dibromofluoromethane		102.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8337-8
Client ID: 149-100214-458-460
Project: Navy Clean WE15-03-06 NW
SDG: SH8337
Lab File ID: C9356.D

Sample Date: 02-OCT-14
Received Date: 03-OCT-14
Extract Date: 06-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151555

Analysis Date: 06-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 07-OCT-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~~ UJ	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	~~UL~~ 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	7.2	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	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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12/29/15

Report of Analytical Results

Client: ENSAFE
Lab ID: SH8337-8
Client ID: 149-100214-458-460
Project: Navy Clean WE15-03-06 NW
SDG: SH8337
Lab File ID: C9356.D

Sample Date: 02-OCT-14
Received Date: 03-OCT-14
Extract Date: 06-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151555

Analysis Date: 06-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 07-OCT-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	J	0.42	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		98.5	%					
Toluene-d8		101.	%					
1,2-Dichloroethane-d4		100.	%					
Dibromofluoromethane		104.	%					

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: ENSAFE
Lab ID: SH8337-10
Client ID: 149-100214-478-480
Project: Navy Clean WE15-03-06 NW
SDG: SH8337
Lab File ID: C9357.D

Sample Date: 02-OCT-14
Received Date: 03-OCT-14
Extract Date: 06-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151555

Analysis Date: 06-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 07-OCT-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	UL	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	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	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: ENSAFE
Lab ID: SH8337-10
Client ID: 149-100214-478-480
Project: Navy Clean WE15-03-06 NW
SDG: SH8337
Lab File ID: C9357.D

Sample Date: 02-OCT-14
Received Date: 03-OCT-14
Extract Date: 06-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151555

Analysis Date: 06-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 07-OCT-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	J J	0.35	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U UJ	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		95.8	%					
Toluene-d8		101.	%					
1,2-Dichloroethane-d4		103.	%					
Dibromofluoromethane		103.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8337-9
Client ID: VPB149-TB-100214
Project: Navy Clean WE15-03-06 NW
SDG: SH8337
Lab File ID: C9347.D

Sample Date: 02-OCT-14
Received Date: 03-OCT-14
Extract Date: 06-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151555

Analysis Date: 06-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 07-OCT-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~~ UJ	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	~~UL~~ 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	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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10/29/15

Report of Analytical Results

Client: ENSAFE
Lab ID: SH8337-9
Client ID: VPB149-TB-100214
Project: Navy Clean WE15-03-06 NW
SDG: SH8337
Lab File ID: C9347.D

Sample Date: 02-OCT-14
Received Date: 03-OCT-14
Extract Date: 06-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151555

Analysis Date: 06-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 07-OCT-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		95.3	%					
Toluene-d8		97.5	%					
1,2-Dichloroethane-d4		95.6	%					
Dibromofluoromethane		97.1	%					

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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: SH8337-3
Report Date: 18-OCT-14
Client PO: 16518
Project: Navy Clean WE15-03-0
SDG: SH8337

Sample Description	Matrix	Date Sampled	Date Received
VPB149-EB-093014	AQ	30-SEP-14 14:00:00	03-OCT-14

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Organic Carbon	J0.32 mg/L	1.0	0.10	.5	SM5310B	WG151770	08-OCT-14 19:08:06	N/A	N/A	

Report of Analytical Results

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

Lab Sample ID: SH8337-4
Report Date: 18-OCT-14
Client PO: 16518
Project: Navy Clean WE15-03-0
SDG: SH8337

Sample Description	Matrix	Date Sampled	Date Received
VPB149-FB-093014	AQ	30-SEP-14 14:10:00	03-OCT-14

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Organic Carbon	J0.22 mg/L	1.0	0.10	.5	SM5310B	WG151770	08-OCT-14 19:35:07	N/A	N/A	

RESOLUTION CONSULTANTS

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Chelmsford, MA 01824

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Data Validation Report

Project:	Regional Groundwater Investigation - NWIRP Bethpage	
Laboratory:	Katahdin Analytical	
Service Request:	SH8430	
Analyses/Method:	EPA SW-846 Method 8260B for VOCs (GC/MS)	
Validation Level:	3	
AECOM Project Number:	60266526.SA.DV	
Prepared by:	Dawn Brule/RESCON	Completed on: 12/22/2014
Reviewed by:	Lori Herberich/RESCON	File Name: SH8430_8260B

SUMMARY

The samples listed below were collected by Resolution Consultants from the Regional Groundwater Investigation - NWIRP Bethpage site on September 19 and October 3 and 6, 2014.

Sample ID	Matrix/Sample Type
VPB149-100314-498-500	Groundwater
VPB149-100314-518-520	Groundwater
VPB149-100314-538-540	Groundwater
VPB149-100614-558-560	Groundwater
VPB149-100614-578-580	Groundwater
VPB149-TB-100614	Trip Blank

Data validation activities were conducted with reference to *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods SW-846, 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) and/or matrix spike duplicate (MSD) 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 (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 and the "GW" from the sample ID, and truncated the ID for the Trip Blank in the report.

Selected samples were mostly soil and had very little standing water.

- For samples VPB149-GW-100314-538-540 and VPB149-GW-100614-578-580, the laboratory decanted the liquid from each vial prior to analysis.
- For sample VPB149-GW-100614-558-560 the laboratory decanted the water from two individual vials into one vial as a composite.

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. Qualified sample results are shown in Table 1.

Holding Times and 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 initial calibration verification (ICV) percent recovery (%R) criteria were met;
- the continuing calibration verification standard (CCV) method percent difference or percent drift (%Ds) and RF acceptance criteria were met; and/or
- the retention time method acceptance criteria were met.

Nonconformances are summarized in Attachment A in Table A-1.

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

ICV Recovery Nonconformances:

Nonconformances	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.

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). An equipment blank was not submitted with the samples in this data set

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 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. All QC acceptance criteria were met.

MS/MSD Results

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

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 not detected (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
VPB149-100314-498-500	WG	2-HEXANONE		2.5	UG/L	UJ	c
VPB149-100314-498-500	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	c
VPB149-100314-518-520	WG	2-HEXANONE		2.5	UG/L	UJ	c
VPB149-100314-518-520	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	c
VPB149-100314-538-540	WG	1,1,1-TRICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-100314-538-540	WG	1,1,2,2-TETRACHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-100314-538-540	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	0.60	0.50	UG/L	J	mc
VPB149-100314-538-540	WG	1,1,2-TRICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-100314-538-540	WG	1,1-DICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-100314-538-540	WG	1,1-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-100314-538-540	WG	1,2,4-TRICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-100314-538-540	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	mc
VPB149-100314-538-540	WG	1,2-DIBROMOETHANE		0.50	UG/L	UJ	mc
VPB149-100314-538-540	WG	1,2-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-100314-538-540	WG	1,2-DICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-100314-538-540	WG	1,2-DICHLOROETHENE, TOTAL		1.0	UG/L	UJ	mc
VPB149-100314-538-540	WG	1,2-DICHLOROPROPANE		0.50	UG/L	UJ	mc
VPB149-100314-538-540	WG	1,3-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-100314-538-540	WG	1,4-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-100314-538-540	WG	2-BUTANONE		2.5	UG/L	UJ	mc
VPB149-100314-538-540	WG	2-HEXANONE		2.5	UG/L	UJ	mc,c
VPB149-100314-538-540	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	mc,c
VPB149-100314-538-540	WG	ACETONE	10	2.5	UG/L	J	mc
VPB149-100314-538-540	WG	BENZENE		0.50	UG/L	UJ	mc
VPB149-100314-538-540	WG	BROMODICHLOROMETHANE		0.50	UG/L	UJ	mc
VPB149-100314-538-540	WG	BROMOFORM		0.50	UG/L	UJ	mc
VPB149-100314-538-540	WG	BROMOMETHANE		1.0	UG/L	UJ	mc
VPB149-100314-538-540	WG	CARBON DISULFIDE		0.50	UG/L	UJ	mc
VPB149-100314-538-540	WG	CARBON TETRACHLORIDE		0.50	UG/L	UJ	mc
VPB149-100314-538-540	WG	CHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-100314-538-540	WG	CHLOROETHANE		1.0	UG/L	UJ	mc
VPB149-100314-538-540	WG	CHLOROFORM		0.50	UG/L	UJ	mc
VPB149-100314-538-540	WG	CHLOROMETHANE		1.0	UG/L	UJ	mc
VPB149-100314-538-540	WG	CIS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-100314-538-540	WG	CIS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	mc
VPB149-100314-538-540	WG	CYCLOHEXANE		0.50	UG/L	UJ	mc
VPB149-100314-538-540	WG	DIBROMOCHLOROMETHANE		0.50	UG/L	UJ	mc
VPB149-100314-538-540	WG	DICHLORODIFLUOROMETHANE	0.29	1.0	UG/L	J	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB149-100314-538-540	WG	ETHYLBENZENE		0.50	UG/L	UJ	mc
VPB149-100314-538-540	WG	ISOPROPYLBENZENE		0.50	UG/L	UJ	mc
VPB149-100314-538-540	WG	M- AND P-XYLENE		1.0	UG/L	UJ	mc
VPB149-100314-538-540	WG	METHYL ACETATE		0.75	UG/L	UJ	mc
VPB149-100314-538-540	WG	METHYL CYCLOHEXANE	0.44	0.50	UG/L	J	mc
VPB149-100314-538-540	WG	METHYL TERT-BUTYL ETHER		0.50	UG/L	UJ	mc
VPB149-100314-538-540	WG	METHYLENE CHLORIDE		2.5	UG/L	UJ	mc
VPB149-100314-538-540	WG	O-XYLENE		0.50	UG/L	UJ	mc
VPB149-100314-538-540	WG	STYRENE		0.50	UG/L	UJ	mc
VPB149-100314-538-540	WG	TETRACHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-100314-538-540	WG	TOLUENE		0.50	UG/L	UJ	mc
VPB149-100314-538-540	WG	TRANS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-100314-538-540	WG	TRANS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	mc
VPB149-100314-538-540	WG	TRICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-100314-538-540	WG	TRICHLOROFLUOROMETHANE		1.0	UG/L	UJ	mc
VPB149-100314-538-540	WG	VINYL CHLORIDE		1.0	UG/L	UJ	mc
VPB149-100314-538-540	WG	XYLENES, TOTAL		1.5	UG/L	UJ	mc
VPB149-100614-558-560	WG	1,1,1-TRICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-100614-558-560	WG	1,1,2,2-TETRACHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-100614-558-560	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		0.50	UG/L	UJ	mc
VPB149-100614-558-560	WG	1,1,2-TRICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-100614-558-560	WG	1,1-DICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-100614-558-560	WG	1,1-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-100614-558-560	WG	1,2,4-TRICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-100614-558-560	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	mc
VPB149-100614-558-560	WG	1,2-DIBROMOETHANE		0.50	UG/L	UJ	mc
VPB149-100614-558-560	WG	1,2-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-100614-558-560	WG	1,2-DICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-100614-558-560	WG	1,2-DICHLOROETHENE, TOTAL		1.0	UG/L	UJ	mc
VPB149-100614-558-560	WG	1,2-DICHLOROPROPANE		0.50	UG/L	UJ	mc
VPB149-100614-558-560	WG	1,3-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-100614-558-560	WG	1,4-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-100614-558-560	WG	2-BUTANONE	5.1	2.5	UG/L	J	mc
VPB149-100614-558-560	WG	2-HEXANONE		2.5	UG/L	UJ	mc,c
VPB149-100614-558-560	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	mc,c
VPB149-100614-558-560	WG	ACETONE	16	2.5	UG/L	J	mc
VPB149-100614-558-560	WG	BENZENE		0.50	UG/L	UJ	mc
VPB149-100614-558-560	WG	BROMODICHLOROMETHANE		0.50	UG/L	UJ	mc
VPB149-100614-558-560	WG	BROMOFORM		0.50	UG/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB149-100614-558-560	WG	BROMOMETHANE		1.0	UG/L	UJ	mc
VPB149-100614-558-560	WG	CARBON DISULFIDE		0.50	UG/L	UJ	mc
VPB149-100614-558-560	WG	CARBON TETRACHLORIDE		0.50	UG/L	UJ	mc
VPB149-100614-558-560	WG	CHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-100614-558-560	WG	CHLOROETHANE		1.0	UG/L	UJ	mc
VPB149-100614-558-560	WG	CHLOROFORM		0.50	UG/L	UJ	mc
VPB149-100614-558-560	WG	CHLOROMETHANE		1.0	UG/L	UJ	mc
VPB149-100614-558-560	WG	CIS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-100614-558-560	WG	CIS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	mc
VPB149-100614-558-560	WG	CYCLOHEXANE		0.50	UG/L	UJ	mc
VPB149-100614-558-560	WG	DIBROMOCHLOROMETHANE		0.50	UG/L	UJ	mc
VPB149-100614-558-560	WG	DICHLORODIFLUOROMETHANE		1.0	UG/L	UJ	mc
VPB149-100614-558-560	WG	ETHYLBENZENE		0.50	UG/L	UJ	mc
VPB149-100614-558-560	WG	ISOPROPYLBENZENE		0.50	UG/L	UJ	mc
VPB149-100614-558-560	WG	M- AND P-XYLENE		1.0	UG/L	UJ	mc
VPB149-100614-558-560	WG	METHYL ACETATE		0.75	UG/L	UJ	mc
VPB149-100614-558-560	WG	METHYL CYCLOHEXANE	0.99	0.50	UG/L	J	mc
VPB149-100614-558-560	WG	METHYL TERT-BUTYL ETHER		0.50	UG/L	UJ	mc
VPB149-100614-558-560	WG	METHYLENE CHLORIDE		2.5	UG/L	UJ	mc
VPB149-100614-558-560	WG	O-XYLENE		0.50	UG/L	UJ	mc
VPB149-100614-558-560	WG	STYRENE		0.50	UG/L	UJ	mc
VPB149-100614-558-560	WG	TETRACHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-100614-558-560	WG	TOLUENE		0.50	UG/L	UJ	mc
VPB149-100614-558-560	WG	TRANS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-100614-558-560	WG	TRANS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	mc
VPB149-100614-558-560	WG	TRICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-100614-558-560	WG	TRICHLOROFLUOROMETHANE		1.0	UG/L	UJ	mc
VPB149-100614-558-560	WG	VINYL CHLORIDE		1.0	UG/L	UJ	mc
VPB149-100614-558-560	WG	XYLENES, TOTAL		1.5	UG/L	UJ	mc
VPB149-100614-578-580	WG	1,1,1-TRICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-100614-578-580	WG	1,1,2,2-TETRACHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-100614-578-580	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	1.3	0.50	UG/L	J	mc
VPB149-100614-578-580	WG	1,1,2-TRICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-100614-578-580	WG	1,1-DICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-100614-578-580	WG	1,1-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-100614-578-580	WG	1,2,4-TRICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-100614-578-580	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	mc
VPB149-100614-578-580	WG	1,2-DIBROMOETHANE		0.50	UG/L	UJ	mc
VPB149-100614-578-580	WG	1,2-DICHLOROBENZENE		0.50	UG/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB149-100614-578-580	WG	1,2-DICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-100614-578-580	WG	1,2-DICHLOROETHENE, TOTAL		1.0	UG/L	UJ	mc
VPB149-100614-578-580	WG	1,2-DICHLOROPROPANE		0.50	UG/L	UJ	mc
VPB149-100614-578-580	WG	1,3-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-100614-578-580	WG	1,4-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-100614-578-580	WG	2-BUTANONE		2.5	UG/L	UJ	mc
VPB149-100614-578-580	WG	2-HEXANONE		2.5	UG/L	UJ	mc,c
VPB149-100614-578-580	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	mc,c
VPB149-100614-578-580	WG	ACETONE	5.1	2.5	UG/L	J	mc
VPB149-100614-578-580	WG	BENZENE		0.50	UG/L	UJ	mc
VPB149-100614-578-580	WG	BROMODICHLOROMETHANE		0.50	UG/L	UJ	mc
VPB149-100614-578-580	WG	BROMOFORM		0.50	UG/L	UJ	mc
VPB149-100614-578-580	WG	BROMOMETHANE		1.0	UG/L	UJ	mc
VPB149-100614-578-580	WG	CARBON DISULFIDE		0.50	UG/L	UJ	mc
VPB149-100614-578-580	WG	CARBON TETRACHLORIDE		0.50	UG/L	UJ	mc
VPB149-100614-578-580	WG	CHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-100614-578-580	WG	CHLOROETHANE		1.0	UG/L	UJ	mc
VPB149-100614-578-580	WG	CHLOROFORM		0.50	UG/L	UJ	mc
VPB149-100614-578-580	WG	CHLOROMETHANE		1.0	UG/L	UJ	mc
VPB149-100614-578-580	WG	CIS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-100614-578-580	WG	CIS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	mc
VPB149-100614-578-580	WG	CYCLOHEXANE		0.50	UG/L	UJ	mc
VPB149-100614-578-580	WG	DIBROMOCHLOROMETHANE		0.50	UG/L	UJ	mc
VPB149-100614-578-580	WG	DICHLORODIFLUOROMETHANE	0.60	1.0	UG/L	J	mc
VPB149-100614-578-580	WG	ETHYLBENZENE		0.50	UG/L	UJ	mc
VPB149-100614-578-580	WG	ISOPROPYLBENZENE		0.50	UG/L	UJ	mc
VPB149-100614-578-580	WG	M- AND P-XYLENE		1.0	UG/L	UJ	mc
VPB149-100614-578-580	WG	METHYL ACETATE		0.75	UG/L	UJ	mc
VPB149-100614-578-580	WG	METHYL CYCLOHEXANE	0.33	0.50	UG/L	J	mc
VPB149-100614-578-580	WG	METHYL TERT-BUTYL ETHER		0.50	UG/L	UJ	mc
VPB149-100614-578-580	WG	METHYLENE CHLORIDE		2.5	UG/L	UJ	mc
VPB149-100614-578-580	WG	O-XYLENE		0.50	UG/L	UJ	mc
VPB149-100614-578-580	WG	STYRENE		0.50	UG/L	UJ	mc
VPB149-100614-578-580	WG	TETRACHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-100614-578-580	WG	TOLUENE		0.50	UG/L	UJ	mc
VPB149-100614-578-580	WG	TRANS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-100614-578-580	WG	TRANS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	mc
VPB149-100614-578-580	WG	TRICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-100614-578-580	WG	TRICHLOROFLUOROMETHANE		1.0	UG/L	UJ	mc
VPB149-100614-578-580	WG	VINYL CHLORIDE		1.0	UG/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB149-100614-578-580	WG	XYLENES, TOTAL		1.5	UG/L	UJ	mc
VPB149-TB-100614	WQ	2-HEXANONE		2.5	UG/L	UJ	c
VPB149-TB-100614	WQ	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	c

