2014 OU2 GROUNDWATER INVESTIGATION
VPB 152
BETHPAGE, NY

Prepared for:

Department of the Navy
Naval Facilities Engineering Command, Mid-Atlantic
9742 Maryland Ave.
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Comprehensive Long-Term Environmental Action Navy
Contract Number N62470-11-D-8013

CTO WE15

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December 2014

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List of Acronyms and Abbreviations

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

1.0 PROJECT BACKGROUND

Resolution Consultants has prepared this Data Summary Report for the Naval Facilities Engineering Command, Mid-Atlantic under contract task order WE15 Contract N62470-11-D-8013. This report describes vertical profile boring (VPB) installation activities (specifically at the VPB 152 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 152. The purpose of the VPB 152 investigation was to ascertain subsurface conditions and contaminant levels upgradient of the South Farmington Water District Plant 6 wellfield and to design outpost wells that will be used to provide early warning of plume migration toward the South Farmington Water District Plant 6 wellfield. VPB locations within the general vicinity of VPB 152 are shown in Figure 2. VPB 152 was completed to 997 feet (ft) below ground surface (bgs).

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 945 ft bgs; these deposits form the Magothy Aquifer.

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

The Upper Glacial Aquifer and the Magothy Aquifer comprise the aquifers of interest at the NWIRP. Regionally, these formations are generally considered to form a common, interconnected aquifer as

the coarse nature of each unit near their contact and the lack of any regionally confining clay unit allows for the unrestricted flow of groundwater between the formations.

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

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

2.0 FIELD PROGRAM

Field investigation activities at VPB 152 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 152) was completed during this field effort between May 23, 2014 and July 7, 2014. The total depth of VPB 152 was 997 ft. The location is shown in Figure 2 and details are summarized in Table 1.

2.1.1 Drilling

VPB 152 was installed by drilling an 8-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 980 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 152 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.

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

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

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

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

Tables

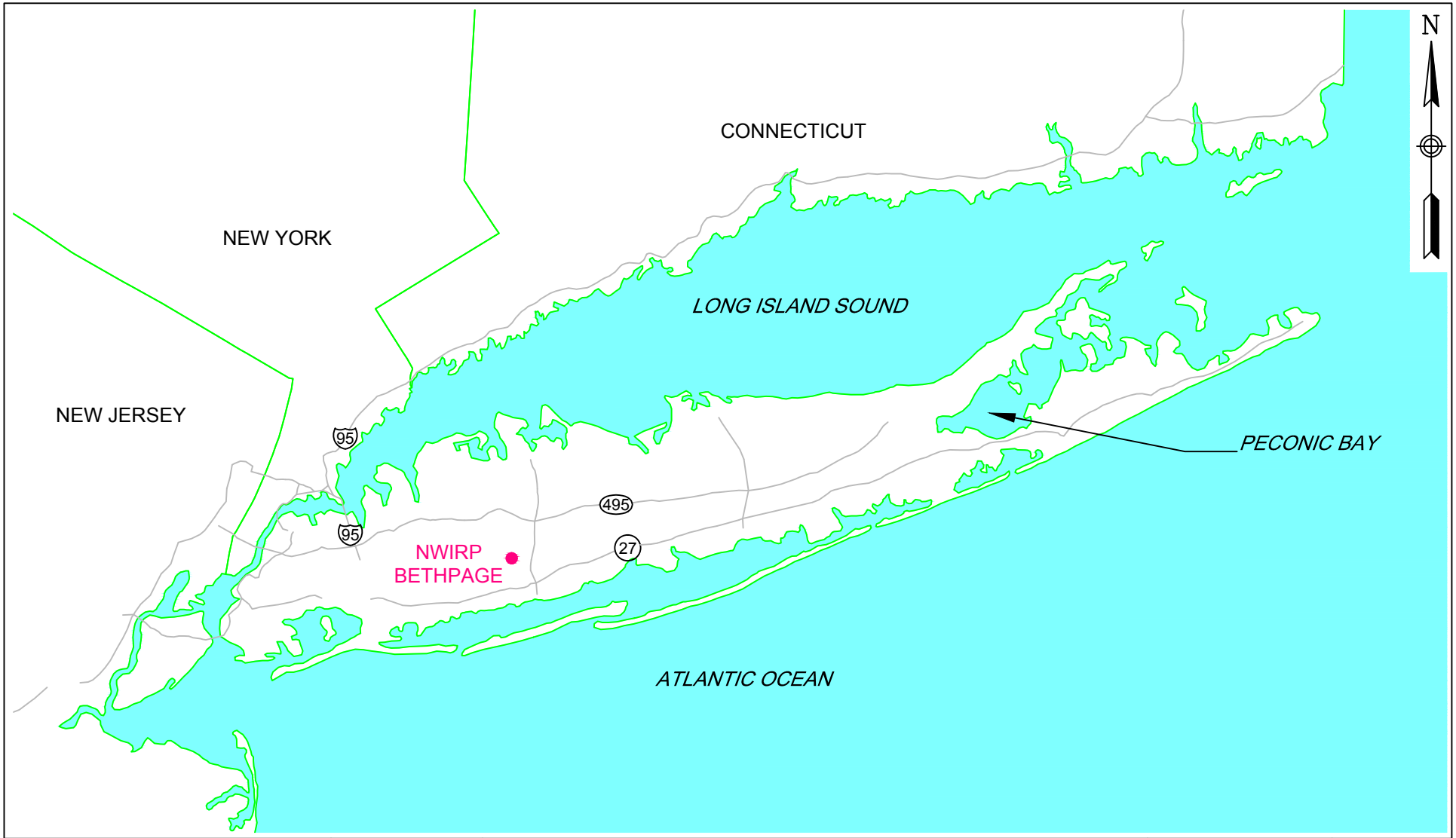
TABLE 1
VERTICAL PROFILE BORING SUMMARY
2014 OU2 GROUNDWATER INVESTIGATION
NWIRP BETHPAGE, NY

BORING	BORING START DATE	BORING COMPLETION DATE	GROUND ELEVATION (MSL)	TOTAL DEPTH (ft bgs)	SURFACE CASING SET AT (ft bgs)	NO. OF SPOON SAMPLES	GAMMA LOG (ft bgs)	NO. GW SAMPLES COLLECTED/ ATTEMPTED	TOC SAMPLES	DATE OF AIR SAMPLE	MONITORING WELLS INSTALLED AT LOCATION
VP 152	5/23/2014	7/7/2014	58.16	997	53.5	8	993	42/52*	325 - 327 ft bgs	6/24/2014	Pending

* includes 2 field duplicates

Figures

112G00622\0510\112G00622CM01.DWG 08/02/10 MKB



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 152 2014 12 10 R1.mxd

Former Naval Weapons Industrial Reserve Plant

Former Northrop Grumman Site

Hempstead Tpke

Hicksville Rd

State Hwy 135

Southern State Parkway

VPB 152

Inset: VPB 152 Location

South Farmingdale Water District Plant 6

0 375 750 1,500 Feet

0 750 1,500 3,000 Feet

Legend

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

VPB 152 LOCATION MAP
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT
BETHPAGE, NEW YORK

CONTRACT NUMBER	CTO NUMBER
N62470-11-D8013	WE15
APPROVED BY: PS	DATE: 12/10/2014
APPROVED BY: —	DATE: —
FIGURE NO.: 2	REV: 0

Appendix A

VPB 152

Section 1

VPB 152 Boring and Gamma Logs

Resolution Consultants

Boring Log

BORING #: VPB152

Sheet 1 of 17

Client: Department of the Navy, Naval Facilities Engineering Command, Mid-Atlantic		**Logged By:** V. Varricchio
Location: Pineneck Road, Bethpage	**Northing:** 197311.98 **Easting:** 1126289.12	**Drilling Company:** Delta Well & Pump
Project #: 60266526	**Ground Elevation (ft amsl):** 58.16	**Well Screen Interval (ft):** NA
Start Date: 5/23/2014	**Drilling Method:** Auger (0-50' bgs) Mud Rotary (>50' bgs)	**Water Level (ft):** NA
Finish Date: 7/7/2014		**Total Depth (ft):** 997.0

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					Upper Glacial	SW		Top Soil
2						SW		Strong brown (7.5 YR 4/6) well graded SAND with some fine to coarse subrounded Gravel, trace silt
4								
6						SW		Strong brown (7.5 YR 4/6) well graded SAND with fine to coarse subrounded Gravel, trace silt
8								
10						SW		Strong brown (7.5 YR 4/6) well graded SAND with fine to coarse subrounded Gravel, trace silt
12								
14						SW		Strong brown (7.5 YR 4/6) well graded SAND with fine to coarse subrounded Gravel, trace silt
16								
18						SW		Strong brown (7.5 YR 4/6) well graded SAND with fine to coarse subrounded Gravel, trace silt
20								
22						SW		Strong brown (7.5 YR 4/6) well graded SAND with fine to coarse subrounded Gravel, trace silt
24								
26						SW		Strong brown (7.5 YR 4/6) well graded SAND with fine to coarse subrounded Gravel, trace silt
28								
30						SW		Strong brown (7.5 YR 4/6) well graded SAND with fine to coarse subrounded Gravel, trace silt
32								
34						SW		Strong brown (7.5 YR 4/6) well graded SAND with fine to coarse subrounded Gravel
36								
38						SW		Yellowish brown (10 YR 5/6) well graded SAND with fine to coarse subrounded Gravel, trace silt
40								
42						SW		Yellowish brown (10 YR 5/6) well graded SAND with fine to coarse subrounded Gravel, trace silt
44								
46						SW		Yellowish brown (10 YR 5/6) well graded fine to coarse subrounded GRAVEL with some medium to coarse Sand
48								
50						GW		
52								
54								

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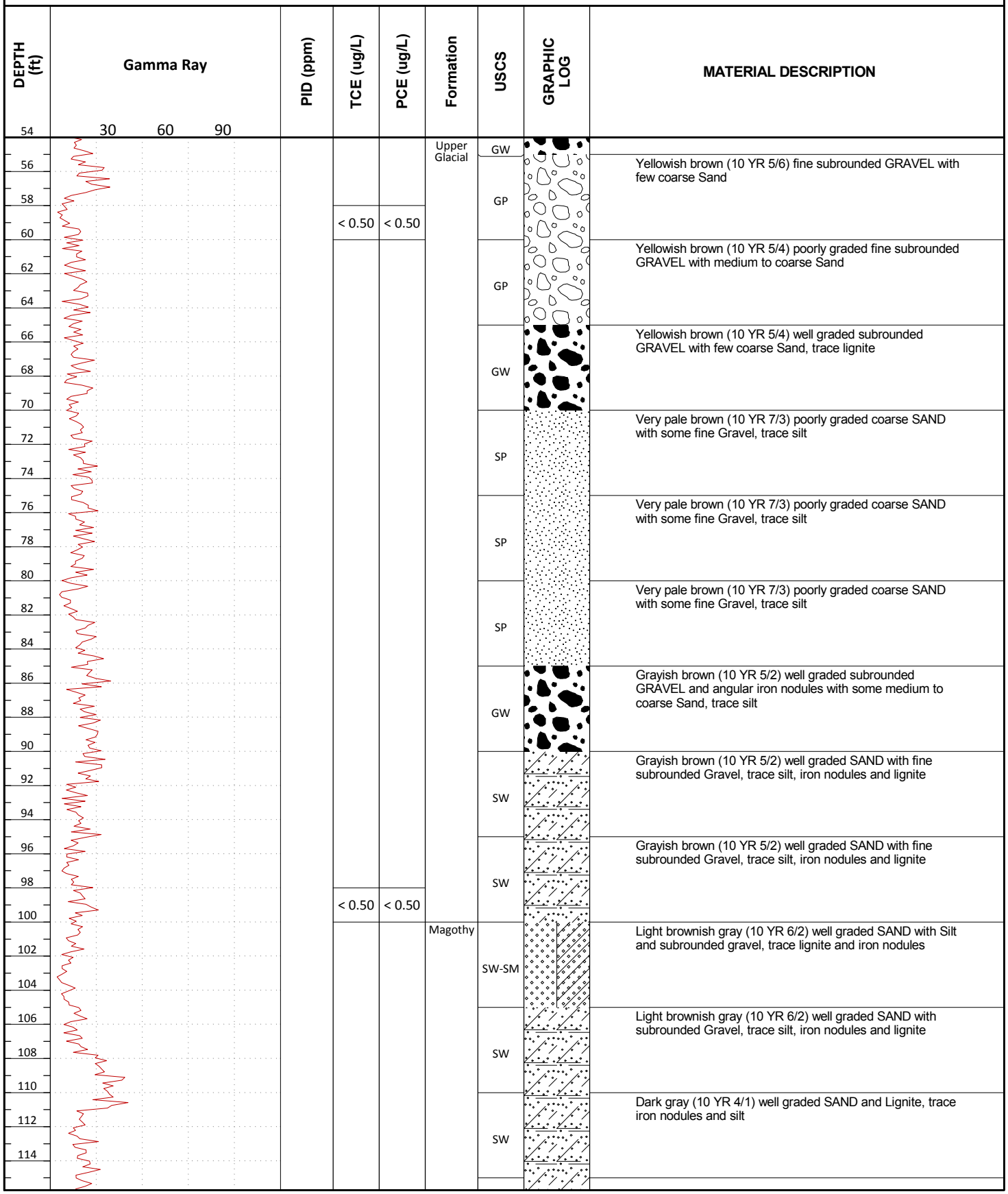
Resolution Consultants

Boring Log

BORING #: VPB152

Sheet 2 of 17



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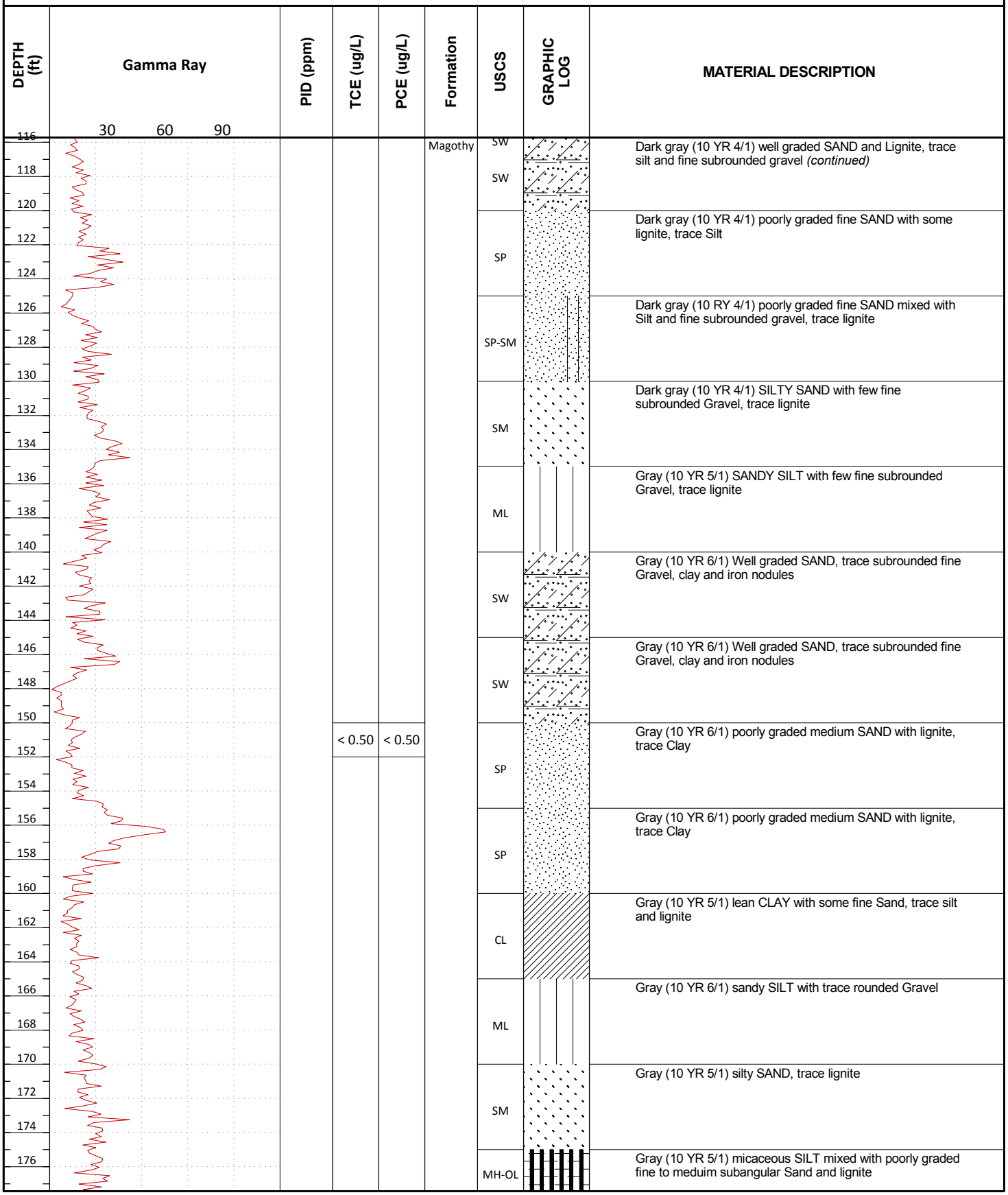
Boring Log

BORING #: VPB152

Sheet 3 of 17



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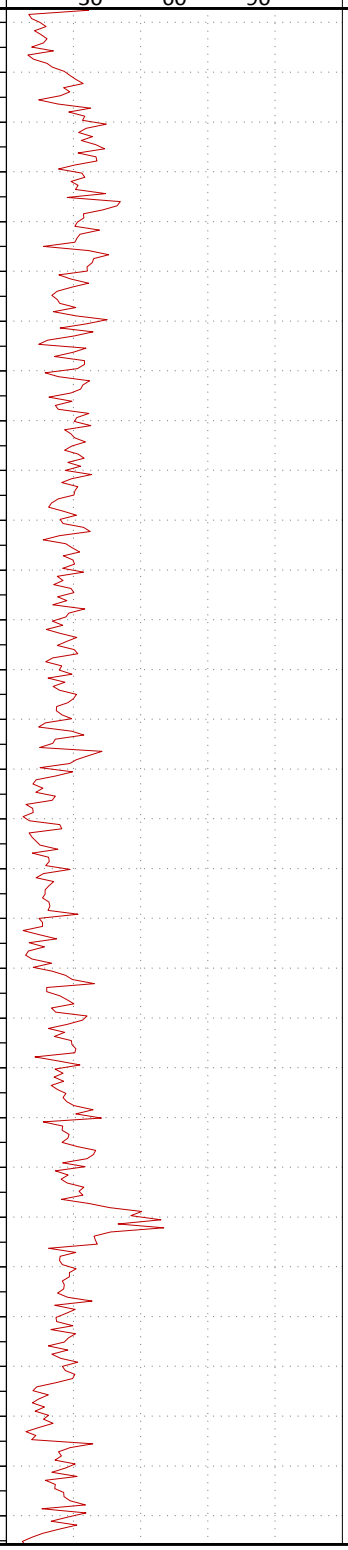
Boring Log

BORING #: VPB152



DEPTH (ft)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	MATERIAL DESCRIPTION
178				Magothy	MH-OL	Gray (10 YR 5/1) micaceous SILT mixed with poorly graded fine to meduim subangular Sand and lignite *(continued)*
180						
182					CH	Dark gray (10 YR 4/1) fine to medium sandy fat CLAY and lignite, trace iron nodules
184						
186					CH	Dark gray (10 YR 4/1) well graded fine sandy fat CLAY and abundant wood chips, trace lignite
188						
190					CH	Dark Gray (10 YR 4/1) poorly graded fine and some medium sandy fat CLAY, abundant lignite and some wood chips
192						
194						
196					SM	Very dark gray (10 YR 3/1) silty poorly graded fine and some medium SAND with abundant lignite and wood chips
198						
200						
202		< 0.50	< 0.50		SM	Very dark gray (10 YR 3/1) silty well graded fine to medium SAND with abundant lignite
204						
206					SM	Very dark gray (10 YR 3/1) silty well graded fine to medium SAND with abundant lignite
208						
210					SM	Very dark gray (10 YR 3/1) silty well graded fine to medium SAND with abundant lignite
212						
214						
216					SM	Very dark gray (10 YR 3/1) silty poorly graded fine SAND with abundant lignite, trace gravel
218						
220						
222		< 0.50	< 0.50		SM	Very dark gray (10 YR 3/1) silty fine to medium SAND with abundant lignite
224						
226					SM	Very dark gray (10 YR 3/1) silty well graded fine to coarse SAND with anundant lignite, trace Clay and rounded gravel
228						
230						
232					SM-SC	Very dark gray (10 YR 3/1) silty clayey well graded fine to medium SAND with abundant lignite
234						
236					SM-SC	Very dark gray (10 YR 3/1) silty clayey well graded fine to medium SAND with abundant lignite
238						

(Continued Next Page)

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Boring Log

BORING #: VPB152

Sheet 5 of 17

DEPTH (ft)	Gamma Ray (30 60 90)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
240					Magothy			
242			< 0.50	< 0.50		SM		Very dark gray (10 YR 3/1) silty well graded fine to medium SAND with abundant lignite
244								
246						SM		Very dark gray (10 YR 3/1) silty well graded fine to medium SAND with abundant lignite
248								
250						SM		Very dark gray (10 YR 3/1) silty poorly graded fine SAND with abundant lignite
252								
254						SM		Very dark gray (10 YR 3/1) silty poorly graded fine SAND with abundant lignite
256								
258						CL		Very dark gray (10 YR 3/1) sandy lean CLAY with abundant Lignite
260			< 0.50	< 0.50				
262						CL		Very dark gray (10 YR 3/1) lean CLAY with fine to medium well graded Sand and abundant lignite
264								
266						ML		Very dark gray (10 YR 3/1) SILT with poorly graded fine Sand and abundant lignite
268								
270						ML		Very dark gray (10 YR 3/1) SILT with poorly graded fine SAND and abundant lignite, trace clay
272								
274						ML		Very dark gray (10 YR 3/1) sandy SILT with abundant lignite
276								
278						SM-SC		Very dark gray (10 YR 3/1) silty clayey poorly graded fine SAND with some lignite
280								
282			< 0.50	< 0.50		SW-SM		Very dark gray (10 YR 3/1) well graded fine to medium SAND mixed with Silt and some lignite, trace clay
284								
286						SP		Very dark gray (10 YR 3/1) poorly graded fine SAND, trace lignite
288								
290								
292								
294								
296								
298								
300			< 0.50	< 0.50				

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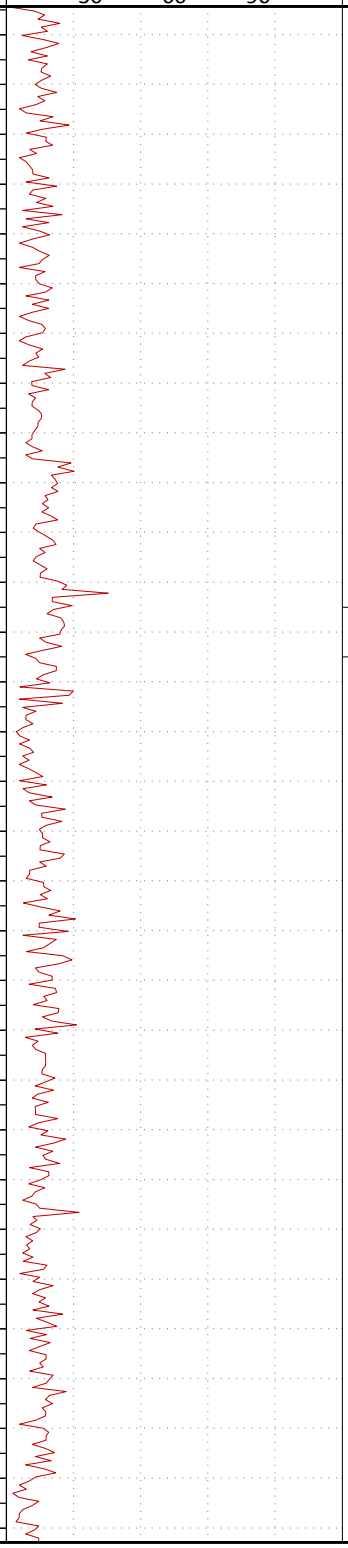

DEPTH (ft)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
302		< 0.50	< 0.50	Magothy	SP		Very dark gray (10 YR 3/1) poorly graded fine SAND, trace lignite *(continued)*
304					SP		
306					SM		Very dark gray (10 YR 3/1) silty poorly graded fine SAND with some lignite
308							
310					SM		Very dark gray (10 YR 3/1) silty poorly graded fine SAND with lignite
312							
314							
316					ML		Very dark gray (10 YR 3/1) SILT with poorly graded fine Sand and lignite
318							
320							
322		< 0.50	< 0.50		CL		Very dark gray (10 YR 3/1) sandy lean CLAY with abundant lignite
324							
326	0.0				CL		Very dark gray (10 YR 3/1) interbedded sandy lean CLAY with abundant lignite
328					SM		Very dark gray (10 YR 3/1) silty poorly graded fine SAND with some lignite
330							
332					ML		Very dark gray (10 YR 3/1) SILT with poorly graded fine Sand and some lignite
334							
336					ML		Very dark gray (10 YR 3/1) SILT with well graded fine to medium Sand and abundant lignite
338							
340							
342					ML		Very dark gray (10 YR 3/1) SILT with poorly graded fine Sand and some lignite
344							
346		< 0.50	< 0.50		ML		Very dark gray (10 YR 3/1) SILT with trace fine Sand, clay and lignite
348							
350							
352					ML		Very dark gray (10 YR 3/1) SILT with poorly graded fine Sand, trace lignite
354							
356					SM		Very dark gray (10 YR 3/1) silty poorly graded fine SAND with lignite
358							
360							
362		< 0.50	< 0.50		ML		Very dark gray (10 YR 3/1) SILT with few poorly graded fine Sand, trace lignite

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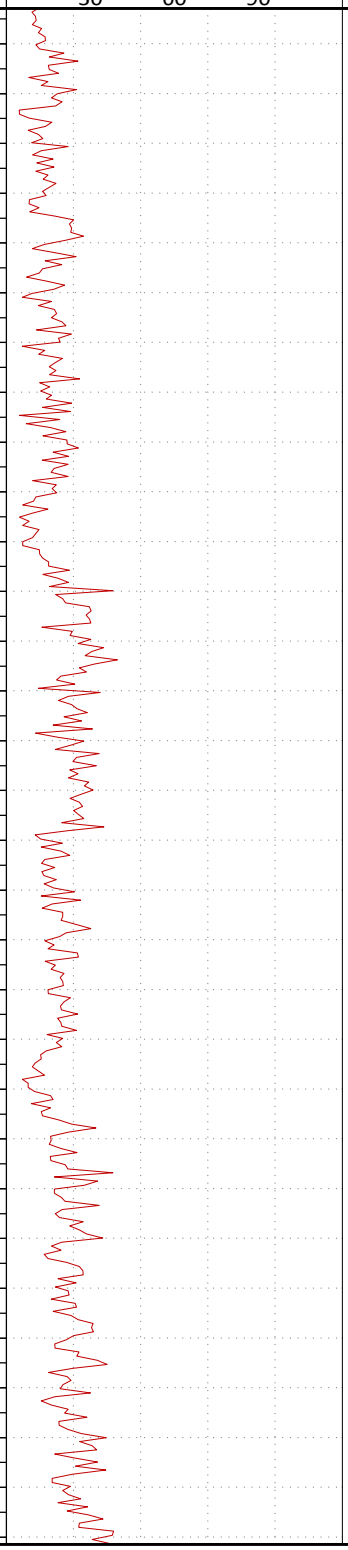
Resolution Consultants

Boring Log

BORING #: VPB152



DEPTH (ft)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
364				Magothy	ML		Very dark gray (10 YR 3/1) SILT with few poorly graded fine Sand, trace lignite *(continued)*
366							
368					ML		Very dark gray (10 YR 3/1) SILT, trace poorly graded fine Sand
370							
372					ML		Very dark gray (10 YR 3/1) SILT, trace poorly graded fine Sand and lignite
374							
376					ML		Very dark gray (10 YR 3/1) SILT, trace poorly graded fine Sand and lignite
378							
380							
382		< 0.50	< 0.50		ML		Gray (10 YR 5/1) poorly graded fine sandy SILT, trace lignite
384							
386					CL		Gray (10 YR 5/1) lean CLAY with trace poorly graded fine Sand and lignite
388							
390							
392					ML-CL		Gray (10 YR 5/1) CLAYEY SILT with trace poorly graded fine Sand and lignite
394							
396					CL		Very dark gray (10 YR 3/1) poorly graded fine sandy CLAY with lignite
398							
400							
402		< 0.50	< 0.50		ML		Dark gray (10 YR 4/1) poorly graded fine sandy SILT, trace lignite
404							
406					SM		Dark gray (10 YR 4/1) silty well graded fine to medium SAND, trace Clay and lignite
408							
410							
412					ML		Dark gray (10 YR 4/1) SILT with some poorly graded fine Sand
414							
416					SM		Gray (10 YR 5/1) silty poorly graded fine SAND, trace lignite
418							
420							
422		< 0.50	< 0.50		ML		Dark gray (10 YR 4/1) SILT with poorly graded fine Sand, trace lignite
424							

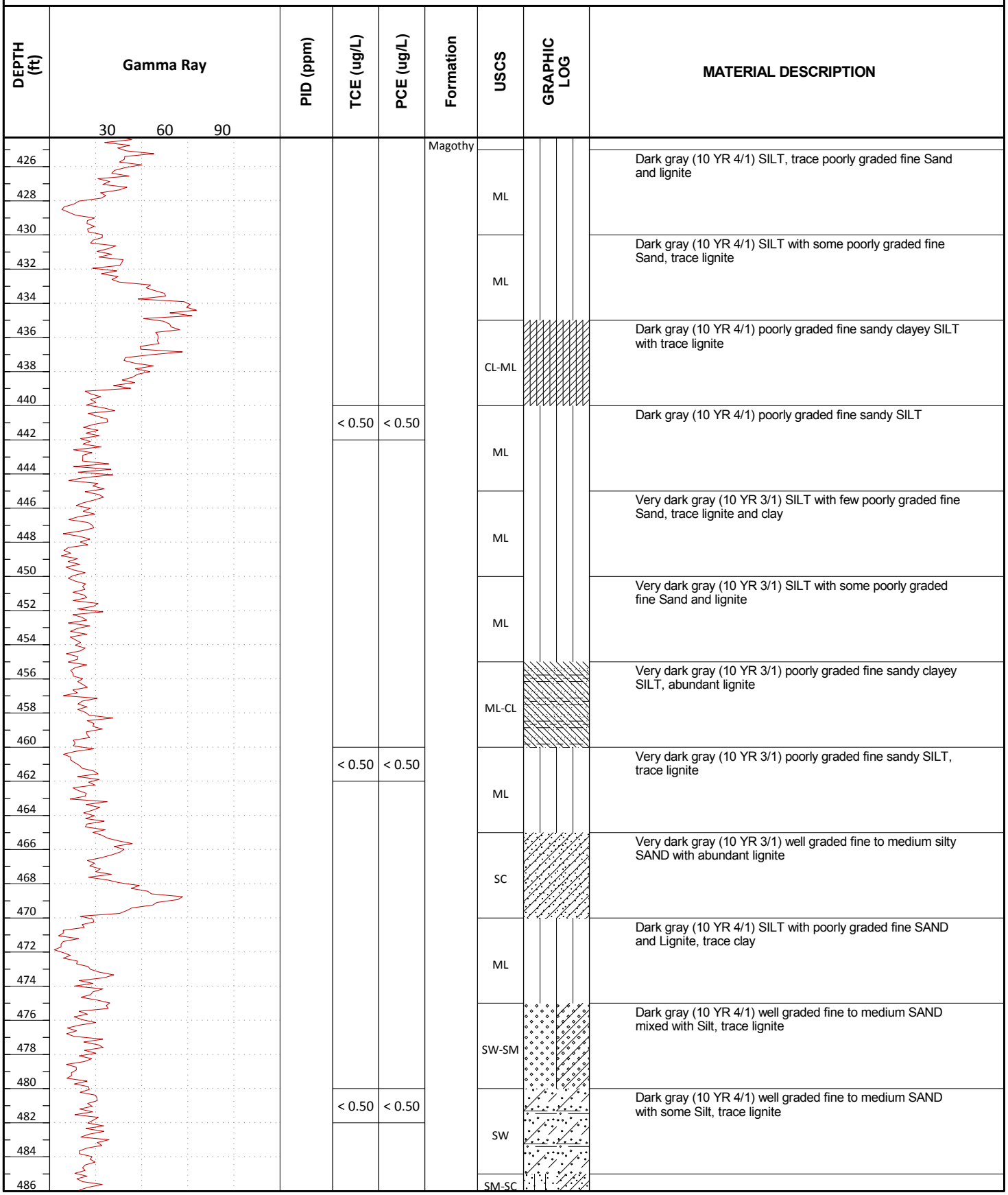
(Continued Next Page)

Resolution Consultants

Boring Log

BORING #: VPB152

Sheet 8 of 17



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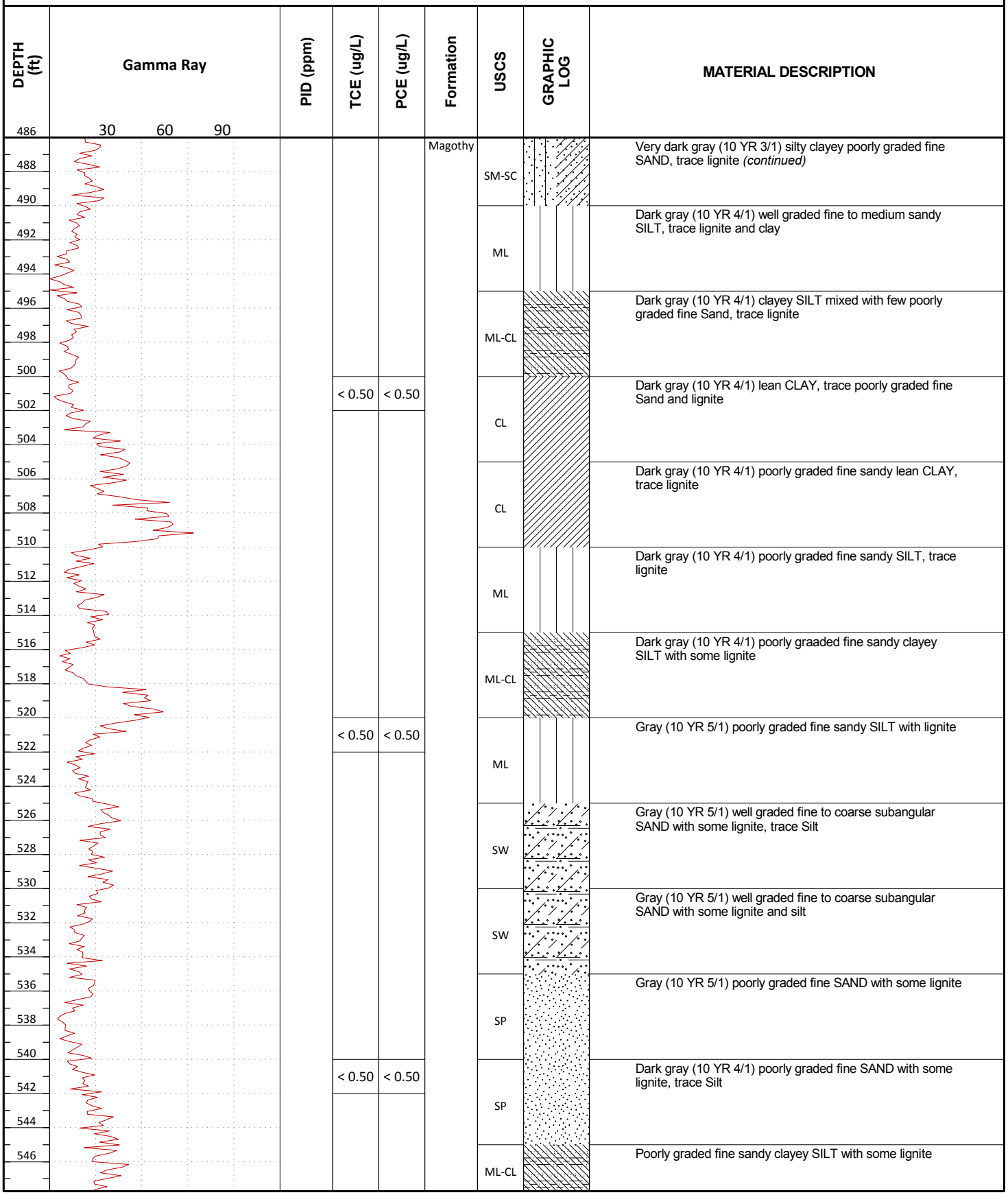
Resolution Consultants

