

**2017 OPERABLE UNIT 2
GROUNDWATER INVESTIGATION
DATA SUMMARY REPORT
VPB166**

**NAVAL WEAPONS INDUSTRIAL RESERVE PLANT
SITE 1 OPERABLE UNIT 2
BETHPAGE, NY**

Prepared for:



**Department of the Navy
Naval Facilities Engineering Command, Atlantic
9324 Virginia Avenue
Building Z-140
Norfolk, Virginia 23511**

December 2018

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Prepared by:



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**Contract Number: N62470-11-D-8013
CTO WE15**

DECEMBER 2018

A handwritten signature in black ink that reads "Brian Caldwell".

**Brian Caldwell
Contract Task Order Manager**

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List of Acronyms and Abbreviations

AOC	Area of Concern
bgs	below ground surface
COR	Continuously Operating Reference
CSM	Conceptual Site Model
DoD	Department of Defense
ELAP	Environmental Laboratory Accreditation Program
EPA	Environmental Protection Agency, United States
ESS	Environmental Sequence Stratigraphy
ft	feet
GOCO	Government-Owned Contractor-Operated
GPS	Global Positioning System
IDW	Investigation Derived Waste
IR	Installation Restoration
Katahdin	Katahdin Analytical Services
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 (NAVFAC), Mid-Atlantic under contract task order WE15 Contract N62470-11-D-8013. This report describes vertical profile boring (VPB) installation activities (specifically at the VPB166 location) in 2017 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 VPB166. The purpose of the VPB166 investigation was to ascertain contaminant levels and depths in the offsite plume area south of Hempstead Turnpike, north of Southern State Parkway, and east of Hicksville Road and to better define the southwestern leading edge of the RE108 hotspot. VPB locations within the general vicinity of VPB166 are shown in Figure 2. VPB166 was completed to 960 feet (ft) below ground surface (bgs).

Field tasks were conducted in 2017 in accordance with the *United Federal Programs Sampling and Analysis Plan (UFP SAP) Site 1 OU2 Offsite TCE Groundwater Plume Investigation*, NWIRP, Bethpage, New York (Resolution Consultants, 2013a) and the *UFP SAP Addendum Installation of Vertical Profile Borings and Monitoring Wells* (Resolution Consultants, 2013b). 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 a residential neighborhood and on the north, south, and west by Steel Equities; however, a small portion near Sites 2 and 3 is still owned by Nassau County. Access to the NWIRP is from South Oyster Bay Road.

1.3 Geology and Hydrogeology

1.3.1 Depositional environment

Resolution Consultants applied a technique known as Environmental Sequence Stratigraphy (ESS) to combine results from regional studies with onsite continuous boring and gamma logs to develop a sequence stratigraphic framework for the Late Cretaceous Turonian age (100 million years ago) Magothy Formation underlying NWIRP Bethpage. The ESS analysis, including the construction of high-resolution base-wide cross sections, is documented in Appendix B. A summary of salient conclusions regarding the depositional environment, stratigraphy and impact on hydrogeology at the site is provided here.

Previous sequence stratigraphic studies of the New Jersey and New York Coastal Plains have shown that facies successions in the region can largely be explained by global sea level oscillations and sediment supply. The Turonian age sea level changes resulted in several phases of seaward progradation and landward retrogradation that affected the deposition and preservation of lithologic sequences in the Magothy. Periods of elevated or low sea level have a distinct effect on shoreline position and the types of deltaic facies that are deposited on the coastal plain. During high sea level, marine to distal deltaic facies tend to form. In contrast, during periods of low relative sea level, marginal to nonmarine deltaic facies are deposited.

Changes in sediment supply resulting from the tectonic uplift and weathering of the ancestral Appalachians during the Albian stage (~97 million years ago) also influenced depositional environments in the region. The large influx of coarse sediments is reflected in the rapid seaward

progradation of the shoreline and extensive delta plain deposits (Magothy Formation) on the New Jersey Coastal Plain.

1.3.2 Stratigraphy

Overburden at the site consists of well over 1,000 ft of unconsolidated deposits overlying crystalline bedrock of the Hartland Formation. Overburden is divided into four geologic units in descending order: 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 consists of till and outwash deposits of medium to coarse sand and gravel with lenses of fine sand, silt and clay (Smolensky and Feldman, 1988); these deposits form the Upper Glacial Aquifer. The ESS analysis concluded that these continental deposits are considerably thicker than previously thought, ranging from 50 – 300 feet. Directly underlying this unit is the Magothy Formation with a thickness of 650 to 900 ft that extends to a depth of 700 to 1,000 ft bgs, as observed at the former NWIRP and extending southeast to areas south of Southern State Parkway. Locally at VPB166, the bottom of the Magothy (top of the Raritan Clay) is encountered at approximately 953 feet bgs. 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 880 ft bgs; these deposits form the main groundwater producing zones of the Magothy Aquifer

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

1.3.3 Hydrogeology

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 coarse sand and gravel lenses located in the lower portion of the Magothy. Because of the presence of intermittent clay layers and the depths, the Magothy Aquifer is commonly regarded to function overall as an unconfined aquifer at shallow depths and a confined aquifer at greater 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 an average 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. Depth to water in the vicinity of VPB166 is approximately 35 feet bgs based on nearby wells RE121D1 and RE121D2. The groundwater flow in the area is to the south-southeast.

The ESS results provide important insight into the distribution of transmissive and storage zones at the Site. Considerable heterogeneity exists in the subsurface due to alternating depositional environments that resulted from changes in sea level and sediment supply. Laterally continuous fluvial sands and distributary mouth bars are inferred to represent high permeability units and conduits for groundwater flow/contaminant transport, however the continuity of those units is variable. Fine grained muds deposited during maximum flooding appear to correlate to contamination data peaks, potentially acting as storage units by adsorption of contamination within the matrix of fine-grained muds.

2.0 FIELD PROGRAM

Field investigation activities at VPB166 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 (VPB166) was completed during this field effort between July 20, 2017 and September 28, 2017. The total depth of VPB166 was 960 ft. The location is shown in Figure 2 and details are summarized in Table 1.

2.1.1 Drilling

In order to prevent sloughing of the borehole through unconsolidated lithologies, VPB166 was installed by setting a 10-inch diameter surface casing to 50 ft bgs and then setting an 8-inch diameter casing to a depth of 121 ft bgs using mud rotary drilling techniques. Drilling mud consisted of potable water and polymer-free sodium bentonite. 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 11 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 928 ft bgs and five (5) 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 VPB166 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 from a depth of 763-765 feet bgs 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 using a Summa

canister 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 Luminol 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. 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 the 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 the Continuously Operating Reference (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, 2013a. *United Federal Programs Sampling and Analysis Plan, Site 1 OU2 Offsite TCE Groundwater Plume Investigation*, NWIRP, Bethpage, New York. April.

Resolution Consultants, 2013b. *UFP SAP Addendum, Installation of Vertical Profile Borings and Monitoring Wells*. NWIRP, Bethpage, New York. December.

Smolensky, D., and Feldman, S., 1988. *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
2017 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/ DUPLICATES/ ATTEMPTED	TOC SAMPLE DEPTH (ft bgs)	DATE OF AIR SAMPLE	MONITORING WELLS INSTALLED AT LOCATION
VPB166	7/20/2017	9/28/2017	79.90	960	50	11	960	39/2/3	763 - 765	9/18/2017	RE132D1, RE132D2, RE132D3, RE132D4, RE132D5, RE132D6, RE132D7

MSL - mean sea level

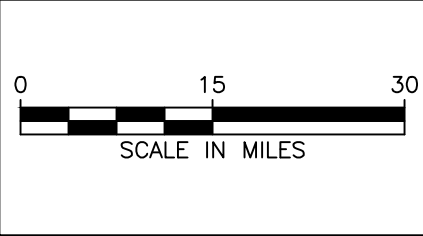
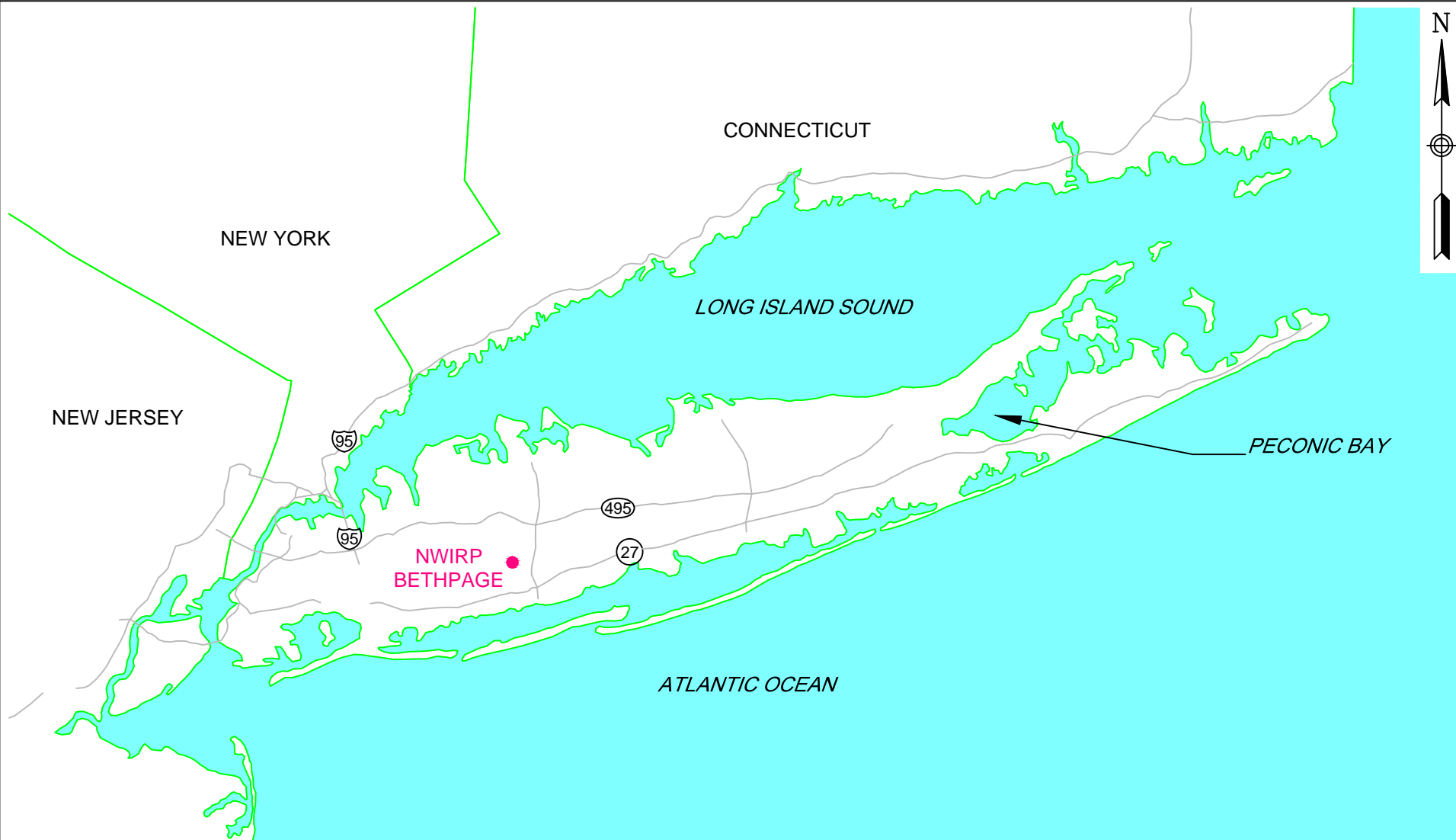
ft bgs - feet below ground surface

GW - Groundwater

TOC - Total Organic Carbon

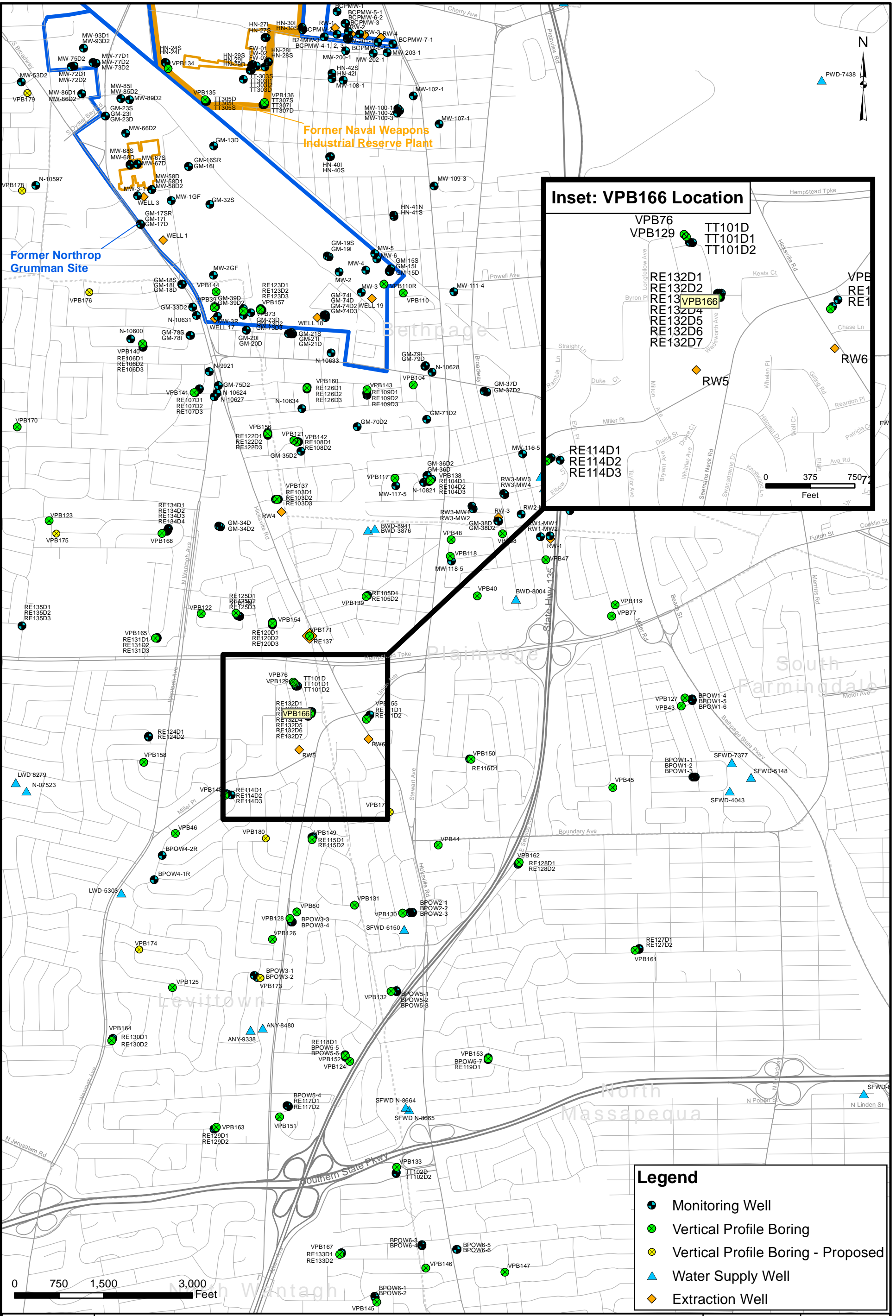
*8-inch casing installed to 120 feet inside 10-inch casing

Figures



GENERAL LOCATION MAP
NWIRP BETHPAGE
BETHPAGE, NEW YORK

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



VPB166 LOCATION MAP
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT
BETHPAGE, NEW YORK

CONTRACT NUMBER N62470-11-D8013	CTO NUMBER WE 15
APPROVED BY PS	DATE 8/20/2018
APPROVED BY	DATE
FIGURE NO. 2	REV 0

Appendices

Appendix A

VPB166

Section 1

VPB166 Boring and Gamma Logs

Client: Department of the Navy, Naval Facilities Engineering Command, Mid-Atlantic			Logged By: V. Thayer		
Location: Poe Place and Wadsworth Ave, Bethpage, NY		Northing: 203081.51 Easting: 1125698.79		Drilling Company: Delta Well & Pump	
Project #: 60266526		Ground Elevation (ft amsl): 79.90		Well Screen Interval (ft): NA	
Start Date: 7/20/2017		Drilling Method: Auger (0-50' bgs) Mud Rotary (>50' bgs)		Water Level (ft): NA	
Finish Date: 9/28/2017				Total Depth (ft): 960.0	

Mud Rotary Drilling Note: Unless denoted by a splitspoon sample (indicated by the presence of a PID reading), boundaries between strata are approximate 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	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
0								
2					Upper Glacial	TOPSOIL		Top Soil 6", Clayey Sand 2'
4						SP-SM		Brown fine SAND, some Gravel
6								Brown coarse to fine SAND, some Gravel, trace silt
8								
10						SP-SM		
12								
14								
16								Brown Gravelly c-f SAND, trace Silt
18								
20								
22								
24								
26								
28								
30								
32								
34								
36						SP-SM		
38								
40								
42								
44								
46								
48								
50								
52								
54								

(Continued Next Page)

DEPTH (ft)	Gamma Ray	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
54	30 60 90							
56					Upper Glacial	SP-SM		Brown Gravelly c-f SAND, trace Silt <i>(continued)</i>
58								
60			<0.5 U	<0.5 U				Reddish yellow (7.5YR 6/6) medium to fine SANDY CLAY, few medium to fine subangular gravel, trace large pyrite
62								
64						CH		
66								
68								
70								Reddish yellow (7.5 YR 6/6) medium to fine poorly graded CLAYEY SAND with few subangular medium Gravel, trace pyrite
72						SC		
74								
76								
78								
80						SC		Light brown (7.5YR 6/4) medium to fine poorly graded CLAYEY SAND with few subrounded coarse Sand, trace pyrite
82								
84								Light brown (7.5YR 6/4) fine to coarse well graded CLAYEY SAND, Sand, subangular, trace pyrite
86								
88						SC		
90								
92								
94								Light brown (7.5 YR 6/4) fine to medium poorly graded SILTY SAND, trace coarse subrounded Sand, trace muscovite
96						SP-SM		
98								
100			<5 UJ	<5 UJ				Light brown (7.5YR 6/4) fine to medium poorly graded SILTY SAND, trace coarse subrounded Sand, trace pyrite, trace muscovite
102					Magothy			
104								
106								
108						SC-SM		
110								
112								
114						SC-SM		Light brown (7.5YR 6/3) fine to medium poorly sorted CLAYEY SAND, some Silt, trace coarse subangular sand, trace muscovite

(Continued Next Page)

DEPTH (ft)	Gamma Ray	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
116	30 60 90				Magothy			
118						SC-SM		
120						SM		Light brown (7.5YR 6/4) fine to medium poorly sorted SILTY SAND, few Clay, few coarse subangular sand, trace muscovite
122								
124								
126								
128								
130								
132						SP-SM		Light brown (7.5YR 6/8) medium poorly graded subangular SAND with few Silt; pinkish white (7.5YR 8/2) clay lenses
134								
136								
138								
140			<2.5 U	<2.5 U				Pink (7.5YR 7/4) medium poorly graded subangular SAND with few Silt; Pinkish white (7.5YR 8/2) clay lenses
142								
144					SP-SM			
146								
148								
150								
152								
154					SP		Light brown (7.5YR 6/3) medium poorly graded subangular SAND, trace subrounded coarse Sand	
156								
158								
160								
162								
164								
166								
168								
170								
172						SW		Light brown (7.5YR 6/3) fine to coarse well graded subangular SAND, trace Pyrite, trace muscovite
174								
176						SP-SM		Light brown (7.5YR 6/4) medium to fine poorly graded SAND with Silt, trace coarse subangular sand

(Continued Next Page)

DEPTH (ft)	Gamma Ray 30 60 90	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
178					Magothy			
180						SP-SM		Light brown (7.5YR 6/4) medium to fine poorly graded SAND with Silt, trace pinkish white (7.5YR 8/2) clay lenses, trace muscovite
182								
184						SM		Light brown (7.5 6/3) medium to fine SILTY SAND, with few Muscovite, trace Gray (7.5YR 5/1) clay lenses
186								
188								
190								Light brown (7.5YR 6/3) medium to fine SILTY SAND with few Muscovite
192								
194								
196						SM		
198								
200			4.7	1				
202								
204								Brown (7.5 4/3) medium to fine poorly graded SAND with Silt, trace pyrite, trace muscovite
206						SP-SM		
208								
210								Brown (7.5 4/3) Brown medium to fine poorly graded SAND with Silt, trace pyrite, trace coarse subangular sand
212								
214						SP-SM		
216								
218								
220			110	3.3				Brown (7.5YR 4/2) medium to fine poorly graded SAND with Clay, trace coarse subangular sand; very dark brown (7.5YR 2.5/2) clay
222						SP-SC		
224								Very dark brown (7.5YR 2.5/2) fat CLAY with medium to coarse Sand
226								
228						CH		
230								
232								
234								Very dark brown (7.5YR 2.5/2) fat CLAY with medium to coarse Sand, trace amounts of lignite
236						CH		
238			94	1.5		CH		

(Continued Next Page)

DEPTH (ft)	Gamma Ray 30 60 90	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
240			94	1.5	Magothy	CH		Very dark brown (7.5YR 2.5/2) fat CLAY with trace amount of medium to coarse Sand, trace lignite <i>(continued)</i>
242						CL		Very dark brown (7.5YR 2.5/2) lean CLAY with trace amount of medium-coarse Sand, trace lignite
244								
246								
248								
250								
252								
254								
256								
258								
260			0.42 J	<0.5 U				
262								
264								
266								
268								
270								
272								
274								
276								
278								
280			<0.5 U	<0.5 U				
282								
284								
286								
288								
290								
292								
294								
296								
298								
300			<0.5 U	<0.5 U				

(Continued Next Page)

DEPTH (ft)	Gamma Ray 30 60 90	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION							
302					Magothy	SP		Dark gray (10YR 4/1) poorly graded fine subrounded SAND, trace Clay, trace lignite <i>(continued)</i>							
304								SP	Dark gray (10YR 4/1) poorly graded fine subrounded SAND, few Lignite, trace clay						
306										SP	Dark gray (10YR 4/1) poorly graded fine to medium SAND, trace Lignite, trace iron nodules				
308												SP	Dark gray (10YR 4/1) poorly graded fine to medium SAND, trace Lignite, trace iron nodules		
310														SP	Dark gray (10YR 4/1) poorly graded fine to medium SAND, trace Lignite, trace iron nodules
312															
314						SP	Dark gray (10YR 4/1) poorly graded fine to medium SAND, trace Lignite, trace iron nodules								
316								SP	Dark gray (10YR 4/1) poorly graded fine to medium SAND, trace Lignite, trace iron nodules						
318										SP	Dark gray (10YR 4/1) poorly graded fine to medium SAND, trace Lignite, trace iron nodules				
320												SP	Dark gray (10YR 4/1) poorly graded fine to medium SAND, trace Lignite, trace iron nodules		
322														SP	Dark gray (10YR 4/1) poorly graded fine to medium SAND, trace Lignite, trace iron nodules
324															
326						SP	Dark gray (10YR 4/1) poorly graded fine to medium SAND, trace Lignite, trace iron nodules								
328								SP	Dark gray (10YR 4/1) poorly graded fine to medium SAND, trace Lignite, trace iron nodules						
330										SP	Dark gray (10YR 4/1) poorly graded fine to medium SAND, trace Lignite, trace iron nodules				
332												SP	Dark gray (10YR 4/1) poorly graded fine to medium SAND, trace Lignite, trace iron nodules		
334														SP	Dark gray (10YR 4/1) poorly graded fine to medium SAND, trace Lignite, trace iron nodules
336															
338	SP	Dark gray (10YR 4/1) poorly graded fine to medium SAND, trace Lignite, trace iron nodules													
340			SP	Dark gray (10YR 4/1) poorly graded fine to medium SAND, trace Lignite, trace iron nodules											
342					SP	Dark gray (10YR 4/1) poorly graded fine to medium SAND, trace Lignite, trace iron nodules									
344							SP	Dark gray (10YR 4/1) poorly graded fine to medium SAND, trace Lignite, trace iron nodules							
346									SP	Dark gray (10YR 4/1) poorly graded fine to medium SAND, trace Lignite, trace iron nodules					
348											SP	Dark gray (10YR 4/1) poorly graded fine to medium SAND, trace Lignite, trace iron nodules			
350	SP	Dark gray (10YR 4/1) poorly graded fine to medium SAND, trace Lignite, trace iron nodules													
352			SP	Dark gray (10YR 4/1) poorly graded fine to medium SAND, trace Lignite, trace iron nodules											
354					SP	Dark gray (10YR 4/1) poorly graded fine to medium SAND, trace Lignite, trace iron nodules									
356							SP	Dark gray (10YR 4/1) poorly graded fine to medium SAND, trace Lignite, trace iron nodules							
358									SP	Dark gray (10YR 4/1) poorly graded fine to medium SAND, trace Lignite, trace iron nodules					
360											SP	Dark gray (10YR 4/1) poorly graded fine to medium SAND, trace Lignite, trace iron nodules			
362	SP	Dark gray (10YR 4/1) poorly graded fine to medium SAND, trace Lignite, trace iron nodules													

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DEPTH (ft)	Gamma Ray 30 60 90	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION	
364					Magothy	SP		Gray (10YR 4/1) poorly graded fine to medium SAND, trace Lignite, trace iron <i>(continued)</i>	
366									
368						SC		Gray (10YR 4/1) Clayey poorly graded fine to medium SAND, trace Lignite	
370									
372						SM		Gray (10YR 4/1) Silty poorly graded fine to medium SAND, trace Lignite	
374									
376									
378									
380			<2 U	<2 U			CH		Dark gray (5YR 2/1) fine Sandy fat CLAY, trace Lignite
382									
384									
386									
388									
390									
392					CH		Dark gray (5YR 2/1) fat CLAY with fine Sand, trace Lignite		
394									
396									
398									
400			<2 U	<2 U					
402									
404					MH		Dark gray (5YR 2/1) fine Sandy SILT, few Lignite		
406									
408					ML		Very Dark gray (10YR 3/1) fine Sandy SILT, trace Lignite		
410									
412									
414									
416									
418									
420			<1 U	<1 U					
422									
424									

(Continued Next Page)

DEPTH (ft)	Gamma Ray 30 60 90	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION	
426					Magothy	ML		Very Dark gray (10YR 3/1) fine Sandy SILT, trace Lignite <i>(continued)</i>	
428						SM		Dark gray (10YR 4/1) Silty fine SAND	
430						SM		Dark gray (10YR 4/1) Silty fine SAND, trace medium to coarse Sand	
432									
434									
436									
438									
440			<0.5 U	<0.5 U					
442									
444						ML		Dark gray (10YR 4/1) SILT with fine Sand, trace lignite, trace muscovite	
446						ML		Dark gray (10YR 4/1) SILT with fine Sand, few lignite, trace medium sand, trace muscovite	
448									
450									
452						SM		Dark gray (10YR 4/1) Silty SAND, fine medium Sand, few lignite, trace muscovite	
454									
456									
458									
460			<1 U	<1 U					
462									
464									
466									
468									
470									
472									
474					SP-SM		Dark gray (10YR 4/1) poorly graded medium subangular SAND with Silt, few coarse subangular sand with muscovite		
476									
478					SP-SC		Gray (10YR 5/1) poorly graded medium subangular SAND with very pale brown (10YR 8/2) Clay lens, trace coarse subangular sand		
480			4	<0.5 U					
482									
484									
486									

(Continued Next Page)

DEPTH (ft)	Gamma Ray	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
486	30 60 90							
488					Magothy			Gray (10YR 5/1) poorly graded medium subangular SAND with very pale brown (10YR 8/2) Clay lens, trace coarse subangular sand <i>(continued)</i>
490								
492						SP-SC		
494								
496								
498								
500			100	<0.5 U				Light brownish gray (10YR 6/2) poorly graded SAND
502						SP		
504								Gray (10YR 6/1) poorly graded medium SAND with Clay; very pale brown (10YR 8/2) small clay lenses
506								
508								
510								
512						SP-SC		
514								
516								
518								
520			100	2.8				Gray (Gley 1 6/N) poorly graded fine SAND with Silt, trace soft fat clay
522								
524						SP-SM		
526								
528								
530								Gray (Gley 1 5/N) soft fat CLAY with fine Sand, trace silt
532								
534						CH		
536								
538								
540			4.5 J	<5 U				Gray (Gley 1 5/N) poorly graded fine SAND with soft fat Clay, trace silt
542								
544						SP-SC		
546								

(Continued Next Page)

DEPTH (ft)	Gamma Ray	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
548	30 60 90							
550					Magothy	SP		Gray (Gley 1 6N) poorly graded fine to medium subangular SAND, trace soft fat gray Clay
552								
554								
556						SP-SC		Gray (Gley 1 6N) poorly graded fine to medium subangular SAND, few soft fat light gray Clay
558								
560						SP		Gray (Gley 6/N) poorly graded fine to medium subangular SAND
562								
564			140	2.4				Gray (Gley 1 5/N) poorly graded fine to medium subangular SAND, trace light gray fat Clay
566								
568						SP-SC		
570								
572								
574								
576								Fine to coarse subangular well graded SAND, few soft fat light gray Clay, trace silt
578						SW		
580								
582								
584			220	4.5				Gray (10YR 5/1) poorly graded fine to medium SAND with Silt
586						SP-SM		
588								
590		0						Gray (10YR 5/1) poorly graded fine SAND with Silt
592								
594								
596						SP-SM		
598								
600			57	<5 U				
602								
604						CL		Gray (10YR 5/1) CLAY
606						SW-SM		Gray (10YR 5/1) well graded fine to coarse SAND with Silt
608						SW-SM		Gray (10YR 5/1) well graded fine to coarse SAND with Silt

(Continued Next Page)

DEPTH (ft)	Gamma Ray 30 60 90	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
610					Magothy			Gray (10YR 5/1) well graded fine to coarse SAND with Silt <i>(continued)</i>
612								
614								
616								
618								
620			190	<0.5 U				
622								
624						SW-SM		
626								
628								
630								
632								
634								
636								
638								
640								Gray (10YR 5/1) poorly graded fine SAND with Silt
642								
644								
646						SP-SM		
648								
650								
652								
654								Gray (10YR 5/1) SILT
656								
658								
660			12 J	<2 UJ		ML		
662								
664								Gray (10YR 5/1) poorly graded fine SAND with Silt
666								
668						SP-SM		
670								

(Continued Next Page)

DEPTH (ft)	Gamma Ray 30 60 90	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
672					Magothy			Gray (10YR 5/1) poorly graded fine SAND with Silt <i>(continued)</i>
674						SP-SM		
676								
678								
680			<5 UJ	<5 UJ		SC		Dark gray (10YR 4/1) Clayey SAND, subangular medium Sand, trace coarse sand, 25% fines
682								
684			2.8 J	<2 UJ				Grayish brown (10YR 5/2) poorly graded SAND, angular medium Sand, trace coarse sand, trace fines
686						SP		
688								
690								
692								
694								
696						GP		White (10YR 8/1) and light gray (10YR 7/1) poorly graded GRAVEL, subrounded fine Gravel, little coarse sand
698								
700			1500	5		SP		Light gray (10YR 7/2) poorly graded SAND with Gravel; quartz, subrounded coarse Sand with subrounded fine gravel (pea size 40%)
702								
704						GP		Light gray (10YR 7/2) poorly graded GRAVEL, quartz, fine subrounded Gravel (pea size), little subrounded coarse sand, few medium sand, interbedded clay
706								
708								
710						SW		Light gray (10YR 7/2) widely graded SAND with Gravel, quartz; subrounded medium to coarse SAND, few fine Sand, little subrounded fine gravel (pea size); trace coarse gravel, several clumps of gray clay (interbedded clay stringers)
712								
714						GW-GC		Light gray (10YR 7/2) widely graded GRAVEL with Sand and clay; subrounded fine gravel (pea size), little subrounded coarse gravel, little coarse sand; clumps of light gray clay (interbedded clay stringers)
716								
718								
720						GW		Light gray (10YR 6/2) widely graded GRAVEL, surrounded to well rounded fine to coarse Gravel; little medium to coarse sand, interbedded clay stringers
722								
724			<5 UJ	<5 UJ				Light gray (10YR 6/2) poorly graded GRAVEL, subrounded to well rounded fine Gravel, few coarse gravel, little coarse sand, interbedded clay stringers
726						GP		
728								
730						GW		Light gray (10YR 6/2) widely graded GRAVEL, subrounded fine to coarse Gravel, some medium to coarse sand
732								
































(Continued Next Page)

DEPTH (ft)	Gamma Ray 30 60 90	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
734					Magothy			
736						GP-GC		Light gray (10YR 6/2) poorly graded GRAVEL with Clay, subrounded fine gravel, few coarse gravel, little medium to coarse sand, gray clumps of clay (interbedded clay stringers)
738								
740			<10 UJ	<10 UJ				
742						CL		CLAY
744		0				CL		White (10YR 8/1) lean CLAY
746								
748								
750						SP		Light brownish gray (10YR 6/2) poorly graded SAND, subangular to angular medium Sand, trace coarse sand, trace fines
752								
754								
756						SP		Light brownish gray (10YR 6/2) poorly graded SAND, subangular medium Sand. Little subrounded coarse sand, trace fine gravel
758								
760			<20 UJ	<20 UJ		SP		Light gray (10YR 7/2) poorly graded SAND, subrounded medium Sand, few coarse sand, few subrounded fine gravel (pea size), interbedded clay stringers
762								
764		0						
766								
768								
770			<10 UJ	<10 UJ		SM		Light gray (10YR 7/2) Silty SAND
772								
774								
776						SP		Grayish brown (10YR 5/1) poorly graded SAND, subangular medium sand
778								
780			<10 UJ	<10 UJ		CL		White (10YR 8/1) CLAY
782								
784								
786								
788						SW-SC		Light gray (2.5Y 7/1) well graded subrounded medium to coarse SAND with fine subrounded Gravel, few light gray clay lenses
790								
792								
794						SW-SC		

(Continued Next Page)

DEPTH (ft)	Gamma Ray 30 60 90	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
796					Magothy	SW-SC		Widely graded SAND with Clay, subrounded medium to coarse sand, few fine sand (10% fines), few clay, few fine gravel (continued)
798						CL		CLAY
800			<2.5 UJ	<2.5 UJ		SWSC		Light gray (10YR 7/2) widely graded SAND with Clay, subrounded medium to coarse Sand, few fine sand, few subrounded fine gravel, 10% fines
802								
804								
806						SP		Light brownish gray (10YR 6/2) poorly graded SAND, subangular medium Sand, trace coarse sand
808								
810								
812						SP		Grayish brown (10YR 5/2) poorly graded SAND, subangular medium Sand, one interbedded clay stringer
814								
816								
818								
820						SP-SC		Grayish brown (10YR 5/2) poorly graded SAND with Clay, subrounded medium Sand, few coarse sand, trace fine gravel, 10% fines, interbedded clay lenses
822								
824			<5 U	<5 U				
826					SP-SC		Grayish brown (10YR 5/2) poorly graded SAND with Clay, subrounded medium Sand, little fine sand, trace coarse sand, 10-15% fines, interbedded clay layer	
828								
830					SP-SC			
832								
834					CL		Gray Sandy CLAY; subrounded fine to coarse Sand (30%), 70% clay (fines)	
836								
838								
840			<20 U	<20 U	CL		Gray (10YR 5/1) Sandy CLAY; fine sand, few medium to coarse Sand, 75% fines	
842								
844					SM		Gray (10YR 5/1) Silty SAND; fine sand, few medium to coarse 40 to 50% silt (fines)	
846								
848								
850					SM		Gray (10YR 5/1) Silty SAND; fine to medium Sand, 25% fines	
852								
854					CL		Gray CLAY	
856								

(Continued Next Page)

DEPTH (ft)	Gamma Ray 30 60 90	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
858					Magothy	CL		Gray CLAY (continued)
860		0	<0.5 U	<0.5 U		SP-SM		Light gray (Gley 1 7/1) poorly graded SAND with Silt, fine sand
862						SP-SM		Light gray (Gley 1 7/1) poorly graded SAND with Silt; micaceous few sand, 15% fines (silt)
864						SM		Light gray (Gley 1 7/1) Silty SAND
866						SM		Gray (10YR 5/1) Silty SAND, fine to medium Sand, 25% fines
868						SM		
870						SM		
872						SM		
874						SM		
876						SM		
878					SM			
880			<20 U	<20 U	SM		Light gray (10YR 7/1) Silty SAND; fine sand, trace medium Sand, 25% fines	
882					SM			
884					SM			
886					SM			
888					SM			
890					SM			
892					SM			
894		0			CL		Gray lean CLAY	
896					CL			
898					CL		Very dark gray (7.5YR 3/1) lean CLAY and 1 inch band of light gray Clay	
900					SM		Light gray (7.5YR 7/1) Silty SAND	
902					SM			
904					ML		Gray (5Y 6/1) Sandy SILT	
906					ML			
908					ML			
910					ML		Gray (5Y 6/1) micaceous Sandy SILT; fine Sand (30%), few medium sand	
912					ML			
914					ML			
916					ML		Gray (Gley 1 6/N) SILT, few fine Sand, trace lean clay and lignite	
918					ML			

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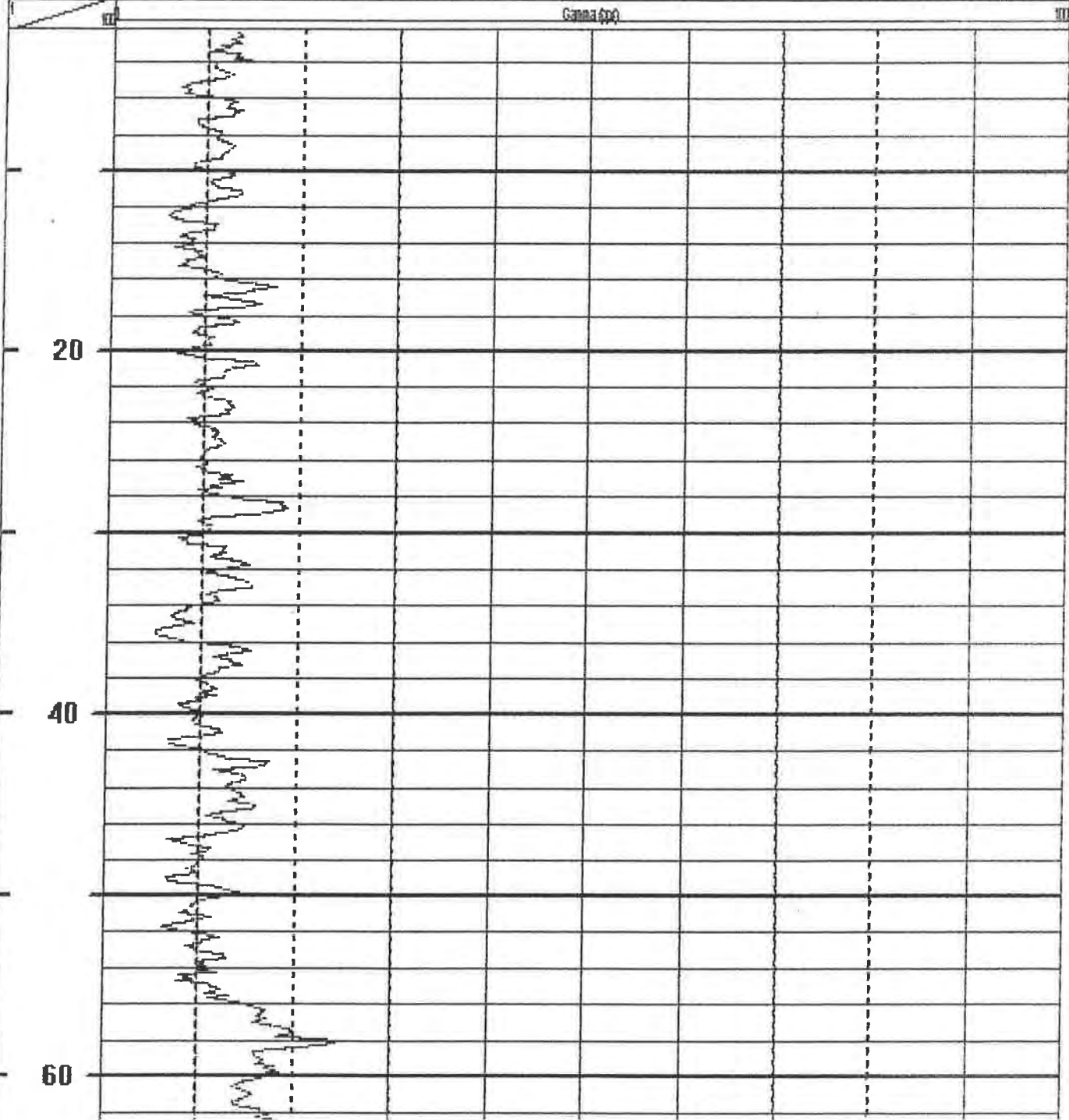
DEPTH (ft)	Gamma Ray	PID (ppm)	TCE (ug/L)	PCE (ug/L)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION
918	30 60 90							
920					Magothy	ML		Gray (Gley 1 6/N) SILT, few fine Sand, trace lean clay and lignite <i>(continued)</i>
922						ML		
924						ML		Very dark gray (10YR 3/1) fine Sandy SILT, trace Clay and lignite
926						ML		
928						ML		
930						CL		Gray (10YR 5/1) Sandy lean CLAY, trace lignite
932						CL		
934						CL		Gray (10YR 5/1) lean CLAY, few fine Sand
936						CL		
938						CL		
940		0				CL		Gray (10YR 5/1) lean CLAY, little fine Sand
942						CL		Gray (2.5Y 5/1) lean CLAY
944		0				CL		
946						CL		Very dark gray (Gley 3/1) lean CLAY
948						CL		
950		0				CL		
952						CH		Dark gray (Gley 1 4/1) fat CLAY
954		0			Raritan	CH		
956						CH		Black (Gley 1 2.5) fat CLAY
958		0				CH		
960		0				CH		