Attachment A

Nonconformance Summary Tables

Table A-1 - Initial Calibration Verification Standard

ICV ID	Compound	% R	Limits
WG151736-7	4-METHYL-2-PENTANONE	73	80-120%
	2-HEXANONE	78	80-120%
Associated samples: all samples in SDG SH8430			

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 Vilvardov	(845) 428-4920	( )

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

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	NWIRP Bethpage / 60266526	

Bill (if different than above) Address

Sampler (Print / Sign) Michael Zobel / Michael Zobel

Copies To:

LAB USE ONLY WORK ORDER #: SH8430

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.	VOC	ANALYSIS AND CONTAINER TYPE PRESERVATIVES Filt. ☐Y ☐N
	VPB149-GW-100314-498-508	10-3-14 / 1015	GW	3	X	
	VPB149-GW-100314-518-528	10-3-14 / 1250	GW	3	X	
	VPB149-GW-MS/MSD-100314-516-528	10-3-14 / 1252	GW	6	X	
	VPB149-GW-100314-538-548	10-3-14 / 1440	GW	2	X	
	VPB149-GW-100614-558-568	10-6-14 / 1115	GW	3	X	
	VPB149-GW-100614-578-588	10-6-14 / 1340	GW	3	X	
	VPB149-TripBlank-100614	9-19-14 / 1130	W	3	X	
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		/				
		/				

COMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
Michael Zobel	10-6-14 / 1615	[signature] 10-7-14 0930			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

000012

ORIGINAL

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

Report of Analytical Results

Client: ENSAFE
Lab ID: SH8430-1
Client ID: 149-100314-498-500
Project: Navy Clean WE15-03-06 NW
SDG: SH8430
Lab File ID: C9399.D

Sample Date: 03-OCT-14
Received Date: 07-OCT-14
Extract Date: 08-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151736

Analysis Date: 08-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 09-OCT-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	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~~ 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~~ UJ	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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K. 12/15/15

Report of Analytical Results

Client: ENSAFE
Lab ID: SH8430-1
Client ID: 149-100314-498-500
Project: Navy Clean WE15-03-06 NW
SDG: SH8430
Lab File ID: C9399.D

Sample Date: 03-OCT-14
Received Date: 07-OCT-14
Extract Date: 08-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151736

Analysis Date: 08-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 09-OCT-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	J	0.46	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		106.	%					
1,2-Dichloroethane-d4		108.	%					
Dibromofluoromethane		104.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8430-2
Client ID: 149-100314-518-520
Project: Navy Clean WE15-03-06 NW
SDG: SH8430
Lab File ID: C9400.D

Sample Date: 03-OCT-14
Received Date: 07-OCT-14
Extract Date: 08-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151736

Analysis Date: 08-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 09-OCT-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	3.6	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~~ 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~~ UJ	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: ENSAFE
Lab ID: SH8430-2
Client ID: 149-100314-518-520
Project: Navy Clean WE15-03-06 NW
SDG: SH8430
Lab File ID: C9400.D

Sample Date: 03-OCT-14
Received Date: 07-OCT-14
Extract Date: 08-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151736

Analysis Date: 08-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 09-OCT-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		96.6	%					
Toluene-d8		101.	%					
1,2-Dichloroethane-d4		107.	%					
Dibromofluoromethane		102.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8430-3
Client ID: 149-100314-538-540
Project: Navy Clean WE15-03-06 NW
SDG: SH8430
Lab File ID: C9401.D

Sample Date: 03-OCT-14
Received Date: 07-OCT-14
Extract Date: 08-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151736

Analysis Date: 08-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 09-OCT-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	J J	0.29	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U UJ	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 J	0.60	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	10	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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K. 1/29/15

Report of Analytical Results

Client: ENSAFE
Lab ID: SH8430-3
Client ID: 149-100314-538-540
Project: Navy Clean WE15-03-06 NW
SDG: SH8430
Lab File ID: C9401.D

Sample Date: 03-OCT-14
Received Date: 07-OCT-14
Extract Date: 08-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151736

Analysis Date: 08-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 09-OCT-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	J J	0.44	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U UJ	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		98.2	%					
Toluene-d8		102.	%					
1,2-Dichloroethane-d4		110.	%					
Dibromofluoromethane		103.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8430-4
Client ID: 149-100614-558-560
Project: Navy Clean WE15-03-06 NW
SDG: SH8430
Lab File ID: C9402.D

Sample Date: 06-OCT-14
Received Date: 07-OCT-14
Extract Date: 08-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151736

Analysis Date: 08-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 09-OCT-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	16	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	J	5.1	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: ENSAFE
Lab ID: SH8430-4
Client ID: 149-100614-558-560
Project: Navy Clean WE15-03-06 NW
SDG: SH8430
Lab File ID: C9402.D

Sample Date: 06-OCT-14
Received Date: 07-OCT-14
Extract Date: 08-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151736

Analysis Date: 08-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 09-OCT-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	J J	0.99	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U UJ	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		100.	%					
Toluene-d8		104.	%					
1,2-Dichloroethane-d4		110.	%					
Dibromofluoromethane		106.	%					

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: ENSAFE
Lab ID: SH8430-5
Client ID: 149-100614-578-580
Project: Navy Clean WE15-03-06 NW
SDG: SH8430
Lab File ID: C9403.D

Sample Date: 06-OCT-14
Received Date: 07-OCT-14
Extract Date: 08-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151736

Analysis Date: 08-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 09-OCT-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	J J	0.60	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U UJ	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	1.3	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	5.1	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	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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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: ENSAFE
Lab ID: SH8430-5
Client ID: 149-100614-578-580
Project: Navy Clean WE15-03-06 NW
SDG: SH8430
Lab File ID: C9403.D

Sample Date: 06-OCT-14
Received Date: 07-OCT-14
Extract Date: 08-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151736

Analysis Date: 08-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 09-OCT-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	J J	0.33	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U UJ	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		98.9	%					
Toluene-d8		104.	%					
1,2-Dichloroethane-d4		109.	%					
Dibromofluoromethane		100.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8430-6
Client ID: VPB149-TB-100614
Project: Navy Clean WE15-03-06 NW
SDG: SH8430
Lab File ID: C9398.D

Sample Date: 06-OCT-14
Received Date: 07-OCT-14
Extract Date: 08-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151736

Analysis Date: 08-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 09-OCT-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~~ 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~~ UJ	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: ENSAFE
Lab ID: SH8430-6
Client ID: VPB149-TB-100614
Project: Navy Clean WE15-03-06 NW
SDG: SH8430
Lab File ID: C9398.D

Sample Date: 06-OCT-14
Received Date: 07-OCT-14
Extract Date: 08-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151736

Analysis Date: 08-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 09-OCT-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		100.	%					
Toluene-d8		105.	%					
1,2-Dichloroethane-d4		104.	%					
Dibromofluoromethane		105.	%					

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RESOLUTION CONSULTANTS

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Data Validation Report

Project:	Regional Groundwater Investigation - NWIRP Bethpage	
Laboratory:	Katahdin Analytical	
Service Request:	SH8621	
Analyses/Method:	EPA SW-846 Method 8260B for VOCs (GC/MS) and Standard Method 5310B for Total Organic Carbon by High-Temperature Combustion	
Validation Level:	3	
AECOM Project Number:	60266526.SA.DV	
Prepared by:	Dawn Brule/RESCON	Completed on: 12/29/2014
Reviewed by:	Lori Herberich/RESCON	File Name: SH8621_5310B and 8260B

SUMMARY

The samples listed below were collected by Resolution Consultants from the Regional Groundwater Investigation - NWIRP Bethpage site on October 7- 9, 2014.

Sample ID	Matrix/Sample Type
VPB149-EB-100814	Equipment blank
VPB149-GWD-100814	Field Duplicate of VPB149-GW-100814-638-640
VPB149-GW-100714-603-605	Groundwater
VPB149-GW-100714-618-620	Groundwater
VPB149-GW-100814-638-640	Groundwater
VPB149-GW-100814-658-660	Groundwater
VPB149-GW-100814-678-680	Groundwater
VPB149-GW-100914-698-700	Groundwater
VPB149-GW-100914-718-720	Groundwater
VPB149-TRIP BLANK-100914	Trip Blank

The samples were analyzed in accordance with:

- *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods SW-846,* Method 8260B, *Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry* (USEPA, 1996).

- *Standard Methods for the Examination of Water and Wastewater, Method SM5310B, 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
NA	Matrix spike (MS) and/or matrix spike duplicate (MSD) results
✓	Laboratory control sample (LCS)/laboratory control sample duplicate (LCSD) 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 and/or 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 and the "GW" from the sample ID, and truncated the ID for the Trip Blank in the report. The submitted EDD file reflects the full sample ID.

The three vials of samples VPB149-GW-100714-603-605 and VPB149-GW-100914-698-700 each contained mostly soil and not very much liquid. Therefore, each vial was decanted and composited

into one vial and analyzed. 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. Qualified sample results are shown in Table 1.

Holding Times and 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 initial calibration verification (ICV) percent recovery (%R) 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.

Nonconformances are summarized in Attachment A in Table A-1.

Data qualification to the analytes associated with the specific ICAL and/or CCV 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.

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.

Nonconformances are summarized in Attachment A in Tables A-2 and A-3.

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 professional judgment			

For TOC:

Blank Type	Blank Result	Sample Result	Action for Samples
ICB/CCB (Positive)	≥DL but ≤ LOQ	Nondetect	No action
		≥DL but ≤LOQ	Qualify as nondetect (U) at the LOQ
		> LOQ	Use professional judgment (see below [1])
	>LOQ	≥DL but ≤LOQ	Qualify as nondetect (U) at the LOQ
		> LOQ but < ICB/CCB Result	Qualify at level of Blank Result with a "U" or Qualify result as unusable
		>ICB/CCB but <10x the ICB/CCB result	Qualify as estimated (J)
		≥10x ICB/CCB	No action is taken based on professional judgment
PB / EB/ FB (Positive)	> LOQ	≥DL but ≤ LOQ	Qualify as nondetect (U) at the LOQ
		>LOQ but < 10x Blank Result	Qualify results as unusable
		≥10x Blank Result	No action
	≥DL but ≤LOQ	Nondetect	No action
		≥DL but ≤LOQ	Qualify as nondetect (U) at the LOQ
		> LOQ	Use professional judgment (see below [1])

[1] Establish an action level (AL) at 5x the blank contamination. If sample result is <AL, qualify the reported result with a U.

LOQ - Limit of Quantitation.

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/MSD Results

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

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 matrices. This criteria 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 not detected (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
VPB149-EB-100814	WQ	2-HEXANONE		2.5	UG/L	UJ	c
VPB149-EB-100814	WQ	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	c
VPB149-EB-100814	WQ	TOTAL ORGANIC CARBON		1.0*	MG/L	U	bl
VPB149-GW-100714-603-605	WG	1,1,1-TRICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	1,1,2,2-TETRACHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	1,1,2-TRICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	1,1-DICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	1,1-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	1,2,4-TRICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	1,2-DIBROMOETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	1,2-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	1,2-DICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	1,2-DICHLOROETHENE, TOTAL		1.0	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	1,2-DICHLOROPROPANE		0.50	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	1,3-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	1,4-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	2-BUTANONE		2.5	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	2-HEXANONE		2.5	UG/L	UJ	mc,c
VPB149-GW-100714-603-605	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	mc,c
VPB149-GW-100714-603-605	WG	ACETONE		16**	UG/L	UJ	mc,bt
VPB149-GW-100714-603-605	WG	BENZENE		0.50	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	BROMODICHLOROMETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	BROMOFORM		0.50	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	BROMOMETHANE		1.0	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	CARBON DISULFIDE		0.50	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	CARBON TETRACHLORIDE		0.50	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	CHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	CHLOROETHANE		1.0	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	CHLOROFORM		0.50	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	CHLOROMETHANE		1.0	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	CIS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	CIS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	CYCLOHEXANE		0.50	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	DIBROMOCHLOROMETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	DICHLORODIFLUOROMETHANE		1.0	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	ETHYLBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	ISOPROPYLBENZENE		0.50	UG/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB149-GW-100714-603-605	WG	M- AND P-XYLENE		1.0	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	METHYL ACETATE		0.75	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	METHYL CYCLOHEXANE	0.68	0.50	UG/L	J	mc
VPB149-GW-100714-603-605	WG	METHYL TERT-BUTYL ETHER		0.50	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	METHYLENE CHLORIDE		2.5	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	O-XYLENE		0.50	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	STYRENE		0.50	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	TETRACHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	TOLUENE		0.50	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	TRANS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	TRANS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	TRICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	TRICHLOROFLUOROMETHANE		1.0	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	VINYL CHLORIDE		1.0	UG/L	UJ	mc
VPB149-GW-100714-603-605	WG	XYLENES, TOTAL		1.5	UG/L	UJ	mc
VPB149-GW-100714-618-620	WG	2-HEXANONE		2.5	UG/L	UJ	c
VPB149-GW-100714-618-620	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	c
VPB149-GW-100814-638-640	WG	2-HEXANONE		2.5	UG/L	UJ	c
VPB149-GW-100814-638-640	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	c
VPB149-GW-100814-638-640	WG	ACETONE		5.0*	UG/L	U	bt
VPB149-GW-100814-658-660	WG	2-HEXANONE		2.5	UG/L	UJ	c
VPB149-GW-100814-658-660	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	c
VPB149-GW-100814-658-660	WG	ACETONE		5.0*	UG/L	U	bt
VPB149-GW-100814-678-680	WG	2-HEXANONE		2.5	UG/L	UJ	c
VPB149-GW-100814-678-680	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	c
VPB149-GW-100914-698-700	WG	1,1,1-TRICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	1,1,2,2-TETRACHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	1,1,2-TRICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	1,1-DICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	1,1-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	1,2,4-TRICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	1,2-DIBROMOETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	1,2-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	1,2-DICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	1,2-DICHLOROETHENE, TOTAL		1.0	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	1,2-DICHLOROPROPANE		0.50	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	1,3-DICHLOROBENZENE		0.50	UG/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB149-GW-100914-698-700	WG	1,4-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	2-BUTANONE		2.5	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	2-HEXANONE		2.5	UG/L	UJ	mc,c
VPB149-GW-100914-698-700	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	mc,c
VPB149-GW-100914-698-700	WG	ACETONE		5.0*	UG/L	UJ	mc,bt
VPB149-GW-100914-698-700	WG	BENZENE		0.50	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	BROMODICHLOROMETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	BROMOFORM		0.50	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	BROMOMETHANE		1.0	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	CARBON DISULFIDE		0.50	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	CARBON TETRACHLORIDE		0.50	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	CHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	CHLOROETHANE		1.0	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	CHLOROFORM		0.50	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	CHLOROMETHANE		1.0	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	CIS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	CIS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	CYCLOHEXANE		0.50	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	DIBROMOCHLOROMETHANE		0.50	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	DICHLORODIFLUOROMETHANE		1.0	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	ETHYLBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	ISOPROPYLBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	M- AND P-XYLENE		1.0	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	METHYL ACETATE		0.75	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	METHYL CYCLOHEXANE		0.50	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	METHYL TERT-BUTYL ETHER		0.50	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	METHYLENE CHLORIDE		2.5	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	O-XYLENE		0.50	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	STYRENE		0.50	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	TETRACHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	TOLUENE		0.50	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	TRANS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	TRANS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	TRICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	TRICHLOROFLUOROMETHANE		1.0	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	VINYL CHLORIDE		1.0	UG/L	UJ	mc
VPB149-GW-100914-698-700	WG	XYLENES, TOTAL		1.5	UG/L	UJ	mc
VPB149-GW-100914-718-720	WG	2-HEXANONE		2.5	UG/L	UJ	c
VPB149-GW-100914-718-720	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	c
VPB149-GWD-100814	WG	2-HEXANONE		2.5	UG/L	UJ	c