Boring Log

BORING #: VPB152



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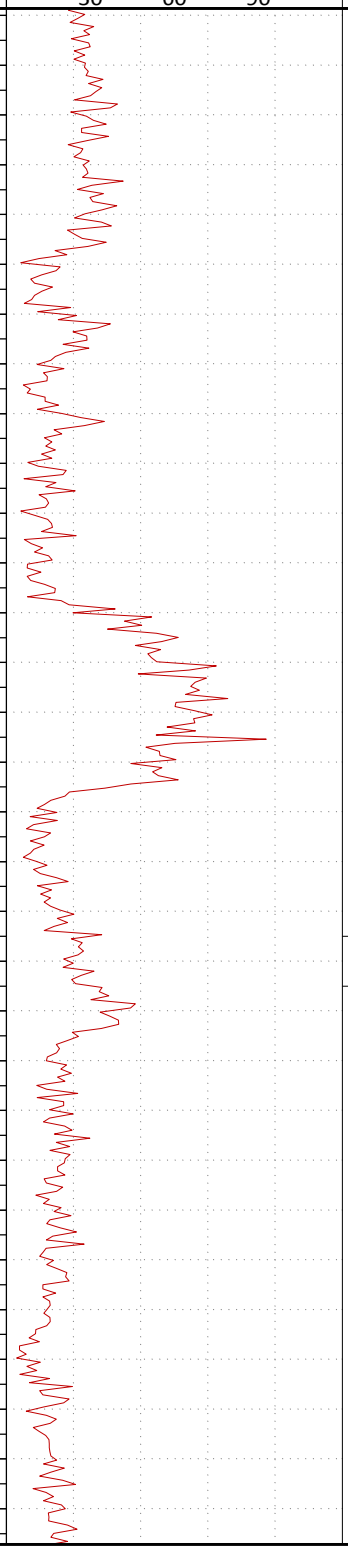
Resolution Consultants

Boring Log

BORING #: VPB152



DEPTH (ft)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
548				Magothy	ML-CL		Poorly graded fine sandy clayey SILT with some lignite *(continued)*
550							
552					ML		Dark gray (10 YR 4/1) poorly graded fine sandy SILT with some Lignite
554							
556					CL-ML		Dark gray (10 YR 4/1) silty CLAY with abundant lignite/wood
558							
560							
562		< 0.50	< 0.50		SW		Gray (10 YR 5/1) well graded fine to medium SAND, trace Clay and lignite
564							
566					SW		Dark gray (10 YR 4/1) well graded fine to medium SAND with Clay, trace lignite
568							
570							
572					CL		Dark gray (10 YR 4/1) lean CLAY with trace poorly graded fine Sand
574							
576					ML		Dark gray (10 YR 4/1) SILT with little poorly graded fine Sand, trace lignite
578							
580							
582		< 0.50	< 0.50		CH		Dark gray (10 YR 4/1) fat CLAY with little poorly graded fine Sand
584							
586	0.0				CH		Dark gray (10 YR 4/1) fat CLAY with little poorly graded fine Sand
588					SP		Gray (10 YR 5/1) poorly graded fine SAND
590							
592					SW		Dark gray (10 YR 4/1) well graded fine to medium SAND, trace lignite
594							
596					SW		Dark gray (10 YR 4/1) well graded fine to coarse subrounded SAND, trace lignite
598							
600							
602					SW		Gray (10 YR 5/1) well graded fine to coarse subrounded SAND, trace Clay and lignite
604							
606		< 0.50	< 0.50		SW		Gray (10 YR 5/1) well graded fine to medium SAND, trace lignite
608							

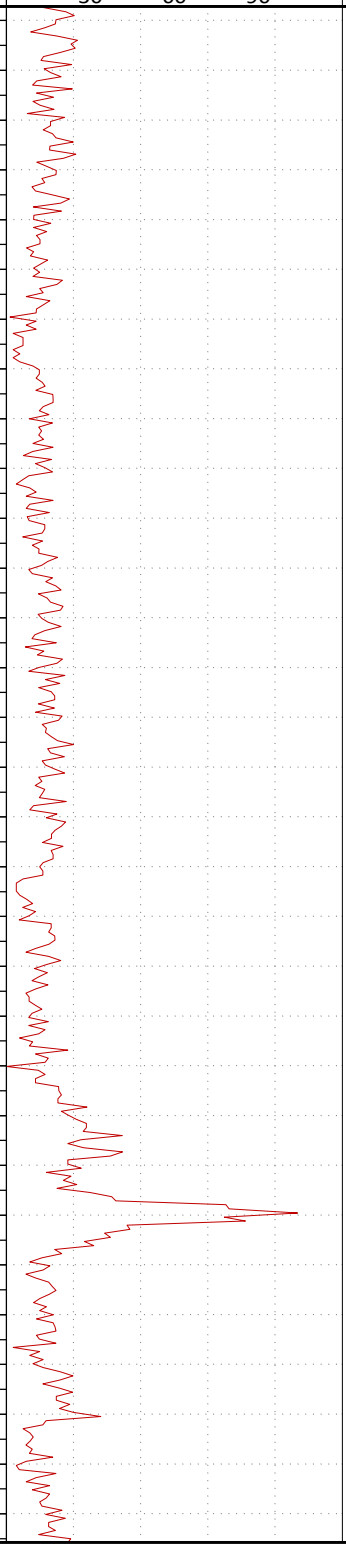
(Continued Next Page)

Resolution Consultants

Boring Log

BORING #: VPB152

Sheet 11 of 17



DEPTH (ft)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
610				Magothy			
612					SW-SM		Gray (10 YR 5/1) well graded fine to medium SAND mixed with Silt, trace lignite
614							
616					SW		Gray (10 YR 5/1) well graded fine to medium SAND with trace Silt and lignite
618							
620							
622		< 0.50	< 0.50		CL		Dark gray (10 YR 4/1) lean CLAY with little poorly graded fine Sand and trace lignite
624							
626					CL		Dark gray (10 YR 4/1) lean CLAY with little poorly graded fine Sand and trace lignite
628							
630							
632					SW-SC		Gray (10 YR 5/1) well graded fine to coarse subangular SAND mixed with some Clay, trace lignite
634							
636					SW-SC		Gray (10 YR 5/1) well graded fine to coarse subangular SAND mixed with some Clay and lignite
638							
640							
642		< 0.50	< 0.50		SM-SC		Gray (10 YR 5/1) clayey silty poorly graded fine SAND, trace Lignite
644							
646					SM-SC		Gray (10 YR 5/1) clayey silty poorly graded fine SAND, trace Lignite
648							
650							
652					SM-SC		Gray (10 YR 5/1) clayey silty poorly graded fine SAND, trace Lignite
654							
656							
658					SM-SC		Gray (10 YR 5/1) clayey silty well graded fine to medium SAND, trace lignite
660							
662		< 0.50	< 0.50		CH		Gray (10 YR 5/1) fat CLAY, trace poorly graded fine Sand
664							
666							
668					CH		Gray (10 YR 5/1) fat CLAY, trace poorly graded fine Sand
670							
					CH-SW		

(Continued Next Page)

Resolution Consultants

Boring Log

BORING #: VPB152

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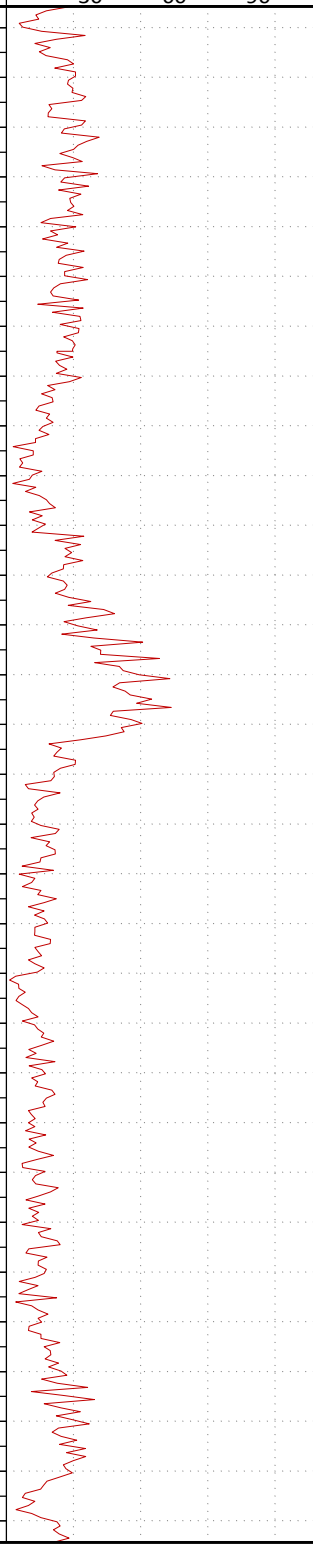

DEPTH (ft)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
672				Magothy	CH-SW		Gray (10 YR 5/1) interbedded fat CLAY and well graded subrounded fine to coarse Sand with some lignite *(continued)*
676					CL		Gray (10 YR 5/1) lean CLAY with some poorly graded fine Sand, trace lignite
682		< 0.50	< 0.50		ML		Gray (10 YR 5/1) poorly graded fine sandy SILT
686					CL		Gray (10 YR 5/1) lean CLAY
690	0.0				SP-CL		Gray (10 YR 5/1) interbedded poorly graded fine SAND and lean Clay
696					SW-CH		Gray (10 YR 5/1) interbedded well graded fine to coarse SAND and light gray (10 YR 7/1) fat Clay
702		< 50	< 50		CL		Gray (10 YR 5/1) lean CLAY with some poorly graded fine Sand, trace lignite and fine subrounded gravel
706					SW-CL		Gray (10 YR 5/1) interbedded well graded fine to coarse SAND and lean Clay, trace subrounded fine gravel
712					SW-CL		Gray (10 YR 5/1) interbedded well graded fine to coarse SAND and lean Clay, trace subrounded fine gravel
716					SW-CL		Gray (10 YR 5/1) interbedded well graded fine to coarse SAND and lean Clay, trace subrounded fine gravel
722					SW-CL		Gray (10 YR 5/1) interbedded well graded fine to coarse SAND and lean Clay, trace subrounded fine gravel
726		< 25	< 25		GC-CL		Gray (10 YR 6/1) interbedded clayey fine angular GRAVEL and lean Clay
732					GC-CL		Gray (10 YR 6/1) interbedded clayey fine angular GRAVEL and lean Clay

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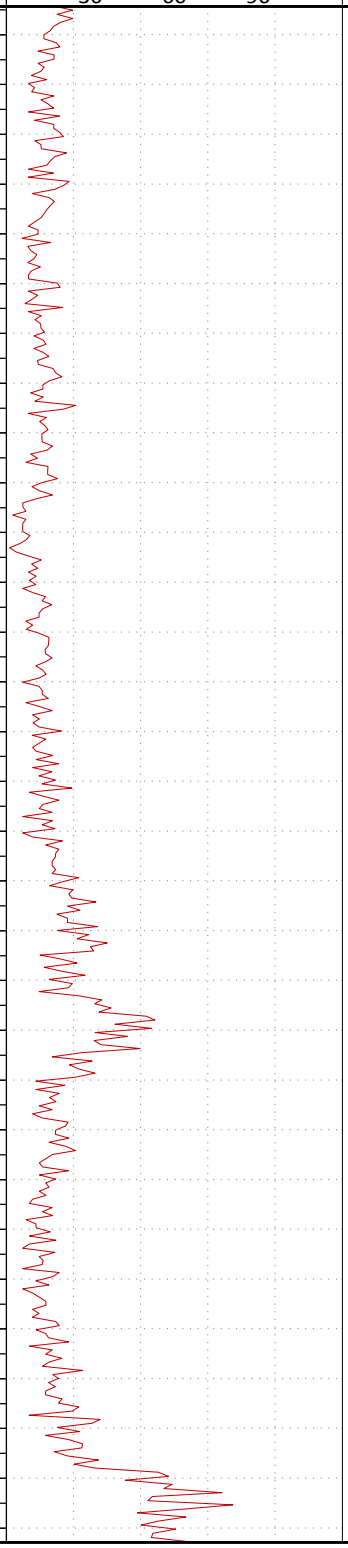
Resolution Consultants

Boring Log

BORING #: VPB152



DEPTH (ft)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
734				Magothy	GC-CL		Gray (10 YR 6/1) interbedded clayey fine angular GRAVEL and lean Clay *(continued)*
736							
738					SW-CL		Gray (10 YR 5/1) interbedded well graded fine to coarse SAND and lean Clay, trace subangular fine gravel
740							
742		< 0.50	< 0.50		ML		Gray (10 YR 5/1) well graded fine to coarse sandy SILT, trace subangular Gravel
744							
746					GC-CL		Gray (10 YR 6/1) clayey fine angular GRAVEL and lean Clay with some well graded fine to coarse sand
748							
750							
752					GP		Very pale brown (10 YR 7/3) poorly graded fine subangular GRAVEL with some well graded fine to coarse Sand
754							
756					GP		Very pale brown (10 YR 7/3) poorly graded fine subangular GRAVEL with some well graded fine to coarse Sand, trace lean clay
758							
760							
762					GP		Very pale brown (10 YR 7/3) poorly graded fine subangular GRAVEL with some well graded fine to coarse Sand, trace lean clay
764							
766					GP-GM		Very pale brown (10 YR 7/3) poorly graded fine subangular GRAVEL mixed with white (10 YR 8/1) Clay and well graded fine to coarse sand
768							
770							
772					GP-CH		Very pale brown (10 YR 7/3) interbedded poorly graded fine subangular GRAVEL with little well graded Sand and white (10 YR 8/1) fat clay
774							
776					CH		White (10 YR 8/1) well graded fine to coarse sandy fat CLAY with fine subangular Gravel
778							
780							
782		< 0.50	< 0.50		SW-SC		Very pale brown (10 YR 7/3) well graded fine to coarse SAND mixed with some white (10 YR 8/1) Clay
784							
786					SW		Very pale brown (10 YR 7/3) well graded fine to coarse SAND with few white (10 YR 8/1) Clay
788							
790							
792					CL		Dark gray (10 YR 4/1) well graded fine to coarse sandy lean CLAY with trace fine subrounded Gravel
794							

(Continued Next Page)

Resolution Consultants

Boring Log

BORING #: VPB152

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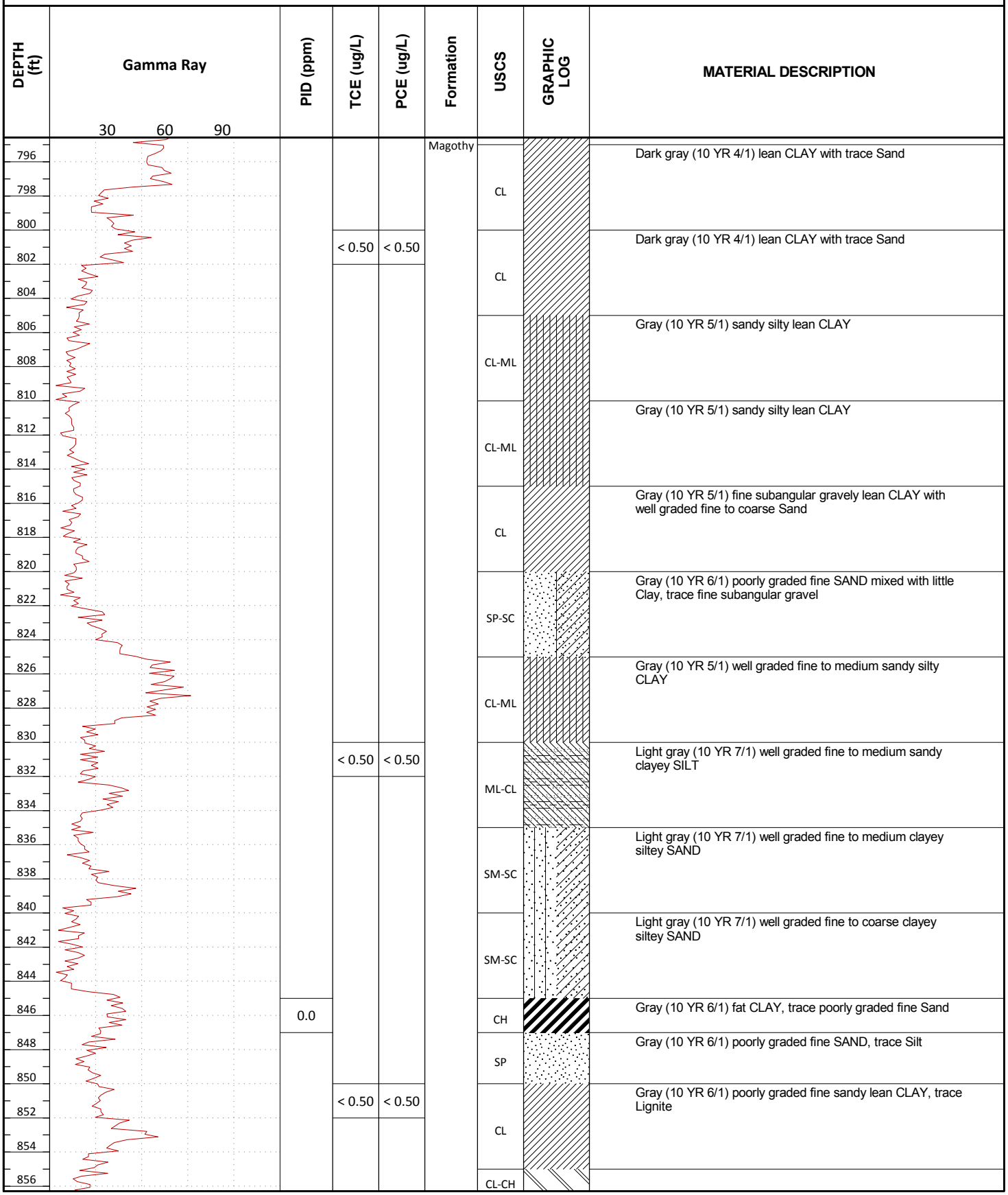

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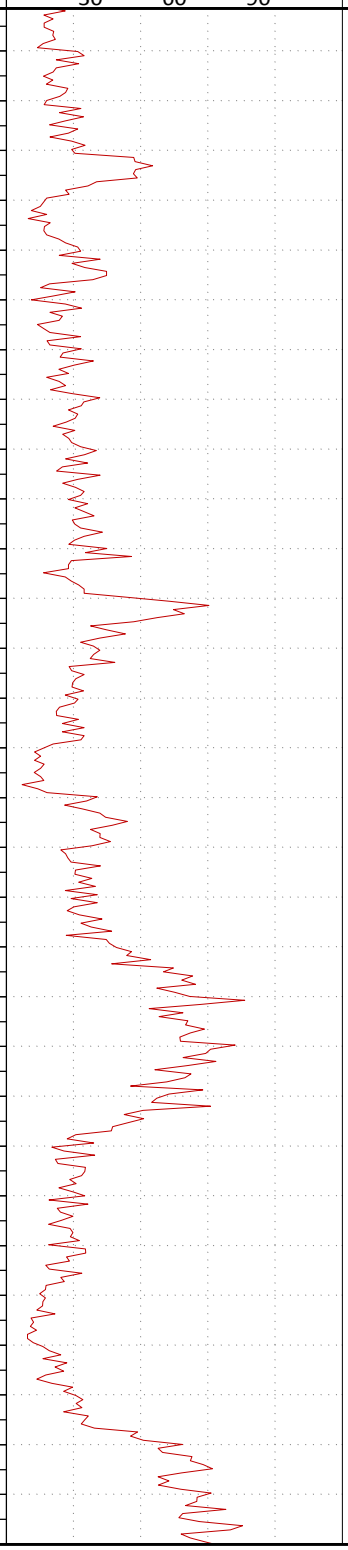
Resolution Consultants

Boring Log

BORING #: VPB152



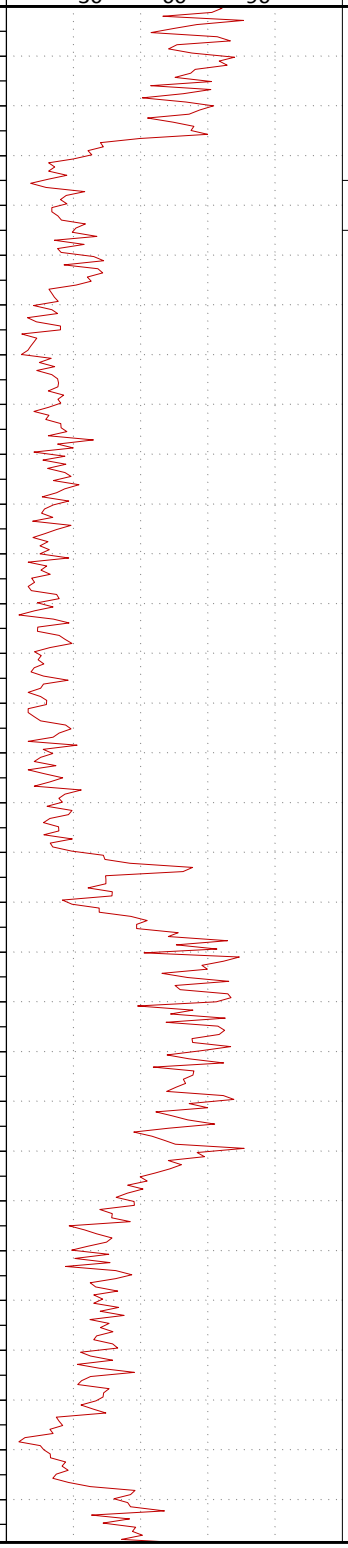
DEPTH (ft)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
858				Magothy	CL-CH		Gray (10 YR 5/1) mixed lean/fat CLAY with few poorly graded fine Sand *(continued)*
860							
862					CL-CH		Light gray (10 YR 7/1) mixed lean/fat CLAY, trace poorly graded fine Sand
864							
866					CL-CH		Light gray (10 YR 7/1) mixed lean/fat CLAY, trace poorly graded fine Sand
868							
870					CL-CH		Light gray (10 YR 7/1) mixed lean/fat CLAY, trace poorly graded fine Sand
872		< 0.50	< 0.50				
874							
876					CL-CH		Light gray (10 YR 7/1) mixed lean/fat CLAY, trace poorly graded fine Sand
878							
880					CH		Gray (10 YR 5/1) fat CLAY, trace poorly graded fine Sand
882		< 0.50	< 0.50				
884							
886					CL-ML		Gray (10 YR 6/1) silty CLAY, trace poorly graded fine Sand and lignite
888							
890					CL-ML		Gray (10 YR 6/1) silty CLAY with few poorly graded fine Sand
892							
894					CH		Gray (10 YR 5/1) fat CLAY, trace poorly graded fine Sand
896							
898					CH		Gray (10 YR 6/1) fat CLAY
900							
902					CH		Gray (10 YR 6/1) fat CLAY, trace poorly graded fine Sand
904							
906					CH		Gray (10 YR 6/1) fat CLAY, trace lignite
908							
910					CH		Gray (10 YR 6/1) fat CLAY, trace lignite
912		< 0.50	< 0.50				
914							
916					CH		
918							

(Continued Next Page)

Resolution Consultants

Boring Log

BORING #: VPB152



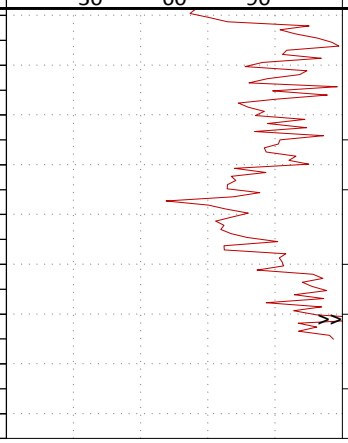
DEPTH (ft)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
918							
920				Magothy	CH		Gray (10 YR 6/1) fat CLAY, trace lignite *(continued)*
922					CH		Gray (10 YR 5/1) fat CLAY, trace poorly graded fine Sand
924							
926	0.0				CH		Gray (10 YR 5/1) fat CLAY, trace poorly graded fine Sand with microlamination
928							
930							
932		< 1.0	< 1.0		SM-SC		Gray (10 YR 6/1) silty clayey well graded fine to coarse SAND, trace lignite
934							
936					SM-SC		Gray (10 YR 6/1) silty clayey well graded fine to coarse SAND, trace lignite
938							
940							
942					SW		Gray (10 YR 6/1) well graded fine to medium SAND, trace Silt and clay
944							
946					SW		Gray (10 YR 6/1) well graded fine to coarse SAND with fine subrounded Gravel, trace silt and clay
948							
950							
952		< 1.0	< 1.0		SW-SC		Very dark gray (10 YR 3/1) well graded fine to coarse SAND mixed with fine subrounded Gravel and clay, trace lignite
954							
956					CH		Very dark gray (10 YR 3/1) well graded fine to coarse sandy fat CLAY with fine subrounded Gravel and lignite
958							
960							
962					CH		Very dark gray (10 YR 3/1) fat CLAY with little Sand and fine subrounded gravel, trace lignite
964							
966					CH		Dark gray (10 YR 4/1) fat CLAY, trace Sand
968							
970							
972					CH		Gray (10 YR 6/1) fat CLAY, trace Sand
974							
976					CH		Gray (10 YR 6/1) fat CLAY, trace Sand
978							

(Continued Next Page)

Resolution Consultants

Boring Log

BORING #: VPB152

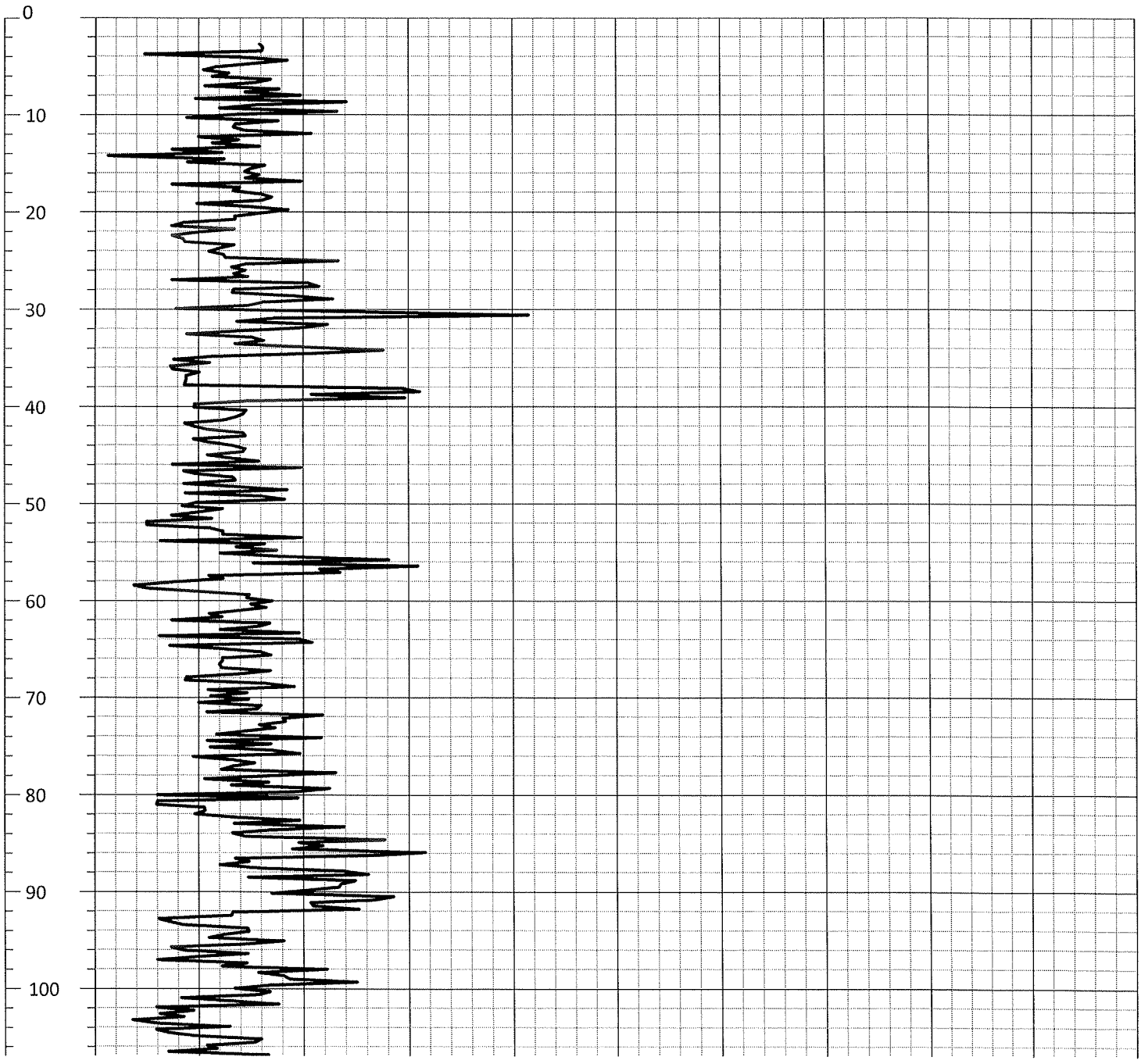
DEPTH (ft)	Gamma Ray (30 60 90)	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
980					Raritan	CH		Dark gray (10 YR 4/1) hard fat CLAY, trace Sand
982								
984								
986		0.0				CH		Very dark gray (10 YR 3/1) hard fat CLAY, laminated
988								
990		0.0				CH		Very dark gray (10 YR 3/1) Hard fat CLAY, laminated
992								
994								
996		0.0				CH		Gray (10 YR 5/1) Hard fat CLAY, laminated

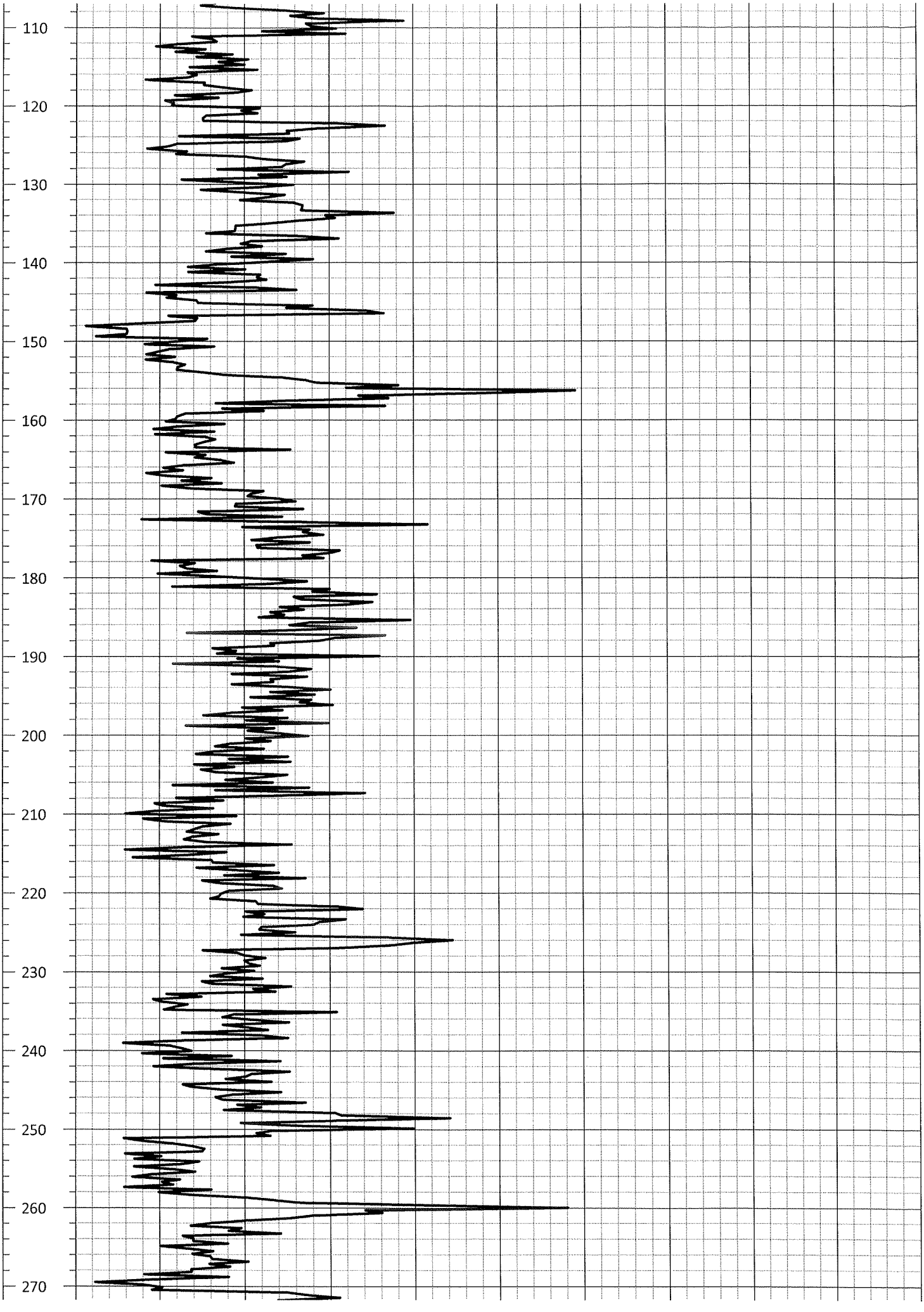
End of boring at 997.0 ft. bgs.