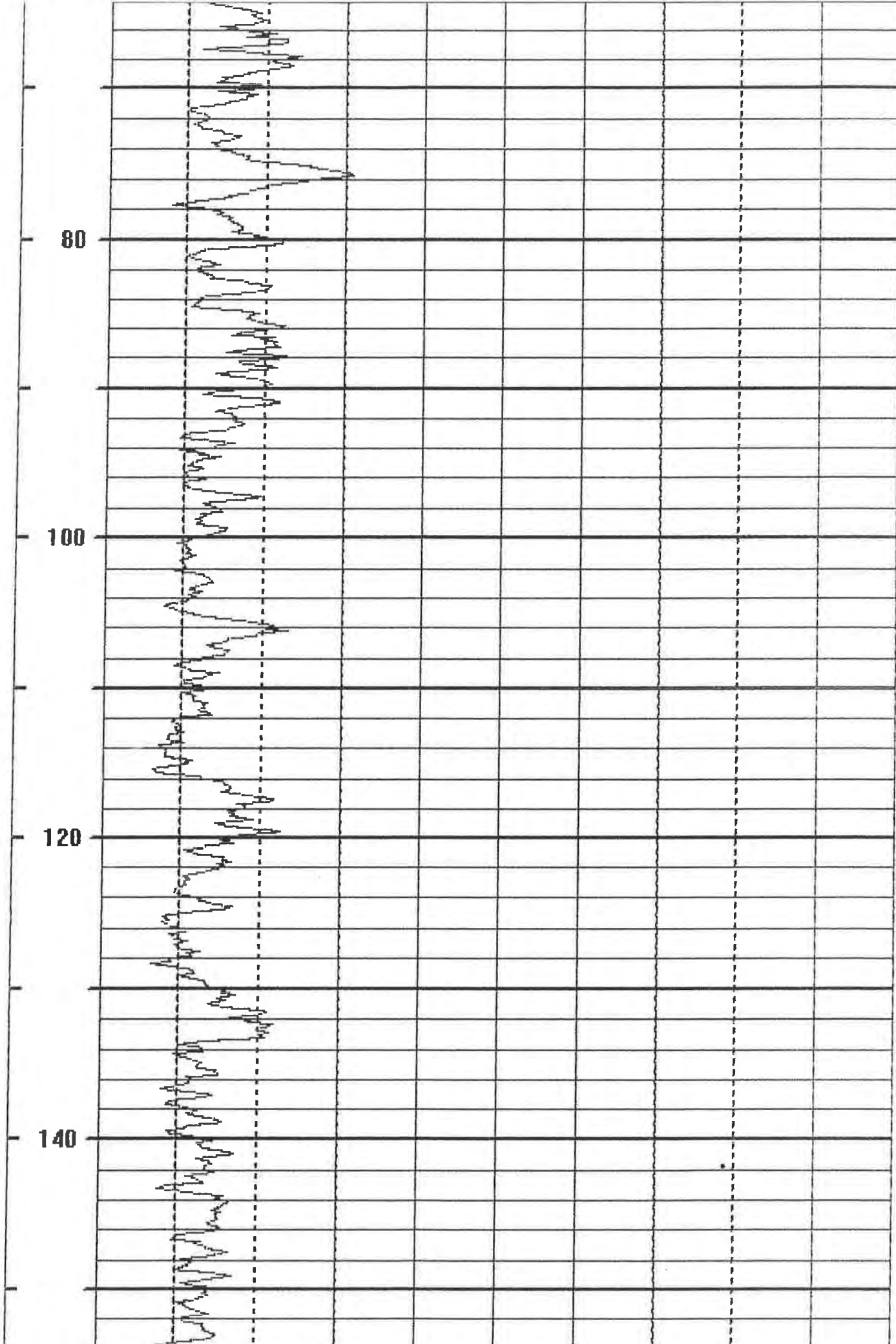
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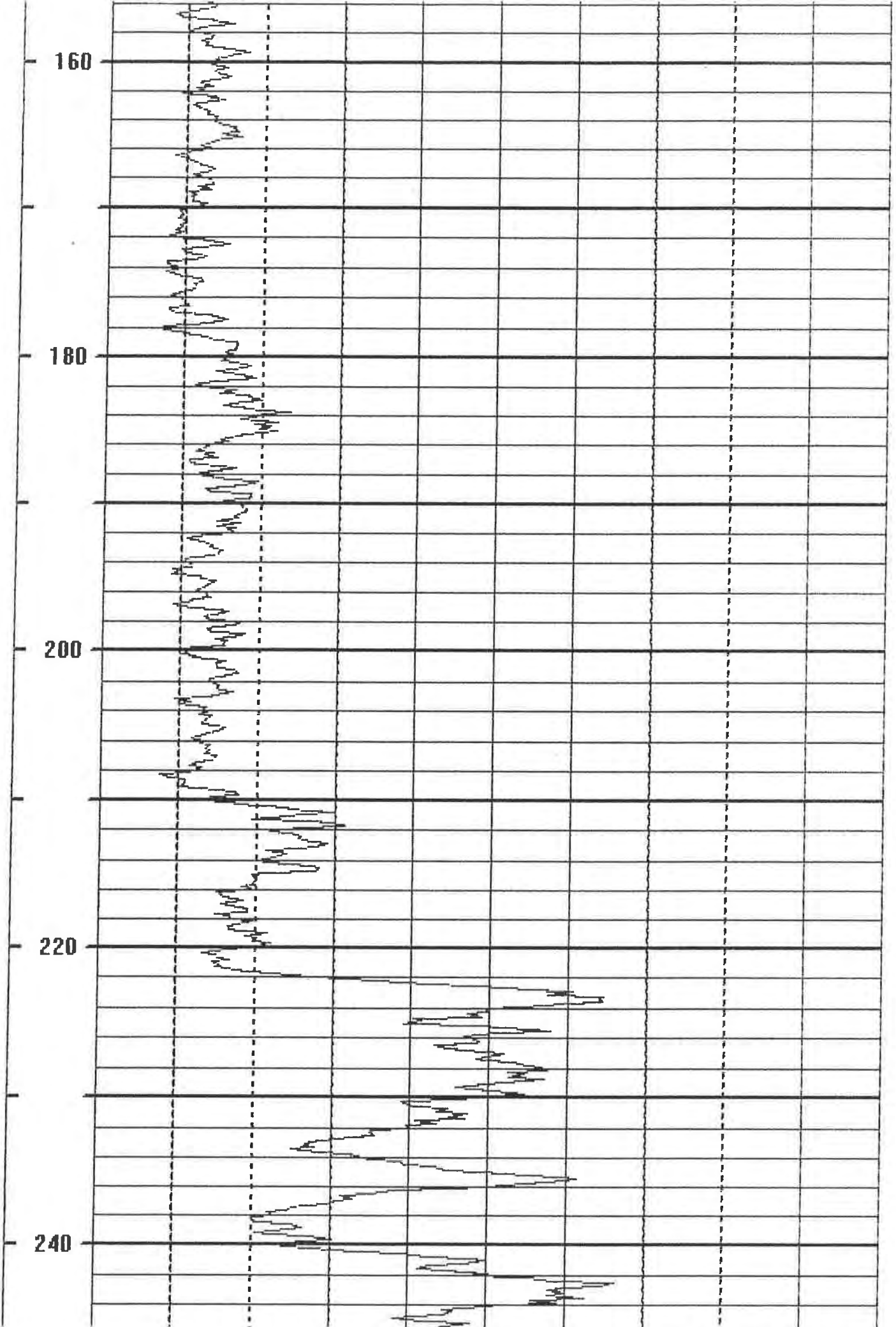
VPB-166

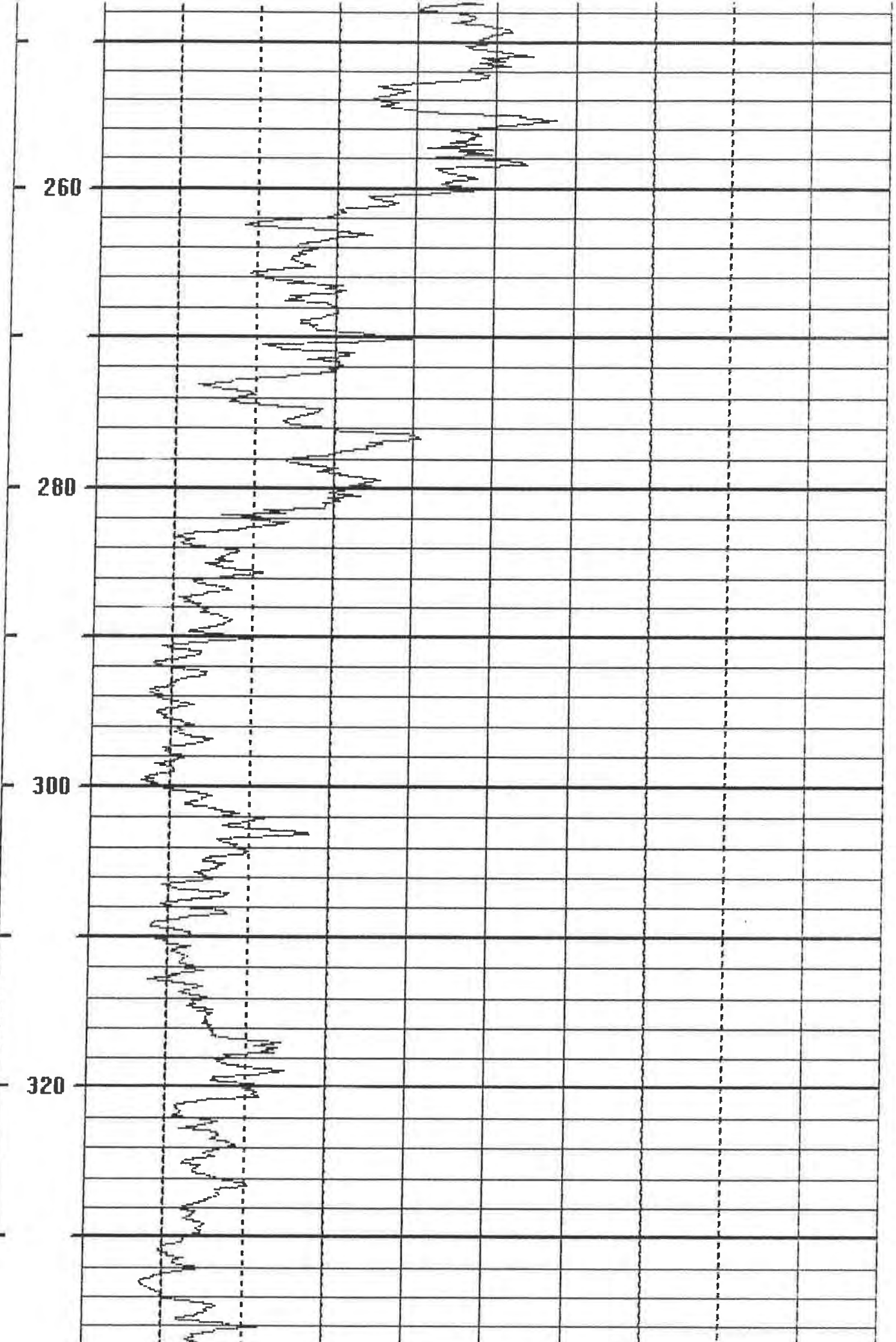
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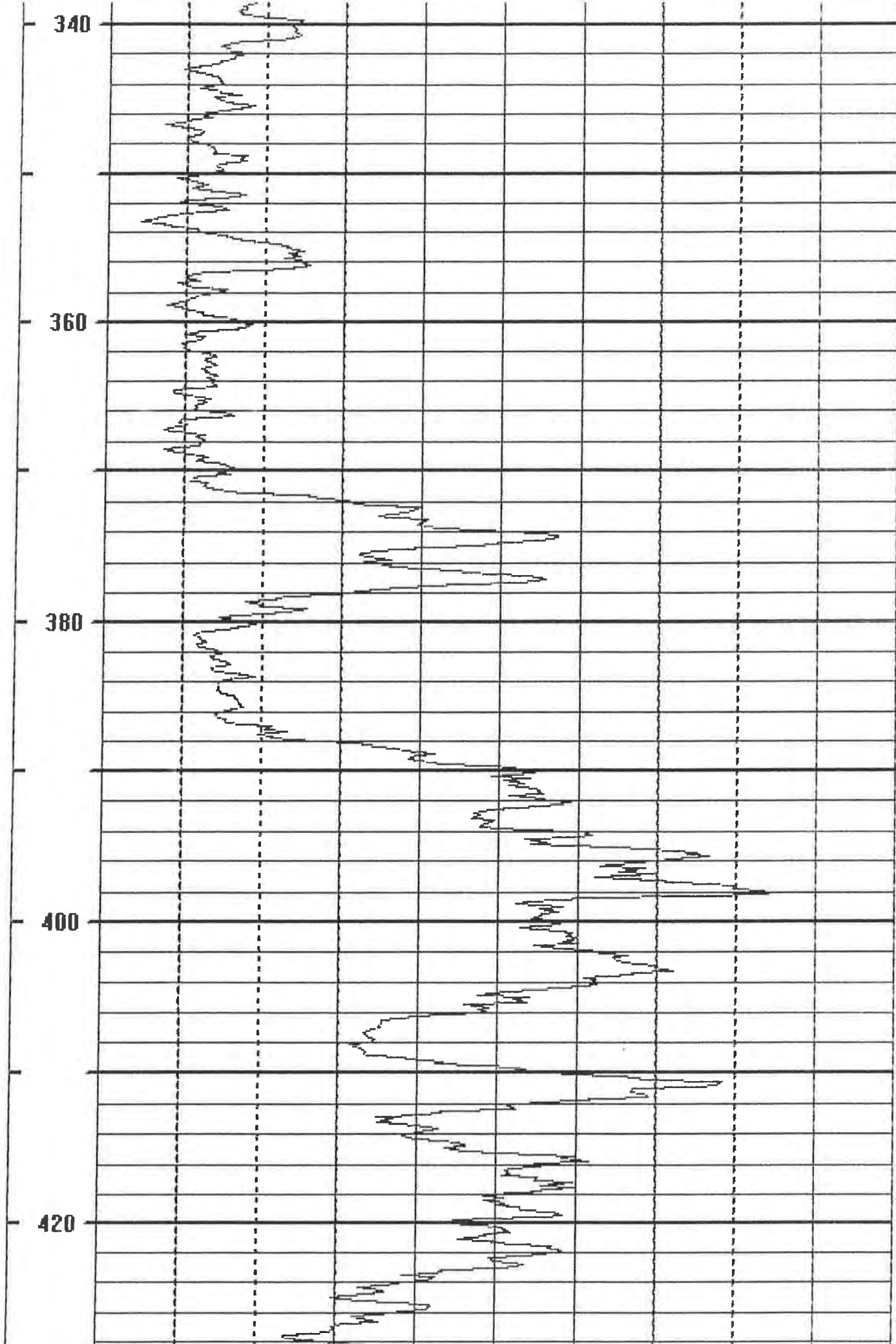
COMPANY: DELTA WELL & PUMP CO., INC.		Casing	
Location: MWRP POE PL			
Well	VPB-166	Depth Driller	
		Depth Logger	
Date	09/22/17	BH Fluid	Logged by: CMC
File Name	739	Witness:	VAL

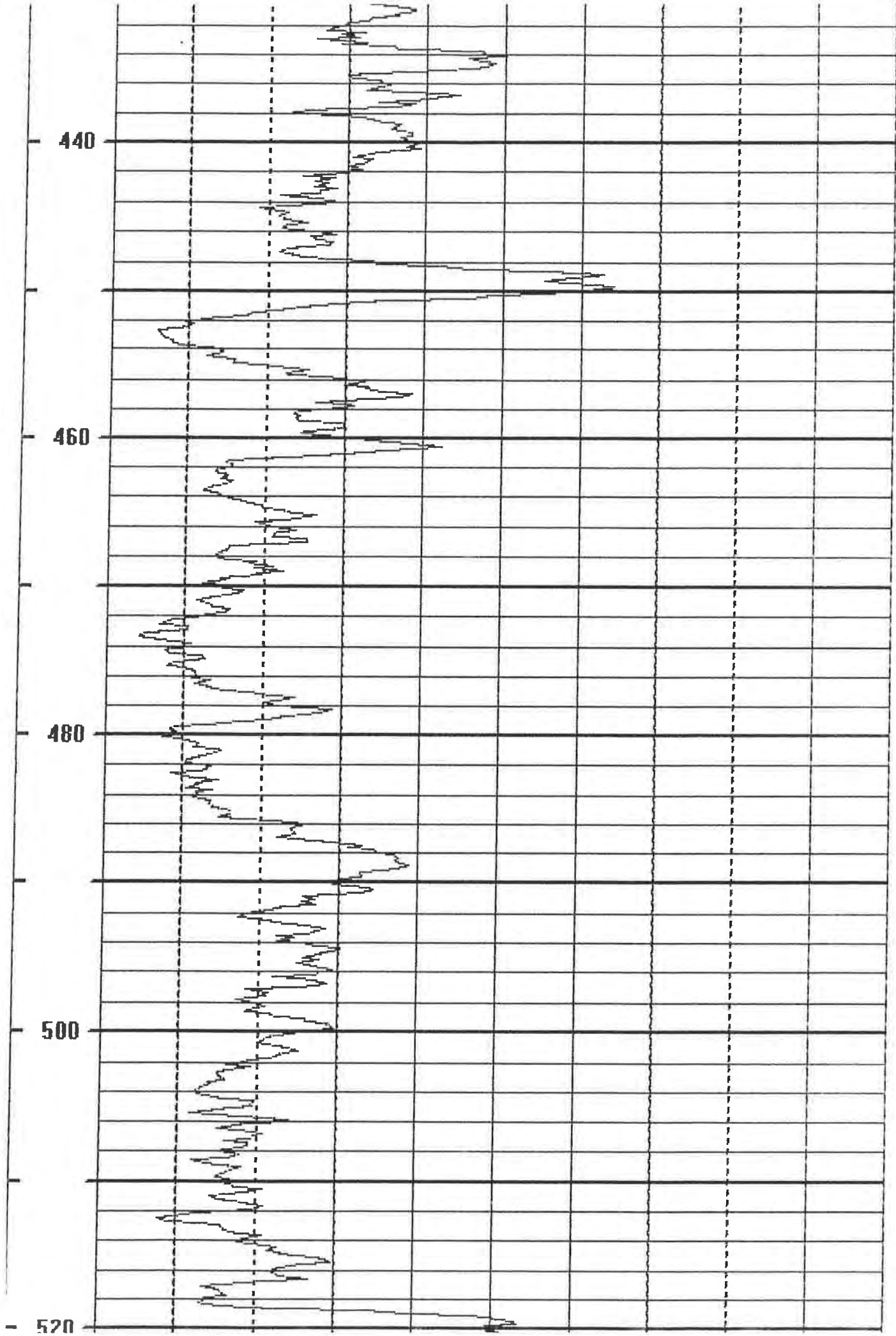


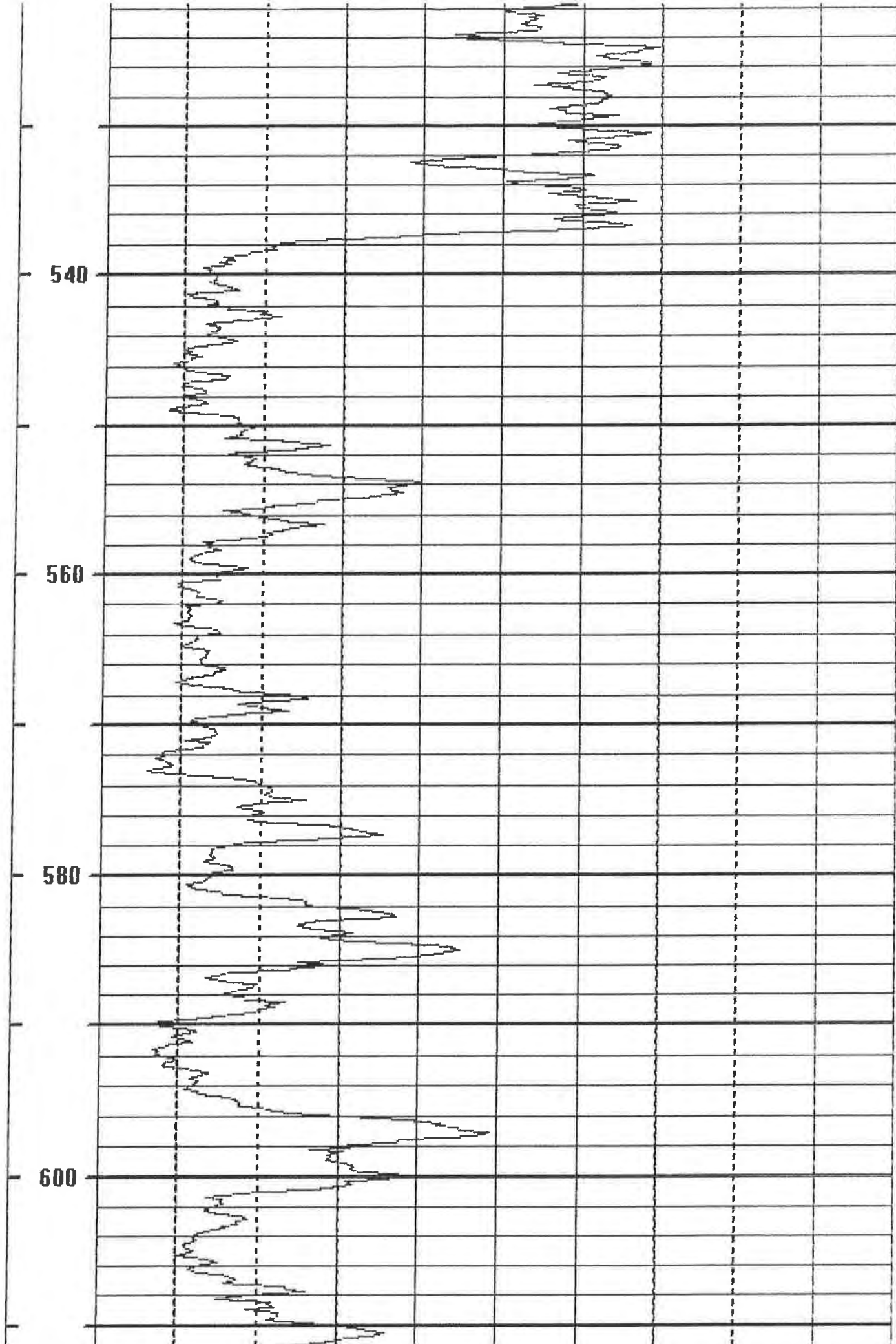


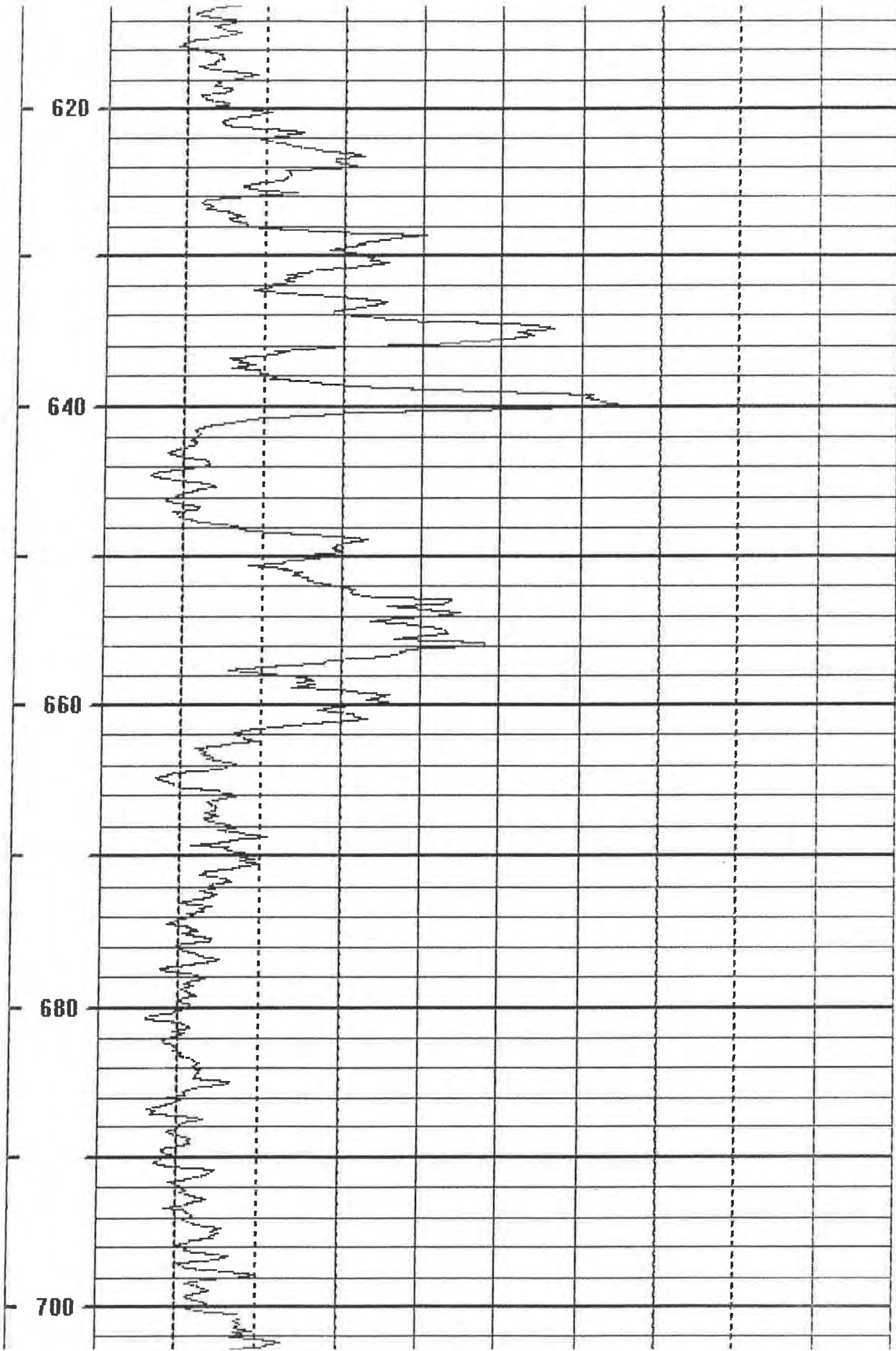


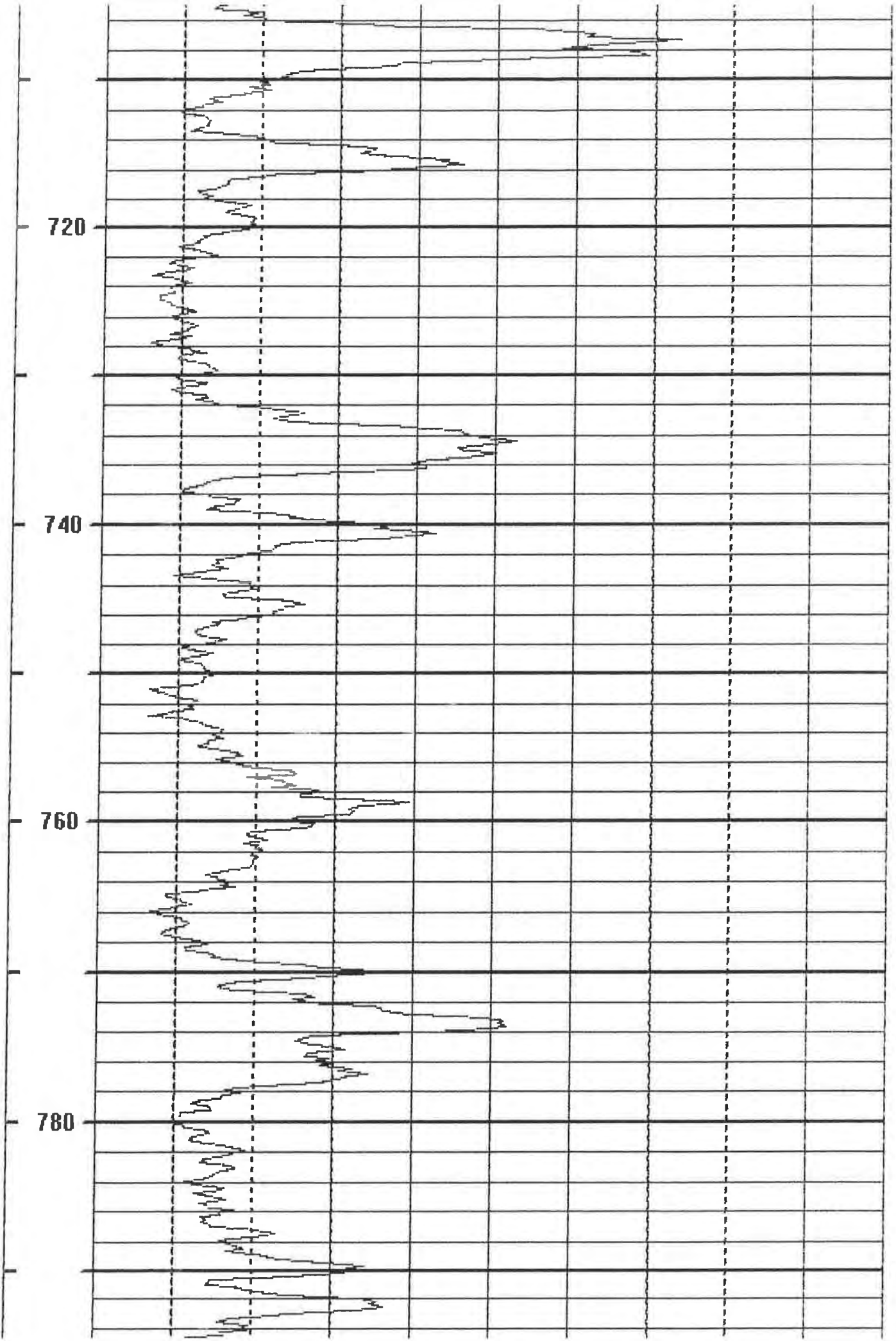


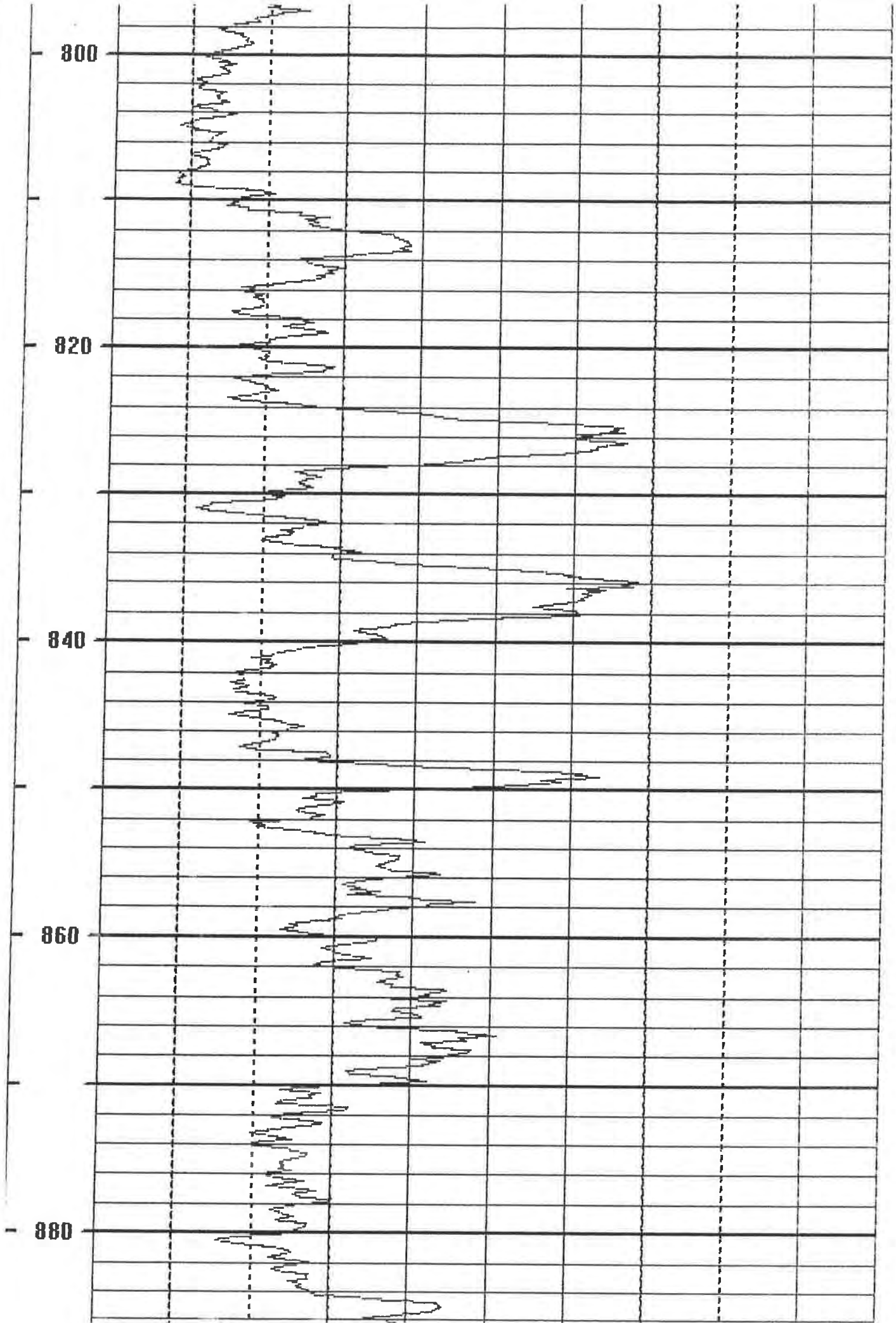


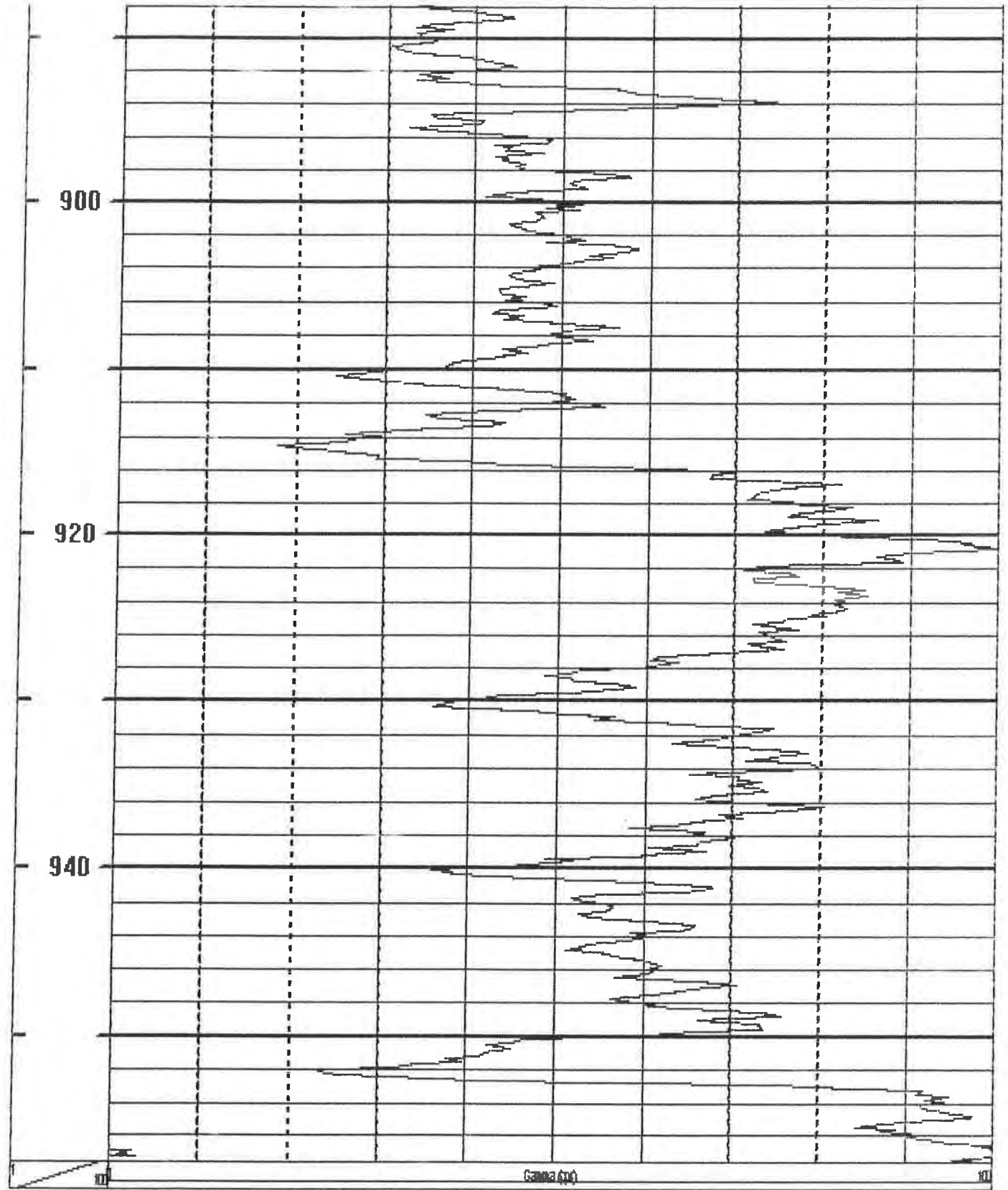








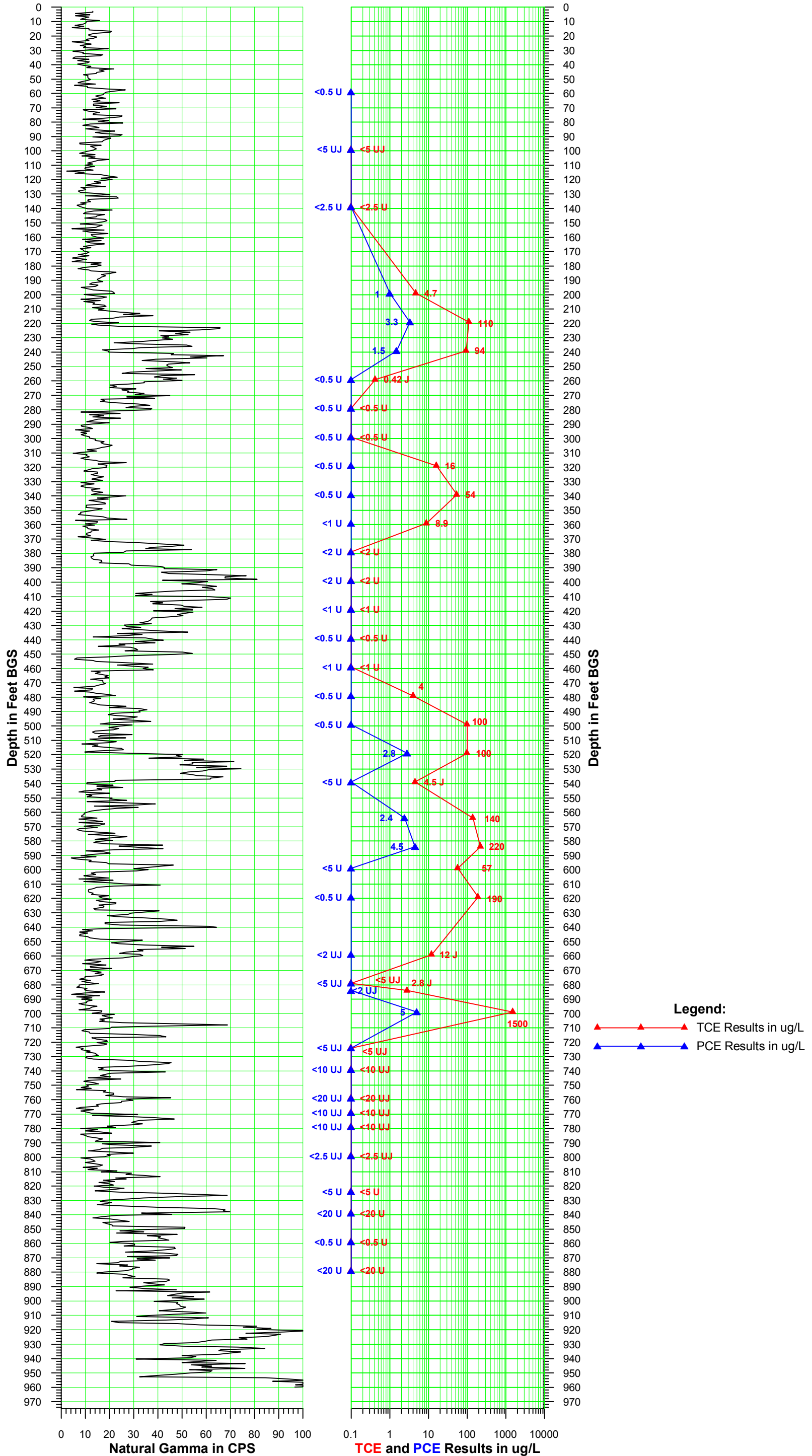




Section 2

VPB166 Gamma and PCE/TCE Plot

Vertical Profile Boring VPB166
Downward Run - October 22, 2017
Validated Analytical Data



Section 3

VPB166 Groundwater Sample Log Sheets



Hydropunch Sample

Client: NWIRP - Bethpage
 Project No: 60266526
 Site Location: Poc Pl
 Weather Conds: Variable

Date: August 21 - Sept 1, 2017
 VPB: 166
 Collector(s): E. Bell

Sample Date	Time	Temp (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Starting depth(ft)	Ending depth(ft)	Color
08/21/2017	10:25	---	---	---	---	---	---	58	60	VPB166-58-60
08/21/2017	12:45	---	---	---	---	---	---	98	100	Not enough for ysi
08/24/2017	09:10	---	---	---	---	---	---	138	140	" "
08/24/2017	14:40	25.6	6.76	499	0.47	13.4	125	198	200	.
08/25/2017	10:30	21.7	6.21	338.6	1.91	31.8	>1000	218	220	.
08/25/2017	12:30	21.4	5.94	313.8	2.58	54.0	>1000	238	240	.
08/25/2017	14:45	21.7	6.22	83.4	2.83	109.3	>1000	258	260	.
8/28/17	10:20	22.8	6.24	142.3	2.63	106.1	>1000	278	280	gray
8/28/17	12:30	21.5	6.19	272.3	0.11	-19.5	>1000	298	300	gray
8/28/17	14:40	22.1	6.67	145.8	1.21	72.7	>1000	318	320	gray
DVP → 8/29/17	10:30	19.2	6.06	175.4	2.83	50.1		338	340	cloudy
8/29/17	13:00	19.8	5.94	156.7	1.03	27.6	>1000	358	360	gray
8/29/17	15:00	20.2	6.28	163.9	0.57	60.5	>1000	378	380	gray
EB → 8/30/17	10:30	---	---	---	---	---	---	398	400	gray
8/30/17	14:20	---	---	---	---	---	---	418	420	gray
8/30/2017	10:30	21.5	6.73	64.0	3.80	76.5	151.7	438	440	Cloudy
08-31-2017	12:35	20.6	6.64	312.0	0.20	17.1	>1000	458	460	gray
08-31-2017	14:45	21.7	6.35	191.1	3.37	33.6	>1000	478	480	gray.
09-01-2017	10:50	21.4	5.74	143.2	1.87	63.0	>1000	498	500	Cloudy Tan
09-01-2017	13:00	19.8	6.36	233.2	1.75	17.5	>1000	518	520	Cloudy Grey Tan.