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB149-GWD-100814	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	c
VPB149-GWD-100814	WG	ACETONE		5.0*	UG/L	U	bt
VPB149-TRIP BLANK-100914	WQ	2-HEXANONE		2.5	UG/L	UJ	c
VPB149-TRIP BLANK-100914	WQ	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	c

*LOQ

**Sample result

Attachment A

Nonconformance Summary Tables

Table A-1 - Initial Calibration Verification Standard

ICV ID	Compound	% R	Limits
WG151736-7	4-METHYL-2-PENTANONE	73	80-120%
	2-HEXANONE	78	80-120%
Associated samples: All samples in SDG SH8621			

Table A-2 - Lab Blanks

Blank ID	Compound	Result	LOD	Units	Associated Samples
WG152063-1	TOTAL ORGANIC CARBON	0.20	0.50	MG/L	VPB149-EB-100814

Table A-3 - Field Blanks

Blank ID	Compound	Result	LOD	Units	Associated Samples
VPB149-TRIP BLANK-100914	ACETONE	3.8	2.5	UG/L	VPB149-GW-100714-603-605 VPB149-GW-100814-638-640 VPB149-GW-100814-658-660 VPB149-GW-100914-698-700 VPB149-GWD-100814

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
bt	Trip 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 Vivaudo	(845) 428-4920	( )

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

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	NWIRP Bethpage / 60266526	

Bill (if different than above) Address

Sampler (Print / Sign) Michael Zobel / Michael Zobel

Copies To:

LAB USE ONLY WORK ORDER #: 548621

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
	VPB149-GW-100714-603-605	10-7-14 / 1140	GW	3	X
	VPB149-GW-100714-618-620	10-7-14 / 1430	GW	3	X
	VPB149-GW-100814-638-640	10-8-14 / 1050	GW	3	X
	VPB149-GW-100814-658-660	10-8-14 / 1335	GW	3	X
	VPB149-GWD-100814	10-8-14 / N/A	GW	3	X
	VPB149-EB-100814	10-8-14 / 1120	W	6	X X
	VPB149-GW-100814-678-680	10-8-14 / 1540	GW	3	X
	VPB149-GW-100914-698-700	10-9-14 / 1040	GW	3	X
	VPB149-GW-100914-718-720	10-9-14 / 1345	GW	3	X
	VPB149-TripBlank-100914	9-15-14 / 1130	W	3	X
		/			
		/			
		/			
		/			
		/			
		/			

OMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
Michael Zobel	10-9-14 1430			10-9-14 1500	Fed Ex
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
		10-10-14 0900			

0000014

ORIGINAL

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: ENSAFE
Lab ID: SH8621-6
Client ID: VPB149-EB-100814
Project: Navy Clean WE15-03-06 NW
SDG: SH8621
Lab File ID: C9442.D

Sample Date: 08-OCT-14
Received Date: 10-OCT-14
Extract Date: 10-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151846

Analysis Date: 10-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 13-OCT-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~~ 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~~ UJ	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: ENSAFE
Lab ID: SH8621-6
Client ID: VPB149-EB-100814
Project: Navy Clean WE15-03-06 NW
SDG: SH8621
Lab File ID: C9442.D

Sample Date: 08-OCT-14
Received Date: 10-OCT-14
Extract Date: 10-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151846

Analysis Date: 10-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 13-OCT-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		95.6	%					
Toluene-d8		103.	%					
1,2-Dichloroethane-d4		110.	%					
Dibromofluoromethane		101.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8621-1
Client ID: 149-100714-603-605
Project: Navy Clean WE15-03-06 NW
SDG: SH8621
Lab File ID: C9443.D

Sample Date: 07-OCT-14
Received Date: 10-OCT-14
Extract Date: 10-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151846

Analysis Date: 10-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 13-OCT-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		16	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: ENSAFE
Lab ID: SH8621-1
Client ID: 149-100714-603-605
Project: Navy Clean WE15-03-06 NW
SDG: SH8621
Lab File ID: C9443.D

Sample Date: 07-OCT-14
Received Date: 10-OCT-14
Extract Date: 10-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151846

Analysis Date: 10-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 13-OCT-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	J	0.68	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		96.6	%					
Toluene-d8		102.	%					
1,2-Dichloroethane-d4		108.	%					
Dibromofluoromethane		104.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8621-2
Client ID: 149-100714-618-620
Project: Navy Clean WE15-03-06 NW
SDG: SH8621
Lab File ID: C9446.D

Sample Date: 07-OCT-14
Received Date: 10-OCT-14
Extract Date: 10-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151846

Analysis Date: 10-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 13-OCT-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	J	1.2	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		1.3	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		3.1	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		1.2	ug/L	1	1	1.0	0.21	0.50
Chloroform		2.5	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	0.93	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		95	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~~ U5	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	0.65	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~~ U5	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: ENSAFE
Lab ID: SH8621-2
Client ID: 149-100714-618-620
Project: Navy Clean WE15-03-06 NW
SDG: SH8621
Lab File ID: C9446.D

Sample Date: 07-OCT-14
Received Date: 10-OCT-14
Extract Date: 10-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151846

Analysis Date: 10-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 13-OCT-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	1.2	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		98.2	%					
Toluene-d8		104.	%					
1,2-Dichloroethane-d4		110.	%					
Dibromofluoromethane		106.	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8621-3
Client ID: 149-100814-638-640
Project: Navy Clean WE15-03-06 NW
SDG: SH8621
Lab File ID: C9447.D

Sample Date: 08-OCT-14
Received Date: 10-OCT-14
Extract Date: 10-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151846

Analysis Date: 10-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 13-OCT-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	J	1.2	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		1.9	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		5.1	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	~~3.8~~ 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		1.2	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	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		2.4	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~~ 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	0.68	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~~ UJ	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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12/29/15

Report of Analytical Results

Client: ENSAFE
Lab ID: SH8621-3
Client ID: 149-100814-638-640
Project: Navy Clean WE15-03-06 NW
SDG: SH8621
Lab File ID: C9447.D

Sample Date: 08-OCT-14
Received Date: 10-OCT-14
Extract Date: 10-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151846

Analysis Date: 10-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 13-OCT-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	1.2	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		95.3	%					
Toluene-d8		101.	%					
1,2-Dichloroethane-d4		112.	%					
Dibromofluoromethane		108.	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8621-4
Client ID: 149-100814-658-660
Project: Navy Clean WE15-03-06 NW
SDG: SH8621
Lab File ID: C9448.D

Sample Date: 08-OCT-14
Received Date: 10-OCT-14
Extract Date: 10-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151846

Analysis Date: 10-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 13-OCT-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	J	0.77	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		1.2	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		4.0	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	U	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	J	0.71	ug/L	1	1	1.0	0.21	0.50
Chloroform		1.4	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	0.40	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		53	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~~ 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	0.36	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~~ UJ	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: ENSAFE
Lab ID: SH8621-4
Client ID: 149-100814-658-660
Project: Navy Clean WE15-03-06 NW
SDG: SH8621
Lab File ID: C9448.D

Sample Date: 08-OCT-14
Received Date: 10-OCT-14
Extract Date: 10-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151846

Analysis Date: 10-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 13-OCT-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	0.71	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		94.8	%					
Toluene-d8		101.	%					
1,2-Dichloroethane-d4		111.	%					
Dibromofluoromethane		105.	%					

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NALYTICAL SERVICES

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8621-7
Client ID: 149-100814-678-680
Project: Navy Clean WE15-03-06 NW
SDG: SH8621
Lab File ID: C9450.D

Sample Date: 08-OCT-14
Received Date: 10-OCT-14
Extract Date: 10-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151846

Analysis Date: 10-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 13-OCT-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	J	0.61	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~~ 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~~ UJ	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: ENSAFE
Lab ID: SH8621-7
Client ID: 149-100814-678-680
Project: Navy Clean WE15-03-06 NW
SDG: SH8621
Lab File ID: C9450.D

Sample Date: 08-OCT-14
Received Date: 10-OCT-14
Extract Date: 10-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151846

Analysis Date: 10-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 13-OCT-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		97.4	%					
Toluene-d8		105.	%					
1,2-Dichloroethane-d4		112.	%					
Dibromofluoromethane		109.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8621-8
Client ID: 149-100914-698-700
Project: Navy Clean WE15-03-06 NW
SDG: SH8621
Lab File ID: C9444.D

Sample Date: 09-OCT-14
Received Date: 10-OCT-14
Extract Date: 10-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151846

Analysis Date: 10-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 13-OCT-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		~~6.4~~ 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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10/29/14

Report of Analytical Results

Client: ENSAFE
Lab ID: SH8621-8
Client ID: 149-100914-698-700
Project: Navy Clean WE15-03-06 NW
SDG: SH8621
Lab File ID: C9444.D

Sample Date: 09-OCT-14
Received Date: 10-OCT-14
Extract Date: 10-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151846

Analysis Date: 10-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 13-OCT-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		90.2	%					
Toluene-d8		103.	%					
1,2-Dichloroethane-d4		89.7	%					
Dibromofluoromethane		100.	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8621-9
Client ID: 149-100914-718-720
Project: Navy Clean WE15-03-06 NW
SDG: SH8621
Lab File ID: C9451.D

Sample Date: 09-OCT-14
Received Date: 10-OCT-14
Extract Date: 10-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151846

Analysis Date: 10-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 13-OCT-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	J	0.47	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		8.8	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~~ 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~~ UJ	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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JK 1/29/15

Report of Analytical Results

Client: ENSAFE
Lab ID: SH8621-9
Client ID: 149-100914-718-720
Project: Navy Clean WE15-03-06 NW
SDG: SH8621
Lab File ID: C9451.D

Sample Date: 09-OCT-14
Received Date: 10-OCT-14
Extract Date: 10-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151846

Analysis Date: 10-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 13-OCT-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		96.5	%					
Toluene-d8		102.	%					
1,2-Dichloroethane-d4		112.	%					
Dibromofluoromethane		108.	%					

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Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac Cert No E87604

Report of Analytical Results

Client: ENSAFE
Lab ID: SH8621-5
Client ID: VPB149-GWD-100814
Project: Navy Clean WE15-03-06 NW
SDG: SH8621
Lab File ID: C9449.D

Sample Date: 08-OCT-14
Received Date: 10-OCT-14
Extract Date: 10-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151846

Analysis Date: 10-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 13-OCT-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	J	1.1	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		4.9	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	~~4.1~~ 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		1.2	ug/L	1	1	1.0	0.21	0.50
Chloroform		1.7	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		2.4	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		110	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~~ 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	0.70	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~~ UJ	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. 12/15

Report of Analytical Results

Client: ENSAFE
Lab ID: SH8621-5
Client ID: VPB149-GWD-100814
Project: Navy Clean WE15-03-06 NW
SDG: SH8621
Lab File ID: C9449.D

Sample Date: 08-OCT-14
Received Date: 10-OCT-14
Extract Date: 10-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151846

Analysis Date: 10-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 13-OCT-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	1.2	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		96.3	%					
Toluene-d8		103.	%					
1,2-Dichloroethane-d4		109.	%					
Dibromofluoromethane		103.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8621-10
Client ID: VPB149-TB-100914
Project: Navy Clean WE15-03-06 NW
SDG: SH8621
Lab File ID: C9441.D

Sample Date: 09-OCT-14
Received Date: 10-OCT-14
Extract Date: 10-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151846

Analysis Date: 10-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 13-OCT-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	3.8	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	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~~ 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~~ UJ	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. 1/29/15

Report of Analytical Results

Client: ENSAFE
Lab ID: SH8621-10
Client ID: VPB149-TB-100914
Project: Navy Clean WE15-03-06 NW
SDG: SH8621
Lab File ID: C9441.D

Sample Date: 09-OCT-14
Received Date: 10-OCT-14
Extract Date: 10-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG151846

Analysis Date: 10-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 13-OCT-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		98.2	%					
Toluene-d8		105.	%					
1,2-Dichloroethane-d4		111.	%					
Dibromofluoromethane		105.	%					

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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: SH8621-6
Report Date: 25-OCT-14
Client PO: 16518
Project: Navy Clean WE15-03-0
SDG: SH8621

Sample Description	Matrix	Date Sampled	Date Received
VPB149-EB-100814	AQ	08-OCT-14 11:20:00	10-OCT-14

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Organic Carbon	~~10.17~~ 1.0 U mg/L	1.0	0.10	.5	SM5310B	WG152063	13-OCT-14 20:44:48	N/A	N/A	

Katahdin Analytical Services 0000182

RESOLUTION CONSULTANTS

Resolution Consultants
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	
Service Request:	SH8710	
Analyses/Method:	EPA SW-846 Method 8260B for VOCs (GC/MS)	
Validation Level:	3	
AECOM Project Number:	60266526.SA.DV	
Prepared by:	Dawn Brule/RESCON	Completed on: 12/22/2014
Reviewed by:	Lori Herberich/RESCON	File Name: SH8710_8260B

SUMMARY

The samples listed below were collected by Resolution Consultants from the Regional Groundwater Investigation - NWIRP Bethpage site on October 10, 2014.

Sample ID	Matrix/Sample Type
VPB149-GW-101014-738-740	Groundwater
VPB149-GW-101014-758-760	Groundwater
VPB149-TRIP BLANK-101014	Trip Blank

Data validation activities were conducted with reference to *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods SW-846, 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
NA	Matrix spike (MS) and/or matrix spike duplicate (MSD) 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 (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 and the "GW" from the sample ID, and truncated the ID for the Trip Blank in the report. The submitted EDD file reflects the full sample ID.

The three vials of samples VPB149-GW-101014-738-740 and VPB149-GW-101014-758-760 each contained mostly soil and not very much liquid. Therefore, each sample set was decanted and composited into one vial and analyzed. 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. Qualified sample results are presented in Table 1.

Holding Times and 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 initial calibration verification (ICV) percent recovery (%R) criteria were met;
- the continuing calibration verification standard (CCV) method percent difference or percent drift (%Ds) and RF acceptance criteria were met; and/or
- the retention time method acceptance criteria were met.

Nonconformances are summarized in Attachment A in Table A-1.

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.

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). An equipment blank was not submitted with the samples in this data set.

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 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. 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 not detected (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
VPB149-GW-101014-738-740	WG	1,1,1-TRICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	1,1,2,2-TETRACHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	1.2	0.50	UG/L	J	mc
VPB149-GW-101014-738-740	WG	1,1,2-TRICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	1,1-DICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	1,1-DICHLOROETHENE	0.36	0.50	UG/L	J	mc
VPB149-GW-101014-738-740	WG	1,2,4-TRICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	1,2-DIBROMOETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	1,2-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	1,2-DICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	1,2-DICHLOROETHENE, TOTAL	0.36	1.0	UG/L	J	mc
VPB149-GW-101014-738-740	WG	1,2-DICHLOROPROPANE		0.50	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	1,3-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	1,4-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	2-BUTANONE		2.5	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	2-HEXANONE		2.5	UG/L	UJ	mc,c
VPB149-GW-101014-738-740	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	mc,c
VPB149-GW-101014-738-740	WG	ACETONE	10	2.5	UG/L	J	mc
VPB149-GW-101014-738-740	WG	BENZENE		0.50	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	BROMODICHLOROMETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	BROMOFORM		0.50	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	BROMOMETHANE		1.0	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	CARBON DISULFIDE		0.50	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	CARBON TETRACHLORIDE		0.50	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	CHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	CHLOROETHANE		1.0	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	CHLOROFORM	0.37	0.50	UG/L	J	mc
VPB149-GW-101014-738-740	WG	CHLOROMETHANE		1.0	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	CIS-1,2-DICHLOROETHENE	0.36	0.50	UG/L	J	mc
VPB149-GW-101014-738-740	WG	CIS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	CYCLOHEXANE		0.50	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	DIBROMOCHLOROMETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	DICHLORODIFLUOROMETHANE		1.0	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	ETHYLBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	ISOPROPYLBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	M- AND P-XYLENE		1.0	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	METHYL ACETATE		0.75	UG/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB149-GW-101014-738-740	WG	METHYL CYCLOHEXANE		0.50	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	METHYL TERT-BUTYL ETHER		0.50	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	METHYLENE CHLORIDE		2.5	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	O-XYLENE		0.50	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	STYRENE		0.50	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	TETRACHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	TOLUENE		0.50	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	TRANS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	TRANS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	TRICHLOROETHENE	16	0.50	UG/L	J	mc
VPB149-GW-101014-738-740	WG	TRICHLOROFLUOROMETHANE		1.0	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	VINYL CHLORIDE		1.0	UG/L	UJ	mc
VPB149-GW-101014-738-740	WG	XYLENES, TOTAL		1.5	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	1,1,1-TRICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	1,1,2,2-TETRACHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	1,1,2-TRICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	1,1-DICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	1,1-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	1,2,4-TRICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	1,2-DIBROMOETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	1,2-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	1,2-DICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	1,2-DICHLOROETHENE, TOTAL		1.0	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	1,2-DICHLOROPROPANE		0.50	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	1,3-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	1,4-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	2-BUTANONE		2.5	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	2-HEXANONE		2.5	UG/L	UJ	mc,c
VPB149-GW-101014-758-760	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	mc,c
VPB149-GW-101014-758-760	WG	ACETONE	11	2.5	UG/L	J	mc
VPB149-GW-101014-758-760	WG	BENZENE		0.50	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	BROMODICHLOROMETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	BROMOFORM		0.50	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	BROMOMETHANE		1.0	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	CARBON DISULFIDE		0.50	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	CARBON TETRACHLORIDE		0.50	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	CHLOROBENZENE		0.50	UG/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB149-GW-101014-758-760	WG	CHLOROETHANE		1.0	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	CHLOROFORM		0.50	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	CHLOROMETHANE		1.0	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	CIS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	CIS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	CYCLOHEXANE		0.50	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	DIBROMOCHLOROMETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	DICHLORODIFLUOROMETHANE		1.0	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	ETHYLBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	ISOPROPYLBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	M- AND P-XYLENE		1.0	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	METHYL ACETATE		0.75	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	METHYL CYCLOHEXANE		0.50	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	METHYL TERT-BUTYL ETHER		0.50	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	METHYLENE CHLORIDE		2.5	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	O-XYLENE		0.50	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	STYRENE		0.50	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	TETRACHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	TOLUENE		0.50	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	TRANS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	TRANS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	TRICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	TRICHLOROFLUOROMETHANE		1.0	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	VINYL CHLORIDE		1.0	UG/L	UJ	mc
VPB149-GW-101014-758-760	WG	XYLENES, TOTAL		1.5	UG/L	UJ	mc
VPB149-TRIP BLANK-101014	WQ	2-HEXANONE		2.5	UG/L	UJ	c
VPB149-TRIP BLANK-101014	WQ	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	c