DOWN HOLE RUN

COMPANY: DELTA WELL & PUMP CO., INC.	
LOCATION: NWIRP PINENECK RD	
Well: VPB-152	Depth Driller:
	Depth Logger:
Date: 07/01/2014 Time:	Logged by: CMO
File Name: 739	Witness: VINCE

Depth (ft.) 0.0 GAMMA (cps) 100.0

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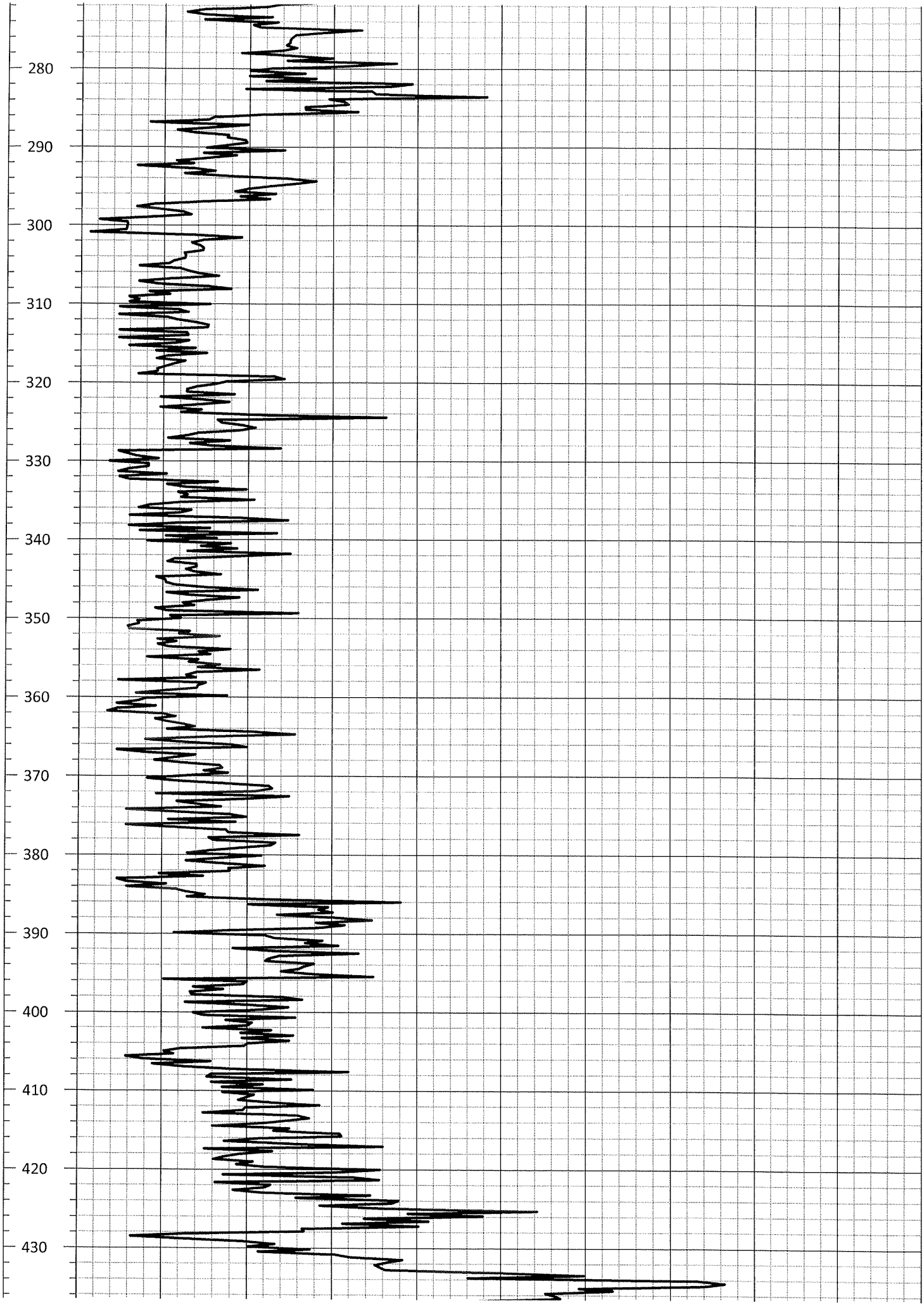
120
130
140
150
160
170
180
190
200
210
220
230
240
250
260
270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340
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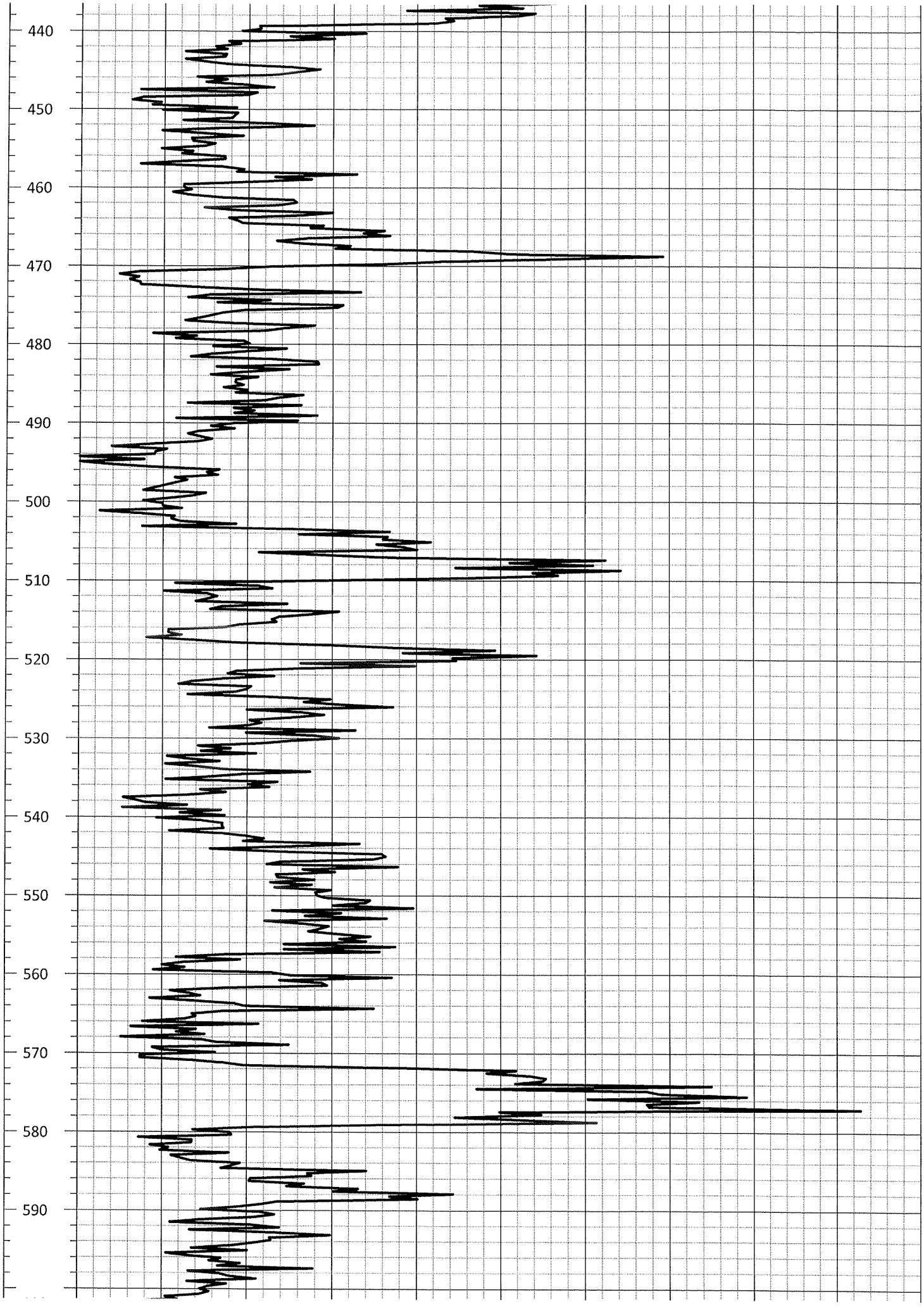
390
400
410
420
430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460
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500
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520
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540
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560
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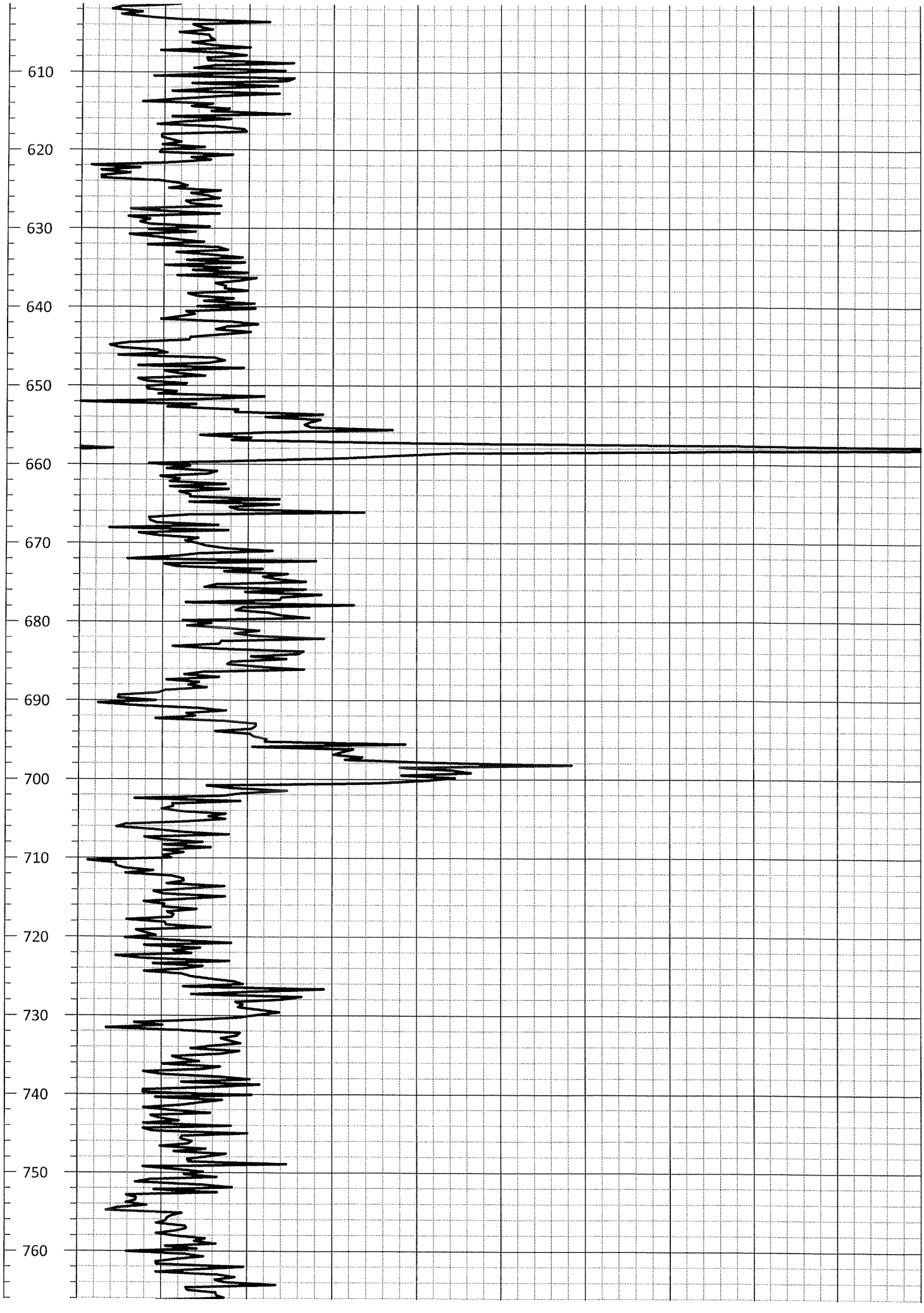
580
590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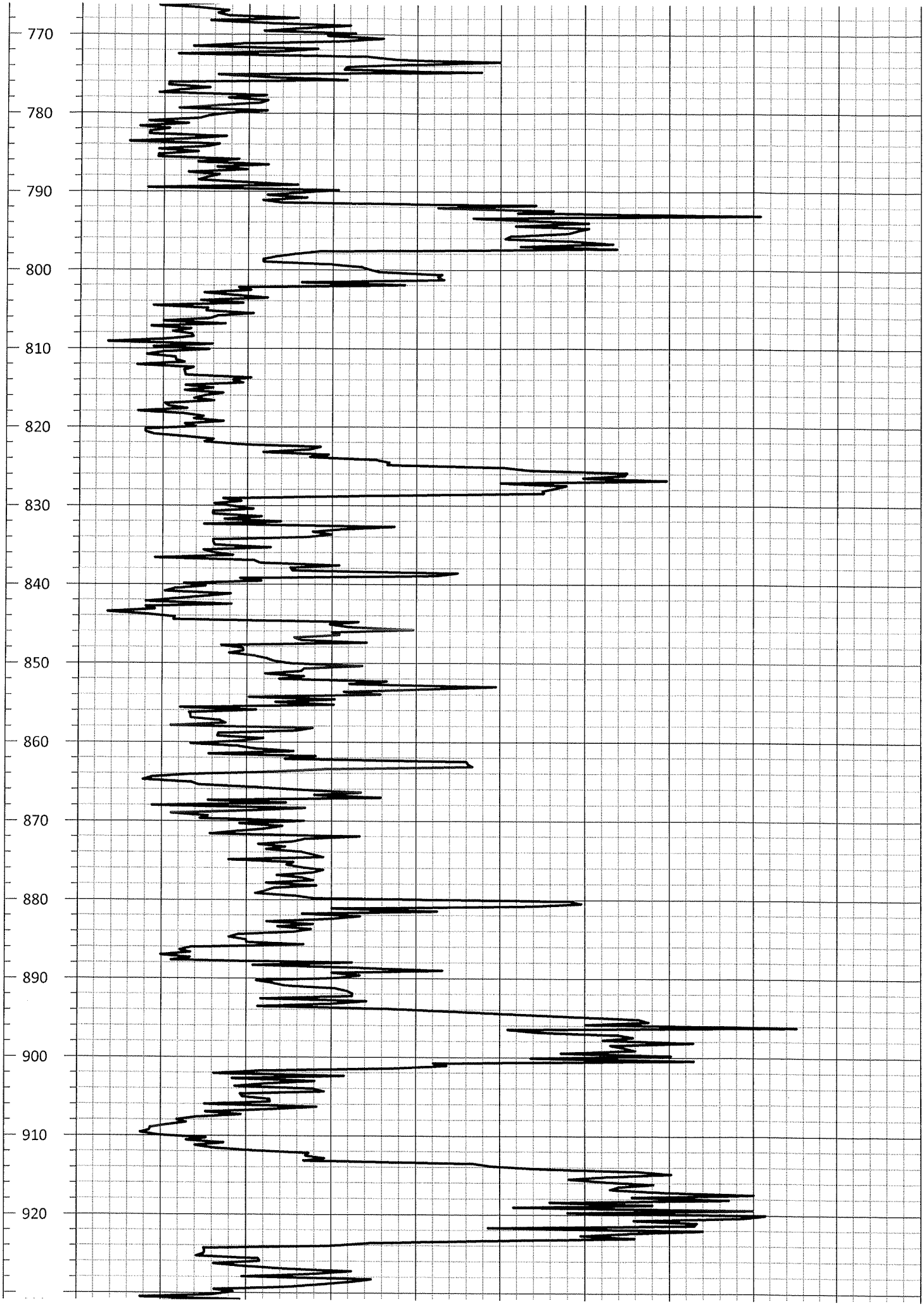
620
630
640
650
660
670
680
690
700
710
720
730
740
750
760


770
780
790
800
810
820
830
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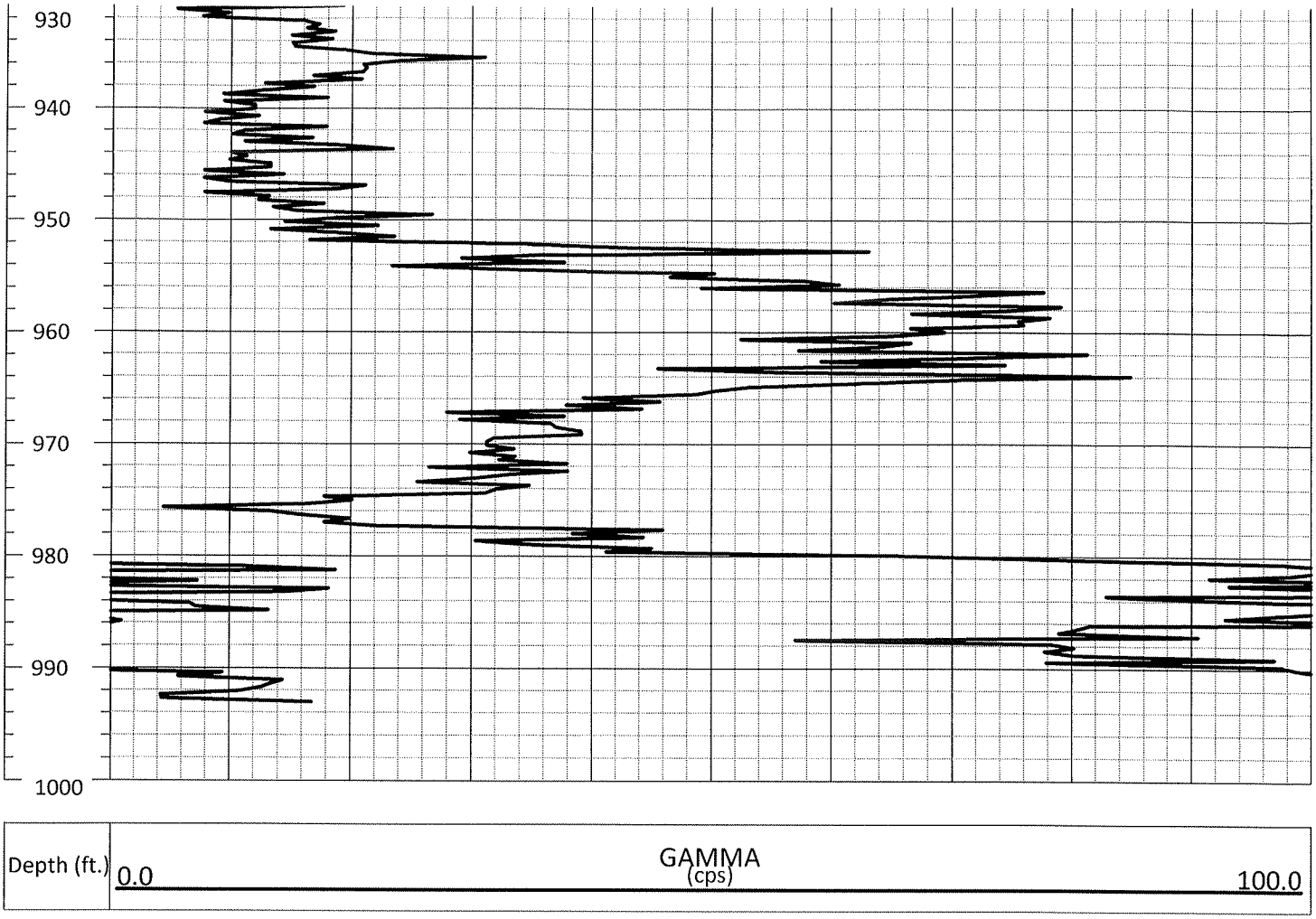
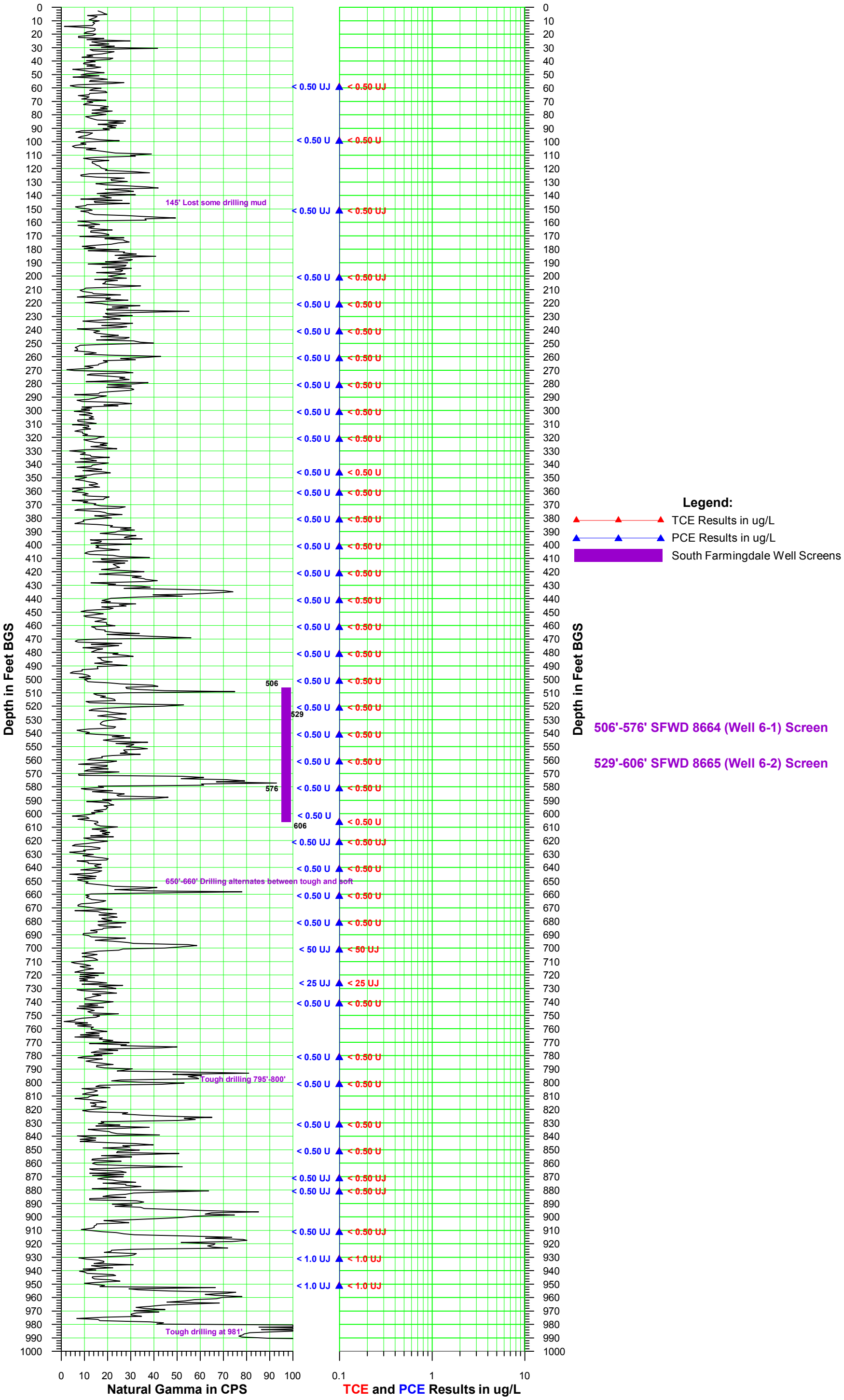
850
860
870
880
890
900
910
920


930
940
950
960
970
980
990
1000
Depth (ft.)
0.0
GAMMA
(cps)
100.0

Section 2

VPB 152 Gamma and PCE/TCE Plot

Vertical Profile Boring VPB-152
Downward Run - July 1, 2014
Validated Analytical Data



Section 3

VPB 152 Groundwater Sample Log Sheets

Hydropunch Sample

Client: Navy - NAVIRP Bethpage
Project No: 060366526
Site Location: VPB - 152 Pinenook Rd
Weather Conds:

Date: 6/3 - 6/11/14
VPB: 152
Collector(s): VV

Sample Date	Time	Temp (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Starting depth(ft)	Ending depth(ft)	Color
6/3/14	9:40	22.6	8.84	1041	6.03	65.8	71100	58	60	Brown
6/3/14	12:00	24.0	6.25	754	1.17	7.4	71400	98	100	Brown
6/3/14	1450	25.6	6.07	514	1.95	115.4	290	150	152	slightly cloudy
6/4/14	1225	22.4	7.05	188	1.96	56.7	295	200	202	Slightly cloudy
6/4/14	1440	Not enough recovery for water Parameters						220	222	slightly cloudy
6/5/14	940	18.1	5.84	355.6	3.56	119.4	260	240	242	slightly cloudy
6/5/14	1145	Not enough recovery for water parameters						260	~~262~~ 262	very dark brown
6/5/14	1355	18.5	5.60	290.7	3.09	125.2	541	280	285	cloudy
6/5/14	1600	20.8	5.72	369.5	3.99	74.5	246.5	300	302	slightly cloudy
6/6/14	830	18.1	6.14	336	2.71	90.9	387.8	320	322	cloudy
6/6/14	1355	19.5	5.63	149.9	2.11	81.9	218.6	345	347	slightly cloudy
6/9/14	940	19.1	5.81	240.3	2.44	88.7	352.1	360	362	cloudy
6/9/14	1135	16.4	6.21	356.3	1.78	93.7	236.8	380	382	slightly cloudy
6/9/14	1340	16.2	5.47	333.5	1.70	78.5	104.1	400	402	Very slightly cloudy
6/9/14	1540	18.1	5.37	334.0	2.76	88.0	245.4	420	422	slightly cloudy
6/10/14	940	14.7	5.58	315.9	2.68	102.9	820.4	440	442	cloudy
6/10/14	1140	19.3	3.83	413.4	4.21	263.2	112.4	460	462	Very slightly cloudy
6/10/14	1410	20.3	3.88	387.9	2.56	252.9	105	480	482	clear
6/10/14	1625	14.6	5.16	170	4.59	46.6	600.6	500	502	cloudy
6/11/14	1010	17	5.52	402.1	0.60	135.7	71,100	520	522	brown
6/11/14	1235	18.4	~~5.63~~ 5.94	106.3	2.51	17.5	71,100	540	542	brown

Hydropunch Sample

Client: Navy / NAVFAC Bethpage
Project No: 60366826
Site Location: VPB-152
Weather Conds:

Date: 6/11 - 6/27/14
VPB: 152
Collector(s): VV

Sample Date	Time	Temp (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Starting depth(ft)	Ending depth(ft)	Color
6/11/14	1450	19.6	6.39	103.8	4.31	72	595.9	560	562	cloudy
6/12/14	1005	17.1	5.67	99.4	1.66	179.1	>1,100	580	585	brown
6/12/14	1455	20.1	3.81	282.9	2.29	255.7	>1,100	605	607	brown
6/13/14	1010	17.1	6.11	296.1	0.66	54.2	>1,100	630	632	brown
6/13/14	1240	20.8	3.55	241.7	2.64	277.9	711.7	640	642	cloudy
6/16/14	955	18.2	3.50	314.8	2.24	271.1	646.6	660	662	cloudy
6/16/14	1200	20.6	5.18	76.7	1.76	39.8	646.7	680	682	cloudy
6/16/14	1445	20.1	5.79	586.6	0.33	-38.6	>1,100	700	702	brown
6/17/14	1230	19.9	6.67	566	2.85	-40.6	>1,100	725	727	brown
6/17/14	1515	23.1	4.82	715	0.25	190.7	>1,100	740	742	brown
6/19/14	1045	18.8	3.58	194.1	4.38	~~280~~.5	>1,100	780	782	white
6/19/14	1330	Not enough recovery for YSI + turbidimeter						800	802	very cloudy / white
6/20/14	1120	19	8.08	48.1	4.81	96.9	>1,100	830	832	white
6/23/14	1515	Not enough recovery for YSI + turbidimeter						850	852	cloudy / brown
6/24/14	1255	21.1	5.73	50.7	1.23	127.9	>1,100	870	872	cloudy / white
6/24/14	1415	21.0	5.81	195.6	2.71	79.4	>1,100	880	882	cloudy / brown
6/25/14	1420	23.2	5.74	61.8	2.87	1.8	421	910	912	slight cloudy
6/26/14	1230	Not enough recovery for YSI + turbidimeter						930	932	dark brown
6/27/14	1030	Not enough recovery for YSI + turbidimeter						950	952	dark brown

Section 4

VPB 152 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
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Data Validation Report

Project:	Regional Groundwater Investigation - NWIRP Bethpage	
Laboratory:	Katahdin Analytical Services, Scarborough, Maine	
Service Request:	SH4831	
Analyses/Method:	EPA SW-846 Method 8260B for VOCs (GC/MS)	
Validation Level:	Limited	
RESCON Project Number:	60266526.SA.DV	
Prepared by:	Sheena Blair/RESCON	Completed on: 9/2/2014
Reviewed by:	Lori Herberich/RESCON	File Name: SH4831_8260B

SUMMARY

The samples listed below were collected by Resolution Consultants (RESCON) from the Regional Groundwater Investigation - NWIRP Bethpage site on June 27 and 30, 2014.

Sample ID	Matrix/Sample Type
VPB152-GW-062714-950-952	Groundwater
VPB152-TRIP BLANK-063014	Trip Blank

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

REVIEW ELEMENTS

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

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

Sample VPB152-GW-062714-950-952 was mostly soil and had very little standing water. The laboratory decanted the water from three individual vials into one vial as a composite. Due to a limited sample volume the composite was analyzed at a 2-fold dilution. Positive and nondetect results for this sample were qualified as estimated (J and UJ, respectively), due to possible loss of sample integrity during the decanting procedure. 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 standard (ICV) percent recoveries (%Rs) acceptance criteria were met;
- the continuing calibration verification standard (CCV) method percent difference or percent drift (%Ds) and RF acceptance criteria were met; and
- the retention time method acceptance criteria were met.

Data qualification to the analytes associated with the specific ICV 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. Nonconformances are summarized in Attachment A in Tables A-1a and A-1b.

Laboratory Blanks/Equipment Blanks/Trip Blanks

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

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

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

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

Surrogate Spike Recoveries

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

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

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

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

MS/MSD Results

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

LCS Results

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

Field Duplicate Results

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

Internal Standard Results

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

Sample Results/Reporting Issues

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

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

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

QUALIFICATION ACTIONS

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

ATTACHMENTS

Attachment A: Nonconformance Summary Tables

Attachment B: Qualifier Codes and Explanations

Attachment C: Reason Codes and Explanations

Table 1 - Data Validation Summary of Qualified Data

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB152-GW-062714-950-952	WG	1,1,1-TRICHLOROETHANE		1.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	1,1,2,2-TETRACHLOROETHANE		1.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		1.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	1,1,2-TRICHLOROETHANE		1.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	1,1-DICHLOROETHANE		1.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	1,1-DICHLOROETHENE		1.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	1,2,4-TRICHLOROBENZENE		1.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	1,2-DIBROMO-3-CHLOROPROPANE		1.5	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	1,2-DIBROMOETHANE		1.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	1,2-DICHLOROBENZENE		1.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	1,2-DICHLOROETHANE		1.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	1,2-DICHLOROETHENE, TOTAL		2.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	1,2-DICHLOROPROPANE		1.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	1,3-DICHLOROBENZENE		1.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	1,4-DICHLOROBENZENE		1.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	2-BUTANONE		5.0	UG/L	UJ	c,mc
VPB152-GW-062714-950-952	WG	2-HEXANONE		5.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	4-METHYL-2-PENTANONE		5.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	ACETONE	46	5.0	UG/L	J	c,mc,s
VPB152-GW-062714-950-952	WG	BENZENE		1.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	BROMODICHLOROMETHANE		1.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	BROMOFORM		1.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	BROMOMETHANE		2.0	UG/L	UJ	c,mc
VPB152-GW-062714-950-952	WG	CARBON DISULFIDE		1.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	CARBON TETRACHLORIDE		1.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	CHLOROBENZENE		1.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	CHLOROETHANE		2.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	CHLOROFORM		1.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	CHLOROMETHANE		2.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	CIS-1,2-DICHLOROETHENE		1.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	CIS-1,3-DICHLOROPROPENE		1.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	CYCLOHEXANE		1.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	DIBROMOCHLOROMETHANE		1.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	DICHLORODIFLUOROMETHANE		2.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	ETHYLBENZENE		1.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	ISOPROPYLBENZENE		1.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	M- AND P-XYLENE		2.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	METHYL ACETATE		1.5	UG/L	UJ	c,mc
VPB152-GW-062714-950-952	WG	METHYL CYCLOHEXANE		1.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	METHYL TERT-BUTYL ETHER		1.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	METHYLENE CHLORIDE	6.6	5.0	UG/L	J	mc,s
VPB152-GW-062714-950-952	WG	O-XYLENE		1.0	UG/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB152-GW-062714-950-952	WG	STYRENE		1.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	TETRACHLOROETHENE		1.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	TOLUENE	5.4	1.0	UG/L	J	mc,s
VPB152-GW-062714-950-952	WG	TRANS-1,2-DICHLOROETHENE		1.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	TRANS-1,3-DICHLOROPROPENE		1.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	TRICHLOROETHENE		1.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	TRICHLOROFLUOROMETHANE		2.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	VINYL CHLORIDE		2.0	UG/L	UJ	mc
VPB152-GW-062714-950-952	WG	XYLENES, TOTAL		3.0	UG/L	UJ	mc
VPB152-TRIP BLANK-063014	WQ	2-BUTANONE	2.5	2.5	UG/L	UJ	c
VPB152-TRIP BLANK-063014	WQ	ACETONE	2.5	2.5	UG/L	UJ	c
VPB152-TRIP BLANK-063014	WQ	BROMOMETHANE	1.0	1.0	UG/L	UJ	c
VPB152-TRIP BLANK-063014	WQ	METHYL ACETATE	0.75	0.75	UG/L	UJ	c

Attachment A

Nonconformance Summary Tables

Table A-1 - Initial Calibration Verification

ICV	Compound	% R	Limit
WG145769-7	ACETONE	145.9	80-120%
Associated samples: VPB152-GW-062714-950-952, VPB152-TRIP BLANK-063014			

Table A-1b - Continuing Calibration Verification

CCV ID	Compound	% D	Limit
WG145865 GCMS-C	BROMOMETHANE	20.8	< 20%
	2-BUTANONE	25.3	< 20%
	METHYL ACETATE	22.3	< 20%
Associated samples: VPB152-GW-062714-950-952, VPB152-TRIP BLANK-063014			

Table A-2- Surrogates

Sample ID	Surrogate	% Recovery	Lower Limit	Upper Limit
VPB152-GW-062714-950-952	1,2-DICHLOROETHANE-D4	132	70	120

Attachment B

Qualifier Codes and Explanations

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

Attachment C

Reason Codes and Explanations

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

Report of Analytical Results

Client: ENSAFE
Lab ID: SH4831-1DL
Client ID: 152-062714-950-952
Project: Navy Clean WE15-03-06 NW
SDG: SH4831
Lab File ID: D9287.D

Sample Date: 27-JUN-14
Received Date: 01-JUL-14
Extract Date: 02-JUL-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG145865

Analysis Date: 02-JUL-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 03-JUL-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	2.0	ug/L	2	2	4.0	0.48	2.0
Chloromethane	U	2.0	ug/L	2	2	4.0	0.72	2.0
Vinyl Chloride	U	2.0	ug/L	2	2	4.0	0.50	2.0
Bromomethane	U	2.0	ug/L	2	2	4.0	0.98	2.0
Chloroethane	U	2.0	ug/L	2	2	4.0	1.1	2.0
Trichlorofluoromethane	U	2.0	ug/L	2	2	4.0	0.48	2.0
1,1-Dichloroethene	U	1.0	ug/L	2	1	2.0	0.70	1.0
Carbon Disulfide	U	1.0	ug/L	2	1	2.0	0.50	1.0
Freon-113	U	1.0	ug/L	2	1	2.0	0.62	1.0
Methylene Chloride	J	6.6	ug/L	2	5	10.	2.3	5.0
Acetone		46	ug/L	2	5	10.	4.4	5.0
trans-1,2-Dichloroethene	U	1.0	ug/L	2	1	2.0	0.50	1.0
Methyl tert-butyl Ether	U	1.0	ug/L	2	1	2.0	0.72	1.0
1,1-Dichloroethane	U	1.0	ug/L	2	1	2.0	0.42	1.0
cis-1,2-Dichloroethene	U	1.0	ug/L	2	1	2.0	0.42	1.0
Chloroform	U	1.0	ug/L	2	1	2.0	0.64	1.0
1,1,1-Trichloroethane	U	1.0	ug/L	2	1	2.0	0.40	1.0
2-Butanone	U	5.0	ug/L	2	5	10.	2.6	5.0
Cyclohexane	U	1.0	ug/L	2	1	2.0	0.62	1.0
Carbon Tetrachloride	U	1.0	ug/L	2	1	2.0	0.44	1.0
Benzene	U	1.0	ug/L	2	1	2.0	0.52	1.0
1,2-Dichloroethane	U	1.0	ug/L	2	1	2.0	0.40	1.0
Trichloroethene	U	1.0	ug/L	2	1	2.0	0.56	1.0
1,2-Dichloropropane	U	1.0	ug/L	2	1	2.0	0.50	1.0
Bromodichloromethane	U	1.0	ug/L	2	1	2.0	0.66	1.0
cis-1,3-Dichloropropene	U	1.0	ug/L	2	1	2.0	0.38	1.0
Toluene		5.4	ug/L	2	1	2.0	0.54	1.0
4-Methyl-2-Pentanone	U	5.0	ug/L	2	5	10.	2.6	5.0
trans-1,3-Dichloropropene	U	1.0	ug/L	2	1	2.0	0.40	1.0
1,1,2-Trichloroethane	U	1.0	ug/L	2	1	2.0	0.66	1.0
Tetrachloroethene	U	1.0	ug/L	2	1	2.0	0.80	1.0
Dibromochloromethane	U	1.0	ug/L	2	1	2.0	0.60	1.0
2-Hexanone	U	5.0	ug/L	2	5	10.	3.4	5.0
Chlorobenzene	U	1.0	ug/L	2	1	2.0	0.44	1.0
Ethylbenzene	U	1.0	ug/L	2	1	2.0	0.42	1.0

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4831-1DL
Client ID: 152-062714-950-952
Project: Navy Clean WE15-03-06 NW
SDG: SH4831
Lab File ID: D9287.D

Sample Date: 27-JUN-14
Received Date: 01-JUL-14
Extract Date: 02-JUL-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG145865

Analysis Date: 02-JUL-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 03-JUL-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	3.0	ug/L	2	3	6.0	0.50	3.0
Styrene	U	1.0	ug/L	2	1	2.0	0.46	1.0
Bromoform	U	1.0	ug/L	2	1	2.0	0.46	1.0
Isopropylbenzene	U	1.0	ug/L	2	1	2.0	0.46	1.0
1,1,2,2-Tetrachloroethane	U	1.0	ug/L	2	1	2.0	0.76	1.0
1,3-Dichlorobenzene	U	1.0	ug/L	2	1	2.0	0.52	1.0
1,4-Dichlorobenzene	U	1.0	ug/L	2	1	2.0	0.48	1.0
1,2-Dichlorobenzene	U	1.0	ug/L	2	1	2.0	0.30	1.0
1,2,4-Trichlorobenzene	U	1.0	ug/L	2	1	2.0	0.74	1.0
Methyl Acetate	U	1.5	ug/L	2	1	2.0	1.1	1.5
Methylcyclohexane	U	1.0	ug/L	2	1	2.0	0.60	1.0
o-Xylene	U	1.0	ug/L	2	1	2.0	0.50	1.0
M+P-Xylenes	U	2.0	ug/L	2	2	4.0	1.2	2.0
1,2-Dichloroethylene (Total)	U	2.0	ug/L	2	2	4.0	0.42	2.0
1,2-Dibromoethane	U	1.0	ug/L	2	1	2.0	0.44	1.0
1,2-Dibromo-3-Chloropropane	U	1.5	ug/L	2	1	2.0	1.0	1.5
P-Bromofluorobenzene		82.5	%					
Toluene-d8		112.	%					
1,2-Dichloroethane-d4	*	132.	%					
Dibromofluoromethane		112.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4831-2
Client ID: VPB152-TB-063014
Project: Navy Clean WE15-03-06 NW
SDG: SH4831
Lab File ID: D9284.D

Sample Date: 30-JUN-14
Received Date: 01-JUL-14
Extract Date: 02-JUL-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG145865

Analysis Date: 02-JUL-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 03-JUL-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	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~~ 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	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~~ UJ	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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RC 9/16/14

Report of Analytical Results

Client: ENSAFE
Lab ID: SH4831-2
Client ID: VPB152-TB-063014
Project: Navy Clean WE15-03-06 NW
SDG: SH4831
Lab File ID: D9284.D

Sample Date: 30-JUN-14
Received Date: 01-JUL-14
Extract Date: 02-JUL-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG145865

Analysis Date: 02-JUL-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 03-JUL-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~~ UJ	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		88.0	%					
Toluene-d8		119.	%					
1,2-Dichloroethane-d4	*	135.	%					
Dibromofluoromethane	*	118.	%					

7/16/14

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RESOLUTION CONSULTANTS

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Data Validation Report

Project:	Regional Groundwater Investigation - NWIRP Bethpage	
Laboratory:	Test-America, South Burlington, Vermont	
Service Request:	200-22958	
Analyses/Method:	EPA Method TO-15, VOCs Collected in Canisters - GC/MS	
Validation Level:	Limited	
RESCON Project Number:	60266526.SA.DV	
Prepared by:	Sheena Blair/RESCON	Completed on: 09/14/2014
Reviewed by:	Lori Herberich/RESCON	File Name: 200-22958_TO-15

SUMMARY

The sample listed below was collected by Resolution Consultants from the Regional Groundwater Investigation - NWIRP Bethpage site on June 24, 2014.

Sample ID	Matrix/Sample Type
VPB152-AIR-062414	Ambient Air

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

REVIEW ELEMENTS

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

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

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

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

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

RESULTS

Data Completeness (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.

Holding Times andSample Preservation

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

GC/MS Performance Checks

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

Initial Calibration/Continuing Calibration Verification

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

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

The QC acceptance criteria were met.

Laboratory Blanks

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

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

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 recoveries were reviewed for conformance with the QC acceptance criteria. All QC acceptance criteria were met.

Field Duplicate Results

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

Internal Standard Results

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

Sample Results/Reporting Issues

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

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

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

QUALIFICATION ACTIONS

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

ATTACHMENTS

Attachment A: Nonconformance Summary Tables

Attachment B: Qualifier Codes and Explanations

Attachment A

Nonconformance Summary Tables

No nonconformances were identified during this review.