--- not enough for ysi



Hydropunch Sample

Client: NWIRP - Bethpage
 Project No: 60266526
 Site Location: Doc Pl - VPB166
 Weather Conds: -

Date: 9/05/17 - 9/19/17
 VPB: 166
 Collector(s): Farrell Bell
Valerie Thayer

* INSUFFICIENT VOLUME TO COLLECT MEASUREMENTS
 Color

Sample Date	Time	Temp (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Starting depth(ft)	Ending depth(ft)	Color
09-05-17	1105	22.4	6.26	538	-	88.6	>1000	538	540	Grey
MSD → 09-05-17	1500	23.6	5.85	137.9	2.23	105.3	192	563	565	Cloudy Tan
Dup → 09-06-2017	1315	21.7	6.00	153.7	1.81	49.5	>1000	588	585	Cloudy Tan
09-07-2017	1030	20.8	6.02	262.4	1.56	110.1	>1000	598	600	V. CLOUDY GRAY
09-07-2017	1315	-	-	-	-	-	954	618	620	CLOUDY GRAY, BATTERIES DIED 2/5/1
*09-08-2017	1230	-	-	-	-	-	>1000	658	660	V. CLOUDY GRAY
*09-08-2017	1430	-	-	-	-	-	>1000	678	680	V. CLOUDY GRAY
09-11-2017	1100	-	-	-	-	-	>1000	683	685	Muddy
09-11-2017	1300	←	→	no recovery		→	→	688	690	
09-11-2017	1515	21.8	7.80	149.3	5.03	229.2	774.3	698	700	clear to cloudy
09-12-2017	1130	←	→	no recovery		→	→	718	720	
* 09-12-2017	1330	-	-	-	-	-	-	723	725	
* 09-13-2017	1030	-	-	-	-	-	-	738	740	
* 09-13-2017	1430	-	-	-	-	-	-	758	760	Mud
09-14-2017	1100	-	-	-	-	-	-	768	770	
09-14-2017	1315	-	-	-	-	-	-	778	780	
* 09-15-2017	1000	-	-	-	-	-	-	798	800	Greyish Brown
* 09-15-2017	1400	←	→	no groundwater		→	→	818	820	All mud no groundwater
09-19-2017	1000	26.4	7.5	577	0.15	141.2	>1000	823	825	Milky Brownish Grey
* 09-19-2017	1330	-	-	-	-	-	-	838	840	ltrial recovered

Section 4

VPB166 Analytical Data Validation

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



DATA VALIDATION REPORT

Project:	Regional Groundwater Investigation — NWIRP Bethpage		
Laboratory:	Katahdin Analytical		
Sample Delivery Group:	BETHPAGE VPB166		
Analyses/Method:	Volatile Organic Compounds (VOCs) by U.S. EPA SW-846 Method 8260C and Total Organic Carbon (TOC) by U.S. EPA SW-846 Method 9060A		
Validation Level:	3		
Project Number:	0888812477.SA.DV		
Prepared by:	Dana Miller/Resolution Consultants	Completed on:	01/15/2018

SUMMARY

This report summarizes data review findings for samples listed below, collected by Resolution Consultants from the Regional Groundwater Investigation — NWIRP Bethpage Site on 21 August to 20 September 2017 in accordance with the following Sampling and Analysis Plans:

- *Sampling and Analysis Plan, Bethpage, New York.* (Resolution Consultants, April 2013).
- *UFP SAP Addendum, Installation of Vertical Profile Borings and Monitoring Wells, Operable Unit 2, NWIRP Bethpage, New York.* (Resolution Consultants, November 2013).
- *UFP SAP Addendum, Inclusion of Additional Target Analytes for Volatile Organics Analyses, NWIRP Bethpage OU2, Bethpage, New York.* (Resolution Consultants, August 2014).

Sample ID	Lab ID	Matrix/Sample Type	Analysis
TB01-WQ-082117	SK7578-1	Trip blank	8260C
VPB166-GW-082117-58-60	SK7578-2	Groundwater	8260C
VPB166-GW-082117-98-100	SK7578-3	Groundwater	8260C
TB01-WQ-082817	SK7847-1	Trip blank	8260C
VPB166-EB-083017	SK7847-10	Equipment blank	8260C
VPB166-GW-083017-418-420	SK7847-11	Groundwater	8260C
VPB166-GW-082417-138-140	SK7847-12	Groundwater	8260C
VPB166-GW-082417-198-200	SK7847-13	Groundwater	8260C
VPB166-GW-082517-218-220	SK7847-14	Groundwater	8260C
VPB166-GW-082517-238-240	SK7847-15	Groundwater	8260C
VPB166-GW-082517-258-260	SK7847-16	Groundwater	8260C
VPB166-GW-083117-438-440	SK7847-17	Groundwater	8260C
VPB166-GW-083117-458-460	SK7847-18	Groundwater	8260C

Sample ID	Lab ID	Matrix/Sample Type	Analysis
VPB166-GW-083117-478-480	SK7847-19	Groundwater	8260C
VPB166-GW-082817-278-280	SK7847-2	Groundwater	8260C
VPB166-GW-082817-298-300	SK7847-3	Groundwater	8260C
VPB166-GW-082817-318-320	SK7847-4	Groundwater	8260C
VPB166-GW-082917-338-340	SK7847-5	Groundwater	8260C
VPB166-GW-DUP-082917	SK7847-6	Duplicate of VPB166-GW-082917-338-340	8260C
VPB166-GW-082917-358-360	SK7847-7	Groundwater	8260C
VPB166-GW-082917-378-380	SK7847-8	Groundwater	8260C
VPB166-GW-083017-398-400	SK7847-9	Groundwater	8260C
TB02-WQ-090117	SK8092-1	Trip blank	8260C
VPB166-GW-090117-498-500	SK8092-2	Groundwater	8260C
VPB166-GW-090117-518-520	SK8092-3	Groundwater	8260C
VPB166-GW-090517-538-540	SK8092-4	Groundwater	8260C
VPB166-GW-090517-563-565	SK8092-5	Groundwater	8260C
VPB166-GW-090617-583-585	SK8092-6	Groundwater	8260C
VPB166-GW-090717-598-600	SK8092-7	Groundwater	8260C
VPB166-GW-090717-618-620	SK8092-8	Groundwater	8260C
VPB166-GW-DUP02	SK8092-9	Duplicate of VPB166-GW-090617-583-585	8260C
VPB166-TB-090817	SK8133-1	Trip blank	8260C
VPB166-GW-090817-658-660	SK8133-2	Groundwater	8260C
VPB166-GW-090817-678-680	SK8133-3	Groundwater	8260C
VPB166-GW-091117-683-685	SK8133-4	Groundwater	8260C
VPB166-GW-091117-698-700	SK8133-5	Groundwater	8260C
VPB166-TB-091217	SK8265-1	Trip blank	8260C
VPB166-GW-091217-723-725	SK8265-2	Groundwater	8260C
VPB166-GW-091317-738-740	SK8265-3	Groundwater	8260C
VPB166-GW-091317-758-760	SK8265-4	Groundwater	8260C
VPB166-TB-091417	SK8324-1	Trip blank	8260C
VPB166-SO-091417-763-765	SK8324-2	Soil	9060A
VPB166-EB-091417	SK8324-3	Equipment blank	9060A
VPB166-FB-091417	SK8324-4	Field blank	8260C
VPB166-GW-091417-768-770	SK8324-5	Groundwater	8260C
VPB166-GW-091417-778-780	SK8324-6	Groundwater	8260C
VPB166-TB-091517	SK8432-1	Trip blank	8260C
VPB166-GW-091517-798-800	SK8432-2	Groundwater	8260C
VPB166-EB-091517	SK8432-3	Equipment blank	8260C
VPB166-TB-091917	SK8534-1	Trip blank	8260C
VPB166-GW-091917-823-825	SK8534-2	Groundwater	8260C

Sample ID	Lab ID	Matrix/Sample Type	Analysis
VPB166-GW-091917-838-840	SK8534-3	Groundwater	8260C
VPB166-GW-092017-858-860	SK8534-4	Groundwater	8260C
VPB166-GW-092017-878-880	SK8534-5	Groundwater	8260C

Data validation activities were conducted using the following guidance documents: *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods SW-846, specifically Method 8260C, Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry* (U.S. EPA, 2006), *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods SW-846, specifically Method 9060A, Total Organic Carbon* (U.S. EPA, 1996), *Method SM5310B, Total Organic Carbon by High-Temperature Combustion, U.S. Environmental Protection Agency (U.S. EPA) Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (NFG, June 2008), *U.S. Environmental Protection Agency (U.S. EPA) Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review* (NFG, January 2010), and Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 4.2 (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 parameters (where applicable to the method):

- ✓ Holding times and sample preservation
- ✓ Gas chromatography/Mass spectrometer performance checks
- ✗ Initial calibration (ICAL) /initial calibration verification (ICV)/continuing calibration verification (CCV)
- ✗ Laboratory blanks/field blanks/equipment blanks/trip blanks
- ✓ Surrogate spike recoveries
- ✓ Matrix spike and/or matrix spike duplicate results
- ✗ Laboratory control sample/laboratory control sample duplicate results
- ✗ Field duplicates
- ✓ Internal standards
- ✓ Sample results/reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. Acceptable data parameters for which all criteria were met and no qualification was performed and non-conformance or other issues that were noted during validation, but did not result in qualification

of data are not discussed further. The symbol (X) indicates that a QC non-conformance resulted in the qualification of data. Any QC non-conformance that resulted in the qualification of data is discussed below.

RESULTS

Initial Calibration/Continuing Calibration Verification

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

- The ICAL percent relative standard deviation, correlation coefficient/coefficient of determination, and/or response factor method acceptance criteria were met
- The ICV standard percent recovery acceptance criteria were met
- The CCV method percent difference or percent drift and response factor acceptance criteria were met
- The retention time method acceptance criteria were met

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

ICAL Linearity Non-conformance:

Criteria	Actions	
	Detected Results	Non-detected Results
%RSD > 15% and quantitation based on mean response factor	J	UJ

Notes:

%RSD = Relative standard deviation
 J = Estimated
 UJ = Undetected and estimated

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

ICV Recovery Non-conformance:

Criteria	Actions	
	Detected Results	Non-detected Results
Recovery > 120%	J	UJ
Recovery < 80%	J	UJ

Notes:

J = Estimated
 UJ = Undetected and estimated

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

CCV Linearity Non-conformance:

Criteria	Actions	
	Detected Results	Non-detected Results
%Difference or %Drift > 20%	J	UJ

Notes:

J = Estimated
 UJ = Undetected and estimated

Laboratory Blanks/Equipment Blanks/ Field Blanks/Trip Blanks

Laboratory blanks, equipment blanks, field blanks, and trip blanks were analyzed with samples to assess contamination imparted by sample preparation and/or analysis. All results associated with a particular blank were evaluated to determine whether there was an inherent variability in the data, or if a problem was an isolated occurrence that did not affect the data. Samples were flagged in accordance with *Functional Guidelines* (shown below) where detections were not believed to be site-related.

Blank Non-conformance Charts:

<i>For common lab contaminants (methylene chloride, acetone, 2-butanone):</i>			
Blank type	Blank result	Sample result	Action for samples
Method, Storage, Trip, Field, or Equipment	Detects	Not detected	No qualification
	≤ 2x LOQ	< 2x LOQ	Report sample LOQ value with a U
		≥ 2x LOQ and ≤ 4x the LOQ	Report the sample result with a U**
		≥ 4x the LOQ	No qualifications
	> 2x LOQ	< LOD	Report sample LOD value with a U**
		≥ LOD and < 2x LOQ	Report sample LOQ value with a U
		≥ 2x LOQ and < blank contamination	Report the blank result with a U or reject the sample result as unusable R
		≥ 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. **

**Based on Resolution Consultants professional judgment

<i>For all other compounds:</i>			
Blank type	Blank result	Sample result	Action for samples
Method, Storage, Trip, Field, or Equipment	Detects	Not detected	No qualification
	< 2x LOQ	< 2x LOQ	Report sample LOQ value with a U
		≥ 2x LOQ	Use professional judgment
	> 2x LOQ	< 2x LOQ	Report sample LOQ value with a U
		≥ 2x LOQ and < blank contamination	Report the blank result with a U or reject the sample result as unusable R
		≥ 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.
	= 2x LOQ	< 2x LOQ	Report sample LOQ value with a U
		≥ 2x LOQ	Use professional judgment
	Gross contamination	Detects	Qualify results as unusable R

Notes:

LOQ = Limit of quantitation
 LOD = Limit of detection
 U = Undetected
 R = Rejected

Laboratory Control Samples / Laboratory Control Sample Duplicate

LCS %Rs is used to monitor the overall accuracy and performance of each step during analysis, including sample preparation. The laboratory analyzed LCSs in duplicate when matrix spike/matrix spike duplicates were not reported. In these instances, the laboratory determined precision between the duplicated values. Data qualification to the analytes associated with the specific LCS/LCS duplicate was as follows:

Laboratory Control Sample / Laboratory Control Sample Duplicate Non-conformance Chart:

Criteria	Action	
	Detected	Non-detected
% R or RPD > UL	J	No qualification
%R < LL	J	UJ
%R < 20%	J	Rejected

Notes:

%R = Percent recovery
 RPD = Relative percent difference
 UL = Upper limit
 LL = Lower limit
 J = Estimated
 UJ = Undetected and estimated

Field Duplicate

Two field duplicate pairs were collected to assess precision: VPB166-GW-082917-338-340/ VPB166-GW-DUP-082917 and VPB166-GW-090617-583-585/ VPB166-GW-DUP02. Field duplicate RPDs were reviewed for conformance with the Resolution Consultants QC criteria of $\leq 30\%$ for aqueous matrices. These criteria apply if both results were greater than two times the limit of quantitation (LOQ). Data qualification to the analytes associated with the specific field duplicate RPDs was as follows:

Field Duplicate Non-conformances Chart:

Criteria	RPD	Action	
		Detected	Non-detected
Sample and duplicate are not detected results	NC	No qualification	No qualification
Sample and duplicate results $\geq 2x$ LOQ	>30 (aqueous)	J	Not Applicable
If sample or duplicate result is $>2x$ LOQ and the other is not detected	NC	J	UJ
If sample or duplicate result is $<2x$ LOQ and the other is not detected	NC	No qualification	No qualification

Qualifications Actions

The data were reviewed independently from the laboratory to assess data quality. All compounds detected at concentrations less than the limit of quantitation but greater than the method detection limit were qualified by the laboratory as estimated (J). This "J" qualifier was retained during data validation. Any sample that was analyzed at a dilution because of high concentrations of target or non-target analytes was checked to confirm that the results and/or sample-specific limit of quantitation and limit of detections were adjusted accordingly by the laboratory.

No results were rejected; therefore, analytical completeness was calculated to be 100 percent. Data not qualified during data review are considered usable by the project. The remaining results qualified as estimated may be high or low, but the data are usable for their intended purpose, according to U.S. EPA and Department of Defense guidelines. Final data review qualifiers used to describe results and how they should be interpreted by the end data user are provided in Attachment A and Attachment B. Attachment C provides final results after data review.

ATTACHMENTS

Attachment A: Qualifier Codes and Explanations

Attachment B: Reason Codes and Explanations

Attachment C: Final Results after Data Review

Attachment A
Qualifier Codes and Explanations

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual quantitation limit 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.

Attachment B
Reason Codes and Explanations

Reason Code	Explanation
be	Equipment blank contamination
bf	Field blank contamination
bl	Laboratory blank contamination
bm	Missing blank information
bt	Trip blank contamination
c	Calibration issue
cr	Chromatographic resolution
d	Reporting limit raised due to chromatographic interference
dt	Dissolved result > total over limit
e	Ether interference
ej	Above calibration range; result estimated.
f	Presumed contamination from FB or ER.
fd	Field duplicate RPDs
h	Holding times
hs	Headspace greater than 6mm in all sample vials
i	Internal standard areas
ii	Injection internal standard area or retention time exceedance
it	Instrument tune
k	Estimated maximum possible concentrations (EMPC)
l	LCS recoveries
lc	Labeled compound recovery
ld	Laboratory duplicate RPDs
lp	Laboratory control sample/laboratory control sample duplicate RPDs
m	Matrix spike recovery
mc	Deviation from the method
md	MS/MSD RPDs
nb	Negative laboratory blank contamination
p	Chemical preservation issue
p-h	Uncertainty near detection limit (< Reporting Limit), historical reason code applied.
pe	Post Extraction Spike
q	Quantitation issue
r	Dual column RPD
rt	SIM ions not within + 2 seconds
s	Surrogate recovery
sp	Sample preparation issue
su	Evidence of ion suppression
t	Temperature Preservation Issue
x	Low % solids
y	Serial dilution results
z	ICS results

Attachment C
Final Results after Data Review

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK7578 TB01-WQ-082117 8/21/2017 Trip blank		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	2.5	U	
8260C	ACETONE	67-64-1	UG L	2.5	U	
8260C	BENZENE	71-43-2	UG L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	0.5	U	
8260C	BROMOFORM	75-25-2	UG L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG L	1	U	
8260C	CHLOROFORM	67-66-3	UG L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	1	U	
8260C	METHYL ACETATE	79-20-9	UG L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	0.5	UJ	c
8260C	METHYLENE CHLORIDE	75-09-2	UG L	2.5	U	
8260C	O-XYLENE	95-47-6	UG L	0.5	U	
8260C	STYRENE	100-42-5	UG L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	0.5	U	
8260C	TOLUENE	108-88-3	UG L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	1.5	U	

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK7578 VPB166-GW-082117-58-60 8/21/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG L	13		
8260C	2-HEXANONE	591-78-6	UG L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	2.5	U	
8260C	ACETONE	67-64-1	UG L	17		
8260C	BENZENE	71-43-2	UG L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	0.5	U	
8260C	BROMOFORM	75-25-2	UG L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG L	1	U	
8260C	CHLOROFORM	67-66-3	UG L	0.71	J	
8260C	CHLOROMETHANE	74-87-3	UG L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	1	U	
8260C	METHYL ACETATE	79-20-9	UG L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	0.5	UJ	c
8260C	METHYLENE CHLORIDE	75-09-2	UG L	2.5	U	
8260C	O-XYLENE	95-47-6	UG L	0.5	U	
8260C	STYRENE	100-42-5	UG L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	0.5	U	
8260C	TOLUENE	108-88-3	UG L	0.5	J	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	1.5	U	

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK7578 VPB166-GW-082117-98-100 8/21/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	5	UJ	mc
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	5	UJ	mc
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	5	UJ	mc
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	5	UJ	mc
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	5	UJ	mc
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	5	UJ	mc
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	5	UJ	mc
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	7.5	UJ	mc
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	5	UJ	mc
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	5	UJ	mc
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	5	UJ	mc
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	10	UJ	mc
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	5	UJ	mc
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	5	UJ	mc
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	5	UJ	mc
8260C	2-BUTANONE	78-93-3	UG L	25	UJ	mc
8260C	2-HEXANONE	591-78-6	UG L	25	UJ	mc
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	25	UJ	mc
8260C	ACETONE	67-64-1	UG L	25	UJ	mc
8260C	BENZENE	71-43-2	UG L	5	UJ	mc
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	5	UJ	mc
8260C	BROMOFORM	75-25-2	UG L	5	UJ	mc
8260C	BROMOMETHANE	74-83-9	UG L	10	UJ	mc
8260C	CARBON DISULFIDE	75-15-0	UG L	5	UJ	mc
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	5	UJ	mc
8260C	CHLOROBENZENE	108-90-7	UG L	5	UJ	mc
8260C	CHLOROETHANE	75-00-3	UG L	10	UJ	mc
8260C	CHLOROFORM	67-66-3	UG L	5	UJ	mc
8260C	CHLOROMETHANE	74-87-3	UG L	10	UJ	mc
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	5	UJ	mc
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	5	UJ	mc
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	5	UJ	mc
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	10	UJ	mc
8260C	ETHYLBENZENE	100-41-4	UG L	5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	10	UJ	mc
8260C	METHYL ACETATE	79-20-9	UG L	7.5	UJ	mc
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	5	UJ	mc
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	5	UJ	c,mc
8260C	METHYLENE CHLORIDE	75-09-2	UG L	25	UJ	mc
8260C	O-XYLENE	95-47-6	UG L	5	UJ	mc
8260C	STYRENE	100-42-5	UG L	5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	5	UJ	mc
8260C	TOLUENE	108-88-3	UG L	5	UJ	mc
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	5	UJ	mc
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	5	UJ	mc
8260C	TRICHLOROETHENE	79-01-6	UG L	5	UJ	mc
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	10	UJ	mc
8260C	VINYL CHLORIDE	75-01-4	UG L	10	UJ	mc
8260C	XYLENES, TOTAL	1330-20-7	UG L	15	UJ	mc

Notes:

UG_L = Micrograms per liter
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RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK7847 VPB166-GW-082417-138-140 8/24/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	2.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	2.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	2.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	2.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	2.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	2.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	2.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	3.8	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	2.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	2.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	2.5	U	bt,be
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	5	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	2.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	2.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	2.5	U	
8260C	2-BUTANONE	78-93-3	UG L	12	U	
8260C	2-HEXANONE	591-78-6	UG L	12	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	12	U	
8260C	ACETONE	67-64-1	UG L	12	U	be
8260C	BENZENE	71-43-2	UG L	2.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	2.5	U	
8260C	BROMOFORM	75-25-2	UG L	2.5	U	
8260C	BROMOMETHANE	74-83-9	UG L	5	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	2.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	2.5	U	
8260C	CHLOROBENZENE	108-90-7	UG L	2.5	U	
8260C	CHLOROETHANE	75-00-3	UG L	5	U	
8260C	CHLOROFORM	67-66-3	UG L	2.5	U	
8260C	CHLOROMETHANE	74-87-3	UG L	5	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	2.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	2.5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	2.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	2.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	5	U	
8260C	ETHYLBENZENE	100-41-4	UG L	2.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	2.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	5	U	
8260C	METHYL ACETATE	79-20-9	UG L	3.8	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	2.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	2.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	12	U	
8260C	O-XYLENE	95-47-6	UG L	2.5	U	
8260C	STYRENE	100-42-5	UG L	2.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	2.5	U	
8260C	TOLUENE	108-88-3	UG L	2.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	2.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	2.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	2.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	5	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	5	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	7.5	U	

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK7847 VPB166-GW-082417-198-200 8/24/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	0.5	U	bt,be
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	2.5	U	
8260C	ACETONE	67-64-1	UG L	2.5	U	be
8260C	BENZENE	71-43-2	UG L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	0.5	U	
8260C	BROMOFORM	75-25-2	UG L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG L	1	U	
8260C	CHLOROFORM	67-66-3	UG L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	1	U	
8260C	METHYL ACETATE	79-20-9	UG L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	5.4		
8260C	METHYLENE CHLORIDE	75-09-2	UG L	2.5	U	
8260C	O-XYLENE	95-47-6	UG L	0.5	U	
8260C	STYRENE	100-42-5	UG L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	1		
8260C	TOLUENE	108-88-3	UG L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	4.7		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	1.5	U	

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK7847 VPB166-GW-082517-218-220 8/25/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	6.8		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	0.94	J	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	1.4		
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	1.7	J	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	2.5	U	
8260C	ACETONE	67-64-1	UG L	2.5	U	
8260C	BENZENE	71-43-2	UG L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	0.5	U	
8260C	BROMOFORM	75-25-2	UG L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG L	1	U	
8260C	CHLOROFORM	67-66-3	UG L	1.5		
8260C	CHLOROMETHANE	74-87-3	UG L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	1.7		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	0.5	J	
8260C	ETHYLBENZENE	100-41-4	UG L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	1	U	
8260C	METHYL ACETATE	79-20-9	UG L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	1.7		
8260C	METHYLENE CHLORIDE	75-09-2	UG L	2.5	U	
8260C	O-XYLENE	95-47-6	UG L	0.5	U	
8260C	STYRENE	100-42-5	UG L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	3.3		
8260C	TOLUENE	108-88-3	UG L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	110		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	1.5	U	

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK7847 VPB166-GW-082517-238-240 8/25/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	7.7		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	1		
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	1.9		
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	1.5	J	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	2.5	U	
8260C	ACETONE	67-64-1	UG L	2.5	U	
8260C	BENZENE	71-43-2	UG L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	0.5	U	
8260C	BROMOFORM	75-25-2	UG L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG L	1	U	
8260C	CHLOROFORM	67-66-3	UG L	1.6		
8260C	CHLOROMETHANE	74-87-3	UG L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	1.5		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	0.56	J	
8260C	ETHYLBENZENE	100-41-4	UG L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	1	U	
8260C	METHYL ACETATE	79-20-9	UG L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	1.7		
8260C	METHYLENE CHLORIDE	75-09-2	UG L	2.5	U	
8260C	O-XYLENE	95-47-6	UG L	0.5	U	
8260C	STYRENE	100-42-5	UG L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	1.5		
8260C	TOLUENE	108-88-3	UG L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	94		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	1.5	U	

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK7847 VPB166-GW-082517-258-260 8/25/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	2.5	U	
8260C	ACETONE	67-64-1	UG L	2.5	U	
8260C	BENZENE	71-43-2	UG L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	0.5	U	
8260C	BROMOFORM	75-25-2	UG L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG L	1	U	
8260C	CHLOROFORM	67-66-3	UG L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG L	0.47	J	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	1	U	
8260C	METHYL ACETATE	79-20-9	UG L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	2.5	U	
8260C	O-XYLENE	95-47-6	UG L	0.5	U	
8260C	STYRENE	100-42-5	UG L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	0.5	U	
8260C	TOLUENE	108-88-3	UG L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	0.42	J	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	1.5	U	

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK7847 TB01-WQ-082817 8/28/2017 Trip blank		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	0.5	U	bl
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	2.5	U	
8260C	ACETONE	67-64-1	UG L	2.5	U	
8260C	BENZENE	71-43-2	UG L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	0.5	U	
8260C	BROMOFORM	75-25-2	UG L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG L	1	U	
8260C	CHLOROFORM	67-66-3	UG L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	1	U	
8260C	METHYL ACETATE	79-20-9	UG L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	2.5	U	
8260C	O-XYLENE	95-47-6	UG L	0.5	U	
8260C	STYRENE	100-42-5	UG L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	0.5	U	
8260C	TOLUENE	108-88-3	UG L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	1.5	U	

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

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Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK7847 VPB166-GW-082817-278-280 8/28/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	2.5	U	
8260C	ACETONE	67-64-1	UG L	2.5	U	be
8260C	BENZENE	71-43-2	UG L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	0.5	U	
8260C	BROMOFORM	75-25-2	UG L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	0.65	J	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG L	1	U	
8260C	CHLOROFORM	67-66-3	UG L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	0.33	J	
8260C	ETHYLBENZENE	100-41-4	UG L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	1	U	
8260C	METHYL ACETATE	79-20-9	UG L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	2.5	U	
8260C	O-XYLENE	95-47-6	UG L	0.5	U	
8260C	STYRENE	100-42-5	UG L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	0.5	U	
8260C	TOLUENE	108-88-3	UG L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	1.5	U	

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

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Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK7847 VPB166-GW-082817-298-300 8/28/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	0.5	U	bt,be
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	2.5	U	
8260C	ACETONE	67-64-1	UG L	2.5	U	be
8260C	BENZENE	71-43-2	UG L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	0.5	U	
8260C	BROMOFORM	75-25-2	UG L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	0.25	J	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG L	1	U	
8260C	CHLOROFORM	67-66-3	UG L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	0.32	J	
8260C	ETHYLBENZENE	100-41-4	UG L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	1	U	
8260C	METHYL ACETATE	79-20-9	UG L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	2.5	U	
8260C	O-XYLENE	95-47-6	UG L	0.5	U	
8260C	STYRENE	100-42-5	UG L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	0.5	U	
8260C	TOLUENE	108-88-3	UG L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	1.5	U	

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK7847 VPB166-GW-082817-318-320 8/28/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	2.7		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	0.4	J	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	0.94	J	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	0.5	U	bt,be
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	1.4	J	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	2.5	U	
8260C	ACETONE	67-64-1	UG L	2.5	U	
8260C	BENZENE	71-43-2	UG L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	0.5	U	
8260C	BROMOFORM	75-25-2	UG L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	1.1		
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG L	1	U	
8260C	CHLOROFORM	67-66-3	UG L	0.6	J	
8260C	CHLOROMETHANE	74-87-3	UG L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	1.4		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	1.8	J	
8260C	ETHYLBENZENE	100-41-4	UG L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	1	U	
8260C	METHYL ACETATE	79-20-9	UG L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	2.5	U	
8260C	O-XYLENE	95-47-6	UG L	0.5	U	
8260C	STYRENE	100-42-5	UG L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	0.5	U	
8260C	TOLUENE	108-88-3	UG L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	16		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	1.5	U	

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK7847 VPB166-GW-082917-338-340 8/29/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	9		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	0.86	J	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	2.4	J	fd
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	0.5	U	bt,be
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	2.5		
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	2.5	U	
8260C	ACETONE	67-64-1	UG L	2.5	U	be
8260C	BENZENE	71-43-2	UG L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	0.5	U	
8260C	BROMOFORM	75-25-2	UG L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	0.66	J	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG L	1	U	
8260C	CHLOROFORM	67-66-3	UG L	0.86	J	
8260C	CHLOROMETHANE	74-87-3	UG L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	2.5		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	1.1	J	fd
8260C	ETHYLBENZENE	100-41-4	UG L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	1	U	
8260C	METHYL ACETATE	79-20-9	UG L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	2.5	U	
8260C	O-XYLENE	95-47-6	UG L	0.5	U	
8260C	STYRENE	100-42-5	UG L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	0.5	U	
8260C	TOLUENE	108-88-3	UG L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	54		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	1.5	U	

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK7847 VPB166-GW-082917-358-360 8/29/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	1	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	1	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	2		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	1	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	1	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	1	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	1	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	1.5	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	1	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	1	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	1	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	2	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	1	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	1	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	1	U	
8260C	2-BUTANONE	78-93-3	UG L	5	U	
8260C	2-HEXANONE	591-78-6	UG L	5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	5	U	
8260C	ACETONE	67-64-1	UG L	5	U	
8260C	BENZENE	71-43-2	UG L	1	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	1	U	
8260C	BROMOFORM	75-25-2	UG L	1	U	
8260C	BROMOMETHANE	74-83-9	UG L	2	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	1	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	1	U	
8260C	CHLOROBENZENE	108-90-7	UG L	1	U	
8260C	CHLOROETHANE	75-00-3	UG L	2	U	
8260C	CHLOROFORM	67-66-3	UG L	1	U	
8260C	CHLOROMETHANE	74-87-3	UG L	2	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	1	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	1	U	
8260C	CYCLOHEXANE	110-82-7	UG L	1	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	1	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	2	U	
8260C	ETHYLBENZENE	100-41-4	UG L	1	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	1	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	2	U	
8260C	METHYL ACETATE	79-20-9	UG L	1.5	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	1	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	1	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	5	U	
8260C	O-XYLENE	95-47-6	UG L	1	U	
8260C	STYRENE	100-42-5	UG L	1	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	1	U	
8260C	TOLUENE	108-88-3	UG L	1	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	1	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	1	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	8.9		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	2	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	2	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	3	U	

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK7847 VPB166-GW-082917-378-380 8/29/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	2	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	2	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	2	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	2	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	2	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	2	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	2	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	3	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	2	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	2	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	2	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	4	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	2	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	2	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	2	U	
8260C	2-BUTANONE	78-93-3	UG L	10	U	
8260C	2-HEXANONE	591-78-6	UG L	10	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	10	U	
8260C	ACETONE	67-64-1	UG L	10	U	
8260C	BENZENE	71-43-2	UG L	2	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	2	U	
8260C	BROMOFORM	75-25-2	UG L	2	U	
8260C	BROMOMETHANE	74-83-9	UG L	4	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	2	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	2	U	
8260C	CHLOROBENZENE	108-90-7	UG L	2	U	
8260C	CHLOROETHANE	75-00-3	UG L	4	U	
8260C	CHLOROFORM	67-66-3	UG L	2	U	
8260C	CHLOROMETHANE	74-87-3	UG L	4	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	2	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	2	U	
8260C	CYCLOHEXANE	110-82-7	UG L	2	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	2	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	4	U	
8260C	ETHYLBENZENE	100-41-4	UG L	2	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	2	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	4	U	
8260C	METHYL ACETATE	79-20-9	UG L	3	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	2	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	2	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	10	U	
8260C	O-XYLENE	95-47-6	UG L	2	U	
8260C	STYRENE	100-42-5	UG L	2	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	2	U	
8260C	TOLUENE	108-88-3	UG L	2	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	2	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	2	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	2	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	4	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	4	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	6	U	

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK7847 VPB166-EB-083017 8/30/2017 Equipment blank		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	0.5	U	bl
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG L	2.5	J	
8260C	2-HEXANONE	591-78-6	UG L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	2.5	U	
8260C	ACETONE	67-64-1	UG L	7.1	J	I
8260C	BENZENE	71-43-2	UG L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	0.5	U	
8260C	BROMOFORM	75-25-2	UG L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG L	1	U	
8260C	CHLOROFORM	67-66-3	UG L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	1	U	
8260C	METHYL ACETATE	79-20-9	UG L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	2.5	U	
8260C	O-XYLENE	95-47-6	UG L	0.5	U	
8260C	STYRENE	100-42-5	UG L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	0.5	U	
8260C	TOLUENE	108-88-3	UG L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	1.5	U	

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK7847 VPB166-GW-083017-398-400 8/30/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	2	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	2	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	2	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	2	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	2	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	2	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	2	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	3	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	2	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	2	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	2	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	4	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	2	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	2	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	2	U	
8260C	2-BUTANONE	78-93-3	UG L	10	U	
8260C	2-HEXANONE	591-78-6	UG L	10	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	10	U	
8260C	ACETONE	67-64-1	UG L	10	U	
8260C	BENZENE	71-43-2	UG L	2	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	2	U	
8260C	BROMOFORM	75-25-2	UG L	2	U	
8260C	BROMOMETHANE	74-83-9	UG L	4	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	2	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	2	U	
8260C	CHLOROBENZENE	108-90-7	UG L	2	U	
8260C	CHLOROETHANE	75-00-3	UG L	4	U	
8260C	CHLOROFORM	67-66-3	UG L	2	U	
8260C	CHLOROMETHANE	74-87-3	UG L	4	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	2	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	2	U	
8260C	CYCLOHEXANE	110-82-7	UG L	2	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	2	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	4	U	
8260C	ETHYLBENZENE	100-41-4	UG L	2	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	2	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	4	U	
8260C	METHYL ACETATE	79-20-9	UG L	3	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	2	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	2	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	10	U	
8260C	O-XYLENE	95-47-6	UG L	2	U	
8260C	STYRENE	100-42-5	UG L	2	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	2	U	
8260C	TOLUENE	108-88-3	UG L	2	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	2	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	2	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	2	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	4	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	4	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	6	U	