Attachment A

Nonconformance Summary Tables

Table A-1 - Initial Calibration Verification Standard

ICV ID	Compound	% R	Limits
WG151736-7	4-METHYL-2-PENTANONE	73	80-120%
	2-HEXANONE	78	80-120%
Associated samples: all samples in SDG SH8710			

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) 425-4980	( )

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

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	NWIRP Bethpage / 60266526	

Bill (if different than above) Address

Sampler (Print / Sign) Michael Zebel / Michael Zebel

Copies To:

LAB USE ONLY WORK ORDER #: 584750

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: VOA	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 ☐I
	VPBi49-GW-101014-758-746	10-10-14 / 1020	GW	3	X										
	VPBi49-GW-101014-758-760	10-10-14 / 1300	GW	3	X										
	VPBi49-TripBlank-101014	9-15-14 / 1130	W	3	X										
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COMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
Michael Zebel	10-13-14 / 1615	10-14-14 0930			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

J000012

ORIGINAL

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ENSAFE
Lab ID: SH8710-1
Client ID: 149-101014-738-740
Project: Navy Clean WE15-03-06 NW
SDG: SH8710
Lab File ID: C9492.D

Sample Date: 10-OCT-14
Received Date: 14-OCT-14
Extract Date: 14-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG152078

Analysis Date: 14-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 15-OCT-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	0.36	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	J	1.2	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	10	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	0.36	ug/L	1	1	1.0	0.21	0.50
Chloroform	J	0.37	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	16	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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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8710-1
Client ID: 149-101014-738-740
Project: Navy Clean WE15-03-06 NW
SDG: SH8710
Lab File ID: C9492.D

Sample Date: 10-OCT-14
Received Date: 14-OCT-14
Extract Date: 14-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG152078

Analysis Date: 14-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 15-OCT-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	0.36	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		96.5	%					
Toluene-d8		102.	%					
1,2-Dichloroethane-d4		108.	%					
Dibromofluoromethane		107.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8710-2
Client ID: 149-101014-758-760
Project: Navy Clean WE15-03-06 NW
SDG: SH8710
Lab File ID: C9493.D

Sample Date: 10-OCT-14
Received Date: 14-OCT-14
Extract Date: 14-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG152078

Analysis Date: 14-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 15-OCT-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	11	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: ENSAFE
Lab ID: SH8710-2
Client ID: 149-101014-758-760
Project: Navy Clean WE15-03-06 NW
SDG: SH8710
Lab File ID: C9493.D

Sample Date: 10-OCT-14
Received Date: 14-OCT-14
Extract Date: 14-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG152078

Analysis Date: 14-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 15-OCT-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		97.2	%					
Toluene-d8		102.	%					
1,2-Dichloroethane-d4		110.	%					
Dibromofluoromethane		103.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8710-3
Client ID: VPB149-TB-101014
Project: Navy Clean WE15-03-06 NW
SDG: SH8710
Lab File ID: C9489.D

Sample Date: 10-OCT-14
Received Date: 14-OCT-14
Extract Date: 14-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG152078

Analysis Date: 14-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 15-OCT-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~~ 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~~ UJ	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: ENSAFE
Lab ID: SH8710-3
Client ID: VPB149-TB-101014
Project: Navy Clean WE15-03-06 NW
SDG: SH8710
Lab File ID: C9489.D

Sample Date: 10-OCT-14
Received Date: 14-OCT-14
Extract Date: 14-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG152078

Analysis Date: 14-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 15-OCT-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		97.7	%					
Toluene-d8		102.	%					
1,2-Dichloroethane-d4		108.	%					
Dibromofluoromethane		108.	%					

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RESOLUTION CONSULTANTS

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Data Validation Report

Project:	Regional Groundwater Investigation - NWIRP Bethpage	
Laboratory:	Katahdin Analytical	
Service Request:	SH8856	
Analyses/Method:	EPA SW-846 Method 8260B for VOCs (GC/MS)	
Validation Level:	3	
AECOM Project Number:	60266526.SA.DV	
Prepared by:	Dawn Brule/RESCON	Completed on: 12/22/2014
Reviewed by:	Lori Herberich/RESCON	File Name: SH8856_8260B

SUMMARY

The samples listed below were collected by Resolution Consultants from the Regional Groundwater Investigation - NWIRP Bethpage site on October 14 -16, 2014.

Sample ID	Matrix/Sample Type
VPB149-GW-101414-808-810	Groundwater
VPB149-GW-101414-818-820	Groundwater
VPB149-GW-101414-838-840	Groundwater
VPB149-GW-101514-858-860	Groundwater
VPB149-GW-101514-878-880	Groundwater
VPB149-GW-101614-903-905	Groundwater
VPB149-GW-101614-918-920	Groundwater
VPB149-TRIP BLANK-101614	Trip Blank

Data validation activities were conducted with reference to *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods SW-846, 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
NA	Matrix spike (MS) and/or matrix spike duplicate (MSD) 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 and/or 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 and the "GW" from the sample ID, and truncated the ID for the 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 sample VPB149-GW-101414-838-840 the laboratory decanted the liquid from one vial prior to analysis.
- For sample VPB149-GW-101414-808-810 the laboratory decanted the water from three individual vials into one vial as a composite.
- For sample VPB149-GW-101514-878-880 the laboratory decanted the water from two individual vials into one vial as a composite. Due to limited volume, the sample was analyzed at a dilution.
- For samples VPB149-GW-101514-858-860, VPB149-GW-101614-903-905, and VPB149-GW-101614-918-920, the laboratory decanted the water from three individual vials into one vial as a composite for each of the samples. Due to limited volume, the samples were analyzed at a dilution.

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. Qualified sample results are presented in Table 1.

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 initial calibration verification (ICV) percent recovery (%R) criteria were met;
- the continuing calibration verification standard (CCV) method percent difference or percent drift (%Ds) and RF acceptance criteria were met; and/or
- the retention time method acceptance criteria were met.

Nonconformances are summarized in Attachment A in Table A-1.

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.

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). An equipment blank was not submitted with the samples in this data set.

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 if the associated results were nondetect or if qualification of sample results was not required.

Nonconformances are summarized in Attachment A in Table A-2 and A-3.

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 AECOM 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.**
	TIC detected	Detects	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 AECOM professional judgment.			

LOQ - Limit of Quantitation.

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/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 not detected (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
VPB149-GW-101414-808-810	WG	1,1,1-TRICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	1,1,2,2-TETRACHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	1,1,2-TRICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	1,1-DICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	1,1-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	1,2,4-TRICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	1,2-DIBROMOETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	1,2-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	1,2-DICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	1,2-DICHLOROETHENE, TOTAL		1.0	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	1,2-DICHLOROPROPANE		0.50	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	1,3-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	1,4-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	2-BUTANONE		2.5	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	2-HEXANONE		2.5	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	ACETONE		18**	UG/L	UJ	mc,c,bt
VPB149-GW-101414-808-810	WG	BENZENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	BROMODICHLOROMETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	BROMOFORM		0.50	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	BROMOMETHANE		1.0	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	CARBON DISULFIDE		1.0*	UG/L	UJ	mc,bl
VPB149-GW-101414-808-810	WG	CARBON TETRACHLORIDE		0.50	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	CHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	CHLOROETHANE		1.0	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	CHLOROFORM		0.50	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	CHLOROMETHANE	0.98	1.0	UG/L	J	mc
VPB149-GW-101414-808-810	WG	CIS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	CIS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	CYCLOHEXANE		0.50	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	DIBROMOCHLOROMETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	DICHLORODIFLUOROMETHANE		1.0	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	ETHYLBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	ISOPROPYLBENZENE		0.50	UG/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB149-GW-101414-808-810	WG	M- AND P-XYLENE		1.0	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	METHYL ACETATE		0.75	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	METHYL CYCLOHEXANE		0.50	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	METHYL TERT-BUTYL ETHER		0.50	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	METHYLENE CHLORIDE		2.5	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	O-XYLENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	STYRENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	TETRACHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	TOLUENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	TRANS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	TRANS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	TRICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	TRICHLOROFLUOROMETHANE		1.0	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	VINYL CHLORIDE		1.0	UG/L	UJ	mc
VPB149-GW-101414-808-810	WG	XYLENES, TOTAL		1.5	UG/L	UJ	mc
VPB149-GW-101414-818-820	WG	CARBON DISULFIDE		1.0*	UG/L	U	bl
VPB149-GW-101414-838-840	WG	1,1,1-TRICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	1,1,2,2-TETRACHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	1,1,2-TRICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	1,1-DICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	1,1-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	1,2,4-TRICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	1,2-DIBROMOETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	1,2-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	1,2-DICHLOROETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	1,2-DICHLOROETHENE, TOTAL		1.0	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	1,2-DICHLOROPROPANE		0.50	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	1,3-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	1,4-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	2-BUTANONE		2.5	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	2-HEXANONE		2.5	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	ACETONE		8.9**	UG/L	UJ	mc,c,bt
VPB149-GW-101414-838-840	WG	BENZENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	BROMODICHLOROMETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	BROMOFORM		0.50	UG/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB149-GW-101414-838-840	WG	BROMOMETHANE		1.0	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	CARBON DISULFIDE		1.0*	UG/L	UJ	mc,bl
VPB149-GW-101414-838-840	WG	CARBON TETRACHLORIDE		0.50	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	CHLOROBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	CHLOROETHANE		1.0	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	CHLOROFORM		0.50	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	CHLOROMETHANE	0.48	1.0	UG/L	J	mc
VPB149-GW-101414-838-840	WG	CIS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	CIS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	CYCLOHEXANE		0.50	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	DIBROMOCHLOROMETHANE		0.50	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	DICHLORODIFLUOROMETHANE		1.0	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	ETHYLBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	ISOPROPYLBENZENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	M- AND P-XYLENE		1.0	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	METHYL ACETATE		0.75	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	METHYL CYCLOHEXANE	0.54	0.50	UG/L	J	mc
VPB149-GW-101414-838-840	WG	METHYL TERT-BUTYL ETHER		0.50	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	METHYLENE CHLORIDE		2.5	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	O-XYLENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	STYRENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	TETRACHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	TOLUENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	TRANS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	TRANS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	TRICHLOROETHENE		0.50	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	TRICHLOROFLUOROMETHANE		1.0	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	VINYL CHLORIDE		1.0	UG/L	UJ	mc
VPB149-GW-101414-838-840	WG	XYLENES, TOTAL		1.5	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	1,1,1-TRICHLOROETHANE		4.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	1,1,2,2-TETRACHLOROETHANE		4.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		4.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	1,1,2-TRICHLOROETHANE		4.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	1,1-DICHLOROETHANE		4.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	1,1-DICHLOROETHENE		4.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	1,2,4-TRICHLOROBENZENE		4.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	1,2-DIBROMO-3-CHLOROPROPANE		6.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	1,2-DIBROMOETHANE		4.0	UG/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB149-GW-101514-858-860	WG	1,2-DICHLOROBENZENE		4.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	1,2-DICHLOROETHANE		4.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	1,2-DICHLOROETHENE, TOTAL		8.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	1,2-DICHLOROPROPANE		4.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	1,3-DICHLOROBENZENE		4.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	1,4-DICHLOROBENZENE		4.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	2-BUTANONE		20	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	2-HEXANONE		20	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	4-METHYL-2-PENTANONE		20	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	ACETONE		40*	UG/L	UJ	mc,c,bt
VPB149-GW-101514-858-860	WG	BENZENE		4.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	BROMODICHLOROMETHANE		4.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	BROMOFORM		4.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	BROMOMETHANE		8.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	CARBON DISULFIDE		8.0*	UG/L	UJ	mc,bl
VPB149-GW-101514-858-860	WG	CARBON TETRACHLORIDE		4.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	CHLOROBENZENE		4.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	CHLOROETHANE		8.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	CHLOROFORM		4.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	CHLOROMETHANE		8.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	CIS-1,2-DICHLOROETHENE		4.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	CIS-1,3-DICHLOROPROPENE		4.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	CYCLOHEXANE		4.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	DIBROMOCHLOROMETHANE		4.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	DICHLORODIFLUOROMETHANE		8.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	ETHYLBENZENE		4.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	ISOPROPYLBENZENE		4.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	M- AND P-XYLENE		8.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	METHYL ACETATE		6.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	METHYL CYCLOHEXANE		4.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	METHYL TERT-BUTYL ETHER		4.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	METHYLENE CHLORIDE		20	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	O-XYLENE		4.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	STYRENE		4.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	TETRACHLOROETHENE		4.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	TOLUENE		4.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	TRANS-1,2-DICHLOROETHENE		4.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	TRANS-1,3-DICHLOROPROPENE		4.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	TRICHLOROETHENE		4.0	UG/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB149-GW-101514-858-860	WG	TRICHLOROFLUOROMETHANE		8.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	VINYL CHLORIDE		8.0	UG/L	UJ	mc
VPB149-GW-101514-858-860	WG	XYLENES, TOTAL		12.	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	1,1,1-TRICHLOROETHANE		2.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	1,1,2,2-TETRACHLOROETHANE		2.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		2.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	1,1,2-TRICHLOROETHANE		2.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	1,1-DICHLOROETHANE		2.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	1,1-DICHLOROETHENE		2.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	1,2,4-TRICHLOROBENZENE		2.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	1,2-DIBROMO-3-CHLOROPROPANE		3.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	1,2-DIBROMOETHANE		2.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	1,2-DICHLOROBENZENE		2.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	1,2-DICHLOROETHANE		2.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	1,2-DICHLOROETHENE, TOTAL		4.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	1,2-DICHLOROPROPANE		2.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	1,3-DICHLOROBENZENE		2.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	1,4-DICHLOROBENZENE		2.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	2-BUTANONE		10	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	2-HEXANONE		10	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	4-METHYL-2-PENTANONE		10	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	ACETONE		22**	UG/L	UJ	mc,c,bt
VPB149-GW-101514-878-880	WG	BENZENE		2.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	BROMODICHLOROMETHANE		2.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	BROMOFORM		2.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	BROMOMETHANE		4.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	CARBON DISULFIDE		4.0*	UG/L	UJ	mc,bl
VPB149-GW-101514-878-880	WG	CARBON TETRACHLORIDE		2.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	CHLOROBENZENE		2.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	CHLOROETHANE		4.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	CHLOROFORM		2.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	CHLOROMETHANE		4.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	CIS-1,2-DICHLOROETHENE		2.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	CIS-1,3-DICHLOROPROPENE		2.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	CYCLOHEXANE		2.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	DIBROMOCHLOROMETHANE		2.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	DICHLORODIFLUOROMETHANE		4.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	ETHYLBENZENE		2.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	ISOPROPYLBENZENE		2.0	UG/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB149-GW-101514-878-880	WG	M- AND P-XYLENE		4.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	METHYL ACETATE		3.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	METHYL CYCLOHEXANE		2.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	METHYL TERT-BUTYL ETHER		2.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	METHYLENE CHLORIDE		10	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	O-XYLENE		2.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	STYRENE		2.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	TETRACHLOROETHENE		2.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	TOLUENE		2.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	TRANS-1,2-DICHLOROETHENE		2.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	TRANS-1,3-DICHLOROPROPENE		2.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	TRICHLOROETHENE		2.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	TRICHLOROFLUOROMETHANE		4.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	VINYL CHLORIDE		4.0	UG/L	UJ	mc
VPB149-GW-101514-878-880	WG	XYLENES, TOTAL		6.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	1,1,1-TRICHLOROETHANE		5.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	1,1,2,2-TETRACHLOROETHANE		5.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		5.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	1,1,2-TRICHLOROETHANE		5.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	1,1-DICHLOROETHANE		5.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	1,1-DICHLOROETHENE		5.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	1,2,4-TRICHLOROBENZENE		5.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	1,2-DIBROMO-3-CHLOROPROPANE		7.5	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	1,2-DIBROMOETHANE		5.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	1,2-DICHLOROBENZENE		5.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	1,2-DICHLOROETHANE		5.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	1,2-DICHLOROETHENE, TOTAL		10	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	1,2-DICHLOROPROPANE		5.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	1,3-DICHLOROBENZENE		5.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	1,4-DICHLOROBENZENE		5.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	2-BUTANONE		25	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	2-HEXANONE		25	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	4-METHYL-2-PENTANONE		25	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	ACETONE		25	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	BENZENE		5.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	BROMODICHLOROMETHANE		5.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	BROMOFORM		5.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	BROMOMETHANE		10	UG/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB149-GW-101614-903-905	WG	CARBON DISULFIDE		10*	UG/L	UJ	mc,bl
VPB149-GW-101614-903-905	WG	CARBON TETRACHLORIDE		5.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	CHLOROBENZENE		5.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	CHLOROETHANE		10	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	CHLOROFORM		5.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	CHLOROMETHANE		10	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	CIS-1,2-DICHLOROETHENE		5.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	CIS-1,3-DICHLOROPROPENE		5.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	CYCLOHEXANE		5.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	DIBROMOCHLOROMETHANE		5.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	DICHLORODIFLUOROMETHANE		10	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	ETHYLBENZENE		5.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	ISOPROPYLBENZENE		5.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	M- AND P-XYLENE		10	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	METHYL ACETATE		7.5	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	METHYL CYCLOHEXANE		5.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	METHYL TERT-BUTYL ETHER		5.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	METHYLENE CHLORIDE		25	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	O-XYLENE		5.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	STYRENE		5.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	TETRACHLOROETHENE		5.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	TOLUENE		5.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	TRANS-1,2-DICHLOROETHENE		5.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	TRANS-1,3-DICHLOROPROPENE		5.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	TRICHLOROETHENE		5.0	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	TRICHLOROFLUOROMETHANE		10	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	VINYL CHLORIDE		10	UG/L	UJ	mc
VPB149-GW-101614-903-905	WG	XYLENES, TOTAL		15.	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	1,1,1-TRICHLOROETHANE		4.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	1,1,2,2-TETRACHLOROETHANE		4.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		4.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	1,1,2-TRICHLOROETHANE		4.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	1,1-DICHLOROETHANE		4.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	1,1-DICHLOROETHENE		4.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	1,2,4-TRICHLOROBENZENE		4.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	1,2-DIBROMO-3-CHLOROPROPANE		6.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	1,2-DIBROMOETHANE		4.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	1,2-DICHLOROBENZENE		4.0	UG/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB149-GW-101614-918-920	WG	1,2-DICHLOROETHANE		4.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	1,2-DICHLOROETHENE, TOTAL		8.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	1,2-DICHLOROPROPANE		4.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	1,3-DICHLOROBENZENE		4.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	1,4-DICHLOROBENZENE		4.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	2-BUTANONE		20	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	2-HEXANONE		20	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	4-METHYL-2-PENTANONE		20	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	ACETONE		20	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	BENZENE		4.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	BROMODICHLOROMETHANE		4.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	BROMOFORM		4.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	BROMOMETHANE		8.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	CARBON DISULFIDE		4.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	CARBON TETRACHLORIDE		4.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	CHLOROBENZENE		4.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	CHLOROETHANE		8.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	CHLOROFORM		4.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	CHLOROMETHANE		8.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	CIS-1,2-DICHLOROETHENE		4.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	CIS-1,3-DICHLOROPROPENE		4.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	CYCLOHEXANE		4.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	DIBROMOCHLOROMETHANE		4.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	DICHLORODIFLUOROMETHANE		8.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	ETHYLBENZENE		4.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	ISOPROPYLBENZENE		4.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	M- AND P-XYLENE		8.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	METHYL ACETATE		6.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	METHYL CYCLOHEXANE		4.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	METHYL TERT-BUTYL ETHER		4.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	METHYLENE CHLORIDE		20	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	O-XYLENE		4.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	STYRENE		4.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	TETRACHLOROETHENE		4.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	TOLUENE		4.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	TRANS-1,2-DICHLOROETHENE		4.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	TRANS-1,3-DICHLOROPROPENE		4.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	TRICHLOROETHENE		4.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	TRICHLOROFLUOROMETHANE		8.0	UG/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB149-GW-101614-918-920	WG	VINYL CHLORIDE		8.0	UG/L	UJ	mc
VPB149-GW-101614-918-920	WG	XYLENES, TOTAL		12.	UG/L	UJ	mc
VPB149-TRIP BLANK-101614	WQ	ACETONE	4.3	2.5	UG/L	J	c
VPB149-TRIP BLANK-101614	WQ	CARBON DISULFIDE		1.0*	UG/L	U	bl