Attachment B

Qualifier Codes and Explanations

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

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

Canister Samples Chain of Custody Record

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

Client Contact Information	Project Manager: E. Vivaudou	Samples Collected By: Vincent Vivaudou
Company: Revolution Consultants	Phone: 845-435-4140	1 of 1 COCs
Address: 100 Red Schoolhouse Rd.	Email: eleanor.vivaudou@revcon.com	
City/State/Zip Chestnut Ridge / NY / 10977		
Phone: 845-435-4180	Site Contact:	
FAX:	TA Contact:	
Project Name: NWIRP Bethpage	Analysis Turnaround Time	
Site: 06266526	Standard (Specify)	
PO #	Rush (Specify)	

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	MA-APH	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
UPB152-AIR-062414	6/24/14	800	1555	-29	-7	3695	5052	X								X			

Temperature (Fahrenheit)	Interior	Ambient	
Start			
Stop			

Pressure (Inches of Hg)	Interior	Ambient	
Start			
Stop			

200-22958 COC

Special Instructions/QC Requirements & Comments:

Samples Shipped by:	Date/Time: 6/24/14 / 1730	Samples Received by: TABUR 6/25/14	1030
Samples Relinquished by:	Date/Time:	Received by:	
Relinquished by:	Date/Time:	Received by:	

Lab Use Only **Shipper Name:** Opened by: Condition:

Client: Katahdin Analytical Services

Job Number: 200-22958-1
Sdg Number: 200-22958

Client Sample ID: **VPB152-AIR-062414**

Lab Sample ID: 200-22958-1
Client Matrix: Air

Date Sampled: 06/24/2014 1555
Date Received: 06/25/2014 1030

TO-15 Volatile Organic Compounds in Ambient Air

Analysis Method:	TO-15	Analysis Batch:	200-74232	Instrument ID:	CHW.i
Prep Method:	Summa Canister	Prep Batch:	N/A	Lab File ID:	8298_026.d
Dilution:	1.0			Initial Weight/Volume:	200 mL
Analysis Date:	06/27/2014 0919			Final Weight/Volume:	200 mL
Prep Date:	06/27/2014 0919			Injection Volume:	200 mL

Analyte	Result (ppb v/v)	Qualifier	DL	LOQ
1,1,1-Trichloroethane	0.080	U	0.20	0.20
1,1,2,2-Tetrachloroethane	0.030	U	0.20	0.20
1,1,2-Trichloro-1,2,2-trifluoroethane	0.030	U	0.20	0.20
1,1,2-Trichloroethane	0.030	U	0.20	0.20
1,1-Dichloroethane	0.080	U	0.20	0.20
1,1-Dichloroethene	0.080	U	0.20	0.20
1,2,4-Trichlorobenzene	0.080	U	0.50	0.50
1,2-Dibromoethane (EDB)	0.080	U	0.20	0.20
1,2-Dichlorobenzene	0.030	U	0.20	0.20
1,2-Dichloroethane	0.030	U	0.20	0.20
1,2-Dichloropropane	0.080	U	0.20	0.20
Acetone	7.5		5.0	5.0
1,3-Dichlorobenzene	0.030	U	0.20	0.20
1,4-Dichlorobenzene	0.030	U	0.20	0.20
2-Butanone (MEK)	0.73		0.50	0.50
2-Hexanone	0.20	U	0.50	0.50
4-Methyl-2-pentanone	0.080	U	0.50	0.50
Benzene	0.030	U	0.20	0.20
Bromoform	0.030	U	0.20	0.20
Bromomethane	0.080	U	0.20	0.20
Carbon disulfide	10		0.50	0.50
Carbon tetrachloride	0.080	U	0.20	0.20
Chlorobenzene	0.030	U	0.20	0.20
Dibromochloromethane	0.030	U	0.20	0.20
Chloroethane	0.080	U	0.50	0.50
Chloroform	0.080	U	0.20	0.20
Chloromethane	0.50		0.50	0.50
cis-1,2-Dichloroethene	0.080	U	0.20	0.20
cis-1,3-Dichloropropene	0.080	U	0.20	0.20
Cyclohexane	0.080	U	0.20	0.20
Bromodichloromethane	0.030	U	0.20	0.20
Dichlorodifluoromethane	0.51		0.50	0.50
Ethylbenzene	0.030	U	0.20	0.20
Isopropylbenzene	0.030	U	0.20	0.20
Methyl tert-butyl ether	0.080	U	0.20	0.20
Methylene Chloride	0.20	U	0.50	0.50
m,p-Xylene	0.080	U	0.50	0.50
Xylene, o-	0.030	U	0.20	0.20
Styrene	0.030	U	0.20	0.20
Tetrachloroethene	0.030	U	0.20	0.20
Toluene	0.030	U	0.20	0.20
trans-1,2-Dichloroethene	0.080	U	0.20	0.20
trans-1,3-Dichloropropene	0.080	U	0.20	0.20
Trichloroethene	0.080	U	0.20	0.20
Trichlorofluoromethane	0.22		0.20	0.20
Vinyl chloride	0.080	U	0.20	0.20

Client: Katahdin Analytical Services

Job Number: 200-22958-1
Sdg Number: 200-22958

Client Sample ID: **VPB152-AIR-062414**

Lab Sample ID: 200-22958-1
Client Matrix: Air

Date Sampled: 06/24/2014 1555
Date Received: 06/25/2014 1030

TO-15 Volatile Organic Compounds in Ambient Air

Analysis Method:	TO-15	Analysis Batch:	200-74232	Instrument ID:	CHW.i
Prep Method:	Summa Canister	Prep Batch:	N/A	Lab File ID:	8298_026.d
Dilution:	1.0			Initial Weight/Volume:	200 mL
Analysis Date:	06/27/2014 0919			Final Weight/Volume:	200 mL
Prep Date:	06/27/2014 0919			Injection Volume:	200 mL

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

Analyte	Result (ug/m3)	Qualifier	DL	LOQ
1,1,1-Trichloroethane	0.44	U	1.1	1.1
1,1,2,2-Tetrachloroethane	0.21	U	1.4	1.4
1,1,2-Trichloro-1,2,2-trifluoroethane	0.23	U	1.5	1.5
1,1,2-Trichloroethane	0.16	U	1.1	1.1
1,1-Dichloroethane	0.32	U	0.81	0.81
1,1-Dichloroethene	0.32	U	0.79	0.79
1,2,4-Trichlorobenzene	0.59	U	3.7	3.7
1,2-Dibromoethane (EDB)	0.61	U	1.5	1.5
1,2-Dichlorobenzene	0.18	U	1.2	1.2
1,2-Dichloroethane	0.12	U	0.81	0.81
1,2-Dichloropropane	0.37	U	0.92	0.92
Acetone	18		12	12
1,3-Dichlorobenzene	0.18	U	1.2	1.2
1,4-Dichlorobenzene	0.18	U	1.2	1.2
2-Butanone (MEK)	2.1		1.5	1.5
2-Hexanone	0.82	U	2.0	2.0
4-Methyl-2-pentanone	0.33	U	2.0	2.0
Benzene	0.096	U	0.64	0.64
Bromoform	0.31	U	2.1	2.1
Bromomethane	0.31	U	0.78	0.78
Carbon disulfide	32		1.6	1.6
Carbon tetrachloride	0.50	U	1.3	1.3
Chlorobenzene	0.14	U	0.92	0.92
Dibromochloromethane	0.26	U	1.7	1.7
Chloroethane	0.21	U	1.3	1.3
Chloroform	0.39	U	0.98	0.98
Chloromethane	1.0		1.0	1.0
cis-1,2-Dichloroethene	0.32	U	0.79	0.79
cis-1,3-Dichloropropene	0.36	U	0.91	0.91
Cyclohexane	0.28	U	0.69	0.69
Bromodichloromethane	0.20	U	1.3	1.3
Dichlorodifluoromethane	2.5		2.5	2.5
Ethylbenzene	0.13	U	0.87	0.87
Isopropylbenzene	0.15	U	0.98	0.98
Methyl tert-butyl ether	0.29	U	0.72	0.72
Methylene Chloride	0.69	U	1.7	1.7
m,p-Xylene	0.35	U	2.2	2.2
Xylene, o-	0.13	U	0.87	0.87
Styrene	0.13	U	0.85	0.85
Tetrachloroethene	0.20	U	1.4	1.4
Toluene	0.11	U	0.75	0.75
trans-1,2-Dichloroethene	0.32	U	0.79	0.79
trans-1,3-Dichloropropene	0.36	U	0.91	0.91

Client: Katahdin Analytical Services

Job Number: 200-22958-1
Sdg Number: 200-22958

Client Sample ID: **VPB152-AIR-062414**

Lab Sample ID: 200-22958-1
Client Matrix: Air

Date Sampled: 06/24/2014 1555
Date Received: 06/25/2014 1030

TO-15 Volatile Organic Compounds in Ambient Air

Analysis Method:	TO-15	Analysis Batch:	200-74232	Instrument ID:	CHW.i
Prep Method:	Summa Canister	Prep Batch:	N/A	Lab File ID:	8298_026.d
Dilution:	1.0			Initial Weight/Volume:	200 mL
Analysis Date:	06/27/2014 0919			Final Weight/Volume:	200 mL
Prep Date:	06/27/2014 0919			Injection Volume:	200 mL

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

RESOLUTION CONSULTANTS

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Data Validation Report

Project:	Regional Groundwater Investigation - NWIRP Bethpage
Laboratory:	Katahdin Analytical Services, Scarborough, Maine
Service Request:	SH4793
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:	Limited
RESCON Project Number:	60266526.SA.DV
Prepared by:	Sheena Blair/RESCON — Completed on: 10/16/2014
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SUMMARY

The samples listed below were collected by Resolution Consultants (RESCON) from the Regional Groundwater Investigation - NWIRP Bethpage site on June 24, 25, and 26, 2014.

Sample ID	Matrix/Sample Type
VPB152-EB-062514	Equipment blank
VPB152-GW-062414-870-872	Groundwater
VPB152-GW-062414-880-882	Groundwater
VPB152-GW-062514-910-912	Groundwater
VPB152-GW-062614-930-932	Groundwater
VPB152-TRIPBLANK-062614	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 SM310B, Total Organic Carbon by High-Temperature Combustion*

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

REVIEW ELEMENTS

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

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

Sample VPB152-GW-062614-930-932 was mostly soil and had very little standing water. The laboratory decanted the water from the individual vials into one vial as a composite. Due to lack of sample volume the composite was analyzed at a 2-fold dilution. Positive and nondetect results for this sample were qualified as estimated (J and UJ) respectively, due to possible loss of sample integrity during the decanting procedure.

Holding Times and Sample Preservation

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

The cooler temperature upon arrival at the laboratory was 17.4°C, which grossly exceeded the QC acceptance limit of 4°C ± 2°C.

All samples were qualified as follows:

Cooler Temperature (all sample matrices)

Criteria	Actions			
	Aqueous		Solid	
	Detected	Nondetected	Detected	Nondetected
Cooler T < 2°C	No qualification[1]		No qualification[1]	
Cooler T >6°C but <10°C	No qualification[1]		No qualification[1]	
Cooler T>10°C	J[2]	UJ[2]	J[2]	UJ[2]

[1]No guidance listed in Region 2. NFG recommends professional judgment, thus RESCON professional judgment was used.
[2] Per Region 2 guidance that states qualify data if cooler temperature >10°C due to no ice/ice melted upon arrival.

Qualified sample results are shown in Table 1.

GC/MS Performance Checks

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

Initial Calibration/Continuing Calibration Verification

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

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

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:

ICAL Linearity Nonconformances:

Nonconformance	Actions	
	Detected Results	Nondetected Results
%RSD > 15% and quantitation based on mean RF	J	UJ
r or r^2 < 0.99 and quantitation based on linear regression	J*	UJ*
* No guidance in NFG, thus RESCON professional judgment was used		

ICV Recovery Nonconformances:

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

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

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 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 RESCON professional judgment			

For TOC:

Blank Type	Blank Result	Sample Result	Action for Samples
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 RESCON professional judgment

LOQ - Limit of Quantitation.

Surrogate Spike Recoveries

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

MS Results

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

For TOC 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.

Acetone had a high %R in one of the LCSs; however, the asscociated sample results were nondetect. No validation action was required for the high bias.

Field Duplicate Results

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

Internal Standard Results

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

Sample Results/Reporting Issues

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

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

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

QUALIFICATION ACTIONS

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

ATTACHMENTS

Attachment A: Nonconformance Summary Tables

Attachment B: Qualifier Codes and Explanations

Attachment C: Reason Codes and Explanations

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB152-EB-062514	WQ	TOTAL ORGANIC CARBON		1.0*	MG/L	UJ	t,bl
VPB152-EB-062514	WQ	1,1,1-TRICHLOROETHANE		0.50	UG/L	UJ	t
VPB152-EB-062514	WQ	1,1,2,2-TETRACHLOROETHANE		0.50	UG/L	UJ	t
VPB152-EB-062514	WQ	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		0.50	UG/L	UJ	t,c
VPB152-EB-062514	WQ	1,1,2-TRICHLOROETHANE		0.50	UG/L	UJ	t
VPB152-EB-062514	WQ	1,1-DICHLOROETHANE		0.50	UG/L	UJ	t
VPB152-EB-062514	WQ	1,1-DICHLOROETHENE		0.50	UG/L	UJ	t,c
VPB152-EB-062514	WQ	1,2,4-TRICHLOROBENZENE		0.50	UG/L	UJ	t
VPB152-EB-062514	WQ	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	t
VPB152-EB-062514	WQ	1,2-DIBROMOETHANE		0.50	UG/L	UJ	t
VPB152-EB-062514	WQ	1,2-DICHLOROBENZENE		0.50	UG/L	UJ	t
VPB152-EB-062514	WQ	1,2-DICHLOROETHANE		0.50	UG/L	UJ	t
VPB152-EB-062514	WQ	1,2-DICHLOROETHENE, TOTAL		1.0	UG/L	UJ	t
VPB152-EB-062514	WQ	1,2-DICHLOROPROPANE		0.50	UG/L	UJ	t
VPB152-EB-062514	WQ	1,3-DICHLOROBENZENE		0.50	UG/L	UJ	t
VPB152-EB-062514	WQ	1,4-DICHLOROBENZENE		0.50	UG/L	UJ	t
VPB152-EB-062514	WQ	2-BUTANONE		2.5	UG/L	UJ	t
VPB152-EB-062514	WQ	2-HEXANONE		2.5	UG/L	UJ	t
VPB152-EB-062514	WQ	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	t
VPB152-EB-062514	WQ	ACETONE	8.1	2.5	UG/L	J	t,c
VPB152-EB-062514	WQ	BENZENE		0.50	UG/L	UJ	t
VPB152-EB-062514	WQ	BROMODICHLOROMETHANE		0.50	UG/L	UJ	t
VPB152-EB-062514	WQ	BROMOFORM		0.50	UG/L	UJ	t
VPB152-EB-062514	WQ	BROMOMETHANE		1.0	UG/L	UJ	t
VPB152-EB-062514	WQ	CARBON DISULFIDE		0.50	UG/L	UJ	t,c
VPB152-EB-062514	WQ	CARBON TETRACHLORIDE		0.50	UG/L	UJ	t
VPB152-EB-062514	WQ	CHLOROBENZENE		0.50	UG/L	UJ	t
VPB152-EB-062514	WQ	CHLOROETHANE		1.0	UG/L	UJ	t
VPB152-EB-062514	WQ	CHLOROFORM		0.50	UG/L	UJ	t
VPB152-EB-062514	WQ	CHLOROMETHANE		1.0	UG/L	UJ	t
VPB152-EB-062514	WQ	CIS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	t
VPB152-EB-062514	WQ	CIS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	t
VPB152-EB-062514	WQ	CYCLOHEXANE		0.50	UG/L	UJ	t
VPB152-EB-062514	WQ	DIBROMOCHLOROMETHANE		0.50	UG/L	UJ	t
VPB152-EB-062514	WQ	DICHLORODIFLUOROMETHANE		1.0	UG/L	UJ	t
VPB152-EB-062514	WQ	ETHYLBENZENE		0.50	UG/L	UJ	t
VPB152-EB-062514	WQ	ISOPROPYLBENZENE		0.50	UG/L	UJ	t
VPB152-EB-062514	WQ	M- AND P-XYLENE		1.0	UG/L	UJ	t
VPB152-EB-062514	WQ	METHYL ACETATE		0.75	UG/L	UJ	t

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB152-EB-062514	WQ	METHYL CYCLOHEXANE		0.50	UG/L	UJ	t,c
VPB152-EB-062514	WQ	METHYL TERT-BUTYL ETHER		0.50	UG/L	UJ	t
VPB152-EB-062514	WQ	METHYLENE CHLORIDE		2.5	UG/L	UJ	t,c
VPB152-EB-062514	WQ	O-XYLENE		0.50	UG/L	UJ	t
VPB152-EB-062514	WQ	STYRENE		0.50	UG/L	UJ	t
VPB152-EB-062514	WQ	TETRACHLOROETHENE		0.50	UG/L	UJ	t
VPB152-EB-062514	WQ	TOLUENE		0.50	UG/L	UJ	t
VPB152-EB-062514	WQ	TRANS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	t
VPB152-EB-062514	WQ	TRANS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	t
VPB152-EB-062514	WQ	TRICHLOROETHENE		0.50	UG/L	UJ	t
VPB152-EB-062514	WQ	TRICHLOROFLUOROMETHANE		1.0	UG/L	UJ	t
VPB152-EB-062514	WQ	VINYL CHLORIDE		1.0	UG/L	UJ	t
VPB152-EB-062514	WQ	XYLENES, TOTAL		1.5	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	1,1,1-TRICHLOROETHANE		0.50	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	1,1,2,2-TETRACHLOROETHANE		0.50	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		0.50	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	1,1,2-TRICHLOROETHANE		0.50	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	1,1-DICHLOROETHANE		0.50	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	1,1-DICHLOROETHENE		0.50	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	1,2,4-TRICHLOROBENZENE		0.50	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	1,2-DIBROMOETHANE		0.50	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	1,2-DICHLOROBENZENE		0.50	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	1,2-DICHLOROETHANE		0.50	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	1,2-DICHLOROETHENE, TOTAL		1.0	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	1,2-DICHLOROPROPANE		0.50	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	1,3-DICHLOROBENZENE		0.50	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	1,4-DICHLOROBENZENE		0.50	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	2-BUTANONE		2.5	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	2-HEXANONE		2.5	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	ACETONE		5.0*	UG/L	UJ	t,be
VPB152-GW-062414-870-872	WG	BENZENE		0.50	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	BROMODICHLOROMETHANE		0.50	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	BROMOFORM		0.50	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	BROMOMETHANE		1.0	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	CARBON DISULFIDE		0.50	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	CARBON TETRACHLORIDE		0.50	UG/L	UJ	t

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB152-GW-062414-870-872	WG	CHLOROBENZENE		0.50	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	CHLOROETHANE		1.0	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	CHLOROFORM		0.50	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	CHLOROMETHANE		1.0	UG/L	UJ	t,c
VPB152-GW-062414-870-872	WG	CIS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	CIS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	CYCLOHEXANE		0.50	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	DIBROMOCHLOROMETHANE		0.50	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	DICHLORODIFLUOROMETHANE		1.0	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	ETHYLBENZENE		0.50	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	ISOPROPYLBENZENE		0.50	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	M- AND P-XYLENE		1.0	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	METHYL ACETATE		0.75	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	METHYL CYCLOHEXANE		0.50	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	METHYL TERT-BUTYL ETHER		0.50	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	METHYLENE CHLORIDE		2.5	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	O-XYLENE		0.50	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	STYRENE		0.50	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	TETRACHLOROETHENE		0.50	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	TOLUENE		0.50	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	TRANS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	TRANS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	TRICHLOROETHENE		0.50	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	TRICHLOROFLUOROMETHANE		1.0	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	VINYL CHLORIDE		1.0	UG/L	UJ	t
VPB152-GW-062414-870-872	WG	XYLENES, TOTAL		1.5	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	1,1,1-TRICHLOROETHANE		0.50	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	1,1,2,2-TETRACHLOROETHANE		0.50	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		0.50	UG/L	UJ	t,c
VPB152-GW-062414-880-882	WG	1,1,2-TRICHLOROETHANE		0.50	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	1,1-DICHLOROETHANE		0.50	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	1,1-DICHLOROETHENE		0.50	UG/L	UJ	t,c
VPB152-GW-062414-880-882	WG	1,2,4-TRICHLOROBENZENE		0.50	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	1,2-DIBROMOETHANE		0.50	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	1,2-DICHLOROBENZENE		0.50	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	1,2-DICHLOROETHANE		0.50	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	1,2-DICHLOROETHENE, TOTAL		1.0	UG/L	UJ	t

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB152-GW-062414-880-882	WG	1,2-DICHLOROPROPANE		0.50	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	1,3-DICHLOROBENZENE		0.50	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	1,4-DICHLOROBENZENE		0.50	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	2-BUTANONE		2.5	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	2-HEXANONE		2.5	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	ACETONE		13*	UG/L	UJ	t,be
VPB152-GW-062414-880-882	WG	BENZENE		0.50	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	BROMODICHLOROMETHANE		0.50	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	BROMOFORM		0.50	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	BROMOMETHANE		1.0	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	CARBON DISULFIDE		0.50	UG/L	UJ	t,c
VPB152-GW-062414-880-882	WG	CARBON TETRACHLORIDE		0.50	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	CHLOROBENZENE		0.50	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	CHLOROETHANE		1.0	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	CHLOROFORM		0.50	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	CHLOROMETHANE		1.0	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	CIS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	CIS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	CYCLOHEXANE		0.50	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	DIBROMOCHLOROMETHANE		0.50	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	DICHLORODIFLUOROMETHANE		1.0	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	ETHYLBENZENE		0.50	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	ISOPROPYLBENZENE		0.50	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	M- AND P-XYLENE		1.0	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	METHYL ACETATE		0.75	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	METHYL CYCLOHEXANE		0.50	UG/L	UJ	t,c
VPB152-GW-062414-880-882	WG	METHYL TERT-BUTYL ETHER		0.50	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	METHYLENE CHLORIDE		2.5	UG/L	UJ	t,c
VPB152-GW-062414-880-882	WG	O-XYLENE		0.50	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	STYRENE		0.50	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	TETRACHLOROETHENE		0.50	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	TOLUENE	1.4	0.50	UG/L	J	t
VPB152-GW-062414-880-882	WG	TRANS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	TRANS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	TRICHLOROETHENE		0.50	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	TRICHLOROFLUOROMETHANE		1.0	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	VINYL CHLORIDE		1.0	UG/L	UJ	t
VPB152-GW-062414-880-882	WG	XYLENES, TOTAL		1.5	UG/L	UJ	t

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB152-GW-062514-910-912	WG	1,1,1-TRICHLOROETHANE		0.50	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	1,1,2,2-TETRACHLOROETHANE		0.50	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		0.50	UG/L	UJ	t,c
VPB152-GW-062514-910-912	WG	1,1,2-TRICHLOROETHANE		0.50	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	1,1-DICHLOROETHANE		0.50	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	1,1-DICHLOROETHENE		0.50	UG/L	UJ	t,c
VPB152-GW-062514-910-912	WG	1,2,4-TRICHLOROBENZENE		0.50	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	1,2-DIBROMOETHANE		0.50	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	1,2-DICHLOROBENZENE		0.50	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	1,2-DICHLOROETHANE		0.50	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	1,2-DICHLOROETHENE, TOTAL		1.0	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	1,2-DICHLOROPROPANE		0.50	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	1,3-DICHLOROBENZENE		0.50	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	1,4-DICHLOROBENZENE		0.50	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	2-BUTANONE		2.5	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	2-HEXANONE		2.5	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	ACETONE		5.0*	UG/L	UJ	t,be
VPB152-GW-062514-910-912	WG	BENZENE		0.50	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	BROMODICHLOROMETHANE		0.50	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	BROMOFORM		0.50	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	BROMOMETHANE		1.0	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	CARBON DISULFIDE		0.50	UG/L	UJ	t,c
VPB152-GW-062514-910-912	WG	CARBON TETRACHLORIDE		0.50	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	CHLOROBENZENE		0.50	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	CHLOROETHANE		1.0	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	CHLOROFORM		0.50	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	CHLOROMETHANE		1.0	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	CIS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	CIS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	CYCLOHEXANE		0.50	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	DIBROMOCHLOROMETHANE		0.50	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	DICHLORODIFLUOROMETHANE		1.0	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	ETHYLBENZENE		0.50	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	ISOPROPYLBENZENE		0.50	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	M- AND P-XYLENE		1.0	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	METHYL ACETATE		0.75	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	METHYL CYCLOHEXANE		0.50	UG/L	UJ	t,c

VPB152-GW-062514-910-912	WG	METHYL TERT-BUTYL ETHER		0.50	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	METHYLENE CHLORIDE		2.5	UG/L	UJ	t,c
VPB152-GW-062514-910-912	WG	O-XYLENE		0.50	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	STYRENE		0.50	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	TETRACHLOROETHENE		0.50	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	TOLUENE		0.50	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	TRANS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	TRANS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	TRICHLOROETHENE		0.50	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	TRICHLOROFLUOROMETHANE		1.0	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	VINYL CHLORIDE		1.0	UG/L	UJ	t
VPB152-GW-062514-910-912	WG	XYLENES, TOTAL		1.5	UG/L	UJ	t
VPB152-GW-062614-930-932	WG	1,1,1-TRICHLOROETHANE		1.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	1,1,2,2-TETRACHLOROETHANE		1.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		1.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	1,1,2-TRICHLOROETHANE		1.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	1,1-DICHLOROETHANE		1.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	1,1-DICHLOROETHENE		1.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	1,2,4-TRICHLOROBENZENE		1.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	1,2-DIBROMO-3-CHLOROPROPANE		1.5	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	1,2-DIBROMOETHANE		1.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	1,2-DICHLOROBENZENE		1.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	1,2-DICHLOROETHANE		1.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	1,2-DICHLOROETHENE, TOTAL		2.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	1,2-DICHLOROPROPANE		1.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	1,3-DICHLOROBENZENE		1.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	1,4-DICHLOROBENZENE		1.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	2-BUTANONE		5.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	2-HEXANONE		5.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	4-METHYL-2-PENTANONE		5.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	ACETONE		32*	UG/L	UJ	t,be,mc
VPB152-GW-062614-930-932	WG	BENZENE		1.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	BROMODICHLOROMETHANE		1.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	BROMOFORM		1.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	BROMOMETHANE		2.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	CARBON DISULFIDE		1.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	CARBON TETRACHLORIDE		1.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	CHLOROBENZENE		1.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	CHLOROETHANE		2.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	CHLOROFORM		1.0	UG/L	UJ	t,mc

VPB152-GW-062614-930-932	WG	CHLOROMETHANE		2.0	UG/L	UJ	t,mc,c
VPB152-GW-062614-930-932	WG	CIS-1,2-DICHLOROETHENE		1.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	CIS-1,3-DICHLOROPROPENE		1.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	CYCLOHEXANE		1.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	DIBROMOCHLOROMETHANE		1.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	DICHLORODIFLUOROMETHANE		2.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	ETHYLBENZENE		1.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	ISOPROPYLBENZENE		1.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	M- AND P-XYLENE		2.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	METHYL ACETATE		1.5	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	METHYL CYCLOHEXANE		1.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	METHYL TERT-BUTYL ETHER		1.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	METHYLENE CHLORIDE	3.2	5.0	UG/L	J	mc,t
VPB152-GW-062614-930-932	WG	O-XYLENE		1.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	STYRENE		1.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	TETRACHLOROETHENE		1.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	TOLUENE	3.8	1.0	UG/L	J	mc,t
VPB152-GW-062614-930-932	WG	TRANS-1,2-DICHLOROETHENE		1.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	TRANS-1,3-DICHLOROPROPENE		1.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	TRICHLOROETHENE		1.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	TRICHLOROFLUOROMETHANE		2.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	VINYL CHLORIDE		2.0	UG/L	UJ	t,mc
VPB152-GW-062614-930-932	WG	XYLENES, TOTAL		3.0	UG/L	UJ	t,mc
VPB152-TRIPBLANK-062614	WQ	1,1,1-TRICHLOROETHANE		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	1,1,2,2-TETRACHLOROETHANE		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	1,1,2-TRICHLOROETHANE		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	1,1-DICHLOROETHANE		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	1,1-DICHLOROETHENE		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	1,2,4-TRICHLOROBENZENE		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	1,2-DIBROMOETHANE		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	1,2-DICHLOROBENZENE		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	1,2-DICHLOROETHANE		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	1,2-DICHLOROETHENE, TOTAL		1.0	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	1,2-DICHLOROPROPANE		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	1,3-DICHLOROBENZENE		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	1,4-DICHLOROBENZENE		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	2-BUTANONE		2.5	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	2-HEXANONE		2.5	UG/L	UJ	t

VPB152-TRIPBLANK-062614	WQ	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	ACETONE		2.5	UG/L	UL	t
VPB152-TRIPBLANK-062614	WQ	BENZENE		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	BROMODICHLOROMETHANE		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	BROMOFORM		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	BROMOMETHANE		1.0	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	CARBON DISULFIDE		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	CARBON TETRACHLORIDE		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	CHLOROBENZENE		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	CHLOROETHANE		1.0	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	CHLOROFORM		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	CHLOROMETHANE		1.0	UG/L	UJ	t,c
VPB152-TRIPBLANK-062614	WQ	CIS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	CIS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	CYCLOHEXANE		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	DIBROMOCHLOROMETHANE		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	DICHLORODIFLUOROMETHANE		1.0	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	ETHYLBENZENE		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	ISOPROPYLBENZENE		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	M- AND P-XYLENE		1.0	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	METHYL ACETATE		0.75	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	METHYL CYCLOHEXANE		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	METHYL TERT-BUTYL ETHER		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	METHYLENE CHLORIDE		2.5	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	O-XYLENE		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	STYRENE		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	TETRACHLOROETHENE		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	TOLUENE		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	TRANS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	TRANS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	TRICHLOROETHENE		0.50	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	TRICHLOROFLUOROMETHANE		1.0	UG/L	UJ	t
VPB152-TRIPBLANK-062614	WQ	VINYL CHLORIDE		1.0	UG/L	UJ	t
*LOQ							

Attachment A

Nonconformance Summary Tables

Table A-1a - Initial Calibration

Calibration Date/Time	Compound	% RSD	Limits
01-July-2014 09:21	CHLOROETHANE	16	≤15%
Associated samples: VPB152-GW-062414-870-872, VPB152-TRIP BLANK-062614,VPB152-GW-062614-930-932			

Table A-1b - Initial Calibration Verification

ICV	Compound	% R	Limit
WG145769-7	ACETONE	128	80-120%
Associated samples: VPB152-GW-062414-870-872, VPB152-TRIP BLANK-062614,VPB152-GW-062614-930-932			
WG146050-7	CARBON DISULFIDE	141	80-120%
	ACETONE	163	80-120%
	2-BUTANONE	122	80-120%
Associated samples: VPB152-GW-062414-880-882, VPB152-EB-062514,VPB152-GW-062514-910-912			

Table A-1c - Continuing Calibration Verification

CCV ID	Compound	% D	Limit
WG146127-4	1,1-DICHLOROETHENE	22	≤ 20%
	CARBON DISULFIDE	27	≤ 20%
	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	39	≤ 20%
	METHYLENE CHLORIDE	24	≤ 20%
Associated samples: VPB152-GW-062414-880-882, VPB152-EB-062514,VPB152-GW-062514-910-912			

Table A-3 - Lab Blanks

Blank ID	Compound	Result	LOD	Units	Associated Samples
WG146111-1	TOTAL ORGANIC CARBON	0.26	0.50	MG/L	VPB152-EB-062514

Table A-4 - Field Blanks

Blank ID	Compound	Result	LOD	Units	Associated Samples
VPB152-EB-062514	ACETONE	8.1	2.5	UG/L	Samples in SDG SH4793

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
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Fax: (207) 775-4029

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Page ____ of ____

Client	Contact	Phone #	Fax #
Resolution Consultants	E. Uhuebu	(845) 425-4180	( )

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

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

Bill (if different than above) | Address

Sampler (Print / Sign) Vincent Uomiako / Vincent Uomiako | Copies To:

LAB USE ONLY | WORK ORDER #: STH4793 | 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
					VOC	TOC								
	VPD152-GW-062414-870-872	6/24/14 1215	GW	3	X									
	VPD152-GW-062414-880-882	6/24/14 1615	GW	3	X									
	VPD152-EB-062514	6/25/14 1330	W	6	X	X								
	VPD152-Trip Blk-062614	6/25/14 1000	W	3	X									
	VPD152-GW-062514-912	6/25/14 1430	GW	3	X									
	VPD152-GW-062614-930-932	6/26/14 1330	GW	2	X									
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COMMENTS

17.4°

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	6/26 1715	Fed EX			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	6/30 9:15	Jennifer Obrien			

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ORIGINAL

0626014

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: ENSAFE
Lab ID: SH4793-1
Client ID: 152-062414-870-872
Project: Navy Clean WE15-03-06 NW
SDG: SH4793
Lab File ID: D9267.D

Sample Date: 24-JUN-14
Received Date: 30-JUN-14
Extract Date: 01-JUL-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG145769

Analysis Date: 01-JUL-14
Analyst: DJP
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 17-JUL-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	L	~~7.2~~ 5.0	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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7/25/14

Report of Analytical Results

Client: ENSAFE
Lab ID: SH4793-1
Client ID: 152-062414-870-872
Project: Navy Clean WE15-03-06 NW
SDG: SH4793
Lab File ID: D9267.D

Sample Date: 24-JUN-14
Received Date: 30-JUN-14
Extract Date: 01-JUL-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG145769

Analysis Date: 01-JUL-14
Analyst: DJP
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 17-JUL-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		85.7	%					
Toluene-d8		111.	%					
1,2-Dichloroethane-d4		115.	%					
Dibromofluoromethane		103.	%					

7/15/14

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: ENSAFE
Lab ID: SH4793-3RA
Client ID: 152-062414-880-882
Project: Navy Clean WE15-03-06 NW
SDG: SH4793
Lab File ID: C8048.D

Sample Date: 24-JUN-14
Received Date: 30-JUN-14
Extract Date: 08-JUL-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG146127

Analysis Date: 08-JUL-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 17-JUL-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		13	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	J	1.4	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U UJ	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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7/25/14

Report of Analytical Results

Client: ENSAFE
Lab ID: SH4793-3RA
Client ID: 152-062414-880-882
Project: Navy Clean WE15-03-06 NW
SDG: SH4793
Lab File ID: C8048.D

Sample Date: 24-JUN-14
Received Date: 30-JUN-14
Extract Date: 08-JUL-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG146127

Analysis Date: 08-JUL-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 17-JUL-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		93.5	%					
Toluene-d8		102.	%					
1,2-Dichloroethane-d4		109.	%					
Dibromofluoromethane		97.7	%					

Rulzsk

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Cert No E87604

Report of Analytical Results

Client: ENSAFE
Lab ID: SH4793-4RA
Client ID: VPB152-EB-062514
Project: Navy Clean WE15-03-06 NW
SDG: SH4793
Lab File ID: C8049.D

Sample Date: 25-JUN-14
Received Date: 30-JUN-14
Extract Date: 08-JUL-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG146127

Analysis Date: 08-JUL-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 17-JUL-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	8.1	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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Client: ENSAFE
Lab ID: SH4793-4RA
Client ID: VPB152-EB-062514
Project: Navy Clean WE15-03-06 NW
SDG: SH4793
Lab File ID: C8049.D

Sample Date: 25-JUN-14
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Extract Date: 08-JUL-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG146127

Analysis Date: 08-JUL-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 17-JUL-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		89.8	%					
Toluene-d8		95.8	%					
1,2-Dichloroethane-d4		101.	%					
Dibromofluoromethane		90.7	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4793-5
Client ID: VPB152-TB-062614
Project: Navy Clean WE15-03-06 NW
SDG: SH4793
Lab File ID: D9263.D

Sample Date: 26-JUN-14
Received Date: 30-JUN-14
Extract Date: 01-JUL-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG145769

Analysis Date: 01-JUL-14
Analyst: DJP
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 17-JUL-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	UL	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4793-5
Client ID: VPB152-TB-062614
Project: Navy Clean WE15-03-06 NW
SDG: SH4793
Lab File ID: D9263.D

Sample Date: 26-JUN-14
Received Date: 30-JUN-14
Extract Date: 01-JUL-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG145769

Analysis Date: 01-JUL-14
Analyst: DJP
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 17-JUL-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		85.9	%					
Toluene-d8		110.	%					
1,2-Dichloroethane-d4		110.	%					
Dibromofluoromethane		102.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4793-6RA
Client ID: 152-062514-910-912
Project: Navy Clean WE15-03-06 NW
SDG: SH4793
Lab File ID: C8050.D

Sample Date: 25-JUN-14
Received Date: 30-JUN-14
Extract Date: 08-JUL-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG146127

Analysis Date: 08-JUL-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 17-JUL-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		~~9.7~~ 5.0	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4793-6RA
Client ID: 152-062514-910-912
Project: Navy Clean WE15-03-06 NW
SDG: SH4793
Lab File ID: C8050.D

Sample Date: 25-JUN-14
Received Date: 30-JUN-14
Extract Date: 08-JUL-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG146127

Analysis Date: 08-JUL-14
Analyst: REC
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 17-JUL-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		92.5	%					
Toluene-d8		97.5	%					
1,2-Dichloroethane-d4		104.	%					
Dibromofluoromethane		92.2	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4793-7DL
Client ID: 152-062614-930-932
Project: Navy Clean WE15-03-06 NW
SDG: SH4793
Lab File ID: D9265.D

Sample Date: 26-JUN-14
Received Date: 30-JUN-14
Extract Date: 01-JUL-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG145769