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK7847 VPB166-GW-083017-418-420 8/30/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	1	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	1	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	1	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	1	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	1	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	1	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	1	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	1.5	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	1	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	1	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	1	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	2	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	1	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	1	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	1	U	
8260C	2-BUTANONE	78-93-3	UG L	5	U	
8260C	2-HEXANONE	591-78-6	UG L	5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	5	U	
8260C	ACETONE	67-64-1	UG L	5	U	
8260C	BENZENE	71-43-2	UG L	1	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	1	U	
8260C	BROMOFORM	75-25-2	UG L	1	U	
8260C	BROMOMETHANE	74-83-9	UG L	2	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	1	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	1	U	
8260C	CHLOROBENZENE	108-90-7	UG L	1	U	
8260C	CHLOROETHANE	75-00-3	UG L	2	U	
8260C	CHLOROFORM	67-66-3	UG L	1	U	
8260C	CHLOROMETHANE	74-87-3	UG L	2	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	1	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	1	U	
8260C	CYCLOHEXANE	110-82-7	UG L	1	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	1	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	2	U	
8260C	ETHYLBENZENE	100-41-4	UG L	1	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	1	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	2	U	
8260C	METHYL ACETATE	79-20-9	UG L	1.5	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	1	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	1	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	5	U	
8260C	O-XYLENE	95-47-6	UG L	1	U	
8260C	STYRENE	100-42-5	UG L	1	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	1	U	
8260C	TOLUENE	108-88-3	UG L	1	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	1	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	1	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	1	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	2	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	2	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	3	U	

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK7847 VPB166-GW-083117-438-440 8/31/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	2.5	U	
8260C	ACETONE	67-64-1	UG L	2.5	U	
8260C	BENZENE	71-43-2	UG L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	0.5	U	
8260C	BROMOFORM	75-25-2	UG L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG L	1	U	
8260C	CHLOROFORM	67-66-3	UG L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	1	U	
8260C	METHYL ACETATE	79-20-9	UG L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	2.5	U	
8260C	O-XYLENE	95-47-6	UG L	0.5	U	
8260C	STYRENE	100-42-5	UG L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	0.5	U	
8260C	TOLUENE	108-88-3	UG L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	1.5	U	

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK7847 VPB166-GW-083117-458-460 8/31/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	1	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	1	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	1	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	1	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	1	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	1	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	1	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	1.5	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	1	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	1	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	1	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	2	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	1	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	1	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	1	U	
8260C	2-BUTANONE	78-93-3	UG L	5	U	
8260C	2-HEXANONE	591-78-6	UG L	5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	5	U	
8260C	ACETONE	67-64-1	UG L	5	U	
8260C	BENZENE	71-43-2	UG L	1	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	1	U	
8260C	BROMOFORM	75-25-2	UG L	1	U	
8260C	BROMOMETHANE	74-83-9	UG L	2	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	1	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	1	U	
8260C	CHLOROBENZENE	108-90-7	UG L	1	U	
8260C	CHLOROETHANE	75-00-3	UG L	2	U	
8260C	CHLOROFORM	67-66-3	UG L	1	U	
8260C	CHLOROMETHANE	74-87-3	UG L	0.72	J	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	1	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	1	U	
8260C	CYCLOHEXANE	110-82-7	UG L	1	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	1	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	2	U	
8260C	ETHYLBENZENE	100-41-4	UG L	1	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	1	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	2	U	
8260C	METHYL ACETATE	79-20-9	UG L	1.5	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	1	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	1	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	5	U	
8260C	O-XYLENE	95-47-6	UG L	1	U	
8260C	STYRENE	100-42-5	UG L	1	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	1	U	
8260C	TOLUENE	108-88-3	UG L	1	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	1	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	1	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	1	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	2	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	2	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	3	U	

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK7847 VPB166-GW-083117-478-480 8/31/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	2		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	0.28	J	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	2.5	U	
8260C	ACETONE	67-64-1	UG L	2.5	U	
8260C	BENZENE	71-43-2	UG L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	0.5	U	
8260C	BROMOFORM	75-25-2	UG L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG L	1	U	
8260C	CHLOROFORM	67-66-3	UG L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	0.28	J	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	0.52	J	
8260C	ETHYLBENZENE	100-41-4	UG L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	1	U	
8260C	METHYL ACETATE	79-20-9	UG L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	2.5	U	
8260C	O-XYLENE	95-47-6	UG L	0.5	U	
8260C	STYRENE	100-42-5	UG L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	0.5	U	
8260C	TOLUENE	108-88-3	UG L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	4		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	1.5	U	

Notes:

- UG_L = Micrograms per liter
- Qual = Final qualifiers (See Attachment A)
- RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK7847 VPB166-GW-DUP-082917 8/29/2017 Field Duplicate		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	12		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	0.91	J	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	3.3	J	fd
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	0.5	U	bt,be
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	2.9		
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	2.5	U	
8260C	ACETONE	67-64-1	UG L	2.5	U	
8260C	BENZENE	71-43-2	UG L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	0.5	U	
8260C	BROMOFORM	75-25-2	UG L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	0.66	J	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG L	1	U	
8260C	CHLOROFORM	67-66-3	UG L	0.96	J	
8260C	CHLOROMETHANE	74-87-3	UG L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	2.9		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	1.6	J	fd
8260C	ETHYLBENZENE	100-41-4	UG L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	1	U	
8260C	METHYL ACETATE	79-20-9	UG L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	2.5	U	
8260C	O-XYLENE	95-47-6	UG L	0.5	U	
8260C	STYRENE	100-42-5	UG L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	0.5	U	
8260C	TOLUENE	108-88-3	UG L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	62		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	1.5	U	

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK8092 TB02-WQ-090117 9/1/2017 Trip blank		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	2.5	U	
8260C	ACETONE	67-64-1	UG L	2.5	U	
8260C	BENZENE	71-43-2	UG L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	0.5	U	
8260C	BROMOFORM	75-25-2	UG L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG L	1	U	
8260C	CHLOROFORM	67-66-3	UG L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	1	U	
8260C	METHYL ACETATE	79-20-9	UG L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	2.5	U	
8260C	O-XYLENE	95-47-6	UG L	0.5	U	
8260C	STYRENE	100-42-5	UG L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	0.5	U	
8260C	TOLUENE	108-88-3	UG L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	1.5	U	

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

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Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK8092 VPB166-GW-090117-498-500 9/1/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	9.1		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	1.1		
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	1.6	J	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	2.5	U	
8260C	ACETONE	67-64-1	UG L	2.5	U	
8260C	BENZENE	71-43-2	UG L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	0.5	U	
8260C	BROMOFORM	75-25-2	UG L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG L	1	U	
8260C	CHLOROFORM	67-66-3	UG L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	1.6		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	0.86	J	
8260C	ETHYLBENZENE	100-41-4	UG L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	1	U	
8260C	METHYL ACETATE	79-20-9	UG L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	2.5	U	
8260C	O-XYLENE	95-47-6	UG L	0.5	U	
8260C	STYRENE	100-42-5	UG L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	0.5	U	
8260C	TOLUENE	108-88-3	UG L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	100		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	1.5	U	

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK8092 VPB166-GW-090117-518-520 9/1/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	3.4		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	0.47	J	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	0.22	J	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	1.4	J	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	2.5	U	
8260C	ACETONE	67-64-1	UG L	2.5	U	
8260C	BENZENE	71-43-2	UG L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	0.5	U	
8260C	BROMOFORM	75-25-2	UG L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG L	1	U	
8260C	CHLOROFORM	67-66-3	UG L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	1.4		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	1	U	
8260C	METHYL ACETATE	79-20-9	UG L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	0.8	J	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	2.5	U	
8260C	O-XYLENE	95-47-6	UG L	0.5	U	
8260C	STYRENE	100-42-5	UG L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	2.8		
8260C	TOLUENE	108-88-3	UG L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	100		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	1.5	U	

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK8092 VPB166-GW-090517-538-540 9/5/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	7.5	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	10	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	5	U	
8260C	2-BUTANONE	78-93-3	UG L	25	U	
8260C	2-HEXANONE	591-78-6	UG L	25	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	25	U	
8260C	ACETONE	67-64-1	UG L	25	U	
8260C	BENZENE	71-43-2	UG L	5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	5	U	
8260C	BROMOFORM	75-25-2	UG L	5	U	
8260C	BROMOMETHANE	74-83-9	UG L	10	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	5	U	
8260C	CHLOROBENZENE	108-90-7	UG L	5	U	
8260C	CHLOROETHANE	75-00-3	UG L	10	U	
8260C	CHLOROFORM	67-66-3	UG L	5	U	
8260C	CHLOROMETHANE	74-87-3	UG L	10	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	10	U	
8260C	ETHYLBENZENE	100-41-4	UG L	5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	10	U	
8260C	METHYL ACETATE	79-20-9	UG L	7.5	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	25	U	
8260C	O-XYLENE	95-47-6	UG L	5	U	
8260C	STYRENE	100-42-5	UG L	5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	5	U	
8260C	TOLUENE	108-88-3	UG L	5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	4.5	J	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	10	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	10	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	15	U	

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK8092 VPB166-GW-090517-563-565 9/5/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	9.5		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	1.1		
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	2		
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	0.5	U	
8260C	1,3-DICHLOROETHANE	541-73-1	UG L	0.5	U	
8260C	1,4-DICHLOROETHANE	106-46-7	UG L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	2.5	U	
8260C	ACETONE	67-64-1	UG L	2.5	U	
8260C	BENZENE	71-43-2	UG L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	0.5	U	
8260C	BROMOFORM	75-25-2	UG L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	0.5	U	
8260C	CHLOROETHANE	108-90-7	UG L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG L	1	U	
8260C	CHLOROFORM	67-66-3	UG L	0.49	J	
8260C	CHLOROMETHANE	74-87-3	UG L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	2		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	1.1	J	
8260C	ETHYLBENZENE	100-41-4	UG L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	1	U	
8260C	METHYL ACETATE	79-20-9	UG L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	2.5	U	
8260C	O-XYLENE	95-47-6	UG L	0.5	U	
8260C	STYRENE	100-42-5	UG L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	2.4		
8260C	TOLUENE	108-88-3	UG L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	140		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	1.5	U	

Notes:

UG_L = Micrograms per liter
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RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK8092 VPB166-GW-090617-583-585 9/6/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	8.5		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	1.4		
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	2.8		
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	2.5	U	
8260C	ACETONE	67-64-1	UG L	2.5	U	
8260C	BENZENE	71-43-2	UG L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	0.5	U	
8260C	BROMOFORM	75-25-2	UG L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG L	1	U	
8260C	CHLOROFORM	67-66-3	UG L	0.66	J	
8260C	CHLOROMETHANE	74-87-3	UG L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	2.8		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	0.68	J	
8260C	ETHYLBENZENE	100-41-4	UG L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	1	U	
8260C	METHYL ACETATE	79-20-9	UG L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	2.5	U	
8260C	O-XYLENE	95-47-6	UG L	0.5	U	
8260C	STYRENE	100-42-5	UG L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	4.5		
8260C	TOLUENE	108-88-3	UG L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	220		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	1.5	U	

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK8092 VPB166-GW-090717-598-600 9/7/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	7.5	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	2.2	J	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	10	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	5	U	
8260C	2-BUTANONE	78-93-3	UG L	25	U	
8260C	2-HEXANONE	591-78-6	UG L	25	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	25	U	
8260C	ACETONE	67-64-1	UG L	25	U	
8260C	BENZENE	71-43-2	UG L	5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	5	U	
8260C	BROMOFORM	75-25-2	UG L	5	U	
8260C	BROMOMETHANE	74-83-9	UG L	10	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	5	U	
8260C	CHLOROBENZENE	108-90-7	UG L	5	U	
8260C	CHLOROETHANE	75-00-3	UG L	10	U	
8260C	CHLOROFORM	67-66-3	UG L	5	U	
8260C	CHLOROMETHANE	74-87-3	UG L	10	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	10	U	
8260C	ETHYLBENZENE	100-41-4	UG L	5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	10	U	
8260C	METHYL ACETATE	79-20-9	UG L	7.5	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	25	U	
8260C	O-XYLENE	95-47-6	UG L	5	U	
8260C	STYRENE	100-42-5	UG L	5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	5	U	
8260C	TOLUENE	108-88-3	UG L	5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	57		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	10	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	10	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	15	U	

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK8092 VPB166-GW-090717-618-620 9/7/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	9.5		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	0.38	J	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	0.67	J	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	3		
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	2.1		
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	2.5	U	
8260C	ACETONE	67-64-1	UG L	2.5	U	
8260C	BENZENE	71-43-2	UG L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	0.5	U	
8260C	BROMOFORM	75-25-2	UG L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	1.2		
8260C	CHLOROBENZENE	108-90-7	UG L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG L	1	U	
8260C	CHLOROFORM	67-66-3	UG L	0.95	J	
8260C	CHLOROMETHANE	74-87-3	UG L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	2.1		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	0.63	J	
8260C	ETHYLBENZENE	100-41-4	UG L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	1	U	
8260C	METHYL ACETATE	79-20-9	UG L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	2.5	U	
8260C	O-XYLENE	95-47-6	UG L	0.5	U	
8260C	STYRENE	100-42-5	UG L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	0.5	U	
8260C	TOLUENE	108-88-3	UG L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	190		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	1.5	U	

Notes:

UG_L = Micrograms per liter
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VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK8092 VPB166-GW-DUP02 9/1/2017 Field Duplicate		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	9.7		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	1.6		
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	2.8		
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	2.5	U	
8260C	ACETONE	67-64-1	UG L	2.5	U	
8260C	BENZENE	71-43-2	UG L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	0.5	U	
8260C	BROMOFORM	75-25-2	UG L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG L	1	U	
8260C	CHLOROFORM	67-66-3	UG L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	2.8		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	0.76	J	
8260C	ETHYLBENZENE	100-41-4	UG L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	1	U	
8260C	METHYL ACETATE	79-20-9	UG L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	2.5	U	
8260C	O-XYLENE	95-47-6	UG L	0.5	U	
8260C	STYRENE	100-42-5	UG L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	4.9		
8260C	TOLUENE	108-88-3	UG L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	210		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	1.5	U	

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK8133 VPB166-TB-090817 9/8/2017 Trip blank		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	2.5	U	
8260C	ACETONE	67-64-1	UG L	2.5	U	
8260C	BENZENE	71-43-2	UG L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	0.5	U	
8260C	BROMOFORM	75-25-2	UG L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG L	1	U	
8260C	CHLOROFORM	67-66-3	UG L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG L	1	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	1	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	1	U	
8260C	METHYL ACETATE	79-20-9	UG L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	0.5	UJ	c
8260C	METHYLENE CHLORIDE	75-09-2	UG L	2.5	U	
8260C	O-XYLENE	95-47-6	UG L	0.5	U	
8260C	STYRENE	100-42-5	UG L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	0.5	U	
8260C	TOLUENE	108-88-3	UG L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	1.5	U	

Notes:

UG_L = Micrograms per liter
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RC = Reason codes (See Attachment B)

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Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK8133 VPB166-GW-090817-658-660 9/8/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	2	UJ	mc
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	2	UJ	mc
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	2	UJ	mc
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	2	UJ	mc
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	2	UJ	mc
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	2	UJ	mc
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	2	UJ	mc
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	3	UJ	mc
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	2	UJ	mc
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	2	UJ	mc
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	2	UJ	mc
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	4	UJ	mc
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	2	UJ	mc
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	2	UJ	mc
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	2	UJ	mc
8260C	2-BUTANONE	78-93-3	UG L	10	UJ	mc
8260C	2-HEXANONE	591-78-6	UG L	10	UJ	mc
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	10	UJ	mc
8260C	ACETONE	67-64-1	UG L	10	UJ	mc
8260C	BENZENE	71-43-2	UG L	2	UJ	mc
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	2	UJ	mc
8260C	BROMOFORM	75-25-2	UG L	2	UJ	mc
8260C	BROMOMETHANE	74-83-9	UG L	4	UJ	mc
8260C	CARBON DISULFIDE	75-15-0	UG L	2	UJ	mc
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	2	UJ	mc
8260C	CHLOROBENZENE	108-90-7	UG L	2	UJ	mc
8260C	CHLOROETHANE	75-00-3	UG L	4	UJ	mc
8260C	CHLOROFORM	67-66-3	UG L	2	UJ	mc
8260C	CHLOROMETHANE	74-87-3	UG L	4	UJ	mc,c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	2	UJ	mc
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	2	UJ	mc
8260C	CYCLOHEXANE	110-82-7	UG L	2	UJ	mc
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	2	UJ	mc
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	4	UJ	mc,c
8260C	ETHYLBENZENE	100-41-4	UG L	2	UJ	mc
8260C	ISOPROPYLBENZENE	98-82-8	UG L	2	UJ	mc
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	4	UJ	mc
8260C	METHYL ACETATE	79-20-9	UG L	3	UJ	mc
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	2	UJ	mc
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	2	UJ	mc,c
8260C	METHYLENE CHLORIDE	75-09-2	UG L	10	UJ	mc
8260C	O-XYLENE	95-47-6	UG L	2	UJ	mc
8260C	STYRENE	100-42-5	UG L	2	UJ	mc
8260C	TETRACHLOROETHENE	127-18-4	UG L	2	UJ	mc
8260C	TOLUENE	108-88-3	UG L	2	UJ	mc
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	2	UJ	mc
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	2	UJ	mc
8260C	TRICHLOROETHENE	79-01-6	UG L	12	J	mc
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	4	UJ	mc
8260C	VINYL CHLORIDE	75-01-4	UG L	4	UJ	mc
8260C	XYLENES, TOTAL	1330-20-7	UG L	6	UJ	mc

Notes:

UG_L = Micrograms per liter
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RC = Reason codes (See Attachment B)

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Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK8133 VPB166-GW-090817-678-680 9/8/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	5	UJ	mc
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	5	UJ	mc
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	5	UJ	mc
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	5	UJ	mc
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	5	UJ	mc
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	5	UJ	mc
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	5	UJ	mc
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	7.5	UJ	mc
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	5	UJ	mc
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	5	UJ	mc
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	5	UJ	mc
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	10	UJ	mc
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	5	UJ	mc
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	5	UJ	mc
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	5	UJ	mc
8260C	2-BUTANONE	78-93-3	UG L	25	UJ	mc
8260C	2-HEXANONE	591-78-6	UG L	25	UJ	mc
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	25	UJ	mc
8260C	ACETONE	67-64-1	UG L	25	UJ	mc
8260C	BENZENE	71-43-2	UG L	5	UJ	mc
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	5	UJ	mc
8260C	BROMOFORM	75-25-2	UG L	5	UJ	mc
8260C	BROMOMETHANE	74-83-9	UG L	10	UJ	mc
8260C	CARBON DISULFIDE	75-15-0	UG L	5	UJ	mc
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	5	UJ	mc
8260C	CHLOROBENZENE	108-90-7	UG L	5	UJ	mc
8260C	CHLOROETHANE	75-00-3	UG L	10	UJ	mc
8260C	CHLOROFORM	67-66-3	UG L	5	UJ	mc
8260C	CHLOROMETHANE	74-87-3	UG L	10	UJ	mc,c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	5	UJ	mc
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	5	UJ	mc
8260C	CYCLOHEXANE	110-82-7	UG L	5	UJ	mc
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	5	UJ	mc
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	10	UJ	mc,c
8260C	ETHYLBENZENE	100-41-4	UG L	5	UJ	mc
8260C	ISOPROPYLBENZENE	98-82-8	UG L	5	UJ	mc
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	10	UJ	mc
8260C	METHYL ACETATE	79-20-9	UG L	7.5	UJ	mc
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	5	UJ	mc
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	5	UJ	mc,c
8260C	METHYLENE CHLORIDE	75-09-2	UG L	25	UJ	mc
8260C	O-XYLENE	95-47-6	UG L	5	UJ	mc
8260C	STYRENE	100-42-5	UG L	5	UJ	mc
8260C	TETRACHLOROETHENE	127-18-4	UG L	5	UJ	mc
8260C	TOLUENE	108-88-3	UG L	5	UJ	mc
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	5	UJ	mc
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	5	UJ	mc
8260C	TRICHLOROETHENE	79-01-6	UG L	5	UJ	mc
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	10	UJ	mc
8260C	VINYL CHLORIDE	75-01-4	UG L	10	UJ	mc
8260C	XYLENES, TOTAL	1330-20-7	UG L	15	UJ	mc

Notes:

UG_L = Micrograms per liter
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Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK8133 VPB166-GW-091117-683-685 9/11/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	2	UJ	mc
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	2	UJ	mc
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	2	UJ	mc
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	2	UJ	mc
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	2	UJ	mc
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	2	UJ	mc
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	2	UJ	mc
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	3	UJ	mc
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	2	UJ	mc
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	2	UJ	mc
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	2	UJ	mc
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	4	UJ	mc
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	2	UJ	mc
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	2	UJ	mc
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	2	UJ	mc
8260C	2-BUTANONE	78-93-3	UG L	10	UJ	mc
8260C	2-HEXANONE	591-78-6	UG L	10	UJ	mc
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	10	UJ	mc
8260C	ACETONE	67-64-1	UG L	10	J	mc
8260C	BENZENE	71-43-2	UG L	2	UJ	mc
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	2	UJ	mc
8260C	BROMOFORM	75-25-2	UG L	2	UJ	mc
8260C	BROMOMETHANE	74-83-9	UG L	4	UJ	mc
8260C	CARBON DISULFIDE	75-15-0	UG L	2	UJ	mc
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	2	UJ	mc
8260C	CHLOROBENZENE	108-90-7	UG L	2	UJ	mc
8260C	CHLOROETHANE	75-00-3	UG L	4	UJ	mc
8260C	CHLOROFORM	67-66-3	UG L	2	UJ	mc
8260C	CHLOROMETHANE	74-87-3	UG L	4	UJ	mc,c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	2	UJ	mc
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	2	UJ	mc
8260C	CYCLOHEXANE	110-82-7	UG L	2	UJ	mc
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	2	UJ	mc
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	4	UJ	mc,c
8260C	ETHYLBENZENE	100-41-4	UG L	2	UJ	mc
8260C	ISOPROPYLBENZENE	98-82-8	UG L	2	UJ	mc
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	4	UJ	mc
8260C	METHYL ACETATE	79-20-9	UG L	3	UJ	mc
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	2	UJ	mc
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	2	UJ	mc,c
8260C	METHYLENE CHLORIDE	75-09-2	UG L	10	UJ	mc
8260C	O-XYLENE	95-47-6	UG L	2	UJ	mc
8260C	STYRENE	100-42-5	UG L	2	UJ	mc
8260C	TETRACHLOROETHENE	127-18-4	UG L	2	UJ	mc
8260C	TOLUENE	108-88-3	UG L	2	UJ	mc
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	2	UJ	mc
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	2	UJ	mc
8260C	TRICHLOROETHENE	79-01-6	UG L	2.8	J	mc
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	4	UJ	mc
8260C	VINYL CHLORIDE	75-01-4	UG L	4	UJ	mc
8260C	XYLENES, TOTAL	1330-20-7	UG L	6	UJ	mc

Notes:

UG_L = Micrograms per liter
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RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK8133 VPB166-GW-091117-698-700 9/11/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	49		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	1.5		
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	2.1		
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	12		
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	3.4		
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	2.5	U	
8260C	ACETONE	67-64-1	UG L	2.5	U	
8260C	BENZENE	71-43-2	UG L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	0.5	U	
8260C	BROMOFORM	75-25-2	UG L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	1.2		
8260C	CHLOROBENZENE	108-90-7	UG L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG L	1	U	
8260C	CHLOROFORM	67-66-3	UG L	1.5		
8260C	CHLOROMETHANE	74-87-3	UG L	1	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	3.4		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	0.44	J	c
8260C	ETHYLBENZENE	100-41-4	UG L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	1	U	
8260C	METHYL ACETATE	79-20-9	UG L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	0.5	UJ	c
8260C	METHYLENE CHLORIDE	75-09-2	UG L	2.5	U	
8260C	O-XYLENE	95-47-6	UG L	0.5	U	
8260C	STYRENE	100-42-5	UG L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	5		
8260C	TOLUENE	108-88-3	UG L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	1500		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	1.5	U	

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

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Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK8265 VPB166-TB-091217 9/12/2017 Trip blank		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	2.5	U	
8260C	ACETONE	67-64-1	UG L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	0.5	U	
8260C	BROMOFORM	75-25-2	UG L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG L	1	U	
8260C	CHLOROFORM	67-66-3	UG L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG L	1	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	1	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	1	U	
8260C	METHYL ACETATE	79-20-9	UG L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	2.5	U	
8260C	O-XYLENE	95-47-6	UG L	0.5	U	
8260C	STYRENE	100-42-5	UG L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	0.5	U	
8260C	TOLUENE	108-88-3	UG L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	1.5	U	

Notes:

UG_L = Micrograms per liter
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RC = Reason codes (See Attachment B)

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Final Results after Data Review
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Sample Delivery Group Sample Identification Sample Date Sample Type				SK8265 VPB166-GW-091217-723-725 9/12/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	5	UJ	mc
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	5	UJ	mc
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	5	UJ	mc
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	5	UJ	mc
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	5	UJ	mc
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	5	UJ	mc
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	5	UJ	mc
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	7.5	UJ	mc
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	5	UJ	mc
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	5	UJ	mc
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	5	UJ	mc
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	10	UJ	mc
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	5	UJ	mc
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	5	UJ	mc
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	5	UJ	mc
8260C	2-BUTANONE	78-93-3	UG L	25	UJ	mc
8260C	2-HEXANONE	591-78-6	UG L	25	UJ	mc
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	25	UJ	mc
8260C	ACETONE	67-64-1	UG L	25	UJ	c,mc
8260C	BENZENE	71-43-2	UG L	5	UJ	mc
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	5	UJ	mc
8260C	BROMOFORM	75-25-2	UG L	5	UJ	mc
8260C	BROMOMETHANE	74-83-9	UG L	10	UJ	mc
8260C	CARBON DISULFIDE	75-15-0	UG L	5	UJ	mc
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	5	UJ	mc
8260C	CHLOROBENZENE	108-90-7	UG L	5	UJ	mc
8260C	CHLOROETHANE	75-00-3	UG L	10	UJ	mc
8260C	CHLOROFORM	67-66-3	UG L	5	UJ	mc
8260C	CHLOROMETHANE	74-87-3	UG L	10	UJ	c,mc
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	5	UJ	mc
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	5	UJ	mc
8260C	CYCLOHEXANE	110-82-7	UG L	5	UJ	mc
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	5	UJ	mc
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	10	UJ	c,mc
8260C	ETHYLBENZENE	100-41-4	UG L	5	UJ	mc
8260C	ISOPROPYLBENZENE	98-82-8	UG L	5	UJ	mc
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	10	UJ	mc
8260C	METHYL ACETATE	79-20-9	UG L	7.5	UJ	mc
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	5	UJ	mc
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	5	UJ	mc
8260C	METHYLENE CHLORIDE	75-09-2	UG L	25	UJ	mc
8260C	O-XYLENE	95-47-6	UG L	5	UJ	mc
8260C	STYRENE	100-42-5	UG L	5	UJ	mc
8260C	TETRACHLOROETHENE	127-18-4	UG L	5	UJ	mc
8260C	TOLUENE	108-88-3	UG L	5	UJ	mc
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	5	UJ	mc
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	5	UJ	mc
8260C	TRICHLOROETHENE	79-01-6	UG L	5	UJ	mc
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	10	UJ	mc
8260C	VINYL CHLORIDE	75-01-4	UG L	10	UJ	mc
8260C	XYLENES, TOTAL	1330-20-7	UG L	15	UJ	mc

Notes:

UG_L = Micrograms per liter
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RC = Reason codes (See Attachment B)

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Final Results after Data Review
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Sample Delivery Group Sample Identification Sample Date Sample Type				SK8265 VPB166-GW-091317-738-740 9/13/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	10	UJ	mc
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	10	UJ	mc
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	10	UJ	mc
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	10	UJ	mc
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	10	UJ	mc
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	10	UJ	mc
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	10	UJ	mc
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	15	UJ	mc
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	10	UJ	mc
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	10	UJ	mc
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	10	UJ	mc
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	20	UJ	mc
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	10	UJ	mc
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	10	UJ	mc
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	10	UJ	mc
8260C	2-BUTANONE	78-93-3	UG L	50	UJ	mc
8260C	2-HEXANONE	591-78-6	UG L	50	UJ	mc
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	50	UJ	mc
8260C	ACETONE	67-64-1	UG L	50	UJ	c,mc
8260C	BENZENE	71-43-2	UG L	10	UJ	mc
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	10	UJ	mc
8260C	BROMOFORM	75-25-2	UG L	10	UJ	mc
8260C	BROMOMETHANE	74-83-9	UG L	20	UJ	mc
8260C	CARBON DISULFIDE	75-15-0	UG L	10	UJ	mc
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	10	UJ	mc
8260C	CHLOROBENZENE	108-90-7	UG L	10	UJ	mc
8260C	CHLOROETHANE	75-00-3	UG L	20	UJ	mc
8260C	CHLOROFORM	67-66-3	UG L	10	UJ	mc
8260C	CHLOROMETHANE	74-87-3	UG L	20	UJ	c,mc
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	10	UJ	mc
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	10	UJ	mc
8260C	CYCLOHEXANE	110-82-7	UG L	10	UJ	mc
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	10	UJ	mc
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	20	UJ	c,mc
8260C	ETHYLBENZENE	100-41-4	UG L	10	UJ	mc
8260C	ISOPROPYLBENZENE	98-82-8	UG L	10	UJ	mc
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	20	UJ	mc
8260C	METHYL ACETATE	79-20-9	UG L	15	UJ	mc
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	10	UJ	mc
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	10	UJ	mc
8260C	METHYLENE CHLORIDE	75-09-2	UG L	50	UJ	mc
8260C	O-XYLENE	95-47-6	UG L	10	UJ	mc
8260C	STYRENE	100-42-5	UG L	10	UJ	mc
8260C	TETRACHLOROETHENE	127-18-4	UG L	10	UJ	mc
8260C	TOLUENE	108-88-3	UG L	10	UJ	mc
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	10	UJ	mc
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	10	UJ	mc
8260C	TRICHLOROETHENE	79-01-6	UG L	10	UJ	mc
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	20	UJ	mc
8260C	VINYL CHLORIDE	75-01-4	UG L	20	UJ	mc
8260C	XYLENES, TOTAL	1330-20-7	UG L	30	UJ	mc

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

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Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK8265 VPB166-GW-091317-758-760 9/13/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	20	UJ	mc
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	20	UJ	mc
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	20	UJ	mc
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	20	UJ	mc
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	20	UJ	mc
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	20	UJ	mc
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	20	UJ	mc
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	30	UJ	mc
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	20	UJ	mc
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	20	UJ	mc
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	20	UJ	mc
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	40	UJ	mc
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	20	UJ	mc
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	20	UJ	mc
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	20	UJ	mc
8260C	2-BUTANONE	78-93-3	UG L	100	UJ	mc
8260C	2-HEXANONE	591-78-6	UG L	100	UJ	mc
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	100	UJ	mc
8260C	ACETONE	67-64-1	UG L	100	UJ	c,mc
8260C	BENZENE	71-43-2	UG L	20	UJ	mc
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	20	UJ	mc
8260C	BROMOFORM	75-25-2	UG L	20	UJ	mc
8260C	BROMOMETHANE	74-83-9	UG L	40	UJ	mc
8260C	CARBON DISULFIDE	75-15-0	UG L	20	UJ	mc
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	20	UJ	mc
8260C	CHLOROBENZENE	108-90-7	UG L	20	UJ	mc
8260C	CHLOROETHANE	75-00-3	UG L	40	UJ	mc
8260C	CHLOROFORM	67-66-3	UG L	20	UJ	mc
8260C	CHLOROMETHANE	74-87-3	UG L	40	UJ	c,mc
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	20	UJ	mc
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	20	UJ	mc
8260C	CYCLOHEXANE	110-82-7	UG L	20	UJ	mc
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	20	UJ	mc
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	40	UJ	c,mc
8260C	ETHYLBENZENE	100-41-4	UG L	20	UJ	mc
8260C	ISOPROPYLBENZENE	98-82-8	UG L	20	UJ	mc
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	40	UJ	mc
8260C	METHYL ACETATE	79-20-9	UG L	30	UJ	mc
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	20	UJ	mc
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	20	UJ	mc
8260C	METHYLENE CHLORIDE	75-09-2	UG L	100	UJ	mc
8260C	O-XYLENE	95-47-6	UG L	20	UJ	mc
8260C	STYRENE	100-42-5	UG L	20	UJ	mc
8260C	TETRACHLOROETHENE	127-18-4	UG L	20	UJ	mc
8260C	TOLUENE	108-88-3	UG L	20	UJ	mc
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	20	UJ	mc
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	20	UJ	mc
8260C	TRICHLOROETHENE	79-01-6	UG L	20	UJ	mc
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	40	UJ	mc
8260C	VINYL CHLORIDE	75-01-4	UG L	40	UJ	mc
8260C	XYLENES, TOTAL	1330-20-7	UG L	60	UJ	mc

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK8324 VPB166-FB-091417 9/14/2017 Field blank		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	2.5	U	
8260C	ACETONE	67-64-1	UG L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	0.5	U	
8260C	BROMOFORM	75-25-2	UG L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG L	1	U	
8260C	CHLOROFORM	67-66-3	UG L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG L	1	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	1	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	1	U	
8260C	METHYL ACETATE	79-20-9	UG L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	2.5	U	
8260C	O-XYLENE	95-47-6	UG L	0.5	U	
8260C	STYRENE	100-42-5	UG L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	0.5	U	
8260C	TOLUENE	108-88-3	UG L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	1.5	U	

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK8324 VPB166-TB-091417 9/14/2017 Trip blank		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	2.5	U	
8260C	ACETONE	67-64-1	UG L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	0.5	U	
8260C	BROMOFORM	75-25-2	UG L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG L	1	U	
8260C	CHLOROFORM	67-66-3	UG L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG L	1	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	1	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	1	U	
8260C	METHYL ACETATE	79-20-9	UG L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	2.5	U	
8260C	O-XYLENE	95-47-6	UG L	0.5	U	
8260C	STYRENE	100-42-5	UG L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	0.5	U	
8260C	TOLUENE	108-88-3	UG L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	1.5	U	

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK8324 VPB166-GW-091417-768-770 9/14/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	10	UJ	mc
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	10	UJ	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	10	UJ	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	10	UJ	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	10	UJ	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	10	UJ	mc
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	10	UJ	mc
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	15	UJ	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	10	UJ	mc
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	10	UJ	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	10	UJ	mc
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	20	UJ	mc
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	10	UJ	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	10	UJ	mc
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	10	UJ	mc
8260C	2-BUTANONE	78-93-3	UG L	50	UJ	
8260C	2-HEXANONE	591-78-6	UG L	50	UJ	mc
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	50	UJ	mc
8260C	ACETONE	67-64-1	UG L	50	UJ	mc,c
8260C	BENZENE	71-43-2	UG L	10	UJ	mc
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	10	UJ	
8260C	BROMOFORM	75-25-2	UG L	10	UJ	mc
8260C	BROMOMETHANE	74-83-9	UG L	20	UJ	mc
8260C	CARBON DISULFIDE	75-15-0	UG L	10	UJ	mc
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	10	UJ	mc
8260C	CHLOROBENZENE	108-90-7	UG L	10	UJ	mc
8260C	CHLOROETHANE	75-00-3	UG L	20	UJ	mc
8260C	CHLOROFORM	67-66-3	UG L	10	UJ	mc
8260C	CHLOROMETHANE	74-87-3	UG L	20	UJ	mc,c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	10	UJ	mc
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	10	UJ	
8260C	CYCLOHEXANE	110-82-7	UG L	10	UJ	mc
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	10	UJ	mc
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	20	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG L	10	UJ	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	10	UJ	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	20	UJ	mc
8260C	METHYL ACETATE	79-20-9	UG L	15	UJ	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	10	UJ	mc
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	10	UJ	mc
8260C	METHYLENE CHLORIDE	75-09-2	UG L	50	UJ	mc
8260C	O-XYLENE	95-47-6	UG L	10	UJ	
8260C	STYRENE	100-42-5	UG L	10	UJ	
8260C	TETRACHLOROETHENE	127-18-4	UG L	10	UJ	mc
8260C	TOLUENE	108-88-3	UG L	10	UJ	mc
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	10	UJ	mc
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	10	UJ	mc
8260C	TRICHLOROETHENE	79-01-6	UG L	10	UJ	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	20	UJ	
8260C	VINYL CHLORIDE	75-01-4	UG L	20	UJ	mc
8260C	XYLENES, TOTAL	1330-20-7	UG L	30	UJ	mc

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK8324 VPB166-GW-091417-778-780 9/14/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	10	UJ	mc
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	10	UJ	mc
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	10	UJ	mc
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	10	UJ	mc
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	10	UJ	mc
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	10	UJ	mc
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	10	UJ	mc
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	15	UJ	mc
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	10	UJ	mc
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	10	UJ	mc
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	10	UJ	mc
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	20	UJ	mc
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	10	UJ	mc
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	10	UJ	mc
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	10	UJ	mc
8260C	2-BUTANONE	78-93-3	UG L	50	UJ	mc
8260C	2-HEXANONE	591-78-6	UG L	50	UJ	mc
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	50	UJ	mc
8260C	ACETONE	67-64-1	UG L	50	UJ	mc,c
8260C	BENZENE	71-43-2	UG L	10	UJ	mc
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	10	UJ	mc
8260C	BROMOFORM	75-25-2	UG L	10	UJ	mc
8260C	BROMOMETHANE	74-83-9	UG L	20	UJ	mc
8260C	CARBON DISULFIDE	75-15-0	UG L	10	UJ	mc
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	10	UJ	mc
8260C	CHLOROBENZENE	108-90-7	UG L	10	UJ	mc
8260C	CHLOROETHANE	75-00-3	UG L	20	UJ	mc
8260C	CHLOROFORM	67-66-3	UG L	10	UJ	mc
8260C	CHLOROMETHANE	74-87-3	UG L	20	UJ	mc,c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	10	UJ	mc
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	10	UJ	mc
8260C	CYCLOHEXANE	110-82-7	UG L	10	UJ	mc
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	10	UJ	mc
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	20	UJ	mc,c
8260C	ETHYLBENZENE	100-41-4	UG L	10	UJ	mc
8260C	ISOPROPYLBENZENE	98-82-8	UG L	10	UJ	mc
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	20	UJ	mc
8260C	METHYL ACETATE	79-20-9	UG L	15	UJ	mc
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	10	UJ	mc
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	10	UJ	mc
8260C	METHYLENE CHLORIDE	75-09-2	UG L	50	UJ	mc
8260C	O-XYLENE	95-47-6	UG L	10	UJ	mc
8260C	STYRENE	100-42-5	UG L	10	UJ	mc
8260C	TETRACHLOROETHENE	127-18-4	UG L	10	UJ	mc
8260C	TOLUENE	108-88-3	UG L	10	UJ	mc
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	10	UJ	mc
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	10	UJ	mc
8260C	TRICHLOROETHENE	79-01-6	UG L	10	UJ	mc
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	20	UJ	mc
8260C	VINYL CHLORIDE	75-01-4	UG L	20	UJ	mc
8260C	XYLENES, TOTAL	1330-20-7	UG L	30	UJ	mc

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK8432 VPB166-EB-091517 9/15/2017 Equipment blank		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	2.5	U	
8260C	ACETONE	67-64-1	UG L	13	J	c
8260C	BENZENE	71-43-2	UG L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	0.5	U	
8260C	BROMOFORM	75-25-2	UG L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG L	1	U	
8260C	CHLOROFORM	67-66-3	UG L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG L	1	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	1	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	1	U	
8260C	METHYL ACETATE	79-20-9	UG L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	2.5	U	
8260C	O-XYLENE	95-47-6	UG L	0.5	U	
8260C	STYRENE	100-42-5	UG L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	0.5	U	
8260C	TOLUENE	108-88-3	UG L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	1.5	U	