*LOQ
**sample result

Attachment A

Nonconformance Summary Tables

Table A-1 - Initial Calibration Verification Standard

ICV ID	Compound	% R	Limits
WG152382-5	ACETONE	128	80-120%
	4-METHYL-2-PENTANONE	123	80-120%
Associated samples: all samples in SDG SH8856			

Table A-2 - Lab Blanks

Blank ID	Compound	Result	LOD	Units	Associated Samples
WG152382-2	CARBON DISULFIDE	0.34	0.50	UG/L	All samples in SDG SH8856

Table A-3 - Field Blanks

Blank ID	Compound	Result	LOQ	Units	Associated Samples
VPB149-TRIP BLANK-101614	ACETONE	4.3	5.0	UG/L	VPB149-GW-101414-808-810 VPB149-GW-101414-838-840 VPB149-GW-101514-858-860 VPB149-GW-101514-878-880

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
bt	Trip 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 Vivanda	(845) 425-4926	( )

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

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	NWIRP Bethpage / 60266526	

Bill (if different than above) Address

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

LAB USE ONLY WORK ORDER #: 548856

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 ☐I
	VPB149-GW-101414-808-810	10-14-14 / 1105	GW	3	X									
	VPB149-GW-101414-818-820	10-14-14 / 1325	GW	3	X									
	VPB149-GW-101414-838-840	10-14-14 / 1535	GW	3	X									
	VPB149-GW-101514-858-860	10-15-14 / 1045	GW	3	X									
	VPB149-GW-101514-878-880	10-15-14 / 1340	GW	2	X									
	VPB149-GW-101614-903-905	10-16-14 / 1240	GW	3	X									
	VPB149-GW-101614-918-920	10-16-14 / 1445	GW	3	X									
	VPB149-Trip Blank-101614	9-15-14 / 1130	W	3	X									
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COMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
Michael Zobel	10-16-14 / 1500			10/16/14 1515	fedex
Relinquished By: (Signature)	Date / Time	Received By: (Signature) 10-17-14 0900	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

2

DO 0001X ORIGINAL

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac Cert No E87604

Report of Analytical Results

Client: ENSAFE
Lab ID: SH8856-1
Client ID: 149-101414-808-810
Project: Navy Clean WE15-03-06 NW
SDG: SH8856
Lab File ID: C9572.D

Sample Date: 14-OCT-14
Received Date: 17-OCT-14
Extract Date: 18-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG152382

Analysis Date: 18-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 20-OCT-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	J J	0.98	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U UJ	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	~~0.38~~ 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		18	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: ENSAFE
Lab ID: SH8856-1
Client ID: 149-101414-808-810
Project: Navy Clean WE15-03-06 NW
SDG: SH8856
Lab File ID: C9572.D

Sample Date: 14-OCT-14
Received Date: 17-OCT-14
Extract Date: 18-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG152382

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

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U J	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		99.2	%					
Toluene-d8		102.	%					
1,2-Dichloroethane-d4		110.	%					
Dibromofluoromethane		105.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8856-2
Client ID: 149-101414-818-820
Project: Navy Clean WE15-03-06 NW
SDG: SH8856
Lab File ID: C9577.D

Sample Date: 14-OCT-14
Received Date: 17-OCT-14
Extract Date: 18-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG152382

Analysis Date: 18-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 20-OCT-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	~~0.42~~ 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	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: ENSAFE
Lab ID: SH8856-2
Client ID: 149-101414-818-820
Project: Navy Clean WE15-03-06 NW
SDG: SH8856
Lab File ID: C9577.D

Sample Date: 14-OCT-14
Received Date: 17-OCT-14
Extract Date: 18-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG152382

Analysis Date: 18-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 20-OCT-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		98.4	%					
Toluene-d8		102.	%					
1,2-Dichloroethane-d4		109.	%					
Dibromofluoromethane		105.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8856-3
Client ID: 149-101414-838-840
Project: Navy Clean WE15-03-06 NW
SDG: SH8856
Lab File ID: C9578.D

Sample Date: 14-OCT-14
Received Date: 17-OCT-14
Extract Date: 18-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG152382

Analysis Date: 18-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 20-OCT-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	J J	0.48	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U UJ	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	~~0.38~~ 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		8.9	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: ENSAFE
Lab ID: SH8856-3
Client ID: 149-101414-838-840
Project: Navy Clean WE15-03-06 NW
SDG: SH8856
Lab File ID: C9578.D

Sample Date: 14-OCT-14
Received Date: 17-OCT-14
Extract Date: 18-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG152382

Analysis Date: 18-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 20-OCT-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	J J	0.54	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U UJ	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		98.0	%					
Toluene-d8		101.	%					
1,2-Dichloroethane-d4		110.	%					
Dibromofluoromethane		102.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8856-4DL
Client ID: 149-101514-858-860
Project: Navy Clean WE15-03-06 NW
SDG: SH8856
Lab File ID: C9573.D

Sample Date: 15-OCT-14
Received Date: 17-OCT-14
Extract Date: 18-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG152382

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

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UJ	8.0	ug/L	8	2	16.	1.9	8.0
Chloromethane	U	8.0	ug/L	8	2	16.	2.9	8.0
Vinyl Chloride	U	8.0	ug/L	8	2	16.	2.0	8.0
Bromomethane	U	8.0	ug/L	8	2	16.	3.9	8.0
Chloroethane	U	8.0	ug/L	8	2	16.	4.4	8.0
Trichlorofluoromethane	U	8.0	ug/L	8	2	16.	1.9	8.0
1,1-Dichloroethene	U	4.0	ug/L	8	1	8.0	2.8	4.0
Carbon Disulfide	J	~~2.2~~ 8.0	ug/L	8	1	8.0	2.0	4.0
Freon-113	U	4.0	ug/L	8	1	8.0	2.5	4.0
Methylene Chloride	U	20	ug/L	8	5	40.	9.0	20.
Acetone	J	~~21~~ 40.0	ug/L	8	5	40.	18.	20.
trans-1,2-Dichloroethene	U	4.0	ug/L	8	1	8.0	2.0	4.0
Methyl tert-butyl Ether	U	4.0	ug/L	8	1	8.0	2.9	4.0
1,1-Dichloroethane	U	4.0	ug/L	8	1	8.0	1.7	4.0
cis-1,2-Dichloroethene	U	4.0	ug/L	8	1	8.0	1.7	4.0
Chloroform	U	4.0	ug/L	8	1	8.0	2.6	4.0
1,1,1-Trichloroethane	U	4.0	ug/L	8	1	8.0	1.6	4.0
2-Butanone	U	20	ug/L	8	5	40.	10.	20.
Cyclohexane	U	4.0	ug/L	8	1	8.0	2.5	4.0
Carbon Tetrachloride	U	4.0	ug/L	8	1	8.0	1.8	4.0
Benzene	U	4.0	ug/L	8	1	8.0	2.1	4.0
1,2-Dichloroethane	U	4.0	ug/L	8	1	8.0	1.6	4.0
Trichloroethene	U	4.0	ug/L	8	1	8.0	2.2	4.0
1,2-Dichloropropane	U	4.0	ug/L	8	1	8.0	2.0	4.0
Bromodichloromethane	U	4.0	ug/L	8	1	8.0	2.6	4.0
cis-1,3-Dichloropropene	U	4.0	ug/L	8	1	8.0	1.5	4.0
Toluene	U	4.0	ug/L	8	1	8.0	2.2	4.0
4-Methyl-2-Pentanone	U	20	ug/L	8	5	40.	10.	20.
trans-1,3-Dichloropropene	U	4.0	ug/L	8	1	8.0	1.6	4.0
1,1,2-Trichloroethane	U	4.0	ug/L	8	1	8.0	2.6	4.0
Tetrachloroethene	U	4.0	ug/L	8	1	8.0	3.2	4.0
Dibromochloromethane	U	4.0	ug/L	8	1	8.0	2.4	4.0
2-Hexanone	U	20	ug/L	8	5	40.	14.	20.
Chlorobenzene	U	4.0	ug/L	8	1	8.0	1.8	4.0
Ethylbenzene	U	4.0	ug/L	8	1	8.0	1.7	4.0

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8856-4DL
Client ID: 149-101514-858-860
Project: Navy Clean WE15-03-06 NW
SDG: SH8856
Lab File ID: C9573.D

Sample Date: 15-OCT-14
Received Date: 17-OCT-14
Extract Date: 18-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG152382

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

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U UJ	12	ug/L	8	3	24.	2.0	12.
Styrene	U	4.0	ug/L	8	1	8.0	1.8	4.0
Bromoform	U	4.0	ug/L	8	1	8.0	1.8	4.0
Isopropylbenzene	U	4.0	ug/L	8	1	8.0	1.8	4.0
1,1,2,2-Tetrachloroethane	U	4.0	ug/L	8	1	8.0	3.0	4.0
1,3-Dichlorobenzene	U	4.0	ug/L	8	1	8.0	2.1	4.0
1,4-Dichlorobenzene	U	4.0	ug/L	8	1	8.0	1.9	4.0
1,2-Dichlorobenzene	U	4.0	ug/L	8	1	8.0	1.2	4.0
1,2,4-Trichlorobenzene	U	4.0	ug/L	8	1	8.0	3.0	4.0
Methyl Acetate	U	6.0	ug/L	8	1	8.0	4.2	6.0
Methylcyclohexane	U	4.0	ug/L	8	1	8.0	2.4	4.0
o-Xylene	U	4.0	ug/L	8	1	8.0	2.0	4.0
M+P-Xylenes	U	8.0	ug/L	8	2	16.	4.7	8.0
1,2-Dichloroethylene (Total)	U	8.0	ug/L	8	2	16.	1.7	8.0
1,2-Dibromoethane	U	4.0	ug/L	8	1	8.0	1.8	4.0
1,2-Dibromo-3-Chloropropane	U	6.0	ug/L	8	1	8.0	4.0	6.0
P-Bromofluorobenzene		98.5	%					
Toluene-d8		103.	%					
1,2-Dichloroethane-d4		106.	%					
Dibromofluoromethane		103.	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8856-5DL
Client ID: 149-101514-878-880
Project: Navy Clean WE15-03-06 NW
SDG: SH8856
Lab File ID: C9574.D

Sample Date: 15-OCT-14
Received Date: 17-OCT-14
Extract Date: 18-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG152382