Analysis Date: 01-JUL-14
Analyst: DJP
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 17-JUL-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	2.0	ug/L	2	2	4.0	0.48	2.0
Chloromethane	U	2.0	ug/L	2	2	4.0	0.72	2.0
Vinyl Chloride	U	2.0	ug/L	2	2	4.0	0.50	2.0
Bromomethane	U	2.0	ug/L	2	2	4.0	0.98	2.0
Chloroethane	U	2.0	ug/L	2	2	4.0	1.1	2.0
Trichlorofluoromethane	U	2.0	ug/L	2	2	4.0	0.48	2.0
1,1-Dichloroethene	U	1.0	ug/L	2	1	2.0	0.70	1.0
Carbon Disulfide	U	1.0	ug/L	2	1	2.0	0.50	1.0
Freon-113	U	1.0	ug/L	2	1	2.0	0.62	1.0
Methylene Chloride	J	3.2	ug/L	2	5	10.	2.3	5.0
Acetone	L	32	ug/L	2	5	10.	4.4	5.0
trans-1,2-Dichloroethene	U	1.0	ug/L	2	1	2.0	0.50	1.0
Methyl tert-butyl Ether	U	1.0	ug/L	2	1	2.0	0.72	1.0
1,1-Dichloroethane	U	1.0	ug/L	2	1	2.0	0.42	1.0
cis-1,2-Dichloroethene	U	1.0	ug/L	2	1	2.0	0.42	1.0
Chloroform	U	1.0	ug/L	2	1	2.0	0.64	1.0
1,1,1-Trichloroethane	U	1.0	ug/L	2	1	2.0	0.40	1.0
2-Butanone	U	5.0	ug/L	2	5	10.	2.6	5.0
Cyclohexane	U	1.0	ug/L	2	1	2.0	0.62	1.0
Carbon Tetrachloride	U	1.0	ug/L	2	1	2.0	0.44	1.0
Benzene	U	1.0	ug/L	2	1	2.0	0.52	1.0
1,2-Dichloroethane	U	1.0	ug/L	2	1	2.0	0.40	1.0
Trichloroethene	U	1.0	ug/L	2	1	2.0	0.56	1.0
1,2-Dichloropropane	U	1.0	ug/L	2	1	2.0	0.50	1.0
Bromodichloromethane	U	1.0	ug/L	2	1	2.0	0.66	1.0
cis-1,3-Dichloropropene	U	1.0	ug/L	2	1	2.0	0.38	1.0
Toluene		3.8	ug/L	2	1	2.0	0.54	1.0
4-Methyl-2-Pentanone	U	5.0	ug/L	2	5	10.	2.6	5.0
trans-1,3-Dichloropropene	U	1.0	ug/L	2	1	2.0	0.40	1.0
1,1,2-Trichloroethane	U	1.0	ug/L	2	1	2.0	0.66	1.0
Tetrachloroethene	U	1.0	ug/L	2	1	2.0	0.80	1.0
Dibromochloromethane	U	1.0	ug/L	2	1	2.0	0.60	1.0
2-Hexanone	U	5.0	ug/L	2	5	10.	3.4	5.0
Chlorobenzene	U	1.0	ug/L	2	1	2.0	0.44	1.0
Ethylbenzene	U	1.0	ug/L	2	1	2.0	0.42	1.0

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4793-7DL
Client ID: 152-062614-930-932
Project: Navy Clean WE15-03-06 NW
SDG: SH4793
Lab File ID: D9265.D

Sample Date: 26-JUN-14
Received Date: 30-JUN-14
Extract Date: 01-JUL-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG145769

Analysis Date: 01-JUL-14
Analyst: DJP
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 17-JUL-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U UJ	3.0	ug/L	2	3	6.0	0.50	3.0
Styrene	U	1.0	ug/L	2	1	2.0	0.46	1.0
Bromoform	U	1.0	ug/L	2	1	2.0	0.46	1.0
Isopropylbenzene	U	1.0	ug/L	2	1	2.0	0.46	1.0
1,1,2,2-Tetrachloroethane	U	1.0	ug/L	2	1	2.0	0.76	1.0
1,3-Dichlorobenzene	U	1.0	ug/L	2	1	2.0	0.52	1.0
1,4-Dichlorobenzene	U	1.0	ug/L	2	1	2.0	0.48	1.0
1,2-Dichlorobenzene	U	1.0	ug/L	2	1	2.0	0.30	1.0
1,2,4-Trichlorobenzene	U	1.0	ug/L	2	1	2.0	0.74	1.0
Methyl Acetate	U	1.5	ug/L	2	1	2.0	1.1	1.5
Methylcyclohexane	U	1.0	ug/L	2	1	2.0	0.60	1.0
o-Xylene	U	1.0	ug/L	2	1	2.0	0.50	1.0
M+P-Xylenes	U	2.0	ug/L	2	2	4.0	1.2	2.0
1,2-Dichloroethylene (Total)	U	2.0	ug/L	2	2	4.0	0.42	2.0
1,2-Dibromoethane	U	1.0	ug/L	2	1	2.0	0.44	1.0
1,2-Dibromo-3-Chloropropane	U	1.5	ug/L	2	1	2.0	1.0	1.5
P-Bromofluorobenzene		85.4	%					
Toluene-d8		110.	%					
1,2-Dichloroethane-d4		110.	%					
Dibromofluoromethane		103.	%					

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Report of Analytical Results

Client: Rick Purdy
AECOM
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Wakefield,MA 01880

Lab Sample ID: SH4793-4
Report Date: 19-JUL-14
Client PO: 16518
Project: Navy Clean WE15-03-0
SDG: SH4793

Sample Description	Matrix	Date Sampled	Date Received
VPB152-EB-062514	AQ	25-JUN-14	30-JUN-14

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Organic Carbon	~~J0.31~~ 1.0 U mg/L	1.0	0.10	.5	SM5310B	WG146111	30-JUN-14 19:35:58	N/A	N/A	

7/25/14

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RESOLUTION CONSULTANTS

Resolution Consultants
250 Apollo Drive
Chelmsford, MA 01824

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Data Validation Report

Project:	Regional Groundwater Investigation - NWIRP Bethpage	
Laboratory:	Katahdin Analytical Services, Scarborough, Maine	
Service Request:	SH4577	
Analyses/Method:	EPA SW-846 Method 8260B for VOCs (GC/MS)	
Validation Level:	Limited	
RESCON Project Number:	60266526.SA.DV	
Prepared by:	Sheena Blair/RESCON	Completed on: 8/30/2014
Reviewed by:	Lori Herberich/RESCON	File Name: SH4577_8260B

SUMMARY

The samples listed below were collected by Resolution Consultants (RESCON) from the Regional Groundwater Investigation - NWIRP Bethpage site on June 20 and 23, 2014.

Sample ID	Matrix/Sample Type
VPB152-GW-062014-830-832	Groundwater
VPB152-GW-062314-850-852	Groundwater
VPB152-TRIP BLANK-062314	Trip Blank

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

REVIEW ELEMENTS

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

- ✓ Data completeness (chain-of-custody [COC])/sample integrity
- ✓ Holding times and sample preservation
- ✓ GC/MS performance checks
- ✗ Initial calibration/continuing calibration verification
- ✓ Laboratory blanks/trip blanks/equipment blanks
- ✓ Surrogate spike recoveries
- NA Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- ✓ Laboratory control sample (LCS) results
- NA Field 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/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 standard (ICV) percent recoveries (%Rs) acceptance criteria were met;

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

Data qualification to the analytes associated with the specific ICAL, ICV and/or CCV was as follows:

ICAL Linearity Nonconformances:

Nonconformance	Actions	
	Detected Results	Nondetected Results
%RSD > 15% and quantitation based on mean RF	J	UJ
r or r^2 < 0.99 and quantitation based on linear regression	J*	UJ*
* No guidance in NFG, thus AECOM professional judgment was used		

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. Nonconformances are summarized in Attachment A in Table A-1a, A-1b, and A-1c.

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.

Surrogate Spike Recoveries

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

Field Duplicate Results

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

Internal Standard Results

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

Sample Results/Reporting Issues

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

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

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

QUALIFICATION ACTIONS

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

ATTACHMENTS

Attachment A: Nonconformance Summary Tables

Attachment B: Qualifier Codes and Explanations

Attachment C: Reason Codes and Explanations

Table 1 - Data Validation Summary of Qualified Data

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB152-GW-062014-830-832	WG	2-BUTANONE		2.5	UG/L	UJ	c
VPB152-GW-062014-830-832	WG	2-HEXANONE		2.5	UG/L	UJ	c
VPB152-GW-062014-830-832	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	c
VPB152-GW-062014-830-832	WG	ACETONE	10	2.5	UG/L	J	c
VPB152-GW-062014-830-832	WG	CHLOROETHANE		1.0	UG/L	UJ	c
VPB152-GW-062014-830-832	WG	CYCLOHEXANE		0.50	UG/L	UJ	c
VPB152-GW-062014-830-832	WG	DICHLORODIFLUOROMETHANE		1.0	UG/L	UJ	c
VPB152-GW-062014-830-832	WG	TRICHLOROFLUOROMETHANE		1.0	UG/L	UJ	c
VPB152-GW-062014-830-832	WG	VINYL CHLORIDE		1.0	UG/L	UJ	c
VPB152-GW-062314-850-852	WG	2-BUTANONE		2.5	UG/L	UJ	c
VPB152-GW-062314-850-852	WG	2-HEXANONE		2.5	UG/L	UJ	c
VPB152-GW-062314-850-852	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	c
VPB152-GW-062314-850-852	WG	ACETONE	7.7	2.5	UG/L	J	c
VPB152-GW-062314-850-852	WG	CHLOROETHANE		1.0	UG/L	UJ	c
VPB152-GW-062314-850-852	WG	CYCLOHEXANE		0.50	UG/L	UJ	c
VPB152-GW-062314-850-852	WG	DICHLORODIFLUOROMETHANE		1.0	UG/L	UJ	c
VPB152-GW-062314-850-852	WG	TRICHLOROFLUOROMETHANE		1.0	UG/L	UJ	c
VPB152-GW-062314-850-852	WG	VINYL CHLORIDE		1.0	UG/L	UJ	c
VPB152-TRIP BLANK-062314	WQ	2-BUTANONE		2.5	UG/L	UJ	c
VPB152-TRIP BLANK-062314	WQ	2-HEXANONE		2.5	UG/L	UJ	c
VPB152-TRIP BLANK-062314	WQ	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	c
VPB152-TRIP BLANK-062314	WQ	CHLOROETHANE		1.0	UG/L	UJ	c
VPB152-TRIP BLANK-062314	WQ	CYCLOHEXANE		0.50	UG/L	UJ	c
VPB152-TRIP BLANK-062314	WQ	DICHLORODIFLUOROMETHANE		1.0	UG/L	UJ	c
VPB152-TRIP BLANK-062314	WQ	TRICHLOROFLUOROMETHANE		1.0	UG/L	UJ	c
VPB152-TRIP BLANK-062314	WQ	VINYL CHLORIDE		1.0	UG/L	UJ	c

Attachment A

Nonconformance Summary Tables

Table A-1a - Initial Calibration

ICAL	Compound	% RSD	Limit
WG144357-7 GCMS-C	CHLOROETHANE	36.2	< 15%
Associated samples: All samples in the SDG			

Table A-1b - Initial Calibration Verification

ICV	Compound	% R	Limit
WG144357-7 GCMS-C	ACETONE	120.4	80-120%
Associated samples: All samples in the SDG			

Table A-1c - Continuing Calibration Verification

CCV ID	Compound	% D	Limit
WG145394 6/25/2014 GCMS-C	DICHLORODIFLUOROMETHANE	38.0	< 20%
	VINYL CHLORIDE	20.4	< 20%
	TRICHLOROFLUOROMETHANE	33.2	< 20%
	2-BUTANONE	40.0	< 20%
	CYCLOHEXANE	20.6	< 20%
	4-METHYL-2-PENTANONE	46.4	< 20%
	2-HEXANONE	27.9	< 20%
Associated samples: All samples in the SDG			

Attachment B

Qualifier Codes and Explanations

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

Attachment C

Reason Codes and Explanations

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

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4577-1
Client ID: 152-062014-830-832
Project: Navy Clean WE15-03-06 NW
SDG: SH4577
Lab File ID: C7913.D

Sample Date: 20-JUN-14
Received Date: 24-JUN-14
Extract Date: 25-JUN-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG145394

Analysis Date: 25-JUN-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 26-JUN-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~~ 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~~ UJ	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	~~U~~ UJ	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	10	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~~ UJ	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	~~U~~ UJ	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	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		3.5	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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11/14/14

Report of Analytical Results

Client: ENSAFE
Lab ID: SH4577-1
Client ID: 152-062014-830-832
Project: Navy Clean WE15-03-06 NW
SDG: SH4577
Lab File ID: C7913.D

Sample Date: 20-JUN-14
Received Date: 24-JUN-14
Extract Date: 25-JUN-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG145394

Analysis Date: 25-JUN-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 26-JUN-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-Xylenc	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		87.1	%					
Toluene-d8		89.4	%					
1,2-Dichloroethane-d4		112.	%					
Dibromofluoromethane		98.4	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4577-2
Client ID: 152-TB-062314
Project: Navy Clean WE15-03-06 NW
SDG: SH4577
Lab File ID: C7904.D

Sample Date: 23-JUN-14
Received Date: 24-JUN-14
Extract Date: 25-JUN-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG145394

Analysis Date: 25-JUN-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 26-JUN-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~~ 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~~ UJ	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	~~U~~ UJ	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~~ UJ	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	~~U~~ UJ	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	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

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Extract Date: 25-JUN-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG145394

Analysis Date: 25-JUN-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 26-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		87.9	%					
Toluene-d8		90.5	%					
1,2-Dichloroethane-d4		117.	%					
Dibromofluoromethane		100.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4577-3
Client ID: 152-062314-850-852
Project: Navy Clean WE15-03-06 NW
SDG: SH4577
Lab File ID: C7914.D

Sample Date: 23-JUN-14
Received Date: 24-JUN-14
Extract Date: 25-JUN-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG145394

Analysis Date: 25-JUN-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 26-JUN-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~~ 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~~ UJ	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	~~U~~ UJ	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	7.7	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	~~U~~ UJ	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	~~U~~ UJ	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	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: SH4577-3
Client ID: 152-062314-850-852
Project: Navy Clean WE15-03-06 NW
SDG: SH4577
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Sample Date: 23-JUN-14
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Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
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Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		87.3	%					
Toluene-d8		88.1	%					
1,2-Dichloroethane-d4		117.	%					
Dibromofluoromethane		98.7	%					

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RESOLUTION CONSULTANTS

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Data Validation Report

Project:	Regional Groundwater Investigation - NWIRP Bethpage	
Laboratory:	Katahdin Analytical Services, Scarborough, Maine	
Service Request:	SH4477	
Analyses/Method:	EPA SW-846 Method 8260B for VOCs (GC/MS)	
Validation Level:	Limited	
RESCON Project Number:	60266526.SA.DV	
Prepared by:	Sheena Blair/RESCON	Completed on: 9/10/2014
Reviewed by:	Lori Herberich/RESCON	File Name: SH4477_8260B

SUMMARY

The samples listed below were collected by Resolution Consultants (RESCON) from the Regional Groundwater Investigation - NWIRP Bethpage site on June 17 and 19, 2014.

Sample ID	Matrix/Sample Type
VPB152-GW-061714-725-727	Groundwater
VPB152-GW-061714-740-742	Groundwater
VPB152-GW-061914-780-782	Groundwater
VPB152-GW-061914-800-802	Groundwater
VPB152-TRIP BLANK-061914	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 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.

Sample VPB152-GW-061714-725-727 was extremely silty and had very little standing water. The laboratory decanted the water from all three individual vials and made a composite of the sample. As a result sample VPB152-GW-061714-725-727 was analyzed at a 50-fold dilution. Positive and nondetect results for this sample were qualified as estimated (J and UJ) respectively, due to possible loss of sample integrity during the compositing 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 standard (ICV) percent recoveries (%Rs) acceptance criteria were met;
- the continuing calibration verification standard (CCV) method percent difference or percent drift (%Ds) and RF acceptance criteria were met; and
- the retention time method acceptance criteria were met.

Data qualification to the analytes associated with the specific ICAL, ICV and/or CCV was as follows:

ICAL Linearity Nonconformances:

Nonconformance	Actions	
	Detected	Nondetected Results
%RSD > 15% and quantitation based on mean RF	J	UJ
r or r^2 < 0.99 and quantitation based on linear	J*	UJ*
* No guidance in NFG, thus professional judgment was used		

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. Nonconformances are summarized in Attachment A in Table A-1a, A-1b, and A-1c.

Laboratory Blanks/Equipment Blanks/Trip Blanks

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

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

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

Sample results were qualified as follows:

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

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

Surrogate Spike Recoveries

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

Field Duplicate Results

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

Internal Standard Results

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

Sample Results/Reporting Issues

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

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

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

QUALIFICATION ACTIONS

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

ATTACHMENTS

Attachment A: Nonconformance Summary Tables

Attachment B: Qualifier Codes and Explanations

Attachment C: Reason Codes and Explanations

Table 1 - Data Validation Summary of Qualified Data

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB152-GW-061714-725-727	WG	1,1,1-TRICHLOROETHANE		25	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	1,1,2,2-TETRACHLOROETHANE		25	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		25	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	1,1,2-TRICHLOROETHANE		25	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	1,1-DICHLOROETHANE		25	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	1,1-DICHLOROETHENE		25	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	1,2,4-TRICHLOROBENZENE		25	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	1,2-DIBROMO-3-CHLOROPROPANE		38	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	1,2-DIBROMOETHANE		25	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	1,2-DICHLOROBENZENE		25	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	1,2-DICHLOROETHANE		25	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	1,2-DICHLOROETHENE, TOTAL		50	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	1,2-DICHLOROPROPANE		25	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	1,3-DICHLOROBENZENE		25	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	1,4-DICHLOROBENZENE		25	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	2-BUTANONE		120	UG/L	UJ	c,mc
VPB152-GW-061714-725-727	WG	2-HEXANONE		120	UG/L	UJ	c,mc
VPB152-GW-061714-725-727	WG	4-METHYL-2-PENTANONE		120	UG/L	UJ	c,mc
VPB152-GW-061714-725-727	WG	ACETONE		120	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	BENZENE		25	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	BROMODICHLOROMETHANE		25	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	BROMOFORM		25	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	BROMOMETHANE		50	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	CARBON DISULFIDE		25	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	CARBON TETRACHLORIDE		25	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	CHLOROBENZENE		25	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	CHLOROETHANE		50	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	CHLOROFORM		25	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	CHLOROMETHANE		50	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	CIS-1,2-DICHLOROETHENE		25	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	CIS-1,3-DICHLOROPROPENE		25	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	CYCLOHEXANE		25	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	DIBROMOCHLOROMETHANE		25	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	DICHLORODIFLUOROMETHANE		50	UG/L	UJ	c,mc
VPB152-GW-061714-725-727	WG	ETHYLBENZENE		25	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	ISOPROPYLBENZENE		25	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	M- AND P-XYLENE		50	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	METHYL ACETATE		38	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	METHYL CYCLOHEXANE		25	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	METHYL TERT-BUTYL ETHER		25	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	METHYLENE CHLORIDE	67	120	UG/L	J	mc
VPB152-GW-061714-725-727	WG	O-XYLENE		25	UG/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB152-GW-061714-725-727	WG	STYRENE		25	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	TETRACHLOROETHENE		25	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	TOLUENE		25	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	TRANS-1,2-DICHLOROETHENE		25	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	TRANS-1,3-DICHLOROPROPENE		25	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	TRICHLOROETHENE		25	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	TRICHLOROFLUOROMETHANE		50	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	VINYL CHLORIDE		50	UG/L	UJ	mc
VPB152-GW-061714-725-727	WG	XYLENES, TOTAL		75	UG/L	UJ	mc
VPB152-GW-061714-740-742	WG	2-BUTANONE	2.1	2.5	UG/L	J	c
VPB152-GW-061714-740-742	WG	2-HEXANONE		2.5	UG/L	UJ	c
VPB152-GW-061714-740-742	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	c
VPB152-GW-061714-740-742	WG	ACETONE	11	2.5	UG/L	J	c
VPB152-GW-061714-740-742	WG	DICHLORODIFLUOROMETHANE		1.0	UG/L	UJ	c
VPB152-GW-061914-780-782	WG	2-BUTANONE		2.5	UG/L	UJ	c
VPB152-GW-061914-780-782	WG	2-HEXANONE		2.5	UG/L	UJ	c
VPB152-GW-061914-780-782	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	c
VPB152-GW-061914-780-782	WG	ACETONE	7.5	2.5	UG/L	J	c
VPB152-GW-061914-780-782	WG	DICHLORODIFLUOROMETHANE		1.0	UG/L	UJ	c
VPB152-GW-061914-800-802	WG	2-BUTANONE		2.5	UG/L	UJ	c
VPB152-GW-061914-800-802	WG	2-HEXANONE		2.5	UG/L	UJ	c
VPB152-GW-061914-800-802	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	c
VPB152-GW-061914-800-802	WG	ACETONE	11	2.5	UG/L	J	c
VPB152-GW-061914-800-802	WG	CARBON DISULFIDE		1.0*	UG/L	U	bf
VPB152-GW-061914-800-802	WG	DICHLORODIFLUOROMETHANE		1.0	UG/L	UJ	c
VPB152-TRIP BLANK-061914	WQ	2-BUTANONE		2.5	UG/L	UJ	c
VPB152-TRIP BLANK-061914	WQ	2-HEXANONE		2.5	UG/L	UJ	c
VPB152-TRIP BLANK-061914	WQ	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	c
VPB152-TRIP BLANK-061914	WQ	DICHLORODIFLUOROMETHANE		1.0	UG/L	UJ	c
*LOQ							

Attachment A

Nonconformance Summary Tables

Table A-1a - Initial Calibration

ICAL	Compound	% RSD	Limit
WG144357-7 GCMS-C	CHLOROETHANE	36.2	< 15%
Associated samples: All samples in the SDG			

Table A-1b - Initial Calibration Verification

ICV	Compound	% R	Limit
WG144357-7 GCMS-C	ACETONE	120.4	80-120%
Associated samples: All samples in the SDG			

Table A-1c - Continuing Calibration Verification

CCV ID	Compound	% D	Limit
WG145087 6/20/2014 GCMS-C	DICHLORODIFLUOROMETHANE	60.6	< 20%
	2-BUTANONE	23.9	< 20%
	4-METHYL-2-PENTANONE	40.2	< 20%
	2-HEXANONE	21.1	< 20%
Associated samples: All samples in the SDG			

Attachment B

Qualifier Codes and Explanations

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

Attachment C

Reason Codes and Explanations

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

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

Report of Analytical Results

Client: ENSAFE
Lab ID: SH4477-1DL
Client ID: 152-061714-725-727
Project: Navy Clean WE15-03-06 NW
SDG: SH4477
Lab File ID: C7780.D

Sample Date: 17-JUN-14
Received Date: 20-JUN-14
Extract Date: 20-JUN-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG145087

Analysis Date: 20-JUN-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 23-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UJ	50	ug/L	50	2	100	12.	50.
Chloromethane	U	50	ug/L	50	2	100	18.	50.
Vinyl Chloride	U	50	ug/L	50	2	100	12.	50.
Bromomethane	U	50	ug/L	50	2	100	24.	50.
Chloroethane	U	50	ug/L	50	2	100	28.	50.
Trichlorofluoromethane	U	50	ug/L	50	2	100	12.	50.
1,1-Dichloroethene	U	25	ug/L	50	1	50.	18.	25.
Carbon Disulfide	U	25	ug/L	50	1	50.	12.	25.
Freon-113	U	25	ug/L	50	1	50.	16.	25.
Methylene Chloride	J J	67	ug/L	50	5	250	56.	120
Acetone	U UJ	120	ug/L	50	5	250	110	120
trans-1,2-Dichloroethene	U	25	ug/L	50	1	50.	12.	25.
Methyl tert-butyl Ether	U	25	ug/L	50	1	50.	18.	25.
1,1-Dichloroethane	U	25	ug/L	50	1	50.	10.	25.
cis-1,2-Dichloroethene	U	25	ug/L	50	1	50.	10.	25.
Chloroform	U	25	ug/L	50	1	50.	16.	25.
1,1,1-Trichloroethane	U	25	ug/L	50	1	50.	10.	25.
2-Butanone	U	120	ug/L	50	5	250	66.	120
Cyclohexane	U	25	ug/L	50	1	50.	16.	25.
Carbon Tetrachloride	U	25	ug/L	50	1	50.	11.	25.
Benzene	U	25	ug/L	50	1	50.	13.	25.
1,2-Dichloroethane	U	25	ug/L	50	1	50.	10.	25.
Trichloroethene	U	25	ug/L	50	1	50.	14.	25.
1,2-Dichloropropane	U	25	ug/L	50	1	50.	12.	25.
Bromodichloromethane	U	25	ug/L	50	1	50.	16.	25.
cis-1,3-Dichloropropene	U	25	ug/L	50	1	50.	9.5	25.
Toluene	U	25	ug/L	50	1	50.	14.	25.
4-Methyl-2-Pentanone	U	120	ug/L	50	5	250	66.	120
trans-1,3-Dichloropropene	U	25	ug/L	50	1	50.	10.	25.
1,1,2-Trichloroethane	U	25	ug/L	50	1	50.	16.	25.
Tetrachloroethene	U	25	ug/L	50	1	50.	20.	25.
Dibromochloromethane	U	25	ug/L	50	1	50.	15.	25.
2-Hexanone	U	120	ug/L	50	5	250	85.	120
Chlorobenzene	U	25	ug/L	50	1	50.	11.	25.
Ethylbenzene	U	25	ug/L	50	1	50.	10.	25.

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6/18/14

Report of Analytical Results

Client: ENSAFE
Lab ID: SH4477-1DL
Client ID: 152-061714-725-727
Project: Navy Clean WE15-03-06 NW
SDG: SH4477
Lab File ID: C7780.D

Sample Date: 17-JUN-14
Received Date: 20-JUN-14
Extract Date: 20-JUN-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG145087

Analysis Date: 20-JUN-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 23-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U UJ	75	ug/L	50	3	150	12.	75.
Styrene	U	25	ug/L	50	1	50.	12.	25.
Bromoform	U	25	ug/L	50	1	50.	12.	25.
Isopropylbenzene	U	25	ug/L	50	1	50.	12.	25.
1,1,2,2-Tetrachloroethane	U	25	ug/L	50	1	50.	19.	25.
1,3-Dichlorobenzene	U	25	ug/L	50	1	50.	13.	25.
1,4-Dichlorobenzene	U	25	ug/L	50	1	50.	12.	25.
1,2-Dichlorobenzene	U	25	ug/L	50	1	50.	7.5	25.
1,2,4-Trichlorobenzene	U	25	ug/L	50	1	50.	18.	25.
Methyl Acetate	U	38	ug/L	50	1	50.	26.	38.
Methylcyclohexane	U	25	ug/L	50	1	50.	15.	25.
o-Xylene	U	25	ug/L	50	1	50.	12.	25.
M+P-Xylenes	U	50	ug/L	50	2	100	30.	50.
1,2-Dichloroethylene (Total)	U	50	ug/L	50	2	100	10.	50.
1,2-Dibromoethane	U	25	ug/L	50	1	50.	11.	25.
1,2-Dibromo-3-Chloropropane	U	38	ug/L	50	1	50.	25.	38.
P-Bromofluorobenzene		94.6	%					
Toluene-d8		96.1	%					
1,2-Dichloroethane-d4		111.	%					
Dibromofluoromethane		97.9	%					

R 6/18/14

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4477-2
Client ID: 152-061714-740-742
Project: Navy Clean WE15-03-06 NW
SDG: SH4477
Lab File ID: C7787.D

Sample Date: 17-JUN-14
Received Date: 20-JUN-14
Extract Date: 20-JUN-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG145087

Analysis Date: 20-JUN-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 23-JUN-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	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~~ J	2.1	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		5.6	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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6/13/14

Report of Analytical Results

Client: ENSAFE
Lab ID: SH4477-2
Client ID: 152-061714-740-742
Project: Navy Clean WE15-03-06 NW
SDG: SH4477
Lab File ID: C7787.D

Sample Date: 17-JUN-14
Received Date: 20-JUN-14
Extract Date: 20-JUN-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG145087

Analysis Date: 20-JUN-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 23-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		99.3	%					
Toluene-d8		98.3	%					
1,2-Dichloroethane-d4		113.	%					
Dibromofluoromethane		101.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4477-3
Client ID: 152-061914-780-782
Project: Navy Clean WE15-03-06 NW
SDG: SH4477
Lab File ID: C7788.D

Sample Date: 19-JUN-14
Received Date: 20-JUN-14
Extract Date: 20-JUN-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG145087

Analysis Date: 20-JUN-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 23-JUN-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	7.5	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~~ UJ	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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RC 11/13/14

Report of Analytical Results

Client: ENSAFE
Lab ID: SH4477-3
Client ID: 152-061914-780-782
Project: Navy Clean WE15-03-06 NW
SDG: SH4477
Lab File ID: C7788.D

Sample Date: 19-JUN-14
Received Date: 20-JUN-14
Extract Date: 20-JUN-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG145087

Analysis Date: 20-JUN-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 23-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		101.	%					
Toluene-d8		99.4	%					
1,2-Dichloroethane-d4		117.	%					
Dibromofluoromethane		103.	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4477-4
Client ID: 152-061914-800-802
Project: Navy Clean WE15-03-06 NW
SDG: SH4477
Lab File ID: C7789.D

Sample Date: 19-JUN-14
Received Date: 20-JUN-14
Extract Date: 20-JUN-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG145087

Analysis Date: 20-JUN-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 23-JUN-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	~~J~~ U	~~0.32~~ 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	11	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	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~~ UJ	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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6/24/14

Report of Analytical Results

Client: ENSAFE
Lab ID: SH4477-4
Client ID: 152-061914-800-802
Project: Navy Clean WE15-03-06 NW
SDG: SH4477
Lab File ID: C7789.D

Sample Date: 19-JUN-14
Received Date: 20-JUN-14
Extract Date: 20-JUN-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG145087

Analysis Date: 20-JUN-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 23-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		99.2	%					
Toluene-d8		98.3	%					
1,2-Dichloroethane-d4		117.	%					
Dibromofluoromethane		102.	%					

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: ENSAFE
Lab ID: SH4477-5
Client ID: VPB152-TB-061914
Project: Navy Clean WE15-03-06 NW
SDG: SH4477
Lab File ID: C7779.D

Sample Date: 19-JUN-14
Received Date: 20-JUN-14
Extract Date: 20-JUN-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG145087

Analysis Date: 20-JUN-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 23-JUN-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	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~~ UJ	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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11/13/14

Report of Analytical Results

Client: ENSAFE
Lab ID: SH4477-5
Client ID: VPB152-TB-061914
Project: Navy Clean WE15-03-06 NW
SDG: SH4477
Lab File ID: C7779.D

Sample Date: 19-JUN-14
Received Date: 20-JUN-14
Extract Date: 20-JUN-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG145087

Analysis Date: 20-JUN-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 23-JUN-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		95.0	%					
Toluene-d8		95.4	%					
1,2-Dichloroethane-d4		115.	%					
Dibromofluoromethane		99.6	%					

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RESOLUTION CONSULTANTS

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Data Validation Report

Project:	Regional Groundwater Investigation - NWIRP Bethpage	
Laboratory:	Katahdin Analytical Services, Scarborough, Maine	
Service Request:	SH4301	
Analyses/Method:	EPA SW-846 Method 8260B for VOCs (GC/MS)	
Validation Level:	Limited	
RESCON Project Number:	60266526.SA.DV	
Prepared by:	Sheena Blair/RESCON	Completed on: 9/10/2014
Reviewed by:	Lori Herberich/RESCON	File Name: SH4301_8260B

SUMMARY

The samples listed below were collected by Resolution Consultants (RESCON) from the Regional Groundwater Investigation - NWIRP Bethpage site on June 13 and 16, 2014.

Sample ID	Matrix/Sample Type
VPB152-GW-061314-620-622	Groundwater
VPB152-GW-061314-640-642	Groundwater
VPB152-GWD-061314	Field Duplicate of VPB152-GW-061314-640-642
VPB152-GW-061614-660-662	Groundwater
VPB152-GW-061614-680-682	Groundwater
VPB152-GW-061614-700-702	Groundwater
VPB152-TRIP BLANK-061614	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
- ✓ 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 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 VPB152-GW-061314-620-622 and VPB152-GW-061614-700-702 the laboratory decanted the liquid from three vials into one vial as a composite. Sample VPB152-GW-061614-700-702 was analyzed at a 100-fold dilution due to the limited sample volume available.

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

Data qualification to the analytes associated with the specific ICAL, ICV, 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. Nonconformances are summarized in Attachment A in Table A-1a, A-1b, A-1c, and A-1d.

Laboratory Blanks/Equipment Blanks/Trip Blanks

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

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

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

Sample results were qualified as follows:

For common lab contaminants (methylene chloride, acetone, 2-butanone):

Blank type	Blank result	Sample result	Action for samples
Method, Storage, Field, Trip, or Instrument*	Detects	Not detected	No qualification
	≤ 2x LOQ	< 2x LOQ	Report sample LOQ value with a U
		≥ 2x LOQ and ≤ 4x LOQ	Report the sample result with a U**
		≥ 4x LOQ	No qualifications
	> 2x LOQ	< 2x LOQ	Report sample LOQ value with a U
		≥ 2x LOQ and < blank contamination	Report the sample result with a U
		≥ 2x LOQ and ≥ blank contamination	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**
* Qualifications based on instrument blank results affect only the sample analyzed immediately after the sample that has target compounds that exceed the calibration range or non-target compounds that exceed 100 µg/L.			
**Based on 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 professional judgment.			

LOQ - Limit of Quantitation

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

Surrogate Spike Recoveries

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

Although selected compounds had high %Rs, no validation action was required because the associated results were nondetect.

Field Duplicate Results

Field duplicate RPDs were reviewed for conformance with the QC criterion of $\leq$30% for aqueous matrices. This criterion applies if both results were greater than five times the Limit of Quantitation (LOQ). All QC acceptance criteria were met.