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK8432 VPB166-TB-091517 9/15/2017 Trip blank		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	2.5	U	
8260C	ACETONE	67-64-1	UG L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	0.5	U	
8260C	BROMOFORM	75-25-2	UG L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG L	1	U	
8260C	CHLOROFORM	67-66-3	UG L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG L	1	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	1	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	1	U	
8260C	METHYL ACETATE	79-20-9	UG L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	2.5	U	
8260C	O-XYLENE	95-47-6	UG L	0.5	U	
8260C	STYRENE	100-42-5	UG L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	0.5	U	
8260C	TOLUENE	108-88-3	UG L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	1.5	U	

Notes:

UG_L = Micrograms per liter
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RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK8432 VPB166-GW-091517-798-800 9/15/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	2.5	UJ	mc
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	2.5	UJ	mc
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	2.5	UJ	mc
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	2.5	UJ	mc
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	2.5	UJ	mc
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	2.5	UJ	mc
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	2.5	UJ	mc
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	3.8	UJ	mc
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	2.5	UJ	mc
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	2.5	UJ	mc
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	2.5	UJ	mc
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	5	UJ	mc
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	2.5	UJ	mc
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	2.5	UJ	mc
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	2.5	UJ	mc
8260C	2-BUTANONE	78-93-3	UG L	12	UJ	mc
8260C	2-HEXANONE	591-78-6	UG L	12	UJ	mc
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	12	UJ	mc
8260C	ACETONE	67-64-1	UG L	12	UJ	mc,bf,c
8260C	BENZENE	71-43-2	UG L	2.5	UJ	mc
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	2.5	UJ	mc
8260C	BROMOFORM	75-25-2	UG L	2.5	UJ	mc
8260C	BROMOMETHANE	74-83-9	UG L	5	UJ	mc
8260C	CARBON DISULFIDE	75-15-0	UG L	2.5	UJ	mc
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	2.5	UJ	mc
8260C	CHLOROBENZENE	108-90-7	UG L	2.5	UJ	mc
8260C	CHLOROETHANE	75-00-3	UG L	5	UJ	mc
8260C	CHLOROFORM	67-66-3	UG L	2.5	UJ	mc
8260C	CHLOROMETHANE	74-87-3	UG L	5	UJ	mc,c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	2.5	UJ	mc
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	2.5	UJ	mc
8260C	CYCLOHEXANE	110-82-7	UG L	2.5	UJ	mc
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	2.5	UJ	mc
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	5	UJ	mc,c
8260C	ETHYLBENZENE	100-41-4	UG L	2.5	UJ	mc
8260C	ISOPROPYLBENZENE	98-82-8	UG L	2.5	UJ	mc
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	5	UJ	mc
8260C	METHYL ACETATE	79-20-9	UG L	3.8	UJ	mc
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	2.5	UJ	mc
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	2.5	UJ	mc
8260C	METHYLENE CHLORIDE	75-09-2	UG L	12	UJ	mc
8260C	O-XYLENE	95-47-6	UG L	2.5	UJ	mc
8260C	STYRENE	100-42-5	UG L	2.5	UJ	mc
8260C	TETRACHLOROETHENE	127-18-4	UG L	2.5	UJ	mc
8260C	TOLUENE	108-88-3	UG L	2.5	UJ	mc
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	2.5	UJ	mc
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	2.5	UJ	mc
8260C	TRICHLOROETHENE	79-01-6	UG L	2.5	UJ	mc
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	5	UJ	mc
8260C	VINYL CHLORIDE	75-01-4	UG L	5	UJ	mc
8260C	XYLENES, TOTAL	1330-20-7	UG L	7.5	UJ	mc

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK8534 VPB166-TB-091917 9/19/2017 Trip blank		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	2.5	U	
8260C	ACETONE	67-64-1	UG L	2.5	U	
8260C	BENZENE	71-43-2	UG L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	0.5	U	
8260C	BROMOFORM	75-25-2	UG L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG L	1	U	
8260C	CHLOROFORM	67-66-3	UG L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	1	U	
8260C	METHYL ACETATE	79-20-9	UG L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	2.5	U	
8260C	O-XYLENE	95-47-6	UG L	0.5	U	
8260C	STYRENE	100-42-5	UG L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	0.5	U	
8260C	TOLUENE	108-88-3	UG L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	1.5	U	

Notes:

UG_L = Micrograms per liter
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RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK8534 VPB166-GW-091917-823-825 9/19/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	7.5	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	10	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	5	U	
8260C	2-BUTANONE	78-93-3	UG L	25	U	
8260C	2-HEXANONE	591-78-6	UG L	25	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	25	U	
8260C	ACETONE	67-64-1	UG L	25	U	
8260C	BENZENE	71-43-2	UG L	5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	5	U	
8260C	BROMOFORM	75-25-2	UG L	5	U	
8260C	BROMOMETHANE	74-83-9	UG L	10	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	5	U	
8260C	CHLOROBENZENE	108-90-7	UG L	5	U	
8260C	CHLOROETHANE	75-00-3	UG L	10	U	
8260C	CHLOROFORM	67-66-3	UG L	5	U	
8260C	CHLOROMETHANE	74-87-3	UG L	10	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	10	U	
8260C	ETHYLBENZENE	100-41-4	UG L	5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	10	U	
8260C	METHYL ACETATE	79-20-9	UG L	7.5	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	25	U	
8260C	O-XYLENE	95-47-6	UG L	5	U	
8260C	STYRENE	100-42-5	UG L	5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	5	U	
8260C	TOLUENE	108-88-3	UG L	5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	10	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	10	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	15	U	

Notes:

UG_L = Micrograms per liter
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RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK8534 VPB166-GW-091917-838-840 9/19/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	20	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	20	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	20	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	20	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	20	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	20	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	20	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	30	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	20	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	20	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	20	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	40	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	20	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	20	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	20	U	
8260C	2-BUTANONE	78-93-3	UG L	100	U	
8260C	2-HEXANONE	591-78-6	UG L	100	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	100	U	
8260C	ACETONE	67-64-1	UG L	100	U	
8260C	BENZENE	71-43-2	UG L	20	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	20	U	
8260C	BROMOFORM	75-25-2	UG L	20	U	
8260C	BROMOMETHANE	74-83-9	UG L	40	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	20	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	20	U	
8260C	CHLOROBENZENE	108-90-7	UG L	20	U	
8260C	CHLOROETHANE	75-00-3	UG L	40	U	
8260C	CHLOROFORM	67-66-3	UG L	20	U	
8260C	CHLOROMETHANE	74-87-3	UG L	40	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	20	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	20	U	
8260C	CYCLOHEXANE	110-82-7	UG L	20	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	20	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	40	U	
8260C	ETHYLBENZENE	100-41-4	UG L	20	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	20	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	40	U	
8260C	METHYL ACETATE	79-20-9	UG L	30	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	20	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	20	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	100	U	
8260C	O-XYLENE	95-47-6	UG L	20	U	
8260C	STYRENE	100-42-5	UG L	20	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	20	U	
8260C	TOLUENE	108-88-3	UG L	20	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	20	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	20	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	20	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	40	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	40	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	60	U	

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK8534 VPB166-GW-092017-858-860 9/20/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	2.5	U	
8260C	ACETONE	67-64-1	UG L	2.5	U	
8260C	BENZENE	71-43-2	UG L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	0.5	U	
8260C	BROMOFORM	75-25-2	UG L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG L	1	U	
8260C	CHLOROFORM	67-66-3	UG L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	1	U	
8260C	METHYL ACETATE	79-20-9	UG L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	2.5	U	
8260C	O-XYLENE	95-47-6	UG L	0.5	U	
8260C	STYRENE	100-42-5	UG L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	0.5	U	
8260C	TOLUENE	108-88-3	UG L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	1.5	U	

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

Sample Delivery Group Sample Identification Sample Date Sample Type				SK8534 VPB166-GW-092017-878-880 9/20/2017 Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG L	20	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG L	20	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG L	20	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG L	20	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG L	20	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG L	20	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG L	20	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG L	30	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG L	20	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG L	20	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG L	20	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG L	40	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG L	20	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG L	20	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG L	20	U	
8260C	2-BUTANONE	78-93-3	UG L	100	U	
8260C	2-HEXANONE	591-78-6	UG L	100	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG L	100	U	
8260C	ACETONE	67-64-1	UG L	100	U	
8260C	BENZENE	71-43-2	UG L	20	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG L	20	U	
8260C	BROMOFORM	75-25-2	UG L	20	U	
8260C	BROMOMETHANE	74-83-9	UG L	40	U	
8260C	CARBON DISULFIDE	75-15-0	UG L	20	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG L	20	U	
8260C	CHLOROBENZENE	108-90-7	UG L	20	U	
8260C	CHLOROETHANE	75-00-3	UG L	40	U	
8260C	CHLOROFORM	67-66-3	UG L	20	U	
8260C	CHLOROMETHANE	74-87-3	UG L	40	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG L	20	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG L	20	U	
8260C	CYCLOHEXANE	110-82-7	UG L	20	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG L	20	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG L	40	U	
8260C	ETHYLBENZENE	100-41-4	UG L	20	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG L	20	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG L	40	U	
8260C	METHYL ACETATE	79-20-9	UG L	30	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG L	20	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG L	20	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG L	100	U	
8260C	O-XYLENE	95-47-6	UG L	20	U	
8260C	STYRENE	100-42-5	UG L	20	U	
8260C	TETRACHLOROETHENE	127-18-4	UG L	20	U	
8260C	TOLUENE	108-88-3	UG L	20	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG L	20	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG L	20	U	
8260C	TRICHLOROETHENE	79-01-6	UG L	20	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG L	40	U	
8260C	VINYL CHLORIDE	75-01-4	UG L	40	U	
8260C	XYLENES, TOTAL	1330-20-7	UG L	60	U	

Notes:

UG_L = Micrograms per liter
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

VPB166
Final Results after Data Review
NWIRP Bethpage OU2 Regional Groundwater Investigation

				Sample Delivery Group		Sample Identification	
				SK8324		SK8324	
				VPB166-SO-091417-763-765		VPB166-EB-091417	
				9/14/2017		9/14/2017	
				Soil		Equipment blank	
Method	Analyte	CAS No	Units	Result	Qual	Result	Qual
2540G	TOTAL SOLIDS	-29	PCT	80		NA	
9060A	TOTAL ORGANIC CARBON	-28	UG_G	440	U	0.35	J

Notes:

- Qual = Final interpreted qualifier
- PCT = Percent
- UG_G = Micrograms per gram
- NA = Not analyzed
- U = Associated sample qualified as non-detect "U".
- J = Estimated value



DATA VALIDATION REPORT

Project:	Regional Groundwater Investigation — NWIRP Bethpage	
Laboratory:	Katahdin Analytical	
Sample Delivery Group:	SK8427	
Analyses/Method:	Volatile Organic Compounds (VOCs) by U.S. EPA Method TO-15	
Validation Level:	3	
Project Number:	0888812477.SA.DV	
Prepared by:	Dana Miller/Resolution Consultants	Completed on: 11/15/2017

SUMMARY

This report summarizes data review findings for samples listed below, collected by Resolution Consultants from the Regional Groundwater Investigation — NWIRP Bethpage site on 18 September 2017 in accordance with the following Sampling and Analysis Plans:

- *Sampling and Analysis Plan, Bethpage, New York.* (Resolution Consultants April 2013).
- *UFP SAP Addendum, Installation of Vertical Profile Borings and Monitoring Wells, Operable Unit 2, NWIRP Bethpage, New York.* (Resolution Consultants November 2013).
- *UFP SAP Addendum, Inclusion of Additional Target Analytes for Volatile Organics Analyses, NWIRP Bethpage OU2, Bethpage, New York.* (Resolution Consultants August 2014).

Sample ID	Matrix/Sample Type	Analysis
VPB166-AIR-091817	Air	TO-15

Data validation activities were conducted using the following guidance documents: *Determination of Volatile Organic Compounds (VOCs) In Air Collected In Specially-Prepared Canisters and Analyzed By Gas Chromatography/Mass Spectrometry (GC/MS) (U.S. EPA, Method TO-15)*, *U.S. Environmental Protection Agency (U.S. EPA) Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (NFG, June 2008), and *Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 4.2* (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 parameters (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
- 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. Acceptable data parameters for which all criteria were met and no qualification was performed and non-conformance or other issues that were noted during validation, but did not result in qualification of data are not discussed further.

Qualifications Actions

The data was reviewed independently from the laboratory to assess data quality and no results were qualified during this data review. Analytical completeness was calculated to be 100% and the data are usable for their intended purpose, according to U.S. EPA guidelines and Department of Defense guidelines. Attachment A provides final results after data review.

ATTACHMENTS

Attachment A: Final Results after Data Review

Attachment A
Final Results after Data Review

Sample Delivery Group				SK8427	
Lab ID				SK8427-1RA	
Sample ID				VPB166-AIR-091817	
Sample Date				9/18/2017	
Sample Type				Air	
Method	Analyte	CAS No	Units	Result	Qual
TO-15	1,1,1-TRICHLOROETHANE	71-55-6	UG_M3	0.27	U
TO-15	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_M3	0.34	U
TO-15	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_M3	0.5	J
TO-15	1,1,2-TRICHLOROETHANE	79-00-5	UG_M3	0.27	U
TO-15	1,1-DICHLOROETHANE	75-34-3	UG_M3	0.2	U
TO-15	1,1-DICHLOROETHENE	75-35-4	UG_M3	0.2	U
TO-15	1,2,4-TRICHLOROBENZENE	120-82-1	UG_M3	0.54	J
TO-15	1,2-DIBROMOETHANE	106-93-4	UG_M3	0.38	U
TO-15	1,2-DICHLOROBENZENE	95-50-1	UG_M3	0.14	J
TO-15	1,2-DICHLOROETHANE	107-06-2	UG_M3	0.2	U
TO-15	1,2-DICHLOROPROPANE	78-87-5	UG_M3	0.23	U
TO-15	1,3-DICHLOROBENZENE	541-73-1	UG_M3	0.12	J
TO-15	1,4-DICHLOROBENZENE	106-46-7	UG_M3	0.14	J
TO-15	2-BUTANONE	78-93-3	UG_M3	0.27	J
TO-15	2-HEXANONE	591-78-6	UG_M3	0.2	U
TO-15	4-METHYL-2-PENTANONE	108-10-1	UG_M3	0.2	U
TO-15	ACETONE	67-64-1	UG_M3	4.7	
TO-15	BENZENE	71-43-2	UG_M3	0.24	J
TO-15	BROMODICHLOROMETHANE	75-27-4	UG_M3	0.33	U
TO-15	BROMOFORM	75-25-2	UG_M3	0.52	U
TO-15	BROMOMETHANE	74-83-9	UG_M3	0.19	U
TO-15	CARBON DISULFIDE	75-15-0	UG_M3	0.16	U
TO-15	CARBON TETRACHLORIDE	56-23-5	UG_M3	0.39	J
TO-15	CHLOROBENZENE	108-90-7	UG_M3	0.23	U
TO-15	CHLOROETHANE	75-00-3	UG_M3	0.13	U
TO-15	CHLOROFORM	67-66-3	UG_M3	0.078	J
TO-15	CHLOROMETHANE	74-87-3	UG_M3	0.7	
TO-15	CIS-1,2-DICHLOROETHENE	156-59-2	UG_M3	0.2	U
TO-15	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_M3	0.23	U
TO-15	CYCLOHEXANE	110-82-7	UG_M3	0.17	U
TO-15	DIBROMOCHLOROMETHANE	124-48-1	UG_M3	0.42	U
TO-15	DICHLORODIFLUOROMETHANE	75-71-8	UG_M3	2	
TO-15	ETHYLBENZENE	100-41-4	UG_M3	0.14	J
TO-15	ISOPROPYLBENZENE	98-82-8	UG_M3	0.074	J
TO-15	M- AND P-XYLENE	108-38-3/106-42	UG_M3	0.32	J
TO-15	METHYL TERT-BUTYL ETHER	1634-04-4	UG_M3	0.18	U
TO-15	METHYLENE CHLORIDE	75-09-2	UG_M3	0.49	J
TO-15	O-XYLENE	95-47-6	UG_M3	0.16	J
TO-15	STYRENE	100-42-5	UG_M3	0.21	U
TO-15	TETRACHLOROETHENE	127-18-4	UG_M3	0.14	J
TO-15	TOLUENE	108-88-3	UG_M3	0.56	
TO-15	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_M3	0.2	U
TO-15	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_M3	0.23	U
TO-15	TRICHLOROETHENE	79-01-6	UG_M3	0.27	U
TO-15	TRICHLOROFLUOROMETHANE	75-69-4	UG_M3	1.3	
TO-15	VINYL CHLORIDE	75-01-4	UG_M3	0.13	U
TO-15	XYLENES, TOTAL	1330-20-7	UG_M3	0.48	J

Notes:

- UG_M3 = Micrograms per cubic meter
- Qual = Final qualifier
- U = The analyte was analyzed for and not detected above the reported sample quantitation limit.
- J = Estimated value

Section 5

VPB166 Analytical Data Table

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	58-60	98-100	138-140	198-200
Sample Date		8/21/2017	8/21/2017	8/24/2017	8/24/2017
Sample ID		VPB166-GW-082117-58-60	VPB166-GW-082117-98-100	VPB166-GW-082417-138-140	VPB166-GW-082417-198-200
Sample type code		N	N	N	N
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	<0.5 U	<5 UJ	<2.5 U	<0.5 U
1,1,2,2-TETRACHLOROETHANE	5	<0.5 U	<5 UJ	<2.5 U	<0.5 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	<0.5 U	<5 UJ	<2.5 U	<0.5 U
1,1,2-TRICHLOROETHANE	1	<0.5 U	<5 UJ	<2.5 U	<0.5 U
1,1-DICHLOROETHANE	5	<0.5 U	<5 UJ	<2.5 U	<0.5 U
1,1-DICHLOROETHENE	5	<0.5 U	<5 UJ	<2.5 U	<0.5 U
1,2,4-TRICHLOROBENZENE	5	<0.5 U	<5 UJ	<2.5 U	<0.5 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	<0.75 U	<7.5 UJ	<3.8 U	<0.75 U
1,2-DIBROMOETHANE	NL	<0.5 U	<5 UJ	<2.5 U	<0.5 U
1,2-DICHLOROBENZENE	3	<0.5 U	<5 UJ	<2.5 U	<0.5 U
1,2-DICHLOROETHANE	5	<0.5 U	<5 UJ	<2.5 U	<0.5 U
1,2-DICHLOROETHENE, TOTAL	5	<1 U	<10 UJ	<5 U	<1 U
1,2-DICHLOROPROPANE	1	<0.5 U	<5 UJ	<2.5 U	<0.5 U
1,3-DICHLOROBENZENE	3	<0.5 U	<5 UJ	<2.5 U	<0.5 U
1,4-DICHLOROBENZENE	3	<0.5 U	<5 UJ	<2.5 U	<0.5 U
2-BUTANONE	50	13	<25 UJ	<12 U	<2.5 U
2-HEXANONE	50	<2.5 U	<25 UJ	<12 U	<2.5 U
4-METHYL-2-PENTANONE	NL	<2.5 U	<25 UJ	<12 U	<2.5 U
ACETONE	50	17	<25 UJ	<12 U	<2.5 U
BENZENE	1	<0.5 U	<5 UJ	<2.5 U	<0.5 U
BROMODICHLOROMETHANE	50	<0.5 U	<5 UJ	<2.5 U	<0.5 U
BROMOFORM	50	<0.5 U	<5 UJ	<2.5 U	<0.5 U
BROMOMETHANE	5	<1 U	<10 UJ	<5 U	<1 U
CARBON DISULFIDE	60	<0.5 U	<5 UJ	<2.5 U	<0.5 U
CARBON TETRACHLORIDE	5	<0.5 U	<5 UJ	<2.5 U	<0.5 U
CHLOROBENZENE	5	<0.5 U	<5 UJ	<2.5 U	<0.5 U
CHLOROETHANE	5	<1 U	<10 UJ	<5 U	<1 U
CHLOROFORM	7	0.71 J	<5 UJ	<2.5 U	<0.5 U
CHLOROMETHANE	5	<1 U	<10 UJ	<5 U	<1 U
CIS-1,2-DICHLOROETHENE	5	<0.5 U	<5 UJ	<2.5 U	<0.5 U
CIS-1,3-DICHLOROPROPENE	0.4	<0.5 U	<5 U	<2.5 U	<0.5 U
CYCLOHEXANE	NL	<0.5 U	<5 UJ	<2.5 U	<0.5 U
DIBROMOCHLOROMETHANE	5	<0.5 U	<5 UJ	<2.5 U	<0.5 U
DICHLORODIFLUOROMETHANE	5	<1 U	<10 UJ	<5 U	<1 U
ETHYLBENZENE	5	<0.5 U	<5 U	<2.5 U	<0.5 U
ISOPROPYLBENZENE	5	<0.5 U	<5 U	<2.5 U	<0.5 U
M- AND P-XYLENE	NL	<1 U	<10 UJ	<5 U	<1 U
METHYL ACETATE	NL	<0.75 U	<7.5 UJ	<3.8 U	<0.75 U
METHYL CYCLOHEXANE	NL	<0.5 U	<5 UJ	<2.5 U	<0.5 U
METHYL TERT-BUTYL ETHER	10	<0.5 UJ	<5 UJ	<2.5 U	5.4
METHYLENE CHLORIDE	5	<2.5 U	<25 UJ	<12 U	<2.5 U
O-XYLENE	NL	<0.5 U	<5 UJ	<2.5 U	<0.5 U
STYRENE	5	<0.5 U	<5 U	<2.5 U	<0.5 U
TETRACHLOROETHENE	5	<0.5 U	<5 UJ	<2.5 U	1
TOLUENE	5	0.5 J	<5 UJ	<2.5 U	<0.5 U
TRANS-1,2-DICHLOROETHENE	5	<0.5 U	<5 UJ	<2.5 U	<0.5 U
TRANS-1,3-DICHLOROPROPENE	0.4	<0.5 U	<5 UJ	<2.5 U	<0.5 U
TRICHLOROETHENE	5	<0.5 U	<5 UJ	<2.5 U	4.7
TRICHLOROFLUOROMETHANE	5	<1 U	<10 UJ	<5 U	<1 U
VINYL CHLORIDE	2	<1 U	<10 UJ	<5 U	<1 U
XYLENES, TOTAL	5	<1.5 U	<15 UJ	<7.5 U	<1.5 U

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	218-220	238-240	258-260	278-280
Sample Date		8/25/2017	8/25/2017	8/25/2017	8/28/2017
Sample ID		VPB166-GW-082517-218-220	VPB166-GW-082517-238-240	VPB166-GW-082517-258-260	VPB166-GW-082817-278-280
Sample type code		N	N	N	N
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,1,2,2-TETRACHLOROETHANE	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	6.8	7.7	<0.5 U	<0.5 U
1,1,2-TRICHLOROETHANE	1	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,1-DICHLOROETHANE	5	0.94 J	1	<0.5 U	<0.5 U
1,1-DICHLOROETHENE	5	1.4	1.9	<0.5 U	<0.5 U
1,2,4-TRICHLOROBENZENE	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	<0.75 U	<0.75 U	<0.75 U	<0.75 U
1,2-DIBROMOETHANE	NL	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,2-DICHLOROBENZENE	3	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,2-DICHLOROETHANE	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,2-DICHLOROETHENE, TOTAL	5	1.7 J	1.5 J	<1 U	<1 U
1,2-DICHLOROPROPANE	1	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,3-DICHLOROBENZENE	3	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,4-DICHLOROBENZENE	3	<0.5 U	<0.5 U	<0.5 U	<0.5 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	<2.5 U	<2.5 U	<2.5 U	<2.5 U
BENZENE	1	<0.5 U	<0.5 U	<0.5 U	<0.5 U
BROMODICHLOROMETHANE	50	<0.5 U	<0.5 U	<0.5 U	<0.5 U
BROMOFORM	50	<0.5 U	<0.5 U	<0.5 U	<0.5 U
BROMOMETHANE	5	<1 U	<1 U	<1 U	<1 U
CARBON DISULFIDE	60	<0.5 U	<0.5 U	<0.5 U	0.65 J
CARBON TETRACHLORIDE	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
CHLOROBENZENE	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
CHLOROETHANE	5	<1 U	<1 U	<1 U	<1 U
CHLOROFORM	7	1.5	1.6	<0.5 U	<0.5 U
CHLOROMETHANE	5	<1 U	<1 U	0.47 J	<1 U
CIS-1,2-DICHLOROETHENE	5	1.7	1.5	<0.5 U	<0.5 U
CIS-1,3-DICHLOROPROPENE	0.4	<0.5 U	<0.5 U	<0.5 U	<0.5 U
CYCLOHEXANE	NL	<0.5 U	<0.5 U	<0.5 U	<0.5 U
DIBROMOCHLOROMETHANE	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
DICHLORODIFLUOROMETHANE	5	0.5 J	0.56 J	<1 U	0.33 J
ETHYLBENZENE	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
ISOPROPYLBENZENE	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
M- AND P-XYLENE	NL	<1 U	<1 U	<1 U	<1 U
METHYL ACETATE	NL	<0.75 U	<0.75 U	<0.75 U	<0.75 U
METHYL CYCLOHEXANE	NL	<0.5 U	<0.5 U	<0.5 U	<0.5 U
METHYL TERT-BUTYL ETHER	10	1.7	1.7	<0.5 U	<0.5 U
METHYLENE CHLORIDE	5	<2.5 U	<2.5 U	<2.5 U	<2.5 U
O-XYLENE	NL	<0.5 U	<0.5 U	<0.5 U	<0.5 U
STYRENE	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TETRACHLOROETHENE	5	3.3	1.5	<0.5 U	<0.5 U
TOLUENE	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TRANS-1,2-DICHLOROETHENE	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TRANS-1,3-DICHLOROPROPENE	0.4	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TRICHLOROETHENE	5	110	94	0.42 J	<0.5 U
TRICHLOROFLUOROMETHANE	5	<1 U	<1 U	<1 U	<1 U
VINYL CHLORIDE	2	<1 U	<1 U	<1 U	<1 U
XYLENES, TOTAL	5	<1.5 U	<1.5 U	<1.5 U	<1.5 U

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	298-300	318-320	338-340	338-340
Sample Date		8/28/2017	8/28/2017	8/29/2017	8/29/2017
Sample ID		VPB166-GW- 082817-298-300	VPB166-GW- 082817-318-320	VPB166-GW- 082917-338-340	VPB166-GW-DUP- 082917
Sample type code		N	N	N	FD
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,1,2,2-TETRACHLOROETHANE	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	<0.5 U	2.7	9	12
1,1,2-TRICHLOROETHANE	1	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,1-DICHLOROETHANE	5	<0.5 U	0.4 J	0.86 J	0.91 J
1,1-DICHLOROETHENE	5	<0.5 U	0.94 J	2.4 J	3.3 J
1,2,4-TRICHLOROBENZENE	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	<0.75 U	<0.75 U	<0.75 U	<0.75 U
1,2-DIBROMOETHANE	NL	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,2-DICHLOROBENZENE	3	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,2-DICHLOROETHANE	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,2-DICHLOROETHENE, TOTAL	5	<1 U	1.4 J	2.5	2.9
1,2-DICHLOROPROPANE	1	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,3-DICHLOROBENZENE	3	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,4-DICHLOROBENZENE	3	<0.5 U	<0.5 U	<0.5 U	<0.5 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	<2.5 U	<2.5 U	<2.5 U	<2.5 U
BENZENE	1	<0.5 U	<0.5 U	<0.5 U	<0.5 U
BROMODICHLOROMETHANE	50	<0.5 U	<0.5 U	<0.5 U	<0.5 U
BROMOFORM	50	<0.5 U	<0.5 U	<0.5 U	<0.5 U
BROMOMETHANE	5	<1 U	<1 U	<1 U	<1 U
CARBON DISULFIDE	60	0.25 J	1.1	0.66 J	0.66 J
CARBON TETRACHLORIDE	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
CHLOROBENZENE	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
CHLOROETHANE	5	<1 U	<1 U	<1 U	<1 U
CHLOROFORM	7	<0.5 U	0.6 J	0.86 J	0.96 J
CHLOROMETHANE	5	<1 U	<1 U	<1 U	<1 U
CIS-1,2-DICHLOROETHENE	5	<0.5 U	1.4	2.5	2.9
CIS-1,3-DICHLOROPROPENE	0.4	<0.5 U	<0.5 U	<0.5 U	<0.5 U
CYCLOHEXANE	NL	<0.5 U	<0.5 U	<0.5 U	<0.5 U
DIBROMOCHLOROMETHANE	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
DICHLORODIFLUOROMETHANE	5	0.32 J	1.8 J	1.1 J	1.6 J
ETHYLBENZENE	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
ISOPROPYLBENZENE	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
M- AND P-XYLENE	NL	<1 U	<1 U	<1 U	<1 U
METHYL ACETATE	NL	<0.75 U	<0.75 U	<0.75 U	<0.75 U
METHYL CYCLOHEXANE	NL	<0.5 U	<0.5 U	<0.5 U	<0.5 U
METHYL TERT-BUTYL ETHER	10	<0.5 U	<0.5 U	<0.5 U	<0.5 U
METHYLENE CHLORIDE	5	<2.5 U	<2.5 U	<2.5 U	<2.5 U
O-XYLENE	NL	<0.5 U	<0.5 U	<0.5 U	<0.5 U
STYRENE	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TETRACHLOROETHENE	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TOLUENE	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TRANS-1,2-DICHLOROETHENE	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TRANS-1,3-DICHLOROPROPENE	0.4	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TRICHLOROETHENE	5	<0.5 U	16	54	62
TRICHLOROFLUOROMETHANE	5	<1 U	<1 U	<1 U	<1 U
VINYL CHLORIDE	2	<1 U	<1 U	<1 U	<1 U
XYLENES, TOTAL	5	<1.5 U	<1.5 U	<1.5 U	<1.5 U

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	358-360	378-380	398-400	418-420
Sample Date		8/29/2017	8/29/2017	8/30/2017	8/30/2017
Sample ID		VPB166-GW-082917-358-360	VPB166-GW-082917-378-380	VPB166-GW-083017-398-400	VPB166-GW-083017-418-420
Sample type code		N	N	N	N
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	<1 U	<2 U	<2 U	<1 U
1,1,2,2-TETRACHLOROETHANE	5	<1 U	<2 U	<2 U	<1 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	2	<2 U	<2 U	<1 U
1,1,2-TRICHLOROETHANE	1	<1 U	<2 U	<2 U	<1 U
1,1-DICHLOROETHANE	5	<1 U	<2 U	<2 U	<1 U
1,1-DICHLOROETHENE	5	<1 U	<2 U	<2 U	<1 U
1,2,4-TRICHLOROBENZENE	5	<1 U	<2 U	<2 U	<1 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	<1.5 U	<3 U	<3 U	<1.5 U
1,2-DIBROMOETHANE	NL	<1 U	<2 U	<2 U	<1 U
1,2-DICHLOROBENZENE	3	<1 U	<2 U	<2 U	<1 U
1,2-DICHLOROETHANE	5	<1 U	<2 U	<2 U	<1 U
1,2-DICHLOROETHENE, TOTAL	5	<2 U	<4 U	<4 U	<2 U
1,2-DICHLOROPROPANE	1	<1 U	<2 U	<2 U	<1 U
1,3-DICHLOROBENZENE	3	<1 U	<2 U	<2 U	<1 U
1,4-DICHLOROBENZENE	3	<1 U	<2 U	<2 U	<1 U
2-BUTANONE	50	<5 U	<10 U	<10 U	<5 U
2-HEXANONE	50	<5 U	<10 U	<10 U	<5 U
4-METHYL-2-PENTANONE	NL	<5 U	<10 U	<10 U	<5 U
ACETONE	50	<5 U	<10 U	<10 U	<5 U
BENZENE	1	<1 U	<2 U	<2 U	<1 U
BROMODICHLOROMETHANE	50	<1 U	<2 U	<2 U	<1 U
BROMOFORM	50	<1 U	<2 U	<2 U	<1 U
BROMOMETHANE	5	<2 U	<4 U	<4 U	<2 U
CARBON DISULFIDE	60	<1 U	<2 U	<2 U	<1 U
CARBON TETRACHLORIDE	5	<1 U	<2 U	<2 U	<1 U
CHLOROBENZENE	5	<1 U	<2 U	<2 U	<1 U
CHLOROETHANE	5	<2 U	<4 U	<4 U	<2 U
CHLOROFORM	7	<1 U	<2 U	<2 U	<1 U
CHLOROMETHANE	5	<2 U	<4 U	<4 U	<2 U
CIS-1,2-DICHLOROETHENE	5	<1 U	<2 U	<2 U	<1 U
CIS-1,3-DICHLOROPROPENE	0.4	<1 U	<2 U	<2 U	<1 U
CYCLOHEXANE	NL	<1 U	<2 U	<2 U	<1 U
DIBROMOCHLOROMETHANE	5	<1 U	<2 U	<2 U	<1 U
DICHLORODIFLUOROMETHANE	5	<2 U	<4 U	<4 U	<2 U
ETHYLBENZENE	5	<1 U	<2 U	<2 U	<1 U
ISOPROPYLBENZENE	5	<1 U	<2 U	<2 U	<1 U
M- AND P-XYLENE	NL	<2 U	<4 U	<4 U	<2 U
METHYL ACETATE	NL	<1.5 U	<3 U	<3 U	<1.5 U
METHYL CYCLOHEXANE	NL	<1 U	<2 U	<2 U	<1 U
METHYL TERT-BUTYL ETHER	10	<1 U	<2 U	<2 U	<1 U
METHYLENE CHLORIDE	5	<5 U	<10 U	<10 U	<5 U
O-XYLENE	NL	<1 U	<2 U	<2 U	<1 U
STYRENE	5	<1 U	<2 U	<2 U	<1 U
TETRACHLOROETHENE	5	<1 U	<2 U	<2 U	<1 U
TOLUENE	5	<1 U	<2 U	<2 U	<1 U
TRANS-1,2-DICHLOROETHENE	5	<1 U	<2 U	<2 U	<1 U
TRANS-1,3-DICHLOROPROPENE	0.4	<1 U	<2 U	<2 U	<1 U
TRICHLOROETHENE	5	8.9	<2 U	<2 U	<1 U
TRICHLOROFUOROMETHANE	5	<2 U	<4 U	<4 U	<2 U
VINYL CHLORIDE	2	<2 U	<4 U	<4 U	<2 U
XYLENES, TOTAL	5	<3 U	<6 U	<6 U	<3 U

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	438-440	458-460	478-480	498-500
Sample Date		8/31/2017	8/31/2017	8/31/2017	9/1/2017
Sample ID		VPB166-GW-083117-438-440	VPB166-GW-083117-458-460	VPB166-GW-083117-478-480	VPB166-GW-090117-498-500
Sample type code		N	N	N	N
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	<0.5 U	<1 U	<0.5 U	<0.5 U
1,1,2,2-TETRACHLOROETHANE	5	<0.5 U	<1 U	<0.5 U	<0.5 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	<0.5 U	<1 U	2	9.1
1,1,2-TRICHLOROETHANE	1	<0.5 U	<1 U	<0.5 U	<0.5 U
1,1-DICHLOROETHANE	5	<0.5 U	<1 U	<0.5 U	<0.5 U
1,1-DICHLOROETHENE	5	<0.5 U	<1 U	<0.5 U	1.1
1,2,4-TRICHLOROBENZENE	5	<0.5 U	<1 U	<0.5 U	<0.5 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	<0.75 U	<1.5 U	<0.75 U	<0.75 U
1,2-DIBROMOETHANE	NL	<0.5 U	<1 U	<0.5 U	<0.5 U
1,2-DICHLOROBENZENE	3	<0.5 U	<1 U	<0.5 U	<0.5 U
1,2-DICHLOROETHANE	5	<0.5 U	<1 U	<0.5 U	<0.5 U
1,2-DICHLOROETHENE, TOTAL	5	<1 U	<2 U	0.28 J	1.6 J
1,2-DICHLOROPROPANE	1	<0.5 U	<1 U	<0.5 U	<0.5 U
1,3-DICHLOROBENZENE	3	<0.5 U	<1 U	<0.5 U	<0.5 U
1,4-DICHLOROBENZENE	3	<0.5 U	<1 U	<0.5 U	<0.5 U
2-BUTANONE	50	<2.5 U	<5 U	<2.5 U	<2.5 U
2-HEXANONE	50	<2.5 U	<5 U	<2.5 U	<2.5 U
4-METHYL-2-PENTANONE	NL	<2.5 U	<5 U	<2.5 U	<2.5 U
ACETONE	50	<2.5 U	<5 U	<2.5 U	<2.5 U
BENZENE	1	<0.5 U	<1 U	<0.5 U	<0.5 U
BROMODICHLOROMETHANE	50	<0.5 U	<1 U	<0.5 U	<0.5 U
BROMOFORM	50	<0.5 U	<1 U	<0.5 U	<0.5 U
BROMOMETHANE	5	<1 U	<2 U	<1 U	<1 U
CARBON DISULFIDE	60	<0.5 U	<1 U	<0.5 U	<0.5 U
CARBON TETRACHLORIDE	5	<0.5 U	<1 U	<0.5 U	<0.5 U
CHLOROBENZENE	5	<0.5 U	<1 U	<0.5 U	<0.5 U
CHLOROETHANE	5	<1 U	<2 U	<1 U	<1 U
CHLOROFORM	7	<0.5 U	<1 U	<0.5 U	<0.5 U
CHLOROMETHANE	5	<1 U	0.72 J	<1 U	<1 U
CIS-1,2-DICHLOROETHENE	5	<0.5 U	<1 U	0.28 J	1.6
CIS-1,3-DICHLOROPROPENE	0.4	<0.5 U	<1 U	<0.5 U	<0.5 U
CYCLOHEXANE	NL	<0.5 U	<1 U	<0.5 U	<0.5 U
DIBROMOCHLOROMETHANE	5	<0.5 U	<1 U	<0.5 U	<0.5 U
DICHLORODIFLUOROMETHANE	5	<1 U	<2 U	0.52 J	0.86 J
ETHYLBENZENE	5	<0.5 U	<1 U	<0.5 U	<0.5 U
ISOPROPYLBENZENE	5	<0.5 U	<1 U	<0.5 U	<0.5 U
M- AND P-XYLENE	NL	<1 U	<2 U	<1 U	<1 U
METHYL ACETATE	NL	<0.75 U	<1.5 U	<0.75 U	<0.75 U
METHYL CYCLOHEXANE	NL	<0.5 U	<1 U	<0.5 U	<0.5 U
METHYL TERT-BUTYL ETHER	10	<0.5 U	<1 U	<0.5 U	<0.5 U
METHYLENE CHLORIDE	5	<2.5 U	<5 U	<2.5 U	<2.5 U
O-XYLENE	NL	<0.5 U	<1 U	<0.5 U	<0.5 U
STYRENE	5	<0.5 U	<1 U	<0.5 U	<0.5 U
TETRACHLOROETHENE	5	<0.5 U	<1 U	<0.5 U	<0.5 U
TOLUENE	5	<0.5 U	<1 U	<0.5 U	<0.5 U
TRANS-1,2-DICHLOROETHENE	5	<0.5 U	<1 U	<0.5 U	<0.5 U
TRANS-1,3-DICHLOROPROPENE	0.4	<0.5 U	<1 U	<0.5 U	<0.5 U
TRICHLOROETHENE	5	<0.5 U	<1 U	4	100
TRICHLOROFUOROMETHANE	5	<1 U	<2 U	<1 U	<1 U
VINYL CHLORIDE	2	<1 U	<2 U	<1 U	<1 U
XYLENES, TOTAL	5	<1.5 U	<3 U	<1.5 U	<1.5 U