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

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	4.0	ug/L	4	2	8.0	0.96	4.0
Chloromethane	U	4.0	ug/L	4	2	8.0	1.4	4.0
Vinyl Chloride	U	4.0	ug/L	4	2	8.0	1.0	4.0
Bromomethane	U	4.0	ug/L	4	2	8.0	2.0	4.0
Chloroethane	U	4.0	ug/L	4	2	8.0	2.2	4.0
Trichlorofluoromethane	U	4.0	ug/L	4	2	8.0	0.96	4.0
1,1-Dichloroethene	U	2.0	ug/L	4	1	4.0	1.4	2.0
Carbon Disulfide	J	~~1.0~~ 4.0	ug/L	4	1	4.0	1.0	2.0
Freon-113	U	2.0	ug/L	4	1	4.0	1.2	2.0
Methylene Chloride	U	10	ug/L	4	5	20.	4.5	10.
Acetone		22	ug/L	4	5	20.	8.8	10.
trans-1,2-Dichloroethene	U	2.0	ug/L	4	1	4.0	1.0	2.0
Methyl tert-butyl Ether	U	2.0	ug/L	4	1	4.0	1.4	2.0
1,1-Dichloroethane	U	2.0	ug/L	4	1	4.0	0.84	2.0
cis-1,2-Dichloroethene	U	2.0	ug/L	4	1	4.0	0.84	2.0
Chloroform	U	2.0	ug/L	4	1	4.0	1.3	2.0
1,1,1-Trichloroethane	U	2.0	ug/L	4	1	4.0	0.80	2.0
2-Butanone	U	10	ug/L	4	5	20.	5.2	10.
Cyclohexane	U	2.0	ug/L	4	1	4.0	1.2	2.0
Carbon Tetrachloride	U	2.0	ug/L	4	1	4.0	0.88	2.0
Benzene	U	2.0	ug/L	4	1	4.0	1.0	2.0
1,2-Dichloroethane	U	2.0	ug/L	4	1	4.0	0.80	2.0
Trichloroethene	U	2.0	ug/L	4	1	4.0	1.1	2.0
1,2-Dichloropropane	U	2.0	ug/L	4	1	4.0	1.0	2.0
Bromodichloromethane	U	2.0	ug/L	4	1	4.0	1.3	2.0
cis-1,3-Dichloropropene	U	2.0	ug/L	4	1	4.0	0.76	2.0
Toluene	U	2.0	ug/L	4	1	4.0	1.1	2.0
4-Methyl-2-Pentanone	U	10	ug/L	4	5	20.	5.3	10.
trans-1,3-Dichloropropene	U	2.0	ug/L	4	1	4.0	0.80	2.0
1,1,2-Trichloroethane	U	2.0	ug/L	4	1	4.0	1.3	2.0
Tetrachloroethene	U	2.0	ug/L	4	1	4.0	1.6	2.0
Dibromochloromethane	U	2.0	ug/L	4	1	4.0	1.2	2.0
2-Hexanone	U	10	ug/L	4	5	20.	6.8	10.
Chlorobenzene	U	2.0	ug/L	4	1	4.0	0.88	2.0
Ethylbenzene	U	2.0	ug/L	4	1	4.0	0.84	2.0

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8856-5DL
Client ID: 149-101514-878-880
Project: Navy Clean WE15-03-06 NW
SDG: SH8856
Lab File ID: C9574.D

Sample Date: 15-OCT-14
Received Date: 17-OCT-14
Extract Date: 18-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG152382

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

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U UJ	6.0	ug/L	4	3	12.	1.0	6.0
Styrene	U	2.0	ug/L	4	1	4.0	0.92	2.0
Bromoform	U	2.0	ug/L	4	1	4.0	0.92	2.0
Isopropylbenzene	U	2.0	ug/L	4	1	4.0	0.92	2.0
1,1,2,2-Tetrachloroethane	U	2.0	ug/L	4	1	4.0	1.5	2.0
1,3-Dichlorobenzene	U	2.0	ug/L	4	1	4.0	1.0	2.0
1,4-Dichlorobenzene	U	2.0	ug/L	4	1	4.0	0.96	2.0
1,2-Dichlorobenzene	U	2.0	ug/L	4	1	4.0	0.60	2.0
1,2,4-Trichlorobenzene	U	2.0	ug/L	4	1	4.0	1.5	2.0
Methyl Acetate	U	3.0	ug/L	4	1	4.0	2.1	3.0
Methylcyclohexane	U	2.0	ug/L	4	1	4.0	1.2	2.0
o-Xylene	U	2.0	ug/L	4	1	4.0	1.0	2.0
M+P-Xylenes	U	4.0	ug/L	4	2	8.0	2.4	4.0
1,2-Dichloroethylene (Total)	U	4.0	ug/L	4	2	8.0	0.84	4.0
1,2-Dibromoethane	U	2.0	ug/L	4	1	4.0	0.88	2.0
1,2-Dibromo-3-Chloropropane	U	3.0	ug/L	4	1	4.0	2.0	3.0
P-Bromofluorobenzene		97.9	%					
Toluene-d8		101.	%					
1,2-Dichloroethane-d4		108.	%					
Dibromofluoromethane		105.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8856-6DL
Client ID: 149-101614-903-905
Project: Navy Clean WE15-03-06 NW
SDG: SH8856
Lab File ID: C9575.D

Sample Date: 16-OCT-14
Received Date: 17-OCT-14
Extract Date: 18-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG152382

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

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U U5	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	J	~~2.7~~ 10.0	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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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8856-6DL
Client ID: 149-101614-903-905
Project: Navy Clean WE15-03-06 NW
SDG: SH8856
Lab File ID: C9575.D

Sample Date: 16-OCT-14
Received Date: 17-OCT-14
Extract Date: 18-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG152382

Analysis Date: 18-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 20-OCT-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		100.	%					
Toluene-d8		102.	%					
1,2-Dichloroethane-d4		117.	%					
Dibromofluoromethane		109.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8856-7DL
Client ID: 149-101614-918-920
Project: Navy Clean WE15-03-06 NW
SDG: SH8856
Lab File ID: C9576.D

Sample Date: 16-OCT-14
Received Date: 17-OCT-14
Extract Date: 18-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG152382

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

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	8.0	ug/L	8	2	16.	1.9	8.0
Chloromethane	U	8.0	ug/L	8	2	16.	2.9	8.0
Vinyl Chloride	U	8.0	ug/L	8	2	16.	2.0	8.0
Bromomethane	U	8.0	ug/L	8	2	16.	3.9	8.0
Chloroethane	U	8.0	ug/L	8	2	16.	4.4	8.0
Trichlorofluoromethane	U	8.0	ug/L	8	2	16.	1.9	8.0
1,1-Dichloroethene	U	4.0	ug/L	8	1	8.0	2.8	4.0
Carbon Disulfide	U	4.0	ug/L	8	1	8.0	2.0	4.0
Freon-113	U	4.0	ug/L	8	1	8.0	2.5	4.0
Methylene Chloride	U	20	ug/L	8	5	40.	9.0	20.
Acetone	U	20	ug/L	8	5	40.	18.	20.
trans-1,2-Dichloroethene	U	4.0	ug/L	8	1	8.0	2.0	4.0
Methyl tert-butyl Ether	U	4.0	ug/L	8	1	8.0	2.9	4.0
1,1-Dichloroethane	U	4.0	ug/L	8	1	8.0	1.7	4.0
cis-1,2-Dichloroethene	U	4.0	ug/L	8	1	8.0	1.7	4.0
Chloroform	U	4.0	ug/L	8	1	8.0	2.6	4.0
1,1,1-Trichloroethane	U	4.0	ug/L	8	1	8.0	1.6	4.0
2-Butanone	U	20	ug/L	8	5	40.	10.	20.
Cyclohexane	U	4.0	ug/L	8	1	8.0	2.5	4.0
Carbon Tetrachloride	U	4.0	ug/L	8	1	8.0	1.8	4.0
Benzene	U	4.0	ug/L	8	1	8.0	2.1	4.0
1,2-Dichloroethane	U	4.0	ug/L	8	1	8.0	1.6	4.0
Trichloroethene	U	4.0	ug/L	8	1	8.0	2.2	4.0
1,2-Dichloropropane	U	4.0	ug/L	8	1	8.0	2.0	4.0
Bromodichloromethane	U	4.0	ug/L	8	1	8.0	2.6	4.0
cis-1,3-Dichloropropene	U	4.0	ug/L	8	1	8.0	1.5	4.0
Toluene	U	4.0	ug/L	8	1	8.0	2.2	4.0
4-Methyl-2-Pentanone	U	20	ug/L	8	5	40.	10.	20.
trans-1,3-Dichloropropene	U	4.0	ug/L	8	1	8.0	1.6	4.0
1,1,2-Trichloroethane	U	4.0	ug/L	8	1	8.0	2.6	4.0
Tetrachloroethene	U	4.0	ug/L	8	1	8.0	3.2	4.0
Dibromochloromethane	U	4.0	ug/L	8	1	8.0	2.4	4.0
2-Hexanone	U	20	ug/L	8	5	40.	14.	20.
Chlorobenzene	U	4.0	ug/L	8	1	8.0	1.8	4.0
Ethylbenzene	U	4.0	ug/L	8	1	8.0	1.7	4.0

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8856-7DL
Client ID: 149-101614-918-920
Project: Navy Clean WE15-03-06 NW
SDG: SH8856
Lab File ID: C9576.D

Sample Date: 16-OCT-14
Received Date: 17-OCT-14
Extract Date: 18-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG152382

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

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U UJ	12	ug/L	8	3	24.	2.0	12.
Styrene	U	4.0	ug/L	8	1	8.0	1.8	4.0
Bromoform	U	4.0	ug/L	8	1	8.0	1.8	4.0
Isopropylbenzene	U	4.0	ug/L	8	1	8.0	1.8	4.0
1,1,2,2-Tetrachloroethane	U	4.0	ug/L	8	1	8.0	3.0	4.0
1,3-Dichlorobenzene	U	4.0	ug/L	8	1	8.0	2.1	4.0
1,4-Dichlorobenzene	U	4.0	ug/L	8	1	8.0	1.9	4.0
1,2-Dichlorobenzene	U	4.0	ug/L	8	1	8.0	1.2	4.0
1,2,4-Trichlorobenzene	U	4.0	ug/L	8	1	8.0	3.0	4.0
Methyl Acetate	U	6.0	ug/L	8	1	8.0	4.2	6.0
Methylcyclohexane	U	4.0	ug/L	8	1	8.0	2.4	4.0
o-Xylene	U	4.0	ug/L	8	1	8.0	2.0	4.0
M+P-Xylenes	U	8.0	ug/L	8	2	16.	4.7	8.0
1,2-Dichloroethylene (Total)	U	8.0	ug/L	8	2	16.	1.7	8.0
1,2-Dibromoethane	U	4.0	ug/L	8	1	8.0	1.8	4.0
1,2-Dibromo-3-Chloropropane	U	6.0	ug/L	8	1	8.0	4.0	6.0
P-Bromofluorobenzene		97.1	%					
Toluene-d8		102.	%					
1,2-Dichloroethane-d4		109.	%					
Dibromofluoromethane		103.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH8856-8
Client ID: VPB149-TB-101614
Project: Navy Clean WE15-03-06 NW
SDG: SH8856
Lab File ID: C9571.D

Sample Date: 16-OCT-14
Received Date: 17-OCT-14
Extract Date: 18-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG152382

Analysis Date: 18-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 20-OCT-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		100.	%					
Toluene-d8		104.	%					
1,2-Dichloroethane-d4		109.	%					
Dibromofluoromethane		104.	%					

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: ENSAFE
Lab ID: SH8856-8
Client ID: VPB149-TB-101614
Project: Navy Clean WE15-03-06 NW
SDG: SH8856
Lab File ID: C9571.D

Sample Date: 16-OCT-14
Received Date: 17-OCT-14
Extract Date: 18-OCT-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG152382

Analysis Date: 18-OCT-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 20-OCT-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	~~0.26~~ 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	4.3	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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R. 12/9/15

RESOLUTION CONSULTANTS

Resolution Consultants
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	
Service Request:	SH8951	
Analyses/Method:	EPA SW-846 Method 9060A for TOC	
Validation Level:	3	
AECOM Project Number:	60266526.SA.DV	
Prepared by:	Dawn Brule/RESCON	Completed on: 01/09/2015
Reviewed by:	Lori Herberich/RESCON	File Name: SH8951_9060A

SUMMARY

The samples listed below were collected by Resolution Consultants from the Regional Groundwater Investigation - NWIRP Bethpage site on October 7, 2014.

Sample ID	Matrix/Sample Type
VPB149-SOIL-DUP-100714	Field Duplicate of VPB149-SOIL-100714-608-610
VPB149-SOIL-100714-608-610	Soil

Data validation activities were conducted with reference to these methods, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods SW-846,* Method 9060A, *Total Organic Carbon* (USEPA, 1996), *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
- ✓ Initial calibration/continuing calibration verification
- ✓ Laboratory blanks/equipment blanks
- ✓ Matrix spike (MS)/Matrix duplicate (MD) and/or matrix spike duplicate (MSD) results
- ✓ Laboratory control sample (LCS) results
- ✓ Field duplicate 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. There were no data points qualified or rejected on the basis of this data review.

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 and the "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.

Initial Calibration/Continuing Calibration Verification

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

- all criteria were met for the calibration curves
- the initial calibration verification (ICV) percent recovery (%R) criteria were met; and
- the continuing calibration verification standard (CCV) method %Rs were met

The QC acceptance criteria were met.

Laboratory Blanks/Equipment Blanks

Laboratory method blanks and equipment rinsate blanks were evaluated as to whether there were contaminants detected above the detection limit (DL). An equipment blank was not submitted with the samples in this data set.

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

Method 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.

MS/MD and/or MSD Results

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

LCS Results

The LCS %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 ≤ 60% for soil matrices. This criteria applies if both results were greater than five times the Limit of Quantitation (LOQ). All QC acceptance criteria were met.

Sample Results/Reporting Issues

Compounds that were not detected in the sample are reported as not detected (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 Qualifier Codes and Explanations

Attachment A

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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CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
Resolution Consultants	Eleanor Vivaudou	(845)425-4980	( )

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

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	NWIRP Bethpage / 60266526	

Bill (if different than above) | Address

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

LAB USE ONLY WORK ORDER #: 5H8451
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
	VPB149-Soil-100714-608-610	10-7-14 / 1230	Soil	1	X									
	VPB149-Soil-Dup-100714	10-7-14 / —	Soil	1	X									
	VPB149-Soil-MS/MSD-100714-608-610	10-7-14 / 1230	Soil	1	X									
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COMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
Michael Zobel	10-20-14 / 1530			10-20-14 1420	Fedex
Relinquished By: (Signature)	Date / Time	Received By: (Signature) 10-21-14 0915	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

ORIGINAL

Katahdin
ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: Accounts Payable
EnSafe
5724 Summer Trees Drive
Memphis,TN 38134

Lab Sample ID: SH8951-1
Report Date: 17-NOV-14
Client PO: 16518
Project: Navy Clean WE15-03-0
SDG: SH8951

Sample Description	Matrix	Date Sampled	Date Received
149-100714-608-610	SL	07-OCT-14 12:30:00	21-OCT-14

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
TOC In Soil	1300 ug/gdrywt	600	130	450	SW846 9060A Mod.	WG152643	22-OCT-14 10:15:11	N/A	N/A	
Total Solids	88. %	1		N/A	SM2540G	WG153072	29-OCT-14 10:58:34	SM2540G	28-OCT-14	

Report of Analytical Results

Client: Accounts Payable
EnSafe
5724 Summer Trees Drive
Memphis,TN 38134

Lab Sample ID: SH8951-2
Report Date: 17-NOV-14
Client PO: 16518
Project: Navy Clean WE15-03-0
SDG: SH8951

Sample Description	Matrix	Date Sampled	Date Received
149-SOIL-DUP-100714	SL	07-OCT-14 00:00:00	21-OCT-14

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
TOC In Soil	980 ug/gdrywt	660	140	500	SW846 9060A Mod.	WG152643	22-OCT-14 10:37:38	N/A	N/A	
Total Solids	87. %	1		N/A	SM2540G	WG153072	29-OCT-14 10:58:49	SM2540G	28-OCT-14	

Section 5

VPB 149 Analytical Data Table

Vertical Profile Boring 149, Analytical Data Table
Naval Weapons Industrial Reserve Plant
Bethpage - Bethpage, New York