Internal Standard Results

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

Sample Results/Reporting Issues

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

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

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

QUALIFICATION ACTIONS

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

ATTACHMENTS

Attachment A: Nonconformance Summary Tables

Attachment B: Qualifier Codes and Explanations

Attachment C: Reason Codes and Explanations

Table 1 - Data Validation Summary of Qualified Data

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB152-GW-061314-620-622	WG	1,1,1-TRICHLOROETHANE		0.50	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	1,1,2,2-TETRACHLOROETHANE		0.50	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		0.50	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	1,1,2-TRICHLOROETHANE		0.50	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	1,1-DICHLOROETHANE		0.50	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	1,1-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	1,2,4-TRICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	1,2-DIBROMOETHANE		0.50	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	1,2-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	1,2-DICHLOROETHANE		0.50	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	1,2-DICHLOROETHENE, TOTAL		1.0	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	1,2-DICHLOROPROPANE		0.50	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	1,3-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	1,4-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	2-BUTANONE		2.5	UG/L	UJ	c,mc
VPB152-GW-061314-620-622	WG	2-HEXANONE		2.5	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	c,mc
VPB152-GW-061314-620-622	WG	ACETONE	14	2.5	UG/L	J	c,mc
VPB152-GW-061314-620-622	WG	BENZENE		0.50	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	BROMODICHLOROMETHANE		0.50	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	BROMOFORM		0.50	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	BROMOMETHANE		1.0	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	CARBON DISULFIDE	0.40	0.50	UG/L	J	mc
VPB152-GW-061314-620-622	WG	CARBON TETRACHLORIDE		0.50	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	CHLOROBENZENE		0.50	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	CHLOROETHANE		1.0	UG/L	UJ	c,mc
VPB152-GW-061314-620-622	WG	CHLOROFORM		0.50	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	CHLOROMETHANE		1.0	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	CIS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	CIS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	CYCLOHEXANE		0.50	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	DIBROMOCHLOROMETHANE		0.50	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	DICHLORODIFLUOROMETHANE		1.0	UG/L	UJ	c,mc
VPB152-GW-061314-620-622	WG	ETHYLBENZENE		0.50	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	ISOPROPYLBENZENE		0.50	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	M- AND P-XYLENE		1.0	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	METHYL ACETATE		0.75	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	METHYL CYCLOHEXANE		0.50	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	METHYL TERT-BUTYL ETHER		0.50	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	METHYLENE CHLORIDE		2.5	UG/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB152-GW-061314-620-622	WG	O-XYLENE		0.50	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	STYRENE		0.50	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	TETRACHLOROETHENE		0.50	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	TOLUENE	3.7	0.50	UG/L	J	mc
VPB152-GW-061314-620-622	WG	TRANS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	TRANS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	TRICHLOROETHENE		0.50	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	TRICHLOROFLUOROMETHANE		1.0	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	VINYL CHLORIDE		1.0	UG/L	UJ	mc
VPB152-GW-061314-620-622	WG	XYLENES, TOTAL		1.5	UG/L	UJ	mc
VPB152-GW-061314-640-642	WG	2-BUTANONE		2.5	UG/L	UJ	c
VPB152-GW-061314-640-642	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	c
VPB152-GW-061314-640-642	WG	ACETONE	7.0	2.5	UG/L	J	c
VPB152-GW-061314-640-642	WG	CARBON DISULFIDE		1.0*	UG/L	U	bl
VPB152-GW-061314-640-642	WG	CHLOROETHANE		1.0	UG/L	UJ	c
VPB152-GW-061314-640-642	WG	DICHLORODIFLUOROMETHANE		1.0	UG/L	UJ	c
VPB152-GW-061614-660-662	WG	2-BUTANONE		2.5	UG/L	UJ	c
VPB152-GW-061614-660-662	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	c
VPB152-GW-061614-660-662	WG	ACETONE	8.4	2.5	UG/L	J	c
VPB152-GW-061614-660-662	WG	CHLOROETHANE		1.0	UG/L	UJ	c
VPB152-GW-061614-660-662	WG	DICHLORODIFLUOROMETHANE		1.0	UG/L	UJ	c
VPB152-GW-061614-680-682	WG	2-BUTANONE	4.8	2.5	UG/L	J	c
VPB152-GW-061614-680-682	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	c
VPB152-GW-061614-680-682	WG	ACETONE	22	2.5	UG/L	J	c
VPB152-GW-061614-680-682	WG	CARBON DISULFIDE		1.0*	UG/L	U	bl
VPB152-GW-061614-680-682	WG	CHLOROETHANE		1.0	UG/L	UJ	c
VPB152-GW-061614-680-682	WG	DICHLORODIFLUOROMETHANE		1.0	UG/L	UJ	c
VPB152-GW-061614-700-702	WG	1,1,1-TRICHLOROETHANE		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	1,1,2,2-TETRACHLOROETHANE		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	1,1,2-TRICHLOROETHANE		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	1,1-DICHLOROETHANE		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	1,1-DICHLOROETHENE		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	1,2,4-TRICHLOROBENZENE		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	1,2-DIBROMO-3-CHLOROPROPANE		75	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	1,2-DIBROMOETHANE		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	1,2-DICHLOROBENZENE		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	1,2-DICHLOROETHANE		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	1,2-DICHLOROETHENE, TOTAL		100	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	1,2-DICHLOROPROPANE		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	1,3-DICHLOROBENZENE		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	1,4-DICHLOROBENZENE		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	2-BUTANONE		250	UG/L	UJ	c,mc
VPB152-GW-061614-700-702	WG	2-HEXANONE		250	UG/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB152-GW-061614-700-702	WG	4-METHYL-2-PENTANONE		250	UG/L	UJ	c,mc
VPB152-GW-061614-700-702	WG	ACETONE		250	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	BENZENE		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	BROMODICHLOROMETHANE		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	BROMOFORM		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	BROMOMETHANE		100	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	CARBON DISULFIDE		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	CARBON TETRACHLORIDE		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	CHLOROBENZENE		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	CHLOROETHANE		100	UG/L	UJ	c,mc
VPB152-GW-061614-700-702	WG	CHLOROFORM		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	CHLOROMETHANE		100	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	CIS-1,2-DICHLOROETHENE		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	CIS-1,3-DICHLOROPROPENE		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	CYCLOHEXANE		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	DIBROMOCHLOROMETHANE		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	DICHLORODIFLUOROMETHANE		100	UG/L	UJ	c,mc
VPB152-GW-061614-700-702	WG	ETHYLBENZENE		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	ISOPROPYLBENZENE		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	M- AND P-XYLENE		100	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	METHYL ACETATE		75	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	METHYL CYCLOHEXANE		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	METHYL TERT-BUTYL ETHER		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	METHYLENE CHLORIDE		500*	UG/L	UJ	bl,mc
VPB152-GW-061614-700-702	WG	O-XYLENE		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	STYRENE		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	TETRACHLOROETHENE		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	TOLUENE		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	TRANS-1,2-DICHLOROETHENE		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	TRANS-1,3-DICHLOROPROPENE		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	TRICHLOROETHENE		50	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	TRICHLOROFLUOROMETHANE		100	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	VINYL CHLORIDE		100	UG/L	UJ	mc
VPB152-GW-061614-700-702	WG	XYLENES, TOTAL		150	UG/L	UJ	mc
VPB152-GWD-061314	WG	2-BUTANONE		2.5	UG/L	UJ	c
VPB152-GWD-061314	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	c
VPB152-GWD-061314	WG	ACETONE	9.5	2.5	UG/L	J	c
VPB152-GWD-061314	WG	CARBON DISULFIDE		1.0*	UG/L	U	bl
VPB152-GWD-061314	WG	CHLOROETHANE		1.0	UG/L	UJ	c
VPB152-GWD-061314	WG	DICHLORODIFLUOROMETHANE		1.0	UG/L	UJ	c
VPB152-TRIP BLANK-061614	WQ	2-BUTANONE		2.5	UG/L	UJ	c
VPB152-TRIP BLANK-061614	WQ	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	c
VPB152-TRIP BLANK-061614	WQ	CHLOROETHANE		1.0	UG/L	UJ	c
VPB152-TRIP BLANK-061614	WQ	DICHLORODIFLUOROMETHANE		1.0	UG/L	UJ	c
*LOQ							

Attachment A

Nonconformance Summary Tables

Table A-1a - Initial Calibration

ICAL	Compound	% RSD	Limit
WG144357-7 GCMS-C	CHLOROETHANE	36.2	< 15%
Associated samples: All samples in the SDG			

Table A-1b - Initial Calibration Verification

ICV	Compound	% R	Limit
WG144357-7 GCMS-C	ACETONE	120.4	80-120%
Associated samples: All samples in the SDG			

Table A-1c - Continuing Calibration Verification

CCV ID	Compound	% D	Limit
WG144955 6/18/2014 GCMS-C	DICHLORODIFLUOROMETHANE	56.1	< 20%
	2-BUTANONE	20.7	< 20%
	4-METHYL-2-PENTANONE	37.9	< 20%
Associated samples: Samples VPB152-GW-061314-620-622, VPB152-GW-061614-700-702, VPB152-TRIP BLANK-061614			

Table A-1d - Continuing Calibration Verification

CCV ID	Compound	% D	Limit
WG145023 6/19/2014 GCMS-C	DICHLORODIFLUOROMETHANE	55.0	< 20%
	2-BUTANONE	29.0	< 20%
	4-METHYL-2-PENTANONE	37.4	< 20%
Associated samples: Samples VPB152-GW-061314-640-642, VPB152-GW-061614-660-662, VPB152-GW-061614-680-682, VPB152-GWD-061314			

Table A-2 - Lab Blanks

Blank ID	Compound	Result	LOD	Units	Associated Samples
WG144955-2	METHYLENE CHLORIDE	1.3	2.5	UG/L	VPB152-GW-061614-700-702
WG145023-2	CARBON DISULFIDE	0.32	0.50	UG/L	VPB152-GW-061314-640-642, VPB152-GW-061614-680-682, VPB152-GWD-061314

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

Report of Analytical Results

Client: ENSAFE
Lab ID: SH4301-1
Client ID: 152-061314-620-622
Project: Navy Clean WE15-03-06 NW
SDG: SH4301
Lab File ID: C7731.D

Sample Date: 13-JUN-14
Received Date: 17-JUN-14
Extract Date: 18-JUN-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG144955

Analysis Date: 18-JUN-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-JUN-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	J J	0.40	ug/L	1	1	1.0	0.25	0.50
Freon-113	U UJ	0.50	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	14	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	J	3.7	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U UJ	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

600 Technology Way
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6/12/14

Report of Analytical Results

Client: ENSAFE
Lab ID: SH4301-1
Client ID: 152-061314-620-622
Project: Navy Clean WE15-03-06 NW
SDG: SH4301
Lab File ID: C7731.D

Sample Date: 13-JUN-14
Received Date: 17-JUN-14
Extract Date: 18-JUN-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG144955

Analysis Date: 18-JUN-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-JUN-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		93.6	%					
Toluene-d8		95.3	%					
1,2-Dichloroethane-d4		113.	%					
Dibromofluoromethane		101.	%					

6/18/14

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ENSAFE
Lab ID: SH4301-2RA
Client ID: 152-061314-640-642
Project: Navy Clean WE15-03-06 NW
SDG: SH4301
Lab File ID: C7753.D

Sample Date: 13-JUN-14
Received Date: 17-JUN-14
Extract Date: 19-JUN-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG145023

Analysis Date: 19-JUN-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	~~UL~~ 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~~ 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 ~~J~~	~~0.35~~ 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	7.0	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~~ UJ	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	UL	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	J	0.72	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	~~U~~ UJ	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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6/13/14

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4301-2RA
Client ID: 152-061314-640-642
Project: Navy Clean WE15-03-06 NW
SDG: SH4301
Lab File ID: C7753.D

Sample Date: 13-JUN-14
Received Date: 17-JUN-14
Extract Date: 19-JUN-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG145023

Analysis Date: 19-JUN-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	UL	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	UL	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	UL	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		96.4	%					
Toluene-d8		96.6	%					
1,2-Dichloroethane-d4		114.	%					
Dibromofluoromethane		102.	%					

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: ENSAFE
Lab ID: SH4301-3RA
Client ID: VPB152-GWD-061314
Project: Navy Clean WE15-03-06 NW
SDG: SH4301
Lab File ID: C7754.D

Sample Date: 13-JUN-14
Received Date: 17-JUN-14
Extract Date: 19-JUN-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG145023

Analysis Date: 19-JUN-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	~~UL~~ 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~~ 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	~~0.38~~ 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	J	9.5	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~~ UJ	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	UL	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	J	0.79	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	~~U~~ UJ	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4301-3RA
Client ID: VPB152-GWD-061314
Project: Navy Clean WE15-03-06 NW
SDG: SH4301
Lab File ID: C7754.D

Sample Date: 13-JUN-14
Received Date: 17-JUN-14
Extract Date: 19-JUN-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG145023

Analysis Date: 19-JUN-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	UL	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	UL	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	UL	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		98.2	%					
1,2-Dichloroethane-d4		114.	%					
Dibromofluoromethane		102.	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4301-4RA
Client ID: 152-061614-660-662
Project: Navy Clean WE15-03-06 NW
SDG: SH4301
Lab File ID: C7755.D

Sample Date: 16-JUN-14
Received Date: 17-JUN-14
Extract Date: 19-JUN-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG145023

Analysis Date: 19-JUN-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 24-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	~~UL~~ 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~~ 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	8.4	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	~~U~~ UJ	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	ULM	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	0.52	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	~~U~~ UJ	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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6/25/14

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4301-4RA
Client ID: 152-061614-660-662
Project: Navy Clean WE15-03-06 NW
SDG: SH4301
Lab File ID: C7755.D

Sample Date: 16-JUN-14
Received Date: 17-JUN-14
Extract Date: 19-JUN-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG145023

Analysis Date: 19-JUN-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 24-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	ULM	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	UL	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	UL	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		94.6	%					
1,2-Dichloroethane-d4		112.	%					
Dibromofluoromethane		97.4	%					

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: ENSAFE
Lab ID: SH4301-5RA
Client ID: 152-061614-680-682
Project: Navy Clean WE15-03-06 NW
SDG: SH4301
Lab File ID: C7756.D

Sample Date: 16-JUN-14
Received Date: 17-JUN-14
Extract Date: 19-JUN-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG145023

Analysis Date: 19-JUN-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	~~UL~~ 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~~ 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 ~~J~~ ~~UJ~~	~~0.47~~ 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	22	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	~~J~~ J	4.8	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	UL	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	J	0.69	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: SH4301-5RA
Client ID: 152-061614-680-682
Project: Navy Clean WE15-03-06 NW
SDG: SH4301
Lab File ID: C7756.D

Sample Date: 16-JUN-14
Received Date: 17-JUN-14
Extract Date: 19-JUN-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG145023

Analysis Date: 19-JUN-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	UL	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	UL	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	UL	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		101.	%					
1,2-Dichloroethane-d4		119.	%					
Dibromofluoromethane		102.	%					

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NALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: ENSAFE
Lab ID: SH4301-7DL
Client ID: 152-061614-700-702
Project: Navy Clean WE15-03-06 NW
SDG: SH4301
Lab File ID: C7728.D

Sample Date: 16-JUN-14
Received Date: 17-JUN-14
Extract Date: 18-JUN-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG144955

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

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UJ	100	ug/L	100	2	200	24.	100
Chloromethane	U	100	ug/L	100	2	200	36.	100
Vinyl Chloride	U	100	ug/L	100	2	200	25.	100
Bromomethane	U	100	ug/L	100	2	200	49.	100
Chloroethane	U	100	ug/L	100	2	200	55.	100
Trichlorofluoromethane	U	100	ug/L	100	2	200	24.	100
1,1-Dichloroethene	U	50	ug/L	100	1	100	35.	50.
Carbon Disulfide	U	50	ug/L	100	1	100	25.	50.
Freon-113	U	50	ug/L	100	1	100	31.	50.
Methylene Chloride	U J UJ	180 500	ug/L	100	5	500	110	250
Acetone	U UJ	250	ug/L	100	5	500	220	250
trans-1,2-Dichloroethene	U	50	ug/L	100	1	100	25.	50.
Methyl tert-butyl Ether	U	50	ug/L	100	1	100	36.	50.
1,1-Dichloroethane	U	50	ug/L	100	1	100	21.	50.
cis-1,2-Dichloroethene	U	50	ug/L	100	1	100	21.	50.
Chloroform	U	50	ug/L	100	1	100	32.	50.
1,1,1-Trichloroethane	U	50	ug/L	100	1	100	20.	50.
2-Butanone	U	250	ug/L	100	5	500	130	250
Cyclohexane	U	50	ug/L	100	1	100	31.	50.
Carbon Tetrachloride	U	50	ug/L	100	1	100	22.	50.
Benzene	U	50	ug/L	100	1	100	26.	50.
1,2-Dichloroethane	U	50	ug/L	100	1	100	20.	50.
Trichloroethene	U	50	ug/L	100	1	100	28.	50.
1,2-Dichloropropane	U	50	ug/L	100	1	100	25.	50.
Bromodichloromethane	U	50	ug/L	100	1	100	33.	50.
cis-1,3-Dichloropropene	U	50	ug/L	100	1	100	19.	50.
Toluene	U	50	ug/L	100	1	100	27.	50.
4-Methyl-2-Pentanone	U	250	ug/L	100	5	500	130	250
trans-1,3-Dichloropropene	U	50	ug/L	100	1	100	20.	50.
1,1,2-Trichloroethane	U	50	ug/L	100	1	100	33.	50.
Tetrachloroethene	U	50	ug/L	100	1	100	40.	50.
Dibromochloromethane	U	50	ug/L	100	1	100	30.	50.
2-Hexanone	U	250	ug/L	100	5	500	170	250
Chlorobenzene	U	50	ug/L	100	1	100	22.	50.
Ethylbenzene	U	50	ug/L	100	1	100	21.	50.

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4301-7DL
Client ID: 152-061614-700-702
Project: Navy Clean WE15-03-06 NW
SDG: SH4301
Lab File ID: C7728.D

Sample Date: 16-JUN-14
Received Date: 17-JUN-14
Extract Date: 18-JUN-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG144955

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

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U UJ	150	ug/L	100	3	300	25.	150
Styrene	U	50	ug/L	100	1	100	23.	50.
Bromoform	U	50	ug/L	100	1	100	23.	50.
Isopropylbenzene	U	50	ug/L	100	1	100	23.	50.
1,1,2,2-Tetrachloroethane	U	50	ug/L	100	1	100	38.	50.
1,3-Dichlorobenzene	U	50	ug/L	100	1	100	26.	50.
1,4-Dichlorobenzene	U	50	ug/L	100	1	100	24.	50.
1,2-Dichlorobenzene	U	50	ug/L	100	1	100	15.	50.
1,2,4-Trichlorobenzene	U	50	ug/L	100	1	100	37.	50.
Methyl Acetate	U	75	ug/L	100	1	100	53.	75.
Methylcyclohexane	U	50	ug/L	100	1	100	30.	50.
o-Xylene	U	50	ug/L	100	1	100	25.	50.
M+P-Xylenes	U	100	ug/L	100	2	200	59.	100
1,2-Dichloroethylene (Total)	U	100	ug/L	100	2	200	21.	100
1,2-Dibromoethane	U	50	ug/L	100	1	100	22.	50.
1,2-Dibromo-3-Chloropropane	U	75	ug/L	100	1	100	50.	75.
P-Bromofluorobenzene		90.8	%					
Toluene-d8		95.3	%					
1,2-Dichloroethane-d4		113.	%					
Dibromofluoromethane		101.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4301-6
Client ID: VPB152-TB-061614
Project: Navy Clean WE15-03-06 NW
SDG: SH4301
Lab File ID: C7725.D

Sample Date: 16-JUN-14
Received Date: 17-JUN-14
Extract Date: 18-JUN-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG144955

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

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

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4301-6
Client ID: VPB152-TB-061614
Project: Navy Clean WE15-03-06\NW
SDG: SH4301
Lab File ID: C7725.D

Sample Date: 16-JUN-14
Received Date: 17-JUN-14
Extract Date: 18-JUN-14
Extracted By: REC
Extraction Method: SW846 5030
Lab Prep Batch: WG144955

Analysis Date: 18-JUN-14
Analyst: REC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-JUN-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		92.4	%					
Toluene-d8		95.4	%					
1,2-Dichloroethane-d4		113.	%					
Dibromofluoromethane		98.3	%					

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RESOLUTION CONSULTANTS

Resolution Consultants
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978.905.2100 tel
978.905.2101 fax

Data Validation Report

Project:	Regional Groundwater Investigation - NWIRP Bethpage
Laboratory:	Katahdin Analytical Services, Scarborough, Maine
Service Request:	SH4222
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:	Limited
RESCON Project Number:	60266526.SA.DV
Prepared by:	Sheena Blair/RESCON — Completed on: 9/15/2014
Reviewed by:	Lori Herberich/RESCON — File Name: SH4222_5310B and 8260B

SUMMARY

The samples listed below were collected by Resolution Consultants (RESCON) from the Regional Groundwater Investigation - NWIRP Bethpage site on June 10,11, and 12, 2014.

Sample ID	Matrix/Sample Type
VPB152-EB-061114	Equipment blank
VPB152-GW-061014-440-442	Groundwater
VPB152-GW-061014-460-462	Groundwater
VPB152-GW-061014-480-482	Groundwater
VPB152-GW-061014-500-502	Groundwater
VPB152-GW-061114-520-522	Groundwater
VPB152-GW-061114-540-542	Groundwater
VPB152-GW-061114-560-562	Groundwater
VPB152-GW-061214-580-582	Groundwater
VPB152-GW-061214-605-607	Groundwater
VPB152-TRIP BLANK-061214	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 SM310B, Total Organic Carbon by High-Temperature Combustion*

Data validation activities were conducted with reference to these methods, *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (June 2008), *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review* (January 2010), and Quality Systems Manual (QSM) for Environmental Laboratories, Version 4.2 (DoD, October 2010) where applicable. In the absence of method-specific

information, laboratory quality control (QC) limits, project-specific requirements and/or professional judgment were used as appropriate.

REVIEW ELEMENTS

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

✓	Data completeness (chain-of-custody [COC])/sample integrity
✓	Holding times and sample preservation
✓	GC/MS performance checks
✗	Initial calibration/continuing calibration verification
✗	Laboratory blanks/equipment blanks/trip blanks
✓	Surrogate spike recoveries
NA	Matrix spike (MS) results
✓	Laboratory control sample (LCS) results
✓	Field duplicate results
✓	Internal standard results
✓	Sample results/reporting issues

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

The data appear valid as reported and may be used for decision making purposes. Selected data points were estimated 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 from the sample ID, and truncated IDs for GW and Trip Blank in the report. The submitted EDD file reflects the full sample ID.

Holding Times/Sample Preservation

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

GC/MS Performance Checks

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

Initial Calibration/Continuing Calibration Verification

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

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

Data qualification to the analytes associated with the specific ICV 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. Nonconformances are summarized in Attachment A in Table A-1a and A-1b.

Laboratory Blanks/Equipment Blanks/Trip Blanks

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

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

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

Sample results were qualified as follows:

For common lab contaminants (methylene chloride, acetone, 2-butanone):

Blank type	Blank result	Sample result	Action for samples
Method, Storage, Field, Trip, or Instrument*	Detects	Not detected	No qualification
	≤ 2x LOQ	< 2x LOQ	Report sample LOQ value with a U
		≥ 2x LOQ and ≤ 4x LOQ	Report the sample result with a U**
		≥ 4x LOQ	No qualifications
	> 2x LOQ	< 2x LOQ	Report sample LOQ value with a U
		≥ 2x LOQ and < blank contamination	Report the sample result with a U
		≥ 2x LOQ and ≥ blank contamination	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**
* Qualifications based on instrument blank results affect only the sample analyzed immediately after the sample that has target compounds that exceed the calibration range or non-target compounds that exceed 100 g/L.			
**Based on professional judgment			

For TOC:

Blank Type	Blank Result	Sample Result	Action for Samples
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])

LOQ - Limit of Quantitation.

Nonconformances are summarized in Attachment A in Tables A-2 and A-3. Qualified sample results are shown in Table 1.

Surrogate Spike Recoveries

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

Although the %Rs were high for surrogates in two samples, qualification of the data was not required because nondetects were reported for the samples.

MS 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 criterion applies if both results were >5x the LOQ. The criterion is doubled if the results were <5x the LOQ. All QC acceptance criteria were met.

Internal Standard Results

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

Sample Results/Reporting Issues

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

Compounds detected at concentrations less than the LOQ but greater than the 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
VPB152-EB-061114	WQ	TOTAL ORGANIC CARBON		1.0*	MG/L	U	bl
VPB152-EB-061114	WQ	ACETONE	4.1	2.5	UG/L	J	c
VPB152-GW-061014-440-442	WG	ACETONE		5.0*	UG/L	U	be
VPB152-GW-061014-480-482	WG	ACETONE		5.0*	UG/L	U	be
VPB152-GW-061014-500-502	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	c
VPB152-GW-061014-500-502	WG	2-HEXANONE		2.5	UG/L	UJ	c
VPB152-GW-061014-500-502	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	c
VPB152-GW-061014-500-502	WG	ACETONE		5.0*	UG/L	U	be
VPB152-GW-061114-520-522	WG	ACETONE		5.0*	UG/L	U	be
VPB152-GW-061114-560-562	WG	ACETONE		5.0*	UG/L	U	be
VPB152-GW-061214-580-582	WG	ACETONE		5.0*	UG/L	U	be
*LOQ							

Attachment A

Non Conformance Summary Tables

Table A-1 - Initial Calibration Verification

ICV	Compound	% R	Limit
WG144515 GC-MS-D	ACETONE	125.4	80-120%
Associated samples: All samples in the SDG			

Table A-1b - Continuing Calibration Verification

CCV ID	Compound	% D	Limit
WG144718-4 GCMS-D 6/14/2014	4-METHYL-2-PENTANONE	21.2	< 20%
	2-HEXANONE	27.7	< 20%
	1,2-DIBROMO-3-CHLOROPROPANE	22.5	< 20%
Associated sample: VPB152-GW-061014-500-502			

Table A-2 - Lab Blanks

Blank ID	Compound	Result	LOQ	Units	Associated Samples
WG145514-1	TOTAL ORGANIC CARBON	0.21	1.0	MG/L	VPB152-EB-061114

Table A-3- Field Blanks

Blank ID	Compound	Result	LOQ	Units	Associated Samples
VPB152-EB-061114	ACETONE	4.1	5.0	UG/L	All field samples in this SDG

Attachment B

Qualifier Codes and Explanations

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

Attachment C

Reason Codes and Explanations

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

Katahdin
NALYTICAL SERVICES

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4222-1
Client ID: 152-061014-440-442
Project: Navy Clean WE15-03-06 NW
SDG: SH4222
Lab File ID: D8915.D

Sample Date: 10-JUN-14
Received Date: 13-JUN-14
Extract Date: 13-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144658

Analysis Date: 13-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 16-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	~~J~~ U	~~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	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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6/16/14

Report of Analytical Results

Client: ENSAFE
Lab ID: SH4222-1
Client ID: 152-061014-440-442
Project: Navy Clean WE15-03-06 NW
SDG: SH4222
Lab File ID: D8915.D

Sample Date: 10-JUN-14
Received Date: 13-JUN-14
Extract Date: 13-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144658

Analysis Date: 13-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 16-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		104.	%					
Toluene-d8		111.	%					
1,2-Dichloroethane-d4		112.	%					
Dibromofluoromethane		106.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4222-2
Client ID: 152-061014-460-462
Project: Navy Clean WE15-03-06 NW
SDG: SH4222
Lab File ID: D8916.D

Sample Date: 10-JUN-14
Received Date: 13-JUN-14
Extract Date: 13-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144658

Analysis Date: 13-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 16-JUN-14

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

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4222-2
Client ID: 152-061014-460-462
Project: Navy Clean WE15-03-06 NW
SDG: SII4222
Lab File ID: D8916.D

Sample Date: 10-JUN-14
Received Date: 13-JUN-14
Extract Date: 13-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144658

Analysis Date: 13-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 16-JUN-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		105.	%					
Toluene-d8		117.	%					
1,2-Dichloroethane-d4		118.	%					
Dibromofluoromethane		110.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4222-3
Client ID: 152-061014-480-482
Project: Navy Clean WE15-03-06 NW
SDG: SH4222
Lab File ID: D8917.D

Sample Date: 10-JUN-14
Received Date: 13-JUN-14
Extract Date: 13-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144658

Analysis Date: 13-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 16-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	~~J~~ U	~~3.2~~ 5.0	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4222-3
Client ID: 152-061014-480-482
Project: Navy Clean WE15-03-06 NW
SDG: SH4222
Lab File ID: D8917.D

Sample Date: 10-JUN-14
Received Date: 13-JUN-14
Extract Date: 13-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144658

Analysis Date: 13-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 16-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		99.9	%					
Toluene-d8		112.	%					
1,2-Dichloroethane-d4		114.	%					
Dibromofluoromethane		105.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4222-4RA
Client ID: 152-061014-500-502
Project: Navy Clean WE15-03-06 NW
SDG: SH4222
Lab File ID: D8937.D

Sample Date: 10-JUN-14
Received Date: 13-JUN-14
Extract Date: 14-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144718

Analysis Date: 14-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 16-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	~~J~~ U	~~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	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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6/16/14

Report of Analytical Results

Client: ENSAFE
Lab ID: SH4222-4RA
Client ID: 152-061014-500-502
Project: Navy Clean WE15-03-06 NW
SDG: SH4222
Lab File ID: D8937.D

Sample Date: 10-JUN-14
Received Date: 13-JUN-14
Extract Date: 14-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144718

Analysis Date: 14-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 16-JUN-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		103.	%					
Toluene-d8		113.	%					
1,2-Dichloroethane-d4		112.	%					
Dibromofluoromethane		107.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4222-5
Client ID: 152-061114-520-522
Project: Navy Clean WE15-03-06 NW
SDG: SH4222
Lab File ID: D8914.D

Sample Date: 11-JUN-14
Received Date: 13-JUN-14
Extract Date: 13-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144658

Analysis Date: 13-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 16-JUN-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	~~9.0~~ 5.0	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4222-5
Client ID: 152-061114-520-522
Project: Navy Clean WE15-03-06 NW
SDG: SH4222
Lab File ID: D8914.D

Sample Date: 11-JUN-14
Received Date: 13-JUN-14
Extract Date: 13-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144658

Analysis Date: 13-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 16-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		102.	%					
Toluene-d8		112.	%					
1,2-Dichloroethane-d4		112.	%					
Dibromofluoromethane		103.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4222-6
Client ID: 152-061114-540-542
Project: Navy Clean WE15-03-06 NW
SDG: SH4222
Lab File ID: D8919.D

Sample Date: 11-JUN-14
Received Date: 13-JUN-14
Extract Date: 13-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144658

Analysis Date: 13-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 16-JUN-14

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

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4222-6
Client ID: 152-061114-540-542
Project: Navy Clean WE15-03-06 NW
SDG: SH4222
Lab File ID: D8919.D

Sample Date: 11-JUN-14
Received Date: 13-JUN-14
Extract Date: 13-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144658

Analysis Date: 13-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 16-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		101.	%					
Toluene-d8		113.	%					
1,2-Dichloroethane-d4		116.	%					
Dibromofluoromethane		109.	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ENSAFE
Lab ID: SH4222-7
Client ID: VPB152-EB-061114
Project: Navy Clean WE15-03-06 NW
SDG: SH4222
Lab File ID: D8920.D

Sample Date: 11-JUN-14
Received Date: 13-JUN-14
Extract Date: 13-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144658

Analysis Date: 13-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 16-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	~~J~~ U	~~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	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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6/16/14

Report of Analytical Results

Client: ENSAFE
Lab ID: SH4222-7
Client ID: VPB152-EB-061114
Project: Navy Clean WE15-03-06 NW
SDG: SH4222
Lab File ID: D8920.D

Sample Date: 11-JUN-14
Received Date: 13-JUN-14
Extract Date: 13-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144658

Analysis Date: 13-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 16-JUN-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		112.	%					
1,2-Dichloroethane-d4		118.	%					
Dibromofluoromethane		110.	%					

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: ENSAFE
Lab ID: SH4222-8
Client ID: 152-061114-560-562
Project: Navy Clean WE15-03-06 NW
SDG: SH4222
Lab File ID: D8921.D

Sample Date: 11-JUN-14
Received Date: 13-JUN-14
Extract Date: 13-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144658

Analysis Date: 13-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 16-JUN-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	~~12~~ 5.0	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4222-8
Client ID: 152-061114-560-562
Project: Navy Clean WE15-03-06 NW
SDG: SH4222
Lab File ID: D8921.D

Sample Date: 11-JUN-14
Received Date: 13-JUN-14
Extract Date: 13-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144658

Analysis Date: 13-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 16-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		99.0	%					
Toluene-d8		112.	%					
1,2-Dichloroethane-d4		117.	%					
Dibromofluoromethane		108.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4222-9
Client ID: VPB152-TB-061214
Project: Navy Clean WE15-03-06 NW
SDG: SH4222
Lab File ID: D8911.D

Sample Date: 12-JUN-14
Received Date: 13-JUN-14
Extract Date: 13-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144658

Analysis Date: 13-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 16-JUN-14

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

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4222-9
Client ID: VPB152-TB-061214
Project: Navy Clean WE15-03-06 NW
SDG: SH4222
Lab File ID: D8911.D

Sample Date: 12-JUN-14
Received Date: 13-JUN-14
Extract Date: 13-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144658

Analysis Date: 13-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 16-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		99.7	%					
Toluene-d8		110.	%					
1,2-Dichloroethane-d4		109.	%					
Dibromofluoromethane		106.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4222-10
Client ID: 152-061214-580-582
Project: Navy Clean WE15-03-06 NW
SDG: SH4222
Lab File ID: D8922.D

Sample Date: 12-JUN-14
Received Date: 13-JUN-14
Extract Date: 13-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144658

Analysis Date: 13-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 16-JUN-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	~~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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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4222-10
Client ID: 152-061214-580-582
Project: Navy Clean WE15-03-06 NW
SDG: SH4222
Lab File ID: D8922.D

Sample Date: 12-JUN-14
Received Date: 13-JUN-14
Extract Date: 13-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144658

Analysis Date: 13-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 16-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		103.	%					
Toluene-d8		116.	%					
1,2-Dichloroethane-d4	*	120.	%					
Dibromofluoromethane		113.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4222-11
Client ID: 152-061214-605-607
Project: Navy Clean WE15-03-06 NW
SDG: SH4222
Lab File ID: D8923.D

Sample Date: 12-JUN-14
Received Date: 13-JUN-14
Extract Date: 13-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144658

Analysis Date: 13-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 16-JUN-14

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

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4222-11
Client ID: 152-061214-605-607
Project: Navy Clean WE15-03-06 NW
SDG: SH4222
Lab File ID: D8923.D

Sample Date: 12-JUN-14
Received Date: 13-JUN-14
Extract Date: 13-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144658

Analysis Date: 13-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 16-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		108.	%					
Toluene-d8	*	120.	%					
1,2-Dichloroethane-d4	*	125.	%					
Dibromofluoromethane	*	117.	%					

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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: SH4222-7
Report Date: 01-JUL-14
Client PO: 16518
Project: Navy Clean WE15-03-0
SDG: SH4222

Sample Description	Matrix	Date Sampled	Date Received
VPB152-EB-061114	AQ	11-JUN-14	13-JUN-14

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Organic Carbon	~~0.20~~ 1.0 U mg/L	1.0	0.10	.5	SM5310B	WG145514	26-JUN-14 19:24:35	N/A	N/A	

6/u/14

Katahdin Analytical Services 0000216

RESOLUTION CONSULTANTS

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 Services, Scarborough, Maine	
Service Request:	SH4056	
Analyses/Method:	EPA SW-846, Method 8260B for VOCs (GC/MS), Total Organic Carbon by EPA SW-846 Method 9060 for TOC (Carbonaceous analyzer, IR or FID), and Standard Methods 5310 for Total Organic Carbon by High-Temperature Combustion	
Validation Level:	Limited	
RESCON Project Number:	60266526.SA.DV	
Prepared by:	Sheena Blair/RESCON	Completed on: 9/14/2014
Reviewed by:	Lori Herberich/RESCON	File Name: SH4056__5310B, 8260B and 9060

SUMMARY

The samples listed below were collected by Resolution Consultants (RESCON) from the Regional Groundwater Investigation - NWIRP Bethpage site on June 6 and 9, 2014.

Sample ID	Matrix/Sample Type
VPB152-FB-060614	Field blank
VPB152-GW-060614-320-322	Groundwater
VPB152-GW-060614-345-347	Groundwater
VPB152-GW-060914-360-362	Groundwater
VPB152-GW-060914-380-382	Groundwater
VPB152-GW-060914-400-402	Groundwater
VPB152-GW-060914-420-422	Groundwater
VPB152-SOIL-060614-325-327	Soil
VPB152-SOIL-D-060614	Field Duplicate of VPB152-SOIL-060614-325-327
VPB152-TRIP BLANK-060914	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).
- *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods SW-846*, Method 9060A, *Total Organic Carbon* (USEPA 2004);
- 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
✓	Matrix spike (MS)/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 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/Sample Preservation

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

GC/MS Performance Checks

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

Initial Calibration/Continuing Calibration Verification

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

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

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

ICV Recovery Nonconformances:

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

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

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

Laboratory Blanks/Equipment Blanks/Trip Blanks

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

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

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

TOC sample results were qualified as follows:

Blank Type	Blank Result	Sample Result	Action for Samples
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	professional judgment (see below [1])

LOQ - Limit of Quantitation.

Nonconformances are summarized in Attachment A in Table A-2. 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 for VOCs were not performed on a sample reported in this SDG. There were no validation actions taken on this basis.

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

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

Criteria	Action	
	Detected Compounds	Nondetected Compounds
%R> UL	J	No qualification
30% ≤ %R < LL	J	UJ
%R <30% (see note 1)	J	R*
%RPD > UL (see note 2)	J	No qualification
Note: Actions are applied to all samples with the same matrix. *When the native sample concentration is >4X the concentration of the spike added (based on Region I criteria), evaluate the MS, MSD, and native sample with regards to %RSD rather than %R (RESCON professional judgment)		

Notes:

1. Based on NFG 2008 VOC guidance, professional judgment is used to reject (R) non-detects in all associated samples for any analyte with < 30% recovery. Also, professional judgment is used to estimate (UJ) rather the reject (R) sample results previously negated (U) on the basis of blank contamination.
2. In the absence of Region 2 guidance, RPD actions are based on professional judgment.
3. If a field duplicate sample was also collected for the native sample chosen for MS/MSD analysis, professional judgment is used to apply MS/MSD actions to the corresponding field duplicate sample as well as the native sample.

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

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 solid matrices. This criterion applies if both results were greater than five times the Limit of Quantitation (LOQ). All QC acceptance criteria were met.