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	518-520	538-540	563-565	583-585
Sample Date		9/1/2017	9/5/2017	9/5/2017	9/6/2017
Sample ID		VPB166-GW-090117-518-520	VPB166-GW-090517-538-540	VPB166-GW-090517-563-565	VPB166-GW-090617-583-585
Sample type code		N	N	N	N
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	<0.5 U	<5 U	<0.5 U	<0.5 U
1,1,2,2-TETRACHLOROETHANE	5	<0.5 U	<5 U	<0.5 U	<0.5 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	3.4	<5 U	9.5	8.5
1,1,2-TRICHLOROETHANE	1	<0.5 U	<5 U	<0.5 U	<0.5 U
1,1-DICHLOROETHANE	5	<0.5 U	<5 U	<0.5 U	<0.5 U
1,1-DICHLOROETHENE	5	0.47 J	<5 U	1.1	1.4
1,2,4-TRICHLOROBENZENE	5	<0.5 U	<5 U	<0.5 U	<0.5 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	<0.75 U	<7.5 U	<0.75 U	<0.75 U
1,2-DIBROMOETHANE	NL	<0.5 U	<5 U	<0.5 U	<0.5 U
1,2-DICHLOROBENZENE	3	<0.5 U	<5 U	<0.5 U	<0.5 U
1,2-DICHLOROETHANE	5	0.22 J	<5 U	<0.5 U	<0.5 U
1,2-DICHLOROETHENE, TOTAL	5	1.4 J	<10 U	2	2.8
1,2-DICHLOROPROPANE	1	<0.5 U	<5 U	<0.5 U	<0.5 U
1,3-DICHLOROBENZENE	3	<0.5 U	<5 U	<0.5 U	<0.5 U
1,4-DICHLOROBENZENE	3	<0.5 U	<5 U	<0.5 U	<0.5 U
2-BUTANONE	50	<2.5 U	<25 U	<2.5 U	<2.5 U
2-HEXANONE	50	<2.5 U	<25 U	<2.5 U	<2.5 U
4-METHYL-2-PENTANONE	NL	<2.5 U	<25 U	<2.5 U	<2.5 U
ACETONE	50	<2.5 U	<25 U	<2.5 U	<2.5 U
BENZENE	1	<0.5 U	<5 U	<0.5 U	<0.5 U
BROMODICHLOROMETHANE	50	<0.5 U	<5 U	<0.5 U	<0.5 U
BROMOFORM	50	<0.5 U	<5 U	<0.5 U	<0.5 U
BROMOMETHANE	5	<1 U	<10 U	<1 U	<1 U
CARBON DISULFIDE	60	<0.5 U	<5 U	<0.5 U	<0.5 U
CARBON TETRACHLORIDE	5	<0.5 U	<5 U	<0.5 U	<0.5 U
CHLOROBENZENE	5	<0.5 U	<5 U	<0.5 U	<0.5 U
CHLOROETHANE	5	<1 U	<10 U	<1 U	<1 U
CHLOROFORM	7	<0.5 U	<5 U	0.49 J	0.66 J
CHLOROMETHANE	5	<1 U	<10 U	<1 U	<1 U
CIS-1,2-DICHLOROETHENE	5	1.4	<5 U	2	2.8
CIS-1,3-DICHLOROPROPENE	0.4	<0.5 U	<5 U	<0.5 U	<0.5 U
CYCLOHEXANE	NL	<0.5 U	<5 U	<0.5 U	<0.5 U
DIBROMOCHLOROMETHANE	5	<0.5 U	<5 U	<0.5 U	<0.5 U
DICHLORODIFLUOROMETHANE	5	<1 U	<10 U	1.1 J	0.68 J
ETHYLBENZENE	5	<0.5 U	<5 U	<0.5 U	<0.5 U
ISOPROPYLBENZENE	5	<0.5 U	<5 U	<0.5 U	<0.5 U
M- AND P-XYLENE	NL	<1 U	<10 U	<1 U	<1 U
METHYL ACETATE	NL	<0.75 U	<7.5 U	<0.75 U	<0.75 U
METHYL CYCLOHEXANE	NL	0.8 J	<5 U	<0.5 U	<0.5 U
METHYL TERT-BUTYL ETHER	10	<0.5 U	<5 U	<0.5 U	<0.5 U
METHYLENE CHLORIDE	5	<2.5 U	<25 U	<2.5 U	<2.5 U
O-XYLENE	NL	<0.5 U	<5 U	<0.5 U	<0.5 U
STYRENE	5	<0.5 U	<5 U	<0.5 U	<0.5 U
TETRACHLOROETHENE	5	2.8	<5 U	2.4	4.5
TOLUENE	5	<0.5 U	<5 U	<0.5 U	<0.5 U
TRANS-1,2-DICHLOROETHENE	5	<0.5 U	<5 U	<0.5 U	<0.5 U
TRANS-1,3-DICHLOROPROPENE	0.4	<0.5 U	<5 U	<0.5 U	<0.5 U
TRICHLOROETHENE	5	100	4.5 J	140	220
TRICHLOROFUOROMETHANE	5	<1 U	<10 U	<1 U	<1 U
VINYL CHLORIDE	2	<1 U	<10 U	<1 U	<1 U
XYLENES, TOTAL	5	<1.5 U	<15 U	<1.5 U	<1.5 U

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	583-585	598-600	618-620	658-660
Sample Date		9/1/2017	9/7/2017	9/7/2017	9/8/2017
Sample ID		VPB166-GW-DUP02	VPB166-GW-090717-598-600	VPB166-GW-090717-618-620	VPB166-GW-090817-658-660
Sample type code		FD	N	N	N
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	<0.5 U	<5 U	<0.5 U	<2 UJ
1,1,2,2-TETRACHLOROETHANE	5	<0.5 U	<5 U	<0.5 U	<2 UJ
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	9.7	<5 U	9.5	<2 UJ
1,1,2-TRICHLOROETHANE	1	<0.5 U	<5 U	0.38 J	<2 UJ
1,1-DICHLOROETHANE	5	<0.5 U	<5 U	0.67 J	<2 UJ
1,1-DICHLOROETHENE	5	1.6	<5 U	3	<2 UJ
1,2,4-TRICHLOROBENZENE	5	<0.5 U	<5 U	<0.5 U	<2 UJ
1,2-DIBROMO-3-CHLOROPROPANE	0.04	<0.75 U	<7.5 U	<0.75 U	<3 UJ
1,2-DIBROMOETHANE	NL	<0.5 U	<5 U	<0.5 U	<2 UJ
1,2-DICHLOROBENZENE	3	<0.5 U	<5 U	<0.5 U	<2 UJ
1,2-DICHLOROETHANE	5	<0.5 U	2.2 J	<0.5 U	<2 UJ
1,2-DICHLOROETHENE, TOTAL	5	2.8	<10 U	2.1	<4 UJ
1,2-DICHLOROPROPANE	1	<0.5 U	<5 U	<0.5 U	<2 UJ
1,3-DICHLOROBENZENE	3	<0.5 U	<5 U	<0.5 U	<2 UJ
1,4-DICHLOROBENZENE	3	<0.5 U	<5 U	<0.5 U	<2 UJ
2-BUTANONE	50	<2.5 U	<25 U	<2.5 U	<10 UJ
2-HEXANONE	50	<2.5 U	<25 U	<2.5 U	<10 UJ
4-METHYL-2-PENTANONE	NL	<2.5 U	<25 U	<2.5 U	<10 UJ
ACETONE	50	<2.5 U	<25 U	<2.5 U	<10 UJ
BENZENE	1	<0.5 U	<5 U	<0.5 U	<2 UJ
BROMODICHLOROMETHANE	50	<0.5 U	<5 U	<0.5 U	<2 UJ
BROMOFORM	50	<0.5 U	<5 U	<0.5 U	<2 UJ
BROMOMETHANE	5	<1 U	<10 U	<1 U	<4 UJ
CARBON DISULFIDE	60	<0.5 U	<5 U	<0.5 U	<2 UJ
CARBON TETRACHLORIDE	5	<0.5 U	<5 U	1.2	<2 UJ
CHLOROBENZENE	5	<0.5 U	<5 U	<0.5 U	<2 UJ
CHLOROETHANE	5	<1 U	<10 U	<1 U	<4 UJ
CHLOROFORM	7	<0.5 U	<5 U	0.95 J	<2 UJ
CHLOROMETHANE	5	<1 U	<10 U	<1 U	<4 UJ
CIS-1,2-DICHLOROETHENE	5	2.8	<5 U	2.1	<2 UJ
CIS-1,3-DICHLOROPROPENE	0.4	<0.5 U	<5 U	<0.5 U	<2 UJ
CYCLOHEXANE	NL	<0.5 U	<5 U	<0.5 U	<2 UJ
DIBROMOCHLOROMETHANE	5	<0.5 U	<5 U	<0.5 U	<2 UJ
DICHLORODIFLUOROMETHANE	5	0.76 J	<10 U	0.63 J	<4 UJ
ETHYLBENZENE	5	<0.5 U	<5 U	<0.5 U	<2 UJ
ISOPROPYLBENZENE	5	<0.5 U	<5 U	<0.5 U	<2 UJ
M- AND P-XYLENE	NL	<1 U	<10 U	<1 U	<4 UJ
METHYL ACETATE	NL	<0.75 U	<7.5 U	<0.75 U	<3 UJ
METHYL CYCLOHEXANE	NL	<0.5 U	<5 U	<0.5 U	<2 UJ
METHYL TERT-BUTYL ETHER	10	<0.5 U	<5 U	<0.5 U	<2 UJ
METHYLENE CHLORIDE	5	<2.5 U	<25 U	<2.5 U	<10 UJ
O-XYLENE	NL	<0.5 U	<5 U	<0.5 U	<2 UJ
STYRENE	5	<0.5 U	<5 U	<0.5 U	<2 UJ
TETRACHLOROETHENE	5	4.9	<5 U	<0.5 U	<2 UJ
TOLUENE	5	<0.5 U	<5 U	<0.5 U	<2 UJ
TRANS-1,2-DICHLOROETHENE	5	<0.5 U	<5 U	<0.5 U	<2 UJ
TRANS-1,3-DICHLOROPROPENE	0.4	<0.5 U	<5 U	<0.5 U	<2 UJ
TRICHLOROETHENE	5	210	57	190	12 J
TRICHLOROFLUOROMETHANE	5	<1 U	<10 U	<1 U	<4 UJ
VINYL CHLORIDE	2	<1 U	<10 U	<1 U	<4 UJ
XYLENES, TOTAL	5	<1.5 U	<15 U	<1.5 U	<6 UJ

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	678-680	683-685	698-700	723-725
Sample Date		9/8/2017	9/11/2017	9/11/2017	9/12/2017
Sample ID		VPB166-GW-090817-678-680	VPB166-GW-091117-683-685	VPB166-GW-091117-698-700	VPB166-GW-091217-723-725
Sample type code		N	N	N	N
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	<5 UJ	<2 UJ	<0.5 U	<5 UJ
1,1,2,2-TETRACHLOROETHANE	5	<5 UJ	<2 UJ	<0.5 U	<5 UJ
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	<5 UJ	<2 UJ	49	<5 UJ
1,1,2-TRICHLOROETHANE	1	<5 UJ	<2 UJ	1.5	<5 UJ
1,1-DICHLOROETHANE	5	<5 UJ	<2 UJ	2.1	<5 UJ
1,1-DICHLOROETHENE	5	<5 UJ	<2 UJ	12	<5 UJ
1,2,4-TRICHLOROBENZENE	5	<5 UJ	<2 UJ	<0.5 U	<5 UJ
1,2-DIBROMO-3-CHLOROPROPANE	0.04	<7.5 UJ	<3 UJ	<0.75 U	<7.5 UJ
1,2-DIBROMOETHANE	NL	<5 UJ	<2 UJ	<0.5 U	<5 UJ
1,2-DICHLOROBENZENE	3	<5 UJ	<2 UJ	<0.5 U	<5 UJ
1,2-DICHLOROETHANE	5	<5 UJ	<2 UJ	<0.5 U	<5 UJ
1,2-DICHLOROETHENE, TOTAL	5	<10 UJ	<4 UJ	3.4	<10 UJ
1,2-DICHLOROPROPANE	1	<5 UJ	<2 UJ	<0.5 U	<5 UJ
1,3-DICHLOROBENZENE	3	<5 UJ	<2 UJ	<0.5 U	<5 UJ
1,4-DICHLOROBENZENE	3	<5 UJ	<2 UJ	<0.5 U	<5 UJ
2-BUTANONE	50	<25 UJ	<10 UJ	<2.5 U	<25 UJ
2-HEXANONE	50	<25 UJ	<10 UJ	<2.5 U	<25 UJ
4-METHYL-2-PENTANONE	NL	<25 UJ	<10 UJ	<2.5 U	<25 UJ
ACETONE	50	<25 UJ	10 J	<2.5 U	<25 UJ
BENZENE	1	<5 UJ	<2 UJ	<0.5 U	<5 UJ
BROMODICHLOROMETHANE	50	<5 UJ	<2 UJ	<0.5 U	<5 UJ
BROMOFORM	50	<5 UJ	<2 UJ	<0.5 U	<5 UJ
BROMOMETHANE	5	<10 UJ	<4 UJ	<1 U	<10 UJ
CARBON DISULFIDE	60	<5 UJ	<2 UJ	<0.5 U	<5 UJ
CARBON TETRACHLORIDE	5	<5 UJ	<2 UJ	1.2	<5 UJ
CHLOROBENZENE	5	<5 UJ	<2 UJ	<0.5 U	<5 UJ
CHLOROETHANE	5	<10 UJ	<4 UJ	<1 U	<10 UJ
CHLOROFORM	7	<5 UJ	<2 UJ	1.5	<5 UJ
CHLOROMETHANE	5	<10 UJ	<4 UJ	<1 UJ	<10 UJ
CIS-1,2-DICHLOROETHENE	5	<5 UJ	<2 UJ	3.4	<5 UJ
CIS-1,3-DICHLOROPROPENE	0.4	<5 UJ	<2 UJ	<0.5 U	<5 UJ
CYCLOHEXANE	NL	<5 UJ	<2 UJ	<0.5 U	<5 UJ
DIBROMOCHLOROMETHANE	5	<5 UJ	<2 UJ	<0.5 U	<5 UJ
DICHLORODIFLUOROMETHANE	5	<10 UJ	<4 UJ	0.44 J	<10 UJ
ETHYLBENZENE	5	<5 UJ	<2 UJ	<0.5 U	<5 UJ
ISOPROPYLBENZENE	5	<5 UJ	<2 UJ	<0.5 U	<5 UJ
M- AND P-XYLENE	NL	<10 UJ	<4 UJ	<1 U	<10 UJ
METHYL ACETATE	NL	<7.5 UJ	<3 UJ	<0.75 U	<7.5 UJ
METHYL CYCLOHEXANE	NL	<5 UJ	<2 UJ	<0.5 U	<5 UJ
METHYL TERT-BUTYL ETHER	10	<5 UJ	<2 UJ	<0.5 UJ	<5 UJ
METHYLENE CHLORIDE	5	<25 UJ	<10 UJ	<2.5 U	<25 UJ
O-XYLENE	NL	<5 UJ	<2 UJ	<0.5 U	<5 UJ
STYRENE	5	<5 UJ	<2 UJ	<0.5 U	<5 UJ
TETRACHLOROETHENE	5	<5 UJ	<2 UJ	5	<5 UJ
TOLUENE	5	<5 UJ	<2 UJ	<0.5 U	<5 UJ
TRANS-1,2-DICHLOROETHENE	5	<5 UJ	<2 UJ	<0.5 U	<5 UJ
TRANS-1,3-DICHLOROPROPENE	0.4	<5 UJ	<2 UJ	<0.5 U	<5 UJ
TRICHLOROETHENE	5	<5 UJ	2.8 J	1500	<5 UJ
TRICHLOROFLUOROMETHANE	5	<10 UJ	<4 UJ	<1 U	<10 UJ
VINYL CHLORIDE	2	<10 UJ	<4 UJ	<1 U	<10 UJ
XYLENES, TOTAL	5	<15 UJ	<6 UJ	<1.5 U	<15 UJ

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	738-740	758-760	768-770	778-780
Sample Date		9/13/2017	9/13/2017	9/14/2017	9/14/2017
Sample ID		VPB166-GW-091317-738-740	VPB166-GW-091317-758-760	VPB166-GW-091417-768-770	VPB166-GW-091417-778-780
Sample type code		N	N	N	N
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	<10 UJ	<20 UJ	<10 UJ	<10 UJ
1,1,2,2-TETRACHLOROETHANE	5	<10 UJ	<20 UJ	<10 UJ	<10 UJ
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	<10 UJ	<20 UJ	<10 UJ	<10 UJ
1,1,2-TRICHLOROETHANE	1	<10 UJ	<20 UJ	<10 UJ	<10 UJ
1,1-DICHLOROETHANE	5	<10 UJ	<20 UJ	<10 UJ	<10 UJ
1,1-DICHLOROETHENE	5	<10 UJ	<20 UJ	<10 UJ	<10 UJ
1,2,4-TRICHLOROBENZENE	5	<10 UJ	<20 UJ	<10 UJ	<10 UJ
1,2-DIBROMO-3-CHLOROPROPANE	0.04	<15 UJ	<30 UJ	<15 UJ	<15 UJ
1,2-DIBROMOETHANE	NL	<10 UJ	<20 UJ	<10 UJ	<10 UJ
1,2-DICHLOROBENZENE	3	<10 UJ	<20 UJ	<10 UJ	<10 UJ
1,2-DICHLOROETHANE	5	<10 UJ	<20 UJ	<10 UJ	<10 UJ
1,2-DICHLOROETHENE, TOTAL	5	<20 UJ	<40 UJ	<20 UJ	<20 UJ
1,2-DICHLOROPROPANE	1	<10 UJ	<20 UJ	<10 UJ	<10 UJ
1,3-DICHLOROBENZENE	3	<10 UJ	<20 UJ	<10 UJ	<10 UJ
1,4-DICHLOROBENZENE	3	<10 UJ	<20 UJ	<10 UJ	<10 UJ
2-BUTANONE	50	<50 UJ	<100 UJ	<50 UJ	<50 UJ
2-HEXANONE	50	<50 UJ	<100 UJ	<50 UJ	<50 UJ
4-METHYL-2-PENTANONE	NL	<50 UJ	<100 UJ	<50 UJ	<50 UJ
ACETONE	50	<50 UJ	<100 UJ	<50 UJ	<50 UJ
BENZENE	1	<10 UJ	<20 UJ	<10 UJ	<10 UJ
BROMODICHLOROMETHANE	50	<10 UJ	<20 UJ	<10 UJ	<10 UJ
BROMOFORM	50	<10 UJ	<20 UJ	<10 UJ	<10 UJ
BROMOMETHANE	5	<20 UJ	<40 UJ	<20 UJ	<20 UJ
CARBON DISULFIDE	60	<10 UJ	<20 UJ	<10 UJ	<10 UJ
CARBON TETRACHLORIDE	5	<10 UJ	<20 UJ	<10 UJ	<10 UJ
CHLOROBENZENE	5	<10 UJ	<20 UJ	<10 UJ	<10 UJ
CHLOROETHANE	5	<20 UJ	<40 UJ	<20 UJ	<20 UJ
CHLOROFORM	7	<10 UJ	<20 UJ	<10 UJ	<10 UJ
CHLOROMETHANE	5	<20 UJ	<40 UJ	<20 UJ	<20 UJ
CIS-1,2-DICHLOROETHENE	5	<10 UJ	<20 UJ	<10 UJ	<10 UJ
CIS-1,3-DICHLOROPROPENE	0.4	<10 UJ	<20 UJ	<10 UJ	<10 UJ
CYCLOHEXANE	NL	<10 UJ	<20 UJ	<10 UJ	<10 UJ
DIBROMOCHLOROMETHANE	5	<10 UJ	<20 UJ	<10 UJ	<10 UJ
DICHLORODIFLUOROMETHANE	5	<20 UJ	<40 UJ	<20 UJ	<20 UJ
ETHYLBENZENE	5	<10 UJ	<20 UJ	<10 UJ	<10 UJ
ISOPROPYLBENZENE	5	<10 UJ	<20 UJ	<10 UJ	<10 UJ
M- AND P-XYLENE	NL	<20 UJ	<40 UJ	<20 UJ	<20 UJ
METHYL ACETATE	NL	<15 UJ	<30 UJ	<15 UJ	<15 UJ
METHYL CYCLOHEXANE	NL	<10 UJ	<20 UJ	<10 UJ	<10 UJ
METHYL TERT-BUTYL ETHER	10	<10 UJ	<20 UJ	<10 UJ	<10 UJ
METHYLENE CHLORIDE	5	<50 UJ	<100 UJ	<50 UJ	<50 UJ
O-XYLENE	NL	<10 UJ	<20 UJ	<10 UJ	<10 UJ
STYRENE	5	<10 UJ	<20 UJ	<10 UJ	<10 UJ
TETRACHLOROETHENE	5	<10 UJ	<20 UJ	<10 UJ	<10 UJ
TOLUENE	5	<10 UJ	<20 UJ	<10 UJ	<10 UJ
TRANS-1,2-DICHLOROETHENE	5	<10 UJ	<20 UJ	<10 UJ	<10 UJ
TRANS-1,3-DICHLOROPROPENE	0.4	<10 UJ	<20 UJ	<10 UJ	<10 UJ
TRICHLOROETHENE	5	<10 UJ	<20 UJ	<10 UJ	<10 UJ
TRICHLOROFLUOROMETHANE	5	<20 UJ	<40 UJ	<20 UJ	<20 UJ
VINYL CHLORIDE	2	<20 UJ	<40 UJ	<20 UJ	<20 UJ
XYLENES, TOTAL	5	<30 UJ	<60 UJ	<30 UJ	<30 UJ

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	798-800	823-825	838-840	858-860
Sample Date		9/15/2017	9/19/2017	9/19/2017	9/20/2017
Sample ID		VPB166-GW-091517-798-800	VPB166-GW-091917-823-825	VPB166-GW-091917-838-840	VPB166-GW-092017-858-860
Sample type code		N	N	N	N
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	<2.5 UJ	<5 U	<20 U	<0.5 U
1,1,2,2-TETRACHLOROETHANE	5	<2.5 UJ	<5 U	<20 U	<0.5 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	<2.5 UJ	<5 U	<20 U	<0.5 U
1,1,2-TRICHLOROETHANE	1	<2.5 UJ	<5 U	<20 U	<0.5 U
1,1-DICHLOROETHANE	5	<2.5 UJ	<5 U	<20 U	<0.5 U
1,1-DICHLOROETHENE	5	<2.5 UJ	<5 U	<20 U	<0.5 U
1,2,4-TRICHLOROBENZENE	5	<2.5 UJ	<5 U	<20 U	<0.5 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	<3.8 UJ	<7.5 U	<30 U	<0.75 U
1,2-DIBROMOETHANE	NL	<2.5 UJ	<5 U	<20 U	<0.5 U
1,2-DICHLOROBENZENE	3	<2.5 UJ	<5 U	<20 U	<0.5 U
1,2-DICHLOROETHANE	5	<2.5 UJ	<5 U	<20 U	<0.5 U
1,2-DICHLOROETHENE, TOTAL	5	<5 UJ	<10 U	<40 U	<1 U
1,2-DICHLOROPROPANE	1	<2.5 UJ	<5 U	<20 U	<0.5 U
1,3-DICHLOROBENZENE	3	<2.5 UJ	<5 U	<20 U	<0.5 U
1,4-DICHLOROBENZENE	3	<2.5 UJ	<5 U	<20 U	<0.5 U
2-BUTANONE	50	<12 UJ	<25 U	<100 U	<2.5 U
2-HEXANONE	50	<12 UJ	<25 U	<100 U	<2.5 U
4-METHYL-2-PENTANONE	NL	<12 UJ	<25 U	<100 U	<2.5 U
ACETONE	50	<12 UJ	<25 U	<100 U	<2.5 U
BENZENE	1	<2.5 UJ	<5 U	<20 U	<0.5 U
BROMODICHLOROMETHANE	50	<2.5 UJ	<5 U	<20 U	<0.5 U
BROMOFORM	50	<2.5 UJ	<5 U	<20 U	<0.5 U
BROMOMETHANE	5	<5 UJ	<10 U	<40 U	<1 U
CARBON DISULFIDE	60	<2.5 UJ	<5 U	<20 U	<0.5 U
CARBON TETRACHLORIDE	5	<2.5 UJ	<5 U	<20 U	<0.5 U
CHLOROBENZENE	5	<2.5 UJ	<5 U	<20 U	<0.5 U
CHLOROETHANE	5	<5 UJ	<10 U	<40 U	<1 U
CHLOROFORM	7	<2.5 UJ	<5 U	<20 U	<0.5 U
CHLOROMETHANE	5	<5 UJ	<10 U	<40 U	<1 U
CIS-1,2-DICHLOROETHENE	5	<2.5 UJ	<5 U	<20 U	<0.5 U
CIS-1,3-DICHLOROPROPENE	0.4	<2.5 UJ	<5 U	<20 U	<0.5 U
CYCLOHEXANE	NL	<2.5 UJ	<5 U	<20 U	<0.5 U
DIBROMOCHLOROMETHANE	5	<2.5 UJ	<5 U	<20 U	<0.5 U
DICHLORODIFLUOROMETHANE	5	<5 UJ	<10 U	<40 U	<1 U
ETHYLBENZENE	5	<2.5 UJ	<5 U	<20 U	<0.5 U
ISOPROPYLBENZENE	5	<2.5 UJ	<5 U	<20 U	<0.5 U
M- AND P-XYLENE	NL	<5 UJ	<10 U	<40 U	<1 U
METHYL ACETATE	NL	<3.8 UJ	<7.5 U	<30 U	<0.75 U
METHYL CYCLOHEXANE	NL	<2.5 UJ	<5 U	<20 U	<0.5 U
METHYL TERT-BUTYL ETHER	10	<2.5 UJ	<5 U	<20 U	<0.5 U
METHYLENE CHLORIDE	5	<12 UJ	<25 U	<100 U	<2.5 U
O-XYLENE	NL	<2.5 UJ	<5 U	<20 U	<0.5 U
STYRENE	5	<2.5 UJ	<5 U	<20 U	<0.5 U
TETRACHLOROETHENE	5	<2.5 UJ	<5 U	<20 U	<0.5 U
TOLUENE	5	<2.5 UJ	<5 U	<20 U	<0.5 U
TRANS-1,2-DICHLOROETHENE	5	<2.5 UJ	<5 U	<20 U	<0.5 U
TRANS-1,3-DICHLOROPROPENE	0.4	<2.5 UJ	<5 U	<20 U	<0.5 U
TRICHLOROETHENE	5	<2.5 UJ	<5 U	<20 U	<0.5 U
TRICHLOROFUOROMETHANE	5	<5 UJ	<10 U	<40 U	<1 U
VINYL CHLORIDE	2	<5 UJ	<10 U	<40 U	<1 U
XYLENES, TOTAL	5	<7.5 UJ	<15 U	<60 U	<1.5 U

Location		878-880
Sample Date		9/20/2017
Sample ID		VPB166-GW-092017-878-880
Sample type code		N
VOC 8260C (ug/L)		
1,1,1-TRICHLOROETHANE	5	<20 U
1,1,2,2-TETRACHLOROETHANE	5	<20 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	<20 U
1,1,2-TRICHLOROETHANE	1	<20 U
1,1-DICHLOROETHANE	5	<20 U
1,1-DICHLOROETHENE	5	<20 U
1,2,4-TRICHLOROBENZENE	5	<20 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	<30 U
1,2-DIBROMOETHANE	NL	<20 U
1,2-DICHLOROBENZENE	3	<20 U
1,2-DICHLOROETHANE	5	<20 U
1,2-DICHLOROETHENE, TOTAL	5	<40 U
1,2-DICHLOROPROPANE	1	<20 U
1,3-DICHLOROBENZENE	3	<20 U
1,4-DICHLOROBENZENE	3	<20 U
2-BUTANONE	50	<100 U
2-HEXANONE	50	<100 U
4-METHYL-2-PENTANONE	NL	<100 U
ACETONE	50	<100 U
BENZENE	1	<20 U
BROMODICHLOROMETHANE	50	<20 U
BROMOFORM	50	<20 U
BROMOMETHANE	5	<40 U
CARBON DISULFIDE	60	<20 U
CARBON TETRACHLORIDE	5	<20 U
CHLOROBENZENE	5	<20 U
CHLOROETHANE	5	<40 U
CHLOROFORM	7	<20 U
CHLOROMETHANE	5	<40 U
CIS-1,2-DICHLOROETHENE	5	<20 U
CIS-1,3-DICHLOROPROPENE	0.4	<20 U
CYCLOHEXANE	NL	<20 U
DIBROMOCHLOROMETHANE	5	<20 U
DICHLORODIFLUOROMETHANE	5	<40 U
ETHYLBENZENE	5	<20 U
ISOPROPYLBENZENE	5	<20 U
M- AND P-XYLENE	NL	<40 U
METHYL ACETATE	NL	<30 U
METHYL CYCLOHEXANE	NL	<20 U
METHYL TERT-BUTYL ETHER	10	<20 U
METHYLENE CHLORIDE	5	<100 U
O-XYLENE	NL	<20 U
STYRENE	5	<20 U
TETRACHLOROETHENE	5	<20 U
TOLUENE	5	<20 U
TRANS-1,2-DICHLOROETHENE	5	<20 U
TRANS-1,3-DICHLOROPROPENE	0.4	<20 U
TRICHLOROETHENE	5	<20 U
TRICHLOROFLUOROMETHANE	5	<40 U
VINYL CHLORIDE	2	<40 U
XYLENES, TOTAL	5	<60 U

Notes:

1 New York State Department of Environmental Conservation Division of Water Technical and Operation Guidance series
(6 NYCRR 700-706, Part 703.5 summarized in TOGS 1.1.1)

Ambient water quality standards and groundwater effluent limitations, class GA; NL = Not Listed

Bold = Detected; ***Bold and Italics***=Not detected 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 = 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 quantitation limit necessary to accurately and precisely measure the analyte in the sample.

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

Section 6

VPB166 Survey

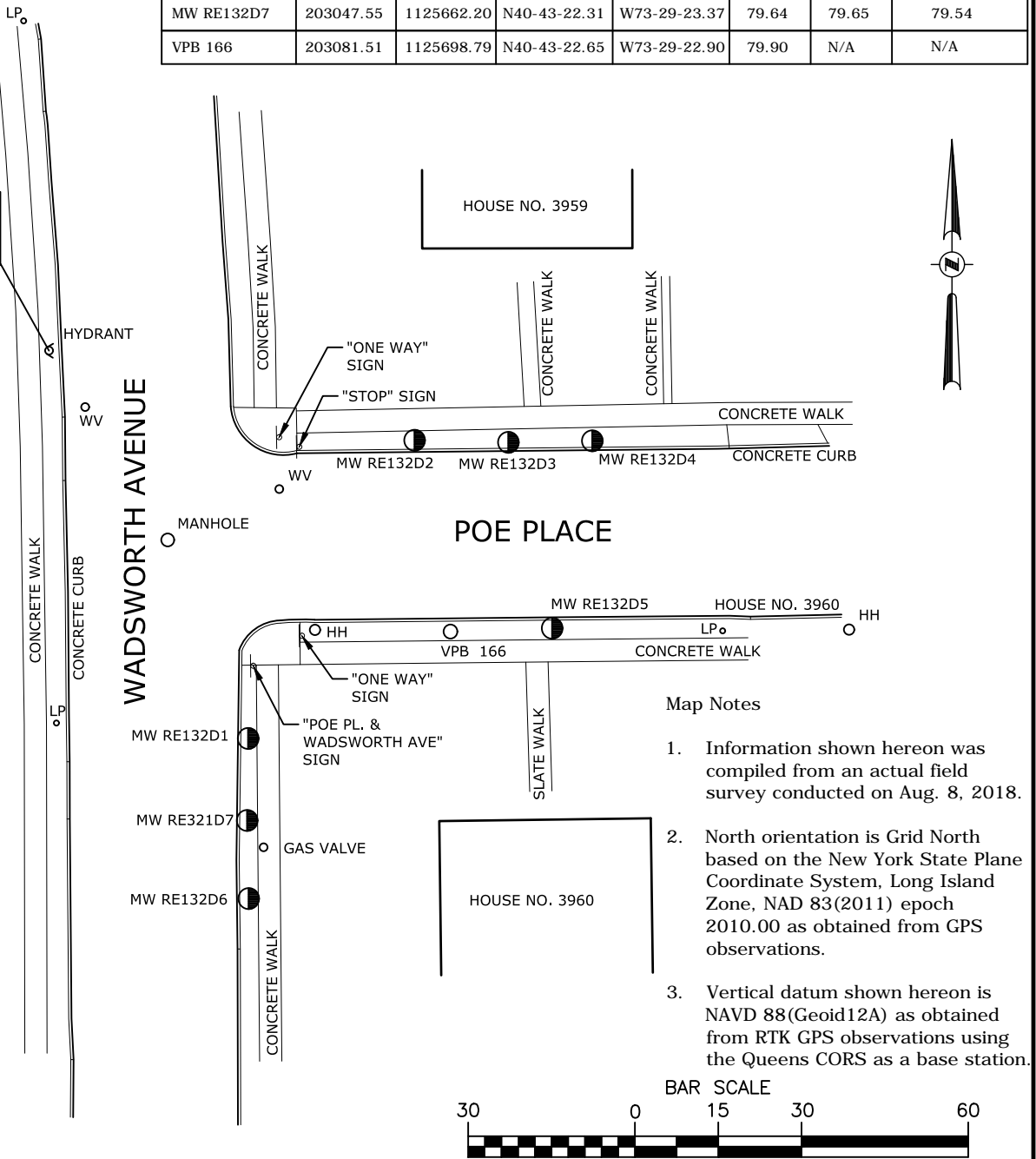
UNAUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

Description	Northing	Easting	Latitude	Longitude	Ground	Top of Casing	Top of PVC (4")
MW RE132D1	203062.29	1125662.40	N40-43-22.46	W73-29-23.37	79.61	79.56	79.51
MW RE132D2	203115.90	1125692.33	N40-43-22.99	W73-29-22.98	80.02	79.94	79.56/80.01(12")
MW RE132D3	203115.53	1125709.20	N40-43-22.98	W73-29-22.76	79.93	79.90	79.43/79.94(12")
MW RE132D4	203115.82	1125724.32	N40-43-22.99	W73-29-22.56	80.00	79.96	79.60/80.03(12")
MW RE132D5	203082.10	1125717.09	N40-43-22.65	W73-29-22.66	79.93	80.04	79.42/79.95(12")
MW RE132D6	203033.49	1125662.48	N40-43-22.18	W73-29-23.37	79.09	79.51	79.10
MW RE132D7	203047.55	1125662.20	N40-43-22.31	W73-29-23.37	79.64	79.65	79.54
VPB 166	203081.51	1125698.79	N40-43-22.65	W73-29-22.90	79.90	N/A	N/A

LEGEND

- HH ELECTRIC HANDHOLE
- LP LIGHT POLE
- MW RE109D3 MONITOR WELL
- VPB VERTICAL PROFILE BORING
- WV WATER VALVE

BENCHMARK FOUND "X-CUT" IN N.H.O.A. ELEVATION=82.49'



Map Notes

- Information shown hereon was compiled from an actual field survey conducted on Aug. 8, 2018.
- North orientation is Grid North based on the New York State Plane Coordinate System, Long Island Zone, NAD 83(2011) epoch 2010.00 as obtained from GPS observations.
- Vertical datum shown hereon is NAVD 88(Geoid12A) as obtained from RTK GPS observations using the Queens CORS as a base station.

Date	RECORD OF WORK	Appr.
8/17/18	MISC. REVISION	
Drafter: MDD	Checker:	
Appr. by: WJN	Proj. No. 14.4121	

MONITOR WELL SURVEY LOCATION
 RE132D1, RE 132D2, RE132D3, RE132D4, RE132D5
 RE132D6, RE132D7 AND VPB 166
 NO. 3959 AND NO. 3960 POE PLACE

TOWN OF LEVITTOWN NASSAU COUNTY, NEW YORK

C.T. MALE ASSOCIATES
 Engineering, Surveying, Architecture & Landscape Architecture, D.P.C.

50 CENTURY HILL DRIVE, LATHAM, NY 12110
 518.786.7400 * FAX 518.786.7299

SCALE: 1"=30' DATE: AUGUST 8, 2018

DWG NO. 18-396

Appendix B
Environmental Sequence Stratigraphy (ESS)
Analysis



RESOLUTION CONSULTANTS

To: Lora Fly and Brian Murray, DON, NAVFAC MIDLANT

From: Brian Caldwell, P.G., Resolution Consultants

Subject: Environmental Sequence Stratigraphy Analysis
Naval Weapons Industrial Reserve Plant (NWIRP) Bethpage

Date: May 18, 2018

1. INTRODUCTION

Previous sequence stratigraphic studies of the New Jersey Coastal Plain (Kulpecz et al., 2008; Miller et al., 1998; and Sugarman et al., 2005) have demonstrated that repetitive and predictable facies successions in the region can largely be explained by cyclic sea level changes. In this Environmental Sequence Stratigraphic (ESS) analysis, we combine results from regional studies (Lanci et al., 2002; Kulpecz et al., 2008; Miller et al., 1998, 1999, 2004, 2006; and Sugarman et al., 2005) with sub-regional continuous geophysical logs (acquired during environmental investigations at NWIRP) to develop a high resolution sequence stratigraphic framework for the Late Cretaceous Turonian age (approximately 94 million years ago) Magothy Formation underlying NWIRP Bethpage. ESS is a method of utilizing available data, coupled with an interpretation of the geologic facies, or depositional environments of the geologic material, to develop and refine Conceptual Site Models (CSM's). The refined CSM is then used in the environmental perspective to optimize contaminated site investigation and remediation. A glossary of terms used in the ESS evaluation is presented in Appendix A.



2. DATA AND METHODS

Geophysical logs have been used to interpret paleoenvironments and correlate depositional facies since Serra and Sulpice (1975) used spontaneous potential (SP) and resistivity logs to determine the depositional history of strata in the Gulf of Mexico. Gamma logs, a measure of naturally occurring radiation in aquifer material, have become a useful tool for log-based facies interpretation, particularly in siliclastic fluvio-deltaic environments coupled with lithologic control from cores. Fine-grained sediments, clays, glauconite sands, and phosphorites, which are common elements in siliclastic fluvio-deltaic facies, retain relatively high levels of radiogenic elements. Therefore, relative gamma log counts can be considered a good indicator of lithology and, in the case of the Magothy, a discriminator between gravels, sands, silts, and clays.

Six detailed cross sections of the Magothy Formation were generated using 29 gamma logs: one north-south trending dip section (B-B') and five east-west trending strike sections (1-1', 2-2', 3-3', 4-4', and 5-5') (Figure 1). Gamma logs were selected for inclusion on the basis of geographic location (i.e., satisfying areas of poor coverage), depth (substantial penetration through the Magothy Formation), and adequate quality. Although this study relied heavily on gamma log data as a method of correlation, lithologic logs were also used to calibrate the correlation and account for sub-regional facies changes.

2.1 Stratigraphic Framework

Based on the gamma log signatures, the stratigraphic units beneath the Site were divided into two major packages of depositions (sequences). Each sequence is bounded by conspicuous subaerial erosion or exposure surfaces (i.e., sequence boundary - red markers in the cross sections) that are the product of relative sea level changes. Each sequence was further divided into "parasequences", or building-blocks of the sequences, marked by flooding surfaces (shale/clay signatures). They are denoted by gray markers in the depositional facies interpretations cross sections representing thin tidal mud deposits.