Resolution Consultants

Location		VPB149	VPB149	VPB149	VPB149
Sample Date	NYSDEC Groundwater Guidance or Standard Value (Note 1)	9/23/2014	9/23/2014	9/24/2014	9/25/2014
Sample ID		VPB149-GW-092314-58-60	VPB149-GW-092314-98-100	VPB149-GW-092414-148-150	VPB149-GW-092514-198-200
Sample Interval		58 - 60 ft	98 - 100 ft	148 - 150 ft	198 - 200 ft
Sample type code		N	N	N	N
VOC 8260c (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	**1.5**
1,1-DICHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	**0.39 J**
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 UJ***	***< 0.75 UJ***	***< 0.75 UJ***	***< 0.75 UJ***
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	**0.17 J**
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	**0.22 J**	**0.72 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 U	< 2.5 U
ACETONE	50	< 5.5 UJ	< 5.0 UJ	< 5.9 UJ	< 5.0 UJ
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	**0.41 J**	**0.55 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	**0.22 J**	**0.72 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	**8.2**	< 0.50 U
DIBROMOCHLOROMETHANE	5	**0.65 J**	< 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	**37**	**2.5**
METHYL TERT-BUTYL ETHER	10	< 0.50 U	< 0.50 U	**8.4**	**3.9**
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	**1.1**	**1.3**
TOLUENE	5	< 0.50 U	< 0.50 U	**0.33 J**	< 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	**3.2**	**11**
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		VPB149	VPB149	VPB149	VPB149
Sample Date	NYSDEC Groundwater Guidance or Standard Value (Note 1)	9/25/2014	9/25/2014	9/25/2014	9/26/2014
Sample ID		VPB149-GW-092514-218-220	VPB149-GWD-092514	VPB149-GW-092514-238-240	VPB149-GW-092614-258-260
Sample Interval		218 - 220 ft	218 - 220 ft	238 - 240 ft	258 - 260 ft
Sample type code		N	FD	N	N
VOC 8260c (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	**2.3**	**2.3**	**1.6**	**1.5**
1,1-DICHLOROETHENE	5	**0.53 J**	**0.54 J**	**0.42 J**	< 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 UJ***	***< 0.75 UJ***	***< 0.75 UJ***	***< 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	**4.7**	**4.6**	**4.1**	< 0.50 U
1,2-DICHLOROETHENE, TOTAL	5	**1.5 J**	**1.6 J**	**1.3 J**	< 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	< 5.0 UJ	< 2.5 UJ	< 9.9 UJ	**3.3 J**
BENZENE	1	< 0.50 U	< 0.50 U	< 0.50 U	**0.33 J**
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 UJ
CHLOROFORM	7	< 0.50 U	**0.45 J**	**0.60 J**	< 0.50 U
CHLOROMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
CIS-1,2-DICHLOROETHENE	5	**1.5**	**1.6**	**1.3**	< 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	**6.6**	< 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	**2.2**	**2.1**	**34**	**1.8**
METHYL TERT-BUTYL ETHER	10	**3.3**	**3.3**	**2.1**	**0.84 J**
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	**4.0**	**4.2**	**2.8**	< 0.50 U
TOLUENE	5	< 0.50 U	< 0.50 U	**0.33 J**	< 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	**9.6**	**9.9**	**8.1**	< 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		VPB149	VPB149	VPB149	VPB149
Sample Date	NYSDEC Groundwater Guidance or Standard Value (Note 1)	9/26/2014	9/29/2014	9/29/2014	9/30/2014
Sample ID		VPB149-GW-092614-283-285	VPB149-GW-092914-298-300	VPB149-GW-092914-318-320	VPB149-GW-093014-338-340
Sample Interval		283 - 285 ft	298 - 300 ft	318 - 320 ft	338 - 340 ft
Sample type code		N	N	N	N
VOC 8260c (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	**5.1 J**	**3.5 J**	**4.8 J**	**8.2 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 UJ
CARBON DISULFIDE	60	< 0.50 U	**0.38 J**	< 0.50 U	< 1.0 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 UJ	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ
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	**3.1**	< 0.50 U	**0.84 J**	**2.7**
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		VPB149	VPB149	VPB149	VPB149
Sample Date	NYSDEC Groundwater Guidance or Standard Value (Note 1)	9/30/2014	10/1/2014	10/1/2014	10/2/2014
Sample ID		VPB149-GW-093014-358-360	VPB149-GW-100114-378-380	VPB149-GW-100114-418-420	VPB149-GW-100214-438-440
Sample Interval		358 - 360 ft	378 - 380 ft	418 - 420 ft	438 - 440 ft
Sample type code		N	N	N	N
VOC 8260c (ug/L)					
1,1,1-TRICHLOROETHANE	5	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 U
1,1,2,2-TETRACHLOROETHANE	5	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 U
1,1,2-TRICHLOROETHANE	1	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 U
1,1-DICHLOROETHANE	5	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 U
1,1-DICHLOROETHENE	5	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 U
1,2,4-TRICHLOROBENZENE	5	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***< 0.75 UJ***	***< 0.75 U***	***< 0.75 UJ***	***< 0.75 U***
1,2-DIBROMOETHANE	NL	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 U
1,2-DICHLOROBENZENE	3	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 U
1,2-DICHLOROETHANE	5	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 U
1,2-DICHLOROETHENE, TOTAL	5	< 1.0 UJ	< 1.0 U	< 1.0 UJ	< 1.0 U
1,2-DICHLOROPROPANE	1	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 U
1,3-DICHLOROBENZENE	3	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 U
1,4-DICHLOROBENZENE	3	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 U
2-BUTANONE	50	< 2.5 UJ	< 2.5 U	< 2.5 UJ	< 2.5 U
2-HEXANONE	50	< 2.5 UJ	< 2.5 U	< 2.5 UJ	< 2.5 U
4-METHYL-2-PENTANONE	NL	< 2.5 UJ	< 2.5 U	< 2.5 UJ	< 2.5 U
ACETONE	50	**8.6 J**	**6.3 J**	**14 J**	< 2.5 U
BENZENE	1	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 U
BROMODICHLOROMETHANE	50	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 U
BROMOFORM	50	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 U
BROMOMETHANE	5	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ
CARBON DISULFIDE	60	< 1.0 UJ	< 1.0 U	< 1.0 UJ	< 0.50 U
CARBON TETRACHLORIDE	5	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 U
CHLOROBENZENE	5	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 U
CHLOROETHANE	5	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ
CHLOROFORM	7	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 U
CHLOROMETHANE	5	< 1.0 UJ	< 1.0 U	< 1.0 UJ	< 1.0 U
CIS-1,2-DICHLOROETHENE	5	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 U
CIS-1,3-DICHLOROPROPENE	0.4	***< 0.50 UJ***	***< 0.50 U***	***< 0.50 UJ***	***< 0.50 U***
CYCLOHEXANE	NL	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 U
DIBROMOCHLOROMETHANE	5	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 U
DICHLORODIFLUOROMETHANE	5	< 1.0 UJ	< 1.0 U	< 1.0 UJ	< 1.0 U
ETHYLBENZENE	5	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 U
ISOPROPYLBENZENE	5	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 U
M- AND P-XYLENE	NL	< 1.0 UJ	< 1.0 U	< 1.0 UJ	< 1.0 U
METHYL ACETATE	NL	< 0.75 UJ	< 0.75 U	< 0.75 UJ	< 0.75 U
METHYL CYCLOHEXANE	NL	**4.6 J**	**0.38 J**	**2.0 J**	< 0.50 U
METHYL TERT-BUTYL ETHER	10	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 U
METHYLENE CHLORIDE	5	< 2.5 UJ	< 2.5 U	< 2.5 UJ	< 2.5 U
O-XYLENE	NL	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 U
STYRENE	5	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 U
TETRACHLOROETHENE	5	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 U
TOLUENE	5	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 U
TRANS-1,2-DICHLOROETHENE	5	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 U
TRANS-1,3-DICHLOROPROPENE	0.4	***< 0.50 UJ***	***< 0.50 U***	***< 0.50 UJ***	***< 0.50 U***
TRICHLOROETHENE	5	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 0.50 U
TRICHLOROFLUOROMETHANE	5	< 1.0 UJ	< 1.0 U	< 1.0 UJ	< 1.0 U
VINYL CHLORIDE	2	< 1.0 UJ	< 1.0 U	< 1.0 UJ	< 1.0 U
XYLENES, TOTAL	5	< 1.5 UJ	< 1.5 U	< 1.5 UJ	< 1.5 U

Location		VPB149	VPB149	VPB149	VPB149
Sample Date	NYSDEC Groundwater Guidance or Standard Value (Note 1)	10/2/2014	10/2/2014	10/3/2014	10/3/2014
Sample ID		VPB149-GW-100214-458-460	VPB149-GW-100214-478-480	VPB149-100314-498-500	VPB149-100314-518-520
Sample Interval		458 - 460 ft	478 - 480 ft	498 - 500 ft	518 - 520 ft
Sample type code		N	N	N	N
VOC 8260c (ug/L)					
1,1,1-TRICHLOROETHANE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
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	< 0.50 U
1,1-DICHLOROETHENE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
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 UJ	< 2.5 UJ
4-METHYL-2-PENTANONE	NL	< 2.5 U	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ
ACETONE	50	**7.2 J**	**2.8 J**	**5.2**	**3.6 J**
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 UJ	< 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 UJ	< 1.0 UJ	< 1.0 U	< 1.0 U
CHLOROFORM	7	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
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	< 1.0 U	< 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	**0.42 J**	**0.35 J**	**0.46 J**	< 0.50 U
METHYL TERT-BUTYL ETHER	10	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
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	< 0.50 U
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		VPB149	VPB149	VPB149	VPB149
Sample Date	NYSDEC Groundwater Guidance or Standard Value (Note 1)	10/3/2014	10/6/2014	10/6/2014	10/7/2014
Sample ID		VPB149-100314-538-540	VPB149-100614-558-560	VPB149-100614-578-580	VPB149-GW-100714-603-605
Sample Interval		538 - 540 ft	558 - 560 ft	578 - 580 ft	603 - 605 ft
Sample type code		N	N	N	N
VOC 8260c (ug/L)					
1,1,1-TRICHLOROETHANE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
1,1,2,2-TETRACHLOROETHANE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	**0.60 J**	< 0.50 UJ	**1.3 J**	< 0.50 UJ
1,1,2-TRICHLOROETHANE	1	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
1,1-DICHLOROETHANE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
1,1-DICHLOROETHENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
1,2,4-TRICHLOROBENZENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***< 0.75 UJ***	***< 0.75 UJ***	***< 0.75 UJ***	***< 0.75 UJ***
1,2-DIBROMOETHANE	NL	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
1,2-DICHLOROBENZENE	3	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
1,2-DICHLOROETHANE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
1,2-DICHLOROETHENE, TOTAL	5	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ
1,2-DICHLOROPROPANE	1	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
1,3-DICHLOROBENZENE	3	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
1,4-DICHLOROBENZENE	3	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
2-BUTANONE	50	< 2.5 UJ	**5.1 J**	< 2.5 UJ	< 2.5 UJ
2-HEXANONE	50	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ
4-METHYL-2-PENTANONE	NL	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ
ACETONE	50	**10 J**	**16 J**	**5.1 J**	< 16 UJ
BENZENE	1	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
BROMODICHLOROMETHANE	50	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
BROMOFORM	50	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
BROMOMETHANE	5	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ
CARBON DISULFIDE	60	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
CARBON TETRACHLORIDE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
CHLOROBENZENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
CHLOROETHANE	5	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ
CHLOROFORM	7	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
CHLOROMETHANE	5	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ
CIS-1,2-DICHLOROETHENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
CIS-1,3-DICHLOROPROPENE	0.4	***< 0.50 UJ***	***< 0.50 UJ***	***< 0.50 UJ***	***< 0.50 UJ***
CYCLOHEXANE	NL	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
DIBROMOCHLOROMETHANE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
DICHLORODIFLUOROMETHANE	5	**0.29 J**	< 1.0 UJ	**0.60 J**	< 1.0 UJ
ETHYLBENZENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
ISOPROPYLBENZENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
M- AND P-XYLENE	NL	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ
METHYL ACETATE	NL	< 0.75 UJ	< 0.75 UJ	< 0.75 UJ	< 0.75 UJ
METHYL CYCLOHEXANE	NL	**0.44 J**	**0.99 J**	**0.33 J**	**0.68 J**
METHYL TERT-BUTYL ETHER	10	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
METHYLENE CHLORIDE	5	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ
O-XYLENE	NL	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
STYRENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
TETRACHLOROETHENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
TOLUENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
TRANS-1,2-DICHLOROETHENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
TRANS-1,3-DICHLOROPROPENE	0.4	***< 0.50 UJ***	***< 0.50 UJ***	***< 0.50 UJ***	***< 0.50 UJ***
TRICHLOROETHENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
TRICHLOROFLUOROMETHANE	5	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ
VINYL CHLORIDE	2	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ
XYLENES, TOTAL	5	< 1.5 UJ	< 1.5 UJ	< 1.5 UJ	< 1.5 UJ

Location		VPB149	VPB149	VPB149	VPB149
Sample Date	NYSDEC Groundwater Guidance or Standard Value (Note 1)	10/7/2014	10/8/2014	10/8/2014	10/8/2014
Sample ID		VPB149-GW-100714-618-620	VPB149-GW-100814-638-640	VPB149-GWD-100814	VPB149-GW-100814-658-660
Sample Interval		618 - 620 ft	638 - 640 ft	638 - 640 ft	658 - 660 ft
Sample type code		N	N	FD	N
VOC 8260c (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	**3.1**	**5.1**	**4.9**	**4.0**
1,1,2-TRICHLOROETHANE	1	**0.65 J**	**0.68 J**	**0.70 J**	**0.36 J**
1,1-DICHLOROETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,1-DICHLOROETHENE	5	**1.3**	**1.9**	**1.5**	**1.2**
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	**1.2 J**	**1.2 J**	**1.2 J**	**0.71 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 UJ	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ
4-METHYL-2-PENTANONE	NL	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ
ACETONE	50	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 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	**0.93 J**	**2.4**	**2.4**	**0.40 J**
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	**2.5**	**1.8**	**1.7**	**1.4**
CHLOROMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
CIS-1,2-DICHLOROETHENE	5	**1.2**	**1.2**	**1.2**	**0.71 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	**1.2 J**	**1.2 J**	**1.1 J**	**0.77 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	**95**	**100**	**110**	**53**
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		VPB149	VPB149	VPB149	VPB149
Sample Date	NYSDEC Groundwater Guidance or Standard Value (Note 1)	10/8/2014	10/9/2014	10/9/2014	10/10/2014
Sample ID		VPB149-GW-100814-678-680	VPB149-GW-100914-698-700	VPB149-GW-100914-718-720	VPB149-GW-101014-738-740
Sample Interval		678 - 680 ft	698 - 700 ft	718 - 720 ft	738 - 740 ft
Sample type code		N	N	N	N
VOC 8260c (ug/L)					
1,1,1-TRICHLOROETHANE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 UJ
1,1,2,2-TETRACHLOROETHANE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 UJ
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	< 0.50 U	< 0.50 UJ	**0.47 J**	**1.2 J**
1,1,2-TRICHLOROETHANE	1	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 UJ
1,1-DICHLOROETHANE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 UJ
1,1-DICHLOROETHENE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	**0.36 J**
1,2,4-TRICHLOROBENZENE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 UJ
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***< 0.75 U***	***< 0.75 UJ***	***< 0.75 U***	***< 0.75 UJ***
1,2-DIBROMOETHANE	NL	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 UJ
1,2-DICHLOROBENZENE	3	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 UJ
1,2-DICHLOROETHANE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 UJ
1,2-DICHLOROETHENE, TOTAL	5	< 1.0 U	< 1.0 UJ	< 1.0 U	**0.36 J**
1,2-DICHLOROPROPANE	1	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 UJ
1,3-DICHLOROBENZENE	3	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 UJ
1,4-DICHLOROBENZENE	3	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 UJ
2-BUTANONE	50	< 2.5 U	< 2.5 UJ	< 2.5 U	< 2.5 UJ
2-HEXANONE	50	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ
4-METHYL-2-PENTANONE	NL	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ
ACETONE	50	< 2.5 U	< 5.0 UJ	< 2.5 U	**10 J**
BENZENE	1	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 UJ
BROMODICHLOROMETHANE	50	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 UJ
BROMOFORM	50	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 UJ
BROMOMETHANE	5	< 1.0 U	< 1.0 UJ	< 1.0 U	< 1.0 UJ
CARBON DISULFIDE	60	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 UJ
CARBON TETRACHLORIDE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 UJ
CHLOROBENZENE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 UJ
CHLOROETHANE	5	< 1.0 U	< 1.0 UJ	< 1.0 U	< 1.0 UJ
CHLOROFORM	7	< 0.50 U	< 0.50 UJ	< 0.50 U	**0.37 J**
CHLOROMETHANE	5	< 1.0 U	< 1.0 UJ	< 1.0 U	< 1.0 UJ
CIS-1,2-DICHLOROETHENE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	**0.36 J**
CIS-1,3-DICHLOROPROPENE	0.4	***< 0.50 U***	***< 0.50 UJ***	***< 0.50 U***	***< 0.50 UJ***
CYCLOHEXANE	NL	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 UJ
DIBROMOCHLOROMETHANE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 UJ
DICHLORODIFLUOROMETHANE	5	< 1.0 U	< 1.0 UJ	< 1.0 U	< 1.0 UJ
ETHYLBENZENE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 UJ
ISOPROPYLBENZENE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 UJ
M- AND P-XYLENE	NL	< 1.0 U	< 1.0 UJ	< 1.0 U	< 1.0 UJ
METHYL ACETATE	NL	< 0.75 U	< 0.75 UJ	< 0.75 U	< 0.75 UJ
METHYL CYCLOHEXANE	NL	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 UJ
METHYL TERT-BUTYL ETHER	10	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 UJ
METHYLENE CHLORIDE	5	< 2.5 U	< 2.5 UJ	< 2.5 U	< 2.5 UJ
O-XYLENE	NL	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 UJ
STYRENE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 UJ
TETRACHLOROETHENE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 UJ
TOLUENE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 UJ
TRANS-1,2-DICHLOROETHENE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 UJ
TRANS-1,3-DICHLOROPROPENE	0.4	***< 0.50 U***	***< 0.50 UJ***	***< 0.50 U***	***< 0.50 UJ***
TRICHLOROETHENE	5	**0.61 J**	< 0.50 UJ	**8.8**	**16 J**
TRICHLOROFLUOROMETHANE	5	< 1.0 U	< 1.0 UJ	< 1.0 U	< 1.0 UJ
VINYL CHLORIDE	2	< 1.0 U	< 1.0 UJ	< 1.0 U	< 1.0 UJ
XYLENES, TOTAL	5	< 1.5 U	< 1.5 UJ	< 1.5 U	< 1.5 UJ