Internal Standard Results

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

Sample Results/Reporting Issues

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

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

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

QUALIFICATION ACTIONS

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

ATTACHMENTS

Attachment A: Nonconformance Summary Tables

Attachment B: Qualifier Codes and Explanations

Attachment C: Reason Codes and Explanations

Table 1 - Data Validation Summary of Qualified Data

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB152-GW-060614-320-322	WG	ACETONE	5.3	2.5	UG/L	J	c
VPB152-GW-060614-345-347	WG	ACETONE	4.4	2.5	UG/L	J	c
VPB152-GW-060914-360-362	WG	ACETONE	9.9	2.5	UG/L	J	c
VPB152-GW-060914-380-382	WG	ACETONE	6.9	2.5	UG/L	J	c
VPB152-GW-060914-420-422	WG	ACETONE	3.1	2.5	UG/L	J	c
VPB152-SOIL-060614-325-327	SO	TOTAL ORGANIC CARBON	27000	620	UG/G	J	m
VPB152-SOIL-D-060614	SO	TOTAL ORGANIC CARBON	16000	570	UG/G	J	m
VPB152-FB-060614	WQ	TOTAL ORGANIC CARBON		1.0*	MG/L	U	bl
*LOQ							

Attachment A

Nonconformance Summary Tables

Table A-1 - Initial Calibration Verification

ICV	Compound	% R	Limit
WG144515-7 GCMS-D	ACETONE	125.4	80-120%
Associated samples: All samples in the SDG			

Table A-2 - Lab Blanks

Blank ID	Compound	Result	QL	Units	Associated Samples
WG144547-1	TOTAL ORGANIC CARBON	0.12	0.50	MG/L	VPB152-FB-060614

Table A-3 - Matrix Spikes

Sample ID	Compound	MS % Recovery	MSD % Recovery	Lower Limit	Upper Limit	RPD	RPD Limit
VPB152-SOIL-060614-325-327	TOTAL ORGANIC CARBON	141	126	75	125	11.2	30

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

Report of Analytical Results

Client: ENSAFE
Lab ID: SH4056-1
Client ID: 152-060614-320-322
Project: Navy Clean WE15-03-06 NW
SDG: SH4056
Lab File ID: D8874.D

Sample Date: 06-JUN-14
Received Date: 10-JUN-14
Extract Date: 11-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144515

Analysis Date: 11-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 12-JUN-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	0.26	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	5.3	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		11	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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11/14/14

Report of Analytical Results

Client: ENSAFE
Lab ID: SH4056-1
Client ID: 152-060614-320-322
Project: Navy Clean WE15-03-06 NW
SDG: SH4056
Lab File ID: D8874.D

Sample Date: 06-JUN-14
Received Date: 10-JUN-14
Extract Date: 11-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144515

Analysis Date: 11-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 12-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		107.	%					
Toluene-d8		115.	%					
1,2-Dichloroethane-d4		105.	%					
Dibromofluoromethane		105.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4056-4
Client ID: VPB152-FB-060614
Project: Navy Clean WE15-03-06 NW
SDG: SH4056
Lab File ID: D8875.D

Sample Date: 06-JUN-14
Received Date: 10-JUN-14
Extract Date: 11-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144515

Analysis Date: 11-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 12-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	J	0.51	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: SH4056-4
Client ID: VPB152-FB-060614
Project: Navy Clean WE15-03-06 NW
SDG: SH4056
Lab File ID: D8875.D

Sample Date: 06-JUN-14
Received Date: 10-JUN-14
Extract Date: 11-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144515

Analysis Date: 11-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 12-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		107.	%					
Toluene-d8		115.	%					
1,2-Dichloroethane-d4		112.	%					
Dibromofluoromethane		106.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4056-5
Client ID: 152-060614-345-347
Project: Navy Clean WE15-03-06 NW
SDG: SH4056
Lab File ID: D8876.D

Sample Date: 06-JUN-14
Received Date: 10-JUN-14
Extract Date: 11-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144515

Analysis Date: 11-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 12-JUN-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	0.42	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	J	4.4	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4056-5
Client ID: 152-060614-345-347
Project: Navy Clean WE15-03-06 NW
SDG: SH4056
Lab File ID: D8876.D

Sample Date: 06-JUN-14
Received Date: 10-JUN-14
Extract Date: 11-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144515

Analysis Date: 11-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 12-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		109.	%					
Toluene-d8		119.	%					
1,2-Dichloroethane-d4		116.	%					
Dibromofluoromethane		110.	%					

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http://www.katahdinlab.com

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NALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ENSAFE
Lab ID: SH4056-6
Client ID: 152-060914-360-362
Project: Navy Clean WE15-03-06 NW
SDG: SH4056
Lab File ID: D8877.D

Sample Date: 06-JUN-14
Received Date: 10-JUN-14
Extract Date: 11-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144515

Analysis Date: 11-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 12-JUN-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	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	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: SH4056-6
Client ID: 152-060914-360-362
Project: Navy Clean WE15-03-06 NW
SDG: SH4056
Lab File ID: D8877.D

Sample Date: 06-JUN-14
Received Date: 10-JUN-14
Extract Date: 11-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144515

Analysis Date: 11-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 12-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		108.	%					
Toluene-d8		116.	%					
1,2-Dichloroethane-d4		111.	%					
Dibromofluoromethane		107.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4056-7
Client ID: 152-060914-380-382
Project: Navy Clean WE15-03-06 NW
SDG: SH4056
Lab File ID: D8878.D

Sample Date: 09-JUN-14
Received Date: 10-JUN-14
Extract Date: 11-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144515

Analysis Date: 11-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 12-JUN-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	6.9	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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11/12/14

Report of Analytical Results

Client: ENSAFE
Lab ID: SH4056-7
Client ID: 152-060914-380-382
Project: Navy Clean WE15-03-06 NW
SDG: SH4056
Lab File ID: D8878.D

Sample Date: 09-JUN-14
Received Date: 10-JUN-14
Extract Date: 11-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144515

Analysis Date: 11-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 12-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		108.	%					
Toluene-d8		117.	%					
1,2-Dichloroethane-d4		114.	%					
Dibromofluoromethane		104.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4056-8
Client ID: VPB152-TB-060914
Project: Navy Clean WE15-03-06 NW
SDG: SH4056
Lab File ID: D8873.D

Sample Date: 09-JUN-14
Received Date: 10-JUN-14
Extract Date: 11-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144515

Analysis Date: 11-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 12-JUN-14

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

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4056-8
Client ID: VPB152-TB-060914
Project: Navy Clean WE15-03-06 NW
SDG: SH4056
Lab File ID: D8873.D

Sample Date: 09-JUN-14
Received Date: 10-JUN-14
Extract Date: 11-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144515

Analysis Date: 11-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 12-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		106.	%					
Toluene-d8		114.	%					
1,2-Dichloroethane-d4		105.	%					
Dibromofluoromethane		102.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4056-9
Client ID: 152-060914-400-402
Project: Navy Clean WE15-03-06 NW
SDG: SH4056
Lab File ID: D8879.D

Sample Date: 09-JUN-14
Received Date: 10-JUN-14
Extract Date: 11-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144515

Analysis Date: 11-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 12-JUN-14

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

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH4056-9
Client ID: 152-060914-400-402
Project: Navy Clean WE15-03-06 NW
SDG: SH4056
Lab File ID: D8879.D

Sample Date: 09-JUN-14
Received Date: 10-JUN-14
Extract Date: 11-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144515

Analysis Date: 11-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 12-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		106.	%					
Toluene-d8		115.	%					
1,2-Dichloroethane-d4		117.	%					
Dibromofluoromethane		108.	%					

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Cert No E87604

Report of Analytical Results

Client: ENSAFE
Lab ID: SH4056-10
Client ID: 152-060914-420-422
Project: Navy Clean WE15-03-06 NW
SDG: SH4056
Lab File ID: D8880.D

Sample Date: 09-JUN-14
Received Date: 10-JUN-14
Extract Date: 12-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144515

Analysis Date: 12-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 12-JUN-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	3.1	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: SH4056-10
Client ID: 152-060914-420-422
Project: Navy Clean WE15-03-06 NW
SDG: SH4056
Lab File ID: D8880.D

Sample Date: 09-JUN-14
Received Date: 10-JUN-14
Extract Date: 12-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144515

Analysis Date: 12-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 12-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		109.	%					
Toluene-d8		117.	%					
1,2-Dichloroethane-d4		119.	%					
Dibromofluoromethane		114.	%					

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Report of Analytical Results

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

Lab Sample ID: SH4056-2
Report Date: 10-JUL-14
Client PO: 16518
Project: Navy Clean WE15-03-0
SDG: SH4056

Sample Description	Matrix	Date Sampled	Date Received
152-060614-325-327	SL	06-JUN-14	10-JUN-14

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
TOC In Soil	27000 J ug/gdrywt	620	130	N/A	SW846 9060A Mod.	WG144438	10-JUN-14 16:16:17	N/A	N/A	
Total Solids	64. %	1		N/A	SM2540G	WG144445	11-JUN-14 14:24:36	SM2540G	10-JUN-14	

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Report of Analytical Results

Client: Rick Purdy
AECOM
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Wakefield,MA 01880

Lab Sample ID: SH4056-3
Report Date: 10-JUL-14
Client PO: 16518
Project: Navy Clean WE15-03-0
SDG: SH4056

Sample Description	Matrix	Date Sampled	Date Received
152-SOIL-D-060614	SL	06-JUN-14	10-JUN-14

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
TOC In Soil	16000 J ug/gdrywt	570	120	N/A	SW846 9060A Mod.	WG144438	10-JUN-14 17:15:33	N/A	N/A	
Total Solids	70. %	1		N/A	SM2540G	WG144445	11-JUN-14 14:24:45	SM2540G	10-JUN-14	

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Report of Analytical Results

Client: Rick Purdy
AECOM
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Wakefield,MA 01880

Lab Sample ID: SH4056-4
Report Date: 10-JUL-14
Client PO: 16518
Project: Navy Clean WE15-03-0
SDG: SH4056

Sample Description	Matrix	Date Sampled	Date Received
VPB152-FB-060614	AQ	06-JUN-14	10-JUN-14

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Organic Carbon	~~10.30~~ 1.0 U mg/L	1.0	0.10	.5	SM5310B	WG144547	11-JUN-14 07:50:02	N/A	N/A	

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RESOLUTION CONSULTANTS

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Data Validation Report

Project:	Regional Groundwater Investigation - NWIRP Bethpage	
Laboratory:	Katahdin Analytical Services, Scarborough, Maine	
Service Request:	SH3956	
Analyses/Method:	EPA SW-846 Method 8260B for VOCs (GC/MS)	
Validation Level:	Limited	
RESCON Project Number:	60266526.SA.DV	
Prepared by:	Sheena Blair/RESCON	Completed on: 8/30/2014
Reviewed by:	Lori Herberich/RESCON	File Name: SH3956_8260B

SUMMARY

The samples listed below were collected by Resolution Consultants from the Regional Groundwater Investigation – NWIRP Bethpage site on June 3, 4, and 5, 2014.

Sample ID	Matrix/Sample Type
VPB152-GWD-060314	Field Duplicate of VPB152-GW-060314-150-152
VPB152-GW-060314-150-152	Groundwater
VPB152-GW-060314-58-60	Groundwater
VPB152-GW-060314-98-100	Groundwater
VPB152-GW-060414-200-202	Groundwater
VPB152-GW-060414-220-222	Groundwater
VPB152-GW-060514-240-242	Groundwater
VPB152-GW-060514-260-262	Groundwater
VPB152-GW-060514-280-282	Groundwater
VPB152-GW-060514-300-302	Groundwater
VPB152-TRIP BLANK-060514	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
✓	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.

Sample VPB152-GW-060314-150-152 was mostly soil and had very little standing water. The laboratory decanted the water from three individual vials into one vial as a composite. Positive and nondetect results for this sample were qualified as estimated (J and UJ, respectively), due to possible loss of sample integrity during the decanting procedure. 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 standard (ICV) percent recoveries (%Rs) acceptance criteria were met;
- the continuing calibration verification standard (CCV) method percent difference or percent drift (%Ds) and RF acceptance criteria were met; and
- the retention time method acceptance criteria were met.

Data qualification to the analytes associated with the specific ICAL,ICV and/or CCV was as follows:

ICAL Linearity Nonconformances:

Nonconformance	Actions	
	Detected Results	Nondetected Results
%RSD > 15% and quantitation based on mean RF	J	UJ
r or r^2 < 0.99 and quantitation based on linear regression	J*	UJ*
* No guidance in NFG, professional judgment was used		

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. Nonconformances are summarized in Attachment A in Tables A-1a, A-1b, A-1c, A-1d and A-1e.

Laboratory Blanks/Equipment Blanks/Trip Blanks

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

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

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

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

Surrogate Spike Recoveries

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

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

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

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

Sample VPB152-GW-060314-150-152 had two surrogates out, one with a high bias and one with a low bias. Positive and nondetect compounds for this sample were qualified, as estimated (J and UJ, respectively), as the bias is undetermined.

MS/MSD Results

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

For the MS/MSD performed on sample VPB152-GW-060414-200-202, over 50% of the compounds did not meet the QC acceptance criteria. The validator chose to qualify all compounds reported from this sample. Positive and nondetects were qualified, as estimated (J and UJ, respectively).

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

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 undetected (U) at the Limit of Detection (LOD).

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

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

QUALIFICATION ACTIONS

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

ATTACHMENTS

Attachment A: Nonconformance Summary Tables

Attachment B: Qualifier Codes and Explanations

Attachment C: Reason Codes and Explanations

Table 1 - Data Validation Summary of Qualified Data

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB152-GW-060314-150-152	WG	1,1,1-TRICHLOROETHANE	2.2	0.50	UG/L	J	s
VPB152-GW-060314-150-152	WG	1,1,2,2-TETRACHLOROETHANE		0.50	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		0.50	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	1,1,2-TRICHLOROETHANE		0.50	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	1,1-DICHLOROETHANE	2.0	0.50	UG/L	J	s
VPB152-GW-060314-150-152	WG	1,1-DICHLOROETHENE	0.61	0.50	UG/L	J	s
VPB152-GW-060314-150-152	WG	1,2,4-TRICHLOROBENZENE		0.50	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	c,s
VPB152-GW-060314-150-152	WG	1,2-DIBROMOETHANE		0.50	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	1,2-DICHLOROBENZENE		0.50	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	1,2-DICHLOROETHANE		0.50	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	1,2-DICHLOROETHENE, TOTAL		1.0	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	1,2-DICHLOROPROPANE		0.50	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	1,3-DICHLOROBENZENE		0.50	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	1,4-DICHLOROBENZENE		0.50	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	2-BUTANONE		2.5	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	2-HEXANONE		2.5	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	c,s
VPB152-GW-060314-150-152	WG	ACETONE	2.7	2.5	UG/L	J	c,s
VPB152-GW-060314-150-152	WG	BENZENE		0.50	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	BROMODICHLOROMETHANE		0.50	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	BROMOFORM		0.50	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	BROMOMETHANE		1.0	UG/L	UJ	c,s
VPB152-GW-060314-150-152	WG	CARBON DISULFIDE		0.50	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	CARBON TETRACHLORIDE		0.50	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	CHLOROBENZENE		0.50	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	CHLOROETHANE		1.0	UG/L	UJ	c,s
VPB152-GW-060314-150-152	WG	CHLOROFORM		0.50	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	CHLOROMETHANE		1.0	UG/L	UJ	c,s
VPB152-GW-060314-150-152	WG	CIS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	CIS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	CYCLOHEXANE		0.50	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	DIBROMOCHLOROMETHANE		0.50	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	DICHLORODIFLUOROMETHANE		1:0	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	ETHYLBENZENE		0.50	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	ISOPROPYLBENZENE		0.50	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	M- AND P-XYLENE		1.0	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	METHYL ACETATE		0.75	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	METHYL CYCLOHEXANE		0.50	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	METHYL TERT-BUTYL ETHER		0.50	UG/L	UJ	c,s
VPB152-GW-060314-150-152	WG	METHYLENE CHLORIDE		2.5	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	O-XYLENE		0.50	UG/L	UJ	s

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB152-GW-060314-150-152	WG	STYRENE		0.50	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	TETRACHLOROETHENE		0.50	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	TOLUENE		0.50	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	TRANS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	TRANS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	TRICHLOROETHENE		0.50	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	TRICHLOROFLUOROMETHANE		1.0	UG/L	UJ	c,s
VPB152-GW-060314-150-152	WG	VINYL CHLORIDE		1.0	UG/L	UJ	s
VPB152-GW-060314-150-152	WG	XYLENES, TOTAL		1.5	UG/L	UJ	s
VPB152-GW-060314-58-60	WG	1,1,1-TRICHLOROETHANE		0.50	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	1,1,2,2-TETRACHLOROETHANE		0.50	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		0.50	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	1,1,2-TRICHLOROETHANE		0.50	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	1,1-DICHLOROETHANE		0.50	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	1,1-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	1,2,4-TRICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	c,mc
VPB152-GW-060314-58-60	WG	1,2-DIBROMOETHANE		0.50	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	1,2-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	1,2-DICHLOROETHANE		0.50	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	1,2-DICHLOROETHENE, TOTAL		1.0	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	1,2-DICHLOROPROPANE		0.50	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	1,3-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	1,4-DICHLOROBENZENE		0.50	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	2-BUTANONE		2.5	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	2-HEXANONE		2.5	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	c,mc
VPB152-GW-060314-58-60	WG	ACETONE	16	2.5	UG/L	J	c,mc,s
VPB152-GW-060314-58-60	WG	BENZENE		0.50	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	BROMODICHLOROMETHANE		0.50	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	BROMOFORM		0.50	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	BROMOMETHANE		1.0	UG/L	UJ	c,mc
VPB152-GW-060314-58-60	WG	CARBON DISULFIDE		0.50	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	CARBON TETRACHLORIDE		0.50	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	CHLOROBENZENE		0.50	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	CHLOROETHANE		1.0	UG/L	UJ	c,mc
VPB152-GW-060314-58-60	WG	CHLOROFORM		0.50	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	CHLOROMETHANE		1.0	UG/L	UJ	c,mc
VPB152-GW-060314-58-60	WG	CIS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	CIS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	CYCLOHEXANE		0.50	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	DIBROMOCHLOROMETHANE	0.34	0.50	UG/L	J	mc,s
VPB152-GW-060314-58-60	WG	DICHLORODIFLUOROMETHANE		1.0	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	ETHYLBENZENE		0.50	UG/L	UJ	mc

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB152-GW-060314-58-60	WG	ISOPROPYLBENZENE		0.50	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	M- AND P-XYLENE		1.0	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	METHYL ACETATE		0.75	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	METHYL CYCLOHEXANE		0.50	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	METHYL TERT-BUTYL ETHER		0.50	UG/L	UJ	c,mc
VPB152-GW-060314-58-60	WG	METHYLENE CHLORIDE		2.5	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	O-XYLENE		0.50	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	STYRENE		0.50	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	TETRACHLOROETHENE		0.50	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	TOLUENE		0.50	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	TRANS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	TRANS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	TRICHLOROETHENE		0.50	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	TRICHLOROFLUOROMETHANE		1.0	UG/L	UJ	c,mc
VPB152-GW-060314-58-60	WG	VINYL CHLORIDE		1.0	UG/L	UJ	mc
VPB152-GW-060314-58-60	WG	XYLENES, TOTAL		1.5	UG/L	UJ	mc
VPB152-GW-060314-98-100	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	c
VPB152-GW-060314-98-100	WG	2-HEXANONE		2.5	UG/L	UJ	c
VPB152-GW-060314-98-100	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	c
VPB152-GW-060314-98-100	WG	ACETONE	4.4	2.5	UG/L	J	c
VPB152-GW-060414-200-202	WG	1,1,1-TRICHLOROETHANE		0.50	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	1,1,2,2-TETRACHLOROETHANE		0.50	UG/L	UJ	m,md
VPB152-GW-060414-200-202	WG	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		0.50	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	1,1,2-TRICHLOROETHANE		0.50	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	1,1-DICHLOROETHANE	0.93	0.50	UG/L	J	m
VPB152-GW-060414-200-202	WG	1,1-DICHLOROETHENE		0.50	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	1,2,4-TRICHLOROBENZENE		0.50	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	U	m
VPB152-GW-060414-200-202	WG	1,2-DIBROMOETHANE		0.50	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	1,2-DICHLOROBENZENE		0.50	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	1,2-DICHLOROETHANE		0.50	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	1,2-DICHLOROETHENE, TOTAL		1.0	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	1,2-DICHLOROPROPANE		0.50	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	1,3-DICHLOROBENZENE		0.50	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	1,4-DICHLOROBENZENE		0.50	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	2-BUTANONE		2.5	UG/L	U	m
VPB152-GW-060414-200-202	WG	2-HEXANONE		2.5	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	ACETONE	8.2	2.5	UG/L	J	m
VPB152-GW-060414-200-202	WG	BENZENE		0.50	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	BROMODICHLOROMETHANE		0.50	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	BROMOFORM		0.50	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	BROMOMETHANE		1.0	UG/L	U	m

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB152-GW-060414-200-202	WG	CARBON DISULFIDE		0.50	UG/L	U	m
VPB152-GW-060414-200-202	WG	CARBON TETRACHLORIDE		0.50	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	CHLOROBENZENE		0.50	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	CHLOROETHANE		1.0	UG/L	U	m
VPB152-GW-060414-200-202	WG	CHLOROFORM		0.50	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	CHLOROMETHANE		1.0	UG/L	U	m
VPB152-GW-060414-200-202	WG	CIS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	CIS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	CYCLOHEXANE		0.50	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	DIBROMOCHLOROMETHANE		0.50	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	DICHLORODIFLUOROMETHANE		1.0	UG/L	U	m
VPB152-GW-060414-200-202	WG	ETHYLBENZENE		0.50	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	ISOPROPYLBENZENE		0.50	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	M- AND P-XYLENE		1.0	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	METHYL ACETATE		0.75	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	METHYL CYCLOHEXANE		0.50	UG/L	UJ	m,md
VPB152-GW-060414-200-202	WG	METHYL TERT-BUTYL ETHER	6.0	0.50	UG/L	J	m
VPB152-GW-060414-200-202	WG	METHYLENE CHLORIDE		2.5	UG/L	U	m
VPB152-GW-060414-200-202	WG	O-XYLENE		0.50	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	STYRENE		0.50	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	TETRACHLOROETHENE		0.50	UG/L	U	m
VPB152-GW-060414-200-202	WG	TOLUENE		0.50	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	TRANS-1,2-DICHLOROETHENE		0.50	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	TRANS-1,3-DICHLOROPROPENE		0.50	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	TRICHLOROETHENE		0.50	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	TRICHLOROFLUOROMETHANE		1.0	UG/L	UJ	m
VPB152-GW-060414-200-202	WG	VINYL CHLORIDE		1.0	UG/L	U	m
VPB152-GW-060414-200-202	WG	XYLENES, TOTAL		1.5	UG/L	UJ	m
VPB152-GW-060414-220-222	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	c
VPB152-GW-060414-220-222	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	c
VPB152-GW-060414-220-222	WG	ACETONE		2.5	UG/L	UJ	c
VPB152-GW-060414-220-222	WG	BROMOMETHANE		1.0	UG/L	UJ	c
VPB152-GW-060414-220-222	WG	CHLOROETHANE		1.0	UG/L	UJ	c
VPB152-GW-060414-220-222	WG	CHLOROMETHANE		1.0	UG/L	UJ	c
VPB152-GW-060414-220-222	WG	METHYL TERT-BUTYL ETHER	0.71	0.50	UG/L	J	c,s
VPB152-GW-060414-220-222	WG	TRICHLOROFLUOROMETHANE		1.0	UG/L	UJ	c
VPB152-GW-060514-240-242	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	c
VPB152-GW-060514-240-242	WG	2-HEXANONE		2.5	UG/L	UJ	c
VPB152-GW-060514-240-242	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	c
VPB152-GW-060514-240-242	WG	ACETONE	7.8	2.5	UG/L	J	c
VPB152-GW-060514-260-262	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	c
VPB152-GW-060514-260-262	WG	2-HEXANONE		2.5	UG/L	UJ	c
VPB152-GW-060514-260-262	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	c

Sample ID	Matrix	Compound	Result	LOD	Units	Validation Qualifiers	Validation Reason
VPB152-GW-060514-260-262	WG	ACETONE	12	2.5	UG/L	J	c
VPB152-GW-060514-280-282	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	c
VPB152-GW-060514-280-282	WG	2-HEXANONE		2.5	UG/L	UJ	c
VPB152-GW-060514-280-282	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	c
VPB152-GW-060514-280-282	WG	ACETONE	4.0	2.5	UG/L	J	c
VPB152-GW-060514-300-302	WG	1,2-DIBROMO-3-CHLOROPROPANE		0.75	UG/L	UJ	c
VPB152-GW-060514-300-302	WG	2-HEXANONE		2.5	UG/L	UJ	c
VPB152-GW-060514-300-302	WG	4-METHYL-2-PENTANONE		2.5	UG/L	UJ	c
VPB152-GW-060514-300-302	WG	ACETONE	3.2	2.5	UG/L	J	c

Attachment A

Nonconformance Summary Tables

Table A-1a - Initial Calibration Verification

ICAL	Compound	% RSD	Limit
WG143501 5/27/2014	CHLOROETHANE	17.2	< 15%
Associated samples: VPB152-GW-060314-58-60, VPB152-GW-060314-150-152, VPB152-GW-060414-220-222			

Table A-1b - Initial Calibration Verification

ICV	Compound	% R	Limit
WG143501-7 5/27/2014 GCMS-D	4-METHYL-2-PENTANONE	79.8	80-120%
	1,2-DIBROMO-3-CHLOROPROPANE	78.5	80-120%
Associated samples: VPB152-GW-060314-58-60, VPB152-GW-060314-150-152, VPB152-GW-060414-220-222			

Table A-1c - Initial Calibration Verification

ICV	Compound	% R	Limit
WG144515-7 GCMS-D 6/11/2014	ACETONE	125.4	80-120%
Associated samples: VPB152-GW-060514-300-302, VPB152-GW-060314-98-100, VPB152-GW-060514-260-262, VPB152-GW-060514-240-242, VPB152-GW-060514-280-282			

Table A-1d - Continuing Calibration Verification

CCV ID	Compound	% D	Limit
WG144345 6/9/2014 GCMS-D	CHLOROMETHANE	21.3	< 20%
	BROMOMETHANE	43.6	< 20%
	CHLOROETHANE	33.7	< 20%
	TRICHLOROFLUOROMETHANE	30.2	< 20%
	ACETONE	37.0	< 20%
	MTBE	23.3	< 20%
Associated samples: VPB152-GW-060314-58-60, VPB152-GW-060314-150-152, VPB152-GW-060414-220-222			

Table A-1e - Continuing Calibration Verification

CCV ID	Compound	% D	Limit
WG145718 GCMS-D 6/14/2014	4-METHYL-2-PENTANONE	21.2	< 20%
	2-HEXNONE	27.7	< 20%
	1,2-DIBROMO-3-CHLOROPROPANE	22.5	< 20%
Associated samples: VPB152-GW-060514-300-302, VPB152-GW-060314-98-100, VPB152-GW-060514-260-262, VPB152-GW-060514-240-242, VPB152-GW-060514-280-282			

Table A-2 - Surrogates

Sample ID	Surrogate	% Recovery	Lower Limit	Upper Limit
VPB152-GW-060314-150-152	1,2-DICHLOROETHANE-D4	125	70	120
VPB152-GW-060314-150-152	4-BROMOFLUOROBENZENE	72.7	75	120
VPB152-GW-060314-58-60	1,2-DICHLOROETHANE-D4	127	70	120
VPB152-GW-060414-220-222	1,2-DICHLOROETHANE-D4	134	70	120

Table A-3 - Matrix Spikes

Sample ID	Compound	MS % Recovery	MSD % Recovery	Lower Limit	Upper Limit	RPD	RPD Limit
VPB152-GW-060414-200-202	ETHYLBENZENE	51.2	59.6	75	125	15	30
VPB152-GW-060414-200-202	STYRENE	51.6	58.4	65	135	12	30
VPB152-GW-060414-200-202	CIS-1,3-DICHLOROPROPENE	46.8	54.2	70	130	15	30
VPB152-GW-060414-200-202	TRANS-1,3-DICHLOROPROPENE	50	57.8	55	140	14	30
VPB152-GW-060414-200-202	1,4-DICHLOROBENZENE	48	56.8	75	125	17	30
VPB152-GW-060414-200-202	1,2-DIBROMOETHANE	55	62.6	80	120	13	30
VPB152-GW-060414-200-202	1,2-DICHLOROETHANE	57	64	70	130	12	30
VPB152-GW-060414-200-202	4-METHYL-2-PENTANONE	44.8	54.8	60	135	20	30
VPB152-GW-060414-200-202	M- AND P-XYLENE	56.2	66.2	75	130	16	30
VPB152-GW-060414-200-202	METHYL CYCLOHEXANE	97.4	71.2	73	125	31	30
VPB152-GW-060414-200-202	TOLUENE	55	62.8	75	120	13	30
VPB152-GW-060414-200-202	CHLOROBENZENE	56.4	63.6	80	120	12	30
VPB152-GW-060414-200-202	CYCLOHEXANE	53	64.4	71	133	19	30
VPB152-GW-060414-200-202	1,2,4-TRICHLOROBENZENE	45	57.8	65	135	25	30
VPB152-GW-060414-200-202	DIBROMOCHLOROMETHANE	55.8	63.2	60	135	12	30
VPB152-GW-060414-200-202	XYLENES, TOTAL	55	64.7	89	116	16	30
VPB152-GW-060414-200-202	CIS-1,2-DICHLOROETHENE	54.8	63	70	125	14	30
VPB152-GW-060414-200-202	TRANS-1,2-DICHLOROETHENE	53.6	61.8	60	140	14	30
VPB152-GW-060414-200-202	METHYL TERT-BUTYL ETHER	65.1	59.5	65	125	8	30
VPB152-GW-060414-200-202	1,2-DICHLOROETHENE, TOTAL	54.2	62.5	84	121	14	30
VPB152-GW-060414-200-202	1,3-DICHLOROBENZENE	53.8	66.8	75	125	22	30
VPB152-GW-060414-200-202	CARBON TETRACHLORIDE	51.2	63	65	140	21	30
VPB152-GW-060414-200-202	2-HEXANONE	37.6	47.8	55	130	24	30

Sample ID	Compound	MS % Recovery	MSD % Recovery	Lower Limit	Upper Limit	RPD	RPD Limit
VPB152-GW-060414-200-202	CHLOROFORM	54	60	65	135	10	30
VPB152-GW-060414-200-202	BENZENE	54.8	62.6	80	120	13	30
VPB152-GW-060414-200-202	1,1,1-TRICHLOROETHANE	52.4	64.4	65	130	20	30
VPB152-GW-060414-200-202	BROMOFORM	48	54.6	70	130	13	30
VPB152-GW-060414-200-202	BROMODICHLOROMETHANE	58	65.8	75	120	13	30
VPB152-GW-060414-200-202	1,1-DICHLOROETHANE	56.5	62.9	70	135	10	30
VPB152-GW-060414-200-202	1,1-DICHLOROETHENE	54.6	62.8	70	130	14	30
VPB152-GW-060414-200-202	TRICHLOROFLUOROMETHANE	56.8	67.6	60	145	17	30
VPB152-GW-060414-200-202	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	88.8	65	73	126	31	30
VPB152-GW-060414-200-202	1,2-DICHLOROPROPANE	56.4	64.2	75	125	13	30
VPB152-GW-060414-200-202	1,1,2-TRICHLOROETHANE	56.2	64.4	75	125	14	30
VPB152-GW-060414-200-202	TRICHLOROETHENE	55.4	61.8	70	125	11	30
VPB152-GW-060414-200-202	METHYL ACETATE	94	69.6	70	132	30	30
VPB152-GW-060414-200-202	1,1,2,2-TETRACHLOROETHANE	56	64.8	65	130	14	30
VPB152-GW-060414-200-202	O-XYLENE	52.6	61.8	80	120	16	30
VPB152-GW-060414-200-202	1,2-DICHLOROBENZENE	55.6	67.2	70	120	19	30
VPB152-GW-060414-200-202	ISOPROPYLBENZENE	58.4	73	75	125	22	30

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

Report of Analytical Results

Client: ENSAFE
Lab ID: SH3956-1
Client ID: 152-060314-58-60
Project: Navy Clean WE15-03-06 NW
SDG: SH3956
Lab File ID: D8824.D

Sample Date: 03-JUN-14
Received Date: 06-JUN-14
Extract Date: 09-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144345

Analysis Date: 09-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-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	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 J	0.34	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: SH3956-1
Client ID: 152-060314-58-60
Project: Navy Clean WE15-03-06 NW
SDG: SH3956
Lab File ID: D8824.D

Sample Date: 03-JUN-14
Received Date: 06-JUN-14
Extract Date: 09-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144345

Analysis Date: 09-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U UJ	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		81.5	%					
Toluene-d8		96.6	%					
1,2-Dichloroethane-d4	*	127.	%					
Dibromofluoromethane		101.	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH3956-2RA
Client ID: 152-060314-98-100
Project: Navy Clean WE15-03-06 NW
SDG: SH3956
Lab File ID: D8935.D

Sample Date: 03-JUN-14
Received Date: 06-JUN-14
Extract Date: 14-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144718

Analysis Date: 14-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-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	4.4	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane		1.8	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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6/24/14

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH3956-2RA
Client ID: 152-060314-98-100
Project: Navy Clean WE15-03-06 NW
SDG: SH3956
Lab File ID: D8935.D

Sample Date: 03-JUN-14
Received Date: 06-JUN-14
Extract Date: 14-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144718

Analysis Date: 14-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-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		100.	%					
Toluene-d8		113.	%					
1,2-Dichloroethane-d4		111.	%					
Dibromofluoromethane		106.	%					

6/21/14

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH3956-3
Client ID: 152-060314-150-152
Project: Navy Clean WE15-03-06 NW
SDG: SH3956
Lab File ID: D8826.D

Sample Date: 03-JUN-14
Received Date: 06-JUN-14
Extract Date: 09-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144345

Analysis Date: 09-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UJ	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	J J	0.61	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U UJ	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	J UJ	2.7	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U UJ	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U UJ	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	J	2.0	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U UJ	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U UJ	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	J	2.2	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U UJ	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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12/2/14

Report of Analytical Results

Client: ENSAFE
Lab ID: SH3956-3
Client ID: 152-060314-150-152
Project: Navy Clean WE15-03-06 NW
SDG: SH3956
Lab File ID: D8826.D

Sample Date: 03-JUN-14
Received Date: 06-JUN-14
Extract Date: 09-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144345

Analysis Date: 09-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-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	*	72.7	%					
Toluene-d8		91.2	%					
1,2-Dichloroethane-d4	*	125.	%					
Dibromofluoromethane		102.	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH3956-4RA
Client ID: VPB152-GWD-060314
Project: Navy Clean WE15-03-06 NW
SDG: SH3956
Lab File ID: D8899.D

Sample Date: 03-JUN-14
Received Date: 06-JUN-14
Extract Date: 12-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144586

Analysis Date: 12-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-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	J	2.8	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane		1.9	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		1.9	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: SH3956-4RA
Client ID: VPB152-GWD-060314
Project: Navy Clean WE15-03-06 NW
SDG: SH3956
Lab File ID: D8899.D

Sample Date: 03-JUN-14
Received Date: 06-JUN-14
Extract Date: 12-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144586

Analysis Date: 12-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		99.2	%					
Toluene-d8		110.	%					
1,2-Dichloroethane-d4		117.	%					
Dibromofluoromethane		108.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH3956-5RA
Client ID: 152-060414-200-202
Project: Navy Clean WE15-03-06 NW
SDG: SH3956
Lab File ID: D8900.D

Sample Date: 04-JUN-14
Received Date: 06-JUN-14
Extract Date: 12-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144586

Analysis Date: 12-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-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	UM	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	UMM	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	UM	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	UM UJ	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	M J	6.0	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	JMM J	0.93	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	UMM UJ	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	UMM	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	UMM	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	UMM	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	UMM	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	UMM	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	UMM	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	UMM	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	UMM	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	UMM	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	UMM	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	UMM	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	UMM	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	UM	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	UMM	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	UM	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	UMM	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	UMM	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	UMM	0.50	ug/L	1	1	1.0	0.21	0.50

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH3956-5RA
Client ID: 152-060414-200-202
Project: Navy Clean WE15-03-06 NW
SDG: SH3956
Lab File ID: D8900.D

Sample Date: 04-JUN-14
Received Date: 06-JUN-14
Extract Date: 12-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144586

Analysis Date: 12-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	UMM UJ	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	UMM	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	UMM	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	UMM	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	UMM	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	UMM	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	UMM	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	UMM	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	UMM	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	UM	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	UM	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	UMM	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	UMM	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	UMM	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	UMM	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		99.8	%					
Toluene-d8		112.	%					
1,2-Dichloroethane-d4		114.	%					
Dibromofluoromethane		107.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH3956-6
Client ID: 152-060414-220-222
Project: Navy Clean WE15-03-06 NW
SDG: SH3956
Lab File ID: D8829.D

Sample Date: 04-JUN-14
Received Date: 06-JUN-14
Extract Date: 09-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144345

Analysis Date: 09-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-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 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~~ UJ	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~~ UJ	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~~ 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	J J	0.71	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	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: SH3956-6
Client ID: 152-060414-220-222
Project: Navy Clean WE15-03-06 NW
SDG: SH3956
Lab File ID: D8829.D

Sample Date: 04-JUN-14
Received Date: 06-JUN-14
Extract Date: 09-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144345

Analysis Date: 09-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-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		75.7	%					
Toluene-d8		96.0	%					
1,2-Dichloroethane-d4	*	134.	%					
Dibromofluoromethane		107.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH3956-7RA
Client ID: 152-060514-240-242
Project: Navy Clean WE15-03-06 NW
SDG: SH3956
Lab File ID: D8938.D

Sample Date: 05-JUN-14
Received Date: 06-JUN-14
Extract Date: 14-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144718

Analysis Date: 14-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-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	7.8	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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Report of Analytical Results

Client: ENSAFE
Lab ID: SH3956-7RA
Client ID: 152-060514-240-242
Project: Navy Clean WE15-03-06 NW
SDG: SH3956
Lab File ID: D8938.D

Sample Date: 05-JUN-14
Received Date: 06-JUN-14
Extract Date: 14-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144718

Analysis Date: 14-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-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		102.	%					
Toluene-d8		113.	%					
1,2-Dichloroethane-d4		110.	%					
Dibromofluoromethane		104.	%					

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Cert No E87604

Report of Analytical Results

Client: ENSAFE
Lab ID: SH3956-8RA
Client ID: 152-060514-260-262
Project: Navy Clean WE15-03-06 NW
SDG: SH3956
Lab File ID: D8936.D

Sample Date: 05-JUN-14
Received Date: 06-JUN-14
Extract Date: 14-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144718

Analysis Date: 14-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-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	12	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		6.1	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: SH3956-8RA
Client ID: 152-060514-260-262
Project: Navy Clean WE15-03-06 NW
SDG: SH3956
Lab File ID: D8936.D

Sample Date: 05-JUN-14
Received Date: 06-JUN-14
Extract Date: 14-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144718

Analysis Date: 14-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-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		105.	%					
Toluene-d8		117.	%					
1,2-Dichloroethane-d4		116.	%					
Dibromofluoromethane		112.	%					

6/21/14

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Cert No E87604

Report of Analytical Results

Client: ENSAFE
Lab ID: SH3956-9RA
Client ID: 152-060514-280-282
Project: Navy Clean WE15-03-06 NW
SDG: SH3956
Lab File ID: D8939.D

Sample Date: 05-JUN-14
Received Date: 06-JUN-14
Extract Date: 14-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144718

Analysis Date: 14-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-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	4.0	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~~ 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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ANALYTICAL SERVICES

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH3956-9RA
Client ID: 152-060514-280-282
Project: Navy Clean WE15-03-06 NW
SDG: SH3956
Lab File ID: D8939.D

Sample Date: 05-JUN-14
Received Date: 06-JUN-14
Extract Date: 14-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144718

Analysis Date: 14-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-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		100.	%					
Toluene-d8		112.	%					
1,2-Dichloroethane-d4		112.	%					
Dibromofluoromethane		108.	%					

11/11/14

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH3956-10RA
Client ID: 152-060514-300-302
Project: Navy Clean WE15-03-06 NW
SDG: SH3956
Lab File ID: D8934.D

Sample Date: 05-JUN-14
Received Date: 06-JUN-14
Extract Date: 14-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144718