2.2 Facies Architecture

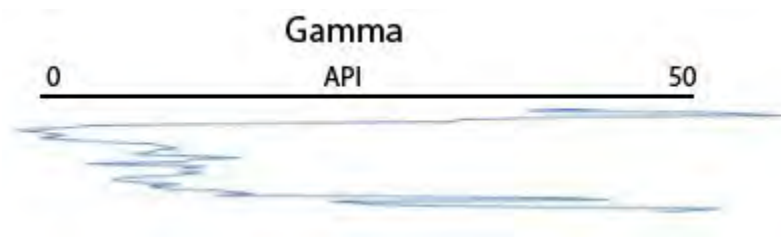
Parasequences were subdivided into marginal marine (delta front, wave-dominated shoreline, estuarine) and nonmarine (upper and lower delta plain/fluvial, glacial) depositional facies within the context of a wave-dominated deltaic depositional model (Sugarman et al., 2005). The individual depositional facies were identified on the basis of gamma log motifs and calibrated with modern

wave-dominated deltaic analogs derived from Google Earth imagery (Figure 2). The analogs allowed prediction of the dimensions (i.e., approximate width and depth) of depositional elements for the Site area, but also leverage horizontal facies relationships based on vertical facies successions in logs (applying Walther's Law - a vertical sequence of facies will be the product of a series of depositional environments which occurred laterally adjacent to each other).

The following is a brief description of the recognition criteria for identifying depositional facies at NWIRP Bethpage using gamma logs.

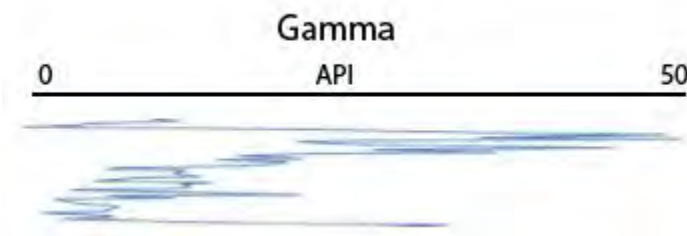
Delta Mouth Bars:

The gamma signature of a deltaic mouth bar is typically spiky and low, with sharp top and basal contacts. These deposits are very coarse.



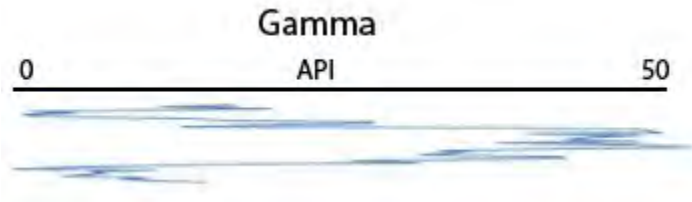
Fluvial:

The gamma signature of a fluvial channel typically exhibits a sharp negative shift overlain by a gradual positive reflection (a "bell" shape) - indicative of a fining upward package.



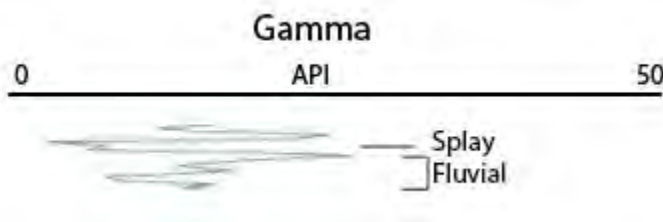
Overbank/Lagoonal:

The gamma signature of an overbank/Lagoonal deposit typically exhibits a high blocky reflection with a "cylindrical" shape. The top and basal contacts are sharp.



Splay:

The gamma signature of a splay deposit typically exhibits a sharp low reflection, however this spike tends to increase laterally. Splay deposits are most easily identified by their proximity to fluvial deposits.



3. RESULTS

Correlation of existing gamma logs beneath the Site reveals that the Magothy Formation consists of several phases of seaward progradation and landward retrogradation that are represented by two major depositional sequences (Figures 3 through 8). The culmination of the 2nd sequence is marked by a probable progradation of continental (glacial) deposits over coastal and deltaic deposits. The facies architecture of the Magothy Formation, resulting from these progradational and retrogradational patterns, provides important insights into the distribution of transmissive and storage zones at the Site over time. The sequences and facies of the Magothy Formation are described in more detail below.

3.1 Sequence 1

Sequence 1 separates the Magothy Formation from the underlying Raritan Formation by a Sequence Boundary (SB 1) which is represented by a basin-wide unconformity (manifested in the log signature as a distinctively low Gamma spike at approximately -800 feet [ft] above mean



sea level [amsl]). According to core studies and field investigations by Sugarman et al. (2005), mottled clays and paleosols (after) locally demarcate the SB 1, indicating local subaerial exposure during relative sea level fall. Elsewhere, the sequence boundary may be represented by fluvial incisions.

SB 1 is juxtaposed by a Transgressive Surface (TS 1, light blue marker), indicating a rapid drowning of the coastline caused by a significant sea level rise. As the sea level began to rise during the Transgressive Systems Tract (TST) (between the blue and green markers), distributary channels and low accommodation deltas of the lowstand were subject to reworking into a predominantly estuarine condition. Backstepping delta mouth bars and muddy fluvial channels are the predominant depositional facies of this interval (resulting in 50-75 ft thick muddy units). Sandy lignite deposits and pyrite concretions observed in cores suggest that these thick, muddy deposits are representative of such estuarine/lagoonal deposits (Sugarman et al., 2005). Channels of the TST also gradually become interspersed and poorly connected. As a result, this unit indicates a high variability of transmissive units interspersed by units of storage.

The TST is bounded on top by two Maximum Flooding Surfaces (green marker, MFS1 and purple marker, MFS2) that represent progressive maximum landward incursions of the shoreline in two phases. As the muddiest intervals of the system, these maximum flooding surfaces seem to act as storage for contamination and show conspicuous spikes of contamination data. MFS1 heralds the first phase of highstand, with aggradational to progradational successions. MFS2 represents the second maximum flooding before the complete turnaround to highstand delta progradation. This highstand phase shows a facies architecture predominated by seaward (southerly) dipping delta mouth bars, with distributary channels locally incising into them. The greater continuity of these sand bodies indicates a higher transmissivity of these units for groundwater flow, and hence contaminant transport.

3.2 Sequence 2

Sequence 2 is separated from Sequence 1 by an erosional unconformity (SB 2, red marker) overlying the highstand delta deposits of the previous sequence. In contrast to Sequence 1, the lowstand deposits are locally preserved (between red and light blue markers) as predominantly channelized units and their associated overbank sediment, with a minor component of southerly prograding mouth bars. A Transgressive Surface (TS 2, light blue marker) above the sequence boundary indicates the renewed initiation of a flooding event. The TST (between blue and green



markers) is marked by laterally continuous, backstepping deltaic deposits and thick lagoonal/estuarine deposits similar to the facies of TST in Sequence 1. However, the TST in this sequence shows a relatively thinner interval than in Sequence 1.

Sequence 2 represents a similar scenario as in Sequence 1 in relation to the culmination of the TST in two phases of maximum landward incursions of the shoreline (denoted by green marker, MFS1 and purple marker, MFS2). Observation of contamination data in relation to the maximum flooding surfaces show significant spikes as similarly observed in Sequence 1. The MFS1 is followed by the first phase of highstand aggradation and progradation of delta mouth bars, and the MFS2 is followed by a more pronounced turnaround to delta progradation. During the culmination of this highstand, a thick unit of continental deposits (possibly composed of coarse-grained glacial outwash) moves farther seaward, over-riding the highstand deltas and coastal deposits. While the grain size of these glacial deposits would be the coarsest, they may have poor transmissivity because of significant glacial mud in the matrices.

4. DISCUSSION

Because thermoflexural subsidence is the dominant tectonic component of evolution of passive margins (Watts and Steckler, 1979), the Turonian sequences and deltaic facies systems of the New Jersey and New York Coastal Plains primarily reflect the interplay of global sea level oscillations and sediment supply.

4.1 Sea Level Oscillations

Third order (1-10 million years) sea level changes (Figure 9) are well documented during the Turonian stage (Miller et al., 2005). Previous estimates from New Jersey Plain coreholes identified 4 sea level cycles in the Turonian with amplitudes as great as approximately 15 meters (Miller et al., 2005). These sea level changes primarily reflect a gradual sea level fall (Figure 9) and are the principal driver behind base-level changes, unconformities, and the development and preservation of the studied sequences on the New Jersey Coastal Plain.

Periods of elevated or low sea level have a distinct effect on shoreline position and the types of deltaic facies that are recorded on the coastal plain. During high sea level, marine to distal deltaic



This analysis from the Turonian Magothy Formation indicates that although global sea level oscillations provide the template for sequences and sequence preservation, changes in sediment supply also largely influence depositional environments in the region.

4.2 Sediment Supply

Peak rates of Late Cretaceous sediment accumulation on the mid-Atlantic Margin occurred during the Albian stage (100 million years ago), representing a phase of tectonic uplift and intense weathering of the ancestral Appalachians (Poag and Sevon, 1989). This large influx of sediments is reflected by the rapid seaward progradation of the shoreline and preservation of extensive delta plain deposits (Magothy Formation) on the New Jersey Coastal Plain (Sugarman et al., 2005; Kulpecz et al., 2008). These observations are consistent with offshore data that shows large amounts of coarse, deltaic material deposited across the New Jersey and New York shelves, a function of high sediment rates “flooding” the system (Poag and Sevon, 1989).

Despite the rapid weathering rates and an overall sea level fall, the Late Turonian also exhibits a rapid sea level transgression upwards of approximately 50 million years (Figure 9) (Miller et al., 2005). During such events, sedimentation is no longer able to keep up with the pace of sea level rise, resulting in shoreline retrogradation, facies backstepping, and lagoonal deposits overlying progradational deltaic facies.

4.3 Stratigraphic Impact on Hydrogeology

This analysis indicates that considerable heterogeneity exists in the subsurface due to an interplay of progradation and transgression. The thick channelized sand bodies at the Site are inferred to represent high permeability units and conduits for groundwater flow/contaminant transport. However, the continuity of those units is variable. Furthermore, while fluvial channels are cut into the underlying deltaic deposits of each sequence, those incisions are not necessarily infilled by channel bars. Lack of space (accommodation) in the coastal realm during each sea level fall forces sediments to deposit farther seaward as delta front (mouth bar) deposits. Parts of the channelized incisions are later infilled by bay-fills and lagoonal mud during the ensuing transgression. As a result, mouth bars show more continuity than their channelized counterparts (and associated splay deposits), which are much more heterogeneous.



5. CONCLUSIONS

- The Turonian Magothy Formation primarily reflects the interplay of global sea level oscillations and sediment supply.
- Correlation of existing gamma logs beneath the Site indicates that the Magothy Formation consists of two high frequency, depositional sequences. Each sequence boundary is either marked by subaerial exposure (paleosol) or fluvial incision.
- Previous CSMs for the Site have interpreted the depositional setting of the Magothy Formation to have been a glacially-derived delta such as the Mackenzie River Delta. This analysis indicates a better analog for the Magothy Formation is the wave-dominated Sao Francisco River delta, Brazil (Figure 2). The Mackenzie River Delta is more appropriate for the overtopping glacial sediments.
- Each sequence within the Magothy shows considerable intra-parasequence heterogeneity. This heterogeneity needs to be addressed in detail in order to understand the pathway of the contamination of the plume. Groundwater preferentially flows through laterally continuous fluvial sands and distributary mouth bars. The distributary mouth bars show more continuity than their channelized counterparts. Mud-plugged channels and bay/lagoonal deposits constitute the lower transmissive units of the Magothy.
- Contamination appears to be primarily traveling through laterally continuous fluvial and mouth bar sands, however, in some locations, such as VPB160 and VPB142 on section B-B', major stratigraphic markers, (such as the maximum flooding surface in Sequence 1) appear to exhibit stratigraphic control on trichloroethene (TCE) and tetrachloroethene (PCE) concentrations.
- The Magothy Formation is topped by 200 to 300 feet of glacially-derived sediment, which in this analysis is considerably thicker than previous interpretations.
- The maximum flooding surfaces identified in this interpretation are strongly related to contamination data peaks. This may be explained by the fact that the maximum flooding surfaces are the muddiest intervals of the Site, rendering them potentially as storage units of contamination (adsorption by fine-grained aquifer material). Moreover, since the overlying deltaic sands lap against these surfaces, over time, groundwater contamination flowing



through those continuous sands could end up in storage within the maximum flooding surfaces. Conversely, desorption of contamination from the maximum flooding surface material could result in higher contamination migration rates in the deltaic sands if the concentration gradient is conducive for transfer (desorption).

Sequence stratigraphy and facies models provide a predictive framework for hydrostratigraphic units, but regional and local differences in sediment supply, depositional environment, and sea level affect the development of the hydrogeologic framework. Sequence stratigraphy allows packages of coarser sediments to be bracketed in a predictable manner by confining units. Facies analysis, coupled with depositional models, allows for the prediction of the potential scale and connectivity of coarser aquifer material. Sequence stratigraphy and facies analysis provides a means of roughly predicting permeability, porosity, and conductivity from aquifers, though exact estimates can only be achieved through hydraulic testing. However, understanding the sequence stratigraphy and depositional facies are critical for understanding scale and connectivity of aquifers and their confining units and predicting their local distributions.



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FIGURE LIST

- Figure 1 Map of ESS Cross Sections
- Figure 2a Modern Analog
- Figure 2b Three-Dimensional Model of Wave-Dominated Delta System
- Figure 3a Cross Section B-B' Showing Stratigraphic Framework
- Figure 3b Cross Section B-B' Showing Depositional Facies Interpretation
- Figure 4a Cross Section 1-1' Showing Stratigraphic Framework
- Figure 4b Cross Section 1-1' Showing Depositional Facies Interpretation
- Figure 5a Cross Section 2-2' Showing Stratigraphic Framework
- Figure 5b Cross Section 2-2' Showing Depositional Facies Interpretation
- Figure 6a Cross Section 3-3' Showing Stratigraphic Framework
- Figure 6b Cross Section 3-3' Showing Depositional Facies Interpretation
- Figure 7a Cross Section 4-4' Showing Stratigraphic Framework
- Figure 7b Cross Section 4-4' Showing Depositional Facies Interpretation
- Figure 8a Cross Section 5-5' Showing Stratigraphic Framework
- Figure 8b Cross Section 5-5' Showing Depositional Facies Interpretation
- Figure 9 Historic Sealevel Curve

ATTACHMENT LIST

- Attachment A Glossary of Basic Terms



*Environmental Sequence Stratigraphy
Analysis, NWIRP Bethpage NY – D1
May 2018*

FIGURES

Figure 1. Map of ESS Cross Sections

2018 ESS Cross Sections

- North-South
- - - East-West

Legend

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

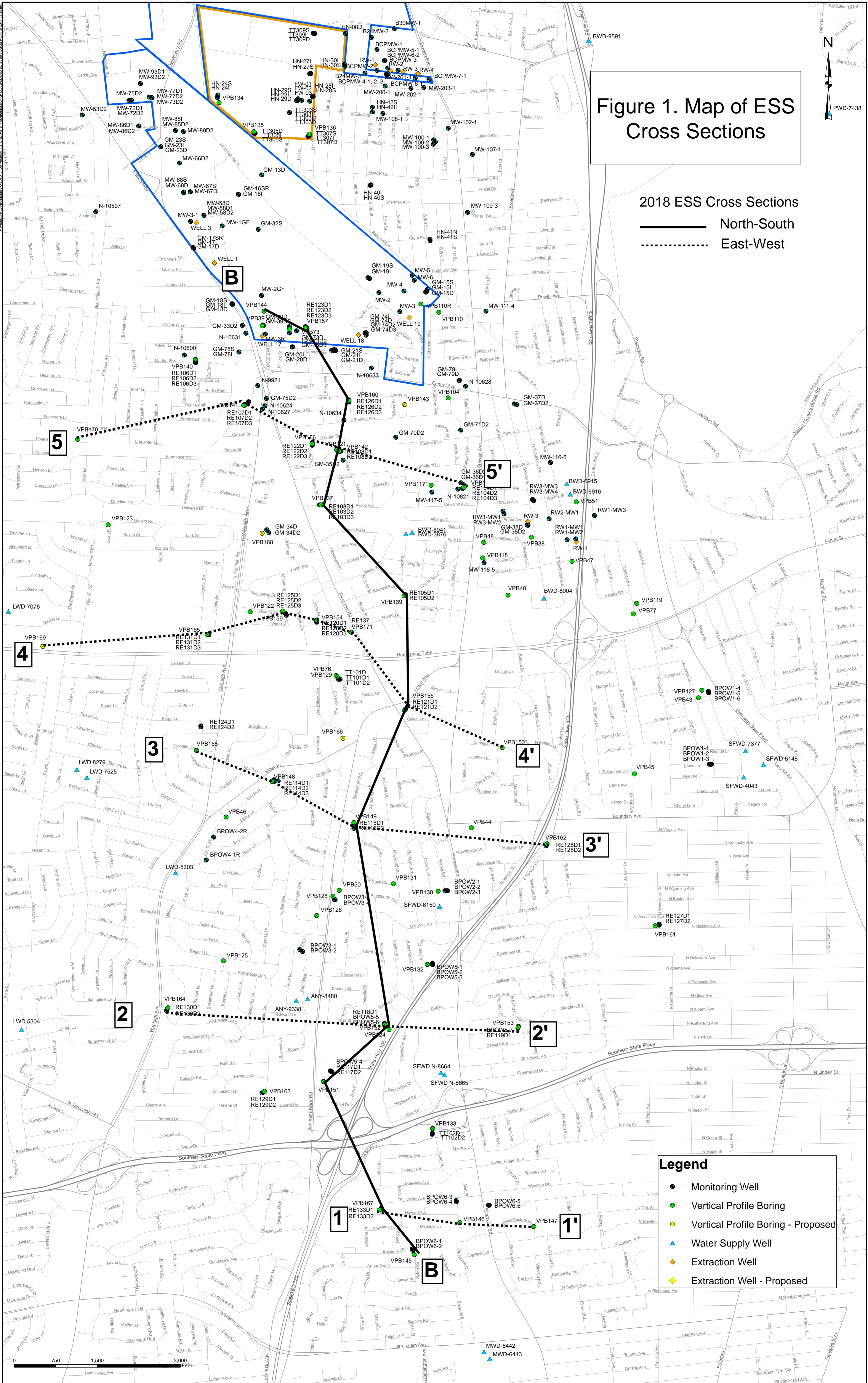




Figure 2a. Modern Analog

Source: Image ©2016 DigitalGlobe; Image ©2016 CNES/ Astrium; ©2016 Google Data SIO, NOAA, U.S. Navy, NGA, GEBCO

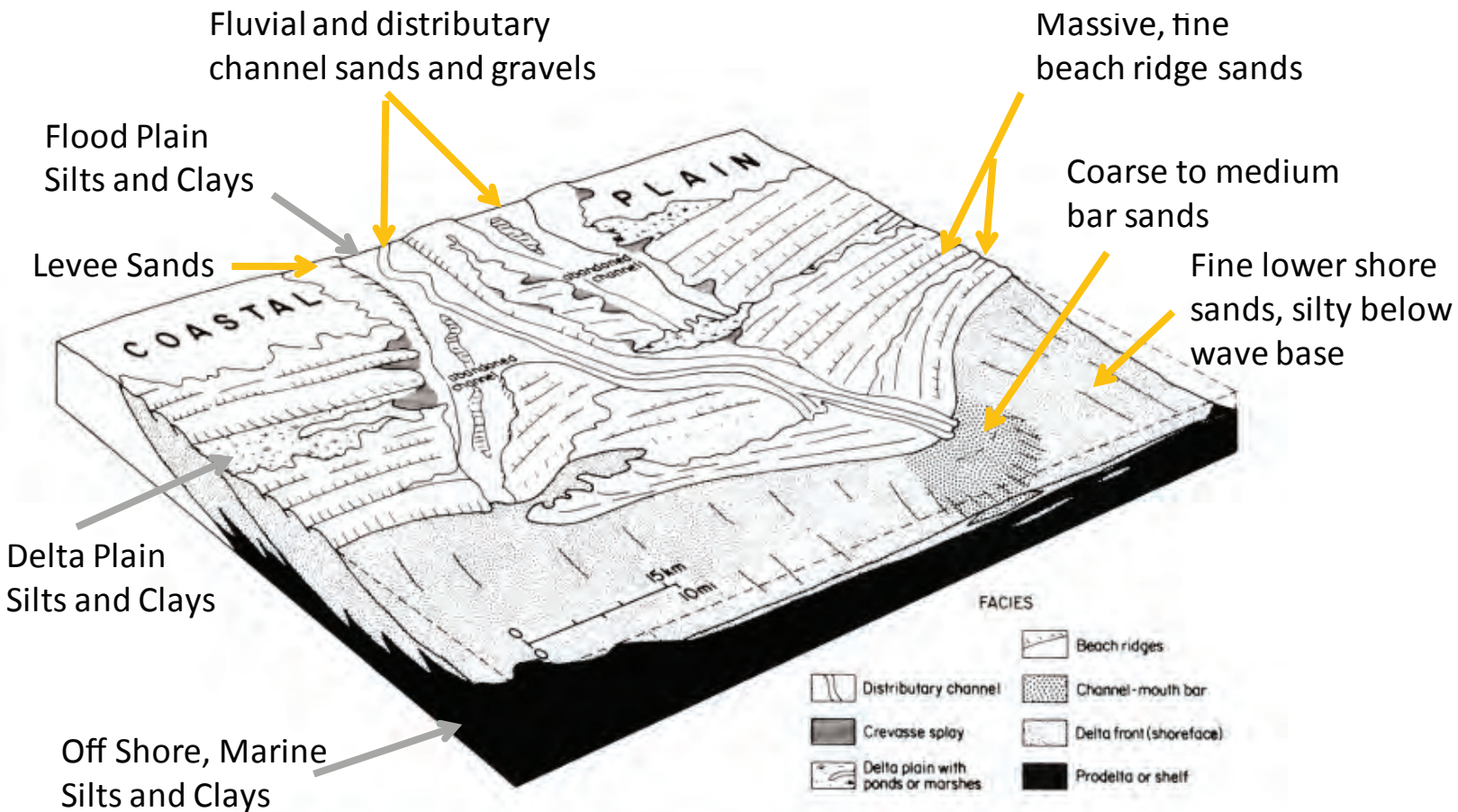


Figure 2b. Three-Dimensional Model of Wave-Dominated Delta System (source Weise, 1980)

Notes for Figures 3 through 8:

1. Approximate cross section dimensions:

Figure 3a & 3b (Section B-B') length is 19,690 feet, sequence 1+2 thickness is 1,000 feet.

Figure 4a & 4b (Section 1-1') length is 2,810 feet, sequence 1+2 thickness is 980 feet.

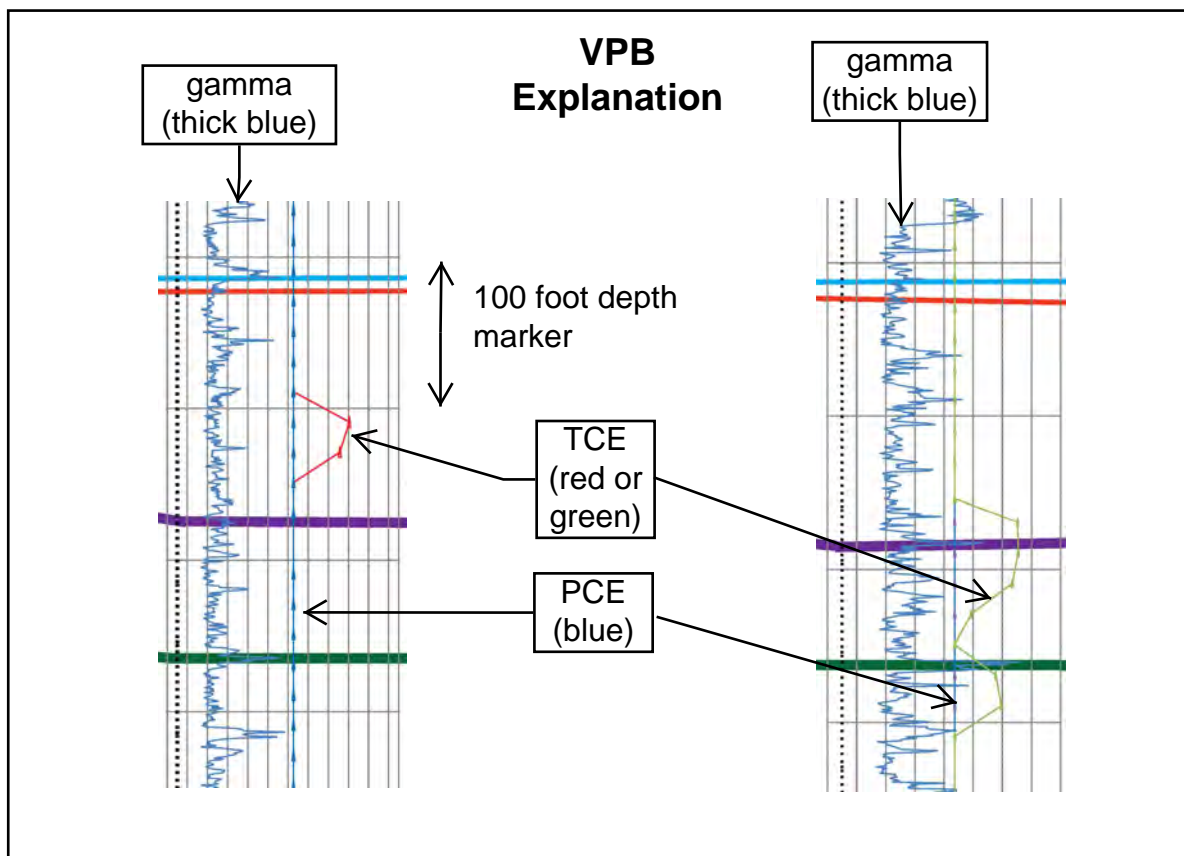
Figure 5a & 5b (Section 2-2') length is 6,340 feet, sequence 1+2 thickness is 970 feet.

Figure 6a & 6b (Section 3-3') length is 6,660 feet, sequence 1+2 thickness is 950 feet.

Figure 7a & 7b (Section 4-4') length is 9,280 feet, sequence 1+2 thickness is 930 feet.

Figure 8a & 8b (Section 5-5') length is 7,330 feet, sequence 1+2 thickness is 915 feet.

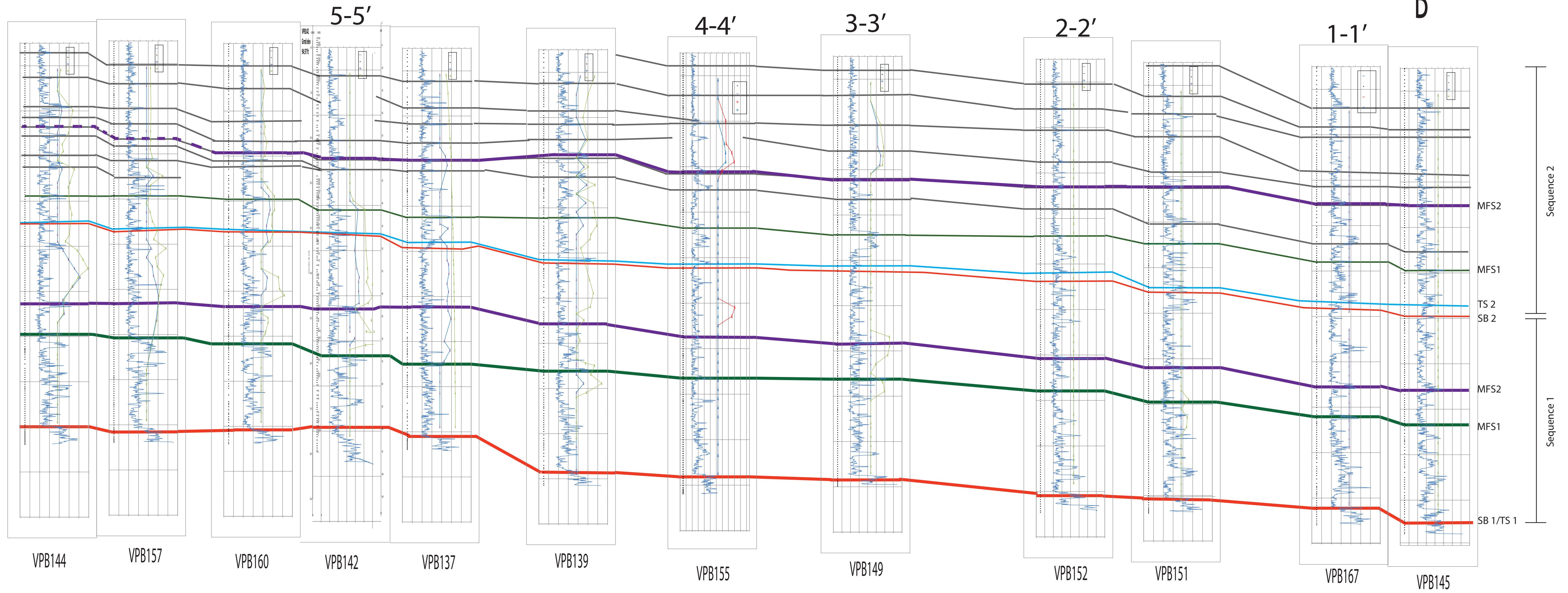
2. Vertical Profile Borings (VPBs) depicted along cross sections are explained below.













North
B

Figure 3a. Cross Section B-B' Showing Stratigraphic Framework

South
B'



- | | |
|---|--|
|  Deltaic (Transgressive Systems Tract) |  Sequence Boundary |
|  Deltaic (Highstand Systems Tract) |  Maximum Flooding Surface 1 |
|  Channel Bar |  Maximum Flooding Surface 2 |
|  Glacial |  Transgressive Surface |
|  Splay/Overbank fines | |
|  Swamp and Tidal mud | |

Sequence 2

Sequence 1

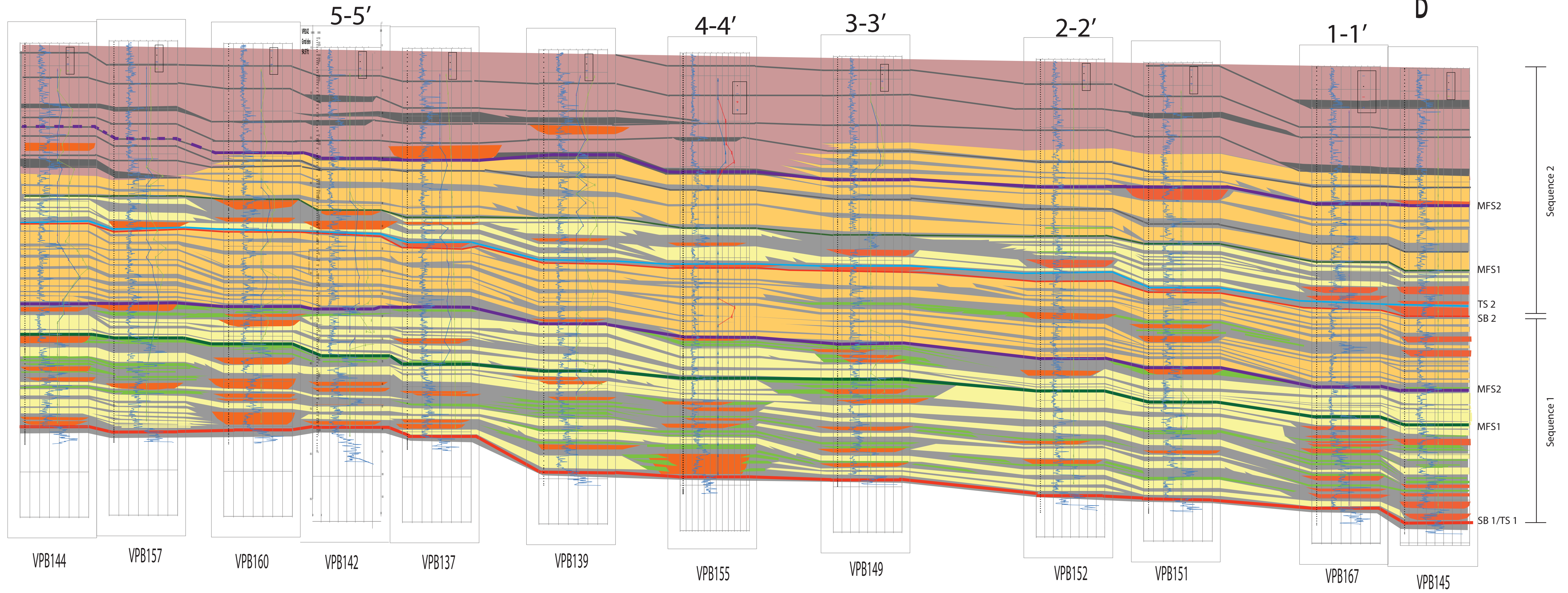
North

Figure 3b. Cross Section B-B' Showing Depositional Facies Interpretation

South

B

B'

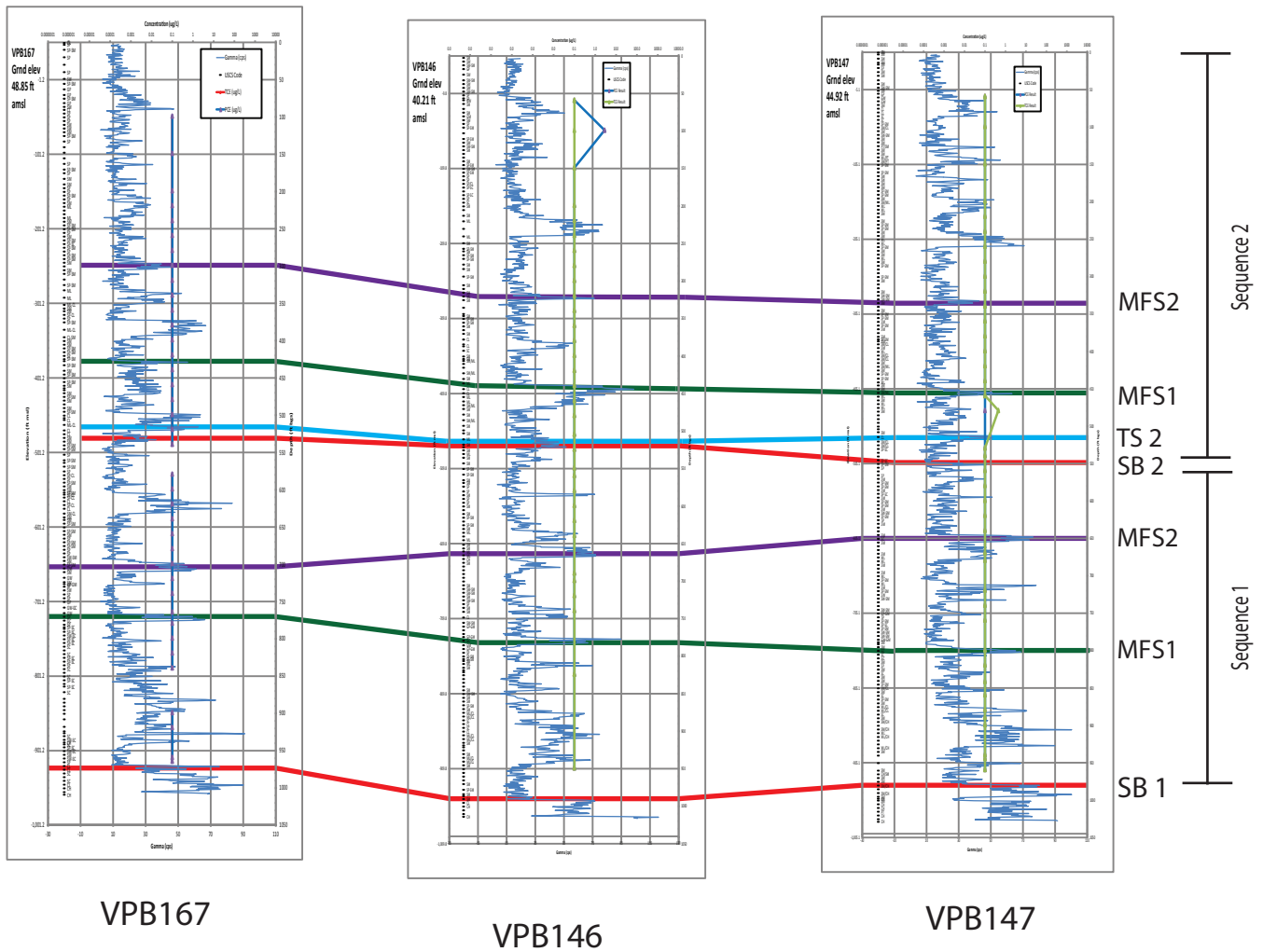


- | | |
|--|--|
| Deltaic (Transgressive Systems Tract) | Sequence Boundary |
| Deltaic (Highstand Systems Tract) | Maximum Flooding Surface 1 |
| Channel Bar | Maximum Flooding Surface 2 |
| Glacial | Transgressive Surface |
| Splay/Overbank fines | |
| Swamp and Tidal mud | |

Figure 4a. Cross Section 1-1' Showing Stratigraphic Framework

West
1

East
1'













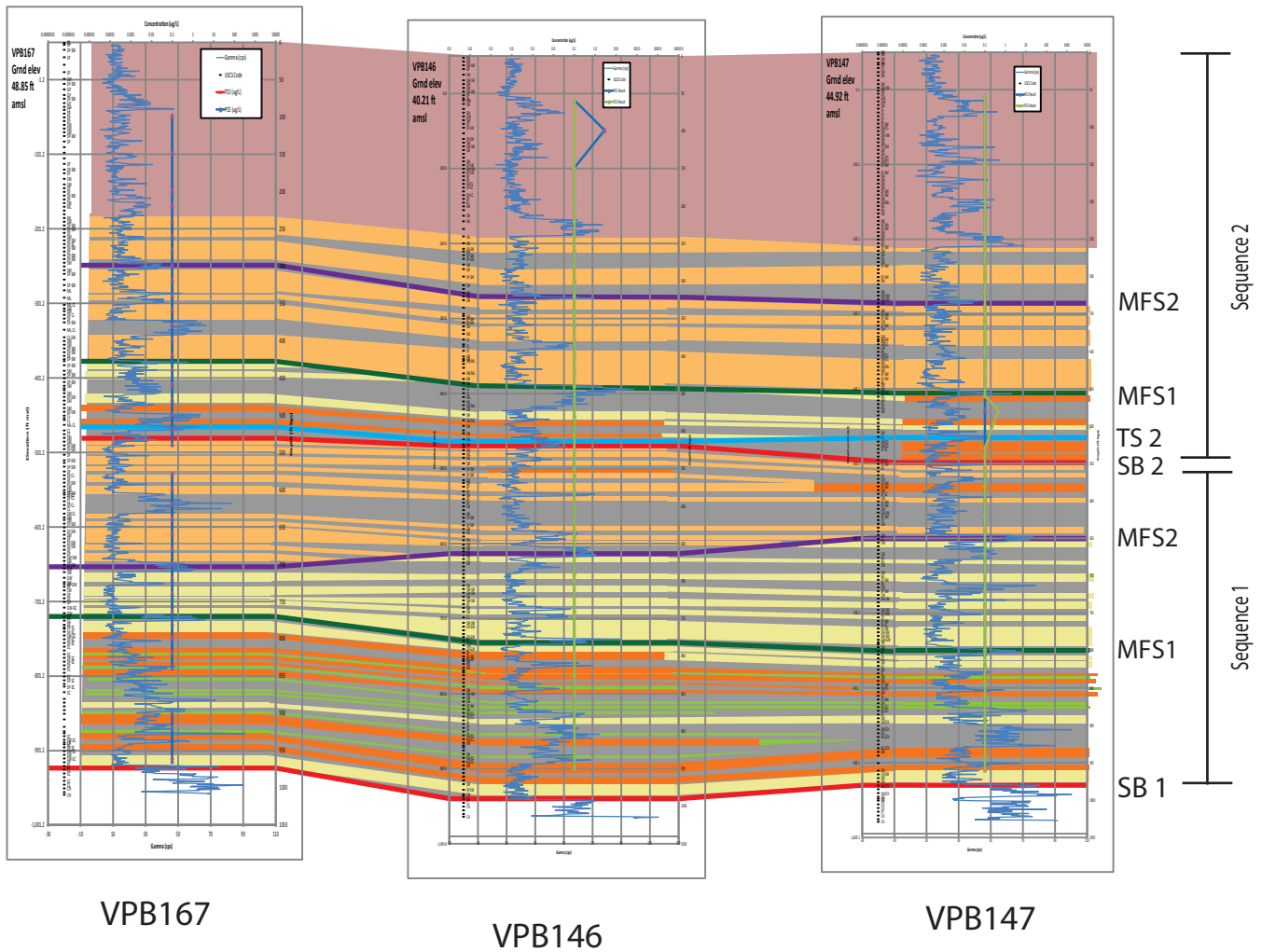
- | | | | |
|---|---------------------------------------|---|----------------------------|
|  | Deltaic (Transgressive Systems Tract) |  | Sequence Boundary |
|  | Deltaic (Highstand Systems Tract) |  | Maximum Flooding Surface 1 |
|  | Channel Bar |  | Maximum Flooding Surface 2 |
|  | Glacial |  | Transgressive Surface |
|  | Splay/Overbank fines | | |
|  | Swamp and Tidal mud | | |