Location		VPB149	VPB149	VPB149	VPB149
Sample Date	NYSDEC Groundwater Guidance or Standard Value (Note 1)	10/10/2014	10/14/2014	10/14/2014	10/14/2014
Sample ID		VPB149-GW-101014-758-760	VPB149-GW-101414-808-810	VPB149-GW-101414-818-820	VPB149-GW-101414-838-840
Sample Interval		758 - 760 ft	808 - 810 ft	818 - 820 ft	838 - 840 ft
Sample type code		N	N	N	N
VOC 8260c (ug/L)					
1,1,1-TRICHLOROETHANE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 UJ
1,1,2,2-TETRACHLOROETHANE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 UJ
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 UJ
1,1,2-TRICHLOROETHANE	1	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 UJ
1,1-DICHLOROETHANE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 UJ
1,1-DICHLOROETHENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 UJ
1,2,4-TRICHLOROBENZENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 UJ
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***< 0.75 UJ***	***< 0.75 UJ***	***< 0.75 U***	***< 0.75 UJ***
1,2-DIBROMOETHANE	NL	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 UJ
1,2-DICHLOROBENZENE	3	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 UJ
1,2-DICHLOROETHANE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 UJ
1,2-DICHLOROETHENE, TOTAL	5	< 1.0 UJ	< 1.0 UJ	< 1.0 U	< 1.0 UJ
1,2-DICHLOROPROPANE	1	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 UJ
1,3-DICHLOROBENZENE	3	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 UJ
1,4-DICHLOROBENZENE	3	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 UJ
2-BUTANONE	50	< 2.5 UJ	< 2.5 UJ	< 2.5 U	< 2.5 UJ
2-HEXANONE	50	< 2.5 UJ	< 2.5 UJ	< 2.5 U	< 2.5 UJ
4-METHYL-2-PENTANONE	NL	< 2.5 UJ	< 2.5 UJ	< 2.5 U	< 2.5 UJ
ACETONE	50	**11 J**	< 18 UJ	< 2.5 U	< 8.9 UJ
BENZENE	1	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 UJ
BROMODICHLOROMETHANE	50	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 UJ
BROMOFORM	50	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 UJ
BROMOMETHANE	5	< 1.0 UJ	< 1.0 UJ	< 1.0 U	< 1.0 UJ
CARBON DISULFIDE	60	< 0.50 UJ	< 1.0 UJ	< 1.0 U	< 1.0 UJ
CARBON TETRACHLORIDE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 UJ
CHLOROBENZENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 UJ
CHLOROETHANE	5	< 1.0 UJ	< 1.0 UJ	< 1.0 U	< 1.0 UJ
CHLOROFORM	7	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 UJ
CHLOROMETHANE	5	< 1.0 UJ	**0.98 J**	< 1.0 U	**0.48 J**
CIS-1,2-DICHLOROETHENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 UJ
CIS-1,3-DICHLOROPROPENE	0.4	***< 0.50 UJ***	***< 0.50 UJ***	***< 0.50 U***	***< 0.50 UJ***
CYCLOHEXANE	NL	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 UJ
DIBROMOCHLOROMETHANE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 UJ
DICHLORODIFLUOROMETHANE	5	< 1.0 UJ	< 1.0 UJ	< 1.0 U	< 1.0 UJ
ETHYLBENZENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 UJ
ISOPROPYLBENZENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 UJ
M- AND P-XYLENE	NL	< 1.0 UJ	< 1.0 UJ	< 1.0 U	< 1.0 UJ
METHYL ACETATE	NL	< 0.75 UJ	< 0.75 UJ	< 0.75 U	< 0.75 UJ
METHYL CYCLOHEXANE	NL	< 0.50 UJ	< 0.50 UJ	< 0.50 U	**0.54 J**
METHYL TERT-BUTYL ETHER	10	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 UJ
METHYLENE CHLORIDE	5	< 2.5 UJ	< 2.5 UJ	< 2.5 U	< 2.5 UJ
O-XYLENE	NL	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 UJ
STYRENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 UJ
TETRACHLOROETHENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 UJ
TOLUENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 UJ
TRANS-1,2-DICHLOROETHENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 UJ
TRANS-1,3-DICHLOROPROPENE	0.4	***< 0.50 UJ***	***< 0.50 UJ***	***< 0.50 U***	***< 0.50 UJ***
TRICHLOROETHENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 UJ
TRICHLOROFLUOROMETHANE	5	< 1.0 UJ	< 1.0 UJ	< 1.0 U	< 1.0 UJ
VINYL CHLORIDE	2	< 1.0 UJ	< 1.0 UJ	< 1.0 U	< 1.0 UJ
XYLENES, TOTAL	5	< 1.5 UJ	< 1.5 UJ	< 1.5 U	< 1.5 UJ

Location		VPB149	VPB149	VPB149	VPB149
Sample Date	NYSDEC Groundwater Guidance or Standard Value (Note 1)	10/15/2014	10/15/2014	10/16/2014	10/16/2014
Sample ID		VPB149-GW-101514-858-860	VPB149-GW-101514-878-880	VPB149-GW-101614-903-905	VPB149-GW-101614-918-920
Sample Interval		858 - 860 ft	878 - 880 ft	903 - 905 ft	918 - 920 ft
Sample type code		N	N	N	N
VOC 8260c (ug/L)					
1,1,1-TRICHLOROETHANE	5	< 4.0 UJ	< 2.0 UJ	< 5.0 UJ	< 4.0 UJ
1,1,2,2-TETRACHLOROETHANE	5	< 4.0 UJ	< 2.0 UJ	< 5.0 UJ	< 4.0 UJ
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	< 4.0 UJ	< 2.0 UJ	< 5.0 UJ	< 4.0 UJ
1,1,2-TRICHLOROETHANE	1	***< 4.0 UJ***	***< 2.0 UJ***	***< 5.0 UJ***	***< 4.0 UJ***
1,1-DICHLOROETHANE	5	< 4.0 UJ	< 2.0 UJ	< 5.0 UJ	< 4.0 UJ
1,1-DICHLOROETHENE	5	< 4.0 UJ	< 2.0 UJ	< 5.0 UJ	< 4.0 UJ
1,2,4-TRICHLOROBENZENE	5	< 4.0 UJ	< 2.0 UJ	< 5.0 UJ	< 4.0 UJ
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***< 6.0 UJ***	***< 3.0 UJ***	***< 7.5 UJ***	***< 6.0 UJ***
1,2-DIBROMOETHANE	NL	< 4.0 UJ	< 2.0 UJ	< 5.0 UJ	< 4.0 UJ
1,2-DICHLOROBENZENE	3	***< 4.0 UJ***	< 2.0 UJ	***< 5.0 UJ***	***< 4.0 UJ***
1,2-DICHLOROETHANE	5	< 4.0 UJ	< 2.0 UJ	< 5.0 UJ	< 4.0 UJ
1,2-DICHLOROETHENE, TOTAL	5	***< 8.0 UJ***	< 4.0 UJ	***< 10 UJ***	***< 8.0 UJ***
1,2-DICHLOROPROPANE	1	***< 4.0 UJ***	***< 2.0 UJ***	***< 5.0 UJ***	***< 4.0 UJ***
1,3-DICHLOROBENZENE	3	***< 4.0 UJ***	< 2.0 UJ	***< 5.0 UJ***	***< 4.0 UJ***
1,4-DICHLOROBENZENE	3	***< 4.0 UJ***	< 2.0 UJ	***< 5.0 UJ***	***< 4.0 UJ***
2-BUTANONE	50	< 20 UJ	< 10 UJ	< 25 UJ	< 20 UJ
2-HEXANONE	50	< 20 UJ	< 10 UJ	< 25 UJ	< 20 UJ
4-METHYL-2-PENTANONE	NL	< 20 UJ	< 10 UJ	< 25 UJ	< 20 UJ
ACETONE	50	< 40 UJ	< 22 UJ	< 25 UJ	< 20 UJ
BENZENE	1	***< 4.0 UJ***	***< 2.0 UJ***	***< 5.0 UJ***	***< 4.0 UJ***
BROMODICHLOROMETHANE	50	< 4.0 UJ	< 2.0 UJ	< 5.0 UJ	< 4.0 UJ
BROMOFORM	50	< 4.0 UJ	< 2.0 UJ	< 5.0 UJ	< 4.0 UJ
BROMOMETHANE	5	***< 8.0 UJ***	< 4.0 UJ	***< 10 UJ***	***< 8.0 UJ***
CARBON DISULFIDE	60	< 8.0 UJ	< 4.0 UJ	< 10 UJ	< 4.0 UJ
CARBON TETRACHLORIDE	5	< 4.0 UJ	< 2.0 UJ	< 5.0 UJ	< 4.0 UJ
CHLOROBENZENE	5	< 4.0 UJ	< 2.0 UJ	< 5.0 UJ	< 4.0 UJ
CHLOROETHANE	5	***< 8.0 UJ***	< 4.0 UJ	***< 10 UJ***	***< 8.0 UJ***
CHLOROFORM	7	< 4.0 UJ	< 2.0 UJ	< 5.0 UJ	< 4.0 UJ
CHLOROMETHANE	5	***< 8.0 UJ***	< 4.0 UJ	***< 10 UJ***	***< 8.0 UJ***
CIS-1,2-DICHLOROETHENE	5	< 4.0 UJ	< 2.0 UJ	< 5.0 UJ	< 4.0 UJ
CIS-1,3-DICHLOROPROPENE	0.4	***< 4.0 UJ***	***< 2.0 UJ***	***< 5.0 UJ***	***< 4.0 UJ***
CYCLOHEXANE	NL	< 4.0 UJ	< 2.0 UJ	< 5.0 UJ	< 4.0 UJ
DIBROMOCHLOROMETHANE	5	< 4.0 UJ	< 2.0 UJ	< 5.0 UJ	< 4.0 UJ
DICHLORODIFLUOROMETHANE	5	***< 8.0 UJ***	< 4.0 UJ	***< 10 UJ***	***< 8.0 UJ***
ETHYLBENZENE	5	< 4.0 UJ	< 2.0 UJ	< 5.0 UJ	< 4.0 UJ
ISOPROPYLBENZENE	5	< 4.0 UJ	< 2.0 UJ	< 5.0 UJ	< 4.0 UJ
M- AND P-XYLENE	NL	< 8.0 UJ	< 4.0 UJ	< 10 UJ	< 8.0 UJ
METHYL ACETATE	NL	< 6.0 UJ	< 3.0 UJ	< 7.5 UJ	< 6.0 UJ
METHYL CYCLOHEXANE	NL	< 4.0 UJ	< 2.0 UJ	< 5.0 UJ	< 4.0 UJ
METHYL TERT-BUTYL ETHER	10	< 4.0 UJ	< 2.0 UJ	< 5.0 UJ	< 4.0 UJ
METHYLENE CHLORIDE	5	***< 20 UJ***	***< 10 UJ***	***< 25 UJ***	***< 20 UJ***
O-XYLENE	NL	< 4.0 UJ	< 2.0 UJ	< 5.0 UJ	< 4.0 UJ
STYRENE	5	< 4.0 UJ	< 2.0 UJ	< 5.0 UJ	< 4.0 UJ
TETRACHLOROETHENE	5	< 4.0 UJ	< 2.0 UJ	< 5.0 UJ	< 4.0 UJ
TOLUENE	5	< 4.0 UJ	< 2.0 UJ	< 5.0 UJ	< 4.0 UJ
TRANS-1,2-DICHLOROETHENE	5	< 4.0 UJ	< 2.0 UJ	< 5.0 UJ	< 4.0 UJ
TRANS-1,3-DICHLOROPROPENE	0.4	***< 4.0 UJ***	***< 2.0 UJ***	***< 5.0 UJ***	***< 4.0 UJ***
TRICHLOROETHENE	5	< 4.0 UJ	< 2.0 UJ	< 5.0 UJ	< 4.0 UJ
TRICHLOROFLUOROMETHANE	5	***< 8.0 UJ***	< 4.0 UJ	***< 10 UJ***	***< 8.0 UJ***
VINYL CHLORIDE	2	***< 8.0 UJ***	***< 4.0 UJ***	***< 10 UJ***	***< 8.0 UJ***
XYLENES, TOTAL	5	***< 12 UJ***	***< 6.0 UJ***	***< 15 UJ***	***< 12 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*** **=**Detection limit 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.

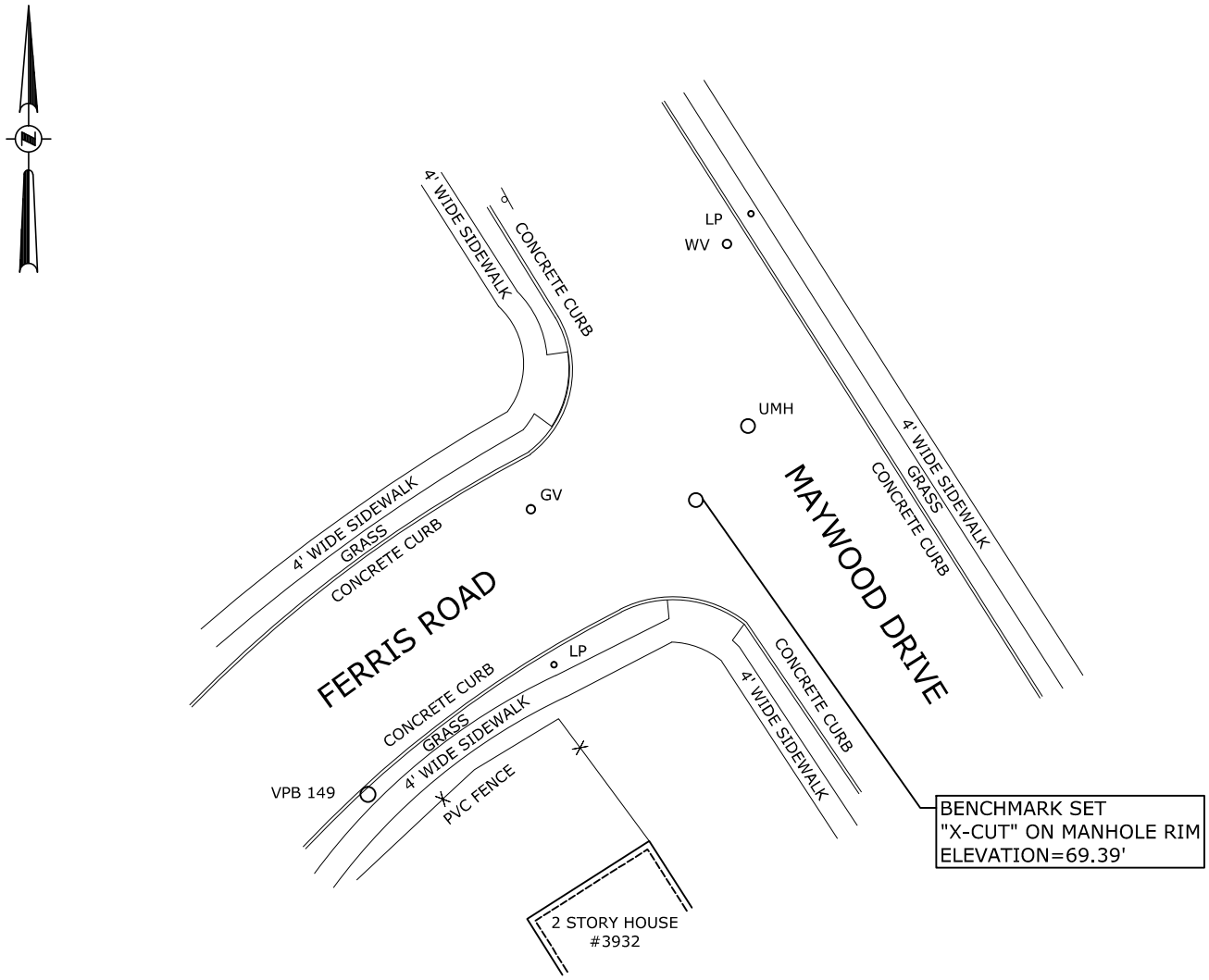
Section 6

Survey

NONE :XREFS

UNAUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

Description	Northing	Easting	Latitude	Longitude	Ground	Rim	PVC
VPB 149	200957.25	1125732.79	N40-43-01.66	W73-29-22.61	69.38	NA	NA



Map Notes

1. Information shown hereon was compiled from an actual field survey conducted from December 9, 2014.
2. North orientation is Grid North based on the New York State Plane Coordinate System, Long Island Zone, NAD 83 as obtained from GPS observations.
3. Vertical datum shown hereon is NAVD 88 as obtained from GPS observations.

BAR SCALE
30 0 15 30 60
1 inch = 30 ft.

Legend

o	GV	Gas Valve
o	LP	Light Post
	PVC	Poly Vinyl Chloride
o		Sign
O	UMH	Unknown Manhole
O	VPB 149	Vertical Profile Boring
o	WV	Water Valve

DWG NO. 14-643

Date	RECORD OF WORK	Appr.

VERICAL PROFILE BORING 149 SURVEY LOCATION
FERRIS ROAD

TOWN OF BETHPAGE | NASSAU COUNTY, NEW YORK

Drafter: LMK | Checker: JFC

Appr. by: JFC | Proj. No. 14.4121

SCALE: 1"=30' | DATE: DEC. 09, 2014

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CAD DWG. FILE NAME: K:\Projects\14412\1\Survey\Drawings and Maps\Elm Dr._Elbow Ln.dwg