Analysis Date: 14-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-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	3.2	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		6.3	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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6/11/14

Report of Analytical Results

Client: ENSAFE
Lab ID: SH3956-10RA
Client ID: 152-060514-300-302
Project: Navy Clean WE15-03-06 NW
SDG: SH3956
Lab File ID: D8934.D

Sample Date: 05-JUN-14
Received Date: 06-JUN-14
Extract Date: 14-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144718

Analysis Date: 14-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-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		100.	%					
Toluene-d8		110.	%					
1,2-Dichloroethane-d4		106.	%					
Dibromofluoromethane		102.	%					

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH3956-11RA
Client ID: VPB152-TB-060514
Project: Navy Clean WE15-03-06 NW
SDG: SH3956
Lab File ID: D8897.D

Sample Date: 05-JUN-14
Received Date: 06-JUN-14
Extract Date: 12-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144586

Analysis Date: 12-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-14

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

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Report of Analytical Results

Client: ENSAFE
Lab ID: SH3956-11RA
Client ID: VPB152-TB-060514
Project: Navy Clean WE15-03-06 NW
SDG: SH3956
Lab File ID: D8897.D

Sample Date: 05-JUN-14
Received Date: 06-JUN-14
Extract Date: 12-JUN-14
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG144586

Analysis Date: 12-JUN-14
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Xylenes (total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
M+P-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
1,2-Dichloroethylene (Total)	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,2-Dibromo-3-Chloropropane	U	0.75	ug/L	1	1	1.0	0.50	0.75
P-Bromofluorobenzene		106.	%					
Toluene-d8		119.	%					
1,2-Dichloroethane-d4	*	124.	%					
Dibromofluoromethane	*	115.	%					

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Section 5

VPB 152 Analytical Data Table

Vertical Profile Boring 152 Analytical Data Table
Naval Weapons Industrial Reserve Plant
Bethpage - Bethpage, New York

Resolution Consultants

Location		VPB152	VPB152	VPB152	VPB152
Sample Date	NYSDEC Groundwater Guidance or Standard Value (Note 1)	6/3/2014	6/3/2014	6/3/2014	6/3/2014
Sample ID		VPB152-GW-060314-58-60	VPB152-GW-060314-98-100	VPB152-GW-060314-150-152	VPB152-GWD-060314
Sample Interval		58 - 60 ft	98 - 100 ft	150 - 152 ft	150 - 152 ft
Sample type code		N	N	N	FD
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	< 0.50 UJ	< 0.50 U	**2.2 J**	**1.9**
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	**1.8**	**2.0 J**	**1.9**
1,1-DICHLOROETHENE	5	< 0.50 UJ	< 0.50 U	**0.61 J**	**0.54 J**
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 UJ***	***< 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 UJ	< 2.5 UJ	< 2.5 U
4-METHYL-2-PENTANONE	NL	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ	< 2.5 U
ACETONE	50	**16 J**	**4.4 J**	**2.7 J**	**2.8 J**
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 U	< 1.0 UJ	< 1.0 U
CARBON DISULFIDE	60	< 0.50 UJ	< 0.50 U	< 0.50 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 U	< 1.0 UJ	< 1.0 U
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	**0.34 J**	< 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	< 0.50 UJ	< 0.50 U	< 0.50 UJ	< 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		VPB152	VPB152	VPB152	VPB152
Sample Date	NYSDEC Groundwater Guidance or Standard Value (Note 1)	6/4/2014	6/4/2014	6/5/2014	6/5/2014
Sample ID		VPB152-GW-060414-200-202	VPB152-GW-060414-220-222	VPB152-GW-060514-240-242	VPB152-GW-060514-260-262
Sample Interval		200 - 202 ft	220 - 222 ft	240 - 242 ft	260 - 262 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 U	< 0.50 U
1,1,2,2-TETRACHLOROETHANE	5	< 0.50 UJ	< 0.50 U	< 0.50 U	< 0.50 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	< 0.50 UJ	< 0.50 U	< 0.50 U	< 0.50 U
1,1,2-TRICHLOROETHANE	1	< 0.50 UJ	< 0.50 U	< 0.50 U	< 0.50 U
1,1-DICHLOROETHANE	5	**0.93 J**	< 0.50 U	< 0.50 U	< 0.50 U
1,1-DICHLOROETHENE	5	< 0.50 UJ	< 0.50 U	< 0.50 U	< 0.50 U
1,2,4-TRICHLOROBENZENE	5	< 0.50 UJ	< 0.50 U	< 0.50 U	< 0.50 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***< 0.75 U***	***< 0.75 UJ***	***< 0.75 UJ***	***< 0.75 UJ***
1,2-DIBROMOETHANE	NL	< 0.50 UJ	< 0.50 U	< 0.50 U	< 0.50 U
1,2-DICHLOROBENZENE	3	< 0.50 UJ	< 0.50 U	< 0.50 U	< 0.50 U
1,2-DICHLOROETHANE	5	< 0.50 UJ	< 0.50 U	< 0.50 U	< 0.50 U
1,2-DICHLOROETHENE, TOTAL	5	< 1.0 UJ	< 1.0 U	< 1.0 U	< 1.0 U
1,2-DICHLOROPROPANE	1	< 0.50 UJ	< 0.50 U	< 0.50 U	< 0.50 U
1,3-DICHLOROBENZENE	3	< 0.50 UJ	< 0.50 U	< 0.50 U	< 0.50 U
1,4-DICHLOROBENZENE	3	< 0.50 UJ	< 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 U	< 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	**8.2 J**	< 2.5 UJ	**7.8 J**	**12 J**
BENZENE	1	< 0.50 UJ	< 0.50 U	< 0.50 U	< 0.50 U
BROMODICHLOROMETHANE	50	< 0.50 UJ	< 0.50 U	< 0.50 U	< 0.50 U
BROMOFORM	50	< 0.50 UJ	< 0.50 U	< 0.50 U	< 0.50 U
BROMOMETHANE	5	< 1.0 U	< 1.0 UJ	< 1.0 U	< 1.0 U
CARBON DISULFIDE	60	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CARBON TETRACHLORIDE	5	< 0.50 UJ	< 0.50 U	< 0.50 U	< 0.50 U
CHLOROBENZENE	5	< 0.50 UJ	< 0.50 U	< 0.50 U	< 0.50 U
CHLOROETHANE	5	< 1.0 U	< 1.0 UJ	< 1.0 U	< 1.0 U
CHLOROFORM	7	< 0.50 UJ	< 0.50 U	< 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 UJ	< 0.50 U	< 0.50 U	< 0.50 U
CIS-1,3-DICHLOROPROPENE	0.4	***< 0.50 UJ***	***< 0.50 U***	***< 0.50 U***	***< 0.50 U***
CYCLOHEXANE	NL	< 0.50 UJ	< 0.50 U	< 0.50 U	< 0.50 U
DIBROMOCHLOROMETHANE	5	< 0.50 UJ	< 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 UJ	< 0.50 U	< 0.50 U	< 0.50 U
ISOPROPYLBENZENE	5	< 0.50 UJ	< 0.50 U	< 0.50 U	< 0.50 U
M- AND P-XYLENE	NL	< 1.0 UJ	< 1.0 U	< 1.0 U	< 1.0 U
METHYL ACETATE	NL	< 0.75 UJ	< 0.75 U	< 0.75 U	< 0.75 U
METHYL CYCLOHEXANE	NL	< 0.50 UJ	< 0.50 U	< 0.50 U	< 0.50 U
METHYL TERT-BUTYL ETHER	10	**6.0 J**	**0.71 J**	< 0.50 U	**6.1**
METHYLENE CHLORIDE	5	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
O-XYLENE	NL	< 0.50 UJ	< 0.50 U	< 0.50 U	< 0.50 U
STYRENE	5	< 0.50 UJ	< 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 UJ	< 0.50 U	< 0.50 U	< 0.50 U
TRANS-1,2-DICHLOROETHENE	5	< 0.50 UJ	< 0.50 U	< 0.50 U	< 0.50 U
TRANS-1,3-DICHLOROPROPENE	0.4	***< 0.50 UJ***	***< 0.50 U***	***< 0.50 U***	***< 0.50 U***
TRICHLOROETHENE	5	< 0.50 UJ	< 0.50 U	< 0.50 U	< 0.50 U
TRICHLOROFLUOROMETHANE	5	< 1.0 UJ	< 1.0 UJ	< 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 UJ	< 1.5 U	< 1.5 U	< 1.5 U

Location		VPB152	VPB152	VPB152	VPB152
Sample Date	NYSDEC Groundwater Guidance or Standard Value (Note 1)	6/5/2014	6/5/2014	6/6/2014	6/6/2014
Sample ID		VPB152-GW-060514-280-282	VPB152-GW-060514-300-302	VPB152-GW-060614-320-322	VPB152-GW-060614-345-347
Sample Interval		280 - 282 ft	300 - 302 ft	320 - 322 ft	345 - 347 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 UJ***	***< 0.75 UJ***	***< 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 UJ	< 2.5 UJ	< 2.5 U	< 2.5 U
4-METHYL-2-PENTANONE	NL	< 2.5 UJ	< 2.5 UJ	< 2.5 U	< 2.5 U
ACETONE	50	**4.0 J**	**3.2 J**	**5.3 J**	**4.4 J**
BENZENE	1	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
BROMODICHLOROMETHANE	50	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
BROMOFORM	50	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
BROMOMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
CARBON DISULFIDE	60	< 0.50 U	< 0.50 U	**0.26 J**	**0.42 J**
CARBON TETRACHLORIDE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CHLOROBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CHLOROETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
CHLOROFORM	7	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CHLOROMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
CIS-1,2-DICHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CIS-1,3-DICHLOROPROPENE	0.4	***< 0.50 U***	***< 0.50 U***	***< 0.50 U***	***< 0.50 U***
CYCLOHEXANE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
DIBROMOCHLOROMETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
DICHLORODIFLUOROMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
ETHYLBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
ISOPROPYLBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
M- AND P-XYLENE	NL	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
METHYL ACETATE	NL	< 0.75 U	< 0.75 U	< 0.75 U	< 0.75 U
METHYL CYCLOHEXANE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
METHYL TERT-BUTYL ETHER	10	< 0.50 U	**6.3**	**11**	< 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		VPB152	VPB152	VPB152	VPB152
Sample Date	NYSDEC Groundwater Guidance or Standard Value (Note 1)	6/6/2014	6/9/2014	6/9/2014	6/9/2014
Sample ID		VPB152-GW-060914-360-362	VPB152-GW-060914-380-382	VPB152-GW-060914-400-402	VPB152-GW-060914-420-422
Sample Interval		360 - 362 ft	380 - 382 ft	400 - 402 ft	420 - 422 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	**9.9 J**	**6.9 J**	< 2.5 U	**3.1 J**
BENZENE	1	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
BROMODICHLOROMETHANE	50	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
BROMOFORM	50	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
BROMOMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
CARBON DISULFIDE	60	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CARBON TETRACHLORIDE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CHLOROBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CHLOROETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
CHLOROFORM	7	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CHLOROMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
CIS-1,2-DICHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CIS-1,3-DICHLOROPROPENE	0.4	***< 0.50 U***	***< 0.50 U***	***< 0.50 U***	***< 0.50 U***
CYCLOHEXANE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
DIBROMOCHLOROMETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
DICHLORODIFLUOROMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
ETHYLBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
ISOPROPYLBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
M- AND P-XYLENE	NL	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
METHYL ACETATE	NL	< 0.75 U	< 0.75 U	< 0.75 U	< 0.75 U
METHYL CYCLOHEXANE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
METHYL TERT-BUTYL ETHER	10	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
METHYLENE CHLORIDE	5	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
O-XYLENE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
STYRENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TETRACHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TOLUENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TRANS-1,2-DICHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TRANS-1,3-DICHLOROPROPENE	0.4	***< 0.50 U***	***< 0.50 U***	***< 0.50 U***	***< 0.50 U***
TRICHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TRICHLOROFLUOROMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
VINYL CHLORIDE	2	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
XYLENES, TOTAL	5	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U

Location		VPB152	VPB152	VPB152	VPB152
Sample Date	NYSDEC Groundwater Guidance or Standard Value (Note 1)	6/10/2014	6/10/2014	6/10/2014	6/10/2014
Sample ID		VPB152-GW-061014-440-442	VPB152-GW-061014-460-462	VPB152-GW-061014-480-482	VPB152-GW-061014-500-502
Sample Interval		440 - 442 ft	460 - 462 ft	480 - 482 ft	500 - 502 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 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	< 0.50 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 UJ
4-METHYL-2-PENTANONE	NL	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 UJ
ACETONE	50	< 5.0 U	< 2.5 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	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CHLOROBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CHLOROETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
CHLOROFORM	7	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CHLOROMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
CIS-1,2-DICHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CIS-1,3-DICHLOROPROPENE	0.4	***< 0.50 U***	***< 0.50 U***	***< 0.50 U***	***< 0.50 U***
CYCLOHEXANE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
DIBROMOCHLOROMETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
DICHLORODIFLUOROMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
ETHYLBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
ISOPROPYLBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
M- AND P-XYLENE	NL	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
METHYL ACETATE	NL	< 0.75 U	< 0.75 U	< 0.75 U	< 0.75 U
METHYL CYCLOHEXANE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
METHYL TERT-BUTYL ETHER	10	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
METHYLENE CHLORIDE	5	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
O-XYLENE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
STYRENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TETRACHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TOLUENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TRANS-1,2-DICHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TRANS-1,3-DICHLOROPROPENE	0.4	***< 0.50 U***	***< 0.50 U***	***< 0.50 U***	***< 0.50 U***
TRICHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TRICHLOROFLUOROMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
VINYL CHLORIDE	2	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
XYLENES, TOTAL	5	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U

Location		VPB152	VPB152	VPB152	VPB152
Sample Date	NYSDEC Groundwater Guidance or Standard Value (Note 1)	6/11/2014	6/11/2014	6/11/2014	6/12/2014
Sample ID		VPB152-GW-061114-520-522	VPB152-GW-061114-540-542	VPB152-GW-061114-560-562	VPB152-GW-061214-580-582
Sample Interval		520 - 522 ft	540 - 542 ft	560 - 562 ft	580 - 582 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	< 5.0 U	< 2.5 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	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CHLOROBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CHLOROETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
CHLOROFORM	7	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CHLOROMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
CIS-1,2-DICHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CIS-1,3-DICHLOROPROPENE	0.4	***< 0.50 U***	***< 0.50 U***	***< 0.50 U***	***< 0.50 U***
CYCLOHEXANE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
DIBROMOCHLOROMETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
DICHLORODIFLUOROMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
ETHYLBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
ISOPROPYLBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
M- AND P-XYLENE	NL	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
METHYL ACETATE	NL	< 0.75 U	< 0.75 U	< 0.75 U	< 0.75 U
METHYL CYCLOHEXANE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
METHYL TERT-BUTYL ETHER	10	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
METHYLENE CHLORIDE	5	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
O-XYLENE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
STYRENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TETRACHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TOLUENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TRANS-1,2-DICHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TRANS-1,3-DICHLOROPROPENE	0.4	***< 0.50 U***	***< 0.50 U***	***< 0.50 U***	***< 0.50 U***
TRICHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TRICHLOROFLUOROMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
VINYL CHLORIDE	2	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
XYLENES, TOTAL	5	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U

Location		VPB152	VPB152	VPB152	VPB152
Sample Date	NYSDEC Groundwater Guidance or Standard Value (Note 1)	6/12/2014	6/13/2014	6/13/2014	6/13/2014
Sample ID		VPB152-GW-061214-605-607	VPB152-GW-061314-620-622	VPB152-GW-061314-640-642	VPB152-GWD-061314
Sample Interval		605 - 607 ft	620 - 622 ft	640 - 642 ft	640 - 642 ft
Sample type code		N	N	N	FD
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 UJ	< 2.5 UJ
2-HEXANONE	50	< 2.5 U	< 2.5 UJ	< 2.5 U	< 2.5 U
4-METHYL-2-PENTANONE	NL	< 2.5 U	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ
ACETONE	50	< 2.5 U	**14 J**	**7.0 J**	**9.5 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 U	< 1.0 UJ	< 1.0 U	< 1.0 U
CARBON DISULFIDE	60	< 0.50 U	**0.40 J**	< 1.0 U	< 1.0 U
CARBON TETRACHLORIDE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
CHLOROBENZENE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
CHLOROETHANE	5	< 1.0 U	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ
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 UJ	< 1.0 UJ
ETHYLBENZENE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
ISOPROPYLBENZENE	5	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
M- AND P-XYLENE	NL	< 1.0 U	< 1.0 UJ	< 1.0 U	< 1.0 U
METHYL ACETATE	NL	< 0.75 U	< 0.75 UJ	< 0.75 U	< 0.75 U
METHYL CYCLOHEXANE	NL	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
METHYL TERT-BUTYL ETHER	10	< 0.50 U	< 0.50 UJ	< 0.50 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	**3.7 J**	**0.72 J**	**0.79 J**
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		VPB152	VPB152	VPB152	VPB152
Sample Date	NYSDEC Groundwater Guidance or Standard Value (Note 1)	6/16/2014	6/16/2014	6/16/2014	6/17/2014
Sample ID		VPB152-GW-061614-660-662	VPB152-GW-061614-680-682	VPB152-GW-061614-700-702	VPB152-GW-061714-725-727
Sample Interval		660 - 662 ft	680 - 682 ft	700 - 702 ft	725 - 727 ft
Sample type code		N	N	N	N
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	< 0.50 U	< 0.50 U	***< 50 UJ***	***< 25 UJ***
1,1,2,2-TETRACHLOROETHANE	5	< 0.50 U	< 0.50 U	***< 50 UJ***	***< 25 UJ***
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	< 0.50 U	< 0.50 U	***< 50 UJ***	***< 25 UJ***
1,1,2-TRICHLOROETHANE	1	< 0.50 U	< 0.50 U	***< 50 UJ***	***< 25 UJ***
1,1-DICHLOROETHANE	5	< 0.50 U	< 0.50 U	***< 50 UJ***	***< 25 UJ***
1,1-DICHLOROETHENE	5	< 0.50 U	< 0.50 U	***< 50 UJ***	***< 25 UJ***
1,2,4-TRICHLOROBENZENE	5	< 0.50 U	< 0.50 U	***< 50 UJ***	***< 25 UJ***
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***< 0.75 U***	***< 0.75 U***	***< 75 UJ***	***< 38 UJ***
1,2-DIBROMOETHANE	NL	< 0.50 U	< 0.50 U	< 50 UJ	< 25 UJ
1,2-DICHLOROBENZENE	3	< 0.50 U	< 0.50 U	***< 50 UJ***	***< 25 UJ***
1,2-DICHLOROETHANE	5	< 0.50 U	< 0.50 U	***< 50 UJ***	***< 25 UJ***
1,2-DICHLOROETHENE, TOTAL	5	< 1.0 U	< 1.0 U	***< 100 UJ***	***< 50 UJ***
1,2-DICHLOROPROPANE	1	< 0.50 U	< 0.50 U	***< 50 UJ***	***< 25 UJ***
1,3-DICHLOROBENZENE	3	< 0.50 U	< 0.50 U	***< 50 UJ***	***< 25 UJ***
1,4-DICHLOROBENZENE	3	< 0.50 U	< 0.50 U	***< 50 UJ***	***< 25 UJ***
2-BUTANONE	50	< 2.5 UJ	**4.8 J**	***< 250 UJ***	***< 120 UJ***
2-HEXANONE	50	< 2.5 U	< 2.5 U	***< 250 UJ***	***< 120 UJ***
4-METHYL-2-PENTANONE	NL	< 2.5 UJ	< 2.5 UJ	< 250 UJ	< 120 UJ
ACETONE	50	**8.4 J**	**22 J**	***< 250 UJ***	***< 120 UJ***
BENZENE	1	< 0.50 U	< 0.50 U	***< 50 UJ***	***< 25 UJ***
BROMODICHLOROMETHANE	50	< 0.50 U	< 0.50 U	< 50 UJ	< 25 UJ
BROMOFORM	50	< 0.50 U	< 0.50 U	< 50 UJ	< 25 UJ
BROMOMETHANE	5	< 1.0 U	< 1.0 U	***< 100 UJ***	***< 50 UJ***
CARBON DISULFIDE	60	< 0.50 U	< 1.0 U	< 50 UJ	< 25 UJ
CARBON TETRACHLORIDE	5	< 0.50 U	< 0.50 U	***< 50 UJ***	***< 25 UJ***
CHLOROBENZENE	5	< 0.50 U	< 0.50 U	***< 50 UJ***	***< 25 UJ***
CHLOROETHANE	5	< 1.0 UJ	< 1.0 UJ	***< 100 UJ***	***< 50 UJ***
CHLOROFORM	7	< 0.50 U	< 0.50 U	***< 50 UJ***	***< 25 UJ***
CHLOROMETHANE	5	< 1.0 U	< 1.0 U	***< 100 UJ***	***< 50 UJ***
CIS-1,2-DICHLOROETHENE	5	< 0.50 U	< 0.50 U	***< 50 UJ***	***< 25 UJ***
CIS-1,3-DICHLOROPROPENE	0.4	***< 0.50 U***	***< 0.50 U***	***< 50 UJ***	***< 25 UJ***
CYCLOHEXANE	NL	< 0.50 U	< 0.50 U	< 50 UJ	< 25 UJ
DIBROMOCHLOROMETHANE	5	< 0.50 U	< 0.50 U	***< 50 UJ***	***< 25 UJ***
DICHLORODIFLUOROMETHANE	5	< 1.0 UJ	< 1.0 UJ	***< 100 UJ***	***< 50 UJ***
ETHYLBENZENE	5	< 0.50 U	< 0.50 U	***< 50 UJ***	***< 25 UJ***
ISOPROPYLBENZENE	5	< 0.50 U	< 0.50 U	***< 50 UJ***	***< 25 UJ***
M- AND P-XYLENE	NL	< 1.0 U	< 1.0 U	< 100 UJ	< 50 UJ
METHYL ACETATE	NL	< 0.75 U	< 0.75 U	< 75 UJ	< 38 UJ
METHYL CYCLOHEXANE	NL	< 0.50 U	< 0.50 U	< 50 UJ	< 25 UJ
METHYL TERT-BUTYL ETHER	10	< 0.50 U	< 0.50 U	***< 50 UJ***	***< 25 UJ***
METHYLENE CHLORIDE	5	< 2.5 U	< 2.5 U	***< 500 UJ***	**67 J**
O-XYLENE	NL	< 0.50 U	< 0.50 U	< 50 UJ	< 25 UJ
STYRENE	5	< 0.50 U	< 0.50 U	***< 50 UJ***	***< 25 UJ***
TETRACHLOROETHENE	5	< 0.50 U	< 0.50 U	***< 50 UJ***	***< 25 UJ***
TOLUENE	5	**0.52 J**	**0.69 J**	***< 50 UJ***	***< 25 UJ***
TRANS-1,2-DICHLOROETHENE	5	< 0.50 U	< 0.50 U	***< 50 UJ***	***< 25 UJ***
TRANS-1,3-DICHLOROPROPENE	0.4	***< 0.50 U***	***< 0.50 U***	***< 50 UJ***	***< 25 UJ***
TRICHLOROETHENE	5	< 0.50 U	< 0.50 U	***< 50 UJ***	***< 25 UJ***
TRICHLOROFLUOROMETHANE	5	< 1.0 U	< 1.0 U	***< 100 UJ***	***< 50 UJ***
VINYL CHLORIDE	2	< 1.0 U	< 1.0 U	***< 100 UJ***	***< 50 UJ***
XYLENES, TOTAL	5	< 1.5 U	< 1.5 U	***< 150 UJ***	***< 75 UJ***

Location		VPB152	VPB152	VPB152	VPB152
Sample Date	NYSDEC Groundwater Guidance or Standard Value (Note 1)	6/17/2014	6/19/2014	6/19/2014	6/20/2014
Sample ID		VPB152-GW-061714-740-742	VPB152-GW-061914-780-782	VPB152-GW-061914-800-802	VPB152-GW-062014-830-832
Sample Interval		740 - 742 ft	780 - 782 ft	800 - 802 ft	830 - 832 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	**2.1 J**	< 2.5 UJ	< 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	**11 J**	**7.5 J**	**11 J**	**10 J**
BENZENE	1	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
BROMODICHLOROMETHANE	50	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
BROMOFORM	50	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
BROMOMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
CARBON DISULFIDE	60	< 0.50 U	< 0.50 U	< 1.0 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	< 0.50 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 UJ
DIBROMOCHLOROMETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
DICHLORODIFLUOROMETHANE	5	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ
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	**5.6**	< 0.50 U	< 0.50 U	**3.5**
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 UJ
VINYL CHLORIDE	2	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 UJ
XYLENES, TOTAL	5	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U

Location		VPB152	VPB152	VPB152	VPB152
Sample Date	NYSDEC Groundwater Guidance or Standard Value (Note 1)	6/23/2014	6/24/2014	6/24/2014	6/25/2014
Sample ID		VPB152-GW-062314-850-852	VPB152-GW-062414-870-872	VPB152-GW-062414-880-882	VPB152-GW-062514-910-912
Sample Interval		850 - 852 ft	870 - 872 ft	880 - 882 ft	910 - 912 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 UJ	< 0.50 UJ
1,1,2,2-TETRACHLOROETHANE	5	< 0.50 U	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	< 0.50 U	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
1,1,2-TRICHLOROETHANE	1	< 0.50 U	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
1,1-DICHLOROETHANE	5	< 0.50 U	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
1,1-DICHLOROETHENE	5	< 0.50 U	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
1,2,4-TRICHLOROBENZENE	5	< 0.50 U	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***< 0.75 U***	***< 0.75 UJ***	***< 0.75 UJ***	***< 0.75 UJ***
1,2-DIBROMOETHANE	NL	< 0.50 U	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
1,2-DICHLOROBENZENE	3	< 0.50 U	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
1,2-DICHLOROETHANE	5	< 0.50 U	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
1,2-DICHLOROETHENE, TOTAL	5	< 1.0 U	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ
1,2-DICHLOROPROPANE	1	< 0.50 U	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
1,3-DICHLOROBENZENE	3	< 0.50 U	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
1,4-DICHLOROBENZENE	3	< 0.50 U	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
2-BUTANONE	50	< 2.5 UJ	< 2.5 UJ	< 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	**7.7 J**	< 5.0 UJ	< 13 UJ	< 5.0 UJ
BENZENE	1	< 0.50 U	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
BROMODICHLOROMETHANE	50	< 0.50 U	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
BROMOFORM	50	< 0.50 U	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
BROMOMETHANE	5	< 1.0 U	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ
CARBON DISULFIDE	60	< 0.50 U	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
CARBON TETRACHLORIDE	5	< 0.50 U	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
CHLOROBENZENE	5	< 0.50 U	< 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 U	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
CHLOROMETHANE	5	< 1.0 U	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ
CIS-1,2-DICHLOROETHENE	5	< 0.50 U	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
CIS-1,3-DICHLOROPROPENE	0.4	***< 0.50 U***	***< 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 U	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
DICHLORODIFLUOROMETHANE	5	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ
ETHYLBENZENE	5	< 0.50 U	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
ISOPROPYLBENZENE	5	< 0.50 U	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
M- AND P-XYLENE	NL	< 1.0 U	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ
METHYL ACETATE	NL	< 0.75 U	< 0.75 UJ	< 0.75 UJ	< 0.75 UJ
METHYL CYCLOHEXANE	NL	< 0.50 U	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
METHYL TERT-BUTYL ETHER	10	< 0.50 U	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
METHYLENE CHLORIDE	5	< 2.5 U	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ
O-XYLENE	NL	< 0.50 U	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
STYRENE	5	< 0.50 U	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
TETRACHLOROETHENE	5	< 0.50 U	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
TOLUENE	5	< 0.50 U	< 0.50 UJ	**1.4 J**	< 0.50 UJ
TRANS-1,2-DICHLOROETHENE	5	< 0.50 U	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
TRANS-1,3-DICHLOROPROPENE	0.4	***< 0.50 U***	***< 0.50 UJ***	***< 0.50 UJ***	***< 0.50 UJ***
TRICHLOROETHENE	5	< 0.50 U	< 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 U	< 1.5 UJ	< 1.5 UJ	< 1.5 UJ

Location		VPB152	VPB152
Sample Date	NYSDEC Groundwater Guidance or Standard Value (Note 1)	6/26/2014	6/27/2014
Sample ID		VPB152-GW-062614-930-932	VPB152-GW-062714-950-952
Sample Interval		930 - 932 ft	950 - 952 ft
Sample type code		N	N
VOC 8260C (ug/L)			
1,1,1-TRICHLOROETHANE	5	< 1.0 UJ	< 1.0 UJ
1,1,2,2-TETRACHLOROETHANE	5	< 1.0 UJ	< 1.0 UJ
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	< 1.0 UJ	< 1.0 UJ
1,1,2-TRICHLOROETHANE	1	< 1.0 UJ	< 1.0 UJ
1,1-DICHLOROETHANE	5	< 1.0 UJ	< 1.0 UJ
1,1-DICHLOROETHENE	5	< 1.0 UJ	< 1.0 UJ
1,2,4-TRICHLOROBENZENE	5	< 1.0 UJ	< 1.0 UJ
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***< 1.5 UJ***	***< 1.5 UJ***
1,2-DIBROMOETHANE	NL	< 1.0 UJ	< 1.0 UJ
1,2-DICHLOROBENZENE	3	< 1.0 UJ	< 1.0 UJ
1,2-DICHLOROETHANE	5	< 1.0 UJ	< 1.0 UJ
1,2-DICHLOROETHENE, TOTAL	5	< 2.0 UJ	< 2.0 UJ
1,2-DICHLOROPROPANE	1	< 1.0 UJ	< 1.0 UJ
1,3-DICHLOROBENZENE	3	< 1.0 UJ	< 1.0 UJ
1,4-DICHLOROBENZENE	3	< 1.0 UJ	< 1.0 UJ
2-BUTANONE	50	< 5.0 UJ	< 5.0 UJ
2-HEXANONE	50	< 5.0 UJ	< 5.0 UJ
4-METHYL-2-PENTANONE	NL	< 5.0 UJ	< 5.0 UJ
ACETONE	50	< 32 UJ	**46 J**
BENZENE	1	< 1.0 UJ	< 1.0 UJ
BROMODICHLOROMETHANE	50	< 1.0 UJ	< 1.0 UJ
BROMOFORM	50	< 1.0 UJ	< 1.0 UJ
BROMOMETHANE	5	< 2.0 UJ	< 2.0 UJ
CARBON DISULFIDE	60	< 1.0 UJ	< 1.0 UJ
CARBON TETRACHLORIDE	5	< 1.0 UJ	< 1.0 UJ
CHLOROBENZENE	5	< 1.0 UJ	< 1.0 UJ
CHLOROETHANE	5	< 2.0 UJ	< 2.0 UJ
CHLOROFORM	7	< 1.0 UJ	< 1.0 UJ
CHLOROMETHANE	5	< 2.0 UJ	< 2.0 UJ
CIS-1,2-DICHLOROETHENE	5	< 1.0 UJ	< 1.0 UJ
CIS-1,3-DICHLOROPROPENE	0.4	***< 1.0 UJ***	***< 1.0 UJ***
CYCLOHEXANE	NL	< 1.0 UJ	< 1.0 UJ
DIBROMOCHLOROMETHANE	5	< 1.0 UJ	< 1.0 UJ
DICHLORODIFLUOROMETHANE	5	< 2.0 UJ	< 2.0 UJ
ETHYLBENZENE	5	< 1.0 UJ	< 1.0 UJ
ISOPROPYLBENZENE	5	< 1.0 UJ	< 1.0 UJ
M- AND P-XYLENE	NL	< 2.0 UJ	< 2.0 UJ
METHYL ACETATE	NL	< 1.5 UJ	< 1.5 UJ
METHYL CYCLOHEXANE	NL	< 1.0 UJ	< 1.0 UJ
METHYL TERT-BUTYL ETHER	10	< 1.0 UJ	< 1.0 UJ
METHYLENE CHLORIDE	5	**3.2 J**	**6.6 J**
O-XYLENE	NL	< 1.0 UJ	< 1.0 UJ
STYRENE	5	< 1.0 UJ	< 1.0 UJ
TETRACHLOROETHENE	5	< 1.0 UJ	< 1.0 UJ
TOLUENE	5	**3.8 J**	**5.4 J**
TRANS-1,2-DICHLOROETHENE	5	< 1.0 UJ	< 1.0 UJ
TRANS-1,3-DICHLOROPROPENE	0.4	***< 1.0 UJ***	***< 1.0 UJ***
TRICHLOROETHENE	5	< 1.0 UJ	< 1.0 UJ
TRICHLOROFLUOROMETHANE	5	< 2.0 UJ	< 2.0 UJ
VINYL CHLORIDE	2	< 2.0 UJ	< 2.0 UJ
XYLENES, TOTAL	5	< 3.0 UJ	< 3.0 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.

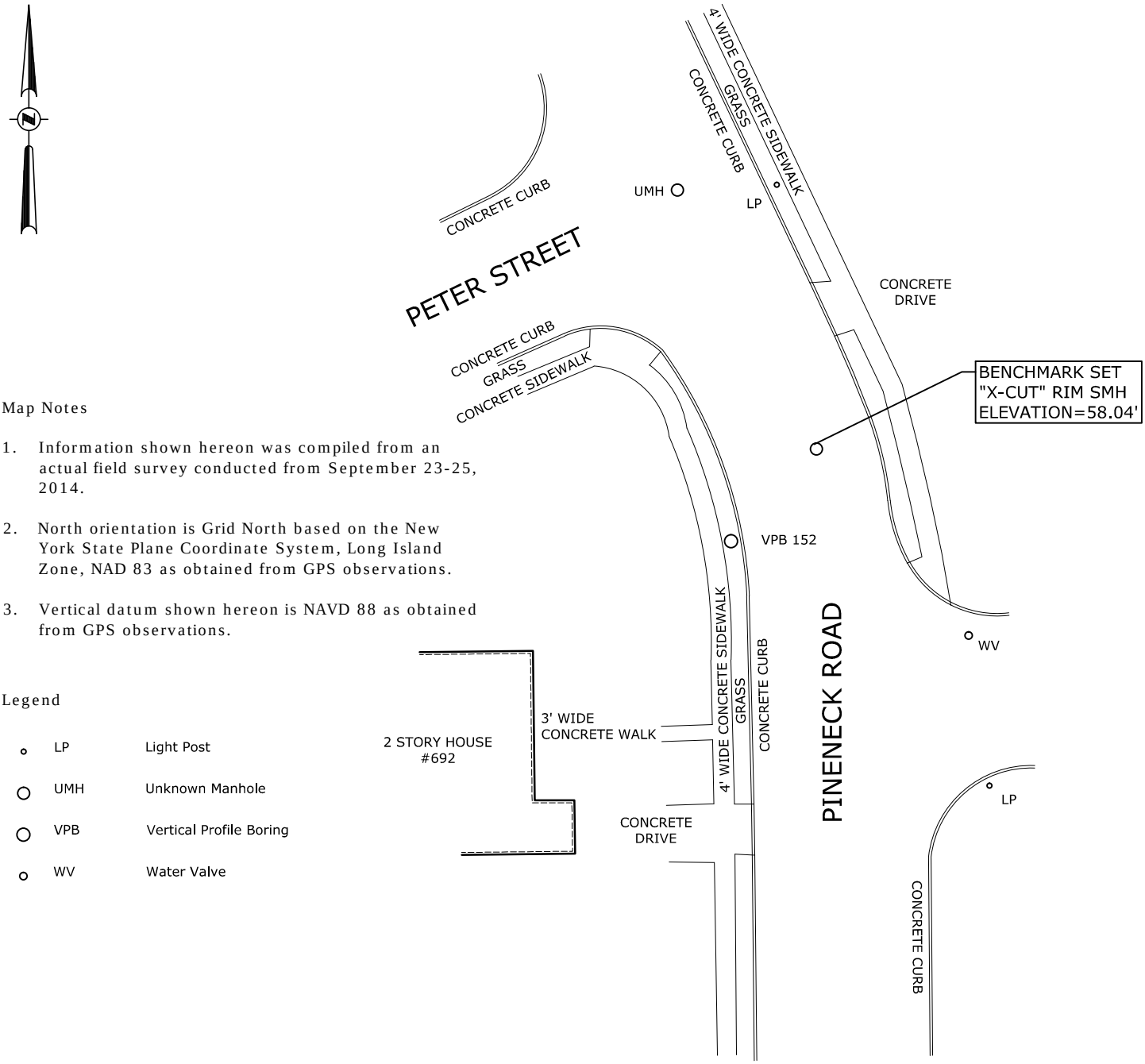
J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

Section 6

Survey

NONE :XREFS

Description	Northing	Easting	Latitude	Longitude	Ground	Rim	PVC
VPB 152	197311.98	1126289.12	N40-42-25.60	W73-29-15.67	58.16	NA	NA



Map Notes

1. Information shown hereon was compiled from an actual field survey conducted from September 23-25, 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.

Legend

∘	LP	Light Post
○	UMH	Unknown Manhole
○	VPB	Vertical Profile Boring
∘	WV	Water Valve

BAR SCALE

30 0 15 30 60

1 inch = 30 ft.

DWG NO. 14-502

Date	RECORD OF WORK	Appr.

VERTICAL PROFILE BORING 152 SURVEY LOCATION
692 PINENECK ROAD

TOWN OF SEAFORD | NASSAU COUNTY, NEW YORK

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Drafter: LMK	Checker: JFC
Appr. by: JFC	Proj. No. 14.4121
SCALE: 1"=30'	DATE: SEPT. 24, 2014

CAD DWG. FILE NAME: K:\Projects\14412\1\Survey\Drawings and Maps\VPB 152.dwg