Figure 4b. Cross Section 1-1' Showing Depositional Facies Interpretation

West
1

East
1'

B-B'



Deltaic (Transgressive Systems Tract)

Deltaic (Highstand Systems Tract)

Channel Bar

Glacial

Splay/Overbank fines

Swamp and Tidal mud

Sequence Boundary

Maximum Flooding Surface 1

Maximum Flooding Surface 2

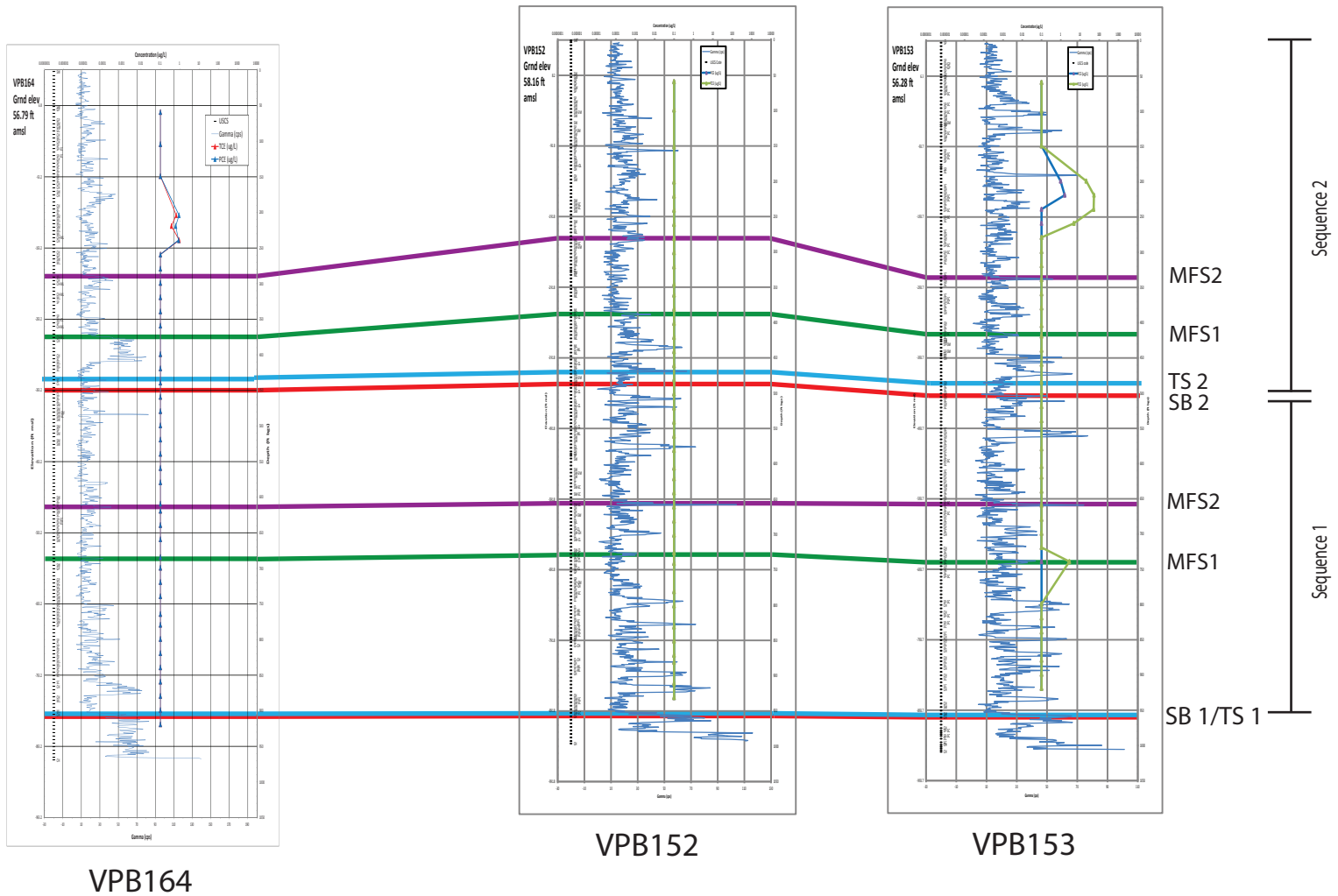
Transgressive Surface

Figure 5a. Cross Section 2-2' Showing Stratigraphic Framework

West
2

East
2'

B-B'









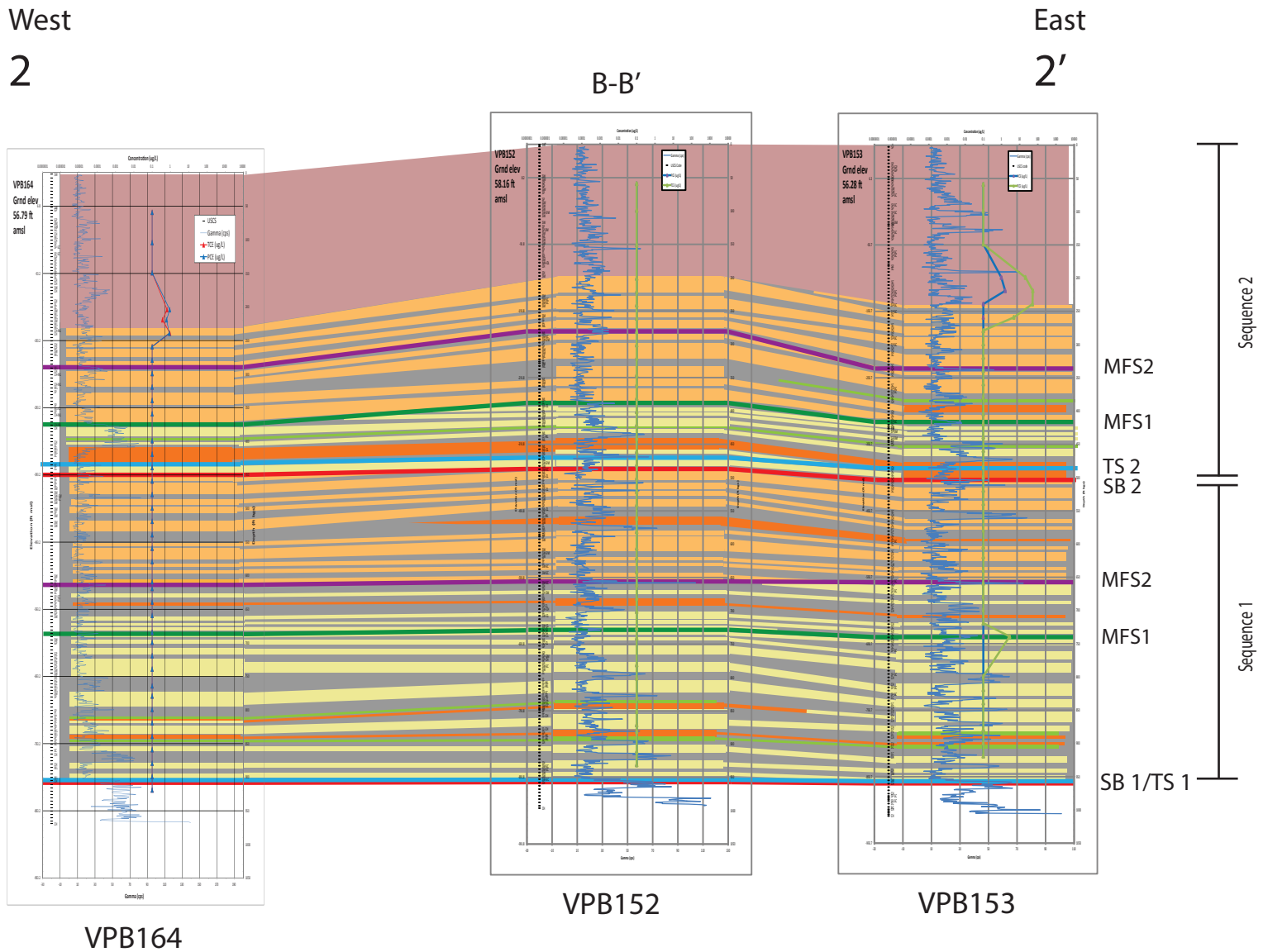
- | | | | |
|---|---------------------------------------|--|----------------------------|
|  | Deltaic (Transgressive Systems Tract) | | Sequence Boundary |
|  | Deltaic (Highstand Systems Tract) | | Maximum Flooding Surface 1 |
|  | Channel Bar | | Maximum Flooding Surface 2 |
|  | Glacial | | Transgressive Surface |
|  | Splay/Overbank fines | | |
|  | Swamp and Tidal mud | | |

Figure 5b. Cross Section 2-2' Showing Depositional Facies Interpretation













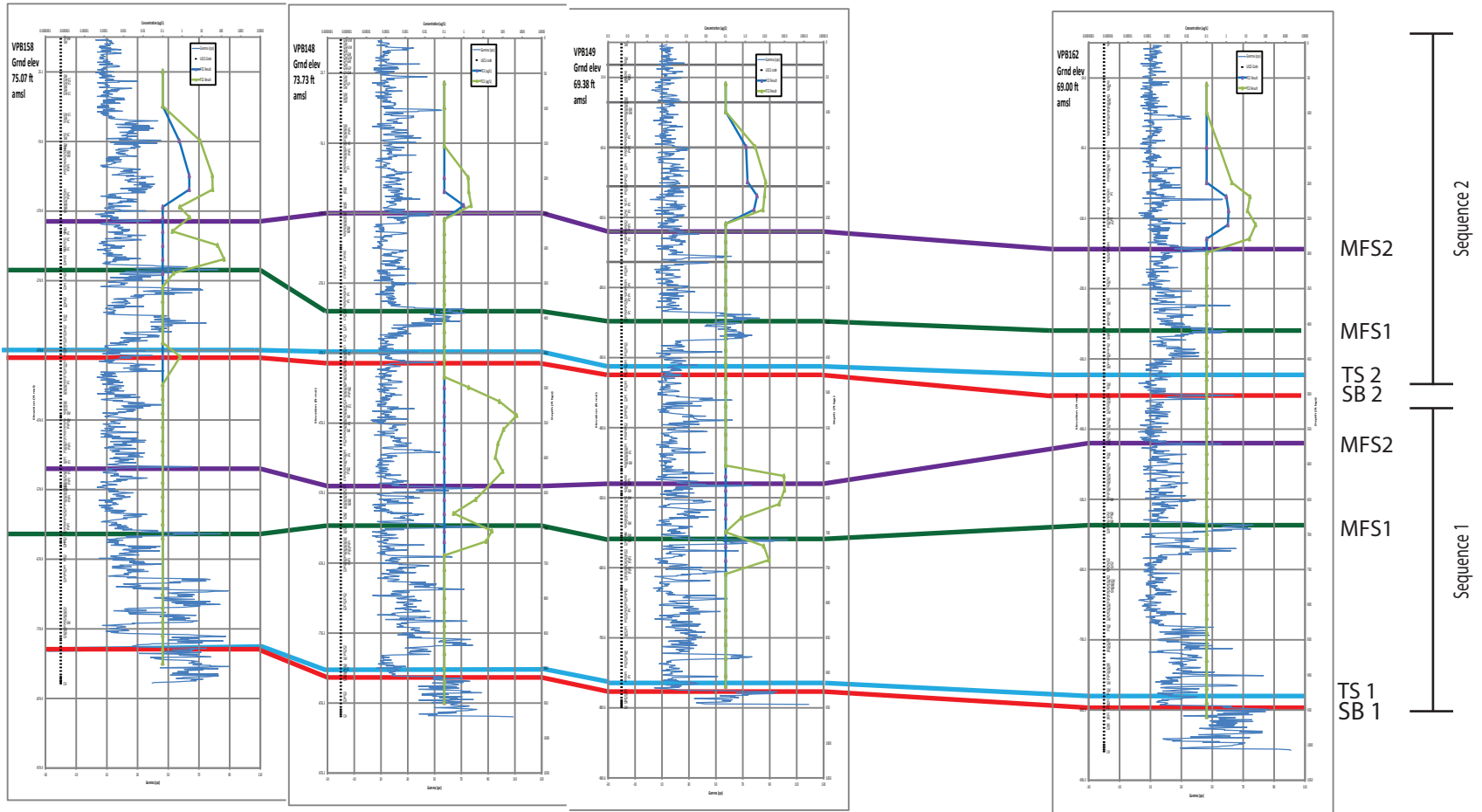
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|---|---------------------------------------|--|----------------------------|
|  | Deltaic (Transgressive Systems Tract) |  | Sequence Boundary |
|  | Deltaic (Highstand Systems Tract) |  | Maximum Flooding Surface 1 |
|  | Channel Bar |  | Maximum Flooding Surface 2 |
|  | Glacial |  | Transgressive Surface |
|  | Splay/Overbank fines | | |
|  | Swamp and Tidal mud | | |

Figure 6a. Cross Section 3-3' Showing Stratigraphic Framework

West 3 East 3'

B-B'



VPB158

VPB148

VPB149

VPB162











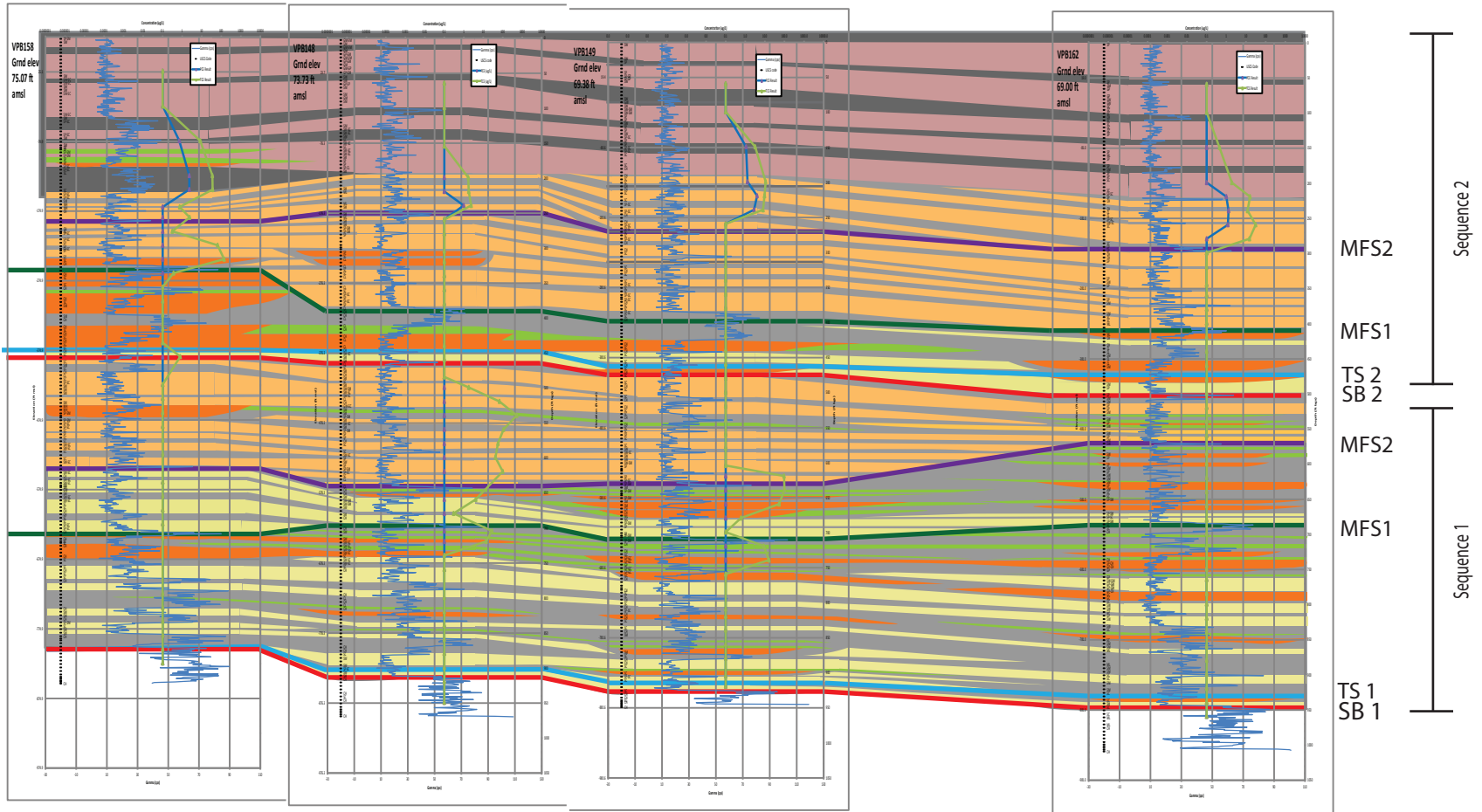
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|---|---------------------------------------|---|----------------------------|
|  | Deltaic (Transgressive Systems Tract) |  | Sequence Boundary |
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|  | Channel Bar |  | Maximum Flooding Surface 2 |
|  | Glacial |  | Transgressive Surface |
|  | Splay/Overbank fines | | |
|  | Swamp and Tidal mud | | |

Figure 6b. Cross Section 3-3' Showing Depositional Facies Interpretation

West 3' East 3'

B-B'



VPB158

VPB148

VPB149

VPB162











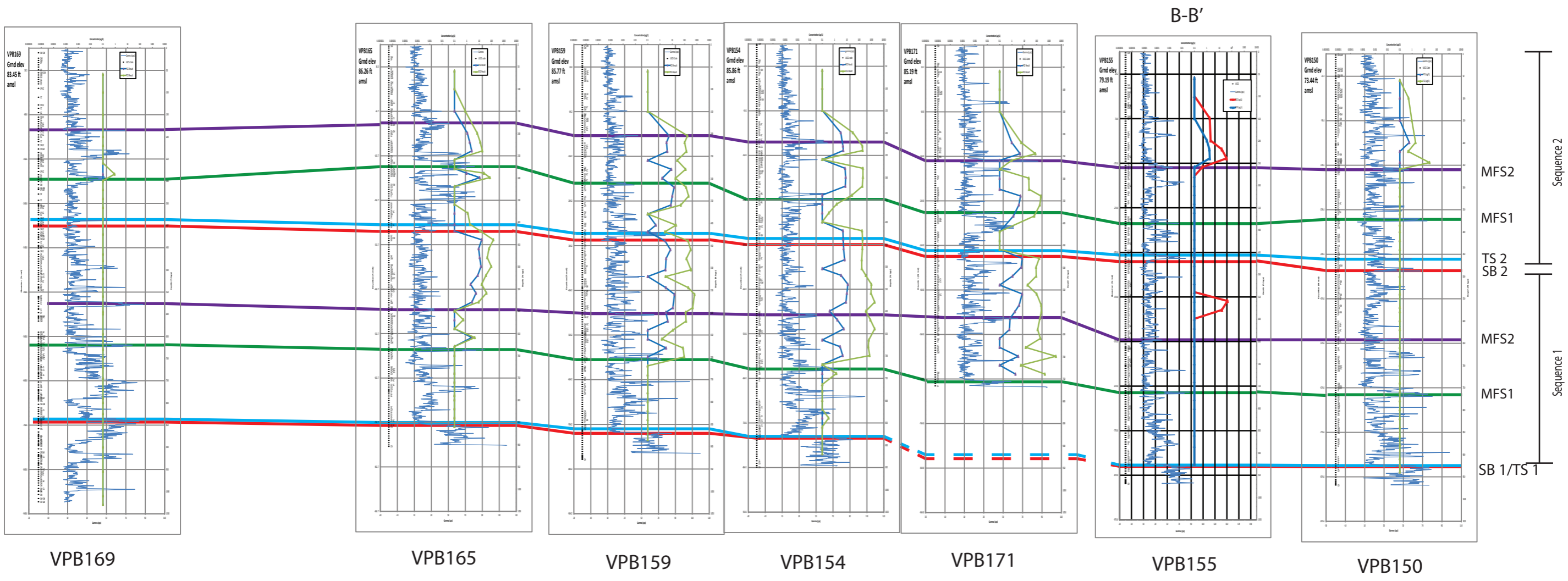
- | | |
|---|--|
|  Deltaic (Transgressive Systems Tract) |  Sequence Boundary |
|  Deltaic (Highstand Systems Tract) |  Maximum Flooding Surface 1 |
|  Channel Bar |  Maximum Flooding Surface 2 |
|  Glacial |  Transgressive Surface |
|  Splay/Overbank fines | |
|  Swamp and Tidal mud | |

Figure 7a. Cross Section 4-4' Showing Stratigraphic Framework

West
4

East
4'



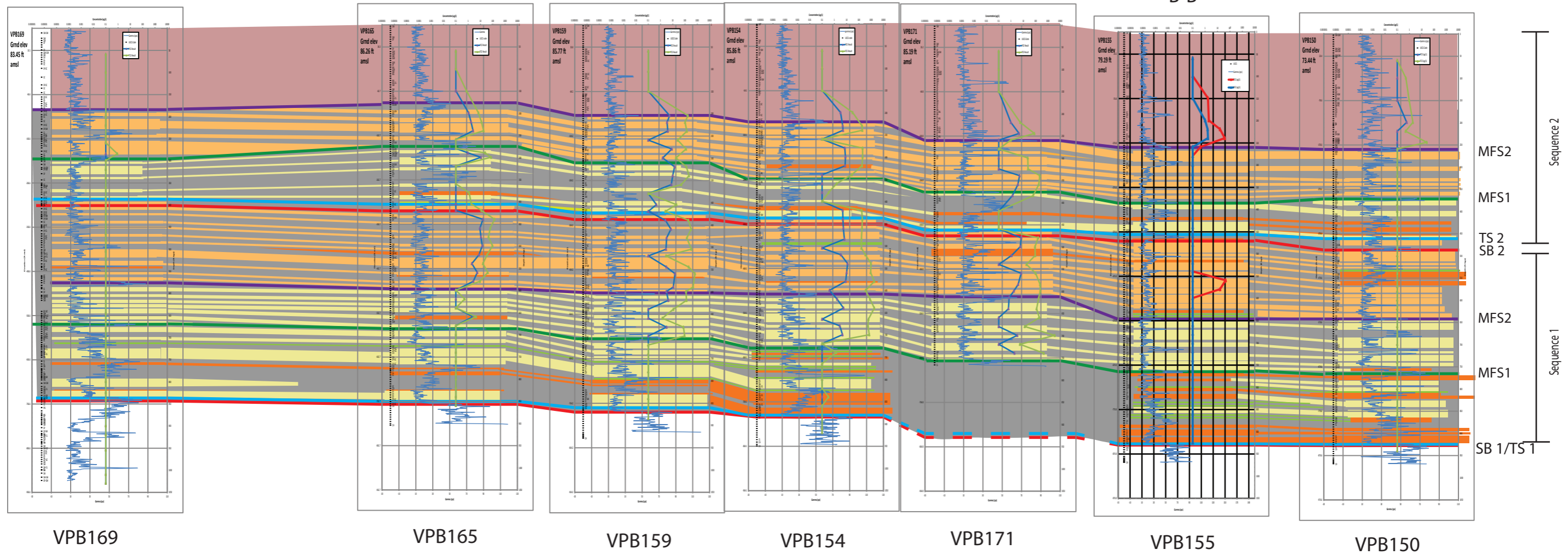
- Deltaic (Transgressive Systems Tract)
- Deltaic (Highstand Systems Tract)
- Channel Bar
- Glacial
- Splay/Overbank fines
- Swamp and Tidal mud
- Sequence Boundary
- Maximum Flooding Surface 1
- Maximum Flooding Surface 2
- Transgressive Surface

Figure 7b. Cross Section 4-4' Showing Depositional Facies Interpretation

West
4

East
4'

B-B'



VPB169

VPB165

VPB159

VPB154

VPB171

VPB155

VPB150











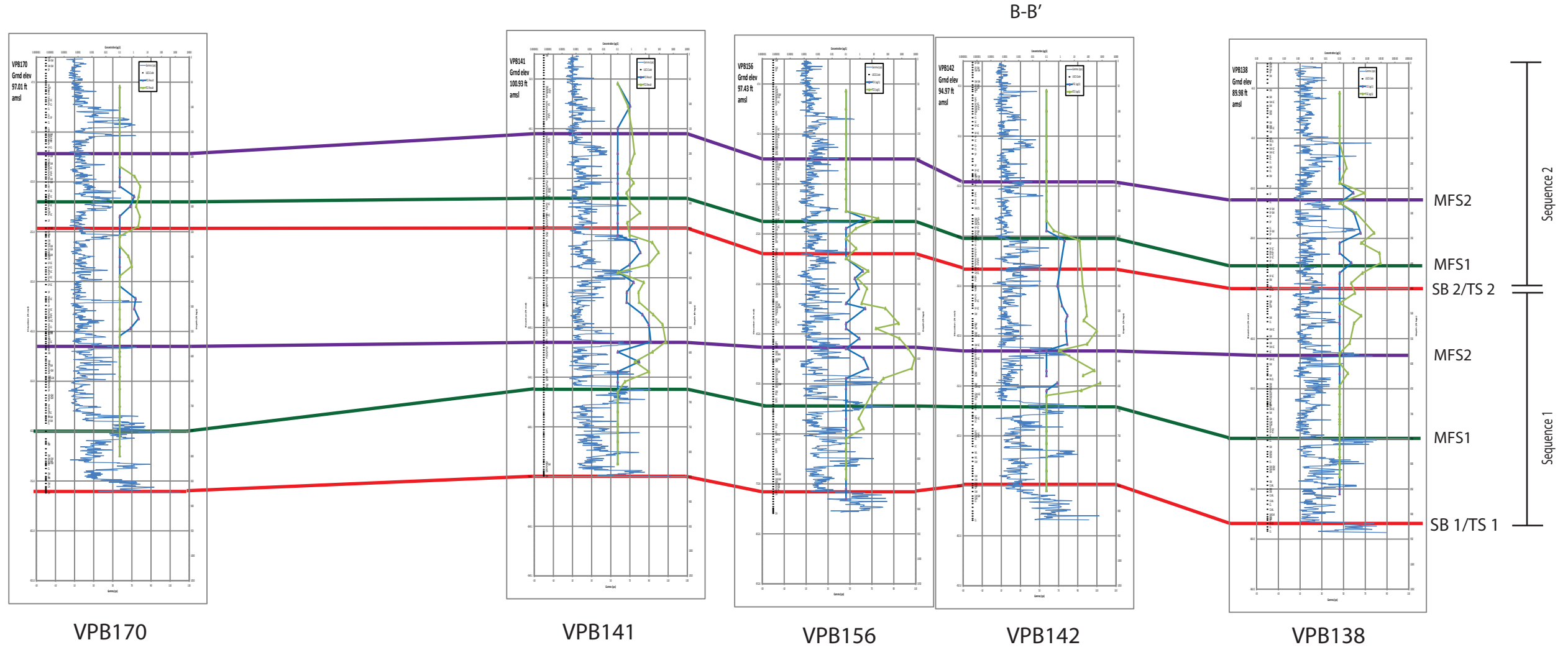
- | | |
|---|--|
|  Deltaic (Transgressive Systems Tract) |  Sequence Boundary |
|  Deltaic (Highstand Systems Tract) |  Maximum Flooding Surface 1 |
|  Channel Bar |  Maximum Flooding Surface 2 |
|  Glacial |  Transgressive Surface |
|  Splay/Overbank fines | |
|  Swamp and Tidal mud | |

Figure 8a. Cross Section 5-5' Showing Stratigraphic Framework

West
5

East
5'













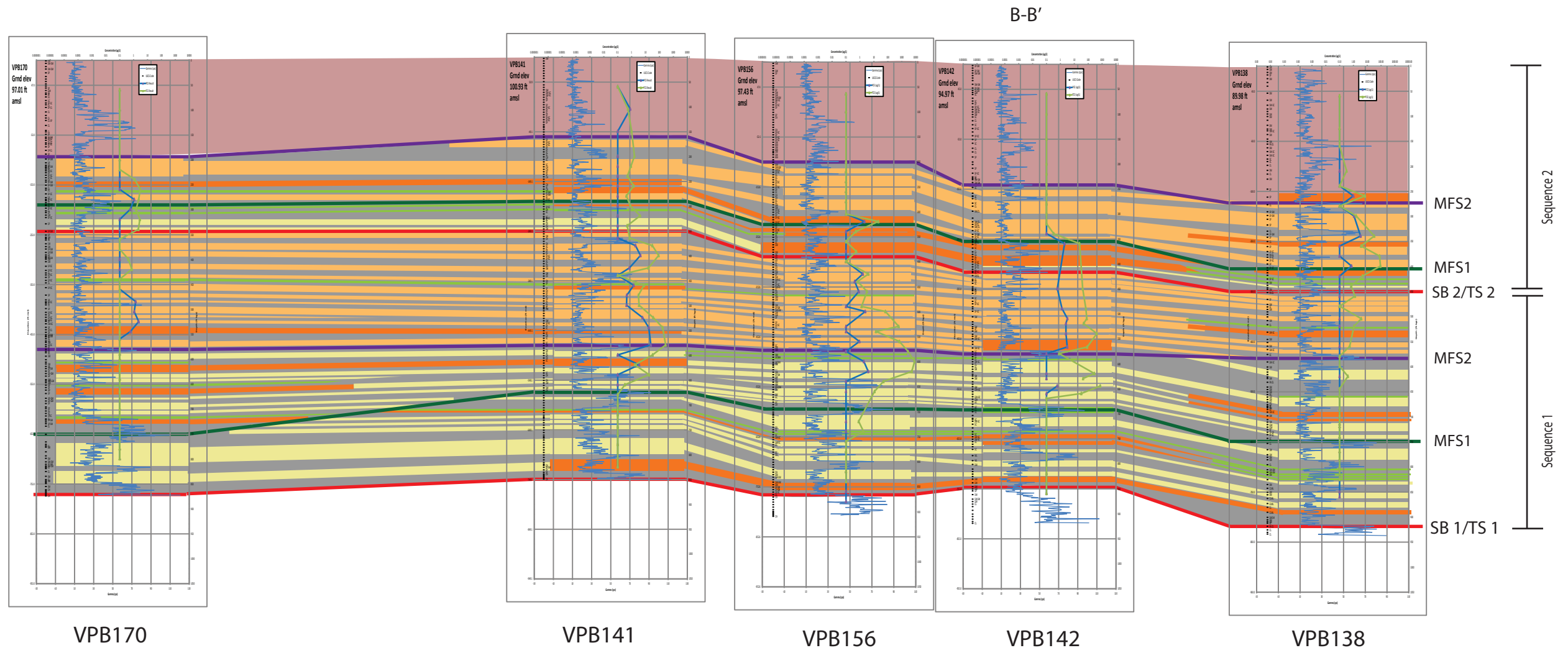










- | | | | |
|---|---------------------------------------|--|----------------------------|
|  | Deltaic (Transgressive Systems Tract) |  | Sequence Boundary |
|  | Deltaic (Highstand Systems Tract) |  | Maximum Flooding Surface 1 |
|  | Channel Bar |  | Maximum Flooding Surface 2 |
|  | Glacial |  | Transgressive Surface |
|  | Splay/Overbank fines | | |
|  | Swamp and Tidal mud | | |

Figure 8b. Cross Section 5-5' Showing Depositional Facies Interpretation

West
5

East
5'



- | | |
|---|--|
|  Deltaic (Transgressive Systems Tract) |  Sequence Boundary |
|  Deltaic (Highstand Systems Tract) |  Maximum Flooding Surface 1 |
|  Channel Bar |  Maximum Flooding Surface 2 |
|  Glacial |  Transgressive Surface |
|  Splay/Overbank fines | |
|  Swamp and Tidal mud | |

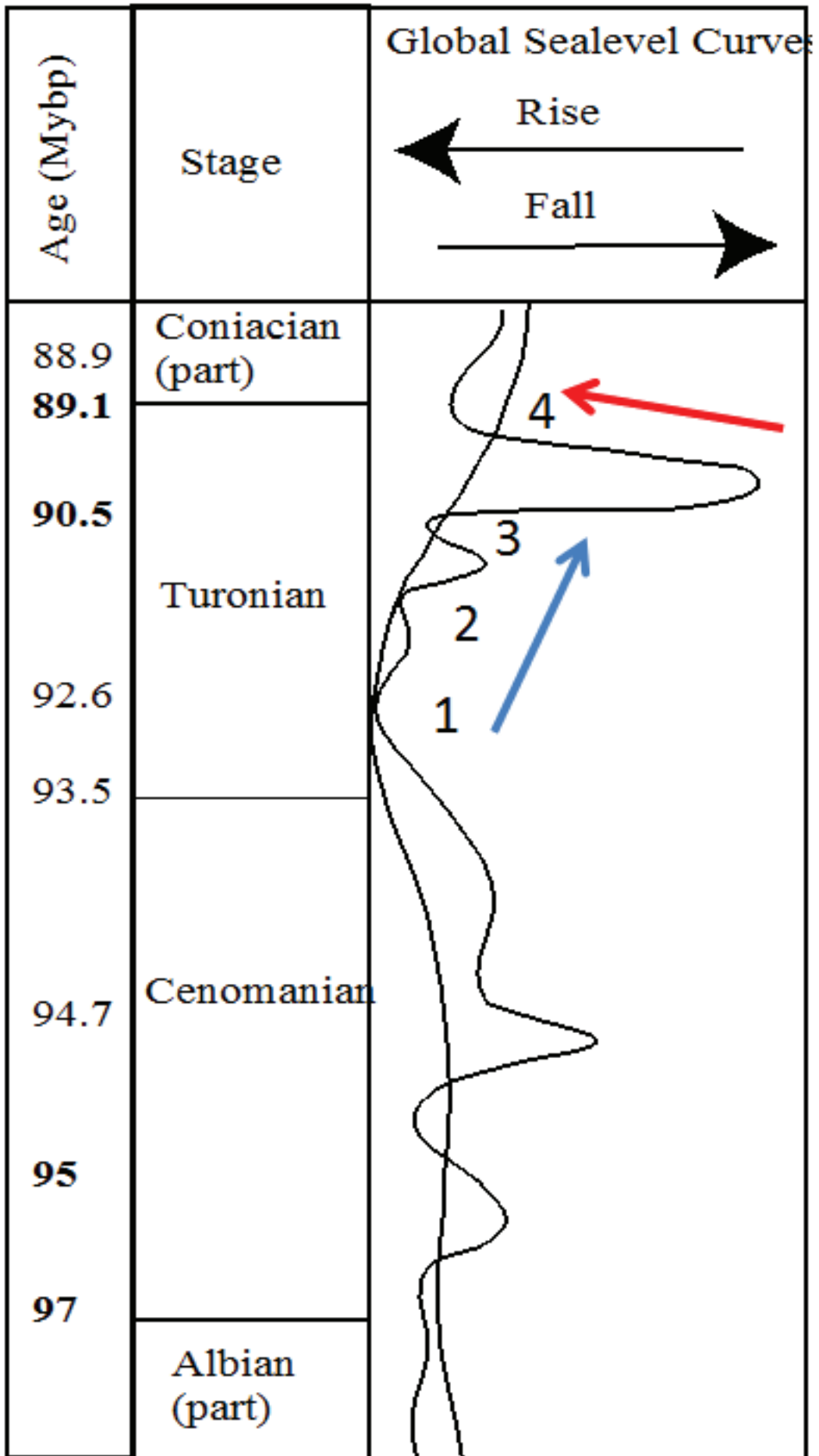


Figure 9. Historic Sea Level Curve (Miller, et al., 2005)



ATTACHMENT A

Glossary of Basic Terms

Glossary of Basic Terms

Accommodation: The space available for potential sediment accumulation. This space is the combined product of movement of:

1. The sea surface (global sea level measured from a datum, such as the center of earth)
2. The sea floor (tectonics)
3. Changes in rates of sediment accumulation.

Base level: a global reference surface to which continental erosion and marine deposition tend to proceed. It is effectively sea level, although rivers erode slightly below it.

Stratigraphy: The study of succession of the layered rocks (strata) and the lateral/vertical variations on a regional basis.

Facies: The sum total of physical and biological characteristics of a rock.

Depositional Environment: Geomorphological setting of a group of linked facies (depositional facies).

Sequence Stratigraphy: Stratigraphy in relation to accommodation within a framework of time-significant surfaces.

Relative sea level: Position of sea surface relative to a fixed datum near the sea floor determined by global sea level change (eustasy) and vertical movement of the sea floor (tectonism and/or sediment compaction).

Progradation: Sea-ward movement of the shoreline (sometimes called “regression”).

Retrogradation: Land-ward movement of the shoreline (sometimes called “transgression”).

Aggradation: No net land-ward or sea-ward movement of the shoreline.

Sequence: A relatively conformable successions of genetically-related strata bounded by subaerial unconformities and their correlative surfaces.

Sequence Boundary (SB): Surface of erosion or non-deposition (unconformity), separating one sequence from another.

Parasequence: Building block of a sequence. Bounded by Marine Flooding Surfaces.

Marine Flooding Surface (FS): Shale markers that record a rapid relative rise in sea level without deposition of sediment.

Transgressive Surface (TS): A prominent flooding surface that represents the first major flooding surface to follow the sequence boundary.

Maximum Flooding Surface (MFS): The last of the significant flooding surfaces and the widest landward extent of the marine incursion. It represents a turnaround from retrogradation to progradation.

Systems Tract: a three- dimensional group of depositional facies, genetically linked by active (modern) or inferred (ancient) processes and environments. We use the term, systems tract, to designate four subdivisions within each sequence of sea-level cycle: Lowstand, Transgressive, Highstand, and Falling-Stage systems tracts

Lowstand Systems Tract (LST): Systems tract bounded by the Sequence Boundary at the base and Transgressive Surface (TS) on top.

Transgressive Systems Tract (LST): Systems tract bounded by the Transgressive Surface (TS) at the base and Maximum Flooding Surface (MFS) on top.

Highstand Systems Tract (HST): Systems Tract bounded by the Maximum Flooding Surface (MFS) at the base and Basal Surface of Forced Regression (BS) on top.

Falling-Stage Systems Tract (FSST): The earliest portion of the Lowstand Systems Tract. Bounded by a Sequence Boundary (SB).


NEW YORK PROFESSIONAL GEOLOGIST SEAL

As a New York-licensed Professional Geologist, I have reviewed and approve this 2017 Vertical Profile Boring Data Summary Report VPB 166, Groundwater Investigation at Naval Industrial Reserve Plant Bethpage Operable Unit 2, Site 1, and seal it in accordance with Article 145 Section 7209 of the New York State Education Laws. In sealing this document, I certify it was prepared under my direction, the geological information contained in it is true to the best of my knowledge and the geological methods and procedures included herein are consistent with currently accepted geological practices.

It is a violation of this law for any person to alter the contained drawings or the report in any way, unless he or she is acting under the direction of a NY-licensed Professional Geologist.

Name: Brian E. Caldwell
NY PG License Number: 000511
State: New York

Signature: B. Caldwell
Date: 12/20/18

The seal is circular with a double border. The outer border contains the text "STATE OF NEW YORK" at the top and "LICENSED PROFESSIONAL GEOLOGIST" at the bottom, separated by two stars. The inner border contains the name "BRIANE CALDWELL" at the top and the license number "511" at the bottom. In the center of the seal is the coat of arms of the State of New York, featuring a shield with a sun, a river, and a plow, flanked by a figure holding a scale and another holding a sword.